

St. Joseph Orphanage Site

Ball Homes

Traffic Impact Study

August 5, 2015 Prepared for: Metro Transportation Planning





St. Joseph Orphanage Site

Project no:	C9X22800
Document title:	Traffic Impact Study
Document No.:	
Revision:	<revision></revision>
Date:	August 5, 2015
Client name:	Ball Homes Inc.
Client no:	Prepared for: Metro Transportation Planning
Project manager:	Diane Zimmerman
Author:	Diane Zimmerman
File name:	C:\Users\diane.zimmerman\Documents\Ball Homes\Factory Lane\St. Joe Factory Lane TIS Report.docx

Jacobs Engineering Group Inc.

11940 Highway 42, Suite 1 Goshen, KY 40026 502-228-0393 502-228-0393 www.jacobs.com

© Copyright 2015 Jacobs Engineering Group Inc. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This report has been prepared on behalf of, and for the exclusive use of Jacobs' Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.



Contents

1.	Introduction	
2.	Existing Conditions	2
3.	Future Conditions	5
4.	Trip Generation and Distribution	7
5.	Analysis	
6.	Conclusion	

Figure 1 : Location Map	1
Figure 2 : A.M. Peak Hour Counts	3
Figure 3 : P.M. Peak Hour Counts	4
Figure 4 : No Build A.M. Peak Hour Volumes	5
Figure 5 : No Build P.M. Peak Hour Volumes	6
Figure 6 : Site Trip Distribution Percentages	7
Figure 7 : Site Trip Distribution A.M. Peak Hour Volumes	8
Figure 8 : Site Trip Distribution P.M. Peak Hour Volumes	9
Figure 9 : Build A.M. Peak Hour Volumes	10
Figure 10 : Build P.M. Peak Hour Volumes	11
Figure 11 : Build Peak Hour Volumes at the Entrances	11

Table 1. Trip Generation Results	7
Table 2 : Level of Service Summary	12

Appendix A. Traffic Counts

Appendix B. Highway Capacity Software Printouts



1. Introduction

The subdivision plan for the St. Joseph Orphanage site shows 325 detached lots and 80 attached lots. The site is located on the north side of Factory Lane in Louisville, KY. Access to the subdivision will be through two entrances on Factory Lane. The sole purpose of this study is to examine the traffic operation impacts of the proposed subdivision on the highway network. For this study, the impact area was defined to be the proposed intersections with Factory Lane, and six additional intersections: Factory Lane at La Grange Road (KY 146), Factory Lane at Colonial Springs Drive, Factory Lane at Terrace Springs Drive, Factory Lane at Old Henry Road at Arnold Palmer Boulevard, and Old Henry Road at Bush Farm Road. A map of the site is shown in **Figure 1**.



Figure 1 : Location Map



2. Existing Conditions

Factory Lane is a Metro maintained road with an estimated 2015 Average Annual Daily Traffic (AADT) of 6,600 vehicles per day at the proposed entrance, as estimated from the turning movement count. The road is a twolane highway with ten-foot lanes with a one foot shoulder along the property frontage. The speed limit is 35 mph. There are sidewalks on both sides of Factory Lane from La Grange Road to Terrace Hill Drive.

The intersection of Factory Lane with La Grange Road (KY 146) is controlled with a traffic signal. The Factory Lane approach has a dedicated left turn lane, a shared thru and left lane and a dedicated right turn lane. The signal operates as split phase for Factory Lane and Chamberlain Lane. The signal also has train preemption.

The intersections of Factory Lane with Colonial Springs Road and Terrace Spring Drive are controlled with twoway stop signs. Factory Lane is the primary route. There are dedicated left turn lanes on Factory Lane to Colonial Springs Road and to Terrace Spring Drive. There are no dedicated turn lanes on either Colonial Springs Road or Terrace Spring Drive.

The intersection with Old Henry Road is currently an all-way stop without dedicated turn lanes. Old Henry Road is scheduled for reconstruction beginning in the summer of 2016. The project will add a two-way left turn lane from the Bush Farm Road intersection to Ash Avenue (KY 362) in Oldham County. Old Henry Road will become the primary route (will not stop) and Factory Lane will be controlled with a stop sign. The eastbound Factory Lane approach will have a dedicated left turn lane. The design speed of Old Henry Road is 45 mph. There will be a sidewalk on the southeast side of the road and a multi-use path on the northwest side of the road.

The intersection of Arnold Palmer Boulevard/Hamilton Springs Drive is controlled with a two-way stop sign for the minor streets. The existing eastbound right turn lane on Old Henry Road will be removed. Neither Arnold Palmer Boulevard nor Hamilton Springs Drive have dedicated turn lanes.

The intersection of Old Henry Road with Bush Farm Road is controlled with a traffic signal. Eastbound Old Henry Road has a dedicated left turn lane and a dedicated right turn lane. Westbound Old Henry Road will have a dedicated left turn lane, a thru lane and a shared thru and right turn lane. Bush Farm Road will have dedicated left turn lane and a shared thru and right turn lane.

Jacobs Engineering Group Inc. obtained a.m. and p.m. peak hour traffic counts at the intersections. The full count data for each intersection are included in Appendix A. **Figure 2** illustrates the existing a.m. and p.m. peak hour traffic volumes for these intersections.





Figure 2 : A.M. Peak Hour Counts





Figure 3 : P.M. Peak Hour Counts



3. Future Conditions

The projected completion year for this development is 2022, so the analysis year for this study is 2022. To predict traffic conditions in 2022, two and one third percent (2.33%) annual growth in traffic was added to Factory Lane and La Grange Road (KY 146). This growth is based upon a review of the traffic forecast for the Old Henry Road Extension dated June 16, 2011. Old Henry Road growth is taken from the forecast. Growth on Hamilton Springs Drive and Bush Farm Road is from the Old Henry Road Traffic Impact Study dated November 2014. **Figures 4 and 5** display the 2022 No Build peak hour volumes.



Figure 4 : No Build A.M. Peak Hour Volumes





Figure 5 : No Build P.M. Peak Hour Volumes



4. Trip Generation and Distribution

The Institute of Transportation Engineers <u>Trip Generation Manual</u>, 9th Edition contains trip generation rates for a wide range of developments. The land use of "Single-Family Detached Housing (210)" and "Residential Condominium/Townhouse (230)" best describe this development. The trip generation results are listed in **Table 1**. The results of the trip generation analysis are that this additional development will generate 280 a.m. peak hour trips and 354 p.m. peak hour trips. The trips for the development were assigned to the highway network with percentages shown on **Figure 6**. **Figures 7 and 8** show the trips generated by this development and distributed throughout the road network for the year 2022 during the peak hours. **Figures 9 and 10** display the individual turning movements for the year 2022 for the peak hours when the development is completed.

		A.M.		Р.М.						
	Total Trips	Entering	Exiting	Total Trips	Entering	Exiting				
325 Detached lots (210)	237	59	178	304	192	112				
80 Attached lots (230)	43	7	36	50	34	16				
Total Peak Hour	280	66	214	354	226	128				

Table 1. Trip Generation Results



Figure 6 : Site Trip Distribution Percentages



To simplify diagrams, the development is shown with a single access point in Figures 7 through 10. Figure 11 focuses on the turning movements for the entrances. Trip generation for 36 townhouses were assigned to the secondary entrance.



Figure 7 : Site Trip Distribution A.M. Peak Hour Volumes





Figure 8 : Site Trip Distribution P.M. Peak Hour Volumes





Figure 9 : Build A.M. Peak Hour Volumes





Figure 10 : Build P.M. Peak Hour Volumes



Figure 11 : Build Peak Hour Volumes at the Entrances



5. Analysis

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a "Level of Service" or LOS. Level of Service is a ranking scale from A through F with each level representing a range. LOS results depend upon the type of facility that is analyzed. In this case, the LOS is based upon the average vehicle delay each minor movement experiences at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersection were determined using procedures detailed in the <u>Highway Capacity Manual</u>, 2010 edition. Future delay and Level of Service were determined for the intersection using HCS 2010 Streets (version 6.65) and HCS+ (version 5.6) software. **Table 2** shows the results of the analysis for the three scenarios analyzed.

Metro Transportation Planning evaluates the need and length of auxiliary turn lanes using the Kentucky Transportation Cabinet <u>Auxiliary Turn Lane</u> Policy dated 7/20/2009. Using the volumes in **Figure 11**, an eastbound left turn lane is required at the main entrance. A westbound right turn lane is not required. An eastbound left turn lane is included in the results of the analysis in **Table 2**.

	A.I	W. Peak Ho	our	P.M. Peak Hour				
Approach	2015	2022 No Build	2022 Build	2015	2022 No Build	2022 Build		
La Grange Road at Factory Lane	D	E	F	C	D	D		
	39.7	70.5	102.2	26.9	35.4	46.0		
La Grange Road Northbound	В	B	B	C	C	D		
	16.4	16.8	16.8	23.7	29.9	40.8		
La Grange Road Southbound	C	C	C	C	C	C		
	27.9	31.1	31.1	27.5	31.1	32.2		
Chamberlain Lane Eastbound	C	D	D	D	D	D		
	34.6	39.1	39.3	37.9	43.8	45.0		
Factory Lane Westbound	F	F	F	C	D	E		
	88.8	210.4	310.3	28.5	52.8	77.6		
Factory Lane at Colonial Springs Road								
Factory Lane Eastbound Left Turn	A	A	A	A	A	A		
	8.0	8.2	8.6	8.2	8.4	8.7		
Colonial Springs Road Southbound	B	B	B	B	B	C		
	11.4	12.0	13.5	14.8	16.3	19.0		
Factory Lane at Terrace Springs Drive								
Factory Lane Eastbound Left Turn	A	A	A	A	A	A		
	7.7	7.8	8.1	8.2	8.4	8.7		
Factory Lane Westbound Left Turn	A	A	A	A	A	A		
	7.6	7.6	7.7	8.0	8.2	8.6		
Terrace Springs Drive Northbound	B	B	В	C	C	C		
	11.6	12.1	13.7	15.1	16.4	19.7		
Terrace Springs Drive Southbound	B	B	В	В	B	B		
	12.0	12.5	14.4	11.4	12.0	13.3		

Table 2 : Level of Service Summary



	A.I	M. Peak Ho	our	P.I	P.M. Peak Ho 2015 2022 No Build 2015 1000 2015 1000 2016 1000 2017 1000 2017 1000 2018 1000 2019 1000 2010 10000 2010 100000 2010 $1000000000000000000000000000000000000$			
Approach	2015	2022 No Build	2022 Build	2015	2022 No Build	2022 Build		
Factory Lane at Main Entrance								
Factory Lane Eastbound Left Turn			A 7.8			A 9.0		
Main Entrance Southbound			B 12.4			C 16.8		
Factory Lane at Secondary Entrance								
Factory Lane Eastbound Left Turn			A 7.6			A 8.5		
Secondary Entrance Southbound			B 10.4			B 14.4		
Old Henry Road at Factory Lane	(This inter construction	section curre	ently operate	es as an all- I Henrv as t	way stop. T	he eet.)		
Old Henry Road Northbound Left Turn	B 11.3	B 10.1	B 10.4	C 17.6	A 9.2	A 9.7		
Old Henry Road Southbound (currently Westbound)	B 10.5			E 46.2				
Factory Lane Eastbound	C 24.9	C 24.0	E 38.1	B 14.8	E 42.4	F 74.2		
Old Henry Road at Hamilton Springs								
Old Henry Road Northbound Left Turn	A 8.7	A 9.8	B 10.2	A 7.9	A 8.3	A 8.5		
Old Henry Road Southbound Left Turn	A 7.6	A 7.8	A 7.9	A 9.9	B 12.2	B 13.5		
Arnold Palmer Boulevard Westbound	D 25.2	E 38.5	E 49.9	D 32.4	E 44 2	F 64 2		
Hamilton Springs Drive Eastbound	B 12.4	C 17.3	C 19.1	A 9.9	B 12.2	B 13.1		
Old Henry Road at Bush Farm Road	C 31.4	E 77.2	E 76.9	C 20.1	F 116.5	F 124.8		
Old Henry Road Northbound	B 17.8	C 23.3	C 25.3	B 18.6	D 50.4	E 74 7		
Old Henry Road Southbound	C 28.4	B 19.1	B 19.8	B 16.4	E 76.5	E 71.9		
Bush Farm Road Eastbound	B 13.7	C 21 7	C 22.0	B 19.3	C 21.1	C 21.1		
Bush Farm Road Westbound	D 40.8	F 188.2	F 192.7	C 28.6	F 317.3	F 317.3		

Key: Level of Service, Delay in seconds per vehicle



6. Conclusion

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2022, there will be impacts to the existing highway network. At the main entrance to the subdivision a left turn lane will be installed per Metro policy. Turn lanes are not required at the secondary entrance.

This report identifies capacity deficiencies at both signalized intersections in the study area. At the La Grange Road intersection with Factory Lane improvements should be realized with the installation of a signal at the intersection of Springs Station Road. This signal has been requested by the shopping center owner and is currently in the review process at KYTC. This proposed signal could divert as much as 30 percent of the shopping center traffic currently using Factory Lane.

At the Old Henry Road intersection with Bush Farm Road, the capacity deficiency is caused by the traffic forecast from the Old Henry Crossings development to utilize Bush Farm Road (westbound left turn). The proposed development does not add traffic to that movement. Once the proposed traffic signal at Terra Crossings is installed, the traffic volumes on Bush Farm Road should decrease.



Appendix A. Traffic Counts

Study Name LaGrange Rd & Chamberlain Ln Start Date 02/24/2015 Start Time 7:00 AM

	LaG Sc	range R outhbour	load nd	Fac W	tory La	ane nd	L	aGrano Northl	ge Road bound	k	Chamberlain Lane Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-Turn	Left	Thru	Right	
7:00 AM	0	178	3	118	16	8	25	77	33	0	16	3	27	
7:15 AM	3	240	2	122	10	7	20	107	39	0	14	7	38	
7:30 AM	2	2 286 5		118	21	12	30	108	50	0	8	5	32	
7:45 AM	8	217	4	133	25	10	38	108	58	3	12	18	34	
	13	921	14	491	72	37	113	400	180	3	50	33	131	
8:00 AM	4 231 8			132	20	9	44	109	42	1	5	10	16	
8:15 AM	7	194	11	111	21	8	36	95	47	0	8	10	33	
8:30 AM	1	1 202 9		96	20	2	39	84	50	0	6	14	22	
8:45 AM	9	155	11	97	18	13	25	81	55	0	9	15	26	
	21	782	39	436	79	32	144	369	194	1	28	49	97	
4:00 PM	8	115	10	64	27	12	29	180	113	0	36	35	99	
4:15 PM	4	134	17	58	24	18	38	234	141	0	23	28	87	
4:30 PM	1	120	12	55	36	8	48	210	142	0	30	38	86	
4:45 PM	4	97	24	67	46	10	33	217	138	0	35	24	50	
	17	466	63	244	133	48	148	841	534	0	124	125	322	
5:00 PM	7	106	19	56	38	12	56	239	156	0	28	20	42	
5:15 PM	8	110	24	68	63	7	34	245	170	0	27	19	59	
5:30 PM	9	111	30	58	62	11	65	264	142	0	23	22	46	
5:45 PM	4	99	15	52	40	15	32	241	134	0	24	23	46	
	28	426	88	234	203	45	187	989	602	0	102	84	193	

	LaG Sc	range F outhbou	Road nd	Fac W	tory La	ane nd	L	aGrano Northi	ge Road bound	d	Chamberlain Lane Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	U-Turn	Left	Thru	Right	
7:15 AM	3	240	2	122	10	7	20	107	39	0	14	7	38	
7:30 AM	2 286 5			118	21	12	30	108	50	0	8	5	32	
7:45 AM	8	217	4	133	25	10	38	108	58	3	12	18	34	
8:00 AM	4	231	8	132 20 9		9	44 109 42		1	5	10	16		
	17	974	19	505	76	38	132	432	189	4	39	40	120	
4:45 PM	4 97 24			67	46	10	33	217	138	0	35	24	50	

	28	424	97	249	209	40	188	965	606	0	113	85	197
5:30 PM	9	111	30	58	62	11	65	264	142	0	23	22	46
5:15 PM	8	110	24	68	63	7	34	245	170	0	27	19	59
5:00 PM	7	106	19	56	38	12	56	239	156	0	28	20	42
4:45 PIVI	4	97	24	67	46	10		217	138	0	35	24	50





File Name : ColonialSpringsAM Site Code : 00512151 Start Date : 5/12/2015 Page No : 1

							Group	is Printed-	Unshift	ted							
	0	Colonial Springs Rd From North				Factory Lane From East				From South				Factory Lane From West			
Start Time	Left	Thru	Right	App. Tetal	Left	Thru	Right	App. Total	Left	Thru	Right	App: Tetal	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	0	7	14	0	62	1	63	0	0	0	0	0	23	0	23	100
07:15 AM	9	0	11	20	0	75	0	76	0	0	0	0	0	22	0	22	117
07:30 AM	7	0	14	21	0	85	3	88	0	0	0	0	1	38	0	39	148
07:45 AM	13	0	9	22	0	90	- 4	94	0	0	0	0	3	39	0	42	158
Total	36	0	41	77	0	312	8	320	0	0	0	0	4	122	0	126	523
08:00 AM	34	0	.9	13	0	79	4	83]	0	0	0	0	2	50	0	52	148
08:15 AM	2	0	8	10	0	68	3	71	0	0	0	-O	0	40	Ū	40	121
08:30 AM	5	0	- 4	9	0	69	3	72	0	0	0	Ð	3	31	0	34	115
08:45 AM	4	0	9	13	0	53	3	56	0	0	0	0	2	30	0	32	101
Total	15	0	30	45	0	269	13	282	0	0	0	0	7	151	0	158	485
Grand Total	51	0	71	122	0	581	21	602	0	0	0	0	11	273	0	284	1008
Appren % Total %	41.8	0	58.2	12.1	0	96.5 57.6	2.1	59.7	0	0	0	0	1.1	27.1	0	28.2	

- 2000 - 2000	Colonial Springs Rd From North				Factory Lane From East				From South				Factory Lane From West				
Start Time	ime Left Thru Right App Tatal Left Thru Right App Tatal		App. Total	Left	Thru	Right	App: Total	Left	Thru	Right	Ace: Total	Int. Total					
Peak Hour Anal	ysis From	m 07:00	AM to	08:45 AM	- Peak	1 of 1											
Peak Hour for E	ntire Inte	ersectio	n Beair	ns at 07:30	AM (
07:30 AM	7	0	14	21	0	85	3	88	0	0	0	0	1	38	0	39	148
07:45 AM	13	0	.9	22	0	90	4	94	0	0	0	0	3	39	0	42	158
08:00 AM	4	0	.9	13	0	79	4	63	0	0	0	0	2	50	0	52	148
08:15 AM	2	0	. 8	10	0	68	3	71	0	0	0	0	0	40	0	40	121
Total Volume	26	0	40	66	0	322	14	336	0	0	0	0	6	167	0	173	575
% App. Total	39.4	0	60.6		0	95.8	4.2		0	0	0		3.5	96.5	0	. 07 S. C.	
PHF	.500	000	714	.750	000	894	875	894	000	000	000	000	500	835	000	832	910

							Group	s Printed-	Unshift	ted							
	0	oloniai From	Springs North	Rd		Facto	ry Lane n East		1209020	From	South			Facto	ry Lane n West		
Start Time	Left	Thru	Right	App. Tatal	Left	Thru	Right	App. Total	Left	Thru	Right	App Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	0	4	16	0	59	5	64	0	0	0	0	6	73	0	79	159
04:15 PM	6	0	5	11	0	61	5	66	0	0	0	0	3	109	0	112	189
04:30 PM	8	0	4	12	0	79	6	84	0	0	0	0	8	132	0	140	236
04:45 PM	18	0	4	22	0	82	6	88	0	0	0	0	3	94	0	97	207
Total	44	0	17	61	0	281	21	302	0	0	0	0	20	408	0	428	791
05:00 PM	17	0	5	22	0	90	11	101	0	0	σ	0	11	125	0	136	269
05:15 PM	17	0	6	23	0	93	8	101	0	0	0	0	8	125	0	133	267
05:30 PM	10	0	4	14	0	84	9	93	0	0	0	0	6	94	0	100	207
05:45 PM	11	0	7	18	0	82	6	88	0	0	0	0	15	127	0	142	248
Total	55	0	22	77	0	349	34	383	0	0	0	0	40	471	0	511	971
Grand Total	99	0	39	138	0	630	55	685	σ	D	0	0	60	879	ū	939	1762
Apprch % Total %	71.7	0	28.3	7.8	0	92 35.8	31	38.9	0	0	0	0	64 34	93.6 49.9	0	53.3	

	C	olonial From	Springs North	Rd.		Facto	ry Lane n East		1	From	South			Facto	ry Lane n West		
Start Time	Left	Thru	Right	App. Tetal	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Anal	ysis Fro	m 04:00	PM to	05:45 PM	- Peak	1 of 1					-		_				
Peak Hour for E	intire Int	ersectio	n Begin	is at 05:00	PM												
05:00 PM	17	0	5	22	0	90	11	101	0	0	0	0	11	125	0	136	259
05:15 PM	17	0	6	23	0	93	8	101	0	0	0	0	8	125	0	133	257
05:30 PM	10	0	4	14	0	84	9	93	0	0	0	0	6	94	0	100	207
05:45 PM	11	0	7	18	0	82	6	88	0	0	0	0	15	127	0	142	248
Total Volume	55	0	22	77	0	349	34	383	0	0	0	Ð	40	471	0	511	971
% App. Total	71.4	0	28.6		0	91.1	8.9		0	0	0		7.8	92.2	0	- 833	1.00
PHF	.809	000	786	837	000	.938	773	.948	.000	000	000	.000	.667	927	.000	900	937





File Name : FactoryLnAM rot Site Code : 00022515 Start Date : 2/25/2015 Page No : 1

							Group	s Printed-	- Unshit	fted							
	Ter	race S From	prings (North	Drive		Facto	ny Lane n East		Tei	From	prings (South	Drive		Facto	ry Lane n West		
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM 07:15 AM	4	0	13 18	17 21	1	40 31	1	42 31	26 15	0	D 0	26 16	4	22 18	15	24 27	109
07:30 AM 07:45 AM	13	0	21 19	22 22	0	41	0	41 50	16 18	0	23	18 22	2	23 42	35	28 53	109
Total	11	0	71	82	1	162	1	164	75	2	5	82	13	105	14	132	450
08:00 AM 08:15 AM 08:30 AM 08:45 AM	1 D 1	0000	13 20 16	14 20 17	1 0 0 2	53 40 30	2 1 2	56 41 32 37	13 16 15 7	0000	3731	16 23 18	4 6 4 5	42 32 30	5 5 2 5	51 43 36	137 127 103 99
Total	3	Ő	58	61	3	158	5	166	51	Ő	14	65	19	137	17	173	465
Grand Total Apprch % Total %	14 9.8 1.5	000	129 90.2 13.9	143 15.5	12 0.4	320 97 34.6	6 1.8 0.6	330 35.7	126 85.7 13.6	1.4 0.2	19 12.9 2.1	147 15.9	32 10.5 3.5	242 79.3 26.2	31 10.2 3.4	305 33	925

		Times 3	onga Sine Nati			Fig.	oyillane. N Kast			Terrest S	oringa Grine Sauth			Fect	on Lans		
Eal The	Let	Thu	There .	Ann. Tana													
Peak Hour Anal	ysis Fro	m 07:0	O AM to	08:45 AM	- Peak	1 of 1											
Peak Hour for E	intire Int	ersectio	m Begin	s at 07:30	MAC												
07:30 AM	1	0	21	22	0	41	0	41	16	0	2	18	2	23	3	28	109
07:45 AM	3	0	19	22	0	50	0	50	18	1	3	22	6	42	5	53	147
08:00 AM	1	0	13	14	1	53	2	56	13	0	3	16	4	42	5	51	137
08:15 AM	0	0	20	20	0	40	1	41	16	0	7	23	6	32	5	43	127
Total Volume	5	0	73	78	1	184	3	188	63	1	15	79	18	139	18	175	520
% App. Total	6.4	0	93.6		0.5	97.9	1.6		79.7	1.3	19		10.3	79.4	10.3		
PHF	.417	.000	869	.886	250	.868	.375	.839	875	250	536	.859	.750	.827	900	825	.884

Counted by: Andy Wolak

File Name : FactoryLnPM rot Site Code : 00022415 Start Date : 2/24/2015 Page No : 1

							Group	s Printed-	- Unshit	fted							
	Tei	race S From	prings (1 North	Drive		Facto Fror	ry Lane n East	6	Те	rrace S From	prings [South	Drive		Facto Fron	ny Lane n West	tin i	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	6	7	2	44	3	49	11	0	1	12	17	54	12	83	151
04:15 PM	5	0	11	16	0	50	0	50	5	0	0	5	14	74	21	109	180
04:30 PM	1	D	7	8	1	37	4	42	6	0	1	7	20	65	11	96	153
04:45 PM	0	0	10	10	3	52	0	55	7	1	3	11	20	52	18	90	166
Total	7	0	34	41	6	183	7	196	29	1	5	35	71	245	62	378	650
05.00 PM	1	0	4	5	0	67	5	72	9	0	2	11	8	52	15	75	163
05:15 PM	3	1	13	17	4	75	8	87	6	0	1	7	26	72	16	114	225
05:30 PM	1	D	9	10	3	93	7	103	5	0	1	6	17	66	23	106	225
05:45 PM	1	0	10	11	2	56	4	62	6	0	4	10	23	64	12	99	182
Total	6	1	36	43	9	291	24	324	26	0	8	34	74	254	66	394	795
Grand Total	13	1	70	84	15	474	31	520	55	.1	13	69	145	499	128	772	1445
Total %	0.9	0.1	63.3 4.8	5.8	29	32.8	2.1	36	3.8	0.1	0.9	4.8	16.8	34.5	10.0	53.4	

	ų	Terrace 3 Plan	orings Drive Natio			Fact Fito	on Lane. n Elest			Terrace I From	Springs Onlie 14 Sauth			Pact Pro	on Lane n Riest		
Start Time	Let	Thu	Ret	Ans. Tate													
Peak Hour Anal	lysis Fro	m 04:0	D PM to	05:45 PN	1 - Peak	1 of 1					10				· · · · · · · · · · · · · · · · · · ·		
Peak Hour for E	Intire Int	ersectio	n Begin	is at 05:0	0 PM												
05:00 PM	1	0	4	5	0	67	5	72	9	0	2	11	8	52	15	75	163
05:15 PM	3	1	13	17	4	75	8	87	6	0	1	7	26	72	16	114	225
05:30 PM	1	0	9	10	3	93	7	103	5	0	1	6	17	66	23	106	225
05:45 PM	1	0	10	11	2	56	4	62	6	0	4	10	23	64	12	99	182
Total Volume	6	1	36	43	9	291	24	324	26	0	8	.34	74	254	66	394	795
% App. Total	14	2.3	83.7		2.8	89.8	7.4		76.5	0	23.5	A STATE	18.8	64.5	16.8		
PHF	.500	.250	.692	.632	.563	.782	.750	.786	722	.000	500	.773	.712	.882	.717	.864	.883





File Name : FactoryLnOldHenryAM Site Code : 05121522 Start Date : 5/13/2015 Page No : 1

									Groups	s Printed	I- Uns	hifted									
l.		Old Fi	Henry rom N	Road orth			Old F	Henry rom E	Road ast	S		Fr	om So	outh			Fa F	ctory l rom W	lane /est		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	Acc. Total	Int Total
27.00 AM	122	D	8	0	130	٥	18	10	0	28	0	0	D	0	0	:3	27	D	0	30	188
07:15 AM	135	0	17	0	152	0	10	25		30		0	0	0	0	1	45	0	0	49	231
07:39 AM	133	Ð	13	0	146	Ű	19	16	0	35	8	0	0	0	0	- 4	36	0	- D	40	221
07:45 AM	105	0	12	0	117	0	39	16		55	0	0	D	0	0	5	42	0	1	47	219
Total	495	Ŭ	50	0	545	0	84	62	<u>_</u> 0	145	8	0	D	0	Ŭ	13	153	0	0	166	857
05:00 AM	112	D	11	5	123	0	18	25		43	0	0	D	0	D	2	42	a	0	44	210
08:15 AM	90	0	10		100	0	23	16		39			D	0	0	5	44	0	0	49	188
08:30 AM	84	0	13		97	0	14	23	0	37		5	Ð	0	D	. 4	31	G	0	35	169
08:45 AM	84	0.	14		98	0	21	23		44	6	0	0	0	D	4.	39	0	. 0	43	185
Total	370	0	48	0	418	0	78	-87	- 10	153		- 0	0	0	0	15	158	0	0	171	752
Grand Total	865	D	96	2	963	۵	160	149		309		ē	D	0	D	28	309	đ	0	337	1609
Approh %	89.8	D	10.2	0		0	51.8	48.2		02101	0	8	D	đ	201	5.3	91.7	Ū	0		
Total %	53.8	0	6.1		59.9	ū	9.9	9.3		19.2		2	D	0	D	1.7	19.2	- 6	. D	20.9	£

		Ole	d Henry I From No	Road rth			0	d Henry From Es	Roed ist			1	From So	uth (<u>^</u>	F	actory Li From We	sne ist		
Start Time	Left	Thru	Right	Feds	Acr. Tate					Are 104		87	1 m		Acri Tatel	1	S			Act Table	10.704
Peak Hour A	nalysis	From	07:00	AM to	08:45 A	M - Pe	ak 1 o	f1													
Peak Hour fo	or Entir	e Inters	section	Begin	s at 07:	15 AM															
07:15 AM	135	0	17	Ŭ.	152	0	10	20	0	30	0	0	- 0	0	0	1	48	0	0	49	231
07:30 AM	133	0	13	0	146	0	19	16	0	35	0	0	0	0	0	4	36	0	0	40	221
07:45 AM	105	0	12	0	117	0	39	16	0	55	0	0	0	0	0	5	42	0	0	47	219
08:00 AM	112	0	11	0	123	0	18	25	0	43	0	0	0	0	0	2	42	0	D	44	210
Total Volume	485	0	53	0	538	0	86	77	0	163	0	0	0	0	0	12	168	0	0	180	881
% App. Total	90.1	0	9.9	0		0	52.8	47.2	0		0	0	0	0	_	6.7	93.3	0	0		
PHF	.898	000	779	000	885	.000	551	770	.000	741	000	000	000	000	.000	600	.875	.000	.000	918	953

Counted by: Andy Wolak

File Name : FactoryLnOldHenryPM Site Code : 05111511 Start Date : 5/12/2015 Page No : 1

									Groups	s Printed	- Uns	hifted									
		Old Fi	Henry rom N	Road orth			Old F	Henry rom E	Road ast			F	rom Se	outh			Fa	rom W	Lane /est		
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	Spp. Total	Int. Total
04 00 PM 04 16 PM 04 30 PM 04 45 PM Total	48 43 51 47 187	0000	0 14 14 37	00000	55 52 65 52 224	0 0 0 0	59 33 38 41 148	74 71 75 257	0000	113 104 112 118 445	0000	00000	0000	0000	0 0 0 0	21 1 21 10 21 10 21 10 21 10 21 10 21	27 42 57 56	0000	00000	40 53 70 71 251	217 209 255 239 920
05:00 PM 05:15 PM 05:30 PM 05:45 PM Total	40 50 34 55 193	000000000000000000000000000000000000000	12 7 9 11 39	00000	58 62 43 89 292	0 0 0 0	60 84 85 71 290	86 91 100 85 382	0000	138 175 188 198 852	00000	00000	0000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	30 20 25 33 110	00 01 06 06 247	0000	0000	85 99 90 90 985	279 320 318 324 1247
Orand Total Approh % Total %	380 83.3 17.5	000	18.7 18.7 3.5	0.00	455 21	000	438 29.9 20.2	659 60.1 30.4	000	1097 50.0	000	000	0	000	0 17	185 20.2 8.5	426 89.7 19.5	000	010	e14 28.5	2167

		Ók	d Hanny I From No	Road			0	e Henry From Ea	Road st		1		From So	ani :				From We	ana Ist		8
Start Time	Left	Thru	Right	Peds	Age True					App. Treat.					Act from					App From	10.704
Peak Hour A	nalysis	From	04:00	PM to	05:45 P	M - Pe	ak 1 o	61	· · · · · ·	1.1.1.1.1.1.1											
Peak Hour fo	or Entir	e Inter	section	Begin	s at 05:	00 PM															
05:00 PM	46	0	12	ŏ	58	0	50	86	0	136	0	0	0	0	0	30	55	0	0	85	279
05 15 PM	55	0	7	0	62	0	84	91	0	175	0	0	0	0	0	28	61	0	0	89	326
05.30 PM	34	0	9	0	43	Ū.	85	100	ö	185	0	0	Ū.	0	0	25	65	Ū.	Ö	90	318
05.45 PM	58	0	11	0	69	0	71	85	0	156	0	0	0	0	0	33	66	0	0	99	324
Total Volume	193	0	39	Ő	232	0	290	362	0	652	0	0	0	0	0	116	247	0	Ó	363	1247
% App. Total	83.2	0	16.8	0		0	44.5	55.5	0		0	0	0	0		32	68	0	0		
PHF	832	GDD	813	000	841	.000	853	905	.000	881	000	000	.000	.000	000	879	.936	000	.000	.917	.956



TABLE 8
WEEKDAY PEAK HOUR COUNTS
Old Henry Road @ Arnold Palmer Boulevard/Hamilton Springs Drive
Old Henry Crossing Traffic Study

Nov-14		2	Old Henry	y Parkway			Arr	old Palmer B	3lvd	Rar	nilton Spring	s Dř	To	tals
Time Interval	EB Luft	EB Through	CB Right	WB Left	WB Through	WB Right	NB Left	NB Through	NB Night	5B Left	SB Through	SB Right	Quarter Hour	Hourly
7:00-7:15 AM	0	13	1	2	160	0	29	0	2	0	0	0	207	
7:15-7:30 AM	0	18	4	8	186	0	25	0	3	Ø	0	0	244	
7:30-7:45 AM	0	45	5	3	147	0	34	0	2	0	0	1	242	
7:45-8:00 AM	0	39	-6	8	149	0	29	0	6	0	0	2	239	932
8:00-8:15 AM	0	46	12	6	131	0	29	C	4	0	0	0	228	953
8:15-8:30 AM	1	36	10	3	109	0	17	0	5	0	0	2	181	890
8:30-8:45 AM	0	19	13	3	125	0	22	0	з	0	0	0	185	833
8:45-9:00 AM	1	39	12	5	101	0	26	0	11	1	0	0	196	790
TOTAL	2	255	63	38	1108	0	211	0	39	1	0	5	1722	
2014 A.M. PEAK HR	0	148	27	25	613	0	117	0	20	0	0	3		5
2016 A.M. PEAK HR	0	154	28	26	638	0	122	0	21	0	0	3	1	
2018 A.M. PEAK HR	0	160	29	27	664	0	127	0	22	0	0	3		
4:00-4:15 AM	0	88	17	9	51	0	18	1	3	0	0	2	199	
4:15-4:30 AM	1	114	16	3	59	0	18	0	3	1	0	0	215	
4:30-4:45 AM	0	90	32	б	77	0	19	0	4	0	0	0	228	
4:45-5:00 AM	1	140	17	8	74	0	11	0	10	0	0	1	262	904
5:00-5:15 AM	1	179	20	9	67	0	17	0	10	0	0	1	304	1009
5:15-5:30 AM	1	163	23	9	90	1	15	0	5	0	0	1	298	1092
5:30-5:45 AM	0	149	22	9	63	0	18	G	2	0	0	1	264	1128
5:45-6:00 AM	1	137	18	3	67	0	17	0	9	0	0	0	252	1118
TOTAL	5	1060	165	56	548	1	133	1	46	1	0	6	2022)
2014 P.M. PEAK HR	3	631	82	35	284	1	61	0	27	0	0	4		
2016 P.M. PEAK HR	3	656	85	36	295	1	63	0	28	0	0	4	1	
2018 P.M. PEAK HR	3	683	89	38	307	1	66	0	29	0	0	4		



JACOBS	
11940 Highway 42, Suite 1 Goshen, KY 40026	

File Name : OldHenryBushFarmAM Site Code : 00062151 Start Date : 6/2/2015 Page No : 1

							Group	is Printed-	Unshit	ted							
		Old He From	nry Roa 1 North	d	E	Bush From	arm Roa n East	bd		Old He From	nry Roa South	bd		Bush F. From	arm Ro: n West	ad	
Start Time	Left	Thru	Right	Apg. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	142	0	152	121	0	5	126	2	16	16	34	0	1	10	11	323
07:15 AM	8	169	1	178	119	0	9	128	2	12	36	50	0	0	. 9	9	365
07:30 AM	8	150	0	158	155	0	12	167	2	33	34	69	0	3	19	22	416
07:45 AM	14	158	0	172	161	1	9	171	1	20	42	63	2	1	14	17	423
Total	40	619	1	660	556	1	35	592	7	81	128	216	2	5	52	59	1527
08-00 AM	24	147	- 9t	172	153	2	11	166	2	34	29	65	1	1	16	18	421
08:15 AM	23	149	0	172	146	1	5	152	2	28	33	63	0	0	23	23	410
08:30 AM	14	139	0	153	127	0	7	134	3	25	62	90	0	2	12	14	391
08:45 AM	46	126	2	174	149	1	13	163	- 4	31	74	109	1	3	11	15	461
Total	107	561	3	671	575	4	36	615	11	118	198	327	2	6	62	70	1683
Grand Total	147	1180	4	1331	1131	5	71	1207	18	199	326	543	. 4	11	114	129	3210
Apprch %	11	88.7	0.3	2344	93.7	0.4	5.9	문화되는	3.3	36.6	60	2.8	3.1	8.5	88.4		- Althia
Total %	4.6	36.8	0.1	41.5	35.2	0.2	2.2	37.6	0.6	6.2	10.2	16.9	0.1	0.3	3.6	4	

	0	Old Her From	nry Roa North	đ	1	Bush Fa Fron	arm Roa n East	id		Old He From	nry Roa South	d		Bush F Fron	arm Roa n West	ad	1
Start Time	Left	Thru	Right	App Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App Total	Int. Total
Peak Hour Anal	ysis Fro	m 07:00	AM to	08.45 AM	- Peak	1 of 1	1						1.11		. Gi		
Peak Hour for E	intire Int	ersectio	n Begin	is at 08:00	MA												
08:00 AM	24	147	· · · · · • •	172	153	2	11	166	2	34	29	65	1	1	16	18	421
08:15 AM	23	149	0	172	146	1	5	152	2	28	33	63	0	0	23	23	410
08:30 AM	14	139	0	153	127	0	7	134	3	25	62	90	0	2	12	14	391
08:45 AM	46	126	2	174	149	1	13	163	4	31	74	109	1	3	11	15	461
Total Volume	107	561	3	671	575	4	36	615	11	118	198	327	2	6	62	70	1683
% App. Total	15.9	83.6	0.4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	93.5	0.7	6.9		3.4	36.1	60.6	10.042	2.9	8.6	88.6		100.08
PHF	.582	.941	.375	.964	.940	500	.692	926	688	868	.669	750	.500	.500	.674	.761	.913

							Group	s Printed-	Unshill	fled							
	1	Old He From	nry Roa 1 North	iđ	1	Bush Fa Fron	arm Roa n East	ad		Old He From	nry Roa South	d	6	Bush From	arm Roa 1 West	ad]
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	19	57	.1	77	97	4.	21	122	13	99	105	217	0	.1	4	5	421
04:15 PM	12	65	1	78	89	3	11	103	5	93	108	206	0	Û	7	7	394
04:30 PM	20	65	1	86	67	0	15	82	15	126	99	240	0	1	7	8	416
04:45 PM	32	83	2	117	78	0	15	93	10	134	123	267	2	0	9	11	488
Total	83	270	5	358	331	7	62	400	43	452	435	930	2	2	27	31	1719
05:00 PM	27	91	2	120	107	1	11	119	25	175	145	345	0	3	6	9	593
05:15 PM	16	86	3	105	81	1	31	113	15	185	141	341	1	3	8	12	671
05:30 PM	18	81	2	101	77	1	12	90	13	175	131	319	2	3	12	17	527
05:45 PM	22	80	2	104	86	2	11	99	7	161	135	303	1	2	12	15	521
Total	83	338	9	430	351	5	65	421	60	696	552	1308	4	11	38	53	2212
Grand Total Apprch %	166 21.1	608 77.2	14 1.8	788	682 83.1	12 1.5	127	821	103 4.6	1148 51.3	987 44.1	2238	7.1	13	65 77.4	84	3931
Total %	4.2	15.5	0.4	20	17.3	0.3	3.2	20.9	2.6	29.2	25.1	56.9	0.2	0.3	1.7	2.1	

		Old Her From	nry Road North	1	3	Bush Fa Fron	arm Roa n East	ıd		Old He From	nry Roa South	d		Bush F From	arm Roa 1 West	id	
Start Time	Left	Thnu	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App Total	Left	Thru	Right	Ado, Total	Int Total
Peak Hour Anal	ysis Fro	m 04:00	PM to I	05:45 PM	- Peak	1 of 1			12 10 10 10	- 100 VS		1000 1000	1111111111	10.000	10.000		2.11.11.1.1.1.1
Peak Hour for E	intire Int	ersectio	n Begins	s at 05:00	PM												
05:00 PM	27	91	2	120	107	1	- 11	119	25	175	145	345	0	3	6	. 9	593
05:15 PM	16	86	3	105	81	1	31	113	15	185	141	341	1	3	8	12	671
05:30 PM	18	81	2	101	77	1	12	90	13	175	131	319	2	3	12	17	527
05:45 PM	22	80	2	104	86	2	11	99	7	161	135	303	1	2	12	15	521
Total Volume	83	338	. 9	430	351	5	-65	421	60	696	552	1308	4	11	38	53	2212
% App. Total	19.3	78.6	2.1		83.4	1.2	15.4		4.6	63.2	42.2	· · · · · · · · · · ·	7.5	20.8	71.7		
PHF	.769	929	.750	.896	.820	625	.524	.884	.600	.941	.952	.948	.500	.917	.792	.779	.933



Appendix B. Highway Capacity Software Printouts

		HCS 2	010 S	ignali	zed l	nterse	ectior	Res	ults S	umm	ary				
Constal Inform										tion Inf				4.0.01	
General Inform	ation	1 and 1						-	intersec	tion Int	ormatic	n	1	411	
Agency		Jacobs		Anabia	in Data	141.24	2045	-	Duration	n	0.25 Other		- 2		
Analysi		D Zimmerman		Analys	as Date		, 2015		Alea iyp	e	loos		-4		1
Junsalction	_	Caster Lans		1ime P	renioa	AM Pe	вак		PHF	Decisi	0.85	20	- IP -		
Intersection		Factory Lane		Analys	as rear	12015		/	Analysis	Period	12 13	30	1		- 10 B
File Name	No.	Pactory AM 10 XUS											-		
Project Descrip	tion	Ball Homes											1 .		Party -
Demand Inform	nation				EB			WE	1		NB	(SB	
Approach Move	ment			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), ve	h/h			39	40	120	505	76	38	132	432	189	17	974	19
1. CON							Married Works	Sec. 1		and a second		- C.	3 ⁰⁰ - 07	-14 	<u> </u>
Signal Informa	tion	1			5	4	2154		¥.,	2		< /	k I		
Cycle, s	88.1	Reference Phase	2	1	25	1251	* *q	č –	SR.	6	٦	1 7	•••	" [T]	- ÷
Offset, s	0	Reference Point	End	Green	1.4	5.0	30.6	15.0	0 10.0	0.0		t	Hard I		~
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	3.5	0.0	4.3	4.0	4.0	0.0		× -	¥.		Y
Force Mode	Fixed	Simult, Gap N/S	On	Red	3.0	0.0	1.6	12.2	3.5	0.0	_				
Timer Results	er Results gned Phase					EBT	WB	1	WBT	NB		NBT	SB		SBT
Assigned Phase	gned Phase					4	3		8	1	_	6	5		2
Case Number	e Number					7.3	1.0		3.0	1.1		3.0	1.1		4.0
Phase Duration	ase Duration, s					17.5	21.3	2	38.7	13 ()	41.5	7.9		36.5
Change Period	ange Period, (Y+Re), s					7.5	6.2		7.5	6.5		5.9	6.5		5.9
Max Allow Head	dway (/	(IAH), s		-		4.4	4.0		4.4	4.0		3.7	4.0		3.7
Queue Clearan	ce Time	e (a₀), s			-	8.2	17.0	0	4.5	6.3		9.6	2.6		24.3
Green Extensio	n Time	(Ge). 5			-	1.4	0.0		1.4	0.4		6.5	0.0	_	6.3
Phase Call Prol	bability				11 22	1.00	1.00	0	1.00	0.97	7	1.00	0.3	5	1.00
Max Out Probal	bility			1		0 00	1.00	0	0.00	0.00)	0.01	0.00)	0.04
				_	50			14.00		-	ALC:			00	
Movement Gro	oup Re	suits			EB			VVB	0		NB	0		58	0
Approach Move	ment			7	1	R	L	0	R	L	0	R	L	1	10
Assigned wove	anena Dete (u)	i sash fi		<i>L</i> .	4	14	500	0	10	100	0	10	0	2	12
Adjusted Flow F	tate (V	, venn			1600	120	1700	1001	40	139	400	199	10	1004	1021
Aujusteu Satura	Time	ow reate (a), veninnin		-	2.0	6.2	15.0	2.5	1004	1122	7.8	1084 E.A	0.6	22.2	22.2
Cucle Oneue C	loarance (§	a Time (a) e		-	4.0	8.2	15.0	2.5	1.4	4.3	7.6	5.4	0.6	22.3	22.3
Green Ratio (a)	(C)	te nine (ge), a			0.11	0.10	0.31	0.25	0.97	0.43	0.40	0.57	0.36	0.35	0.35
Capacity (c) ye	h/h				245	298	490	666	590	285	1449	916	390	653	649
Volume-to-Can	acity R	atio (X)			0.339	0.424	1 107	0 120	0.068	0.525	0.314	0.217	0.046	0.803	0.803
Available Cana	city (c-)	veh/b			776	840	480	854	749	946	2234	1266	767	1174	1166
Back of Queue	(Q), ve	h/in (50th percentile)	1		1.6	2.3	12.4	1.0	0.5	1.7	2.9	1.6	0.2	9.4	9.3
Queue Storage	Ratio (RQ) (50th percentile)		0.08	0.12	1.49	0.12	0.07	0.10	0.07	0.13	0.01	0.24	0.24
Uniform Delay ((dr), s/v	eh .			36.3	31.7	31.1	19.2	17.9	19.7	17.9	9.1	18.2	26.1	26.1
Incremental De	lay (da)	, s/veh			1.0	1.2	73.5	0.1	0.0	1.6	0.1	0.1	0.0	2.0	2.0
Initial Queue De	elay (d)), s/veh			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ntrol Delay (d), s/veh					32.8	104.6	19.3	18.0	21.3	18.0	9.2	18.2	28.1	28.1
Level of Service	vel of Service (LOS)					C	F	B	В	С	В	A	В	C	C
Approach Delay	, s/veh	/LOS		34.6	5	C	88.8	8	F	16.4	+	В	27.9	2	С
Intersection Del	lay, s/ve	eh / LOS			-	39	9.7						D		
11	10000			0.0					50	-			_		
Multimodal Re	sults				EB		1	WB			NB	-		SB	
Pedestrian LOS	6 Score	/LOS		3.0		C	2.8		C	2.4	_	В	2.3		8
Bicycle LOS Sc	ore / L(os		0.8		A	1.6		A	1.1		A	1.4		A

Copyright © 2015 University of Florida, All Rights Reserved.

HC5 2010*** Streets Version 6.65



		HCS 2	010 S	ignali	zed l	nterse	ectior	n Res	ults S	umm	ary				
General Inform	nation	~							ntersec	tion Inf	ormatio	on	2	111	h la
Agency		Jacobs						1	Duration,	h	0.25			***	
Analyst		D Zimmerman		Analys	is Date	e Jul 21	, 2015	/	Area Typ	e	Other		.∆ →		 ▲ ▲ ★
Jurisdiction				Time P	eriod	AM Pe	eak		PHF		0.95		*		÷
Intersection		Factory Lane		Analys	is Year	2022	No Build	d I	Analysis	Period	1> 7:	00	1 4		Y C
File Name		Factory AM 22 NB.:	xus											httr	
Project Descrip	tion	Ball Homes											h	41441	2.1
Demand Inform	nation				EB			WE	2		NB			SB	
Approach Move	ment			1	Т	R	1 1	T	, R	1 1	T	R	1 1	T	R
Demand (v) ve	h/b			46	47	141	503	20	45	155	508	222	20	1144	22
Demand (V), Ve	11/11			40	47	141	383	09	45	155	508	222	20	1144	22
Signal Informa	tion				L.	~	26		5	5					
Cycle, s	99.7	Reference Phase	2		20	550	2 <u>5</u> 1	2	ĭ₩.	è	_	∖⊥শ		∠ →-	- € .
Offset, s	0	Reference Point	End	Green	1.8	5.8	39.1	15 (0.0	- +	+	2	 3	<u> </u>
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	3.5	0.0	4.3	4.0	4.0	0.0	- L	<u> </u>	512		\rightarrow
Force Mode	redinated Yes Simult. Gap E/W O Mode Fixed Simult. Gap N/S O Results Image: Comparison of the set of		On	Red	3.0	0.0	1.6	2.2	3.5	0.0		5	G	7	8
	Mode Fixed Simult. Gap N/S Or Results Ned Phase Number Duration, s In Period, (Y+Rc), s														
Timer Results	er Results igned Phase e Number			EBL		EBT	WB	L	WBT	NB	-	NBT	SBL	-	SBT
Assigned Phase	signed Phase se Number					4	3		8	1		6	5		2
Case Number	se Number ase Duration, s					7.3	1.0		3.0	1.1		3.0	1.1		4.0
Phase Duration	ase Duration, s					19.4	21.2	2	40.6	14.1		50.9	8.3		45.0
Change Period,	ange Period, (Y+Rc), s					7.5	6.2		7.5	6.5		5.9	6.5		5.9
Max Allow Head	ange Period, (Y+Rc), s ax Allow Headway (<i>MAH</i>), s					4.4	4.0		4.4	4.0		3.7	4.0		3.7
Queue Clearan	ce Time	e (g₅), s				10.2	17.0)	5.5	7.2		11.6	2.7		31.5
Green Extensio	ange Pendu, ($r + \pi_o$), s ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_e), s reen Extension Time (g_e), s hase Call Probability					1.6	0.0		1.6	0.5		8.4	0.0		7.6
Phase Call Pro	signed Phase ase Number hase Duration, s hange Period, ($Y+R_o$), s ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_e), s reen Extension Time (g_e), s hase Call Probability ax Out Probability ovement Group Results oproach Movement signed Movement diverted Elser Data (c_i), esh(b_i					1.00	1.00)	1.00	0.99	9	1.00	0.44	t i	1.00
Max Out Proba	ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_s), s reen Extension Time (g_e), s nase Call Probability ax Out Probability ovement Group Results					0.00	1.00)	0.00	0.00)	0.03	0.00)	0.17
Movement Gro	hase Duration, s hange Period, (Y+ R_c), s ax Allow Headway (MAH), s heue Clearance Time (g_c), s heen Extension Time (g_c), s hase Call Probability hase Call Probability ax Out Probability by proach Movement hisigned Movement hisited Flow Rate (y), yeb/h				EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	T	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow F	Rate (v)	, veh/h			98	148	624	94	47	163	535	234	21	616	612
Adjusted Satura	ation Flo	ow Rate (s), veh/h/ln			1603	1594	1792	1881	1594	1792	1791	1594	1792	1881	1868
Queue Service	Time (g	fs), S			3.5	8.2	15.0	3.5	2.0	5.2	9.6	6.8	0.7	29.5	29.5
Cycle Queue C	learanc	e Time (g₀), s			5.5	8.2	15.0	3.5	2.0	5.2	9.6	6.8	0.7	29.5	29.5
Green Ratio (g/	(C)				0.12	0.20	0.29	0.33	0.35	0.48	0.45	0.60	0.41	0.39	0.39
Capacity (c), ve	eh/h				245	312	429	624	557	253	1616	959	398	738	733
Volume-to-Capa	acity Ra	atio (X)			0.400	0.476	1.454	0.150	0.085	0.644	0.331	0.244	0.053	0.834	0.834
Available Capa	city (c∎)	, veh/h			681	761	429	755	668	835	1975	1119	725	1038	1030
Back of Queue	(Q), vel	h/In (50th percentile))		2.2	3.2	28.8	1.5	0.7	2.1	3.7	2.1	0.3	12.9	12.9
Queue Storage	Ratio (RQ) (50th percentile	:)		0.11	0.16	3.45	0.18	0.10	0.13	0.09	0.17	0.02	0.33	0.32
Uniform Delay ((d1), s/v	eh			41.0	35.6	35.8	23.4	21.8	21.6	17.7	9.3	17.7	27.4	27.4
Incremental De	niform Delay (d1), s/veh cremental Delay (d2), s/veh				1.3	1.4	216.9	0.1	0.1	2.7	0.1	0.1	0.1	3.9	4.0
Initial Queue De	tial Queue Delay (d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ontrol Delay (d), s/veh				42.3	37.0	252.7	23.6	21.8	24.3	17.8	9.4	17.8	31.3	31.3
Level of Service	vel of Service (LOS)				D	D	F	С	С	С	В	Α	В	С	С
Approach Delay	proach Delay, s/veh / LOS			39.1		D	210.	4	F	16.8	3	В	31.1		С
Intersection De	lay, s/ve	eh / LOS				70).5						E		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	Score	/LOS		3.0		С	2.8		С	2.4		В	2.3		В
Bicycle LOS Sc	ore / LC	DS		0.9		А	1.8		А	1.3		А	1.5		А

HCS 2010[™] Streets Version 6.65



		HCS 2	010 S	ignali	zed l	nterse	ection	n Res	sults S	umm	ary				
General Inform	nation	×							Intersec	tion Inf	ormatio	on		114	x la
Agency		Jacobs		_					Duration	h	0.25			***	
Analyst		D Zimmerman		Analys	is Date	e Jul 21	, 2015		Area Typ	e	Other		.∆ →		• <u>*</u>
Jurisdiction				Time F	Period	AM Pe	eak		PHF		0.95		*		÷ -
Intersection		Factory Lane		Analys	is Year	2022	Build		Analysis	Period	1> 7:(00	14		5 C
File Name		Factory AM 22 B.xu	IS											httr	
Project Descript	tion	Ball Homes											h	141491	21
Demand Inform	nation				EB			WE	3		NB			SB	
Approach Move	ment			L	T	R	L	Т	R	L	T	R	L	Т	R
Demand (v), ve	h/h			46	53	141	697	10	5 53	155	508	253	23	1144	22
Signal Informa	tion		-		5	~	245			2					_
Cycle, s	e, s 100.1 Reference Phase t, s 0 Reference Point E ordinated Yes Simult. Gap E/W C e Mode Fixed Simult. Gap N/S C r Results ned Phase Number e Duration, s ge Period, (Y+Re), s Mode Simult Simult. Simult		2		25	- N 517	Z \Sî	2	πR.	2	٦)	2	` ┍;-	€ ₄
Offset, s	bach Movement and (v), veh/h al Information al Information		End	Green	2.0	5.7	39.4	15.	0 12.0	0.0	Ť	Ť			ĸ
Uncoordinated	and Information oach Movement and (v), veh/h al Information e, s 100.1 Reference Phase 2 et, s 0 Reference Point E bordinated Yes Simult. Gap E/W C e Mode Fixed Simult. Gap N/S C er Results gned Phase e Number the Duration, s nge Period, (Y+ R_c), s Allow Headway (MAH), s ue Clearance Time (g_c), s an Extension Time (g_c), s e Call Probability Out Probability Out Probability ement Group Results oach Movement sted Flow Rate (v), veh/h sted Saturation Flow Rate (s), veh/h/ln		On	Yellow	3.5	0.0	4.3	4.0	4.0	0.0		_ _	∇		7
Force Mode	and Information oach Movement and (v), veh/h al Information e, s 100.1 e, s 100.1 Reference Phase 2 er Results Simult. Gap E/W C er Results Fixed Simult. Gap N/S C er Clearance Time (gs), s Fixed Clearance Time (gs), s Fixed Clearance Time (gs), s Fixed Clearance Time (gs), s er Call Probability Out Probability Out Probability Fixed Clearance Time (gred Movement Group Results Fixed Clearance (v), veh/h exter Flow Rate (v), veh/h Sted Flow Rate (v), veh/h Sted Flow Rate			Red	3.0	0.0	1.6	2.2	3.5	0.0	_	5	6	7	8
Timor Poculto	nal Information le, s 100.1 Reference Phase 2 et, s 0 Reference Point Er oordinated Yes Simult. Gap E/W 0 ce Mode Fixed Simult. Gap N/S 0 er Results igned Phase 0 0 e Number se Duration, s 0 0 se Duration, s se Clearance Time (gs), s 0 en Extension Time (gs), s se Call Probability 0 c Out Probability se cout Probability 0			EDI		EDT	W/P		WPT	ND		NDT	SDI		SDT
Assigned Phase	coordinated Yes Simult. Gap E/W Or rcc Mode Fixed Simult. Gap N/S Or mer Results signed Phase signed Phase signed Phase se Number ase Duration, s ange Period, (Y+Re), s x Allow Headway (MAH), s eue Clearance Time (ge), s een Extension Time (ge), s ase Call Probability			EBL	-	4	3		8	1	-	6	5	-	2
Case Number	ssigned Phase ase Number nase Duration, s nange Period (Y+R-) s					7.3	1.0	-	3.0	1.1		3.0	1.1		4.0
Phase Duration	ase Number nase Duration, s nange Period, (Y+ <i>R</i> c), s					19.5	21.2	2	40.7	14.1		50.9	8.5		45.3
Change Period.	ase Duration, s ange Period, (Y+Rc), s ax Allow Headway (<i>MAH</i>), s					7.5	6.2		7.5	6.5		5.9	6.5		5.9
Max Allow Head	hase Duration, s hange Period, (Y+ R_o), s ax Allow Headway (<i>MAH</i>), s heue Clearance Time (g_o), s					4.4	4.0		4.4	4.0		3.7	4.0		3.7
Queue Clearan	hange Period, (Y+R _c), s ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g _s), s reen Extension Time (c _n) s					10.3	17 ()	6.2	7.2		11.7	2.8		31.6
Green Extensio	hase Duration, s hange Period, (Y+ R_o), s ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_s), s reen Extension Time (g_e), s hase Call Probability ax Out Probability					17	0.0	-	1.8	0.5		87	0.0		77
Phase Call Pro	imer Results ssigned Phase ase Number hase Duration, s hange Period, $(Y+R_c)$, s lax Allow Headway (MAH), s ueue Clearance Time (g_s), s ireen Extension Time (g_e), s hase Call Probability lax Out Probability lovement Group Results pproach Movement ssigned Movement djusted Flow Rate (v), veh/h					1.00	1.00)	1.00	0.99	,	1.00	0.49	3	1 00
Max Out Proba	mer Results ssigned Phase ase Number hase Duration, s hange Period, (Y+ R_c), s ax Allow Headway (MAH), s ueue Clearance Time (g_s), s reen Extension Time (g_e), s hase Call Probability ax Out Probability ovement Group Results pproach Movement ssigned Movement djusted Flow Rate (v), veh/h djusted Saturation Flow Rate (s), veh/h/ln ueue Service Time (g_s), s					0.00	1.00)	0.00	0.00)	0.03	0.00)	0.18
	imer Results ssigned Phase ase Number hase Duration, s hange Period, ($Y+R_c$), s lax Allow Headway (MAH), s ueue Clearance Time (g_e), s reen Extension Time (g_e), s hase Call Probability lax Out Probability lovement Group Results pproach Movement ssigned Movement djusted Flow Rate (v), veh/h djusted Saturation Flow Rate (s), veh/h/ln ueue Service Time (g_e), s ycle Queue Clearance Time (g_e), s reen Ratio (g/C)				50			14/D			NID			0.0	
Movement Gro	ax Allow Headway (MAH), s ueue Clearance Time (gs), s reen Extension Time (ge), s hase Call Probability ax Out Probability ovement Group Results oproach Movement ssigned Movement				EB			VVB			NB			SB	
Approach Move	ement				1	R	L		R	L	1	R			R
Assigned Move	ment			- /	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow F	Rate (V)	, veh/h			104	148	734	111	56	163	535	266	24	616	612
Adjusted Satura		w Rate (s), veh/h/ln			1607	1594	1/92	1881	1594	1792	1791	1594	1/92	1881	1868
Queue Service	Time (g	(s), S			3.9	8.3	15.0	4.2	2.4	5.2	9.7	8.0	0.8	29.6	29.6
Cycle Queue C	learance	e ⊓me (g₀), s			5.9	8.3	15.0	4.Z	2.4	5.Z	9.7	8.0	0.8	29.6	29.6
Green Ratio (g/	C)				0.12	0.20	0.29	0.33	0.35	0.48	0.45	0.60	0.41	0.39	0.39
Capacity (c), ve	n/n	tio (M			245	313	423	0.477	560	254	1012	950	400	740	/35
Volume-to-Capa	acity Ra				670	750	1.733	751	0.100	0.043	1067	0.279	722	1022	0.833
Available Capa	(O) vol	, ven/n			0/9	759	423	10	000	0.02	2.7	2.4	0.2	1033	1020
Dueue Storage	(Q), ver Ratio (J	PO) (50th percentile)) .)		2.4	0.16	42.0	0.21	0.0	2.1	0.00	2.4	0.02	0.22	0.22
Uniform Delay (eh)		41.2	35.7	35.8	23.8	21.8	21.7	17.8	9.6	17.7	27.4	27.4
Incremental De	av (d2)	s/veh			14	1.3	339.5	0.1	0.1	21.7	0.1	0.0	0.1	3.9	4.0
Initial Queue De	cremental Delay (d₂), s/veh itial Queue Delay (d₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ontrol Delay (d), s/veh				42.7	37.0	375.3	23.0	21.9	24.4	17.9	9.8	17.7	31.3	31.4
Level of Service	evel of Service (LOS)				D	D	F	20.0 C	C	C.	B	Δ	B	C.	C
Approach Delay	vel of Service (LOS) oproach Delay, s/veh / LOS					D	310	3	F	16.9		B	31.1		c
Intersection Del	av slve	h/105		00.0		10	2.2	~		10.0		0	F		-
Intersection Del						10	- · £								
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	Score	/ LOS		3.0		С	2.8		С	2.4		В	2.3		В
Bicycle LOS Sc	ore / LC	DS		0.9		А	2.0		А	1.3		А	1.5		А

HCS 2010[™] Streets Version 6.65



		HCS 2	010 S	ignali	zed l	nterse	ection	Res	ults S	umm	ary				
General Inform	nation								Intersec	tion Inf	ormatio	on		4.4.4.1	4 L.
Agency		Jacobs						[Duration,	h	0.25			4+4	1
Analyst		D Zimmerman		Analys	is Date	e Jul 21	, 2015	/	Area Typ	e	Other		4		4
Jurisdiction				Time F	Period	PM Pe	eak	F	PHF		0.95				+ +
Intersection		Factory Lane		Analys	is Year	2015		/	Analysis	Period	1> 7:(00	1 19 1		
File Name		Factory PM 15.xus												5110	
Project Descrip	tion	Ball Homes												11441	11
										1					
Demand Inform	nation				EB			WE	}		NB			SB	
Approach Move	ement			L	T	R	L	T	R	L	T	R	L	Т	R
Demand (v), ve	h/h			113	85	197	249	209	9 40	188	965	606	28	424	97
Signal Informa	tion					-		1	5	8				1	
Cycle s	105.5	Reference Phase	2				243	_	A.	÷.		< 🛛			<u> </u>
Offset s	0	Reference Point	End		2	<u>``````</u>	2 <u>``</u> 1		2 1		Ţ	1	2	5	Y 4
Uncoordinated	r, s 103.3 Reference Printse 1 ett, s 0 Reference Point E ordinated Yes Simult. Gap E/W C e Mode Fixed Simult. Gap N/S C r Results gened Phase Simult. Gap N/S C Number e Duration, s Generation (Y+R_c), s Allow Headway (MAH), s ie Clearance Time (g_s), s		On	Green	2.3	1.0	35.6	14.1	1 19.8	0.0	- L	Ĺ	-+-		5
Force Mode	al Information e, s 105.5 Reference Phase et, s 0 Reference Point E pordinated Yes Simult. Gap E/W C e Mode Fixed Simult. Gap N/S C er Results gned Phase E E e Number E E Simult. Gap N/S C ar Results gned Phase E E E e Number E E E E E adlow Headway (MAH), s E E E E an Extension Time (g_e), s E E E E Out Probability Out Probability E E E		On	Red	3.5	3.5	4.3	2.2	4.0	0.0	_	≥ 5	Y	7	¥ 8
T OFCE MODE	e Mode Fixed Simult. Gap N/S C er Results gned Phase e Number se Duration, s nge Period, (Y+Rc), s			ricu	10.0	0.0	1.0	2.2	0.0	0.0					-
Timer Results	er Results igned Phase se Number ise Duration, s arga Reried (X+R) s			EBI		EBT	WB		WBT	NBI		NBT	SBI		SBT
Assigned Phase	ner Results signed Phase ise Number ase Duration, s				-	4	3		8	1	-	6	5	-	2
Case Number	ase Number					7.3	1.0		3.0	1.1		3.0	1.1		4.0
Phase Duration	ase Duration, s					27.3	20.3	3	47.6	16.3	3	49.1	8.8		41.5
Change Period,	ase Duration, s ange Period, (Y+R₀), s					7.5	6.2		7.5	6.5		5.9	6.5		5.9
Max Allow Head	ange Period, (Y+Rc), s ax Allow Headway (<i>MAH</i>), s					4.5	4.0		4.5	4.0		3.7	4.0		3.7
Queue Clearan	aange Period, (Y+R₀), s ax Allow Headway (<i>MAH</i>), s ieue Clearance Time (g₅), s					16.9	13.9	,	10.7	9.2		34.2	3.1		14.5
Green Extensio	nange Period, (Y+ R_o), s ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_o), s reen Extension Time (g_e), s nase Call Probability					2.5	0.1		3.0	0.6		8.9	0.0		10.8
Phase Call Prol	mer Results ssigned Phase ase Number hase Duration, s hange Period, $(Y+R_c)$, s hax Allow Headway (MAH), s ueue Clearance Time (g_s), s reen Extension Time (g_e), s hase Call Probability overment Group Results opproach Movement ssigned Movement djusted Flow Rate (v), veh/h djusted Saturation Flow Rate (s), veh/h/ln					1.00	1.00)	1.00	1.00)	1.00	0.58	3	1.00
Max Out Proba	ase Number hase Duration, s hange Period, ($Y+R_c$), s ax Allow Headway (MAH), s ueue Clearance Time (g_s), s reen Extension Time (g_e), s hase Call Probability ax Out Probability ovement Group Results oproach Movement ssigned Movement djusted Flow Rate (v), veh/h					0.01	1.00)	0.00	0.00)	0.30	0.00) (0.07
	hange Period, ($Y+R_o$), s ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_o), s reen Extension Time (g_e), s hase Call Probability ax Out Probability ovement Group Results opproach Movement ssigned Movement				50			MID			ND			0.0	
Wovement Gro	oup Res	suits			EB	D		VVB			INB T	D		5B - T	
Approach Move	ement				1	R	L	1	R 10	L		R 40	L	1	R
Assigned wove	ment			1	4	14	3	8	18	1	0	10	5	2	12
Adjusted Flow F	tate (V)	, ven/n			208	207	262	220	42	198	1016	638	29	282	267
Adjusted Satura		w Rate (s), ven/n/in			1402	1594	1/92	1881	1594	1/92	1791	1594	1/92	1881	1760
Queue Service	loarance	s), S o Timo (a), s			14.7	11.3	11.9	0.7	1.7	7.2	24.7	32.2	1.1	12.3	12.5
Green Ratio (a)		e fille (ge), s			0.10	0.28	0.34	0.7	0.40	0.45	0.41	0.54	0.36	0.34	0.34
Capacity (c) ve	h/h				317	449	368	715	641	426	1466	865	195	636	595
Volume-to-Can	acity Ra	tio (X)			0.657	0.462	0.712	0.308	0.066	0.465	0.693	0.737	0.151	0.443	0.448
Available Cana	citv (c∍)	veh/h			583	753	384	715	641	937	1866	1043	495	980	917
Back of Queue	(0) vel	h/ln (50th percentile)			5.2	4.3	5.4	37	0.6	2.9	9.9	11 0	0.5	5.3	51
Queue Storage	Ratio (RQ) (50th percentile))		0.26	0.22	0.65	0.44	0.09	0.17	0.25	0.92	0.03	0.13	0.13
Uniform Delay ($(d_1) = s/v_1$	eh	/		40.8	31.3	28.6	23.0	19.4	19.2	25.7	18.4	23.8	27.2	27.3
Incremental De	niform Delay (d1), s/veh				2.8	0.9	5.8	0.2	0.0	0.8	0.7	2.1	0.4	0.4	0.5
Initial Queue De	itial Queue Delay (d2), s/ven				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ontrol Delay (d), s/veh				43.6	32.2	34.4	23.2	19.4	20.0	26.4	20.5	24.2	27.6	27.7
Level of Service	evel of Service (LOS)				D	С	C	С	В	C	C	C	С	С	C
Approach Delay	pproach Delay, s/veh / LOS			37.9		D	28.5		C	23 7	7	C	27 5		C
Intersection Del	proach Delay, s/veh / LOS ersection Delay, s/veh / LOS					- 2F	3.9		-			-	C		-
						20							-		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	Score	/LOS		3.0		С	2.8		С	2.4		В	2.3		В
Bicycle LOS Sc	ore / LC	DS		1.2		А	1.4		А	2.0		В	1.0		А

HCS 2010[™] Streets Version 6.65



		HCS 2	010 S	ignali	zed l	nterse	ectior	n Res	sults S	umm	ary				
General Inform	nation								Intersec	tion Inf	ormatio	on	- 1	411	× 4
Agency		Jacobs						\rightarrow	Duration	, h	0.25		2		<u>N</u>
Analyst		D Zimmerman		Analys	is Date	Jul 21	, 2015		Area Typ	e	Othe	r			•
Jurisdiction				Time F	eriod	PM Pe	eak		PHF		0.95		* -		÷-
Intersection		Factory Lane		Analys	is Year	2022	No Build	d l	Analysis	Period	1> 7:	00	14		2 2
File Name		Factory PM 22 NB.	(us											httr	
Project Descript	tion	Ball Homes												141991	* 11
Demand Inform	nation				EB			W	3		NB			SB	
Approach Move	ment			L	Т	R	L	Т	R	L	T	R	L	Т	R
Demand (v), ve	h/h			133	100	231	293	24	6 47	221	1134	1 712	33	498	114
							1 11:	_		_					
Signal Informa	tion	D (D			5	~	205			2	,				
Cycle, s	Information le, s 123.5 Reference Phase set, s 0 Reference Point E oordinated Yes Simult. Gap E/W C ce Mode Fixed Simult. Gap N/S C er Results igned Phase set se Duration, s inge Period, (Y+R_c), s c cAllow Headway (MAH), s set ere Clearance Time (g_s), s en Extension Time (g_e), s		2		25	- h 51i	2 <u>S</u> ∩	2	žŘ	ε	J	יוו	2	ॅ ┍;	€ ₄
Offset, s	roach Movement hand (v), veh/h hal Information le, s 123.5 Reference Phase let, s 0 Reference Point E oordinated Yes Simult. Gap E/W C ce Mode Fixed Simult. Gap N/S C er Results igned Phase e Number se Duration, s inge Period, (Y+ R_c), s c Allow Headway (<i>MAH</i>), s sue Clearance Time (g_e), s en Extension Time (g_e), s se Call Probability c Out Probability roach Movement igned Movement igned Movement		End	Green	2.8	3.1	44.4	15.	0 25.5	0.0	Ť	Ť.			ĸ
Uncoordinated	mand Information proach Movement mand (v), veh/h nal Information sile, s 123.5 Reference Phase 2 set, s 0 Reference Point Ei coordinated Yes Simult. Gap E/W C ce Mode Fixed Simult. Gap N/S C ce Mode Fixed Simult. Gap N/S C ner Results Simult. Gap N/S C set Number Simult. Gap N/S C ase Duration, s Sange Period, (Y+R_o), s S x Allow Headway (MAH), s Seue Clearance Time (g_e) , s S see Call Probability x S vx Out Probability x S vx Out Probability S S valued Flow Rate (v), veh/h S S signed Movement S S usted Flow Rate (v), veh/h S S		On	Yellow	3.5	3.5	4.3	4.0	4.0	0.0	_ `	<u></u>	*		Y
Force Mode	mand Information proach Movement mand (v), veh/h mail Information cle, s 123.5 set, s 0 Reference Phase 2 set, s 0 Reference Point E coordinated Yes Simult. Gap E/W C ce Mode Fixed Simult. Gap N/S C mark Results Simult. Gap N/S signed Phase S see Number S ase Duration, s S ange Period, (Y+R_o), s S x Allow Headway (MAH), s S eue Clearance Time (g_o), s S ase Call Probability S vout Probability S vement Group Results S proach Movement S signed Movement S usted Flow Rate (v), veh/h S aster Group Results S		On	Red	3.0	3.0	1.6	2.2	3.5	0.0	_	5	6	7	8
Timer Results	mand (v), veh/h inal Information cle, s 123.5 Reference Phase 2 set, s 0 Reference Point Er coordinated Yes Simult. Gap E/W O cce Mode Fixed Simult. Gap N/S O ref Results Signed Phase See Number See Number ase Duration, s ange Period, (Y+R_c), s x X x Allow Headway (MAH), s See Call Probability See Call Probability x x Out Probability x Vulterobability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability See Call Probability x for the results See Call Probability S			EBI		FBT	WB	1	WBT	NB		NBT	SB		SBT
Assigned Phase	Interference Interference <t< td=""><td></td><td></td><td>4</td><td>3</td><td></td><td>8</td><td>1</td><td></td><td>6</td><td>5</td><td>-</td><td>2</td></t<>					4	3		8	1		6	5	-	2
Case Number	ase Number nase Duration, s					7.3	1.0		3.0	1.1		3.0	1.1		4.0
Phase Duration	hase Duration, s					33.0	21.2	2	54.2	18.9	9	59.9	9.3		50.3
Change Period.	nase Duration, s nange Period, (Y+ <i>R</i> c), s					7.5	6.2		7.5	6.5		5.9	6.5		5.9
Max Allow Head	nange Period, (Y+Rc), s ax Allow Headway (<i>MAH</i>), s					4.5	4.0		4.5	4.0		3.7	4.0		3.7
Queue Clearan	ce Time	: (g ₅), S				23.5	17.0)	14.2	11.6	3	50.3	3.5		19.1
Green Extensio	n Time	(ge), S				2.0	0.0		3.6	0.8		3.7	0.0		14.0
Phase Call Prot	hange Period, (Y+ R_o), s lax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g_o), s reen Extension Time (g_e), s hase Call Probability lax Out Probability					1.00	1.00)	1.00	1.00)	1.00	0.70)	1.00
Max Out Proba	ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g _s), s reen Extension Time (g _e), s hase Call Probability ax Out Probability ovement Group Results					0.07	1.00)	0.01	0.00)	0.96	0.00)	0.22
	hange Period, (Y+R _c), s lax Allow Headway (<i>MAH</i>), s ueue Clearance Time (g _s), s reen Extension Time (g _e), s hase Call Probability lax Out Probability lovement Group Results pproach Movement						_								
Movement Gro	oup Res	ults			EB			WB	1 -		NB			SB	
Approach Move	ement			L	Т	R	L	T	R	L	T	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow F	Rate (v)	, veh/h			245	243	308	259	49	233	1194	749	35	332	313
Adjusted Satura	ation Flo	w Rate (s), veh/h/ln			1361	1594	1792	1881	1594	1792	1791	1594	1792	1881	1760
Queue Service	lime (g	s), S			21.5	15.4	15.0	12.2	2.4	9.6	34.7	48.3	1.5	16.9	17.1
Cycle Queue Ci	learanc	e ⊓me (g₀), s			21.5	15.4	15.0	12.2	2.4	9.6	34.7	48.3	1.5	16.9	17.1
Green Ratio (g/	6) h/h				220	401	0.34	740	640	0.48	1567	0.56	0.38	0.30	0.30
Valume to Car	n/n	tio (V)			328	491	319	0.26	040	413	0.762	891	0.211	0.400	0.404
Available Capa	acity Ra				107	677	210	712	+ 0.077	0.503	1505	0.641	114	0.490	70/
Back of Oueue	(O) vol	, ven/n p/ln (50th percentile)			7.4	59	10.7	5.4	040	4.0	14.5	10.1	0.7	7.5	7.04
Queue Storage	Ratio (RO) (50th percentile))		0.38	0.30	1 29	0.65	0.3	0.24	0.37	1.52	0.04	0.19	0.18
Uniform Delay (d1). s/v	eh	/		47.4	34.9	36.7	27.6	22.8	21.5	29.3	22.7	27.3	30.8	30.8
Incremental Del	lay (d2).	s/veh			4.2	0.9	41.7	0.3	0.1	1.2	2.1	7.0	0.6	0.5	0.5
Initial Queue De	icremental Delay (d2), s/ven itial Queue Delay (d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ontrol Delay (d), s/veh				51.6	35.9	78.5	28.0	22.9	22.8	31.4	29.7	27.9	31.2	31.3
Level of Service	evel of Service (LOS)				D	D	E	С	С	С	С	С	С	С	С
Approach Delay	vel of Service (LOS) pproach Delay, s/veh / LOS			43.8		D	52.8	3	D	29.9	9	С	31.1	1	С
Intersection Del	ay, s/ve	h / LOS				35	5.4						D		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	Score	/LOS		3.0		С	2.8		С	2.4		В	2.3		В
Bicycle LOS Sc	ore / LC	DS		1.3		А	1.5		А	2.3		В	1.0		A

HCS 2010[™] Streets Version 6.65



		HCS 2	010 S	ignali	zed l	nterse	ection	Re	sults S	umm	ary				
General Inform	nation								Intersec	tion Inf	ormatio	on	P P	4.1.4.1.1	x lu
Agency		Jacobs							Duration	h	0.25			4+4	
Analyst		D Zimmerman		Analys	sis Date	e Jul 21	, 2015		Area Typ	e	Other		4		4
Jurisdiction		ĺ		Time F	Period	PM Pe	eak		PHF		0.95				+
Intersection		Factory Lane		Analys	sis Yea	r 2022	Build		Analysis	Period	1> 7:(00	1 12 1		
File Name		Factory PM 22 B.xu	IS											5 + + *	
Project Descrip	tion	Ball Homes											1 1	41441	1 1
		1													
Demand Inform	nation				EB			W	В		NB			SB	
Approach Move	ement			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), ve	h/h			133	116	231	331	27	8 54	221	1134	828	39	498	114
Signal Informa	tion				ΙL	r.	UI.	1		8					
Cycle s	126.9	Reference Phase	2		<u> </u>		2 54		23	÷.		< 4		\sim	<u> </u>
Offset s	0	Reference Point	End	L	2	<u>```</u>	<u> </u>	<u></u>	2 1		ļ	1	2	5	Y 4
Uncoordinated	Yes	Simult Gan E/W	On	Green	3.1	3.2	45.3	15	.0 27.7	0.0	— L	L	-+-		—
Force Mode	Fixed	Simult Gap N/S	On	Red	3.5	3.5	4.3	2.2	2 3.5	0.0	_	5	Y	7	× 8
T orce mode	Mode Fixed Simult. Gap N/S O Results ned Phase Number Puration, s ge Period, (Y+ <i>R</i> ₀), s		UII	Ttou	10.0	0.0	1.0	2.2	0.0	0.0					
Timer Results	er Results gned Phase e Number se Duration, s			EBI		FBT	WB		WBT	NB		NBT	SBI		SBT
Assigned Phase	er Results igned Phase e Number ise Duration, s					4	3	-	8	1		6	5		2
Case Number	se Number ase Duration s					7.3	1.0	-	3.0	11		3.0	11		4.0
Phase Duration	ase Duration, s					35.2	21.2	,	56.4	19.2	2	60.9	9.6		51.2
Change Period	se Duration, s inge Period, (Y+Ro), s			-		7.5	6.2	-	7.5	6.5	-	5.9	6.5		5.9
Max Allow Head	ange Period, (Y+R₀), s x Allow Headway (<i>MAH</i>), s					4.5	4.0		4.5	4.0		3.8	4.0		3.8
Queue Clearan	ange Period, $(Y+R_o)$, s x Allow Headway (<i>MAH</i>), s eue Clearance Time (g_o), s					25.7	17 (16.4	12 (57.0	3.8		19.6
Green Extensio	ange Period, $(Y+R_o)$, s x Allow Headway (<i>MAH</i>), s eue Clearance Time (g_o), s een Extension Time (g_e), s ase Call Probability					20.1	0.0		3.8	0.8	-	0.0	0.0		15.0
Phase Call Prof	mer Results signed Phase ase Number ase Duration, s ange Period, (Y+ R_o), s aax Allow Headway (MAH), s ieue Clearance Time (g_s), s een Extension Time (g_e), s aase Call Probability ax Out Probability ovement Group Results proach Movement signed Movement justed Flow Rate (v), veh/h justed Saturation Flow Rate (s), veh/h/in					1.00	1.00)	1.00	1.00)	1.00	0.76		1.00
Max Out Proba	mer Results signed Phase ise Number ase Duration, s iange Period, (Y+ R_c), s iax Allow Headway (MAH), s ieue Clearance Time (g_c), s een Extension Time (g_c), s een Extension Time (g_c), s ase Call Probability ax Out Probability exement Group Results proach Movement signed Movement justed Flow Rate (v), veh/h justed Saturation Flow Rate (s), veh/h/In ieue Service Time (g_c), s cle Queue Clearance Time (g_c), s					0.14	1.00		0.02	0.00	2	1.00	0.00		0.28
max out roba	Ise Number Iase Duration, s Iange Period, (Y+ R_o), s Iange Period, (Y+ R_o), s Iase Allow Headway (MAH), s Iase Clearance Time (g_s), s Iase Clearance Time (g_e), s Iase Call Probability Iase Call Probability Ias					0.11	1.00	, 	0.02	0.00	,	1.00	0.00		0.20
Movement Gro	oup Res	sults			EB			WB	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	T	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow F	Rate (v)	, veh/h			262	243	348	293	57	233	1194	872	41	332	313
Adjusted Satura	ation Flo	ow Rate (s), veh/h/ln			1358	1594	1792	188	1 1594	1792	1791	1594	1792	1881	1760
Queue Service	Time (g	(s), S			23.7	15.6	15.0	14.4	2.8	10.0	35.9	55.0	1.8	17.5	17.6
Cycle Queue C	learanc	e Time (g₀), s			23.7	15.6	15.0	14.4	2.8	10.0	35.9	55.0	1.8	17.5	17.6
Green Ratio (g/	(C)				0.22	0.32	0.35	0.39	0.41	0.47	0.43	0.55	0.38	0.36	0.36
Capacity (c), ve	h/h				340	509	309	725	653	409	1553	880	163	672	628
Volume-to-Capa	acity Ra	itio (X)			0.771	0.478	1.127	0.40	3 0.087	0.569	0.769	0.991	0.252	0.494	0.497
Available Capa	city (c₀),	, veh/h			472	663	309	725	653	794	1553	880	402	815	763
Back of Queue	(Q), veł	h/ln (50th percentile)			8.3	6.0	14.9	6.3	1.0	4.1	15.2	30.4	0.8	7.8	7.3
Queue Storage	Ratio (RQ) (50th percentile)		0.42	0.30	1.79	0.76	6 0.15	0.25	0.38	2.55	0.05	0.20	0.19
Uniform Delay ((d1), s/v	eh			48.0	34.7	37.7	28.4	22.9	22.4	30.5	28.1	28.3	31.8	31.9
Incremental De	remental Delay (d2), s/veh				5.8	0.8	89.9	0.4	0.1	1.2	2.3	28.0	0.8	0.5	0.5
Initial Queue De	tial Queue Delay (d₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ntrol Delay (d), s/veh				53.8	35.6	127.6	28.7	23.0	23.6	32.9	56.1	29.1	32.3	32.4
Level of Service	el of Service (LOS)				D	D	F	С	С	С	С	E	С	С	С
Approach Delay	proach Delay, s/veh / LOS			45.0)	D	77.6	3	E	40.8	3	D	32.2	2	С
Intersection Del	lay, s/ve	eh / LOS				46	6.0						D		
Multimodal Re	sults				EB	_		WB	-		NB	_		SB	_
Pedestrian LOS	5 Score	/LOS		3.0		С	2.8		С	2.4		В	2.3		В
Bicycle LOS Sc	ore / LC)S		1.3		A	1.6		A	2.4		В	1.1		A

HCS 2010[™] Streets Version 6.65



	TWC	-WAY STOP	CONTR	OL S	SUM	IMARY				
General Information	on		Site I	nfori	mat	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Ye	ar		2015			
Project Description E	Ball Homes Fac	ctory Lane								
East/West Street: Fac	tory Lane		North/	South	Stre	et: Colon	ial Springs			
Intersection Orientation	: East-West		Study	Period	d (hrs	s): 0.25			_	
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	nd		-
Movement	1	2	3			4	<u>5</u>			6
Valuma (vah/h)	L	167	R			L	200			R M
Volume (ven/n) Doak Hour Factor, DHE	0.01	107	1.00	,		1.00	322		- 1	4
Hourly Flow Rate, HFR (veh/h)	6	183	0			0	353		1	15
Percent Heavy Vehicle	s 1					0				
Median Type			Two V	Vay Le	eft Τι	ırn Lane				
RT Channelized			0							0
Lanes	1	1	0			0	1			0
Configuration	L	Т							7	R
Upstream Signal		0					0			
Minor Street		Northbound					Southbou	Ind		
Movement	7	8	9			10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)						26			4	40
Peak-Hour Factor, PHF	1.00	1.00	1.00			0.91	1.00		0.	91
Hourly Flow Rate, HFR (veh/h)	0	0	0			28	0		4	13
Percent Heavy Vehicle	s 0	0	0			1	0			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	0	0			0	0			0
Configuration							LR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	1	lorthb	ound	d	S	outhbo	und	
Movement	1	4	7	8	3	9	10	11		12
Lane Configuration	L							LR		
v (veh/h)	6							71		
C (m) (veh/h)	1196							636		
v/c	0.01							0.11		
95% queue length	0.02							0.38		
Control Delay (s/veh)	80							11 /		
	Δ							R	+	
Approach Delay				L				11.4	1	
Approach LOS								В		

Generated: 7/21/2015 2:18 PM



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site Information							
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	rman 5	Interse Jurisd Analys	ection iction sis Ye	ar		2022 No	Build		
Project Description E	Ball Homes Fac	tory Lane			~					
East/West Street: Fac	tory Lane		North/	South	Stre	et: Colon	ial Springs			
Intersection Orientation	East-West		Study	Istuay Perioa (nrs): 0.20						
Vehicle Volumes a	and Adjustn	nents								
Major Street	1	Eastbound	2			4	VVestbou	na	6	
wovernent	I	Z	R L			 т		P		
Volume (veh/h)	6	196				L	378		14	
Peak-Hour Factor, PHF	0.91	0.91	1.00)		1.00	0.91		0.91	
Hourly Flow Rate, HFR (veh/h)	6	215	0	0 0			415		15	
Percent Heavy Vehicle	s 1			0						
Median Type			Тwo И	Vay Le	eft Τι	ırn Lane				
RT Channelized			0	0				0		
Lanes	1	1	0	0 0 1					0	
Configuration	L	Т						TR		
Upstream Signal		0				0	0			
Minor Street		Northbound					Southbound			
Movement	7	8	9			10	11		12	
	L	Т	R			L	T		R	
Volume (veh/h)						26			40	
Peak-Hour Factor, PHF	1.00	1.00	1.00			0.91	1.00		0.91	
Hourly Flow Rate, HFR (veh/h)	0	0	0			28	0		43	
Percent Heavy Vehicle	s 0	0	0			1	0		1	
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0						0	
Lanes	0	0	0			0	0		0	
Configuration							LR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	1	orthb	ound	b	S	outhbou	nd	
Movement	1	4	7	8		9	10	11	12	
Lane Configuration	L							LR		
v (veh/h)	6						71			
C (m) (veh/h)	1135						587			
v/c	0.01						0.12			
95% queue length	0.02					0.41				
Control Delay (s/veh)	8.2						12.0			
LOS	Α							В		
Approach Delay (s/veh)			12.0							
Approach LOS								В		

HCS+[™] Version 5.6

Generated: 7/21/2015 2:21 PM



TWO-WAY STOP CONTROL SUMMARY									
General Information	on		Site I	nfori	nati	ion			
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5	Interse Jurisd Analys	ection iction sis Ye	ar		2022 Bui	ild	
Project Description E	Ball Homes Fac	ctory Lane							
East/West Street: Fac	tory Lane		North/	South	Stre	et: Colon	ial Springs	;	
Intersection Orientation	n: East-West		Study Period (hrs): 0.25						
Vehicle Volumes a	and Adjustn	nents							
Major Street		Eastbound					Westbou	ind	
Movement	1	2	3			4	5		6
Valuma (valu/b)	L	000	К			L	500		R
Peak-Hour Factor, PHE	= 0.01	230	1.00)		1.00	0.01		0.01
Hourly Flow Rate, HFR (veh/h)	6	259	0			0	556		15
Percent Heavy Vehicle	s 1					0			
Median Type			Тwo И	Two Way Left Turn Lane					
RT Channelized			0					0	
Lanes	1	1	0 0 1				0		
Configuration	L	Т							TR
Upstream Signal		0					0		
Minor Street		Northbound					Southbound		
Movement	7	8	9			10	11		12
	L	Т	R			L	Т		R
Volume (veh/h)						26			40
Peak-Hour Factor, PHF	1.00	1.00	1.00)		0.91	1.00	.00 0.9	
Hourly Flow Rate, HFR (veh/h)	0	0	0			28	0		43
Percent Heavy Vehicle	s 0	0	0			1	0		1
Percent Grade (%)		0					0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
Lanes	0	0	0			0	0		0
Configuration							LR		
Delay, Queue Length,	and Level of	Service							
Approach	Eastbound	Westbound	١	orthb	ound	ł	S	outhbou	und
Movement	1	4	7	8		9	10	11	12
Lane Configuration	L							LR	
v (veh/h)	6							71	
C (m) (veh/h)	1007							492	
v/c	0.01							0.14	
95% queue lenath	0.02							0.50	
Control Delay (s/yeh)	8.6							13.5	
LOS	A							B	
Approach Delay (s/veh)			13.5						
Approach LOS			В						



TWO-WAY STOP CONTROL SUMMARY									
General Information	on		Site I	nforr	nati	ion			
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Ye	ar		2015		
Project Description E	Ball Homes Fac	ctory Lane							
East/West Street: Fac	tory Lane		North/	South	Stre	et: Colon	ial Springs	:	
Intersection Orientation	n: East-West		Study Period (hrs): 0.25						
Vehicle Volumes a	and Adjustn	nents							
Major Street		Eastbound					Westbou	ind	
Movement	1	2	3			4	5		6
) (= ,	L	474	R R			L	1		R
Volume (ven/n)	40	4/1	1.00	,		1.00	349		34
Hourly Flow Rate, HFR	42	501	0	,		0	371		36
Percent Heavy Vehicle	s 1					0			
Median Type			Two Way Left Turn Lane						
RT Channelized			0						0
Lanes	1	1	0 0 1				0		
Configuration	L	Т						TR	
Upstream Signal		0					0		
Minor Street		Northbound	Southbound			und			
Movement	7	8	9			10	11	11	
	L	Т	R			L	Т		R
Volume (veh/h)						55			22
Peak-Hour Factor, PHF	= 1.00	1.00	1.00)		0.94	1.00		0.94
Hourly Flow Rate, HFR (veh/h)	0	0	0			58	0		23
Percent Heavy Vehicle	s 0	0	0			1	0		1
Percent Grade (%)		0					0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
Lanes	0	0	0			0	0		0
Configuration							LR		
Delay, Queue Length,	and Level of	Service							
Approach	Eastbound	Westbound	1	Northb	ound	ł	S	outhbou	nd
Movement	1	4	7	8		9	10	11	12
Lane Configuration	L							LR	
v (veh/h)	42							81	
C (m) (veh/h)	1157							447	
v/c	0.04							0.18	
95% gueue lenath	0.11							0.65	
Control Delay (s/veh)	82							14.8	
LOS	A							B	
Approach Delay (s/veh)			14.8						
Approach LOS			B						

HCS+[™] Version 5.6



General Information Site Information Analyst D Zimmerman Agency/Co. Jacobs Date Performed 7/21/2015 Analysis Year 2022 No Build Analysis Time Period PM Peak North/South Street: Colonial Springs Thersection Orientation: East/West Study Period (hrs). 0.25 Vehicle Volumes and Adjustments Westbound Morth/South Street: Colonial Springs Morement 1 2 3 4 5 6 North/South Street: Eastbound Westbound Morement 3/4 5 6 North/Fow Rate, IHR 4/2 588 0 0 4/36 36 Percent Heavy Vehicles 1 - - 0 - - RC Channelized 0 1 0 1 0 22 22 Median Type 1 0 0 1 0 1 1 22 Configuration L T R 1 1 0	TWO-WAY STOP CONTROL SUMMARY										
Analyst D Zimmerman Agency/Co. Intersection Jurisdiction Agency/Co. Jacobs Jurisdiction Analysis Time Period PXI /2015 Analysis Year 2022 No Build Project Description Ball Homes Factory Lane North/South Street: Colonial Springs EastWest Street: Factory Lane North/South Street: Colonial Springs Major Street East-West Study Period (hrs): 0.25 Vehicle Volumes and Adjustments Major Street East-West Study Period (hrs): 0.410 Movement 1 2 3 4 5 6 Volume (veh/n) 40 553 410 34 9 Percent Heavy Vehicles 1 - - - - Moutry Flow Rate, HFR 42 588 0 0 436 36 Percent Heavy Vehicles 1 - - - - - Minof Street Northbound Southbound 0 100 100 100 100 2	General Information	on		Site Information							
Project Description Ball Homes Factory Lane North/South Street: Colonial Springs Intersection Orientation: East/West Study Period (hrs): 0.25 Vehicle Volumes and Adjustments Westbound Westbound Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 40 553 410 34 Peak-Hour Factor, PHF 0.94 0.94 1.00 0.94 0.94 Hourly Flow Rate, HFR 42 588 0 0 436 36 Percent Heavy Vehicles 1 - - 0 - - RT Channelized 0 1 0 0 1 0 Lanes 1 1 0 0 1 0 Miore Street Northbound Southbound Northout Southbound Movement 7 8 9 10 11 12 Peak-Hour Factor, PHF 1.00 <td>Analyst Agency/Co. Date Performed Analysis Time Period</td> <td>D Zimme Jacobs 7/21/201 PM Peak</td> <td>erman 5 C</td> <td>Interse Jurisd Analys</td> <td>ection iction sis Ye</td> <td>ar</td> <td></td> <td>2022 No</td> <td>Build</td> <td>,</td> <td></td>	Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 C	Interse Jurisd Analys	ection iction sis Ye	ar		2022 No	Build	,	
East/West Street: Pactory Lane North/South Street: Colonal Symmas Major Street East-West Study Period (hrs): 0.25 Vehicle Volumes and Adjustments Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 40 553 410 34 Peak-Hour Factor, PHF 0.94 0.94 1.00 1.00 0.94 0.94 Hourly Flow Rate, HFR 42 588 0 0 4336 36 Percent Heavy Vehicles 1 - - 0 - - RT Channelized 0 1 0 1 0 0 Image: Colonal Street Northbound Minor Street Northbound Southbound Southbound Movement 7 8 9 10 11 12 Volume (veh/h) 1.00 1.00 0.00 55 22 22 24 24 24 24 24	Project Description E	Ball Homes Fac	ctory Lane								
Intersection Orientation Last-West Istudy Period (nrs): 0.25 Vehicle Volumes and Adjustments Eastbound Westbound Movement 1 2 3 4 5 6 L T R L T R Volume (veh/h) 40 553 410 34 Peak-Hour Factor, PHF 0.94 0.94 1.00 1.00 0.94 0.94 Hourly Flow Rate, HFR 42 588 0 0 436 36 Percent Heavy Vehicles 1 - - 0 -	East/West Street: Fac	tory Lane		North/	South	Stre	et: Colon	ial Springs			
Vehicle Volumes and Adjustments Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 40 553 - 410 34 Peak-Hour Factor, PHF 0.94 0.94 1.00 1.00 0.94 0.94 Hourly Flow Rate, HFR 42 588 0 0 436 36 Percent Heavy Vehicles 1 0 Median Type Two Way Left Turn Lane R Channelized 0 0 0 Lanes 1 1 0 0 1 0 Upstream Signal 0 - 0 Volume (veh/h) - T R L T R Volume (veh/h) - T R L T R Volume (veh/h) 1.00 1.00 0.94 1.00 0.94	Intersection Orientation	n: East-West		Study	Study Period (hrs): 0.25						
Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 40 553 Image: Constraint of the start of the	Vehicle Volumes a	and Adjustn	nents								
Movement 1 2 3 4 5 0 Volume (veh/h) 40 553 Image: Constraint of the second of the se	Major Street		Eastbound					Westbou	nd		0
Volume (veh/h) 4D 553 410 34 Peak-Hour Factor, PHF 0.94 0.94 1.00 1.00 0.94 0.94 Hourly Flow Rate, HFR 42 588 0 0 436 36 Percent Heavy Vehicles 1 0 Median Type 7 7 0 1 0 0 1 0 Lanes 1 1 0 0 1 0 0 1 0 Minor Street Northbound Southbound Southbound 11 12 1 1 10 0 11 12 1 1 1 12 1 1 12 1 1 12 1 1 1 12 1 1 12 1 1 1 12 1 1 12 1 1 12 1 1 1 12 1 1 12 1 <td>Iviovement</td> <td>1</td> <td>2</td> <td>3 D</td> <td></td> <td></td> <td>4</td> <td><u>5</u> т</td> <td></td> <td></td> <td>6 D</td>	Iviovement	1	2	3 D			4	<u>5</u> т			6 D
Volume (verifi) 40 333 410 140 34 Peak-Hour Factor, PHF 0.94 0.94 1.00 0.94 0.94 Hourly Flow Rate, HFR 42 588 0 0 436 36 Percent Heavy Vehicles 1 - - 0 - - Median Type Two Way Left Turn Lane 0 1 0 0 0 Lanes 1 1 0 0 1 0 0 Configuration L T 0 0 0 0 Mior Street Northbound Southbound Mourne 0 11 12 Mourne (veh/h) 1 0 0 100 0.94 100 0.94 Volume (veh/h) 1 0 0 10 11 12 Veh/hourly Flow Rate, HFR 0 0 0 10 1 10 Percent Heavy Vehicles 0 0 0 <td>Volumo (voh/h)</td> <td>L</td> <td>552</td> <td>R R</td> <td></td> <td></td> <td>L</td> <td>I</td> <td></td> <td></td> <td>K M</td>	Volumo (voh/h)	L	552	R R			L	I			K M
Low Tree Pow Rate, HFR 42 5.07 1.00 1.00 4.36 36 Percent Heavy Vehicles 1 0 Median Type Two Way Left Turn Lane 0 0 1 0 RT Channelized 0 0 1 0 0 1 0 Lanes 1 1 0 0 1 0 0 1 0 Upstream Signal 0 0 10 11 12 <td>Peak-Hour Factor PH</td> <td>= 0.94</td> <td>0.94</td> <td>1.00</td> <td>)</td> <td></td> <td>1.00</td> <td>0.94</td> <td></td> <td></td> <td>9<u>4</u> 9<u>4</u></td>	Peak-Hour Factor PH	= 0.94	0.94	1.00)		1.00	0.94			9 <u>4</u> 9 <u>4</u>
Intervent Heavy Vehicles10Median TypeTwo Way Left Turn Lane000Lanes110010Lanes110010ConfigurationLTTTRTRUpstream Signal0001112Minor StreetNorthboundSouthboundMovementTRLTRLTR22Volume (veh/h)1.001.001.000.941.000.94Houry Flow Rate, HFR (veh/h)0058023Percent Heavy Vehicles00101Percent Heavy Vehicles00000Flared ApproachNNImage: Configuration00RT Channelized000000Lanes000000ConfigurationImage: ConfigurationImage: ConfigurationImage: ConfigurationImage: ConfigurationMovement14789101112Lanes0000000ConfigurationImage: ConfigurationImage: ConfigurationImage: ConfigurationImage: Configuration1112Lanes0.0400.2039816.339816.3398Vic <td>Hourly Flow Rate, HFR (veh/h)</td> <td>42</td> <td>588</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>436</td> <td></td> <td>3</td> <td>86</td>	Hourly Flow Rate, HFR (veh/h)	42	588	0			0	436		3	86
Median Type Two Way Left Turn Lane RT Channelized 0 0 0 Lanes 1 1 0 0 1 0 Configuration L T 0 0 1 0 Questream Signal 0 0 11 1 0 0 Minor Street Northbound Southbound Northbound Southbound Movement 7 8 9 10 11 12 U T R L T R O 0 94 Volume (veh/h) 1.00 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR 0 0 0 0 23 Percent Heavy Vehicles 0 0 1 1 1 Percent Heavy Vehicles 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1	Percent Heavy Vehicle	s 1					0			-	
RT Channelized 0 0 0 Lanes 1 1 0 0 1 0 Configuration L T 0 0 1 0 Winor Street Northbound Southbound 0 0 11 12 Minor Street Northbound Southbound Movement 7 8 9 10 11 12 Volume (veh/h) L T R L T R Volume (veh/h) 55 22 Peak-Hour Factor, PHF 1.00 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 1 1 1 Storage 0 0 0 0 0 1 0 Storage 0 0 0 0 0 0 0 Lanes 0	Median Type		I	Two V	Two Way Left Turn Lane				I		
Lanes 1 1 0 0 1 0 Configuration L T 0 TR TR Upstream Signal 0 0 0 0 0 TR Minor Street Northbound Southbound 0 11 12 Minor Street Northbound Southbound 11 12 L T R L T R Volume (veh/h) 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 10 1 1 Percent Grade (%) 0 0 0 0 1 1 Storage 0 0 0 0 0 0 0 Lanes 0 0 0 0 0 1 1 1 Vereth/h) 1 4 <t< td=""><td>RT Channelized</td><td></td><td></td><td colspan="5"></td><td>(</td><td>0</td></t<>	RT Channelized								(0	
Configuration L T Image: configuration TR Upstream Signal 0 11 12 0 10 11 12 0 10 11 12 0 0 0 10 11 12 0 0 0 10 11 10 11 12 0 <td>Lanes</td> <td>1</td> <td>1</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>1</td> <td></td> <td>(</td> <td>0</td>	Lanes	1	1	0			0	1		(0
Upstream Signal 0 0 Minor Street Northbound Southbound Movement 7 8 9 10 11 12 L T R L T R Volume (veh/h) 55 22 Peak-Hour Factor, PHF 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 1 0 1 Percent Grade (%) 0 0 1 0 1 1 Percent Grade (%) 0 0 0 0 1 1 Storage 0 0 0 0 0 0 1 Lanes 0 0 0 0 0 0 0 Lanes 0 0 0 1 1 1 1 1 1 1 1 1	Configuration	L	Т				,		7	R	
Minor Street Northbound Southbound Movement 7 8 9 10 11 12 L T R L T R Volume (veh/h) 11 12 Velume (veh/h) L T R L T R Velume (veh/h) 1.00 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 1 0 1 Percent Grade (%) 0 0 0 1 0 1 Storage 0 0 0 0 0 0 0 Lanes 0 0 0 0 0 0 0 Lanes 0 0 0 0 0 0 0 Configuration 1 4 7 8 9 10 11	Upstream Signal		0				0				
Movement 7 8 9 10 11 12 L T R L T R L T R Volume (veh/h) 55 22 22 22 22 22 Peak-Hour Factor, PHF 1.00 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 1 0 1 Percent Grade (%) 0 0 0 1 0 1 Storage 0 0 0 0 0 0 0 RT Channelized 0 0 0 0 0 0 0 Lanes 0 0 0 0 0 0 0 Delay, Queue Length, and Level of Service ILR	Minor Street		Northbound					Southbound			
LTRLTRVolume (veh/h)1.001.001.000.941.000.94Peak-Hour Factor, PHF1.001.001.000.941.000.94Hourly Flow Rate, HFR (veh/h)00058023Percent Heavy Vehicles000101Percent Grade (%)00101Percent Grade (%)000101Percent Grade (%)000000Flared ApproachNNN11Storage000000RT Channelized000000Lanes0000000Delay, Queue Length, and Level of ServiceVerthoundSouthboundSouthboundMovement147891011Lane ConfigurationLIILRILRILRV (veh/h)42IIII398398V/c0.04III0.20IIII398V/c0.04IIII0.75IIIIII16.3	Movement	7	8	9			10	11			12
Volume (veh/h) 55 22 Peak-Hour Factor, PHF 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR (veh/h) 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 1 0 1 Percent Heavy Vehicles 0 0 1 0 1 0 1 Percent Grade (%) 0 0 1 0 1 0 1 Percent Grade (%) 0 0 0 0 0 1 0 1 Flared Approach N 0		L	Т	R			L	Т			R
Peak-Hour Factor, PHF 1.00 1.00 1.00 0.94 1.00 0.94 Hourly Flow Rate, HFR (veh/h) 0 0 0 58 0 23 Percent Heavy Vehicles 0 0 0 1 0 1 Percent Grade (%) 0 0 1 0 1 0 1 Flared Approach N 0 0 0 0 0 0 1 Storage 0 1 <t< td=""><td>Volume (veh/h)</td><td></td><td></td><td></td><td></td><td></td><td>55</td><td colspan="2">4.00</td><td>2</td><td>22</td></t<>	Volume (veh/h)						55	4.00		2	22
Hourly Flow Rate, HFR (veh/h) 0 0 58 0 23 Percent Heavy Vehicles 0 0 1 0 1 Percent Grade (%) 0 0 1 0 1 Percent Grade (%) 0 0 0 1 0 1 Percent Grade (%) 0 0 0 0 0 0 1 Flared Approach N 0	Peak-Hour Factor, PHF	1.00	1.00	1.00)		0.94	1.00) 0.9	
Percent Heavy Vehicles 0 0 1 0 1 Percent Grade (%) 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 1 1 1 1 0 1 1 1 1 1	Hourly Flow Rate, HFR (veh/h)	0	0	0			58	0		2	23
Percent Grade (%)00Flared ApproachNNStorage00RT Channelized00Lanes00Configuration00Delay, Queue Length, and Level of ServiceApproachEastboundMovement141478910Itane ConfigurationLRV (veh/h)42C (m) (veh/h)1095V/c0.0495% queue length0.12Control Delay (s/veh)8.4	Percent Heavy Vehicle	s 0	0	0			1	0			1
Flared ApproachNNStorage000RT Channelized000Lanes0000Configuration0000Delay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundMovement14789Lane ConfigurationL1112Lane ConfigurationL181C (m) (veh/h)1095398398v/c0.040.120.2095% queue length0.120.75Control Delay (s/veh)8.416.3	Percent Grade (%)		0					0			
Storage 0 0 0 RT Channelized 0	Flared Approach		N					N			
RT Channelized000Lanes00000ConfigurationImage: constraint of the serviceImage: constraint of the serviceImage: constraint of the serviceDelay, Queue Length, and Level of ServiceImage: constraint of the serviceImage: constraint of the serviceApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLImage: constraint of the serviceImage: constraint of the serviceImage: constraint of the servicev (veh/h)42Image: constraint of the serviceImage: constraint of the serviceImage: constraint of the serviceImage: constraint of the servicev (veh/h)1095Image: constraint of the serviceImage: constraint of the serviceImage: constraint of the servicev/c0.04Image: constraint of the serviceImage: constraint of the serviceImage: constraint of the service95% queue length0.12Image: constraint of the serviceImage: constraint of the serviceImage: constraint of the serviceControl Delay (s/veh)8.4Image: constraint of the serviceImage: constraint of the serviceImage: constraint of the service	Storage		0					0			
Lanes 0 <td>RT Channelized</td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td>	RT Channelized			0							0
ConfigurationLRDelay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLR1112V (veh/h)428181C (m) (veh/h)1095398398v/c0.040.200.75S% queue length0.1216.316.3	Lanes	0	0	0			0	0		(0
Delay, Queue Length, and Level of ServiceApproachEastboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLRv (veh/h)4281398C (m) (veh/h)10950.20y/c0.040.7505% queue length0.1216.3	Configuration							LR			
Approach Eastbound Westbound Northbound Southbound Movement 1 4 7 8 9 10 11 12 Lane Configuration L LR 81 v (veh/h) 42 398 398 81 398 </td <td>Delay, Queue Length,</td> <td>and Level of</td> <td>Service</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Delay, Queue Length,	and Level of	Service	-							
Movement 1 4 7 8 9 10 11 12 Lane Configuration L LR LR 81 81 398 398 398	Approach	Eastbound	Westbound	1	lorthb	ound	ł	S	outhb	ound	
Lane Configuration L L LR v (veh/h) 42 81 81 C (m) (veh/h) 1095 398 398 v/c 0.04 0.20 0.20 95% queue length 0.12 0.75 0.75 Control Delay (s/veh) 8.4 16.3 16.3	Movement	1	4	7	8		9	10	1	1	12
v (veh/h) 42 81 C (m) (veh/h) 1095 398 v/c 0.04 0.20 95% queue length 0.12 0.75 Control Delay (s/veh) 8.4 16.3	Lane Configuration	L							LF	۲ (
C (m) (veh/h) 1095 398 v/c 0.04 0.20 95% queue length 0.12 0.75 Control Delay (s/veh) 8.4 16.3	v (veh/h)	42							81	1	
v/c 0.04 0.20 95% queue length 0.12 0.75 Control Delay (s/veh) 8.4 16.3	C (m) (veh/h)	1095							39	8	
95% queue length 0.12 0.75 Control Delay (s/veh) 8.4 16.3	v/c	0.04							0.2	20	
Control Delay (s/veh) 8.4 16.3	95% queue length	0.12							07	75	
	Control Delay (s/veh)	84							16	3	
	LOS	A								-	
Approach Delay 16.3	Approach Delay			16.3			3				
Approach LOS C	Approach LOS								С		

HCS+[™] Version 5.6

Generated: 7/21/2015 2:25 PM



TWO-WAY STOP CONTROL SUMMARY									
General Informati	on		Site I	nfori	mati	ion			
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Ye	ar		2022 Bui	ild	
Project Description	Ball Homes Fac	ctory Lane							
East/West Street: Fac	ctory Lane		North/	South	Stre	et: Colon	ial Springs	;	
Intersection Orientation	n: East-West		Study	Study Period (hrs): 0.25					
Vehicle Volumes	and Adjustn	nents							
Major Street		Eastbound					Westbou	ind	
Movement	1	2	3			4	5		6
	L	1	R R			L	107		<u> </u>
Volume (ven/n) Roak Hour Factor, PHI	= 0.04	089	1.00	,		1.00	48/		34
Hourly Flow Rate, HFF (veh/h)	42	732	0	,		0	518		36
Percent Heavy Vehicle	s 1					0			
Median Type		I	Тwo И	Vav Le	eft Tu	ırn Lane			
RT Channelized							0		
Lanes	1	1	0	0 0 1					0
Configuration	L	T						TR	
Upstream Signal		0				0			
Minor Street		Northbound		Southbound			und		
Movement	7	8	9	9 10		10	11		12
	L	Т	R			L	Т		R
Volume (veh/h)						55			22
Peak-Hour Factor, PH	= 1.00	1.00	1.00)		0.94	1.00		0.94
Hourly Flow Rate, HFF (veh/h)	0	0	0			58	0		23
Percent Heavy Vehicle	s 0	0	0			1	0		1
Percent Grade (%)		0	-				0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
Lanes	0	0	0			0	0		0
Configuration							LR		
Delay, Queue Length	, and Level of	Service							
Approach	Eastbound	Westbound	١	orthb	ound	d	S	outhbou	nd
Movement	1	4	7	8	;	9	10	11	12
Lane Configuration	L							LR	
v (veh/h)	42							81	
C (m) (veh/h)	1021							338	
v/c	0.04							0.24	
95% queue length	0.13							0.27	
Control Delay (s/yeb)	87				10.02				
	0.7							19.0	-
Approach Delay			19.0						
Approach LOS								С	

HCS+[™] Version 5.6



TWO-WAY STOP CONTROL SUMMARY										
General Informatio	n		Site I	nforr	nati	on				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	rman 5	Interse Jurisd Analys	ection iction sis Yea	ar		2015			
Project Description B	all Homes Fac	tory Lane								
East/West Street: Fact	ory Lane		North/	South	Stre	et: <i>Terrac</i>	ce Springs	Drive)	
Intersection Orientation:	East-West		Study	Period	l (hrs	s): 0.25				
Vehicle Volumes a	nd Adjustn	nents								
Major Street		Eastbound					Westbou	ind		
Movement	1	2	3 4				5			6
	L 10	1 100	R 10			L	104			R
Volume (ven/n)	18	139	18	,		1	184		0	<u>კ</u> იი
Hourly Flow Rate, HFR	20	157	20	20 1		209		0.	3	
Percent Heavy Vehicles	1					1				
Median Type			Тwo И	Vav Le	ft Tu	rn Lane				
RT Channelized			0							0
Lanes	1	1	0	0 1						0
Configuration	L		TR	TR L				7	ſŔ	
Upstream Signal		0				0				
Minor Street		Northbound					Southbound			
Movement	7	8	9			10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)	63	1	15			73	0			5
Peak-Hour Factor, PHF	0.88	0.88	0.88			0.88	0.88		8 0.	
Hourly Flow Rate, HFR (veh/h)	71	1	17			82	0			5
Percent Heavy Vehicles	1	1	1			1	1			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	Ν	orthb	ound	1	S	outhb	ound	
Movement	1	4	7	8		9	10	1	1	12
Lane Configuration	L	L		LTF	2			LT	R	
v (veh/h)	20	1		89				87	7 [
C (m) (veh/h)	1364	1405		635				60	2	
v/c	0.01	0.00		0.14				0.1	4	
95% queue lenath	0.04	0.00		0.49				0.5	50	
Control Delay (s/veh)	7.7	7.6		0.4				12	0	
IOS	A	A		B	-			B		
Approach Delay (s/veh)			11.6		6			12.0	0	
Approach LOS				В				В		

HCS+[™] Version 5.6



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site I	nforr	nati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5	Interse Jurisd Analys	ection iction sis Yea	ar		2022 No	Build	1	
Project Description E	Ball Homes Fac	tory Lane								
East/West Street: Fac	tory Lane		North/	South	Stre	et: Terrac	ce Springs	Drive)	
Intersection Orientation	n: East-West		Study Period (hrs): 0.25							
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	ind		
Movement	1	2	3 4			5			6	
	L	T	R	R L		T			R	
Volume (veh/h)	18	163	18	18 1		216			3	
Peak-Hour Factor, PH	- 0.88	0.88	0.88	0.88 0.88		0.88		0	.88	
(veh/h)	20	185	20 1		245			3		
Percent Heavy Vehicle	s 1			- 1						
Median Type		-	Two V	Vay Le	ft Tı	ırn Lane				
RT Channelized			0							0
Lanes	1	1	0			1	1			0
Configuration	L		TR	TR L		'				
Upstream Signal		0				0				
Minor Street		Northbound					Southbound			
Movement	7	8	9			10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)	63	1	15			73	0			5
Peak-Hour Factor, PHF	0.88	0.88	0.88			0.88	0.88	0.88		.88
Hourly Flow Rate, HFR (veh/h)	71	1	17			82	0			5
Percent Heavy Vehicle	s 1	1	1			1	1			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	1	lorthb	ound	ł	S	outhb	ound	
Movement	1	4	7	8		9	10	1	1	12
Lane Configuration	L	L		LTF	7			LT	R	
v (veh/h)	20	1		89				8	7	
C (m) (veh/h)	1324	1372		598				56	6	
v/c	0.02	0.00		0.15					15	
95% queue length	0.05	0.00		0.5				0.5	54	
Control Delay (s/veh)	7.8	7.6		12				12	.5	
LOS	A	A		В					3	
Approach Delay (s/veh)			12.1		1	·	12.		5	
Approach LOS				В			В			

HCS+[™] Version 5.6



General Information Site Information Analyst D Zimmerman Agency/Co. Jacobs Date Performed 7/21/2015 Analysis Time Period AM Peak Project Description Bail Momes Factory Lane Intersection Orientation: East/West Intersection Orientation: East-West Vehicle Volumes and Adjustments Westbound Movement 1 2 Vehicle Volumes and Adjustments Westbound Movement 1 2 Pack-Hour Factor, PHE 0.88 0.88 Hourty Flow Rate, HFR 20 2.30 Pack-Hour Factor, PHE 0.88 0.88 Hourty Flow Rate, HFR 20 2.30 2.0 RT Channelized 0 1 0 RT Channelized 0 1 0 Lanes 1 1 0 1 Volume (veh/h) 63 1 15 7.3 0 Upstream Signal 0 1 1 1 1	TWO-WAY STOP CONTROL SUMMARY										
Analyst D Zimmerman Intersection Agency/Co. Jacobs Jurisdiction Analysis Time Period AM Peak Project Description Ball Homes Factory Lane Project Description Ball Homes Factory Lane North/South Street: Terrace Springs Drive Intersection Orientation: East-West Study Period (hrs). 0.25 Vehicle Volumes and Adjustments Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 Vehicle Site 1 - - 1 0 1 1 0 Channelized 0 1 1 0 1 1 0 0 East-West Southbound	General Information	on		Site Information							
Project Description Ball Homes Factory Lane North/South Street: Terrace Springs Drive Intersection Orientation: East/West Study Period (hrs): 0.25 Vehicle Volumes and Adjustments Westbound Movement 1 2 3 4 5 6 Workington L T R L T R Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 Hourly Flow Rate, HFR 20 230 20 1 390 3 Percent Heavy Vehicles 1 - - 1 - - RT Channelized 0 1 1 0 1 1 0 Lanes 1 1 0 1 1 0 1 1 1 Upstream Signal 0 1 1 0 1 1 1 1 1	Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Yea	ar		2022 Bui	ild		
EastWest Street: Factory Lane North/South Street: Terrace Springs Drive Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volumes and Adjustments Westbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.89 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 <td< td=""><td>Project Description E</td><td>Ball Homes Fac</td><td>ctory Lane</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Project Description E	Ball Homes Fac	ctory Lane								
Intersection Orientation: East:Nest [Study Period (hrs): 0.25 Vehicle Volumes and Adjustments Major Street East:Bound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 0.88 Houry Flow Rate, HFR 20 230 20 1 390 3 Percent Heavy Vehicles 1 - 1 Median Type Two Way Left Turn Lane R 0 0 0 Lanes 1 1 0 1 1 0 1 Upstream Signal 0 0 0 0 Minor Street Northbound Southbound Southbound 0 5 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88	East/West Street: Fac	tory Lane		North/	South	Stre	et: Terrac	ce Springs	Drive)	
Vehicle Volumes and Adjustments Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.89 0.8 0.89 0.8 0.89 0.80 0.80 0.89 0.88 <td< td=""><td>Intersection Orientation</td><td>n: East-West</td><td></td><td>Study</td><td>Period</td><td>l (hrs</td><td>s): 0.25</td><td></td><td></td><td></td><td></td></td<>	Intersection Orientation	n: East-West		Study	Period	l (hrs	s): 0.25				
Major Street Eastbound Westbound Movement 1 2 3 4 5 6 Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.89 0.80 0.89 0.89 0.90 0 1 1 0 1 1 1 1 1 2 0 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Vehicle Volumes a	and Adjustn	nents								
Movement 1 2 3 4 5 6 L T R L T R Volume (veh/h) 18 1 344 3 Peak-Hour Factor, PHF 0.88	Major Street		Eastbound					Westbou	ind		
L I R L I R Volume (veh/h) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.89 0	Movement	1	2	3 4				5			6
Volume (ven/n) 18 203 18 1 344 3 Peak-Hour Factor, PHF 0.88 0.89 0 0 L TR U TR N SU <				R (10)			L				R
Preak-Hour Factor, PHF 0.00 0.0	Volume (ven/n)	18	203	18	18 1		344			<u>კ</u>	
(Verify)	Hourly Flow Rate, HFR	20	230	20	20 1		390		0	3	
Image: Construction of the second	Percent Heavy Vehicle	s 1					1				
Interview Interview O RT Channelized 0 0 0 Lanes 1 1 0 1 1 0 Configuration L TR L TR Upstream Signal 0 0 Minor Street Northbound Southbound Southbound 0 0 0 Morement 7 8 9 10 11 12 1 1 12 Volume (veh/h) 63 1 15 73 0 5 5 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 Hourly Flow Rate, HFR 71 1 17 82 0 5 Percent Heavy Vehicles 1 1 1 1 1 1 1 Percent Grade (%) 0 0 0 0 0 0 0 Iares 0 1 0 0 1 0 0 0 1 1 1 1 1 1 1 <	Median Type	<u> </u>		Two V	Vavle	ft Ti	ırn Lane				
Lanes110110ConfigurationLTRLTRTRUpstream Signal0000Minor StreetNorthboundSouthboundMovement7891011LTRLTRVolume (veh/h)631157305Peak-Hour Factor, PHF0.880.880.880.880.880.88Houry Flow Rate, HFR (veh/h)711178205Percent Heavy Vehicles111111Percent Heavy Vehicles111111Percent Grade (%)000000Flared ApproachNN0000Lanes0100100Lanes010011112Delay, Queue Length, and Level of ServiceApproachLLLTRLTRLTRDelay, Queue Length, and Level of Service89101112Lane ConfigurationLLLTRLTRLTRV (veh/h)2018987C0Movement14789101112150147014470470V (veh/h)0.020.000.08	RT Channelized			0	/		in Eano				0
Lange L TR L TR Upstream Signal 0 0 0 0 Minor Street Northbound Southbound Morement TR L TR Minor Street Northbound Southbound 11 12 1 12 Minor Street Northbound Southbound Southbound Morement TR R D 11 12 TR R Southbound M Southbound Southbound Southbound M Southbound N Image: Southbound Southbound Southbound N Image: Southbound Southbound <t< td=""><td>Lanes</td><td>1</td><td>1</td><td>0</td><td colspan="4"></td><td></td><td></td><td>0</td></t<>	Lanes	1	1	0							0
Upstream Signal 0 0 0 Minor Street Northbound Southbound Movement 7 8 9 10 11 12 L T R L T R Volume (veh/h) 63 1 15 73 0 5 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 0.88 Hourly Flow Rate, HFR (veh/h) 71 1 17 82 0 5 Percent Heavy Vehicles 1 1 1 1 1 1 1 Percent Grade (%) 0 0 0 0 0 0 Flared Approach N N 0 0 0 0 RT Channelized 0 1 0 0 1 0 Configuration L TR LTR LTR LTR 1 1 1 1 1 1 1 1	Configuration	L L		TR	TR I		1		-	TR	
Minor StreetNorthboundSouthboundMovement789101112LTRLTRVolume (veh/h)631157305Peak-Hour Factor, PHF0.880.880.880.880.880.880.88Hourly Flow Rate, HFR (veh/h)711178205Percent Heavy Vehicles111111Percent Grade (%)0000Flared ApproachNN000RT Channelized010010Lanes010011Delay, Queue Length, and Level of Service01121ApproachLLLTRLTRLTRV (veh/h)20189872C (m) (veh/h)11771321501470V(c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (sizeh)8171327144	Upstream Signal		0				0				
Instruction Instruction Instruction Image for the state of t	Minor Street		Northbound					Southbound			
L T R L T R Volume (veh/h) 63 1 15 73 0 5 Peak-Hour Factor, PHF 0.88 0.88 0.88 0.88 0.88 0.88 0.88 Hourly Flow Rate, HFR 71 1 17 82 0 5 Percent Heavy Vehicles 1 1 1 1 1 1 1 Percent Grade (%) 0 0 0 0 0 1 1 Flared Approach N 0 0 0 0 0 1 0 Storage 0 1 0 0 1 0 0 1 0 Configuration LTR 0 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 0 1 1 1 1	Movement	7	8	9			10	11			12
Volume (veh/h) 63 1 15 73 0 5 Peak-Hour Factor, PHF 0.88 0.80 0.90 0.11 0 0		L	Т	R			L	Т	Т		R
Peak-Hour Factor, PHF 0.88 0.89	Volume (veh/h)	63	1	15			73	0			5
Hourly Flow Rate, HFR (veh/h)711178205Percent Heavy Vehicles1111111Percent Grade (%)00000Flared ApproachN0000Storage00000RT Channelized0000Lanes01001ConfigurationLTRLTRLTRDelay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLLTRLTRLTRV (veh/h)1171321501470V (veh/h)20189870.1995% queue length0.050.000.640.6714.4	Peak-Hour Factor, PHF	- 0.88	0.88	0.88	1		0.88	0.88		0.88 0.	
Percent Heavy Vehicles1111111Percent Grade (%)000Flared ApproachNNNStorage000RT Channelized000Lanes010ConfigurationLTRLTRDelay, Queue Length, and Level of ServiceApproachEastboundWestboundMovement14789Lane ConfigurationLLLTRLTRV (veh/h)2018987C (m) (veh/h)11711321501470v/c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (s(ueb)8.17.7132.714.4	Hourly Flow Rate, HFR (veh/h)	71	1	17			82	0			5
Percent Grade (%) 0 0 N Flared Approach N N N Storage 0 0 0 RT Channelized 0 0 0 Lanes 0 1 0 0 Configuration LTR LTR LTR Delay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundMovement 1 4 7 8 9 Lane Configuration L L LTR LTR V (veh/h) 20 1 89 87 C (m) (veh/h) 1171 1321 501 470 v/c 0.02 0.00 0.18 0.19 95% queue length 0.05 0.00 0.64 0.67	Percent Heavy Vehicle	s 1	1	1			1	1			1
Flared ApproachNNStorage000RT Channelized000Lanes010OnigurationLTRLTRDelay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundMovement14789Iane ConfigurationLLLTRLTRV (veh/h)2018987C (m) (veh/h)11711321501470V(c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (c)(veh)8.17.713.714.4	Percent Grade (%)		0					0			
Storage00RT Channelized000Lanes010OnfigurationLTRLTRDelay, Queue Length, and Level of ServiceApproachEastboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLLTRLTRLTR1112Lane ConfigurationLLLTRLTR1112V (veh/h)20189877C (m) (veh/h)11711321501470V/c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (s/uph)8.17.713.714.4	Flared Approach		N					N			
RT Channelized00Lanes01010ConfigurationLTRLTRLTRDelay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLLTRLTRLTRv (veh/h)20189876C (m) (veh/h)11711321501470y/c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (s/veh)8.17.713.714.4	Storage		0					0			
Lanes010010Configuration LTR LTR LTR LTR LTR Delay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLLTRLTRLTRv (veh/h)20189876C (m) (veh/h)11711321501470v/c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (s/yeb)8.17.713.714.4	RT Channelized			0							0
ConfigurationLTRLTRDelay, Queue Length, and Level of ServiceApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLLTRLTRLTRv (veh/h)20189876C (m) (veh/h)11711321501470v/c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (s/yeb)8.17.713.714.4	Lanes	0	1	0			0	1			0
Delay, Queue Length, and Level of Service Approach Eastbound Westbound Northbound Southbound Movement 1 4 7 8 9 10 11 12 Lane Configuration L L LTR LTR LTR v (veh/h) 20 1 89 87 C (m) (veh/h) 1171 1321 501 470 v/c 0.02 0.00 0.18 0.19 95% queue length 0.05 0.00 0.64 0.67	Configuration		LTR					LTR			
ApproachEastboundWestboundNorthboundSouthboundMovement14789101112Lane ConfigurationLLLTRLTRLTRv (veh/h)2018987C (m) (veh/h)11711321501470v/c0.020.000.180.1995% queue length0.050.000.640.67Control Delay (s/yeb)8.17.713.714.4	Delay, Queue Length,	and Level of	Service								
Movement 1 4 7 8 9 10 11 12 Lane Configuration L L LTR LTR LTR LTR LTR V (veh/h) 20 1 89 87 6 6 7 6 7 7 8 9 10 11 12 <td>Approach</td> <td>Eastbound</td> <td>Westbound</td> <td>1</td> <td>lorthb</td> <td>ound</td> <td>ł</td> <td>S</td> <td>outhb</td> <td>ound</td> <td></td>	Approach	Eastbound	Westbound	1	lorthb	ound	ł	S	outhb	ound	
Lane Configuration L L LTR LTR v (veh/h) 20 1 89 87 C (m) (veh/h) 1171 1321 501 470 v/c 0.02 0.00 0.18 0.19 95% queue length 0.05 0.00 0.64 0.67 Control Delay (s/yeb) 81 77 137 144	Movement	1	4	7	8		9	10	1	1	12
v (veh/h) 20 1 89 87 C (m) (veh/h) 1171 1321 501 470 v/c 0.02 0.00 0.18 0.19 95% queue length 0.05 0.00 0.64 0.67 Control Delay (s/yeb) 8.1 7.7 13.7 14.4	Lane Configuration	L	L		LTF	2			LT	R	
C (m) (veh/h) 1171 1321 501 470 v/c 0.02 0.00 0.18 0.19 95% queue length 0.05 0.00 0.64 0.67 Control Delay (s/yeb) 8.1 7.7 13.7 14.4	v (veh/h)	20	1		89				87	7	
v/c 0.02 0.00 0.18 0.19 95% queue length 0.05 0.00 0.64 0.67 Control Delay (s/yeb) 8.1 7.7 13.7 14.4	C (m) (veh/h)	1171	1321		501			-	47	o	
95% queue length 0.05 0.00 0.64 0.67 Control Delay (s/yeb) 8.1 7.7 13.7 14.4	v/c	0.02	0.00		0.18				01	19	
Control Delay (s/yeb) 81 77 127 144	95% queue lenath	0.05	0.00		0.18				0.6	37	
	Control Delay (s/yeh)	8.1	7 7		0.6				11	4	
		Δ	Δ		, J.				- 14. P	2	
Approach Delay 13.7 14.4	Approach Delay			13.1		7	L		14.	4	
Approach LOS B B	Approach LOS				В				В		

HCS+[™] Version 5.6



	TWO-WAY STOP CONTROL SUMMARY									
General Information	on		Site I	nforn	nati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Yea	ar		2015			
Project Description E	Ball Homes Fac	ctory Lane						<u> </u>		
East/West Street: Fac	tory Lane		North/s	South	Stre	et: <i>Lerrac</i>	ce Springs	Drive	<u>)</u>	
Intersection Orientation	1: East-West		Study	Period	i (nrs	5): 0.25				
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	nd		0
Movement	1	2	3			4	5			<u>6</u>
Volumo (voh/h)	L	254	R 66			L	201			
Peak-Hour Factor PHF	- 0.88	0.88	0.88	2		9 0.88	0.88			24 88
Hourly Flow Rate, HFR	0.00	0.00	75 10		0.00			-		
(veh/h)	84	288	75 10		330		2	27		
Percent Heavy Vehicle	s 1		1							
Median Type			Тwo И	Vay Le	ft Tu	ırn Lane				
RT Channelized			0					0		
Lanes	1	1	0 1 1					0		
Configuration	L		TR	TR L				7	R	
Upstream Signal		0			0					
Minor Street		Northbound		So			Southbou	Ind		
Movement	7	8	9			10	11			12
	L	Т	R			L	Т		R	
Volume (veh/h)	26	0	8			6	1		3	36
Peak-Hour Factor, PHF	0.88	0.88	0.88	:		0.88	0.88		0.8	
Hourly Flow Rate, HFR (veh/h)	29	0	9			6	1		4	40
Percent Heavy Vehicle	s 1	1	1			1	1			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	١	Northbo	ounc	ł	S	outhb	ound	
Movement	1	4	7	8		9	10	1	1	12
Lane Configuration	L	L		LTF	2			LT	R	
v (veh/h)	84	10		38	-			4	7	
$C_{\rm (m)}$ (veh/h)	1207	1201		393				61	0	
v/c	0.07	0.01		0 10				0.0	2	
95% queue length	0.22	0.03	0.10		2			0.0	25	
Control Dolay (s/yob)	0.22 g ว	80		0.32				11	4	
	0.2	0.0		10.	,				.4	
Approach Delay			C 15.1		1			Е 11.	9 4	
Approach LOS			C B							

HCS+[™] Version 5.6



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site I	nfori	mat	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	rman 5	Interse Jurisd Analy:	ection iction sis Ye	ar		2022 No	Build		
Project Description B	all Homes Fac	tory Lane								
East/West Street: Fac	tory Lane		North/	South	Stre	et: Terrac	ce Springs	Drive		
Intersection Orientation	: East-West		Study	Study Period (nrs): 0.25						
Vehicle Volumes a	ind Adjustn	nents								
Major Street		Eastbound		Westbound						-
Movement	1	2	3	3 4			5			6
	L	1	R			L	1			R M
Volume (ven/n)	74	298	00	66 9		9	342			24 00
Hourly Flow Rate, HFR	84	338	75	75 10			388		2	27
Percent Heavy Vehicles	5 1					1				
Median Type			Two V	Vav Le	eft Tu	ırn Lane				
RT Channelized			0							0
Lanes	1	1	0	0 1			1			0
Configuration	L		TR	TR L		1				
Upstream Signal		0				0		0		
Minor Street		Northbound					Southbound			
Movement	7	8	9			10	11			12
	L	Т	R			L	Т			
Volume (veh/h)	26	0	8			6	1			36
Peak-Hour Factor, PHF	0.88	0.88	0.88	}		0.88	0.88		3 0.0	
Hourly Flow Rate, HFR (veh/h)	29	0	9			6 1			4	40
Percent Heavy Vehicles	5 1	1	1			1	1			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	1	Northb	ound	b	S	outhbo	ound	
Movement	1	4	7	8	;	9	10	11	1	12
Lane Configuration	L	L		LTI	R			LTF	2	
v (veh/h)	84	10		38	}			47	·	
C (m) (veh/h)	1149	1151		35				56	1	
v/c	0.07	0.01		0.11			0		8	
95% queue length	0.24	0.03		0.1				0.2	7	
Control Delay (s/yeb)	81	8.00		0.3				12	0	
	л	Δ.2		16.				, Z.	-	
Approach Delay		-		16.	4	1	12.0)	
Approach LOS				С				В		

HCS+[™] Version 5.6



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site I	nforr	nati	on				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	rman 5	Interse Jurisd Analys	ection iction sis Ye	ar		2022 Bui	ild		
Project Description E	Ball Homes Fac	tory Lane								
East/West Street: Fac	tory Lane		North/	South	Stree	et: Terrac	ce Springs	Drive		
Intersection Orientation	n: East-West		Study	5): 0.25						
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	ind		
Movement	1	2	3 4 P I				5			6
Valuese (vab/b)	L	424	R			L	110			K M
Volume (ven/n) Doak Hour Factor, DHE	14	434	00	,		9	419			24 88
Hourly Flow Rate, HFR	84	493	75 10			476		2	27	
Percent Heavy Vehicle	s 1		1						-	
Median Type			Two V	Vav Le	eft Tu	rn Lane				
RT Channelized								0		
Lanes	1	1	0 1 1					0		
Configuration	L		TR	TR L					7	R
Upstream Signal		0				0				
Minor Street		Northbound					Southbound			
Movement	7	8	9			10	11			12
	L	Т	R			L	Т		R	
Volume (veh/h)	26	0	8			6	1		3	86
Peak-Hour Factor, PHF	0.88	0.88	0.88	}		0.88	0.88		.88 0.8	
Hourly Flow Rate, HFR (veh/h)	29	0	9			6	1		4	40
Percent Heavy Vehicle	s 1	1	1			1	1			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	1	Northb	ound		S	outhb	ound	
Movement	1	4	7	8		9	10	1.	1	12
Lane Configuration	L	L		LTI	2			LTI	R	
v (veh/h)	84	10		38	;			47	7	
C (m) (veh/h)	1067	1009		283				48	1	
v/c	0.08	0.01		0.13				0.1	0	
95% queue lenath	0.26	0.03	0.13		6			0.3	2	
Control Delay (s/yeh)	87	8.6		0.46				13	3	
LOS	Δ	Δ		19.1				P.		
Approach Delay			19.7 1			13.3	3			
Approach LOS			C B							

HCS+[™] Version 5.6



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site Information							
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	rman 5	Interse Jurisd Analys	ection iction sis Ye	ar		2022			
Project Description E	Ball Homes Fac	tory Lane								
East/West Street: Fac	tory Lane		North/	South	Stre	et: Main l	Entrance			
Intersection Orientatior	: East-West		Study Period (hrs): 0.25							
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	nd		
Movement	1	2	3			4	5		6	
	L	T	R			L	T		R	
Volume (veh/h)	38	185	1.00			1.00	173		25	
Peak-Hour Factor, PHr	0.88	0.88	1.00			1.00	0.88		0.88	
(veh/h)	43	210	0			0	196		28	
Percent Heavy Vehicle	s 1					0				
Median Type			Raised curb							
RT Channelized			0						0	
Lanes	1	1	0 0 1				0			
Configuration	L	Т						TR		
Upstream Signal		0					0			
Minor Street		Northbound					Southbou	und		
Movement	7	8	9			10	11		12	
	L	Т	R			L	Т		R	
Volume (veh/h)						80			118	
Peak-Hour Factor, PHF	1.00	1.00	1.00)		0.88	1.00	1.00 0.8		
Hourly Flow Rate, HFR (veh/h)	0	0	0			90	0		134	
Percent Heavy Vehicle	s 0	0	0			1	0		1	
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0						0	
Lanes	0	0	0			0	0		0	
Configuration							LR			
Delay, Queue Length,	and Level of	Service								
Approach	Eastbound	Westbound	١	Northb	ound	ł	S	outhbour	d	
Movement	1	4	7	8		9	10	11	12	
Lane Configuration	L							LR		
v (veh/h)	43							224		
C (m) (veh/h)	1351							712		
v/c	0.03							0.31		
95% queue lenath	0.10							1.35		
Control Delay (s/yeb)	7.8					12 /				
	Λ.0							12.4 P		
Approach Delay										
Approach LOS			B							

HCS+[™] Version 5.6 Generated: 7/21/2015 2:39 PM



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site I	nfori	mati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 4	Interse Jurisd Analys	ection iction sis Ye	ar		2022			
Project Description	Ball Homes Fac	ctory Lane								
East/West Street: Fac	ctory Lane		North/	South	Stre	et: <i>Main</i> I	Entrance			
Intersection Orientation	n: East-West		Study	Period	d (hrs	s): 0.25				
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	ind		
Movement	1	2	3			4	5			6
	L	T	R			L	Т			R
Volume (veh/h)	127	321					391		3	34
Peak-Hour Factor, PH	- 0.88	0.88	1.00)		1.00	0.88		0.	88
(veh/h)	144	364	0			0	444		g	95
Percent Heavy Vehicle	s 1					0				
Median Type				Raise	d cu	rb				
RT Channelized			0							0
Lanes	1	1	0			0	1			0
Configuration	L	Т							7	ſR
Upstream Signal		0					0			
Minor Street		Northbound					Southbou	und	nd	
Movement	7	8	9	9		10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)						48			7	73
Peak-Hour Factor, PH	1.00	1.00	1.00	1.00		0.88	1.00		0.	.88
Hourly Flow Rate, HFF (veh/h)	0	0	0			54	0		8	32
Percent Heavy Vehicle	s 0	0	0			1	0			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	0	0			0	0			0
Configuration							LR			
Delay, Queue Length	and Level of	Service								
Approach	Eastbound	Westbound	1	Northb	ound	t	S	outhbo	ound	
Movement	1	4	7	8	;	9	10	11	1	12
Lane Configuration	L							LR	2	
v (veh/h)	144					•		136	5	
C (m) (veh/h)	1034							439	9	
v/c	0.14							0.3	1	
95% queue length	0.48							1.30	0	
Control Delay (s/veh)	9.0							16.8	8	
LOS	A							С		
Approach Delay (s/veh)				1			16.8			
Approach LOS	C									



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site I	nfori	nati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5	Inters Jurisd Analy	ection iction sis Ye	ar		2022			
Project Description	Ball Homes Fac	ctory Lane								
East/West Street: Fac	tory Lane		North/	South	Stre	et: Secor	ondary Entrance			
Intersection Orientation	n: East-West		Study	Study Period (hrs): 0.25						
Vehicle Volumes a	and Adjustn	nents								
Major Street		Eastbound					Westbou	nd		
Movement	1	2	3			4	5		6	
		1	R R			L	100		<u>R</u>	
Volume (ven/n) Roak Hour Factor, PH	2	203	1.00			1.00	188		1	
Hourly Flow Rate, HFF	2	298	0			0	213		1	
(veh/h)	- 4					0			•	
Percent Heavy Venicle	s 1			1.1		0				
Nedian Type		Undivided							0	
RT Channelized			0						0	
Lanes	0	1	0			0	1		0	
Configuration	LI						0		IR	
							0			
Minor Street	7	Northbound		0		10	Southbou	ind	10	
woverneni	1	о т	9			10	т		12 D	
Volumo (voh/h)		1	ĸ			6	1		10	
Peak-Hour Factor PH	= 1.00	1.00	1.00			0.88	1.00		0.88	
Hourly Flow Rate, HFF	0	0	0			6 0			11	
(Veni/II) Percent Heavy Vehicle	s 0	0	0			1	0		1	
Percent Grade (%)	3 0	0				,	0		,	
Elered Approach		U					N			
Starage										
Storage DT Chappelized		0					0		0	
			0			0			0	
Lanes	0	0	0			0			0	
Conliguration							LR			_
Delay, Queue Length	and Level of	Service		1 41 1			0			
Approach	Eastbound	vvestbound			ound	1	5			
Movement	1	4	1	8		9	10	11	12	<u>'</u>
Lane Configuration	LT							LR	_	
v (veh/h)	2							17		
C (m) (veh/h)	1362							685		
v/c	0.00							0.02		
95% queue length	0.00							0.08		
Control Delay (s/veh)	7.6							10.4		
LOS	А							В		
Approach Delay (s/veh)								10.4		
Approach LOS		B								

HCS+[™] Version 5.6



TWO-WAY STOP CONTROL SUMMARY										
General Informati	on		Site I	nfori	nati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 (Inters Jurisd Analy	ection liction sis Ye	ar		2022			
Project Description L	Ball Homes Fac	ctory Lane								
East/West Street: Fac	ctory Lane		North/	South	Stre	et: Secor	ndary Entra	ance		
Intersection Orientation	1: East-West		Study	Period	a (nrs	5): 0.20				
Vehicle Volumes	and Adjustn	nents								
Major Street	1	Eastbound	2			4	VVestbou	ind		6
woverneni	i	Z				4	<u> </u>			0 P
Volume (veh/h)	9	360				L	471			6
Peak-Hour Factor PH	= 0.88	0.88	1.00)		1 00	0.88		0	88
Hourly Flow Rate, HFF (veh/h)	10	409	0			0	535			6
Percent Heavy Vehicle	s 1					0				
Median Type		I		Undi	video	d		I		
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration	LT								7	ſR
Upstream Signal		0					0			
Minor Street		Northbound					Southbound			
Movement	7	8	9	9		10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)						3				4
Peak-Hour Factor, PH	= 1.00	1.00	1.00		0.88		1.00		0.	.88
Hourly Flow Rate, HFF (veh/h)	0	0	0			3	0			4
Percent Heavy Vehicle	s 0	0	0			1	0			1
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	0	0			0	0			0
Configuration							LR			
Delay, Queue Length	, and Level of	Service								
Approach	Eastbound	Westbound	1	Northb	ound	ł	S	outhbo	ound	
Movement	1	4	7	8		9	10	11	1	12
Lane Configuration	LT							LR	2	
v (veh/h)	10							7		
C(m)(veh/h)	1033							388	3	
v/c	0.01							0.0	2	
95% queue length	0.07							0.0	6	
Control Dolay (chuch)	0.00 8.5							14	1	
	0.0							14.4	7	
Approach Delay	A 			1				<u>в</u> 14.4	1 1	
Approach LOS								В		



	ļ	ALL-WA	Y STOP C	ONTROL	ANALYS	IS		
General Information				Site Inform	nation			
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimi Jacobs 7/21/2 AM Pe	merman s 015 eak		Intersection Jurisdiction Analysis Year		2015	5	
Project ID Ball Homes Factor	y Lane							
East/West Street: Factory La	ane			North/South St	reet: Old Hen	ry Road		
Volume Adjustments	and Site C	haracteri	Stics		1	14	aathaund	
Movement	L		T	R	L	V	T	R
Volume (veh/h)	12	2	168	0	0		86	77
%Thrus Left Lane								
Approach		1	Northbound			Sc	uthbound	
Movement			0	<u> </u>	L 		0	<u> </u>
%Thrus Left Lane				0	400	<u> </u>		
formus Leit Lane								
	East	bound	VVes	stbound	Nortr		Sout	nbound
		L2		L2	L1	L2		L2
Configuration			1R					
PHF Flaw Data (vah/h)	0.90		0.95				0.90	
Flow Rate (ven/n)	100		1				1 1	+
No Lanes		1	- /	1))	/	1
Geometry Group		1		1		,		1
Duration, T		r		0.2	25			,
Saturation Headway	Adiustmen	t Worksh	eet					
Prop. Left-Turns	01		0.0				0.9	
Prop. Right-Turns	0.0		0.5				0.0	
Prop. Heavy Vehicle	0.0		0.0				0.0	
hLT-adi	0.0	0.2	0.2	02			0.0	02
hRT-adi	-0.6	-0.6	-0.6	-0.6			-0.6	-0.6
hHV-adj	17	17	17	17			17	17
hadi. computed	0.0	1.1	-0.3				0.1	1.1
Departure Headway	and Service	Time	0.0	1.		J	0.1	
hd initial value (s)	3 20		3.20				3.20	1
x initial	0.17		0.15				0.50	+
hd, final value (s)	5.81		5.55				5.08	
x, final value	0.30		0.26				0.80	
Move-up time, m (s)	2	.0	2	2.0			2	2.0
Service Time, t_ (s)	3.8		3.6				3.1	
Capacity and Level o	of Service	1		J		1		<u></u>
	Fast	bound	Wes	sthound	North	bound	Sout	hbound
	11	12	11	12	11	12	11	12
Capacity (veh/h)	/38		421				600	
	11 20		421				24.02	+
	JI.3Z		10.03				24.92	
	В		<u> </u>					
Approach: Delay (s/veh)	1	1.32	10	1.53			24	.92
LOS	ļ	В		В				С
Intersection Delay (s/veh)				19.	49			
Intersection LOS	<u> </u>				/	-		
Jopyright © 2007 University o	r ⊢lorida, All Ri	ghts Reserve	1	HCS+™	Version 5.3	0	enerated: 7/21/	2015 12:15 PM



TWO-WAY STOP CONTROL SUMMARY											
General Informati	on		Site Information								
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jaccobs 7/21/201 AM Peak	erman 5 <	Interse Jurisd Analys	ection iction sis Ye	ar		2022 No	Build	1		
Project Description I	Ball Homes Fac	ctory Lane									
East/West Street: Fac	ctory Lane		North/	South	Stre	et: Old H	enry Road				
Intersection Orientation	n: North-Sout	h	Study	s): 0.25							
Vehicle Volumes a	and Adjustn	nents									
Major Street		Northbound					Southbou	und			
Movement	1	2	3			4	5			6	
	L	T	R			L	T			R	
Volume (veh/h)	101	142	1.00			1.00	/29			62	
Peak-Hour Factor, PHI	- 0.95	0.95	1.00)		1.00	0.95		0	.95	
(veh/h)	106	149	0			0	767			65	
Percent Heavy Vehicle	s 1					0					
Median Type		I	Two V	Vav Le	eft Tu	ırn Lane					
RT Channelized			0							0	
Lanes	1	1	0			0	1			0	
Configuration	L	T								TR	
Upstream Signal		0					0				
Minor Street		Eastbound					Westbound				
Movement	7	8	9	9		10	11			12	
	L	Т	R			L	Т			R	
Volume (veh/h)	14		197	197							
Peak-Hour Factor, PH	- 0.95	1.00	0.95			1.00	1.00		1	.00	
Hourly Flow Rate, HFF (veh/h)	14	0	207		0		0			0	
Percent Heavy Vehicle	s 1	0	1		0		0			0	
Percent Grade (%)		0					0				
Flared Approach		N					N				
Storage		0					0				
RT Channelized			0							0	
Lanes	1	0	1			0	0			0	
Configuration	L		R								
Delay, Queue Length	, and Level of	Service					•				
Approach	Northbound	Southbound	١	Nestb	ounc	ł	E	Eastbo	ound		
Movement	1	4	7	8		9	10	1	1	12	
Lane Configuration	L						L			R	
v (veh/h)	106					-	14	-		207	
C(m)(veh/h)	805						318			387	
	0.13						0.04			0.53	
05% quouo longth	0.15						0.04			2.04	
Control Dolou (chick)	40.4						16.0			01F	
Control Delay (s/veh)	10.1						10.8			24.0	
LUS Annrach Delevi	В						C			C	
Approach Delay (s/veh)							24.0				
Approach LOS								С			

HCS+[™] Version 5.6

Generated: 7/21/2015 12:23 PM



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site I	nfori	mat	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jaccobs 7/21/201 AM Peak	erman 5 (Inters Jurisd Analy	ection iction sis Ye	ar		2022 Bui	ld		
Project Description L	Ball Homes Fac	ctory Lane								
East/West Street: Fac	tory Lane		North/	South	Stre	et: Old H	enry Road			
Intersection Orientation	n: North-Sout	n	Study							
Vehicle Volumes a	and Adjustn	nents								
Major Street		Northbound					Southbou	ind		
iviovement	1	Z	3 D			4	<u> </u>			0 D
Volume (veh/h)	127	142	K K			L	720			R 62
Peak-Hour Factor PH	= 0.95	0.95	1.00)		1 00	0.95		0	95
Hourly Flow Rate, HFF (veh/h)	133	149	0			0	767			65
Percent Heavy Vehicle	s 1					0				
Median Type		· · ·			eft Τι	ırn Lane				
RT Channelized										0
Lanes	1	1	0			0	1			0
Configuration	L	Т							1	TR
Upstream Signal		0					0			
Minor Street		Eastbound					Westbound			
Movement	7	8	9	9		10	11			12
	L	T	R		L		Τ			R
Volume (veh/h)	14		283		1.00					
Peak-Hour Factor, PH	0.95	1.00	0.95	0.95		1.00	1.00		1	.00
Hourly Flow Rate, HFF (veh/h)	14	0	297			0	0			0
Percent Heavy Vehicle	s 1	0	1			0	0			0
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	1	0	1			0	0			0
Configuration	L		R							
Delay, Queue Length	and Level of	Service								
Approach	Northbound	Southbound	١	Nestb	ound	ł	E	astbo	und	
Movement	1	4	7	8	}	9	10	11		12
Lane Configuration	L						L			R
v (veh/h)	133						14			297
C (m) (veh/h)	805						301			387
v/c	0.17						0.05			0.77
95% queue length	0.59						0.15			6.33
Control Delay (s/veh)	10.4						17.5			39.1
LOS	В						С			Е
Approach Delay (s/veh)						•		38.1		
Approach LOS			E							

HCS+[™] Version 5.6

Generated: 7/21/2015 12:25 PM



		LL-W	VAY	STOP C	ONTROL	ANALYS	IS			
General Information					Site Inform	nation				
Analyst Agency/Co. Date Performed Analysis Time Period Project ID Ball Homes Factori	D Zim Jacob 7/21/2 PM Pe	merman 8 015 9ak			Intersection Jurisdiction Analysis Year			2015		
East/Most Street: Eactory	no				North/South St	reet: Old Her	ny Poar	1		
Volume Adjustments	and Site C	haract	terist	tice			ny riodo			
Approach		ilaraci	Ea	astbound				West	tbound	
Movement	L			Т	R	L			T	R
Volume (veh/h)	11	6		247	0	0		2	290	362
%Thrus Left Lane										
Approach			No	rthbound				Sout	hbound	
Volume (veh/h)				0	<u>к</u>	103	2		0	<u> </u>
Volume (ven/n)				0	0	195	,		0	39
%Thrus Leit Lane										
	East	bound		We	stbound	Norti	1bound		Sout	hbound
	L1	L	2	L1	L2	L1	I	L2	L1	L2
Configuration	LT			TR					LR	
PHF	0.96			0.96			<u> </u>		0.96	
Flow Rate (veh/h)	3//			679					241	
% Heavy Vehicles	1	ļ		1			<u> </u>		1	
No. Lanes		1			1	(0			1
Geometry Group		/			1	25				7
Duration, i	A	4 \A/		-4	0.2	20				
Saturation Headway A	Aajustmen		snee	et	1	1	1			1
Prop. Left-Turns	0.3			0.0					0.8	
Prop. Right-Turns	0.0			0.6					0.2	
Prop. Heavy Vehicle	0.0			0.0					0.0	
hLT-adj	0.2	0.2	2	0.2	0.2				0.2	0.2
hRT-adj	-0.6	-0.	6	-0.6	-0.6				-0.6	-0.6
hHV-adj	1.7	1.7	7	1.7	1.7				1.7	1.7
hadj, computed	0.1			-0.3					0.1	
Departure Headway a	nd Service	e Time								
hd, initial value (s)	3.20			3.20					3.20	
x, initial	0.34			0.60					0.21	
hd, final value (s)	5.83			5.08					6.63	
x, final value	0.61			0.96					0.44	
Move-up time, m (s)	2	.0		2	2.0				2	2.0
Service Time, t _s (s)	3.8			3.1					4.6	
Capacity and Level of	f Service									
	East	bound		We	stbound	North	nbound		Sout	hbound
	L1	Lź	2	L1	L2	L1	1	L2	L1	L2
Capacity (veh/h)	603			707					491	
Delay (s/yeh)	17.56			46.20					14.82	
	0			= 40.20 E					D	
Approach: Deley (chick)		7.50			2.00					
Approach: Delay (s/ven)	1	7.56		40	5.20				14	
LOS		С			E					В
Intersection Delay (s/veh)					32.	04				
Intersection LUS		- Lu - D			L	/		~		0045 40 47 0

HCS+[™] Version 5.3

Generated: 7/21/2015 12:17 PM



	тис	-WAY STOP	CONTR		UM	MARY			
General Information	on		Site I	nfori	nati	ion			
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jaccobs 7/21/201 PM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Ye	ar		2022 No	Build	
Project Description E	Ball Homes Fac	ctory Lane							
East/West Street: Fac	tory Lane		North/	South	Stre	et: Old H	enry Road		
Intersection Orientation	: North-Sout	h	Study Period (hrs): 0.25						
Vehicle Volumes a	and Adjustn	nents							
Major Street		Northbound					Southbou	ind	
iviovement	1	Z	3 D			4	5 T		0
Volume (veh/h)	341	544	ĸ			L	200		R 16
Peak-Hour Factor PHF	0.96	0.96	1 00			1 00	0.96		0.96
Hourly Flow Rate, HFR	355	566	0			0	302		47
(ven/n) Dereent Heever Vehicle	- 1					0			
Modian Type	5 1		 Two M	lov La	# Тı	U Irn Lono			
PT Channelized					11 10	IIII Laile			0
	1	1	0			0	1		0
Configuration	1	т				0	/		TR
Upstream Signal		0					0		
Minor Street		Eastbound					Westhou	nd	
Movement	7	8	9	9		10	11		12
	L	T	R			L	Т		R
Volume (veh/h)	136		290						
Peak-Hour Factor, PHF	0.96	1.00	0.96			1.00	1.00		1.00
Hourly Flow Rate, HFR (veb/b)	141	0	302		0		0		0
Percent Heavy Vehicle	s 1	0	1			0	0		0
Percent Grade (%)		0	1				0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
Lanes	1	0	1			0	0		0
Configuration	L		R						
Delay, Queue Length,	and Level of	Service							
Approach	Northbound	Southbound	\	Vestb	ounc	1	E	astbou	nd
Movement	1	4	7	8	_	9	10	11	12
Lane Configuration	L	-	-			-	L		R
v (veh/h)	355						141		302
C (m) (veh/h)	1215						157		718
v/c	0.29						0.90		0.42
95% queue length	1.22						6.34		2 09
Control Delay (s/yob)	0.2						104.0		13.6
	Э.2 Л						E		13.0 D
Approach Delay								42 4	
(s/veh) Approach LOS							E		

HCS+[™] Version 5.6

Generated: 7/21/2015 12:29 PM



TWO-WAY STOP CONTROL SUMMARY									
General Information	on		Site I	nforr	nati	ion			
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jaccobs 7/21/201 PM Peak	erman 5 C	Interse Jurisd Analys	ection iction sis Ye	ar		2022 Bui	ld	
Project Description L	Ball Homes Fac	ctory Lane	.						
East/West Street: Fac	ctory Lane	1-	North/	South	Stre	et: Old H	enry Road		
Intersection Orientation	n: North-Sout	n	Study	Period	i (nrs	5): 0.20			
Vehicle Volumes	and Adjustn	nents							
Major Street		Northbound				4	Southbou	Ind	0
Movement	1	2 T	3			4	5 T		6 D
Volumo (voh/h)	L	544	ĸ			L	200		R 46
Peak-Hour Factor PH	= 0.96	0.96	1.00)		1.00	0.96		40
Hourly Flow Rate, HFF (veh/h)	2 448	566	0			0	302		47
Percent Heavy Vehicle	s 1					0			
Median Type		I	Тwo И	Vav Le	eft Tu	ırn Lane			
RT Channelized			0						0
Lanes	1	1	0			0	1		0
Configuration	L	T							TR
Upstream Signal		0					0		
Minor Street		Eastbound					Westbou	nd	
Movement	7	8	9	9 10		10	11		12
	L	Т	R			L	Т		R
Volume (veh/h)	136		341	341					
Peak-Hour Factor, PH	- 0.96	1.00	0.96	0.96		1.00	1.00		1.00
Hourly Flow Rate, HFF (veh/h)	141	0	355			0	0		0
Percent Heavy Vehicle	s 1	0	1			0	0		0
Percent Grade (%)		0					0		
Flared Approach		N					N		
Storage		0					0		
RT Channelized			0						0
Lanes	1	0	1			0	0		0
Configuration	L		R						
Delay, Queue Length	and Level of	Service							
Approach	Northbound	Southbound	١	Nestb	ound	1	E	astbound	
Movement	1	4	7	8		9	10	11	12
Lane Configuration	1						1		R
v (veh/h)	448						141		355
C(m)(veh/h)	1215						116		718
	0.37						1 22		0.40
05% guous longth	1.70						0.00		0.43
Sontrol Delev (stork)	1.12						9.00		2.11
Control Delay (s/veh)	9.7						223.0		14.8
LOS Approach Delay	A						<i>F</i>	74.2	В
(s/veh) Approach LOS		74.2							
								•	

HCS+[™] Version 5.6

Generated: 7/21/2015 12:31 PM



	TWC	-WAY STOP	CONTR	OL S	UMI	MARY				
General Information	on		Site Information							
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5 :	Interse Jurisd Analys	ection iction sis Yea	ar		2015			
Project Description E	Ball Homes Fac	tory Lane		0 11 1	01					
East/West Street: Hai	milton Springs/	Arnoid Paimer	North/s	South	Stree	et: Old H	enry Road			
Intersection Orientation	1. Nonn-Soul	n	Sludy	Period	(nrs). 0.20				
Vehicle Volumes a	and Adjustn	nents								
Major Street	1	Northbound	2			4	Southbol	und		6
wovernent	1	Z				4	<u>э</u> т			D
Volume (veh/h)		148	27			25	613			0
Peak-Hour Factor PHF	- 0.98	0.98	0.98	2	(2.0	0.98		0	98
Hourly Flow Rate, HFR (veh/h)	0	151	27			25	625			0
Percent Heavy Vehicle	s 0					1				
Median Type				Undiv	/ided					
RT Channelized			0							0
Lanes	0	1	1			0	1			0
Configuration	LT		R		l	LTR				
Upstream Signal		1					0			
Minor Street		Eastbound					Westbou	ind		
Movement	7	8	9	9		10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)	0	0	3		117		0		2	20
Peak-Hour Factor, PHF	0.98	0.98	0.98		(0.98	0.98		0.	.98
Hourly Flow Rate, HFR (veh/h)	0	0	3		119		0		2	20
Percent Heavy Vehicle	s 0	0	0			1	0			0
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length,	and Level of	Service								
Approach	Northbound	Southbound	١	Nestbo	ound		E	Eastbo	ound	
Movement	1	4	7	8		9	10	1	1	12
Lane Configuration	LT	LTR		LTR	2			LT	R	
v (veh/h)	0	25		139	,			3		
C (m) (veh/h)	966	1405		315	5			48	8	
v/c	0.00	0.02		0.44	4			0.0)1	
95% queue length	0.00	0.05		216	6			0.0)2	
Control Delay (s/veh)	87	7.6		25 2	2			12	4	
LOS	Δ	Δ			-			P		
Approach Delay	/				25.2			12.4		
Approach LOS			D				В			

HCS+[™] Version 5.6

Generated: 7/21/2015 11:53 AM



	TWC	-WAY STOP	CONTR	OL S	UM	MARY				
General Information	on		Site I	nforr	nati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5 C	Interse Jurisd Analys	ection iction sis Yea	ar		2022			
Project Description E	Ball Homes Fac	ctory Lane	NI41- //	0	01					
East/West Street: Hai	milton Springs/	Arnoid Paimer	North/s	South Deried	Stre	et: 010 H	enry Road			
Intersection Orientation	1. 10111-3000		Sludy	Penou	1 (1115	5). 0.20				
Vehicle Volumes a	and Adjustn	nents					Couthbourd			
Movement	1		3	2 4			Soumbou	una I		6
movement		Z	R							R
Volume (veh/h)	8	226	27			25	886			2
Peak-Hour Factor, PH	0.98	0.98	0.98	;		0.98	0.98		0.	98
Hourly Flow Rate, HFR	8	230	27			25	904			2
Percent Heavy Vehicle	s 0					1				
Median Type			Тwo И	Vay Le	ft Tu	ırn Lane				
RT Channelized			0							0
Lanes	1	1	0			1	1			0
Configuration	L	L				L			7	R
Upstream Signal		1					0			
Minor Street		Eastbound					Westbou	ind		
Movement	7	8	9	9		10	11			12
	L	Т	R			L	Т			R
Volume (veh/h)	2	0	38			117	0		2	20
Peak-Hour Factor, PH	0.98	0.98	0.98			0.98	0.98		0.	98
Hourly Flow Rate, HFR (veh/h)	2	0	38		119		0		2	20
Percent Heavy Vehicle	s 0	0	0			1	0			0
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Configuration		LTR					LTR			
Delay, Queue Length	and Level of	Service					_			
Approach	Northbound	Southbound	١	Nestbo	ound	1	E	Eastb	ound	
Movement	1	4	7	8		9	10	1	1	12
Lane Configuration	L	L		LTF	2			L7	R	
v (veh/h)	8	25		139	9			4	0	
C (m) (veh/h)	759	1318		241	1			33	32	
v/c	0.01	0.02		0.5	8			0.1	12	
95% queue length	0.03	0.06		3.2	6			0.4	41	
Control Delay (s/veh)	9.8	7.8		38.	5			17	.3	
LOS	A	А		E				0	2	
Approach Delay (s/veh)				38.	5		17.3			
Approach LOS			E				С			

HCS+[™] Version 5.6

Generated: 7/21/2015 11:59 AM



TWO-WAY STOP CONTROL SUMMARY										
General Information	on		Site Information							
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 AM Peak	erman 5 (Interse Jurisd Analys	ection iction sis Yea	ar		2022 Bui	ild		
Project Description E	Ball Homes Fac	ctory Lane								
East/West Street: Hai	milton Springs/,	Arnold Palmer	North/	South	Stre	et: Old H	enry Road			
Intersection Orientation	n: North-Sout	h	Study	Period	l (hrs	s): 0.25				
Vehicle Volumes a	and Adjustn	nents								
Major Street		Northbound					Southbou	und		
Movement	1	2	3			4	5			6
	L	T	R			L	T			R
Volume (ven/n) Roak Hour Fastor, DHE	8	252	2/	,		20	972		0	2
Hourly Flow Rate, HFR (veh/h)	8	257	27	,		25	991			2
Percent Heavy Vehicle	s 0					1				
Median Type			Two V	Vay Le	ft Tu	ırn Lane		I		
RT Channelized			0							0
Lanes	1	1	0			1	1			0
Configuration	L	L				L			1	ſR
Upstream Signal		1					0			
Minor Street		Eastbound					Westbou	Ind		
Movement	7	8	9	9		10	11			12
	L	ТТ	R			L	T			R
Volume (veh/h)	2	0	38			117	0		2	20
Peak-Hour Factor, PH	- 0.98	0.98	0.98			0.98	0.98		0	.98
(veh/h)	2	0	38			119	0			20
Percent Heavy Venicle	s U	0	0			1	0			0
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			0
Conliguration					_		LIR			
Delay, Queue Length,	and Level of	Service					-			
Approach	Northbound	Southbound		vesto	ounc	0	40	astbo		40
	1	4	1	8		9	10	1	1	12
Lane Configuration	L	L		LIF	۲				R	
v (veh/h)	8	25		139	•			40)	
C (m) (veh/h)	704	1288		211	1			29	6	
v/c	0.01	0.02		0.6	6			0.1	4	
95% queue length	0.03	0.06		4.0	1			0.4	16	
Control Delay (s/veh)	10.2	7.9		49.	9			19.	.1	
LOS	В	A		E				C	;	
Approach Delay (s/veh)			49.	9		19.1				
Approach LOS		E			С					

HCS+[™] Version 5.6

Generated: 7/21/2015 12:01 PM



	TWC	-WAY STOP	CONTR	OL S	UM	MARY					
General Information	on		Site I	nforn	nati	ion					
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	rman 5	Interse Jurisd Analys	ection iction sis Yea	ar		2015				
Project Description E	Ball Homes Fac	tory Lane									
East/West Street: Har	nilton Springs/	Arnold Palmer	North/	South	Stre	et: Old H	enry Road				
Intersection Orientation	: North-Sout	h	Study	Period	l (hrs	s): 0.25					
Vehicle Volumes a	and Adjustn	nents									
Major Street		Northbound					Southbou	und			
Movement	1	2	3			4	5			6	
	L	1	R			L	I			R	
Volume (ven/n)	3	0.02	82	,		30	284			1	
Hourly Flow Rate, HFR	3	678	88			37	305		0.	1	
Percent Heavy Vehicles	5 0					1					
Median Type				Undiv	video	d					
RT Channelized			0							0	
Lanes	0	1	1			0	1			0	
Configuration	LT		R			LTR					
Upstream Signal		1					0				
Minor Street		Eastbound					Westbou	nd			
Movement	7	8	9			10 1				12	
	L	Т	R			L	Т			R	
Volume (veh/h)	0	0	4			61	0		2	?7	
Peak-Hour Factor, PHF	0.93	0.93	0.93			0.93	0.93		0.	93	
Hourly Flow Rate, HFR (veh/h)	0	0	4			65	0		2	29	
Percent Heavy Vehicles	s 0	0	0		1		0			0	
Percent Grade (%)		0	_				0				
Flared Approach		N					N				
Storage		0					0				
RT Channelized			0							0	
Lanes	0	1	0			0	1			0	
Configuration		LTR					LTR				
Delay, Queue Length,	and Level of	Service									
Approach	Northbound	Southbound	١	Nestbo	ound	1	E	Eastbo	und		
Movement	1	4	7	8		9	10	11		12	
Lane Configuration	LT	LTR		LTF	7			LTF	2		
v (veh/h)	3	37		94				4			
C (m) (veh/h)	1266	776		223	3			739	, †		
v/c	0.00 0.05				2			0.01	1		
95% gueue lenath	0.01	0.15		1.9	5			0.02	2		
Control Delay (s/veh)	7.9	9.9		32	4			9.9			
LOS	A	A		D				A	-+		
Approach Delay (s/veh)				32.4	4	L		9.9			
Approach LOS				D				Α	1 6 1 1 0.93 1 1 0 0 1 0 0 1 0 0 12 R 27 0.93 29 0 0 0 29 0 00 0 00 0 00 0 11 12 tbound 11 11 12 tbound 11 11 12 0.01 0 0.02 9.9 A 9.9 A 9.9		

HCS+[™] Version 5.6

Generated: 7/21/2015 12:06 PM



	тис	-WAY STOP	CONTR	OL S	UM	MARY						
General Information	on		Site I	nforn	nati	ion						
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5 c	Interse Jurisd Analys	ection iction sis Yea	ar		2022 No	Build				
Project Description E	Ball Homes Fac	ctory Lane										
East/West Street: Har	milton Springs/	Arnold Palmer	North/	South	Stre	et: Old He	enry Road					
Intersection Orientation	n: North-Sout	h	Study	Period	(hrs	s): 0.25						
Vehicle Volumes a	and Adjustn	nents										
Major Street		Northbound					Southbou	ind	-			
Movement	1	2	3		4		<u>5</u>		6			
Valuma (vab/b)	L	062	R 00			25	400		2			
Peak-Hour Factor PHF	= 0.93	003	02			0.03	<u>422</u> 0.93		0.93			
Hourly Flow Rate, HFR	30	0.00	88			37	153		3			
(veh/h)		321	00			57	400		5			
Percent Heavy Vehicle	s 0				<i>a</i> –	1						
Median Type				Vay Lei	ft Tu	irn Lane						
RT Channelized			0						0			
Lanes	1	1	0			1	1		0			
Configuration	L	1	IR			L	0		IR			
Opstream Signal						0						
Minor Street	7	Eastbound	0	9		10	VVestbou	na	10			
wovernent	1	о Т	9			10	т		12 D			
Volume (veh/h)	L	0	21			L 61	0		27			
Peak-Hour Factor PHF	0.93	0.93	0.93			0.93	0.93		0.93			
Hourly Flow Rate, HFR (veh/h)	1	0	22			65	0		29			
Percent Heavy Vehicle	s 0	0	0			1	0		0			
Percent Grade (%)		0	-				0					
Flared Approach		N					Ν					
Storage		0					0					
RT Channelized			0						0			
Lanes	0	1	0			0	1		0			
Configuration		LTR					LTR					
Delay, Queue Length,	and Level of	Service										
Approach	Northbound	Southbound	١	Nestbo	bund		E	astbour	nd			
Movement	1	4	7	8		9	10	11	12			
Lane Configuration	L	L		LTF	2			LTR				
v (veh/h)	39	37		94				23				
C (m) (veh/h)	535		182	2			524					
v/c	0.03	0.07		0.52	2			0.04				
95% queue length	0.11	0.22		2.59	9			0.14				
Control Delay (s/veh)	8.3	12.2		44.2	2			12.2				
LOS	А	В		Е				В				
Approach Delay (s/veh)				44.2				12.2				
Approach LOS				Е				В				

HCS+[™] Version 5.3

Generated: 7/21/2015 12:09 PM



	TWC	-WAY STOP	CONTR	OL S	UM	MARY				
General Information	on		Site I	nforr	nati	ion				
Analyst Agency/Co. Date Performed Analysis Time Period	D Zimme Jacobs 7/21/201 PM Peak	erman 5	Interse Jurisd Analys	ection iction sis Yea	ar		2022 Bui	ild		
Project Description E	Ball Homes Fac	ctory Lane								
East/West Street: Hai	milton Springs/	Arnold Palmer	North/	South	Stre	et: Old H	enry Road			
Intersection Orientation	n: North-Sout	h	Study	Period	i (hrs	5): 0.25				
Vehicle Volumes a	and Adjustn	nents								
Major Street		Northbound					Southbou	und		
Movement	1	2	3		4		5			6
	L	1	R			L	170			R
Volume (ven/n)	3/	953	82	,		35	4/3		0	3
Hourly Flow Rate, HFR	39	1024	88	,		37	508		0.	95 3
(Ven/II) Percent Heavy Vehicle	s 0					1				
Median Type	5 0		 Two M		eft Turn Lane					
				ay Le	11 14	III Lane				0
	1	1	0			1	1			0
Configuration	1	/				1	1			
Unstream Signal		1				L	0			<u> </u>
Minor Street		Factbound					Westhou	und		
Movement	7	Eastbound	0			10				12
Movement		т				10	т			D
Volume (veh/h)	1	0	21			61	0			77
Peak-Hour Factor PH	- 0.93	0.93	0.93			0.93	0.93		0	.,
Hourly Flow Rate, HFR (veh/h)	1	0	22			65	0		2	29
Percent Heavy Vehicle	s 0	0	0	0		1	0			0
Percent Grade (%)		0					0			
Flared Approach		N					N			
Storage		0					0			
RT Channelized			0							0
Lanes	0	1	0			0	1			<u> </u>
Configuration		ITR				0	I TR			·
Delay Queue Length	and level of	Service					Em			
Approach	Northbound	Southbound	1	Nosth	ound	1	F	actho	bund	
Movement	1	J	7	00310	ound	0	10	1		10
	1	4	1	0	_	9	10	17		12
	L	L			۲					
v (ven/n)	39	37		94				23	5	
C (m) (veh/h)	1065	462		148	3			46	/	
v/c					4			0.0	15	
95% queue length	6 queue length 0.11 0.26				5			0.1	5	
Control Delay (s/veh)	8.5	13.5		64.	2			13.	1	
LOS	A	В		F				В		
Approach Delay (s/veh)				64.	2			13.1	1	
Approach LOS				F				В		

HCS+[™] Version 5.3

Generated: 7/21/2015 12:11 PM



		HCS 2	010 S	ignali	zed	Inters	ectior	n Res	sults S	umm	ary				
O									1	41 m l = 6				al Lab I	N U
General Inform	nation	Incohe							Intersec		ormatio	on	- 1	11	
Agency		Jacobs					0045			, n	0.25		- 2		
Analyst		D Zimmerman		Analys	sis Dai	te Jul 21	, 2015	\rightarrow	Area Typ	e	Other	ſ			۵ ۲
Jurisdiction				l lime F	Period	AM P	eak	\rightarrow	PHF	D · ·	0.99	~~	4	w++	- [*]
Intersection		Bush Farm Road		Analys	sis Yea	ar 2015			Analysis	Period	1> 7:3	30	n n		
File Name		Old Henry at Bush	15 AM.X	us									- 1	htr	
Project Descrip	tion	Ball Homes Factory	Lane											N T 44 Y	P (
Demand Inform	nation				EB			W	3		NB			SB	
Approach Move	ement			L	T	R	L	Т	R	L	Т	R	L	T	R
Demand (v), ve	h/h			3	5	72	615	4	37	7	115	138	69	604	1
							i,								
Signal Informa	ation				205	3 4	<u> </u>						-+-		-
Cycle, s	85.0	Reference Phase	2		51	rË '						1	\mathbf{Y}_{2}	3	-€ ₄
Offset, s	0	Reference Point	End	Green	32.8	40.0	0.0	0.0	0.0	0.0					5
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.3	3.6	0.0	0.0	0.0	0.0					7
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.3	3.0	0.0	0.0	0.0	0.0		5	6	7	8
Timer Desults				EDI		EDT	W/D	1	WDT	ND		NDT	CDI		CDT
Assigned Phase				EBI	-	EBI	VVB		0	NB		NB I	SBL	-	6
Case Number	e				-	60	-	-	0.0			50	<u> </u>		6.0
Phase Duration			_			46.6			46.6			38.4			38.4
Change Period	(V+D.)				-	6.6	<u> </u>	-	6.6			56		-	56
Max Allow Hear	, (1.176) dway (A	η, 5 ΛΛΗλ ε				1.8			1.8			5.0			5.0
Queue Clearan	away (n	(a) s				42.0	<u> </u>		42.0			27.0			27.1
Groop Extensio	n Timo	= (gs), 5 (gs), 5				42.0			42.0			4.0			50
Phase Call Pro	hability	(ge), 5				1.00	<u> </u>		1.00	<u> </u>	1.00		<u> </u>	-	1.00
Max Out Proba	bility					1.00			1.00			0.17			0.15
Max Out 1054	onity					1.00			1.00			0.11			0.10
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow F	Rate (v)), veh/h		3	78		621	41		7	116	79	70	611	
Adjusted Satura	ation Flo	ow Rate (s), veh/h/ln		1387	1610)	1329	1618	;	823	1863	1579	1283	1881	
Queue Service	Time (g	g≈), S		0.0	2.3		37.7	1.2		0.7	3.5	2.7	3.2	25.1	
Cycle Queue C	learanc	e Time (g₀), s		40.0	2.3		40.0	1.2		25.8	3.5	2.7	6.7	25.1	
Green Ratio (g/	/C)			0.47	0.47		0.47	0.47		0.39	0.39	0.39	0.39	0.39	
Capacity (c), ve	eh/h			85	758		675	762		159	719	609	527	725	
Volume-to-Cap	acity Ra	atio (X)		0.036	0.103	3	0.921	0.054	1	0.045	0.162	0.129	0.132	0.842	
Available Capa	city (c∎)	, veh/h		85	758		675	762		277	986	836	712	996	
Back of Queue	(Q), ve	h/In (50th percentile)		0.1	0.8		15.1	0.4		0.1	1.4	0.9	0.9	11.0	
Queue Storage	Ratio (RQ) (50th percentile)	0.01	0.04		0.76	0.01		0.02	0.04	0.02	0.23	0.28	
Uniform Delay	(d1), s/v	eh		42.5	12.5		24.6	12.2		35.5	17.1	16.9	19.3	23.7	
Incremental De	lay (d2)	, s/veh		0.2	0.1		18.2	0.0		0.2	0.1	0.1	0.2	5.7	
Initial Queue De	nitial Queue Delay (d₃), s/veh				0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay (Control Delay (<i>d</i>), s/veh			42.7	12.6		42.7	12.3		35.7	17.2	17.0	19.5	29.5	
Level of Service	evel of Service (LOS)			D	В		D	В		D	В	В	В	С	
Approach Delay, s/veh / LOS				13.7	7	В	40.8	3	D	17.8	3	В	28.4	+	С
Intersection De	ntersection Delay, s/veh / LOS					3	1.4						С		
								14/5			NID			0.0	
Nultimodal Re	sults	(1.00		0.5	EB	D		WB	D	0.0	NB	D	0.0	SB	
Pedestrian LOS	s score	1105		2.5		В	2.3		В	2.3		В	2.3		В
BICYCIE LOS SC	ore / LC	5		0.6		A	1.6		A	0.8		А	1.6		А

HCS 2010[™] Streets Version 6.65

Generated: 7/21/2015 10:36:35 AM



		HCS 2	010 S	ignali	ized	Inters	ectior	n Res	sults S	umm	ary				
General Inforn	nation								Intersec	tion Inf	ormatio	on	- 1	4 J 4 J	the last
Agency		Jacobs							Duration	, h	0.25				
Analyst		D Zimmerman		Analys	sis Dat	e Jul 21	1, 2015		Area Typ	be	Other		4 →		* *
Jurisdiction				Time F	Period	AM P	eak		PHF		0.99		* *		÷.
Intersection		Bush Farm Road		Analys	sis Yea	ır 2022	No Buile	d	Analysis	Period	1> 7:	30	4		v c
File Name		Old Henry at Bush	22 AM I	NB.xus										5 tr	
Project Descrip	tion	Ball Homes Factory	/ Lane											1144	21
Demand Inform	nation				EB			W	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), ve	h/h			15	10	104	742	37	7 52	171	174	235	129	804	50
								<u> </u>			i,				
Signal Informa	ation	Reference Phase	2	-	205								512		x
Offect e	0.0	Reference Point	End			r Fi						1	2	3	Y 4
Unseerdinated	Vaa	Simult Can E/M	On	Green	44.4	40.0	0.0	0.0	0.0	0.0	_				<u>A</u>
Chicoordinated	Finad	Simult Cap E/W	On	Yellow	4.3	3.6	0.0	0.0	0.0	0.0	_			7	×.
Force Mode	Fixed	Simult. Gap N/S	On	Reu	1.5	3.0	0.0	10.0	0.0	0.0		5	ь	1	0
Timer Results				EBI	-	EBT	WB	L	WBT	NB	L	NBT	SB	-	SBT
Assigned Phas	е					4			8			2			6
Case Number						6.0			6.0			5.0			6.0
Phase Duration	1, S					46.6			46.6			50.0			50.0
Change Period	, (Y+R₀)), S				6.6			6.6			5.6			5.6
Max Allow Hea	dway (<i>l</i>	<i>1AH</i>), s				4.8			4.8			5.3			5.3
Queue Clearan	ce Time	e (g₅), s				42.0			42.0			42.3			17.7
Green Extensio	n Time	(ge), s				0.0			0.0			2.1			11.7
Phase Call Pro	bability					1.00			1.00			1.00			1.00
Max Out Proba	bility					1.00			1.00			1.00			0.31
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow	Rate (v)	, veh/h		15	115		749	90		173	176	177	130	436	427
Adjusted Satura	ation Flo	w Rate (s), veh/h/ln		1328	1616		1285	1702	2	651	1863	1579	1216	1881	1842
Queue Service	Time (g	1s), S		0.0	4.3		35.7	3.2		24.5	5.4	6.6	6.9	15.7	15.7
Cycle Queue C	learanc	e Time (g₀), s		40.0	4.3		40.0	3.2		40.3	5.4	6.6	12.4	15.7	15.7
Green Ratio (g	/C)			0.41	0.41		0.41	0.41		0.46	0.46	0.46	0.46	0.46	0.46
Capacity (c), ve	eh/h			75	669		549	705		268	856	725	565	864	846
Volume-to-Cap	acity Ra	atio (X)		0.203	0.172	2	1.365	0.12	7	0.646	0.205	0.244	0.231	0.504	0.504
Available Capa	city (c₀)	, veh/h		75	669		549	705		272	868	736	573	877	858
Back of Queue	(Q), vel	h/In (50th percentile))	0.4	1.6		39.8	1.2		4.0	2.2	2.2	1.9	6.3	6.2
Queue Storage	Ratio (RQ) (50th percentile)	0.05	0.08		2.01	0.03		0.50	0.05	0.06	0.47	0.16	0.16
Uniform Delay	(d1), s/v	eh		48.3	17.8		32.9	17.5		32.5	15.6	15.9	19.3	18.4	18.4
Incremental De	remental Delay (d₂), s/veh				0.1		175.8	0.1		5.9	0.2	0.2	0.3	0.7	0.7
Initial Queue D	al Queue Delay (d₃), s/veh			0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/vel	h		49.9	18.0		208.7	17.6		38.4	15.7	16.1	19.6	19.0	19.0
Level of Service	e (LOS)			D	В		F	В		D	В	В	В	В	В
Approach Dela	pproach Delay, s/veh / LOS			21.7	7	С	188.	2	F	23.3	3	С	19.1	1	В
Intersection De	Intersection Delay, s/veh / LOS					7	7.2						E		
Multimodal Re	sults	11.00		0.0	EB	0		WB		0.0	NB	D	0.0	SB	D
Rigvela LOS S	ore /14	1203		2.9		^	2.4		D	2.3			2.3		
DILYLIC LUG OL	JUC/LU			U.1		~	1.3		~			~	1.3		~

HCS 2010[™] Streets Version 6.65

Generated: 7/21/2015 10:36:35 AM



		HCS 2	010 S	ignali	zed	Inters	ectior	1 Res	sults \$	Summ	ary				
General Inform	nation								Interse	tion Inf	ormatio	on		111	te la
Agency		Jacobs							Duratior	i, h	0.25			***	
Analyst		D Zimmerman		Analys	sis Dat	te Jul 2	1, 2015		Area Ty	be	Other		A		A
Jurisdiction				Time F	Period	AM F	eak		PHF		0.99		*		÷.
Intersection		Bush Farm Road		Analys	sis Yea	ar 2022	Build		Analysis	Period	1> 7:3	30	1		7
File Name		Old Henry at Bush	22 AM E	3.xus										5 tr	
Project Descrip	tion	Ball Homes Factory	/ Lane										n n	* 1 * * *	Pr 11
				_			Y								
Demand Inform	nation				EB			W	B		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), ve	h/h			15	10	104	742	37	7 52	171	200	235	129	890	50
Signal Informa	ation					, I,									
Cycle s	97.2	Reference Phase	2		243		a						V		<u> </u>
Offset s	0	Reference Point	End	<u> </u>	<u> </u>	ΎΓ̈́́						1	2	3	Y 4
Uncoordinated	Ves	Simult Gan E/W	On	Green	45.0	40.0	0.0	0.0	0.0	0.0	_				ð-
Eorce Mode	Fixed	Simult Gap N/S	On	Red	4.3	3.0	0.0	0.0	0.0	0.0	_	5		7	¥ 8
T OFCC MODE	TIXCU	Sindir. Oap 14/5	OII	Tied	1.0	0.0	0.0	0.0	0.0	0.0		-	-		-
Timer Results				EBI		EBT	WB	L	WBT	NB		NBT	SBL		SBT
Assigned Phase	e					4		-	8			2			6
Case Number						6.0			6.0			5.0			6.0
Phase Duration	1 5		_			46.6			46.6			50.6			50.6
Change Period	(Y+Rc)	s				6.6		-	6.6			56			56
Max Allow Hear	dway (M	, <u>,</u> 1AH) s				4.8			4.8			5.4			5.4
Queue Clearan	ce Time	(a) s				42.0		-	42.0			47.0			19.8
Green Extensio	n Time	(g_) s				0.0			0.0			0.0			12.4
Phase Call Pro	hability	(ge), 3			-	1.00		-	1.00			1.00	<u> </u>		1.00
Max Out Proba	bility					1.00	-	-	1.00	-		1.00			0.41
	Dinty					1.00			1.00						0.11
Movement Gro	oup Res	ults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow I	Rate (<i>v</i>)	, veh/h		15	115		749	90		173	202	177	130	479	470
Adjusted Satura	ation Flo	ow Rate (s), veh/h/ln		1328	1616	\$	1285	1702	2	600	1863	1579	1187	1881	1846
Queue Service	Time (g	(s), S		0.0	4.4		35.6	3.2		27.2	6.3	6.6	7.2	17.8	17.8
Cycle Queue C	learance	e Time (g₀), s		40.0	4.4		40.0	3.2		45.0	6.3	6.6	13.6	17.8	17.8
Green Ratio (g/	/C)			0.41	0.41		0.41	0.41		0.46	0.46	0.46	0.46	0.46	0.46
Capacity (c), ve	eh/h			74	665		545	700		242	862	731	546	871	854
Volume-to-Cap	acity Ra	itio (X)		0.204	0.173	3	1.376	0.12	3	0.715	0.234	0.242	0.239	0.550	0.550
Available Capa	city (c₀),	, veh/h		74	665		545	700		242	862	731	546	871	854
Back of Queue	(Q), veł	n/In (50th percentile))	0.4	1.6		40.3	1.2		4.6	2.5	2.2	1.9	7.3	7.1
Queue Storage	Ratio (RQ) (50th percentile)	0.05	0.08		2.03	0.03	;	0.57	0.06	0.06	0.48	0.18	0.18
Uniform Delay	(d1), s/v	eh		48.6	18.1		33.2	17.8	;	35.4	15.7	15.8	19.8	18.8	18.8
Incremental De	lay (d2),	s/veh		1.6	0.1		180.5	0.1		10.4	0.2	0.2	0.3	1.0	1.0
Initial Queue De	elay (d₃)), s/veh		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veł	า		50.2	18.3		213.7	17.9		45.9	15.9	16.0	20.1	19.8	19.8
Level of Service	evel of Service (LOS)			D	В		F	В		D	В	В	С	В	В
Approach Delay	Approach Delay, s/veh / LOS			22.0)	С	192.	7	F	25.3	3	С	19.8	3	В
Intersection De	lay, s/ve	eh / LOS				7	6.9						E		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	S Score	/ LOS		2.9		С	2.4		В	2.3		В	2.3		В
Bicycle LOS So	ore / LC	DS		0.7		А	1.9		А	1.4		А	1.4		Α

HCS 2010[™] Streets Version 6.65

Generated: 7/21/2015 10:36:35 AM



		HCS 2	010 S	ignali	ized	Inter	se	ection	Res	sults	S	umm	ary				
General Inform	nation									Inters	ect	ion Inf	ormatio	on		4.4.4.1	la lu
Agency		Jacobs								Durati	on,	h	0.25			••	
Analyst		D Zimmerman		Analys	sis Da	te Jul	21,	2015		Area T	ур	e	Other		∆ →		* *
Jurisdiction				Time F	Period	PM	Pe	eak		PHF			0.93		* -*		÷.
Intersection		Bush Farm Road		Analys	sis Yea	ar 201	15			Analys	sis I	Period	1> 5:(00	1 4		7 7
File Name		Old Henry at Bush	15 PM.>	us												htr	
Project Descrip	tion	Ball Homes Factory	/ Lane													4144	N M
Demand Inform	mation				EB	}			WE	3			NB			SB	
Approach Move	ement			L	Т	F	۲	L	T	F	२	L	Т	R	L	Т	R
Demand (v), ve	eh/h			4	11	3	8	351	5	6	5	60	696	552	83	338	9
Signal Informa	tion			1			5					1					
	83.0	Reference Phase	2		243	·	÷	=							512		7
Offect e	03.9	Reference Paint	- Z			MΒ	2							1	T 2	3	
Unset, s	Vaa	Circult Car 5/4/	Cra	Green	43.6	3 28.	.1	0.0	0.0	0.	0	0.0					<u> </u>
Checoordinated	Finad	Simult. Gap E/W	On	Yellow	4.3	3.6	<u>}</u>	0.0	0.0	0.	0	0.0	_				¥.
Force Wode	Fixed	Simult. Gap N/S	Un	Reu	1.5	3.0	j	0.0	10.0	0.	0	0.0		5	ь	7	0
Timer Results				EBI	L	EBT		WB	L	WBT	٦	NBI	-	NBT	SBI	-	SBT
Assigned Phase	е					4				8			2				6
Case Number						6.0				6.0				5.0			6.0
Phase Duration	1, S				34					34.7				49.2			49.2
Change Period	, (Y+R₀)	, S				6.6				6.6				5.6			5.6
Max Allow Head	dway (<i>l</i> /	1AH), s			4					4.7				5.2			5.2
Queue Clearan	ce Time	e (g₅), s				4.9				26.0				29.1			38.8
Green Extensio	on Time	(ge), S				2.7				2.1				10.3			4.9
Phase Call Pro	bability					1.00				1.00				1.00			1.00
Max Out Proba	bility					0.00				0.06				0.68			0.96
Movement Gro	oup Res	ults			EB				WB		٦		NB			SB	
Approach Move	ement			L	Т	R		L	Т	R		L	T	R	L	Т	R
Assigned Move	ment			7	4	14	F	3	8	18		5	2	12	1	6	16
Adjusted Flow F	Rate (v)	. veh/h		4	53			377	75	-		65	748	529	89	373	
Adjusted Satura	ation Flo	, ow Rate (s), veh/h/ln	1	1345	1651	1		1359	1612			1025	1863	1579	717	1872	
Queue Service	Time (g	(s), S		0.2	1.8			22.1	2.7			3.4	27.1	20.3	9.6	10.0	
Cycle Queue C	learanc	e Time (g₀), s		2.9	1.8			24.0	2.7			13.5	27.1	20.3	36.8	10.0	
Green Ratio (g/	/C)			0.34	0.34	1		0.34	0.34			0.52	0.52	0.52	0.52	0.52	
Capacity (c), ve	eh/h			494	554			512	541			495	967	820	226	972	
Volume-to-Cap	acity Ra	atio (X)		0.009	0.09	5		0.737	0.139)		0.130	0.774	0.645	0.395	0.384	
Available Capa	city (c₀)	, veh/h		683	786			704	768			512	998	846	238	1004	
Back of Queue	(Q), vel	h/In (50th percentile))	0.1	0.7			7.2	1.0			0.7	10.6	6.5	1.6	3.7	
Queue Storage	Ratio (RQ) (50th percentile	:)	0.01	0.03	3		0.36	0.03			0.09	0.27	0.17	0.41	0.09	
Uniform Delay	(d1), s/v	eh		20.4	19.1			27.4	19.4			16.2	16.2	14.6	31.0	12.1	
Incremental De	Incremental Delay (d2), s/veh			0.0	0.1			3.0	0.1			0.2	4.0	1.9	1.6	0.4	
Initial Queue De	nitial Queue Delay (d3), s/veh			0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0	0.0	
Control Delay (Control Delay (d), s/veh			20.5	19.2	2		30.4	19.6			16.4	20.2	16.5	32.6	12.5	
Level of Service	Level of Service (LOS)			С	В			С	В			В	С	В	С	В	
Approach Delay	Approach Delay, s/veh / LOS			19.3	3	В		28.6	3	С		18.6	3	В	16.4	1	В
Intersection De	ntersection Delay, s/veh / LOS						20	.1							C		
Multimodal Pe	Aultimodal Results								WP				NB			SB	
Pedestrian LOS	S Score	/105		25		В	-	22		B	۲	22		В	22		в
Bicycle LOS Sc	core / L C)S		0.6		A		12		A		2.2		B	1.3		A
				0.0				1.2						-	1.0		

HCS 2010[™] Streets Version 6.65

Generated: 7/21/2015 11:33:10 AM



		HCS 20	10 S	ignali	zed	Inte	erse	ection	Re	su	ılts S	umma	ary				
General Inform	nation									In	tersect	ion Inf	ormatio	on	- 1	4444	
Agency		Jacobs								Du	uration,	h	0.25		12		5
Analyst		D Zimmerman		Analys	sis Da	te Ju	ul 21,	, 2015		Ar	rea Typ	e	Other		Å		۸ ۲
Jurisdiction		ļ		Time F	Period	PI	ΜPe	eak		PH	HF		0.93		* -*		÷.
Intersection		Bush Farm Road		Analys	sis Yea	ar 20	0221	No Buil	d	Ar	nalysis	Period	1> 5:	00	2		2
File Name		Old Henry at Bush 2	2 PM N	VB.xus												htr	
Project Descrip	tion	Ball Homes Factory	Lane												h	4 † 4* Y	P M
Demand Inform	nation				EB	3			W	/B			NB			SB	
Approach Move	ement			L	Т		R	L	1 1	Т	R	L	Т	R	L	Т	R
Demand (v), ve	h/h			74	40		225	632	1	2	125	97	832	624	106	460	19
Signal Informa	tion				20	a .	a È	=							-+-		_
Cycle, s	97.2	Reference Phase	2		5	ηΖË	ŠÉ	<u> </u>						1	Y	-	-€ ₄
Offset, s	0	Reference Point	End	Green	45.0) 4	0.0	0.0	0.0	0	0.0	0.0					ĸ
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.3	3	3.6	0.0	0.0	0	0.0	0.0					-₹
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.3	3	3.0	0.0	0.0	0	0.0	0.0		5	6	7	8
				50		50	T.	14/5			NOT	ND		NDT	0.01	_	0.0.7
Timer Results				EBI	-	EB	1	WB	-	V	NBI	NBL	-	NBI	SBL		SBI
Assigned Phase	e				+	6.0	,		+		8		-	2			60
Phase Number					-	46.0	, c		\rightarrow	4	0.0		-	5.0			50.6
Change Period	(V+D_)	6			+	40.0	2		\rightarrow	4	6.6		50.6				56
Max Allow Hoay	(1+rc)	1, 5 4440 c			-	0.0 5 1	,		-+-		5.1			5.0	<u> </u>		5.0
	uway (n	(IAIT), S		<u> </u>	-	5.1		<u> </u>	-	4	0.1		-	J.Z			17.0
Queue Clearan	ce nime	e (gs), S				14.	-		-	4	+2.U			47.0		_	47.0
Bhase Call Brok	h n nme	(ge), s		<u> </u>	-	0.0	2	<u> </u>	-	1	0.0		_	1.00		_	1.00
Max Out Broba	bility				-	0.10	0 6		-	1	1.00			1.00		_	1.00
Max Out Floba	Dinty					0.10	0				.00			1.00			1.00
Movement Gro	oup Res	ults			EB				WE	В			NB			SB	
Approach Move	ement			L	Т		R	L	Т		R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	1	14	3	8		18	5	2	12	1	6	16
Adjusted Flow F	Rate (<i>v</i>)	, veh/h		80	285	;		680	147	7		104	895	606	114	259	256
Adjusted Satura	ation Flo	ow Rate (s), veh/h/ln		1260	1632	2		1101	161	6		900	1863	1579	626	1881	1855
Queue Service	Time (g	(s), S		4.2	12.1			27.9	5.7			7.9	45.0	32.6	0.0	8.3	8.4
Cycle Queue C	learanc	e Time (g₀), s		10.0	12.1			40.0	5.7			16.3	45.0	32.6	45.0	8.3	8.4
Green Ratio (g/	(C)			0.41	0.41			0.41	0.4	1		0.46	0.46	0.46	0.46	0.46	0.46
Capacity (c), ve	eh/h			518	672			390	665	5		413	862	731	74	871	859
Volume-to-Capa	acity Ra	itio (X)		0.154	0.42	4		1.743	0.22	22		0.252	1.037	0.830	1.539	0.297	0.298
Available Capa	city (c₀)	, veh/h		518	672			390	665	5		413	862	731	74	871	859
Back of Queue	(Q), vel	h/In (50th percentile)		1.2	4.5		_	46.7	2.1			1.6	27.3	12.4	7.9	3.3	3.3
Queue Storage	Ratio (RQ) (50th percentile)		0.16	0.23	3	_	2.35	0.0	5		0.20	0.69	0.32	1.99	0.08	0.08
Uniform Delay ((01), S/V	en alvah		21.7	20.4	•	_	31.3	18.	5		21.3	20.1	22.8	48.6	16.3	16.3
Incremental De	emental Delay (d2), s/veh			0.2	0.5	+-	_	344.7	0.2	-		0.5	40.7	8.3	298.7	0.3	0.3
Initial Queue De	elay (as), s/ven		0.0	0.0	_	_	0.0	10.0	7	_	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (ontrol Delay (d), s/veh			21.9	20.9	,		382.0	18.	1		21.8	66.8	31.0	347.3	16.5	16.5
Level of Service	e (LOS)	11.05		014				F			F	50.4			F 70.5	В	
Approach Delay	y, s/ven	100		21.1		0		317.	3		Г	50.4		U	76.5	,	C
Intersection De	ay, s/ve	en / LOS					116	0.5							F		
Multimodal Re	sults				EB				W	В			NB			SB	
Pedestrian LOS	S Score	/LOS		2.9	T	С		2.4			В	2.3		В	2.3		В
Bicycle LOS Sc	ore / LC	DS		1.1		Α		1.9			А	3.1		С	1.0		А

HCS 2010[™] Streets Version 6.65

Generated: 7/21/2015 11:41:48 AM



		HCS 2	010 S	ignali	ized	Inters	ectior	ı Re	sults	Summ	ary				
General Inform	nation								Interse	ction In	formatio	on		111	the late
Agency		Jacobs							Duratio	n, h	0.25			4+4	
Analyst		D Zimmerman		Analys	sis Dat	te Jul 2	1, 2015		Area Ty	pe	Othe		4		A 2
Jurisdiction				Time F	Period	PM F	'eak		PHF		0.93		*		÷.
Intersection		Bush Farm Road		Analys	sis Yea	ar 2022	Build		Analysi	s Period	1> 5:	00	1 1		7
File Name		Old Henry at Bush	22 PM E	3.xus										5 t C	
Project Descrip	tion	Ball Homes Factory	Lane											* 1 * *	P (*
				_											
Demand Inform	nation				EB	;		W	В		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), ve	:h/h			74	40	225	632	12	2 12	5 97	922	624	106	511	19
Signal Informa	ation				U.		<u>.</u>								
Cvcle, s	97.2	Reference Phase	2	1	124S		1						V		<u> </u>
Offset, s	0	Reference Point	End			Γ <u></u>		-				1	2	3	Y 4
Uncoordinated	Yes	Simult Gan E/W	On	Green	45.0	40.0	0.0	0.0) 0.0	0.0	_				Ð-
Force Mode	Fixed	Simult Gap N/S	On	Red	1.3	3.0	0.0	0.0			_	5	6	7	₹ 8
T OFCE MODE	TIXCU	ointait: Oap 14/0	OII	Ttea	1.0	0.0	0.0	10.0	0.0	0.0					
Timer Results				EBI		EBT	WB	L	WBT	NB	L	NBT	SBI		SBT
Assigned Phase	e					4			8			2			6
Case Number						6.0			6.0			5.0			6.0
Phase Duration	1. S					46.6			46.6			50.6			50.6
Change Period	(Y+R₀)	. S				6.6			6.6			5.6			5.6
Max Allow Head	dwav (M	/				5.1			5.1	-		5.2			5.2
Queue Clearan	ce Time	(a ₂) s			-	14.1		-	42.0			47.0			47.0
Green Extensio	n Time	(ge) S	_			8.5			0.0			0.0			0.0
Phase Call Pro	hability	(9=), 5			-	1.00		-	1.00	-		1.00			1.00
Max Out Proba	bility					0.16			1.00			1.00			1.00
	2					0.110									
Movement Gro	oup Res	sults			EB			WE	;		NB			SB	
Approach Move	ement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Assigned Move	ment			7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow F	Rate (<i>v</i>)	, veh/h		80	285		680	147		104	991	606	114	286	283
Adjusted Satura	ation Flo	ow Rate (s), veh/h/ln		1260	1632	2	1101	1616	3	855	1863	1579	571	1881	1857
Queue Service	Time (g	(s), S		4.2	12.1		27.9	5.7		8.6	45.0	32.6	0.0	9.4	9.4
Cycle Queue C	learance	e Time (g₀), s		10.0	12.1		40.0	5.7		18.0	45.0	32.6	45.0	9.4	9.4
Green Ratio (g/	/C)			0.41	0.41		0.41	0.41		0.46	0.46	0.46	0.46	0.46	0.46
Capacity (c), ve	eh/h			518	672		390	665		387	862	731	74	871	860
Volume-to-Capa	acity Ra	itio (X)		0.154	0.424	4	1.743	0.22	2	0.269	1.150	0.830	1.539	0.329	0.330
Available Capa	city (c⊧),	, veh/h		518	672		390	665		387	862	731	74	871	860
Back of Queue	(Q), veł	n/In (50th percentile)		1.2	4.5		46.7	2.1		1.7	36.9	12.4	7.9	3.8	3.7
Queue Storage	Ratio (I	RQ) (50th percentile)	0.16	0.23	;	2.35	0.05	5	0.21	0.94	0.32	1.99	0.09	0.09
Uniform Delay ((d1), s/v	eh		21.7	20.4		37.3	18.5	5	22.2	26.1	22.8	48.6	16.5	16.5
Incremental De	lay (d2),	s/veh		0.2	0.5		344.7	0.2		0.5	80.7	8.3	298.7	0.3	0.3
Initial Queue De	elay (d₃)), s/veh		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (y (d), s/veh			21.9	20.9		382.0	18.7	'	22.8	106.8	31.0	347.3	16.8	16.9
Level of Service	vel of Service (LOS)			С	С		F	В		С	F	С	F	В	В
Approach Delay	Approach Delay, s/veh / LOS			21.1	1	С	317.	3	F	74.	7	E	71.9		E
Intersection De	lay, s/ve	eh / LOS				1:	24.8						F		
Multimodal Re	sults				EB			WE	}		NB			SB	
Pedestrian LOS	S Score	/ LOS		2.9		С	2.4		В	2.3	3	В	2.3		В
Bicycle LOS Sc	ore / LC	DS		1.1		А	1.9		А	3.3	3	С	1.1		A

HCS 2010[™] Streets Version 6.65

Generated: 7/21/2015 11:41:48 AM