Avenida Esmeralda & avenida Lopategui
AM Condiciones Existentes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	124	684	172	212	504	252	68	248	296	96	132	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.974			0.961			0.927			0.986	
Flt Protected		0.994			0.989			0.994			0.981	
Satd. Flow (prot)	0	3427	0	0	3364	0	0	3261	0	0	3423	0
Flt Permitted		0.663			0.559			0.884			0.627	
Satd. Flow (perm)	0	2285	0	0	1901	0	0	2900	0	0	2188	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			104			213			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1130			2203			326			316	
Travel Time (s)		25.7			50.1			7.4			7.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	684	172	212	504	252	68	248	296	96	132	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	980	0	0	968	0	0	612	0	0	252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	45.0	45.0	0.0	45.0	45.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%
Maximum Green (s)	41.0	41.0		41.0	41.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		41.0			41.0			26.0			26.0	
Actuated g/C Ratio		0.55			0.55			0.35			0.35	
v/c Ratio		0.77			0.89			0.53			0.33	
Control Delay		17.6			26.0			14.4			18.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.6			26.0			14.4			18.3	
LOS		B			C			B			B	

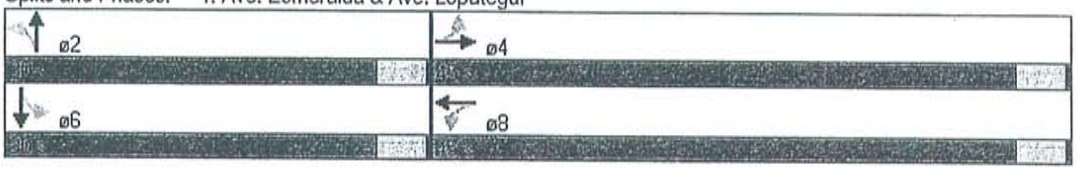
Figura 22

Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.6			26.0			14.4			18.3	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 4 (5%), Referenced to phase 2:NBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 95.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Ave. Esmeralda & Ave. Lopategui



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Lane Configurations											
Volume (vph)	568	416	4	8	304	456	8	0	654	8	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.911					0.850	
Flt Protected		0.972			0.999		0.950		0.950		
Satd. Flow (prot)	0	3437	0	0	3221	0	1770	0	1770	1583	0
Flt Permitted		0.557			0.944		0.950		0.752		
Satd. Flow (perm)	0	1969	0	0	3044	0	1770	0	1401	1583	0
Right Turn on Red			Yes			Yes		Yes			Yes
Satd. Flow (RTOR)		1			449					352	
Link Speed (mph)		30			30		30		30		
Link Distance (ft)		576			315		369		2203		
Travel Time (s)		13.1			7.2		8.4		50.1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	568	416	4	8	304	456	8	0	654	8	352
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	988	0	0	768	0	8	0	654	360	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)		0			0		12		12		
Link Offset(ft)		0			0		0		0		
Crosswalk Width(ft)		16			16		16		16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	15	9	9
Turn Type	Prot			Perm						custom	
Protected Phases	7	4			8		2			6	
Permitted Phases				8					6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0		20.0	20.0	
Total Split (s)	20.0	55.0	0.0	35.0	35.0	0.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	22.2%	61.1%	0.0%	38.9%	38.9%	0.0%	38.9%	0.0%	38.9%	38.9%	0.0%
Maximum Green (s)	16.0	51.0		31.0	31.0		31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Walk Time (s)	5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	
Act Effct Green (s)		51.0			31.0		31.0		31.0	31.0	
Actuated g/C Ratio		0.57			0.34		0.34		0.34	0.34	
v/c Ratio		1.80dl			0.57		0.01		1.35	0.46	
Control Delay		17.7			11.3		19.6		200.3	4.9	
Queue Delay		0.0			0.0		0.0		0.0	0.0	
Total Delay		17.7			11.3		19.6		200.3	4.9	
LOS		B			B		B		F	A	

Figura 23

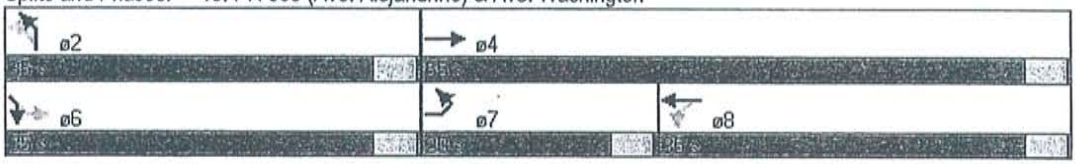
Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Approach Delay		17.7			11.3		19.6		130.9		
Approach LOS		B			B		B		F		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBL, Start of Green
Natural Cycle: 80
Control Type: Pretimed
Maximum v/c Ratio: 1.35
Intersection Signal Delay: 57.3 Intersection LOS: E
Intersection Capacity Utilization 107.7% ICU Level of Service G
Analysis Period (min) 15
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: PR-838 (Ave. Alejandrino) & Ave. Washington



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	792	624	0	0	332	212	296	308	136	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.942			0.972				
Flt Protected		0.973						0.980				
Satd. Flow (prot)	0	3444	0	0	3334	0	0	3371	0	0	0	0
Flt Permitted		0.973						0.980				
Satd. Flow (perm)	0	3444	0	0	3334	0	0	3371	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					80			23				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		280			1723			464			433	
Travel Time (s)		6.4			39.2			10.5			9.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	792	624	0	0	332	212	296	308	136	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1416	0	0	544	0	0	740	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			50		0	50				
Detector 1 Position(ft)	0	0			50		0	50				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Split						Perm					
Protected Phases	4	4			8			2				
Permitted Phases							2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	4.0	4.0			4.0		4.0	4.0				
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	85.0	85.0	0.0	0.0	0.0	0.0
Total Split (%)	24.2%	24.2%	0.0%	0.0%	24.2%	0.0%	51.5%	51.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	36.0	36.0			36.0		81.0	81.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	None	None			None		Max	Max				
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		36.1			26.3			81.1				
Actuated g/C Ratio		0.23			0.17			0.52				
v/c Ratio		1.93dl			0.86			0.42				
Control Delay		386.9			67.7			23.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		386.9			67.7			23.4				
LOS		F			E			C				
Approach Delay		386.9			67.7			23.4				
Approach LOS		F			E			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 165			
Actuated Cycle Length: 155.5			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.77			
Intersection Signal Delay: 223.0		Intersection LOS: F	
Intersection Capacity Utilization 91.3%		ICU Level of Service F	
Analysis Period (min) 15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

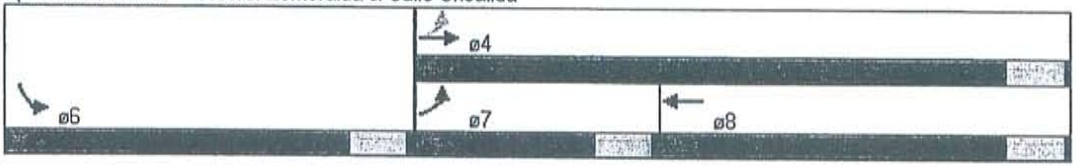
Splits and Phases: 10: Ave. Esmeralda & Ave. Acuarela

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Volume (vph)	116	648	436	76	424	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.978		0.973	
Flt Protected		0.992			0.962	
Satd. Flow (prot)	0	3511	3461	0	1976	0
Flt Permitted		0.658			0.962	
Satd. Flow (perm)	0	2329	3461	0	1976	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			32		21	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1723	1130		515	
Travel Time (s)		39.2	25.7		11.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	116	648	436	76	424	108
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	764	512	0	532	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt					
Protected Phases	7	4	8		6	
Permitted Phases	4					
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	8.0	20.0	20.0		20.0	
Total Split (s)	15.0	40.0	25.0	0.0	25.0	0.0
Total Split (%)	23.1%	61.5%	38.5%	0.0%	38.5%	0.0%
Maximum Green (s)	11.0	36.0	21.0		21.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5		0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None		Max	
Walk Time (s)		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)		41.5	36.0		76.0	
Actuated g/C Ratio		0.32	0.30		0.63	
v/c Ratio		0.96	0.48		0.42	
Control Delay		31.9	8.7		11.7	
Queue Delay		0.0	0.0		0.0	
Total Delay		31.9	8.7		11.7	
LOS		C	A		B	
Approach Delay		31.9	8.7		11.7	
Approach LOS		C	A		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 120			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: Ave. Esmeralda & Calle Crisalida



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Lane Configurations											
Volume (vph)	340	248	4	8	344	424	8	0	536	0	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.918					0.850	
Flt Protected		0.972			0.999		0.950		0.950		
Satd. Flow (prot)	0	3437	0	0	3246	0	1770	0	1770	1583	0
Flt Permitted		0.558			0.949		0.950		0.752		
Satd. Flow (perm)	0	1973	0	0	3083	0	1770	0	1401	1583	0
Right Turn on Red			Yes			Yes		Yes			Yes
Satd. Flow (RTOR)		1			370					568	
Link Speed (mph)		30			30		30		30		
Link Distance (ft)		576			315		369		2203		
Travel Time (s)		13.1			7.2		8.4		50.1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	248	4	8	344	424	8	0	536	0	484
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	592	0	0	776	0	8	0	536	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)		0			0		12		12		
Link Offset(ft)		0			0		0		0		
Crosswalk Width(ft)		16			16		16		16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	15	9	9
Turn Type	Prot			Perm						custom	
Protected Phases	7	4			8		2			6	
Permitted Phases				8					6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0		20.0	20.0	
Total Split (s)	20.0	55.0	0.0	35.0	35.0	0.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	22.2%	61.1%	0.0%	38.9%	38.9%	0.0%	38.9%	0.0%	38.9%	38.9%	0.0%
Maximum Green (s)	16.0	51.0		31.0	31.0		31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Walk Time (s)	5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	
Act Effct Green (s)		51.0			31.0		31.0		31.0	31.0	
Actuated g/C Ratio		0.57			0.34		0.34		0.34	0.34	
v/c Ratio		1.08dl			0.60		0.01		1.11	0.53	
Control Delay		11.6			14.3		19.6		104.8	3.0	
Queue Delay		0.0			0.0		0.0		0.0	0.0	
Total Delay		11.6			14.3		19.6		104.8	3.0	
LOS		B			B		B		F	A	

Figura 26

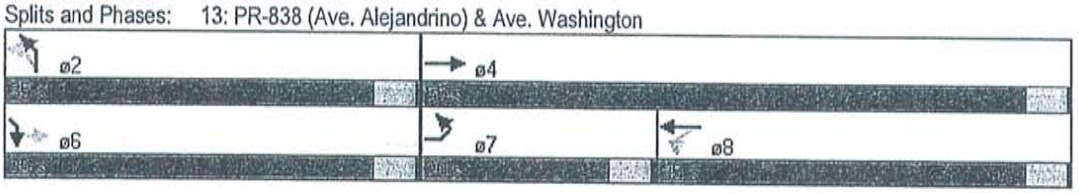
Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Approach Delay		11.6			14.3		19.6		56.5		
Approach LOS		B			B		B		E		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBL, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 31.6		Intersection LOS: C	
Intersection Capacity Utilization 88.6%		ICU Level of Service E	
Analysis Period (min) 15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: PR-838 (Ave. Alejandrino) & Ave. Washington



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Lane Configurations											
Volume (vph)	340	248	4	8	344	424	8	0	536	0	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.918					0.850	
Flt Protected		0.972			0.999		0.950		0.950		
Satd. Flow (prot)	0	3437	0	0	3246	0	1770	0	1770	1583	0
Flt Permitted		0.558			0.949		0.950		0.752		
Satd. Flow (perm)	0	1973	0	0	3083	0	1770	0	1401	1583	0
Right Turn on Red			Yes			Yes		Yes			Yes
Satd. Flow (RTOR)		1			370					568	
Link Speed (mph)		30			30		30		30		
Link Distance (ft)		576			315		369		2203		
Travel Time (s)		13.1			7.2		8.4		50.1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	248	4	8	344	424	8	0	536	0	484
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	592	0	0	776	0	8	0	536	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)		0			0		12		12		
Link Offset(ft)		0			0		0		0		
Crosswalk Width(ft)		16			16		16		16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	15	9	9
Turn Type	Prot			Perm						custom	
Protected Phases	7	4			8		2			6	
Permitted Phases				8					6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0		20.0	20.0	
Total Split (s)	20.0	55.0	0.0	35.0	35.0	0.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	22.2%	61.1%	0.0%	38.9%	38.9%	0.0%	38.9%	0.0%	38.9%	38.9%	0.0%
Maximum Green (s)	16.0	51.0		31.0	31.0		31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Walk Time (s)	5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	
Act Effct Green (s)		51.0			31.0		31.0		31.0	31.0	
Actuated g/C Ratio		0.57			0.34		0.34		0.34	0.34	
v/c Ratio		1.08dl			0.60		0.01		1.11	0.53	
Control Delay		11.6			14.3		19.6		104.8	3.0	
Queue Delay		0.0			0.0		0.0		0.0	0.0	
Total Delay		11.6			14.3		19.6		104.8	3.0	
LOS		B			B		B		F	A	

Figura 27

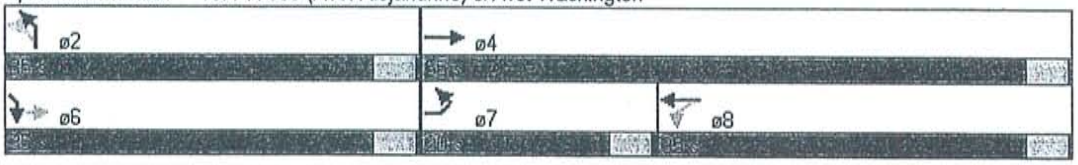
Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Approach Delay		11.6			14.3		19.6		56.5		
Approach LOS		B			B		B		E		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBL, Start of Green
Natural Cycle: 75
Control Type: Pretimed
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 31.6 Intersection LOS: C
Intersection Capacity Utilization 88.6% ICU Level of Service E
Analysis Period (min) 15
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: PR-838 (Ave. Alejandrino) & Ave. Washington



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	564	636	0	0	268	340	272	256	232	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.916			0.954				
Flt Protected		0.977						0.982				
Satd. Flow (prot)	0	3458	0	0	3242	0	0	3316	0	0	0	0
Flt Permitted		0.977						0.982				
Satd. Flow (perm)	0	3458	0	0	3242	0	0	3316	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					203			87				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		280			1723			464			433	
Travel Time (s)		6.4			39.2			10.5			9.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	564	636	0	0	268	340	272	256	232	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1200	0	0	608	0	0	760	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			50		0	50				
Detector 1 Position(ft)	0	0			50		0	50				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Split						Perm					
Protected Phases	4	4			8			2				
Permitted Phases							2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	4.0	4.0			4.0		4.0	4.0				
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				

Figura 28

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0	0.0	0.0	20.0	0.0	22.0	22.0	0.0	0.0	0.0	0.0
Total Split (%)	44.0%	44.0%	0.0%	0.0%	26.7%	0.0%	29.3%	29.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	29.0	29.0			16.0		18.0	18.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	None	None			None		C-Max	C-Max				
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		28.7			13.5			20.8				
Actuated g/C Ratio		0.38			0.18			0.28				
v/c Ratio		0.91			0.81			0.77				
Control Delay		33.4			32.7			29.9				
Queue Delay		0.0			0.0			0.0				
Total Delay		33.4			32.7			29.9				
LOS		C			C			C				
Approach Delay		33.4			32.7			29.9				
Approach LOS		C			C			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 2 (3%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 32.2		Intersection LOS: C	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 10: Ave. Esmeralda & Ave. Acuarela

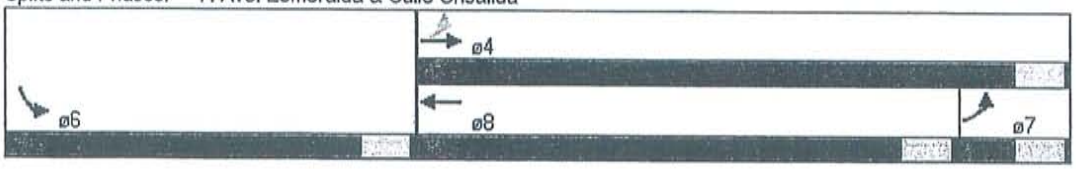
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↱		⅄	
Volume (vph)	88	780	552	60	216	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.985		0.972	
Flt Protected		0.995			0.962	
Satd. Flow (prot)	0	3522	3486	0	1974	0
Flt Permitted		0.807			0.962	
Satd. Flow (perm)	0	2856	3486	0	1974	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			20		19	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1723	1130		515	
Travel Time (s)		39.2	25.7		11.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	88	780	552	60	216	56
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	868	612	0	272	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt					
Protected Phases	7	4	8		6	
Permitted Phases	4					
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	

Figura 29

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	8.0	20.0	20.0		20.0	
Total Split (s)	8.0	46.0	38.0	0.0	29.0	0.0
Total Split (%)	10.7%	61.3%	50.7%	0.0%	38.7%	0.0%
Maximum Green (s)	4.0	42.0	34.0		25.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5		0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None		C-Max	
Walk Time (s)		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)		32.2	32.2		34.8	
Actuated g/C Ratio		0.43	0.43		0.46	
v/c Ratio		0.68	0.41		0.29	
Control Delay		6.6	13.2		14.5	
Queue Delay		0.0	0.0		0.0	
Total Delay		6.6	13.2		14.5	
LOS		A	B		B	
Approach Delay		6.6	13.2		14.5	
Approach LOS		A	B		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 30 (40%), Referenced to phase 2: and 6:SBL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: Ave. Esmeralda & Calle Crisalida



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	684	172	212	504	252	68	248	296	96	132	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.974			0.961			0.927			0.986	
Flt Protected		0.994			0.989			0.994			0.981	
Satd. Flow (prot)	0	3427	0	0	3364	0	0	3261	0	0	3423	0
Flt Permitted		0.698			0.575			0.880			0.579	
Satd. Flow (perm)	0	2406	0	0	1956	0	0	2887	0	0	2021	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			136			280			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1130			2203			326			316	
Travel Time (s)		25.7			50.1			7.4			7.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	684	172	212	504	252	68	248	296	96	132	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	980	0	0	968	0	0	612	0	0	252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	53.0	53.0	0.0	53.0	53.0	0.0	22.0	22.0	0.0	22.0	22.0	0.0
Total Split (%)	70.7%	70.7%	0.0%	70.7%	70.7%	0.0%	29.3%	29.3%	0.0%	29.3%	29.3%	0.0%
Maximum Green (s)	49.0	49.0		49.0	49.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		49.0			49.0			18.0			18.0	
Actuated g/C Ratio		0.65			0.65			0.24			0.24	
v/c Ratio		0.61			0.73			0.68			0.86dl	
Control Delay		4.1			11.3			18.0			27.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.1			11.3			18.0			27.5	
LOS		A			B			B			C	

Figura 30

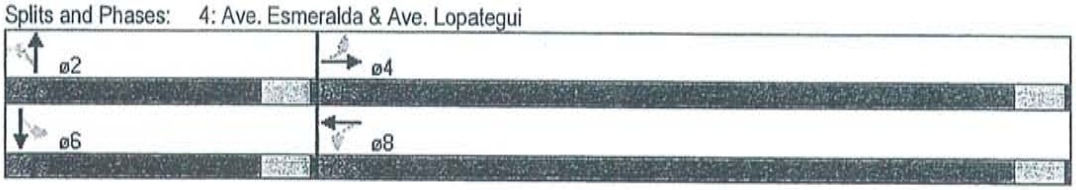
Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		4.1			11.3			18.0			27.5	
Approach LOS		A			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 62 (83%), Referenced to phase 2:NBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 95.0%		ICU Level of Service F	
Analysis Period (min) 15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 4: Ave. Esmeralda & Ave. Lopategui



Avenida Washington & avenida Alejandrino
AM Condiciones Existentes Optimizado

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Lane Configurations											
Volume (vph)	568	416	4	8	304	456	8	0	654	8	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.911					0.850	
Flt Protected		0.972			0.999		0.950		0.950		
Satd. Flow (prot)	0	3437	0	0	3221	0	1770	0	1770	1583	0
Flt Permitted		0.656			0.941		0.950		0.752		
Satd. Flow (perm)	0	2319	0	0	3034	0	1770	0	1401	1583	0
Right Turn on Red			Yes			Yes		Yes			Yes
Satd. Flow (RTOR)		1			414					352	
Link Speed (mph)		30			30		30		30		
Link Distance (ft)		576			315		369		2203		
Travel Time (s)		13.1			7.2		8.4		50.1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	568	416	4	8	304	456	8	0	654	8	352
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	988	0	0	768	0	8	0	654	360	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)		0			0		12		12		
Link Offset(ft)		0			0		0		0		
Crosswalk Width(ft)		16			16		16		16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	15	9	9
Turn Type	Prot			Perm						custom	
Protected Phases	7	4			8		2			6	
Permitted Phases				8					6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0		20.0	20.0	
Total Split (s)	20.0	40.0	0.0	20.0	20.0	0.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	25.0%	50.0%	0.0%	25.0%	25.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	16.0	36.0		16.0	16.0		36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Walk Time (s)	5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	
Act Effct Green (s)		36.0			16.0		36.0		36.0	36.0	
Actuated g/C Ratio		0.45			0.20		0.45		0.45	0.45	
v/c Ratio		1.60dl			0.82		0.01		1.04	0.40	
Control Delay		30.6			22.4		12.2		70.7	3.2	
Queue Delay		0.0			0.0		0.0		0.0	0.0	
Total Delay		30.6			22.4		12.2		70.7	3.2	
LOS		C			C		B		E	A	

Figura 31

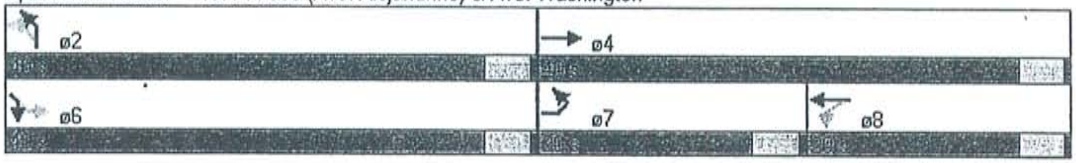
Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Approach Delay		30.6			22.4		12.3		46.7		
Approach LOS		C			C		B		D		

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 34.2		Intersection LOS: C	
Intersection Capacity Utilization 107.7%		ICU Level of Service G	
Analysis Period (min) 15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: PR-838 (Ave. Alejandrino) & Ave. Washington



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	792	624	0	0	332	212	296	308	136	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.942			0.972				
Flt Protected		0.973						0.980				
Satd. Flow (prot)	0	3444	0	0	3334	0	0	3371	0	0	0	0
Flt Permitted		0.973						0.980				
Satd. Flow (perm)	0	3444	0	0	3334	0	0	3371	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					123			31				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		280			1723			464			433	
Travel Time (s)		6.4			39.2			10.5			9.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	792	624	0	0	332	212	296	308	136	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1416	0	0	544	0	0	740	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			50		0	50				
Detector 1 Position(ft)	0	0			50		0	50				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Split						Perm					
Protected Phases	4	4			8			2				
Permitted Phases							2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	4.0	4.0			4.0		4.0	4.0				
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				

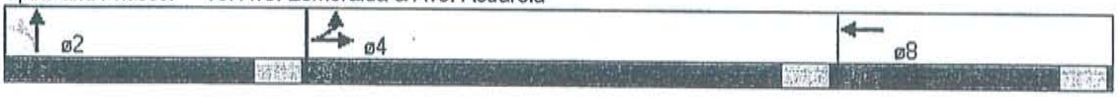
Figura 32

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	38.0	38.0	0.0	0.0	20.0	0.0	22.0	22.0	0.0	0.0	0.0	0.0
Total Split (%)	47.5%	47.5%	0.0%	0.0%	25.0%	0.0%	27.5%	27.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	34.0	34.0			16.0		18.0	18.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	None	None			None		Max	Max				
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		34.0			15.3			58.7				
Actuated g/C Ratio		0.28			0.13			0.49				
v/c Ratio		1.58dl			1.02			0.44				
Control Delay		224.6			67.1			20.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		224.6			67.1			20.3				
LOS		F			E			C				
Approach Delay		224.6			67.1			20.3				
Approach LOS		F			E			C				

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 120			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.45			
Intersection Signal Delay: 136.9		Intersection LOS: F	
Intersection Capacity Utilization 91.3%		ICU Level of Service F	
Analysis Period (min) 15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 10: Ave. Esmeralda & Ave. Acuarela



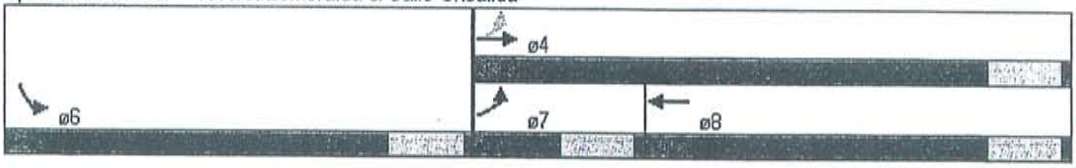
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	116	648	436	76	424	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.978		0.973	
Flt Protected		0.992			0.962	
Satd. Flow (prot)	0	3511	3461	0	1976	0
Flt Permitted		0.799			0.962	
Satd. Flow (perm)	0	2828	3461	0	1976	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			42		29	
Link Speed (mph)		30	30		30	
Link Distance (ft)		1723	1130		515	
Travel Time (s)		39.2	25.7		11.7	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	116	648	436	76	424	108
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	764	512	0	532	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt					
Protected Phases	7	4	8		6	
Permitted Phases	4					
Detector Phase	7	4	8		6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	

Figura 33

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	8.0	20.0	20.0		20.0	
Total Split (s)	8.0	28.0	20.0	0.0	22.0	0.0
Total Split (%)	16.0%	56.0%	40.0%	0.0%	44.0%	0.0%
Maximum Green (s)	4.0	24.0	16.0		18.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5		0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None		C-Max	
Walk Time (s)		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)		19.7	19.7		22.3	
Actuated g/C Ratio		0.39	0.39		0.45	
v/c Ratio		0.65	0.37		0.59	
Control Delay		14.3	8.5		15.2	
Queue Delay		0.0	0.0		0.0	
Total Delay		14.3	8.5		15.2	
LOS		B	A		B	
Approach Delay		14.3	8.5		15.2	
Approach LOS		B	A		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 50			
Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: Ave. Esmeralda & Calle Crisalida



Avenida Esmeralda & avenida Lopategui
PM Condiciones Existentes Optimizado

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	128	728	192	212	504	252	92	148	224	96	132	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.973			0.961			0.928			0.986	
Flt Protected		0.994			0.989			0.990			0.981	
Satd. Flow (prot)	0	3423	0	0	3364	0	0	3252	0	0	3423	0
Flt Permitted		0.671			0.557			0.782			0.584	
Satd. Flow (perm)	0	2311	0	0	1894	0	0	2568	0	0	2038	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			114			218			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1130			2203			326			316	
Travel Time (s)		25.7			50.1			7.4			7.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	728	192	212	504	252	92	148	224	96	132	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1048	0	0	968	0	0	464	0	0	252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	73.0	73.0	0.0	73.0	73.0	0.0	27.0	27.0	0.0	27.0	27.0	0.0
Total Split (%)	73.0%	73.0%	0.0%	73.0%	73.0%	0.0%	27.0%	27.0%	0.0%	27.0%	27.0%	0.0%
Maximum Green (s)	69.0	69.0		69.0	69.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		69.0			69.0			23.0			23.0	
Actuated g/C Ratio		0.69			0.69			0.23			0.23	
v/c Ratio		0.65			0.72			0.61			0.53	
Control Delay		7.8			12.1			21.7			37.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.8			12.1			21.7			37.1	
LOS		A			B			C			D	

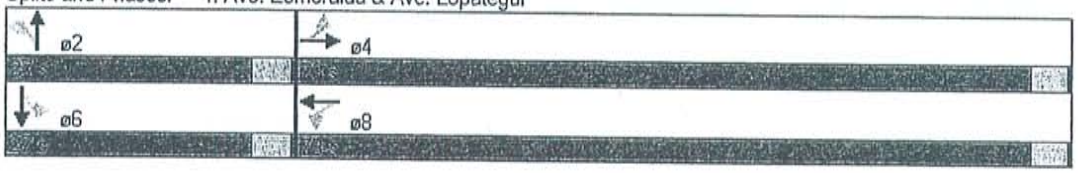
Figura 34

Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		7.8			12.1			21.7			37.1	
Approach LOS		A			B			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 64 (64%), Referenced to phase 2:NBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 92.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 4: Ave. Esmeralda & Ave. Lopategui



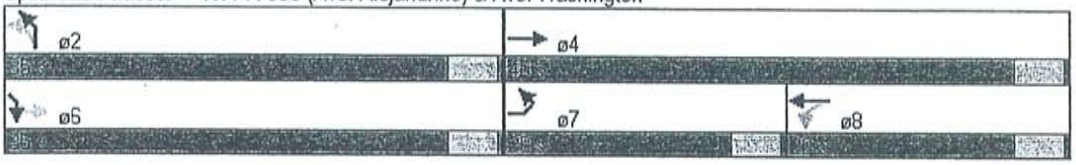
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Lane Configurations											
Volume (vph)	340	248	4	8	344	424	8	0	536	0	484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.918					0.850	
Flt Protected		0.972			0.999		0.950		0.950		
Satd. Flow (prot)	0	3437	0	0	3246	0	1770	0	1770	1583	0
Flt Permitted		0.646			0.947		0.950		0.752		
Satd. Flow (perm)	0	2284	0	0	3077	0	1770	0	1401	1583	0
Right Turn on Red			Yes			Yes		Yes			Yes
Satd. Flow (RTOR)		1			370					610	
Link Speed (mph)		30			30		30		30		
Link Distance (ft)		576			315		369		2203		
Travel Time (s)		13.1			7.2		8.4		50.1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	340	248	4	8	344	424	8	0	536	0	484
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	592	0	0	776	0	8	0	536	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)		0			0		12		12		
Link Offset(ft)		0			0		0		0		
Crosswalk Width(ft)		16			16		16		16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	15	9	9
Turn Type	Prot			Perm						custom	
Protected Phases	7	4			8		2			6	
Permitted Phases				8					6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0		20.0	20.0	
Total Split (s)	20.0	40.0	0.0	20.0	20.0	0.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	26.7%	53.3%	0.0%	26.7%	26.7%	0.0%	46.7%	0.0%	46.7%	46.7%	0.0%
Maximum Green (s)	16.0	36.0		16.0	16.0		31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes						
Walk Time (s)	5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	
Act Effct Green (s)		36.0			16.0		31.0		31.0	31.0	
Actuated g/C Ratio		0.48			0.21		0.41		0.41	0.41	
v/c Ratio		0.90dl			0.82		0.01		0.93	0.48	
Control Delay		14.0			23.1		13.1		46.5	2.0	
Queue Delay		0.0			0.0		0.0		0.0	0.0	
Total Delay		14.0			23.1		13.1		46.5	2.0	
LOS		B			C		B		D	A	

Figura 35

Synchro 7 - Report

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER	SER2
Approach Delay		14.0			23.1		13.1		25.4		
Approach LOS		B			C		B		C		

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBL, Start of Green
Natural Cycle: 75
Control Type: Pretimed
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 21.8 Intersection LOS: C
Intersection Capacity Utilization 88.6% ICU Level of Service E
Analysis Period (min) 15
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 13: PR-838 (Ave. Alejandrino) & Ave. Washington