

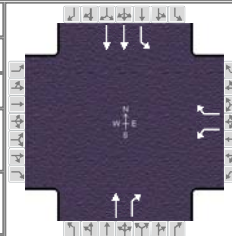
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# ***HCS 2010 Analysis Output***



# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Weekday PM Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2016 No Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2016_NoBuild_PM_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h				322		61		572	367	36	474	

Signal Information													
Cycle, s	60.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	30.0	18.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	2.0	2.0	0.0	0.0	0.0	0.0			

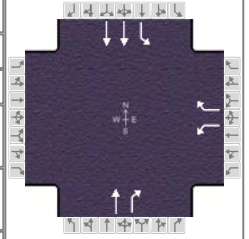
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				24.0		36.0		36.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				12.3				
Green Extension Time ( g <sub>e</sub> ), s				0.5		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				0.19				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				350		66		622	399	39		515
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	799		1773
Queue Service Time ( g <sub>s</sub> ), s				10.3		1.8		15.0	10.1	2.3		5.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				10.3		1.8		15.0	10.1	17.3		5.1
Green Ratio ( g/C )				0.30		0.30		0.50	0.50	0.50		0.50
Capacity ( c ), veh/h				532		474		931	789	319		1773
Volume-to-Capacity Ratio ( X )				0.658		0.140		0.668	0.505	0.123		0.291
Available Capacity ( c <sub>a</sub> ), veh/h				532		474		931	789	319		1773
Back of Queue ( Q ), veh/ln ( 50 th percentile)				4.1		0.6		5.8	3.3	0.5		1.7
Queue Storage Ratio ( RQ ) ( 50 th percentile)				0.83		0.00		0.00	0.00	0.09		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				18.3		15.3		11.3	10.0	17.8		8.8
Incremental Delay ( d <sub>2</sub> ), s/veh				2.4		0.0		3.8	2.3	0.8		0.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				20.7		15.4		15.0	12.3	18.6		9.2
Level of Service ( LOS )				C		B		B	B	B		A
Approach Delay, s/veh / LOS	0.0			19.8		B	14.0		B	9.9		A
Intersection Delay, s/veh / LOS	14.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.2	B	0.9	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	Burgess & Niple			Duration, h	0.25	
Analyst	Burgess & Niple		Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield		Time Period	2016 Saturday Peak	PHF	0.92
Urban Street	Bechtle Avenue		Analysis Year	2016 No Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...		File Name	2016_NoBuild_SAT_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				325		33		558	404	32	677	

Signal Information														
Cycle, s	60.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	29.0	19.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
				Red	2.0	2.0	0.0	0.0	0.0	0.0				

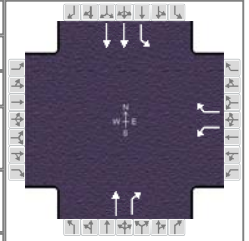
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				25.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.1		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				12.2				
Green Extension Time ( g <sub>e</sub> ), s				0.5		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				0.08				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				353		36		607	439	35		736
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	811		1773
Queue Service Time ( g <sub>s</sub> ), s				10.2		1.0		15.0	11.9	2.1		8.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				10.2		1.0		15.0	11.9	17.0		8.1
Green Ratio ( g/C )				0.32		0.32		0.48	0.48	0.48		0.48
Capacity ( c ), veh/h				562		500		900	763	310		1714
Volume-to-Capacity Ratio ( X )				0.629		0.072		0.674	0.576	0.112		0.429
Available Capacity ( c <sub>a</sub> ), veh/h				562		500		900	763	310		1714
Back of Queue ( Q ), veh/ln ( 50 th percentile)				3.9		0.3		5.9	4.0	0.4		2.7
Queue Storage Ratio ( RQ ) ( 50 th percentile)				0.80		0.00		0.00	0.00	0.08		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				17.5		14.3		11.9	11.1	18.4		10.1
Incremental Delay ( d <sub>2</sub> ), s/veh				1.7		0.0		4.0	3.1	0.7		0.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				19.2		14.4		15.9	14.2	19.1		10.9
Level of Service ( LOS )				B		B		B	B	B		B
Approach Delay, s/veh / LOS	0.0			18.7		B	15.2		B	11.3		B
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.2	B	1.1	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Weekday PM Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2036 No Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2036_NoBuild_PM_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h				339		64		601	386	37	499	

Signal Information													
Cycle, s	60.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	30.0	18.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	2.0	2.0	0.0	0.0	0.0	0.0			

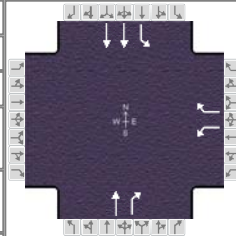
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				24.0		36.0		36.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				13.0				
Green Extension Time ( g <sub>e</sub> ), s				0.5		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				0.31				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				368		70		653	420	40		542
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	776		1773
Queue Service Time ( g <sub>s</sub> ), s				11.0		1.9		16.2	10.9	2.5		5.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				11.0		1.9		16.2	10.9	18.7		5.4
Green Ratio ( g/C )				0.30		0.30		0.50	0.50	0.50		0.50
Capacity ( c ), veh/h				532		474		931	789	298		1773
Volume-to-Capacity Ratio ( X )				0.692		0.147		0.701	0.532	0.135		0.306
Available Capacity ( c <sub>a</sub> ), veh/h				532		474		931	789	298		1773
Back of Queue ( Q ), veh/ln ( 50 th percentile)				4.4		0.6		6.4	3.5	0.5		1.8
Queue Storage Ratio ( RQ ) ( 50 th percentile)				0.90		0.00		0.00	0.00	0.10		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				18.6		15.4		11.6	10.2	18.8		8.9
Incremental Delay ( d <sub>2</sub> ), s/veh				3.2		0.1		4.4	2.6	0.9		0.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				21.8		15.4		15.9	12.8	19.7		9.3
Level of Service ( LOS )				C		B		B	B	B		A
Approach Delay, s/veh / LOS	0.0			20.8		C	14.7		B	10.0		B
Intersection Delay, s/veh / LOS	14.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.3	B	1.0	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Saturday Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2036 No Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2036_NoBuild_SAT_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				342		33		587	424	33	712	

Signal Information				EB						WB				NB				SB			
Cycle, s	60.0	Reference Phase	2																		
Offset, s	0	Reference Point	End																		
Uncoordinated	No	Simult. Gap E/W	On																		
Force Mode	Fixed	Simult. Gap N/S	On																		
Green	29.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Red	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

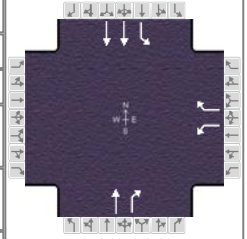
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				25.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.1		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				12.9				
Green Extension Time ( g <sub>e</sub> ), s				0.5		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				0.13				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				372		36		638	461	36		774
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	787		1773
Queue Service Time ( g <sub>s</sub> ), s				10.9		1.0		16.2	12.8	2.3		8.7
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				10.9		1.0		16.2	12.8	18.4		8.7
Green Ratio ( g/C )				0.32		0.32		0.48	0.48	0.48		0.48
Capacity ( c ), veh/h				562		500		900	763	289		1714
Volume-to-Capacity Ratio ( X )				0.662		0.072		0.709	0.604	0.124		0.451
Available Capacity ( c <sub>a</sub> ), veh/h				562		500		900	763	289		1714
Back of Queue ( Q ), veh/ln ( 50 th percentile)				4.2		0.3		6.5	4.3	0.4		2.9
Queue Storage Ratio ( RQ ) ( 50 th percentile)				0.86		0.00		0.00	0.00	0.09		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				17.7		14.3		12.2	11.3	19.4		10.2
Incremental Delay ( d <sub>2</sub> ), s/veh				2.3		0.0		4.7	3.5	0.9		0.9
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				20.1		14.4		16.9	14.8	20.3		11.1
Level of Service ( LOS )				C		B		B	B	C		B
Approach Delay, s/veh / LOS	0.0			19.6		B	16.0		B	11.5		B
Intersection Delay, s/veh / LOS	15.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.3	B	1.2	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Weekday PM Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2016 Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2016_Build_PM_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				403		111		596	391	116	473	

Signal Information														
Cycle, s	60.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	26.0	22.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
				Red	2.0	2.0	0.0	0.0	0.0	0.0				

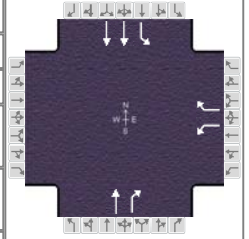
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				28.0		32.0		32.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				14.5				
Green Extension Time ( g <sub>e</sub> ), s				0.8		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				0.10				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				438		121		648	425	126		514
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	780		1773
Queue Service Time ( g <sub>s</sub> ), s				12.5		3.1		18.1	12.5	7.9		5.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				12.5		3.1		18.1	12.5	26.0		5.8
Green Ratio ( g/C )				0.37		0.37		0.43	0.43	0.43		0.43
Capacity ( c ), veh/h				650		579		807	684	222		1537
Volume-to-Capacity Ratio ( X )				0.673		0.208		0.803	0.621	0.567		0.335
Available Capacity ( c <sub>a</sub> ), veh/h				650		579		807	684	222		1537
Back of Queue ( Q ), veh/ln ( 50 th percentile)				4.7		1.0		8.1	4.5	2.3		2.0
Queue Storage Ratio ( RQ ) ( 50 th percentile)				0.96		0.00		0.00	0.00	0.47		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				16.0		13.0		14.8	13.2	26.8		11.3
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		0.1		8.3	4.2	10.1		0.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				18.2		13.1		23.1	17.4	36.9		11.9
Level of Service ( LOS )				B		B		C	B	D		B
Approach Delay, s/veh / LOS	0.0			17.1		B	20.8		C	16.8		B
Intersection Delay, s/veh / LOS	18.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.3	B	1.0	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Saturday Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2016 Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2016_Build_SAT_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h				448		104		602	442	155	678	

Signal Information													
Cycle, s	60.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	29.0	19.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	2.0	2.0	0.0	0.0	0.0	0.0			

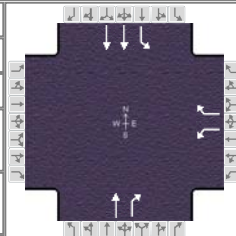
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				25.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				17.5				
Green Extension Time ( g <sub>e</sub> ), s				0.3		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				1.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				487		113		654	480	168		737
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	775		1773
Queue Service Time ( g <sub>s</sub> ), s				15.5		3.2		16.8	13.6	12.2		8.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				15.5		3.2		16.8	13.6	29.0		8.1
Green Ratio ( g/C )				0.32		0.32		0.48	0.48	0.48		0.48
Capacity ( c ), veh/h				562		500		900	763	278		1714
Volume-to-Capacity Ratio ( X )				0.867		0.226		0.727	0.630	0.606		0.430
Available Capacity ( c <sub>a</sub> ), veh/h				562		500		900	763	278		1714
Back of Queue ( Q ), veh/ln ( 50 th percentile)				7.6		1.0		6.8	4.6	2.9		2.7
Queue Storage Ratio ( RQ ) ( 50 th percentile)				1.54		0.00		0.00	0.00	0.59		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				19.3		15.1		12.3	11.5	24.3		10.1
Incremental Delay ( d <sub>2</sub> ), s/veh				12.9		0.1		5.1	3.9	9.5		0.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				32.3		15.2		17.5	15.4	33.8		10.9
Level of Service ( LOS )				C		B		B	B	C		B
Approach Delay, s/veh / LOS	0.0			29.0		C		16.6	B	15.2		B
Intersection Delay, s/veh / LOS				18.9						B		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.4	B	1.2	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Weekday PM Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2036 Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2036_Build_PM_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				420		114		625	410	117	498	

Signal Information														
Cycle, s	60.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	25.0	23.0	0.0	0.0	0.0	0.0				
		Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed			Red	2.0	2.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				29.0		31.0		31.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				14.8				
Green Extension Time ( g <sub>e</sub> ), s				0.9		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				0.07				

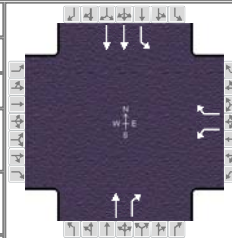
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				457		124		679	446	127		541
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	758		1773
Queue Service Time ( g <sub>s</sub> ), s				12.8		3.2		20.1	13.8	4.9		6.3
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				12.8		3.2		20.1	13.8	25.0		6.3
Green Ratio ( g/C )				0.38		0.38		0.42	0.42	0.42		0.42
Capacity ( c ), veh/h				680		605		776	658	182		1478
Volume-to-Capacity Ratio ( X )				0.671		0.205		0.875	0.678	0.699		0.366
Available Capacity ( c <sub>a</sub> ), veh/h				680		605		776	658	182		1478
Back of Queue ( Q ), veh/ln ( 50 th percentile)				4.8		1.0		9.9	5.1	2.7		2.2
Queue Storage Ratio ( RQ ) ( 50 th percentile)				0.98		0.00		0.00	0.00	0.56		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				15.4		12.4		16.1	14.2	28.8		12.0
Incremental Delay ( d <sub>2</sub> ), s/veh				2.1		0.1		13.2	5.5	20.0		0.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				17.5		12.4		29.2	19.8	48.8		12.7
Level of Service ( LOS )				B		B		C	B	D		B
Approach Delay, s/veh / LOS	0.0			16.4		B	25.5		C	19.6		B
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	2.3	B	1.0	A



# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Saturday Peak	PHF	0.92
Urban Street	Bechtle Avenue	Analysis Year	2036 Build Conditions	Analysis Period	1 > 5:00
Intersection	Bechtle Avenue & St Pik...	File Name	2036_Build_SAT_Bechtle.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				465		104		631	462	156	713	

Signal Information														
Cycle, s	60.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	29.0	19.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
				Red	2.0	2.0	0.0	0.0	0.0	0.0				

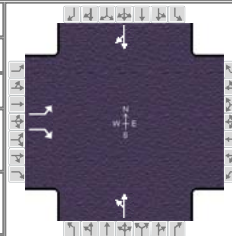
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2		6
Case Number				9.0		7.0		6.0
Phase Duration, s				25.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s				6.0		6.0		6.0
Max Allow Headway ( MAH ), s				3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s				18.3				
Green Extension Time ( g <sub>e</sub> ), s				0.1		0.0		0.0
Phase Call Probability				1.00				
Max Out Probability				1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				505		113		686	502	170		775
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1774		1579		1863	1579	753		1773
Queue Service Time ( g <sub>s</sub> ), s				16.3		3.2		18.1	14.5	10.9		8.7
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				16.3		3.2		18.1	14.5	29.0		8.7
Green Ratio ( g/C )				0.32		0.32		0.48	0.48	0.48		0.48
Capacity ( c ), veh/h				562		500		900	763	257		1714
Volume-to-Capacity Ratio ( X )				0.900		0.226		0.762	0.658	0.659		0.452
Available Capacity ( c <sub>a</sub> ), veh/h				562		500		900	763	257		1714
Back of Queue ( Q ), veh/ln ( 50 th percentile)				8.5		1.0		7.5	5.0	3.2		2.9
Queue Storage Ratio ( RQ ) ( 50 th percentile)				1.73		0.00		0.00	0.00	0.65		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				19.6		15.1		12.7	11.7	25.6		10.2
Incremental Delay ( d <sub>2</sub> ), s/veh				17.0		0.1		6.1	4.4	12.5		0.9
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				36.6		15.2		18.7	16.2	38.1		11.1
Level of Service ( LOS )				D		B		B	B	D		B
Approach Delay, s/veh / LOS	0.0			32.7		C		17.6	B	16.0		B
Intersection Delay, s/veh / LOS				20.4						C		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.7	B	2.5	B	2.2	B	0.7	A
Bicycle LOS Score / LOS				F	2.4	B	1.3	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Weekday PM Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2016 No Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2016_NoBuild_PM_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h	96		307				301	152			91	82

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	31.0	17.0	0.0	0.0	0.0	0.0				
		Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
		Red	2.0	2.0	0.0	0.0	0.0	0.0				

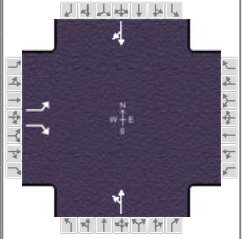
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		23.0				37.0		37.0
Change Period, ( $Y+R_c$ ), s		6.0				6.0		6.0
Max Allow Headway ( $MAH$ ), s		3.3				0.0		0.0
Queue Clearance Time ( $g_s$ ), s		13.5						
Green Extension Time ( $g_e$ ), s		0.4				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.91						

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( $v$ ), veh/h	104		334				492				188	
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1774		1579				1231				1716	
Queue Service Time ( $g_s$ ), s	2.7		11.5				17.4				3.6	
Cycle Queue Clearance Time ( $g_c$ ), s	2.7		11.5				21.0				3.6	
Green Ratio ( $g/C$ )	0.28		0.28				0.52				0.52	
Capacity ( $c$ ), veh/h	503		447				736				887	
Volume-to-Capacity Ratio ( $X$ )	0.208		0.746				0.669				0.212	
Available Capacity ( $c_a$ ), veh/h	503		447				736				887	
Back of Queue ( $Q$ ), veh/ln ( 50 th percentile)	1.0		4.5				5.4				1.2	
Queue Storage Ratio ( $RQ$ ) ( 50 th percentile)	0.20		0.00				0.00				0.00	
Uniform Delay ( $d_1$ ), s/veh	16.4		19.5				13.2				7.9	
Incremental Delay ( $d_2$ ), s/veh	0.1		6.0				4.8				0.5	
Initial Queue Delay ( $d_3$ ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( $d$ ), s/veh	16.4		25.5				17.9				8.4	
Level of Service ( LOS )	B		C				B				A	
Approach Delay, s/veh / LOS	23.4		C	0.0			17.9		B	8.4		A
Intersection Delay, s/veh / LOS	18.5						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.3		A	0.8		A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Saturday Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2016 No Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2016_NoBuild_SAT_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	91		345				253	73			75	105

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	27.0	21.0	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0		
				Red	2.0	2.0	0.0	0.0	0.0	0.0		

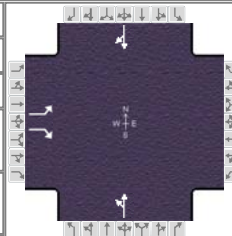
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		27.0				33.0		33.0
Change Period, ( Y+R <sub>c</sub> ), s		6.0				6.0		6.0
Max Allow Headway ( MAH ), s		3.3				0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		14.2						
Green Extension Time ( g <sub>e</sub> ), s		0.7				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.14						

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	99		375				354				196	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1774		1579				1121				1686	
Queue Service Time ( g <sub>s</sub> ), s	2.3		12.2				13.0				4.3	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.3		12.2				17.4				4.3	
Green Ratio ( g/C )	0.35		0.35				0.45				0.45	
Capacity ( c ), veh/h	621		553				611				759	
Volume-to-Capacity Ratio ( X )	0.159		0.679				0.580				0.258	
Available Capacity ( c <sub>a</sub> ), veh/h	621		553				611				759	
Back of Queue ( Q ), veh/ln ( 50 th percentile)	0.8		4.2				4.1				1.5	
Queue Storage Ratio ( RQ ) ( 50 th percentile)	0.17		0.00				0.00				0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	13.4		16.6				15.1				10.3	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.0		2.8				4.0				0.8	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( d ), s/veh	13.5		19.4				19.1				11.1	
Level of Service ( LOS )	B		B				B				B	
Approach Delay, s/veh / LOS	18.2		B	0.0			19.1		B	11.1		B
Intersection Delay, s/veh / LOS	17.1						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.1		A	0.8		A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Weekday PM Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2036 No Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2036_NoBuild_PM_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	101		322				316	159			96	87

Signal Information																		
Cycle, s	60.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	31.0	17.0	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	2.0	2.0	0.0	0.0	0.0	0.0								

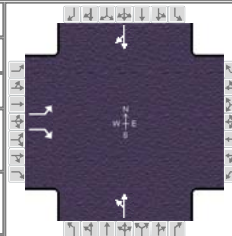
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		23.0				37.0		37.0
Change Period, ( Y+R <sub>c</sub> ), s		6.0				6.0		6.0
Max Allow Headway ( MAH ), s		3.3				0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		14.2						
Green Extension Time ( g <sub>e</sub> ), s		0.4				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		1.00						

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	110		350				516				199	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1774		1579				1200				1716	
Queue Service Time ( g <sub>s</sub> ), s	2.8		12.2				19.7				3.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.8		12.2				23.5				3.8	
Green Ratio ( g/C )	0.28		0.28				0.52				0.52	
Capacity ( c ), veh/h	503		447				720				887	
Volume-to-Capacity Ratio ( X )	0.218		0.783				0.717				0.224	
Available Capacity ( c <sub>a</sub> ), veh/h	503		447				720				887	
Back of Queue ( Q ), veh/ln ( 50 th percentile)	1.0		5.0				6.1				1.3	
Queue Storage Ratio ( RQ ) ( 50 th percentile)	0.21		0.00				0.00				0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	16.4		19.8				14.1				7.9	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1		8.0				6.0				0.6	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( d ), s/veh	16.5		27.8				20.1				8.5	
Level of Service ( LOS )	B		C				C				A	
Approach Delay, s/veh / LOS	25.1		C	0.0			20.1		C	8.5		A
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			1.3	A	0.8	A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Saturday Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2036 No Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2036_NoBuild_SAT_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	96		361				265	77			79	110

Signal Information														
Cycle, s	60.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	27.0	21.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
				Red	2.0	2.0	0.0	0.0	0.0	0.0				

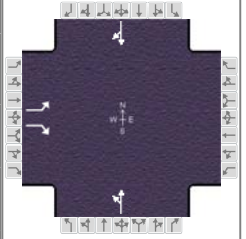
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		27.0				33.0		33.0
Change Period, ( Y+R <sub>c</sub> ), s		6.0				6.0		6.0
Max Allow Headway ( MAH ), s		3.3				0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		14.9						
Green Extension Time ( g <sub>e</sub> ), s		0.7				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.22						

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	104		392					372			205	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1774		1579					1102			1686	
Queue Service Time ( g <sub>s</sub> ), s	2.4		12.9					14.2			4.6	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.4		12.9					18.8			4.6	
Green Ratio ( g/C )	0.35		0.35					0.45			0.45	
Capacity ( c ), veh/h	621		553					602			759	
Volume-to-Capacity Ratio ( X )	0.168		0.710					0.617			0.271	
Available Capacity ( c <sub>a</sub> ), veh/h	621		553					602			759	
Back of Queue ( Q ), veh/ln ( 50 th percentile)	0.9		4.6					4.5			1.6	
Queue Storage Ratio ( RQ ) ( 50 th percentile)	0.18		0.00					0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	13.5		16.9					15.7			10.3	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.0		3.6					4.7			0.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0					0.0			0.0	
Control Delay ( d ), s/veh	13.5		20.5					20.4			11.2	
Level of Service ( LOS )	B		C					C			B	
Approach Delay, s/veh / LOS	19.0		B	0.0			20.4	C		11.2		B
Intersection Delay, s/veh / LOS	18.0						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.1		A	0.8		A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Weekday PM Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2016 Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2016_Build_PM_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h	131		359				366	140			85	114

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	30.0	18.0	0.0	0.0	0.0	0.0				
		Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
		Red	2.0	2.0	0.0	0.0	0.0	0.0				

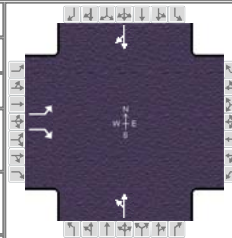
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		24.0				36.0		36.0
Change Period, ( $Y+R_c$ ), s		6.0				6.0		6.0
Max Allow Headway ( $MAH$ ), s		3.3				0.0		0.0
Queue Clearance Time ( $g_s$ ), s		15.8						
Green Extension Time ( $g_e$ ), s		0.4				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		1.00						

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( $v$ ), veh/h	142		390				550				216	
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1774		1579				1105				1689	
Queue Service Time ( $g_s$ ), s	3.7		13.8				25.4				4.4	
Cycle Queue Clearance Time ( $g_c$ ), s	3.7		13.8				29.8				4.4	
Green Ratio ( $g/C$ )	0.30		0.30				0.50				0.50	
Capacity ( $c$ ), veh/h	532		474				656				844	
Volume-to-Capacity Ratio ( $X$ )	0.268		0.824				0.838				0.256	
Available Capacity ( $c_a$ ), veh/h	532		474				656				844	
Back of Queue ( $Q$ ), veh/ln ( 50 th percentile)	1.3		5.8				8.3				1.5	
Queue Storage Ratio ( $RQ$ ) ( 50 th percentile)	0.27		0.00				0.00				0.00	
Uniform Delay ( $d_1$ ), s/veh	16.0		19.5				17.1				8.6	
Incremental Delay ( $d_2$ ), s/veh	0.1		10.6				12.2				0.7	
Initial Queue Delay ( $d_3$ ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( $d$ ), s/veh	16.1		30.1				29.3				9.3	
Level of Service ( LOS )	B		C				C				A	
Approach Delay, s/veh / LOS	26.4		C	0.0			29.3		C	9.3		A
Intersection Delay, s/veh / LOS	24.8						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.4		A	0.8		A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2016 Saturday Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2016 Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2016_Build_SAT_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	143		426				351	58			67	154

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	28.0	20.0	0.0	0.0	0.0	0.0				
		Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
		Red	2.0	2.0	0.0	0.0	0.0	0.0				

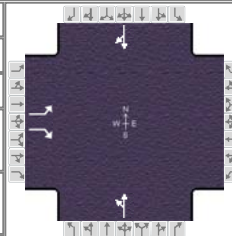
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		26.0				34.0		34.0
Change Period, ( Y+R <sub>c</sub> ), s		6.0				6.0		6.0
Max Allow Headway ( MAH ), s		3.3				0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		18.6						
Green Extension Time ( g <sub>e</sub> ), s		0.3				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		1.00						

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	155		463				445				240	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1774		1579				969				1655	
Queue Service Time ( g <sub>s</sub> ), s	3.8		16.6				22.0				5.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.8		16.6				27.4				5.4	
Green Ratio ( g/C )	0.33		0.33				0.47				0.47	
Capacity ( c ), veh/h	591		526				564				772	
Volume-to-Capacity Ratio ( X )	0.263		0.880				0.789				0.311	
Available Capacity ( c <sub>a</sub> ), veh/h	591		526				564				772	
Back of Queue ( Q ), veh/ln ( 50 th percentile)	1.4		7.5				6.8				1.8	
Queue Storage Ratio ( RQ ) ( 50 th percentile)	0.28		0.00				0.00				0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	14.6		18.9				18.5				10.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1		15.2				10.7				1.0	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( d ), s/veh	14.7		34.1				29.3				11.0	
Level of Service ( LOS )	B		C				C				B	
Approach Delay, s/veh / LOS	29.2		C	0.0			29.3		C	11.0		B
Intersection Delay, s/veh / LOS	25.9						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.2		A	0.9		A

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Burgess & Niple			Duration, h	0.25
Analyst	Burgess & Niple	Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Weekday PM Peak	PHF	0.92
Urban Street	St Paris Pike	Analysis Year	2036 Build Conditions	Analysis Period	1 > 5:00
Intersection	St Paris Pike & St Pike...	File Name	2036_Build_PM_St.Paris.xus		
Project Description	Bechtle Ave & St. Paris Connector TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	136		374				381	147			90	119

Signal Information											
Cycle, s	60.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		24.0				36.0		36.0
Change Period, ( Y+R <sub>c</sub> ), s		6.0				6.0		6.0
Max Allow Headway ( MAH ), s		3.3				0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		16.6						
Green Extension Time ( g <sub>e</sub> ), s		0.3				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		1.00						

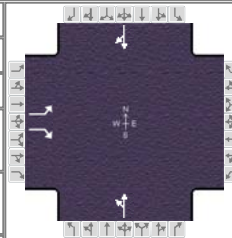
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	148		407				574				227	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1774		1579				1086				1690	
Queue Service Time ( g <sub>s</sub> ), s	3.8		14.6				25.3				4.7	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.8		14.6				30.0				4.7	
Green Ratio ( g/C )	0.30		0.30				0.50				0.50	
Capacity ( c ), veh/h	532		474				646				845	
Volume-to-Capacity Ratio ( X )	0.278		0.858				0.888				0.269	
Available Capacity ( c <sub>a</sub> ), veh/h	532		474				646				845	
Back of Queue ( Q ), veh/ln ( 50 th percentile)	1.4		6.5				9.7				1.6	
Queue Storage Ratio ( RQ ) ( 50 th percentile)	0.28		0.00				0.00				0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	16.0		19.8				18.0				8.7	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1		14.0				16.6				0.8	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( d ), s/veh	16.1		33.8				34.6				9.4	
Level of Service ( LOS )	B		C				C				A	
Approach Delay, s/veh / LOS	29.1		C	0.0			34.6		C	9.4		A
Intersection Delay, s/veh / LOS	28.1						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.4		A	0.9		A



# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	Burgess & Niple			Duration, h	0.25	
Analyst	Burgess & Niple		Analysis Date	9/28/2015	Area Type	Other
Jurisdiction	Clark County-Springfield	Time Period	2036 Saturday Peak	PHF	0.92	
Urban Street	St Paris Pike	Analysis Year	2036 Build Conditions	Analysis Period	1 > 5:00	
Intersection	St Paris Pike & St Pike...	File Name	2036_Build_SAT_St.Paris.xus			
Project Description	Bechtle Ave & St. Paris Connector TIS					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	148		442				363	62			71	159

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	28.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		9.0				8.0		8.0
Phase Duration, s		26.0				34.0		34.0
Change Period, ( Y+R <sub>c</sub> ), s		6.0				6.0		6.0
Max Allow Headway ( MAH ), s		3.3				0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		19.5						
Green Extension Time ( g <sub>e</sub> ), s		0.1				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		1.00						

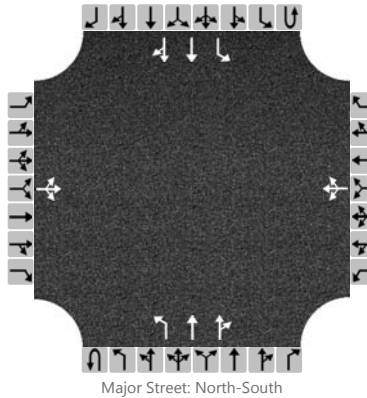
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	161		480				462				250	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1774		1579				952				1657	
Queue Service Time ( g <sub>s</sub> ), s	4.0		17.5				22.3				5.7	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.0		17.5				28.0				5.7	
Green Ratio ( g/C )	0.33		0.33				0.47				0.47	
Capacity ( c ), veh/h	591		526				555				773	
Volume-to-Capacity Ratio ( X )	0.272		0.913				0.832				0.323	
Available Capacity ( c <sub>a</sub> ), veh/h	591		526				555				773	
Back of Queue ( Q ), veh/ln ( 50 th percentile)	1.4		8.4				7.6				1.9	
Queue Storage Ratio ( RQ ) ( 50 th percentile)	0.29		0.00				0.00				0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	14.7		19.2				19.3				10.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1		20.0				13.6				1.1	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0				0.0	
Control Delay ( d ), s/veh	14.8		39.1				32.9				11.2	
Level of Service ( LOS )	B		D				C				B	
Approach Delay, s/veh / LOS	33.0		C	0.0			32.9		C	11.2		B
Intersection Delay, s/veh / LOS	28.9						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.1		B	2.1		B	0.7		A	1.7		A
Bicycle LOS Score / LOS			F				1.2		A	0.9		A

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2016			North/South Street	Bechtle Avenue		
Time Analyzed	2016 PM Peak No Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	T	TR		L	T	TR	
Volume (veh/h)		21	18	68		32	5	171		72	747	39		31	643	122	
Percent Heavy Vehicles		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

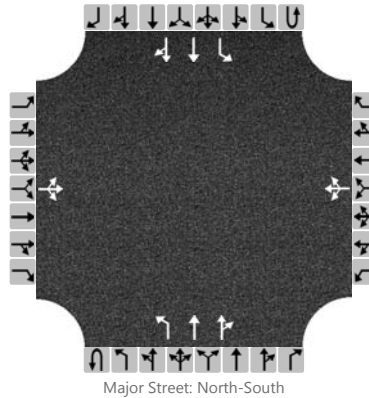
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			117				226			78				34			
Capacity			137				221			790				775			
v/c Ratio			0.85				1.02			0.10				0.04			
95% Queue Length			5.5				9.5			0.3				0.1			
Control Delay (s/veh)			103.5				112.4			10.1				9.9			
Level of Service (LOS)			F				F			B				A			
Approach Delay (s/veh)	103.5				112.4				0.8				0.4				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2016			North/South Street	Bechtle Avenue		
Time Analyzed	2016 SAT Peak No Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	T	TR		L	T	TR
Volume (veh/h)		23	8	119		52	7	209		102	730	70		40	815	147
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

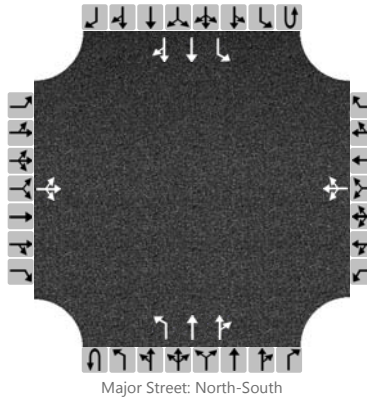
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			163				292				111				43		
Capacity			110				133				655				765		
v/c Ratio			1.48				2.19				0.17				0.06		
95% Queue Length			11.8				24.4				0.6				0.2		
Control Delay (s/veh)			327.2				615.6				11.6				10.0		
Level of Service (LOS)			F				F				B				A		
Approach Delay (s/veh)	327.2				615.6				1.3				0.4				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2036			North/South Street	Bechtle Avenue		
Time Analyzed	2036 PM Peak No Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	T	TR		L	T	TR
Volume (veh/h)		22	19	71		33	5	180		75	785	41		32	678	128
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

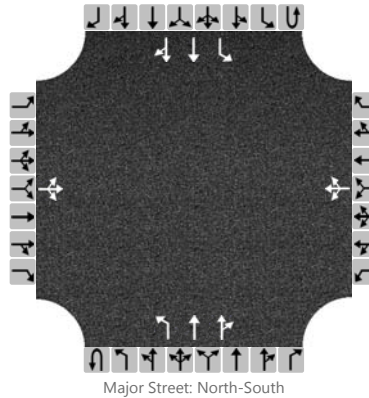
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			122				237				82				35		
Capacity			118				192				760				746		
v/c Ratio			1.04				1.23				0.11				0.05		
95% Queue Length			7.0				12.7				0.4				0.1		
Control Delay (s/veh)			163.7				191.5				10.3				10.1		
Level of Service (LOS)			F				F				B				B		
Approach Delay (s/veh)	163.7				191.5				0.9				0.4				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2036			North/South Street	Bechtle Avenue		
Time Analyzed	2036 SAT Peak No Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	T	TR		L	T	TR
Volume (veh/h)		24	9	125		55	6	219		107	768	74		42	857	155
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

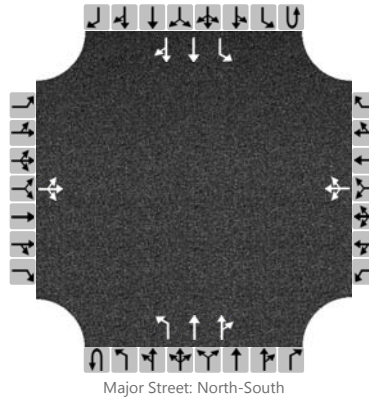
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			172				305				116				46		
Capacity			90				107				625				735		
v/c Ratio			1.90				2.86				0.19				0.06		
95% Queue Length			14.6				28.8				0.7				0.2		
Control Delay (s/veh)			523.2				924.7				12.1				10.2		
Level of Service (LOS)			F				F				B				B		
Approach Delay (s/veh)	523.2				924.7				1.4				0.4				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2016			North/South Street	Bechtle Avenue		
Time Analyzed	2016 PM Peak Build Cond.			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	T	TR		L	T	TR
Volume (veh/h)		21	18	68		41	5	180		72	803	88		36	727	122
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

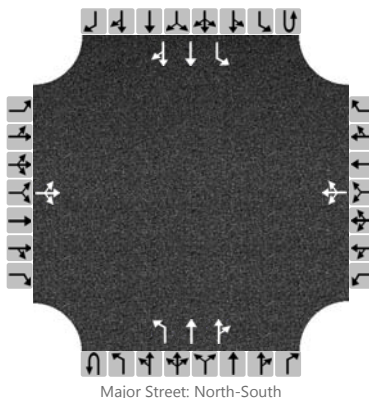
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			117				246				78				39		
Capacity			102				147				730				701		
v/c Ratio			1.15				1.68				0.11				0.06		
95% Queue Length			7.7				17.6				0.4				0.2		
Control Delay (s/veh)			214.6				385.5				10.5				10.4		
Level of Service (LOS)			F				F				B				B		
Approach Delay (s/veh)	214.6				385.5				0.8				0.4				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2016			North/South Street	Bechtle Avenue		
Time Analyzed	2016 SAT Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	T	TR		L	T	TR	
Volume (veh/h)		23	8	119		65	7	222		102	813	151		48	950	147	
Percent Heavy Vehicles		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

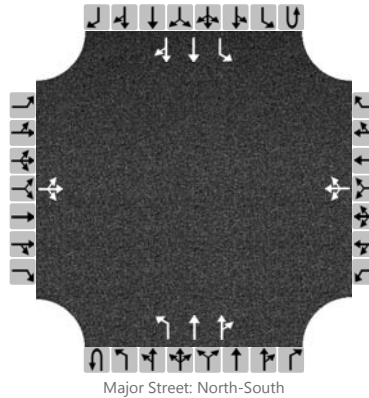
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			163				320				111				52		
Capacity			61				69				575				654		
v/c Ratio			2.69				4.65				0.19				0.08		
95% Queue Length			16.5				34.8				0.7				0.3		
Control Delay (s/veh)			911.4				1762.1				12.7				11.0		
Level of Service (LOS)			F				F				B				B		
Approach Delay (s/veh)	911.4				1762.1				1.2				0.5				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Burgess & Niple	Intersection	Bechtle Ave/Walmart N.
Agency/Co.	Burgess & Niple	Jurisdiction	Clark County Springfield
Date Performed	9/30/2015	East/West Street	Walmart N. Entrance
Analysis Year	2036	North/South Street	Bechtle Avenue
Time Analyzed	2036 PM Peak Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Bechtle Avenue & St. Paris Connector TIS		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	T	TR		L	T	TR	
Volume (veh/h)		22	19	71		42	5	189		75	841	90		37	762	128	
Percent Heavy Vehicles		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

## Delay, Queue Length, and Level of Service

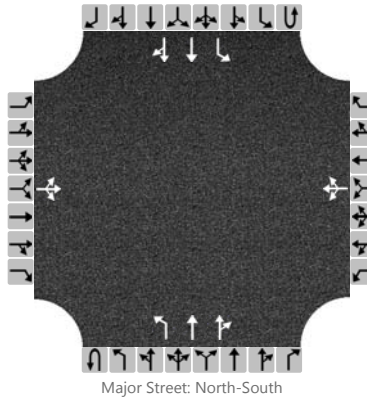
Flow Rate (veh/h)			122				256				82					40	
Capacity			86				120				702					675	
v/c Ratio			1.42				2.14				0.12					0.06	
95% Queue Length			9.4				21.5				0.4					0.2	
Control Delay (s/veh)			329.5				599.0				10.8					10.7	
Level of Service (LOS)			F				F				B					B	
Approach Delay (s/veh)	329.5				599.0				0.8				0.4				
Approach LOS	F				F				A				A				



# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	Bechtle Ave/Walmart N.		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	Walmart N. Entrance		
Analysis Year	2036			North/South Street	Bechtle Avenue		
Time Analyzed	2036 SAT Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	T	TR		L	T	TR	
Volume (veh/h)		24	9	125		68	6	232		107	851	155		50	992	155	
Percent Heavy Vehicles		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

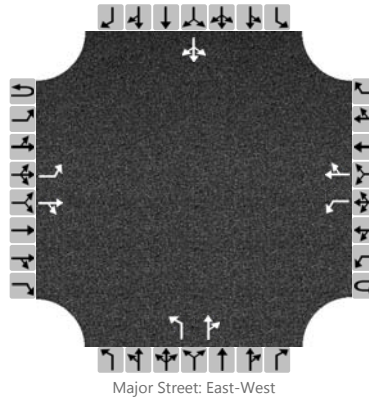
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			172				333				116				54		
Capacity			48				49				549				629		
v/c Ratio			3.59				6.77				0.21				0.09		
95% Queue Length			18.9				38.7				0.8				0.3		
Control Delay (s/veh)			1341.7				2758.3				13.3				11.3		
Level of Service (LOS)			F				F				B				B		
Approach Delay (s/veh)	1341.7				2758.3				1.3				0.5				
Approach LOS	F				F				A				A				

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	St. Paris Con. / Driveway		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	St. Paris Connector		
Analysis Year	2036			North/South Street	Driveway		
Time Analyzed	2016 PM Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		0	1	0
Configuration		L		TR		L		TR		L		TR			LTR	
Volume (veh/h)		27	403	77		79	383	18		105	19	72		15	19	26
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

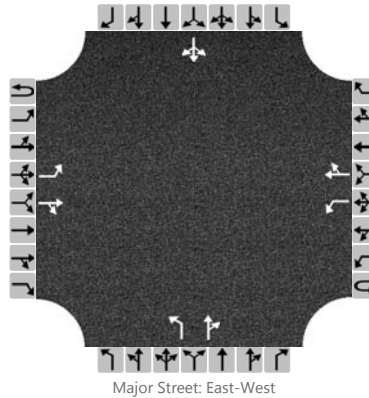
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		29				86				114		99				65	
Capacity		1117				1038				137		393				215	
v/c Ratio		0.03				0.08				0.83		0.25				0.30	
95% Queue Length		0.1				0.3				5.3		1.0				1.2	
Control Delay (s/veh)		8.3				8.8				100.4		17.2				28.9	
Level of Service (LOS)		A				A				F		C				D	
Approach Delay (s/veh)		0.4				1.4				61.8				28.9			
Approach LOS		A				A				F				D			

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	St. Paris Con. / Driveway		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	St. Paris Connector		
Analysis Year	2016			North/South Street	Driveway		
Time Analyzed	2016 SAT Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		0	1	0
Configuration		L		TR		L		TR		L		TR			LTR	
Volume (veh/h)		42	436	119		120	358	21		153	29	108		25	29	41
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

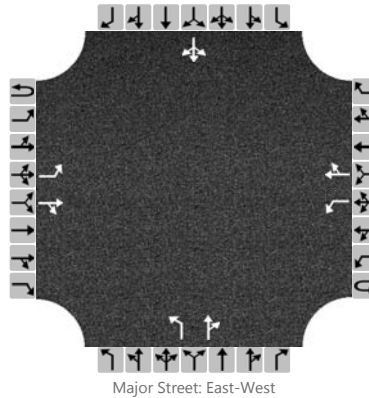
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		46				130					166		149			104	
Capacity		1140				969					85		326			145	
v/c Ratio		0.04				0.13					1.94		0.46			0.72	
95% Queue Length		0.1				0.5					14.4		2.3			4.2	
Control Delay (s/veh)		8.3				9.3					545.5		25.0			76.5	
Level of Service (LOS)		A				A					F		D			F	
Approach Delay (s/veh)		0.6				2.2				299.3				76.5			
Approach LOS		A				A				F				F			

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	St. Paris Con. / Driveway		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	St. Paris Connector		
Analysis Year	2036			North/South Street	Driveway		
Time Analyzed	2036 PM Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		0	1	0
Configuration		L		TR		L		TR		L		TR			LTR	
Volume (veh/h)		27	423	77		79	403	18		105	19	72		15	19	26
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

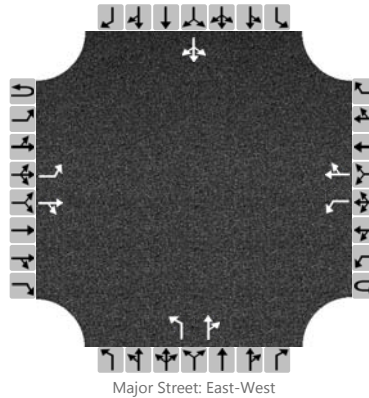
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		29				86				114		99				65	
Capacity		1097				1019				126		375				201	
v/c Ratio		0.03				0.08				0.90		0.26				0.32	
95% Queue Length		0.1				0.3				5.8		1.0				1.3	
Control Delay (s/veh)		8.4				8.9				121.8		18.0				31.2	
Level of Service (LOS)		A				A				F		C				D	
Approach Delay (s/veh)		0.4				1.4				73.5				31.2			
Approach LOS		A				A				F				D			

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Burgess & Niple			Intersection	St. Paris Con. / Driveway		
Agency/Co.	Burgess & Niple			Jurisdiction	Clark County Springfield		
Date Performed	9/30/2015			East/West Street	St. Paris Connector		
Analysis Year	2036			North/South Street	Driveway		
Time Analyzed	2036 SAT Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Bechtle Avenue & St. Paris Connector TIS						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		0	1	0
Configuration		L		TR		L		TR		L		TR			LTR	
Volume (veh/h)		42	457	119		120	375	27		153	29	108		25	29	41
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		46				130				166		149				104	
Capacity		1116				950				78		309				133	
v/c Ratio		0.04				0.14				2.13		0.48				0.78	
95% Queue Length		0.1				0.5				15.1		2.5				4.7	
Control Delay (s/veh)		8.4				9.4				635.7		27.0				91.5	
Level of Service (LOS)		A				A				F		D				F	
Approach Delay (s/veh)		0.6				2.2				347.8				91.5			
Approach LOS		A				A				F				F			