VOLUME AND LEVELS OF SERVICE FIGURES

Orth - Rodgers & Associates, Inc.

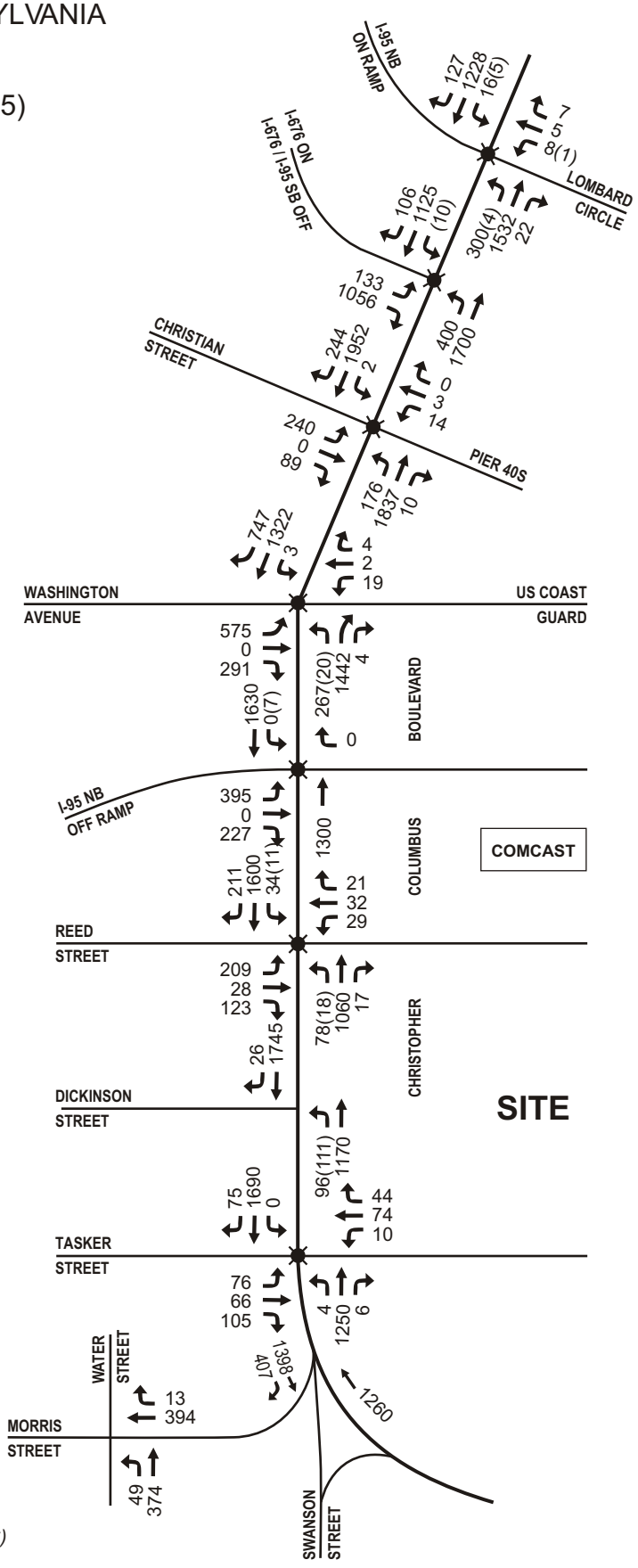
FIGURE 7

Existing Early Friday Afternoon Peak Hour Traffic Volumes

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

January / February 2006
Late Afternoon (3:15 - 4:15)



LEGEND

- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

Orth - Rodgers & Associates, Inc.

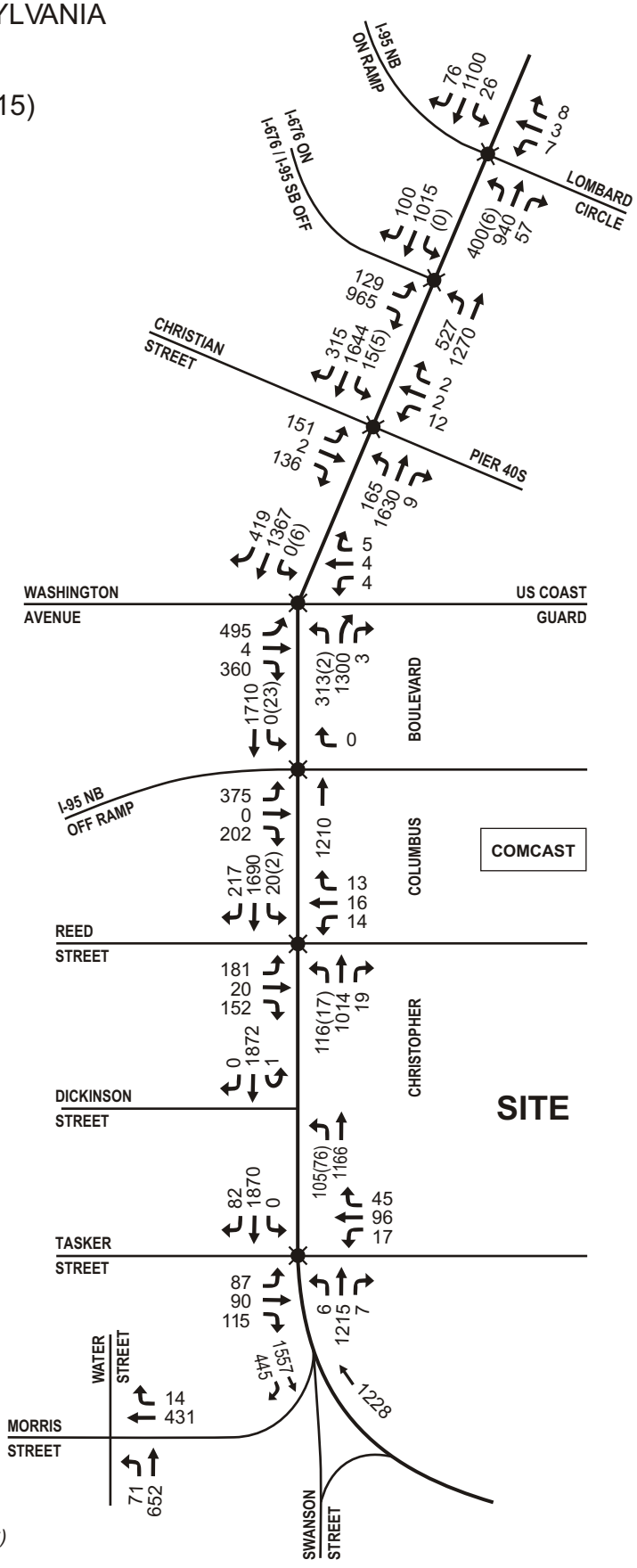
FIGURE 8

Existing Early Saturday Afternoon Peak Hour Traffic Volumes

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

January / February 2006
Early Afternoon (1:15 - 2:15)



LEGEND

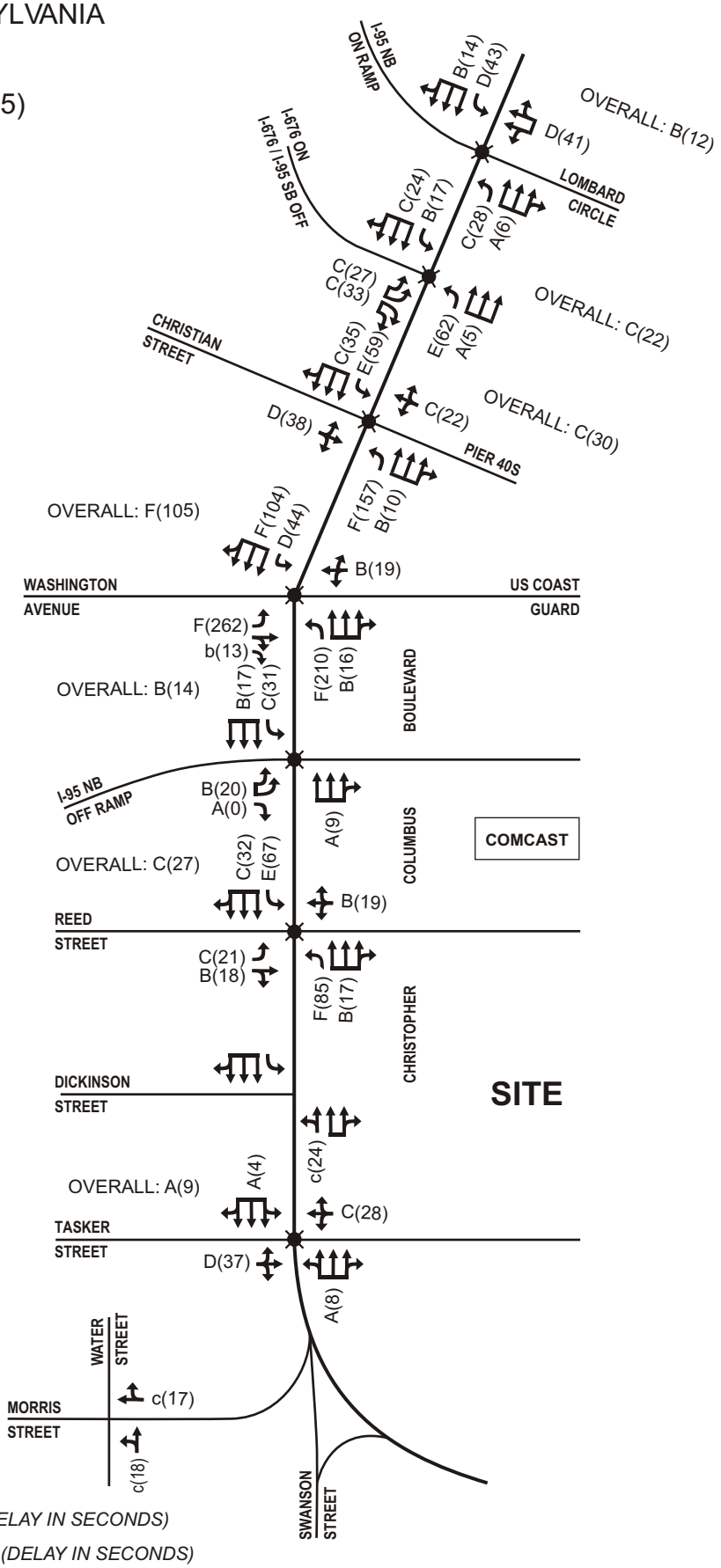
- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

Existing Early Friday Afternoon Peak Hour Level of Service

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

January / February 2006
Late Afternoon (3:15 - 4:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

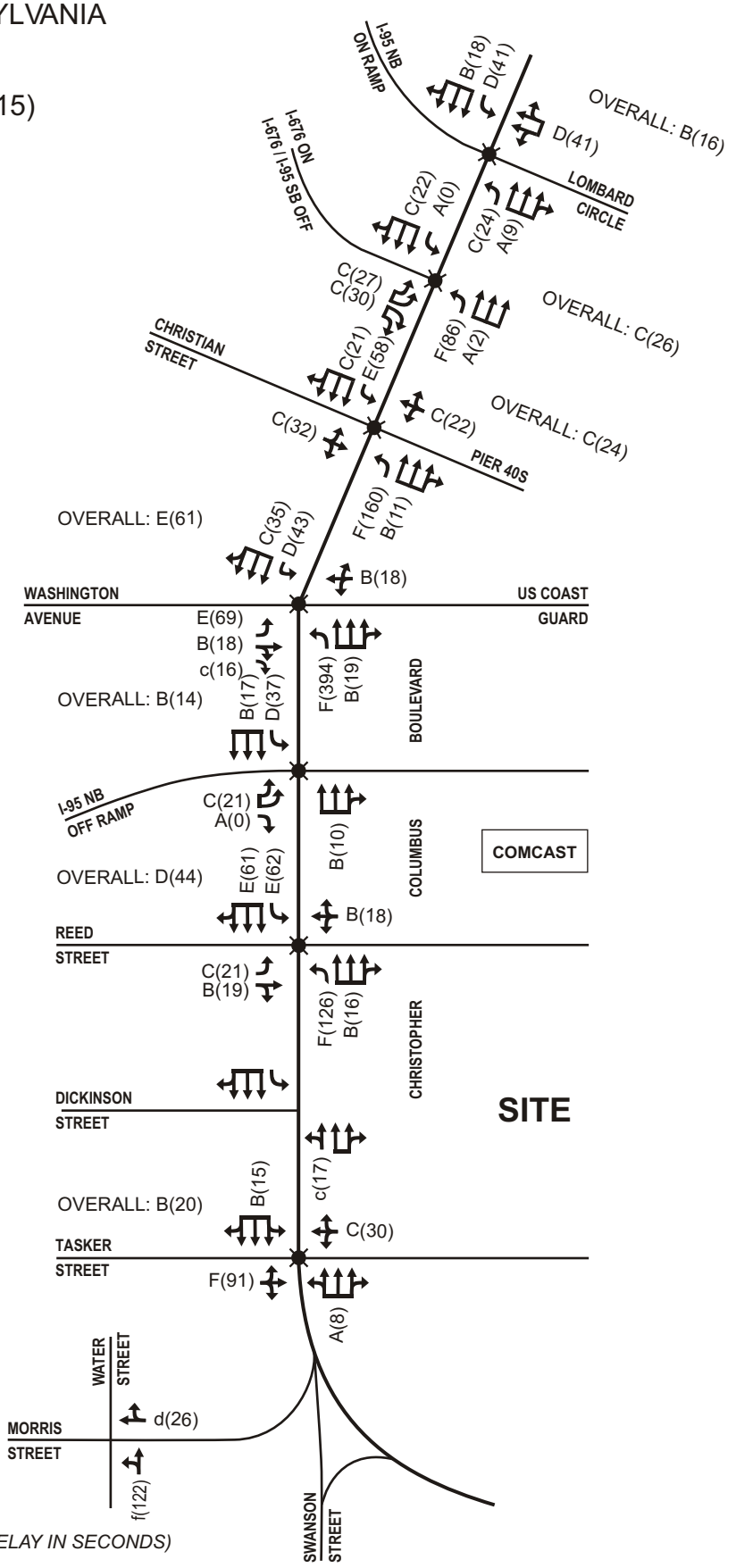
a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

Existing Early Saturday Afternoon Peak Hour Level of Service

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

January / February 2006
Early Afternoon (1:15 - 2:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

Orth - Rodgers & Associates, Inc.

FIGURE 11

2008 No Build Early Friday Afternoon Peak Hour Traffic Volumes

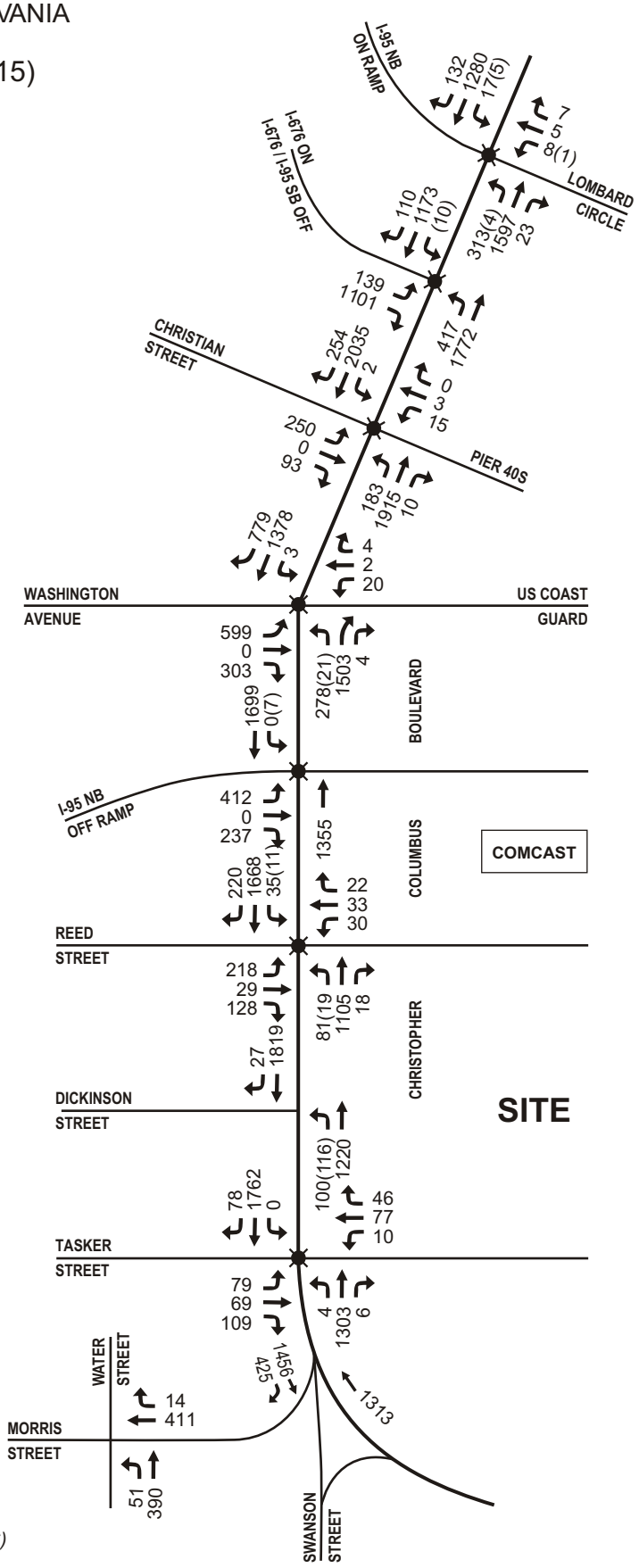
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)

NOTE

INCLUDES 4.2% BACKGROUND GROWTH



LEGEND

- EXISTING TRAFFIC SIGNAL
- #(#) MOVEMENT VOLUMES(U-TURNS)

Orth - Rodgers & Associates, Inc.

FIGURE 12

2008 No Build Early Saturday Afternoon Peak Hour Traffic Volumes

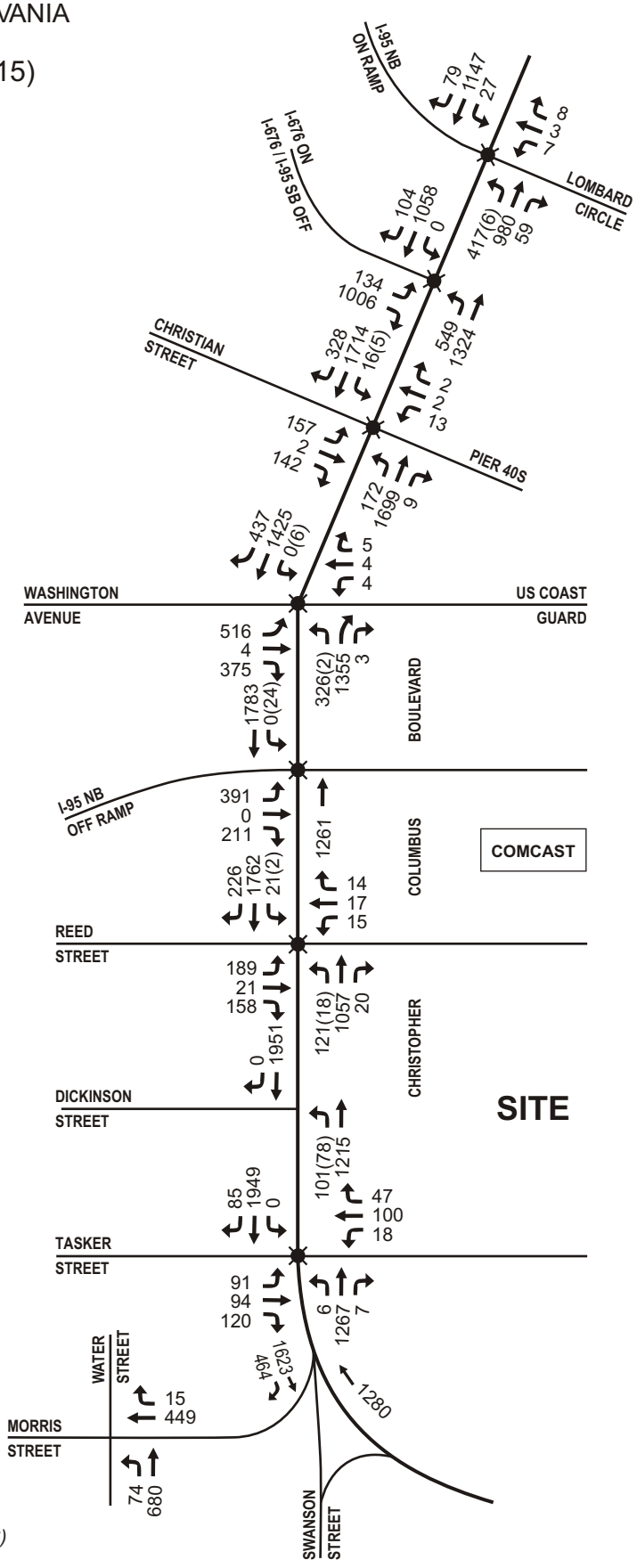
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)

NOTE

INCLUDES 4.2% BACKGROUND GROWTH



LEGEND

- EXISTING TRAFFIC SIGNAL
- #(#) MOVEMENT VOLUMES(U-TURNS)

OR&A Orth - Rodgers & Associates, Inc.

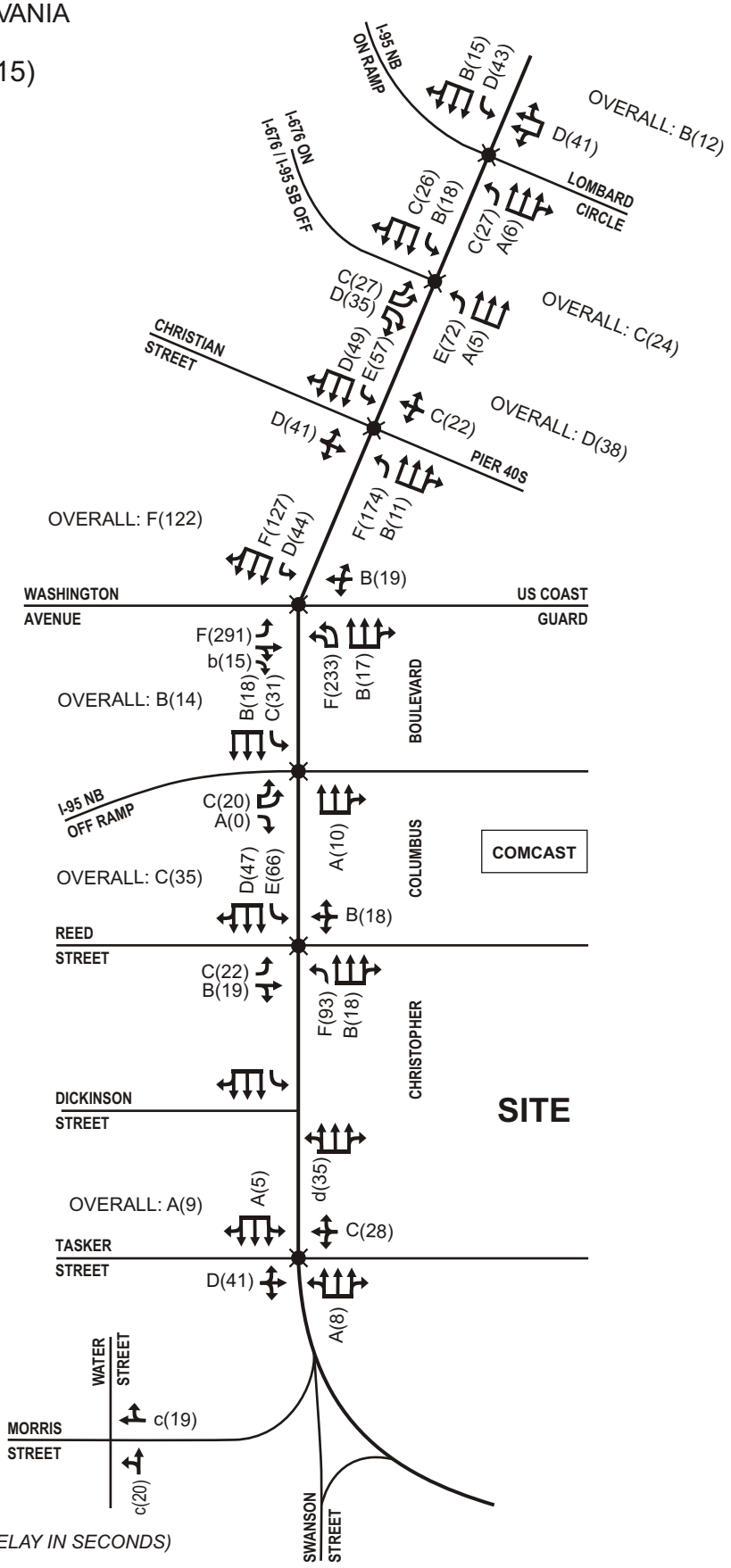
FIGURE 13

2008 No Build Early Friday Afternoon Peak Hour Levels of Service

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

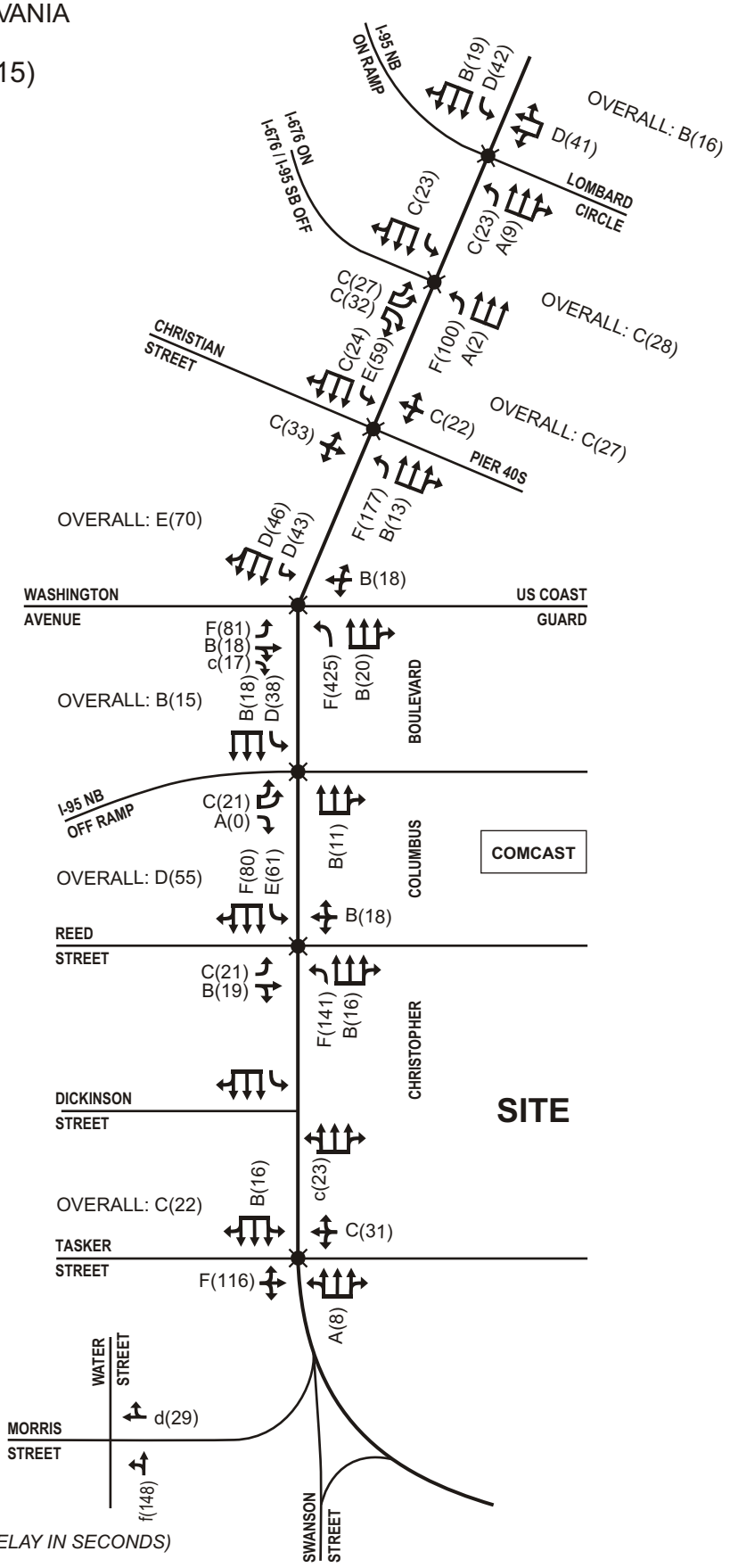
a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

2008 No Build Early Saturday Afternoon Peak Hour Levels of Service

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

2008 Build Early Friday Afternoon Peak Hour Traffic Volumes w/ Improvements

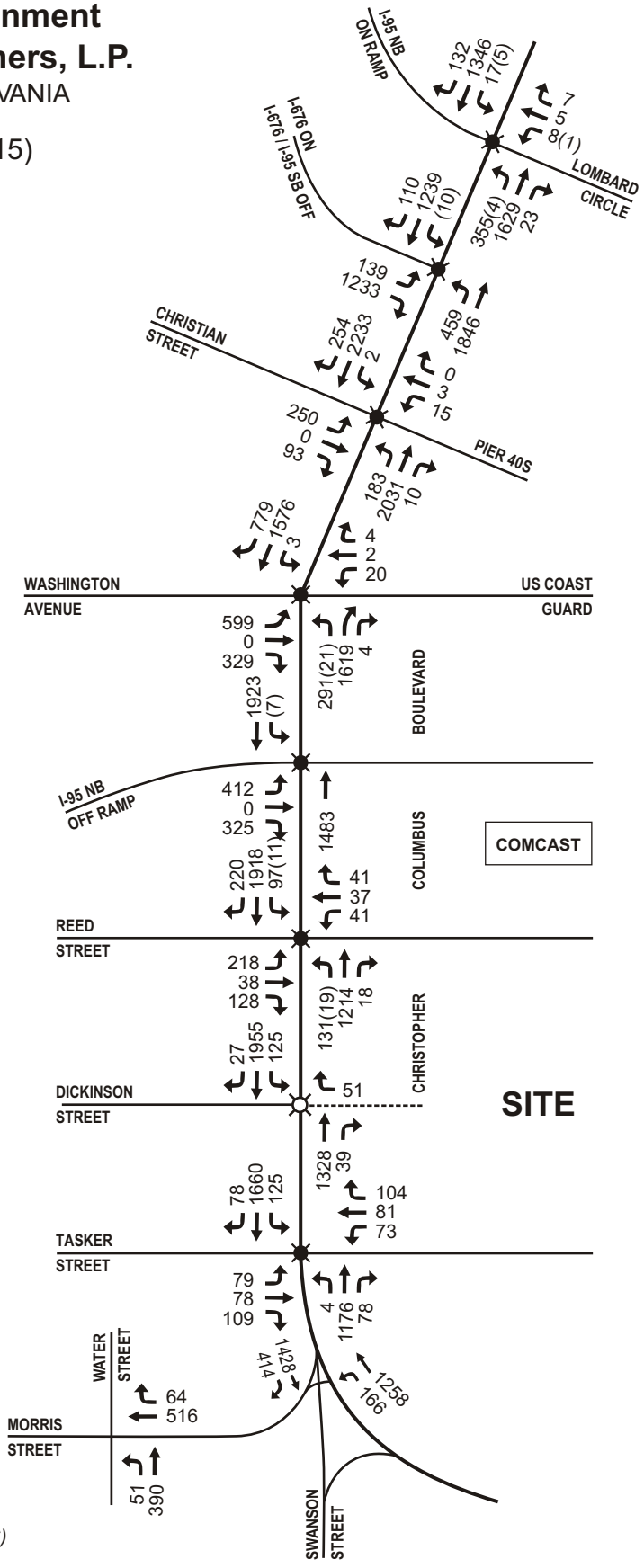
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)

NOTE

INCLUDES 4.2% BACKGROUND GROWTH



LEGEND

- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

Orth - Rodgers & Associates, Inc.

FIGURE 16

2008 Build Early Saturday Afternoon Peak Hour Traffic Volumes w/ Improvements

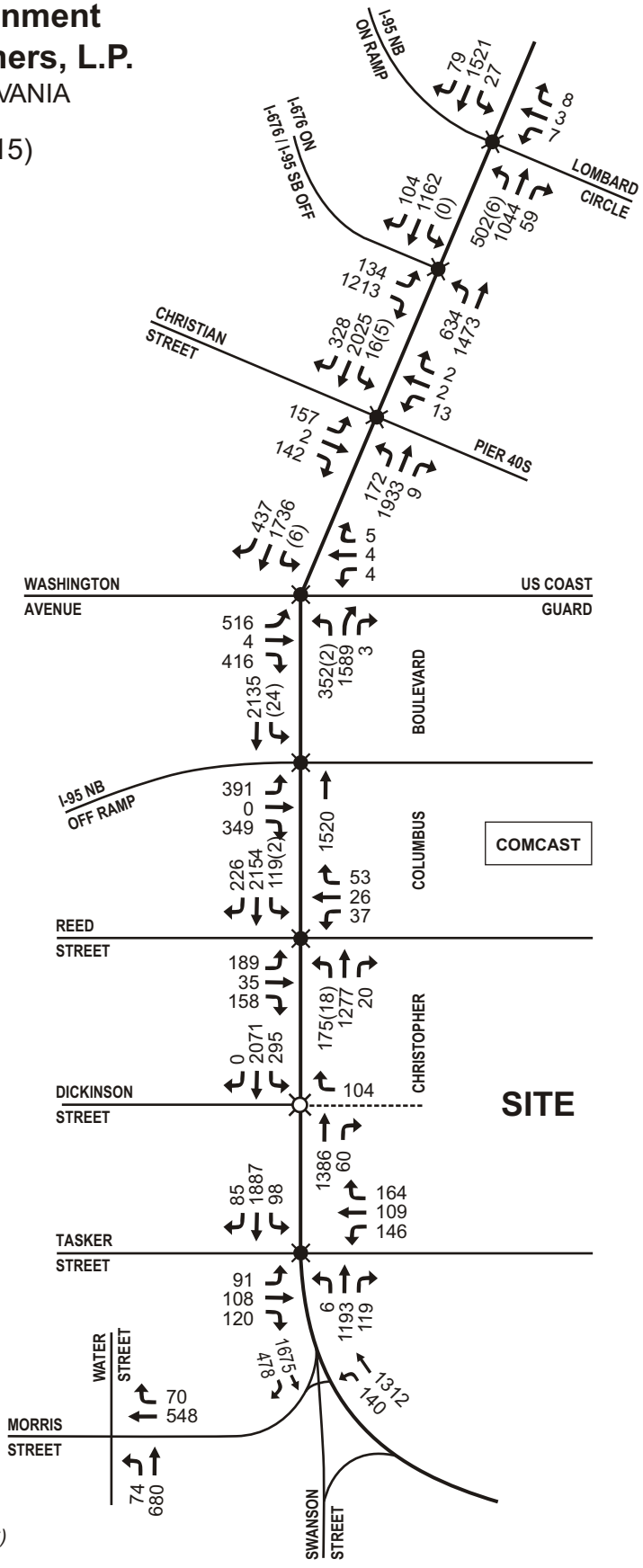
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)

NOTE

INCLUDES 4.2% BACKGROUND GROWTH



LEGEND

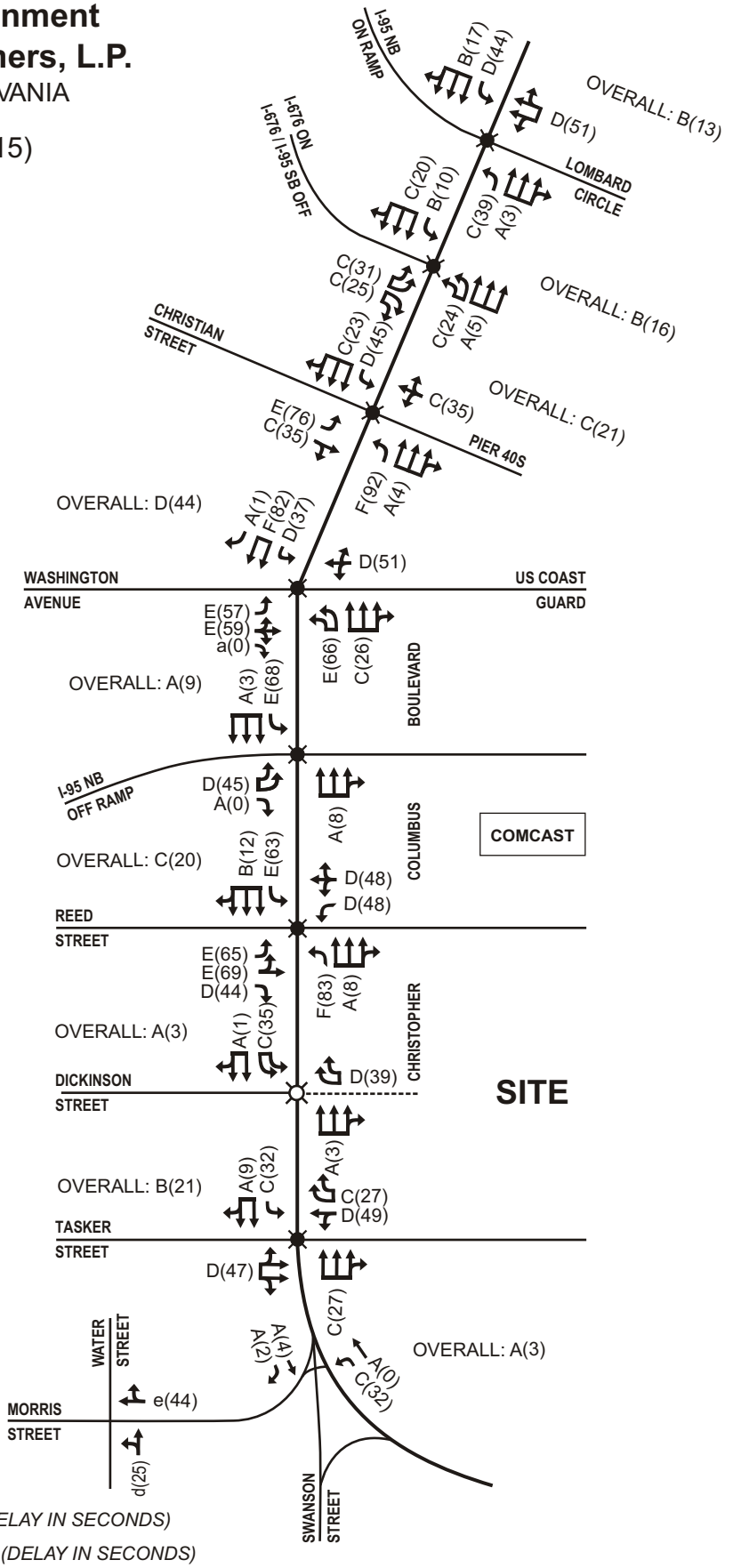
- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

2008 Build Early Friday Afternoon Peak Hour Levels of Service w/ Improvements

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

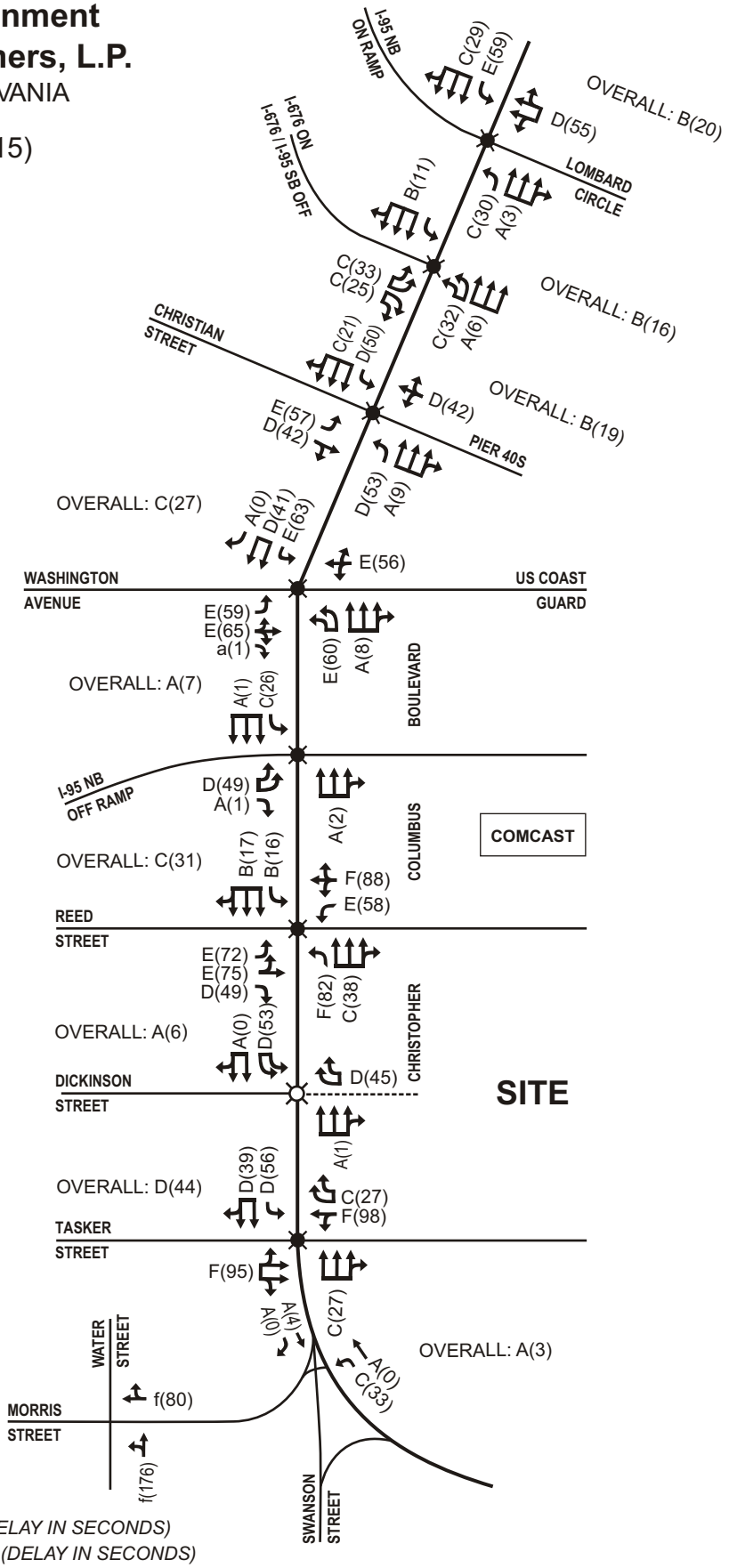
a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

2008 Build Early Saturday Afternoon Peak Hour Levels of Service w/ Improvements

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

Orth - Rodgers & Associates, Inc.

FIGURE 23

2010 Build Early Friday Afternoon Peak Hour Traffic Volumes w/ Improvements w/o Dickinson Street Ramp

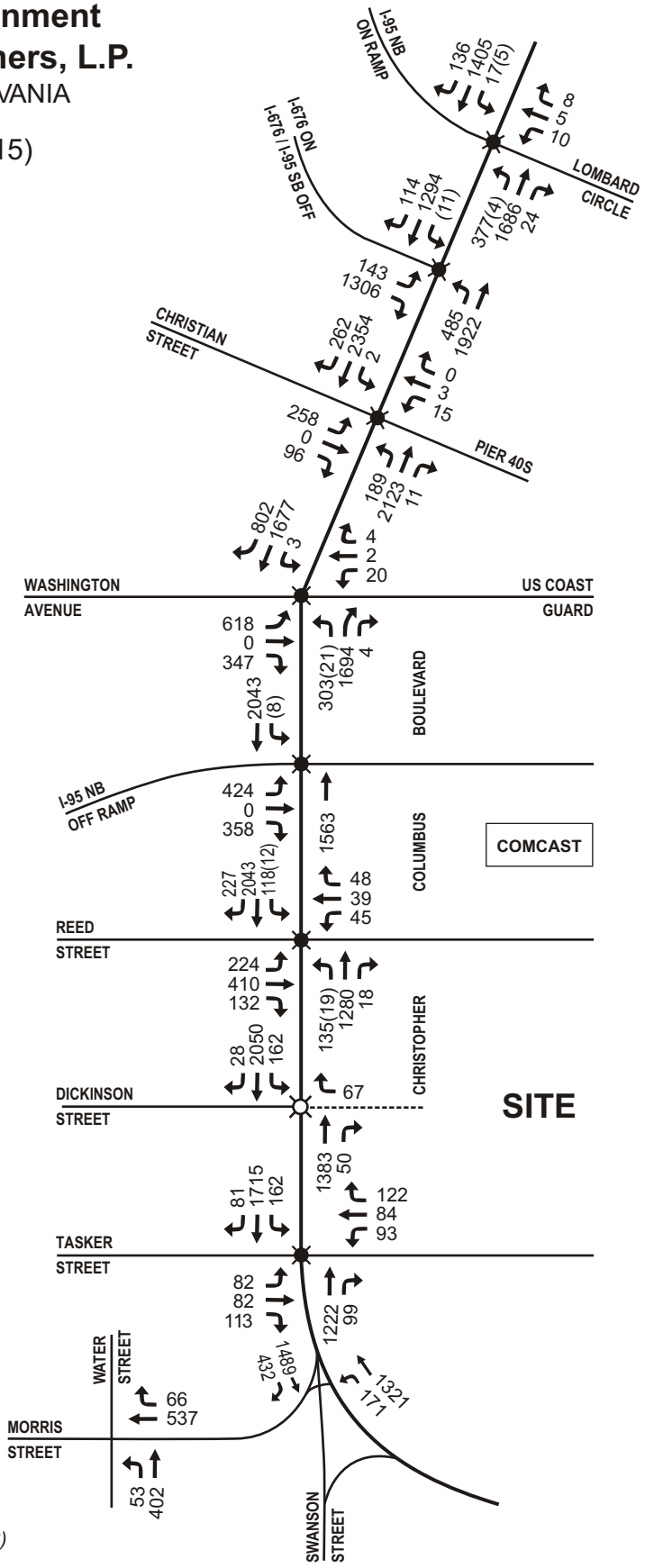
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)

NOTE

INCLUDES 7.4% BACKGROUND GROWTH



LEGEND

- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

Orth - Rodgers & Associates, Inc.

FIGURE 24

2010 Build Early Saturday Afternoon Peak Hour Traffic Volumes w/ Improvements w/o Dickinson Street Ramp

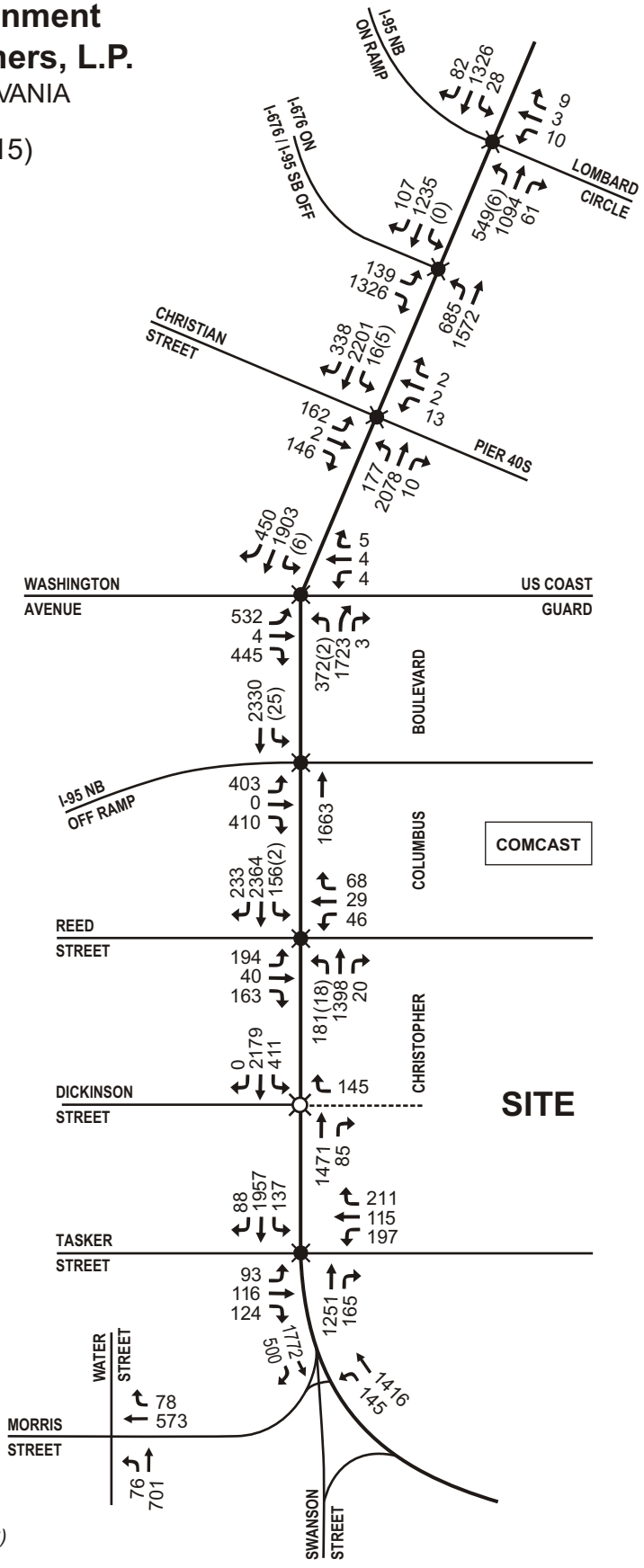
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)

NOTE

INCLUDES 7.4% BACKGROUND GROWTH



LEGEND

- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

OR&A
Orth - Rodgers & Associates, Inc.

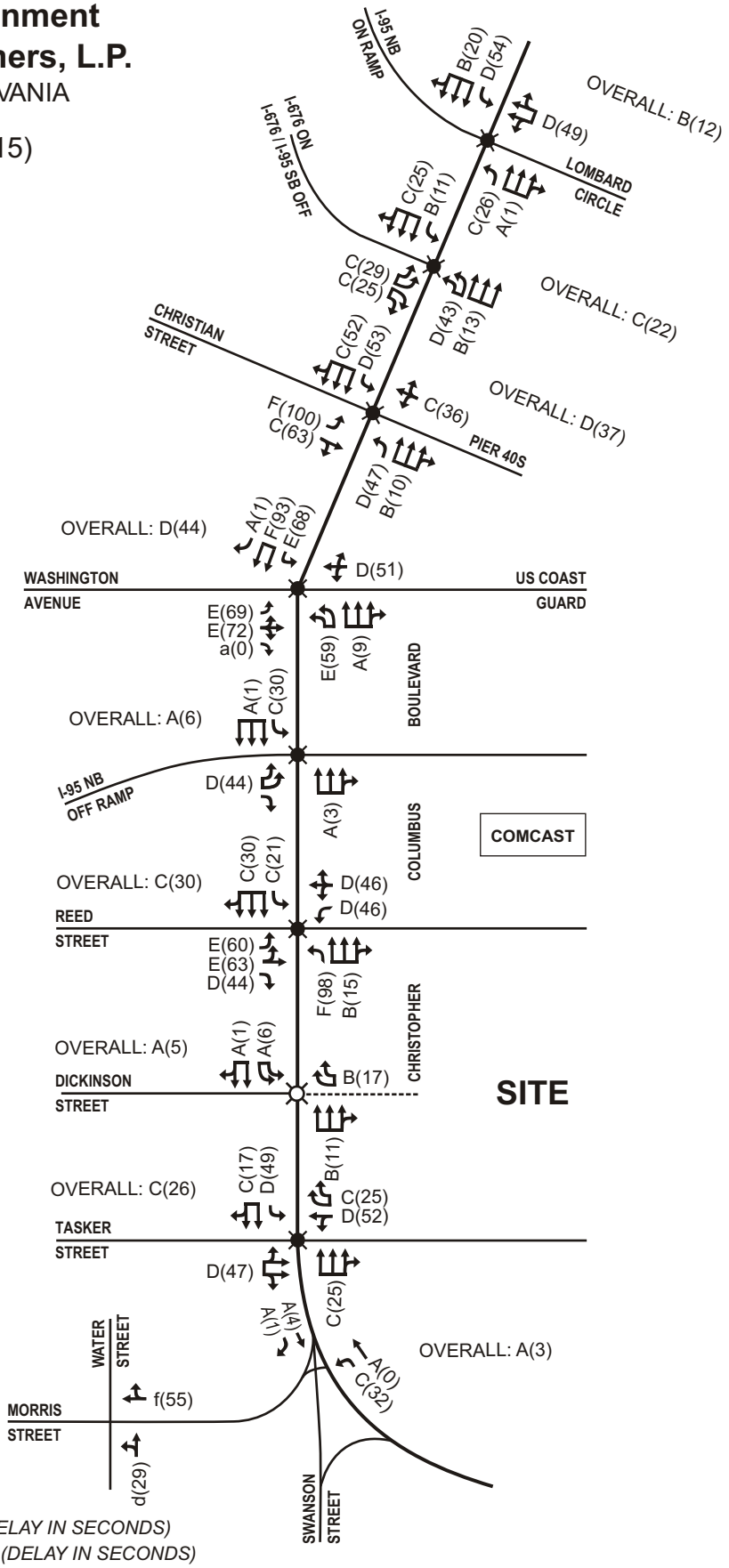
FIGURE 25

2010 Build Early Friday Afternoon Peak Hour Levels of Service w/ Improvements w/o Dickinson Street Ramp

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

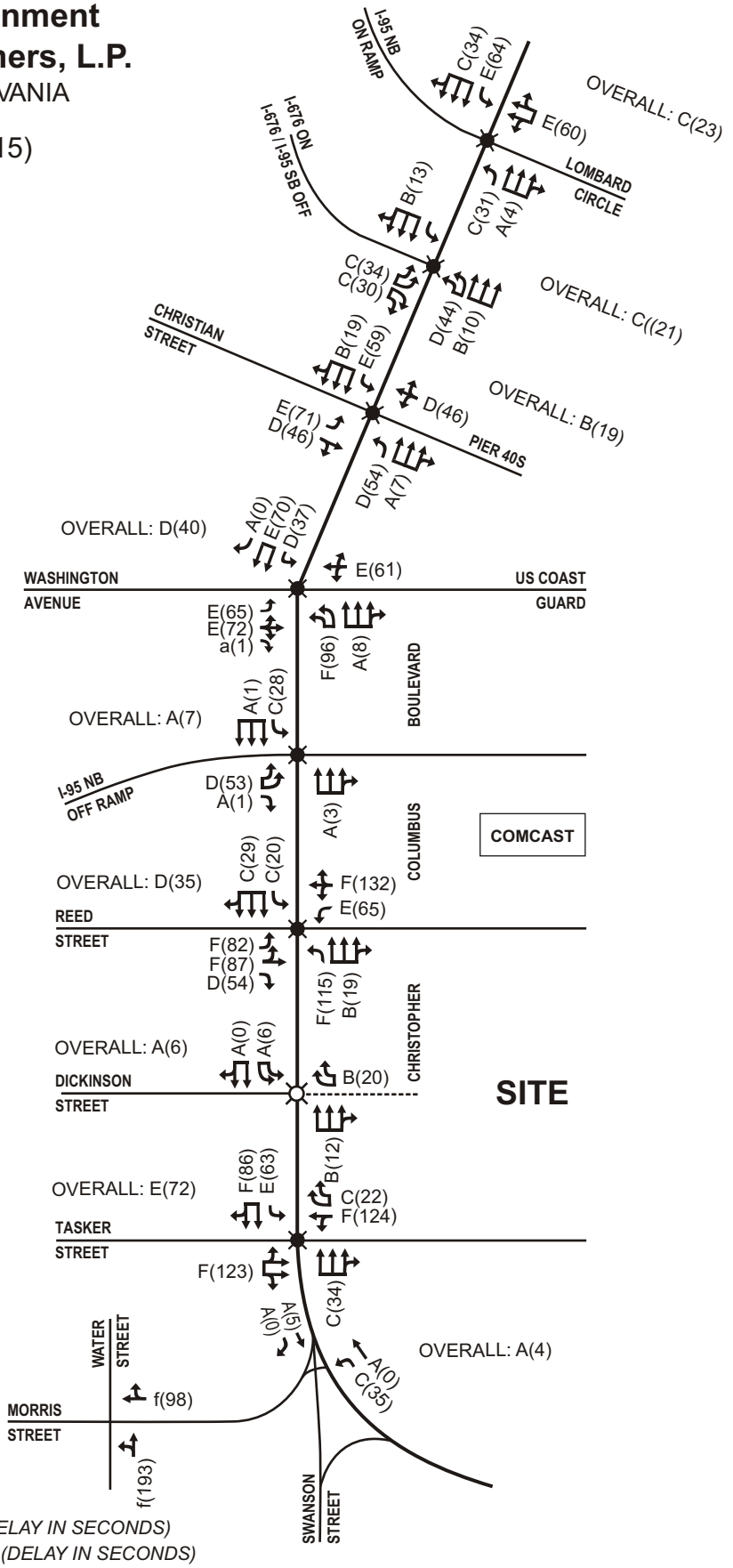
a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

2010 Build Early Saturday Afternoon Peak Hour Levels of Service w/ Improvements w/o Dickinson Street Ramp

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

2010 Build Early Friday Afternoon Peak Hour Traffic Volumes w/ Improvements w/ Dickinson Street Ramp

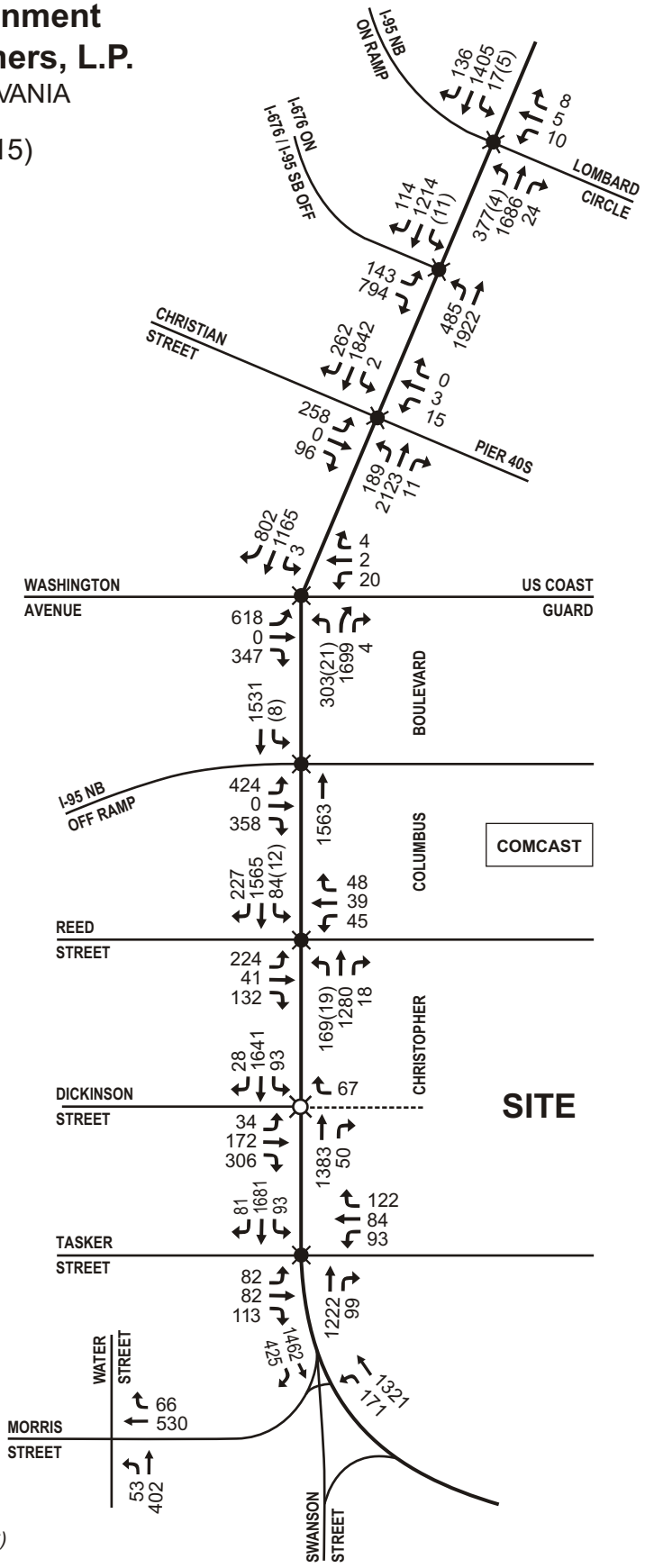
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)

NOTE

INCLUDES 7.4% BACKGROUND GROWTH



LEGEND

- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

Orth - Rodgers & Associates, Inc.

FIGURE 30

2010 Build Early Saturday Afternoon Peak Hour Traffic Volumes w/ Improvements w/ Dickinson Street Ramp

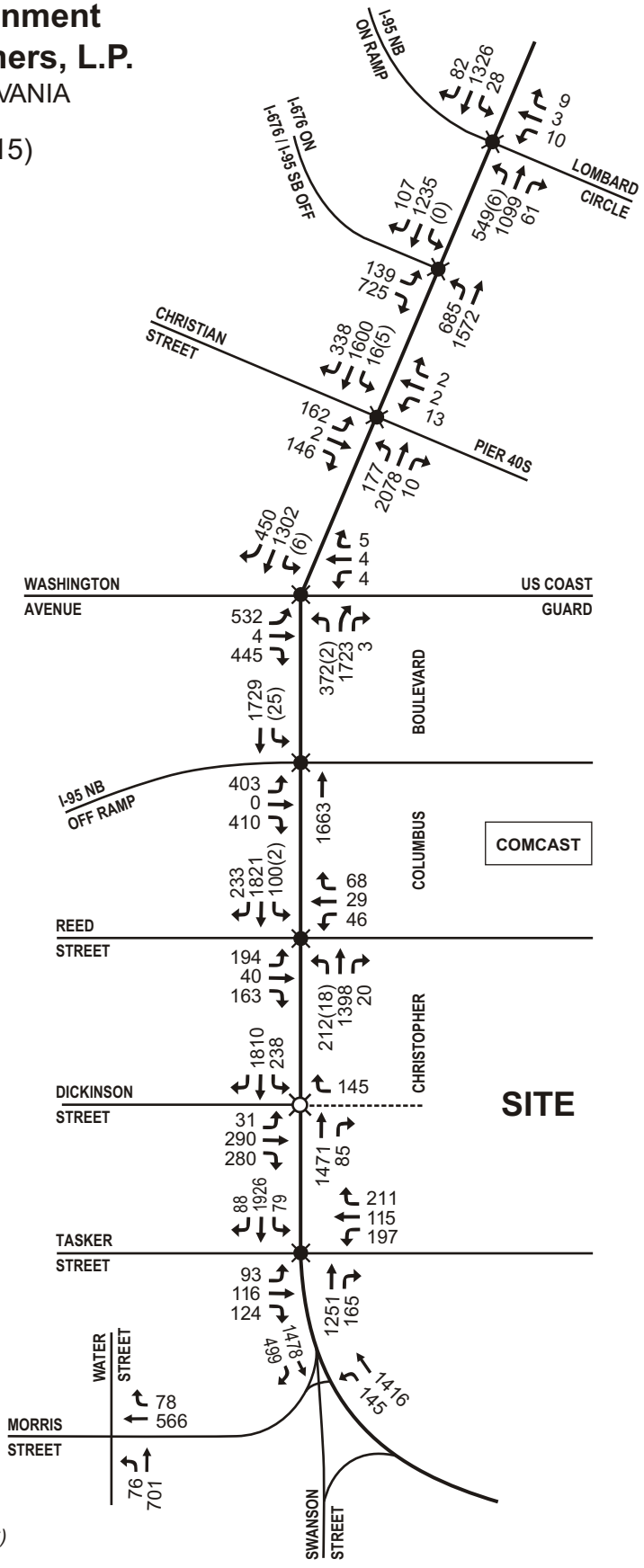
Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)

NOTE

INCLUDES 7.4% BACKGROUND GROWTH



LEGEND

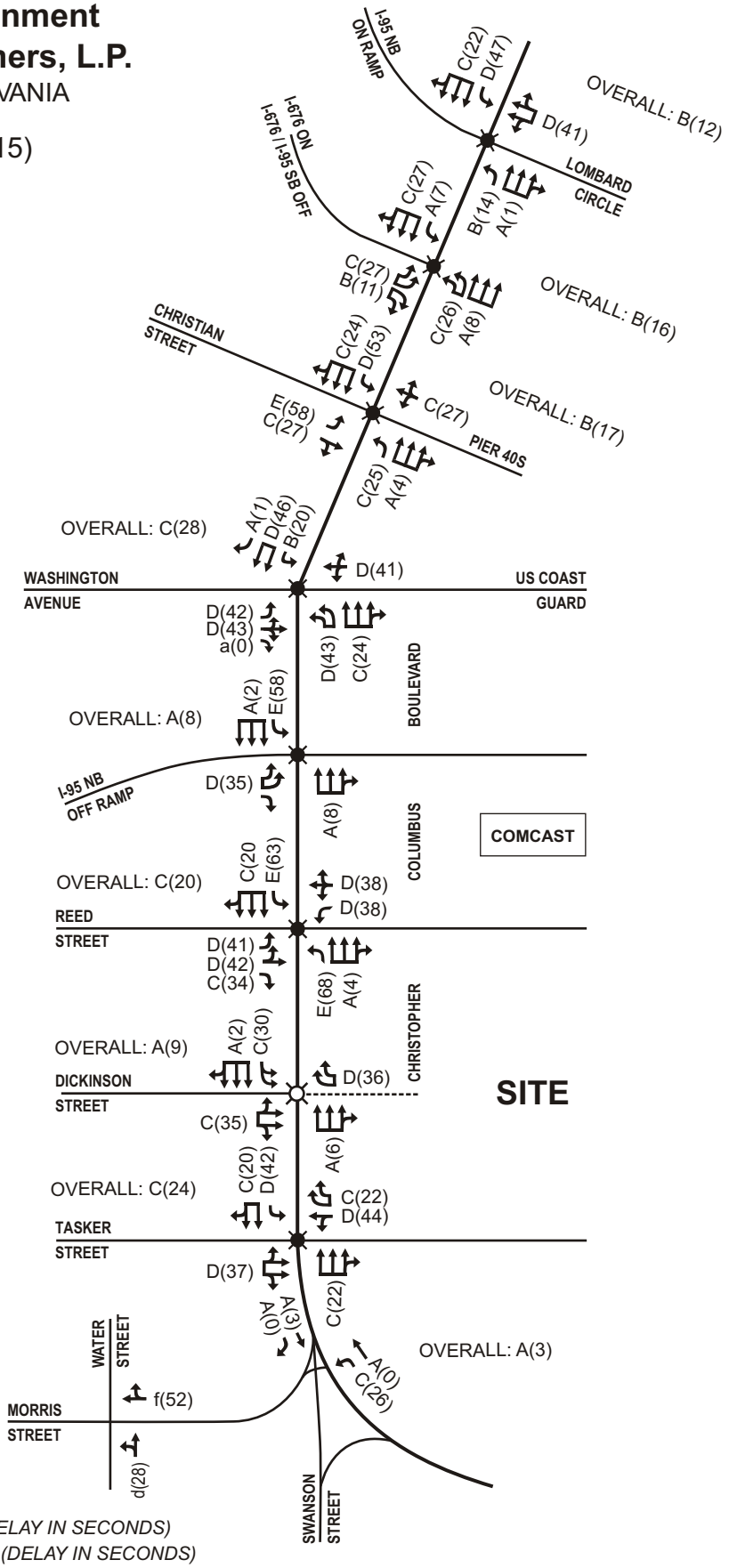
- *EXISTING TRAFFIC SIGNAL*
- *#(#) MOVEMENT VOLUMES(U-TURNS)*

2010 Build Early Friday Afternoon Peak Hour Levels of Service w/ Improvements w/ Dickinson Street Ramp

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (3:15 - 4:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

Orth - Rodgers & Associates, Inc.

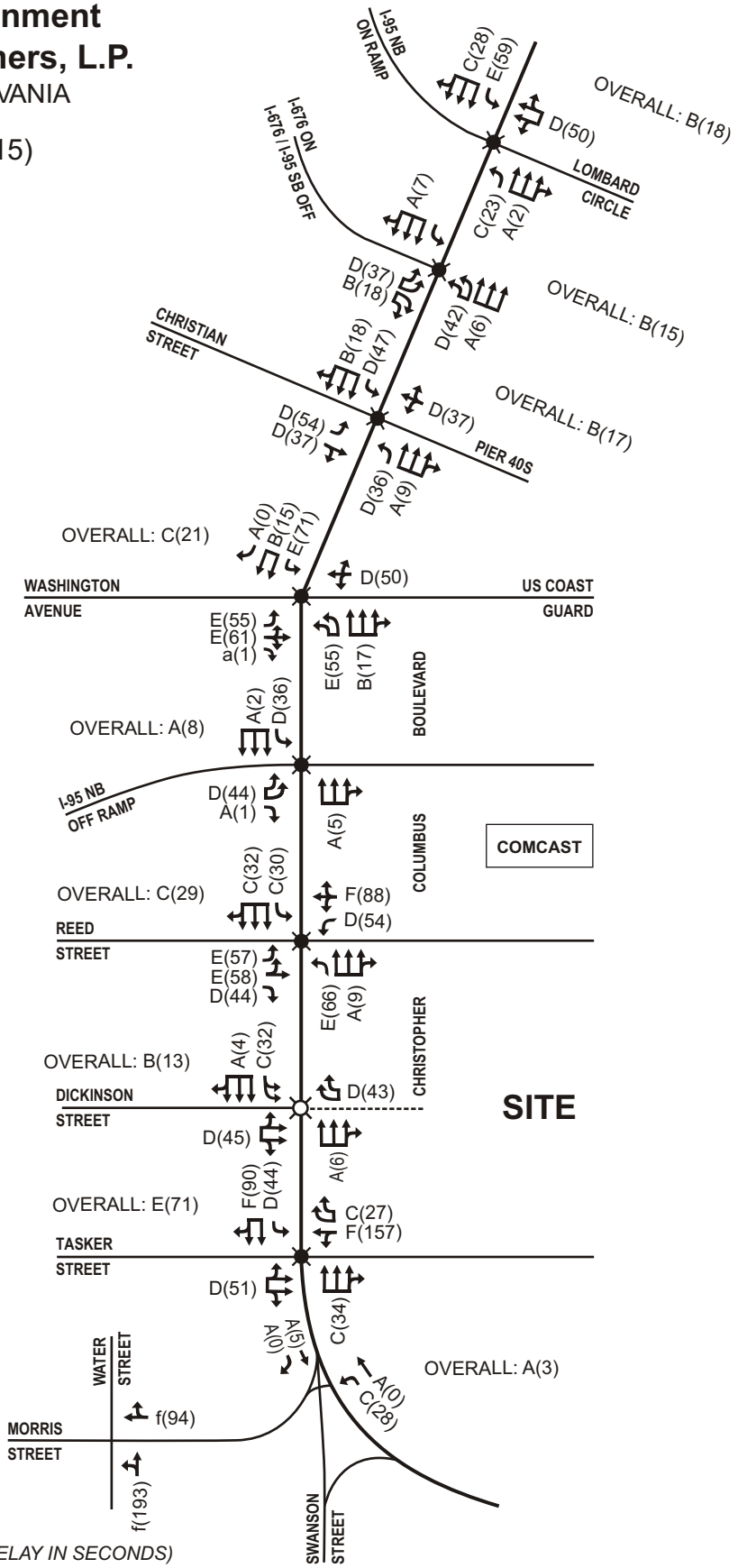
FIGURE 32

2010 Build Early Saturday Afternoon Peak Hour Levels of Service w/ Improvements w/ Dickinson Street Ramp

Philadelphia Entertainment & Development Partners, L.P.

PHILADELPHIA, PENNSYLVANIA

Early Afternoon (1:15 - 2:15)



LEGEND

- EXISTING TRAFFIC SIGNAL

A(#) - SIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

a(#) - UNSIGNALIZED LEVEL OF SERVICE (DELAY IN SECONDS)

CAPACITY ANALYSIS – EXISTING CONDITIONS

1: I-95 NB On Ramp & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)						4.0			4.0	4.0		
Lane Util. Factor						0.95			1.00	0.91		
Frt						0.95			1.00	1.00		
Flt Protected						0.98			0.95	1.00		
Satd. Flow (prot)						3283			1770	5074		
Flt Permitted						0.98			0.95	1.00		
Satd. Flow (perm)						3283			1770	5074		
Volume (vph)	0	0	0	1	8	5	7	4	300	1532	22	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	1	9	5	8	4	326	1665	24	5
RTOR Reduction (vph)	0	0	0	0	0	8	0	0	0	1	0	0
Lane Group Flow (vph)	0	0	0	0	0	15	0	0	330	1688	0	0
Turn Type				Split	Split			Prot	Prot			Prot
Protected Phases				8	8	8		1	1	6		5
Permitted Phases												
Actuated Green, G (s)						2.8			22.5	68.0		
Effective Green, g (s)						4.8			23.5	69.0		
Actuated g/C Ratio						0.05			0.26	0.77		
Clearance Time (s)						6.0			5.0	5.0		
Vehicle Extension (s)						3.0			3.0	3.0		
Lane Grp Cap (vph)						175			462	3890		
v/s Ratio Prot						c0.00			c0.19	0.33		
v/s Ratio Perm												
v/c Ratio						0.09			0.71	0.43		
Uniform Delay, d1						40.5			30.2	3.7		
Progression Factor						1.00			0.78	1.56		
Incremental Delay, d2						0.2			4.0	0.3		
Delay (s)						40.7			27.7	6.0		
Level of Service						D			C	A		
Approach Delay (s)		0.0				40.7				9.5		
Approach LOS		A				D				A		

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

1: I-95 NB On Ramp & Chris Columbus Blvd.

Movement	SBL	SBT	SBR
Lane Configurations			
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	4.0	4.0	
Lane Util. Factor	1.00	0.91	
Frt	1.00	0.99	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1770	5014	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1770	5014	
Volume (vph)	16	1228	127
Peak-hour factor, PHF	0.92	0.92	0.92
Adj. Flow (vph)	17	1335	138
RTOR Reduction (vph)	0	10	0
Lane Group Flow (vph)	22	1463	0
Turn Type	Prot		
Protected Phases	5	2	
Permitted Phases			
Actuated Green, G (s)	3.2	48.7	
Effective Green, g (s)	4.2	49.7	
Actuated g/C Ratio	0.05	0.55	
Clearance Time (s)	5.0	5.0	
Vehicle Extension (s)	3.0	3.0	
Lane Grp Cap (vph)	83	2769	
v/s Ratio Prot	0.01	c0.29	
v/s Ratio Perm			
v/c Ratio	0.27	0.53	
Uniform Delay, d1	41.4	12.7	
Progression Factor	1.00	1.00	
Incremental Delay, d2	1.7	0.7	
Delay (s)	43.1	13.5	
Level of Service	D	B	
Approach Delay (s)		13.9	
Approach LOS		B	

Intersection Summary

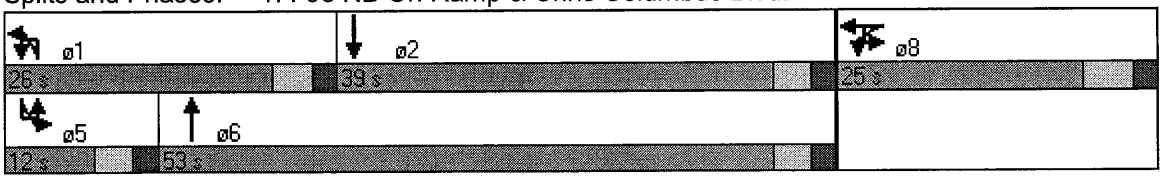
1: I-95 NB On Ramp & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0		0		0		152		0	
Storage Lanes	0		0		0		0		1		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
Leading Detector (ft)				50	50	50		50	50	50		50
Trailing Detector (ft)				0	0	0		0	0	0		0
Turning Speed (mph)	15		9	9	15		9	9	15		9	9
Right Turn on Red			Yes				Yes				Yes	
Link Speed (mph)		30				30				30		
Link Distance (ft)		369				514				1103		
Travel Time (s)		8.4				11.7				25.1		
Volume (vph)	0	0	0	1	8	5	7	4	300	1532	22	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Turn Type				Split	Split			Prot	Prot			Prot
Protected Phases				8	8	8		1	1	6		5
Permitted Phases												
Detector Phases				8	8	8		1	1	6		5
Minimum Initial (s)				7.0	7.0	7.0		4.6	4.6	34.0		4.6
Minimum Split (s)				13.0	13.0	13.0		10.0	10.0	53.0		10.0
Total Split (s)	0.0	0.0	0.0	25.0	25.0	25.0	0.0	26.0	26.0	53.0	0.0	12.0
Total Split (%)	0.0%	0.0%	0.0%	27.8%	27.8%	27.8%	0.0%	28.9%	28.9%	58.9%	0.0%	13.3%
Yellow Time (s)				4.0	4.0	4.0		3.0	3.0	3.0		3.0
All-Red Time (s)				2.0	2.0	2.0		2.0	2.0	2.0		2.0
Lead/Lag								Lead	Lead	Lag		Lead
Lead-Lag Optimize?								Yes	Yes	Yes		Yes
Recall Mode				None	None	None		None	None	C-Min		None

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 81 (90%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 1: I-95 NB On Ramp & Chris Columbus Blvd.



1: I-95 NB On Ramp & Chris Columbus Blvd.

Lane Group	SBL	SBT	SBR
Lane Configurations			
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	320		0
Storage Lanes	1		0
Total Lost Time (s)	4.0	4.0	4.0
Leading Detector (ft)	50	50	
Trailing Detector (ft)	0	0	
Turning Speed (mph)	15		9
Right Turn on Red			Yes
Link Speed (mph)		30	
Link Distance (ft)		527	
Travel Time (s)		12.0	
Volume (vph)	16	1228	127
Peak Hour Factor	0.92	0.92	0.92
Turn Type	Prot		
Protected Phases	5	2	
Permitted Phases			
Detector Phases	5	2	
Minimum Initial (s)	4.6	34.0	
Minimum Split (s)	10.0	39.0	
Total Split (s)	12.0	39.0	0.0
Total Split (%)	13.3%	43.3%	0.0%
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	2.0	2.0	
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Recall Mode	None	C-Min	

Intersection Summary

2: I-676 On & I-676/95 SB Off Ramp & Chris Columbus Blvd.

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.88	1.00	0.91	1.00	0.91	
Frt	1.00	0.85	1.00	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	3433	2787	1736	4988	1752	4959	
Flt Permitted	0.95	1.00	0.95	1.00	0.14	1.00	
Satd. Flow (perm)	3433	2787	1736	4988	254	4959	
Volume (vph)	133	1056	400	1700	10	1125	106
Peak-hour factor, PHF	0.81	0.92	0.80	0.76	0.92	0.92	0.77
Adj. Flow (vph)	164	1148	500	2237	11	1223	138
RTOR Reduction (vph)	0	701	0	0	0	16	0
Lane Group Flow (vph)	164	447	500	2237	11	1345	0
Heavy Vehicles (%)	2%	2%	4%	4%	3%	3%	3%
Turn Type		Prot	Prot		Perm		
Protected Phases	3	3	1	6		2	
Permitted Phases					2		
Actuated Green, G (s)	20.0	20.0	25.0	58.0	27.0	27.0	
Effective Green, g (s)	22.0	22.0	27.0	60.0	29.0	29.0	
Actuated g/C Ratio	0.24	0.24	0.30	0.67	0.32	0.32	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	839	681	521	3325	82	1598	
v/s Ratio Prot	0.05	c0.16	c0.29	0.45		c0.27	
v/s Ratio Perm					0.04		
v/c Ratio	0.20	0.66	0.96	0.67	0.13	0.84	
Uniform Delay, d1	27.0	30.6	31.0	9.1	21.6	28.4	
Progression Factor	1.00	1.00	1.18	0.45	0.64	0.66	
Incremental Delay, d2	0.1	2.3	25.7	0.9	3.0	5.0	
Delay (s)	27.1	32.9	62.4	5.0	16.9	23.8	
Level of Service	C	C	E	A	B	C	
Approach Delay (s)	32.2			15.5		23.8	
Approach LOS	C			B		C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

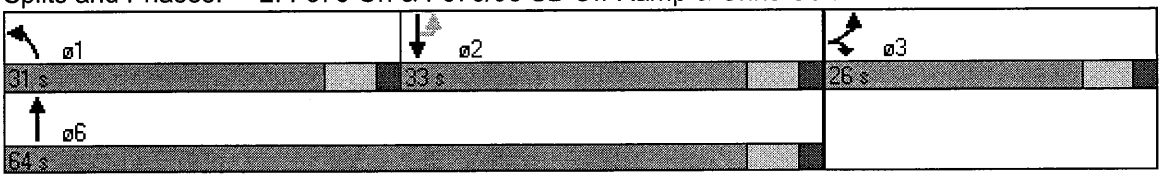
2: I-676 On & I-676/95 SB Off Ramp & Chris Columbus Blvd.

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		150		0
Storage Lanes	2	2	1		1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	0	
Turning Speed (mph)	15	9	15		9		9
Right Turn on Red		Yes					Yes
Link Speed (mph)	30			30		30	
Link Distance (ft)	589			1367		1103	
Travel Time (s)	13.4			31.1		25.1	
Volume (vph)	133	1056	400	1700	10	1125	106
Peak Hour Factor	0.81	0.92	0.80	0.76	0.92	0.92	0.77
Heavy Vehicles (%)	2%	2%	4%	4%	3%	3%	3%
Turn Type		Prot	Prot		Perm		
Protected Phases	3	3	1	6		2	
Permitted Phases					2		
Detector Phases	3	3	1	6	2	2	
Minimum Initial (s)	20.0	20.0	25.0	27.0	27.0	27.0	
Minimum Split (s)	26.0	26.0	31.0	64.0	33.0	33.0	
Total Split (s)	26.0	26.0	31.0	64.0	33.0	33.0	0.0
Total Split (%)	28.9%	28.9%	34.4%	71.1%	36.7%	36.7%	0.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	C-Max	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 6.3 (7%), Referenced to phase 2:SBTU and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 2: I-676 On & I-676/95 SB Off Ramp & Chris Columbus Blvd.



3: Christian St. & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frt		0.96			1.00		1.00	1.00		1.00	0.98	
Flt Protected		0.96			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1731			1788		1770	5081		1770	5001	
Flt Permitted		0.77			0.78		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1388			1449		1770	5081		1770	5001	
Volume (vph)	240	0	89	14	3	0	176	1837	10	2	1952	244
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	0	97	15	3	0	191	1997	11	2	2122	265
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	343	0	0	18	0	191	2008	0	2	2369	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Actuated Green, G (s)		26.0			26.0		7.0	46.6		1.4	41.0	
Effective Green, g (s)		28.0			28.0		8.0	47.6		2.4	42.0	
Actuated g/C Ratio		0.31			0.31		0.09	0.53		0.03	0.47	
Clearance Time (s)		6.0			6.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		432			451		157	2687		47	2334	
v/s Ratio Prot							c0.11	0.40		0.00	c0.47	
v/s Ratio Perm		c0.25			0.01							
v/c Ratio		0.79			0.04		1.22	0.75		0.04	1.02	
Uniform Delay, d1		28.4			21.6		41.0	16.5		42.7	24.0	
Progression Factor		1.00			1.00		1.02	0.59		1.37	0.73	
Incremental Delay, d2		9.7			0.0		114.7	0.6		0.2	17.5	
Delay (s)		38.0			21.7		156.6	10.4		58.6	34.9	
Level of Service		D			C		F	B		E	C	
Approach Delay (s)		38.0			21.7			23.1			34.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

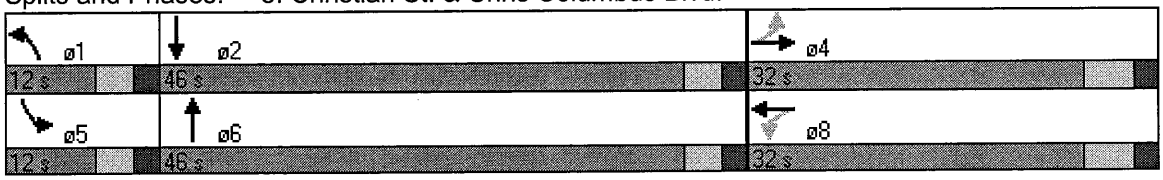
3: Christian St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	130		0	90		0
Storage Lanes	0		0	0		0	1		0	1		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
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		792			277			631			1367	
Travel Time (s)		18.0			6.3			14.3			31.1	
Volume (vph)	240	0	89	14	3	0	176	1837	10	2	1952	244
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8								
Detector Phases	4	4		8	8		1	6		5	2	
Minimum Initial (s)	26.0	26.0		26.0	26.0		7.0	41.0		7.0	41.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		12.0	46.0		12.0	46.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	0.0	12.0	46.0	0.0	12.0	46.0	0.0
Total Split (%)	35.6%	35.6%	0.0%	35.6%	35.6%	0.0%	13.3%	51.1%	0.0%	13.3%	51.1%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 44.8 (50%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 3: Christian St. & Chris Columbus Blvd.



4: Washington Ave & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	12	12	12	10	13
Total Lost time (s)	4.0				4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00				1.00			1.00	0.91		1.00	0.91
Frt	1.00				0.98			1.00	1.00		1.00	0.95
Flt Protected	0.95				0.96			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752				2029			1770	5083		1652	4970
Flt Permitted	0.73				0.86			0.95	1.00		0.95	1.00
Satd. Flow (perm)	1352				1801			1770	5083		1652	4970
Volume (vph)	575	0	0	19	2	4	20	267	1442	4	3	1322
Peak-hour factor, PHF	0.80	0.92	0.92	0.69	0.69	0.69	0.92	0.92	0.92	0.92	0.89	0.89
Adj. Flow (vph)	719	0	0	28	3	6	22	290	1567	4	3	1485
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	113
Lane Group Flow (vph)	719	0	0	0	33	0	0	312	1571	0	3	2211
Heavy Vehicles (%)	3%	2%	2%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot	Prot			Prot	
Protected Phases		8			4		1	1	6		5	2
Permitted Phases	8			4								
Actuated Green, G (s)	30.0				30.0			11.0	38.2		5.8	33.0
Effective Green, g (s)	32.0				32.0			12.0	39.2		6.8	34.0
Actuated g/C Ratio	0.36				0.36			0.13	0.44		0.08	0.38
Clearance Time (s)	6.0				6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0				3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	481				640			236	2214		125	1878
v/s Ratio Prot								c0.18	0.31		0.00	c0.44
v/s Ratio Perm	c0.53				0.02							
v/c Ratio	1.49				0.05			1.32	0.71		0.02	1.18
Uniform Delay, d1	29.0				19.0			39.0	20.7		38.5	28.0
Progression Factor	1.00				1.00			1.06	0.68		1.13	0.79
Incremental Delay, d2	233.4				0.0			168.8	1.7		0.0	81.6
Delay (s)	262.4				19.1			210.2	15.9		43.5	103.8
Level of Service	F				B			F	B		D	F
Approach Delay (s)		262.4			19.1				48.1			103.8
Approach LOS		F			B				D			F

Intersection Summary			
HCM Average Control Delay	105.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

4: Washington Ave & Chris Columbus Blvd.

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	747
Peak-hour factor, PHF	0.89
Adj. Flow (vph)	839
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

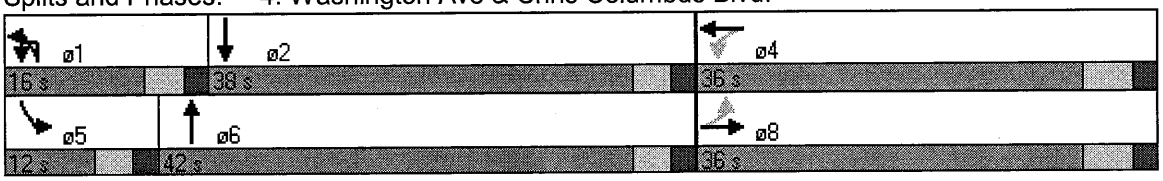
4: Washington Ave & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	16	12	12	12	12	12	10	13
Storage Length (ft)	0		0	0		0		150		0	150	
Storage Lanes	1		0	0		0		1		0	1	
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
Leading Detector (ft)	50	50		50	50		50	50	50		50	50
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			30
Link Distance (ft)		259			507				180			631
Travel Time (s)		5.9			11.5				4.1			14.3
Volume (vph)	575	0	0	19	2	4	20	267	1442	4	3	1322
Peak Hour Factor	0.80	0.92	0.92	0.69	0.69	0.69	0.92	0.92	0.92	0.92	0.89	0.89
Heavy Vehicles (%)	3%	2%	2%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot	Prot			Prot	
Protected Phases		8			4		1	1	6		5	2
Permitted Phases	8			4								
Detector Phases	8	8		4	4		1	1	6		5	2
Minimum Initial (s)	30.0	30.0		30.0	30.0		11.0	11.0	29.0		5.0	29.0
Minimum Split (s)	36.0	36.0		36.0	36.0		16.0	16.0	34.0		10.0	34.0
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	16.0	16.0	42.0	0.0	12.0	38.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%	17.8%	17.8%	46.7%	0.0%	13.3%	42.2%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Lead/Lag							Lead	Lead	Lag		Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		None	None	C-Min		Min	C-Min

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 50.3 (56%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Washington Ave & Chris Columbus Blvd.



4: Washington Ave & Chris Columbus Blvd.

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	747
Peak Hour Factor	0.89
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.97		1.00					0.91			1.00	0.91
Frt	1.00		0.85					1.00			1.00	1.00
Flt Protected	0.95		1.00					1.00			0.95	1.00
Satd. Flow (prot)	3433		1583					5085			1805	5036
Flt Permitted	0.95		1.00					1.00			0.95	1.00
Satd. Flow (perm)	3433		1583					5085			1805	5036
Volume (vph)	395	0	227	0	0	0	0	1300	0	7	0	1630
Peak-hour factor, PHF	0.94	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.44	0.92	0.97
Adj. Flow (vph)	420	0	239	0	0	0	0	1413	0	16	0	1680
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	420	0	239	0	0	0	0	1413	0	0	16	1680
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	3%
Turn Type	Prot		Free							Prot	Prot	
Protected Phases	3							6		5	5	2
Permitted Phases			Free									
Actuated Green, G (s)	32.0		90.0					40.6			1.4	47.0
Effective Green, g (s)	34.0		90.0					41.6			2.4	48.0
Actuated g/C Ratio	0.38		1.00					0.46			0.03	0.53
Clearance Time (s)	6.0							5.0			5.0	5.0
Vehicle Extension (s)	3.0							3.0			3.0	3.0
Lane Grp Cap (vph)	1297		1583					2350			48	2686
v/s Ratio Prot	c0.12							0.28			0.01	c0.33
v/s Ratio Perm			0.15									
v/c Ratio	0.32		0.15					0.60			0.33	0.63
Uniform Delay, d1	19.9		0.0					18.0			43.0	14.7
Progression Factor	1.00		1.00					0.47			0.68	1.14
Incremental Delay, d2	0.1		0.2					0.9			1.4	0.4
Delay (s)	20.0		0.2					9.4			30.7	17.2
Level of Service	B		A					A			C	B
Approach Delay (s)		12.8			0.0			9.4				17.3
Approach LOS		B			A			A				B

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	0
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

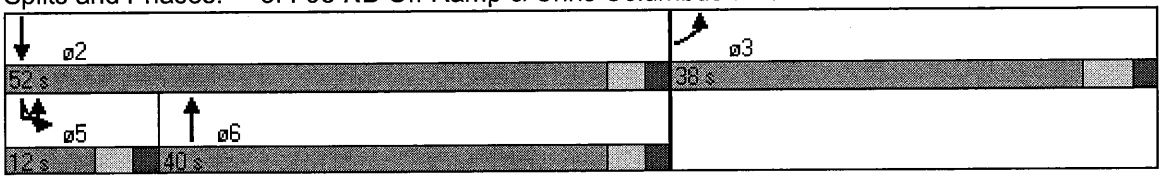
5: I-95 NB Off Ramp & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	148		0		110	
Storage Lanes	2		1	0		0	0		0		1	
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
Leading Detector (ft)	50		50					50		50	50	50
Trailing Detector (ft)	0		0					0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Right Turn on Red			Yes			Yes			Yes			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		596			153			487				641
Travel Time (s)		13.5			3.5			11.1				14.6
Volume (vph)	395	0	227	0	0	0	0	1300	0	7	0	1630
Peak Hour Factor	0.94	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.44	0.92	0.97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	0%	3%
Turn Type	Prot		Free							Prot	Prot	
Protected Phases	3							6		5	5	2
Permitted Phases			Free									
Detector Phases	3							6		5	5	2
Minimum Initial (s)	32.0							35.0		7.0	7.0	35.0
Minimum Split (s)	38.0							40.0		12.0	12.0	52.0
Total Split (s)	38.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	12.0	12.0	52.0
Total Split (%)	42.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	44.4%	0.0%	13.3%	13.3%	57.8%
Yellow Time (s)	4.0							3.0		3.0	3.0	3.0
All-Red Time (s)	2.0							2.0		2.0	2.0	2.0
Lead/Lag								Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes	Yes	
Recall Mode	None							C-Min		None	None	C-Min

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 10.5 (12%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 5: I-95 NB Off Ramp & Chris Columbus Blvd.



5: I-95 NB Off Ramp & Chris Columbus Blvd.

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	0
Peak Hour Factor	0.92
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

6: Reed St. & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	13	12	12	13	12	10	10	11	12	10	10
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	1.00			1.00			1.00	0.91			1.00
Frt	1.00	0.88			0.97			1.00	1.00			1.00
Flt Protected	0.95	1.00			0.98			0.95	1.00			0.95
Satd. Flow (prot)	1888	1689			1844			1626	4896			1620
Flt Permitted	0.71	1.00			0.87			0.95	1.00			0.95
Satd. Flow (perm)	1416	1689			1637			1626	4896			1620
Volume (vph)	209	28	123	29	32	21	18	78	1060	17	11	34
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.75	0.75	0.80	0.47	0.92	0.87
Adj. Flow (vph)	227	30	134	35	38	25	24	104	1325	36	12	39
RTOR Reduction (vph)	0	82	0	0	14	0	0	0	3	0	0	0
Lane Group Flow (vph)	227	82	0	0	84	0	0	128	1358	0	0	51
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	4%	2%	2%	4%	4%
Turn Type	Perm			Perm			Prot	Prot			Prot	Prot
Protected Phases		3			7		1	1	6		5	5
Permitted Phases	3			7								
Actuated Green, G (s)	32.0	32.0			32.0			7.0	37.8			4.2
Effective Green, g (s)	34.0	34.0			34.0			8.0	38.8			5.2
Actuated g/C Ratio	0.38	0.38			0.38			0.09	0.43			0.06
Clearance Time (s)	6.0	6.0			6.0			5.0	5.0			5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	535	638			618			145	2111			94
v/s Ratio Prot		0.05						c0.08	c0.28			0.03
v/s Ratio Perm	c0.16				0.05							
v/c Ratio	0.42	0.13			0.14			0.88	0.64			0.54
Uniform Delay, d1	20.7	18.3			18.4			40.5	20.2			41.2
Progression Factor	1.00	1.00			1.00			1.09	0.78			1.49
Incremental Delay, d2	0.5	0.1			0.1			40.4	1.4			5.3
Delay (s)	21.3	18.4			18.5			84.7	17.2			66.9
Level of Service	C	B			B			F	B			E
Approach Delay (s)		20.1			18.5				23.0			
Approach LOS		C			B				C			

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Reed St. & Chris Columbus Blvd.

Movement	SBT	SBR
Lane Configurations	↑↑↑	
Ideal Flow (vphpl)	1900	1900
Lane Width	10	12
Total Lost time (s)	4.0	
Lane Util. Factor	0.91	
Frt	0.98	
Flt Protected	1.00	
Satd. Flow (prot)	4621	
Flt Permitted	1.00	
Satd. Flow (perm)	4621	
Volume (vph)	1600	211
Peak-hour factor, PHF	0.97	0.80
Adj. Flow (vph)	1649	264
RTOR Reduction (vph)	24	0
Lane Group Flow (vph)	1889	0
Heavy Vehicles (%)	3%	0%
Turn Type		
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	35.0	
Effective Green, g (s)	36.0	
Actuated g/C Ratio	0.40	
Clearance Time (s)	5.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1848	
v/s Ratio Prot	c0.41	
v/s Ratio Perm		
v/c Ratio	1.02	
Uniform Delay, d1	27.0	
Progression Factor	0.25	
Incremental Delay, d2	25.0	
Delay (s)	31.7	
Level of Service	C	
Approach Delay (s)	32.6	
Approach LOS	C	

Intersection Summary

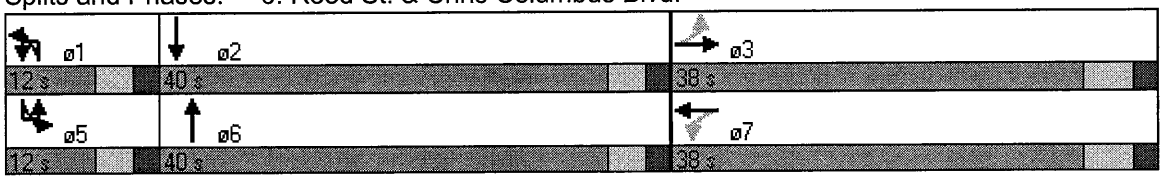
6: Reed St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	13	12	12	13	12	10	10	11	12	10	10
Storage Length (ft)	0		0	0		0		100		0		150
Storage Lanes	1		0	0		0		1		0		1
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
Leading Detector (ft)	50	50		50	50		50	50	50		50	50
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			
Link Distance (ft)		625			893				453			
Travel Time (s)		14.2			20.3				10.3			
Volume (vph)	209	28	123	29	32	21	18	78	1060	17	11	34
Peak Hour Factor	0.92	0.92	0.92	0.84	0.84	0.84	0.75	0.75	0.80	0.47	0.92	0.87
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	4%	2%	2%	4%	4%
Turn Type	Perm			Perm			Prot	Prot			Prot	Prot
Protected Phases		3			7		1	1	6		5	5
Permitted Phases	3			7								
Detector Phases	3	3		7	7		1	1	6		5	5
Minimum Initial (s)	32.0	32.0		32.0	32.0		7.0	7.0	35.0		7.0	7.0
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	12.0	40.0		12.0	12.0
Total Split (s)	38.0	38.0	0.0	38.0	38.0	0.0	12.0	12.0	40.0	0.0	12.0	12.0
Total Split (%)	42.2%	42.2%	0.0%	42.2%	42.2%	0.0%	13.3%	13.3%	44.4%	0.0%	13.3%	13.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Lead/Lag							Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		None	None	C-Max		None	None

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 6: Reed St. & Chris Columbus Blvd.



6: Reed St. & Chris Columbus Blvd.

Lane Group	SBT	SBR
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	10	12
Storage Length (ft)		0
Storage Lanes		0
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	
Trailing Detector (ft)	0	
Turning Speed (mph)		9
Right Turn on Red		Yes
Link Speed (mph)	30	
Link Distance (ft)	487	
Travel Time (s)	11.1	
Volume (vph)	1600	211
Peak Hour Factor	0.97	0.80
Heavy Vehicles (%)	3%	0%
Turn Type		
Protected Phases	2	
Permitted Phases		
Detector Phases	2	
Minimum Initial (s)	35.0	
Minimum Split (s)	40.0	
Total Split (s)	40.0	0.0
Total Split (%)	44.4%	0.0%
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	C-Max	

Intersection Summary

7: Dickinson St. & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Sign Control		Stop			Stop				Free			Free
Grade		0%			0%				0%			0%
Volume (veh/h)	0	0	0	0	0	0	111	96	1170	0	0	1745
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.73	0.75	0.82	0.92	0.92	0.84
Hourly flow rate (vph)	0	0	0	0	0	0	0	128	1427	0	0	2077
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)									450			453
pX, platoon unblocked	0.70	0.70	0.64	0.70	0.70	0.88	0.00	0.64			0.88	
vC, conflicting volume	2824	3776	708	2375	3791	476	0	2108			1427	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2008	3366	0	1367	3388	146	0	1613			1222	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	0.0	4.2			4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	0.0	2.2			2.2	
p0 queue free %	100	100	100	100	100	100	0	49			100	
cM capacity (veh/h)	15	3	697	44	3	773	0	252			501	

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	413	571	571	0	831	831	446
Volume Left	128	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	31
cSH	252	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.51	0.34	0.34	0.00	0.49	0.49	0.26
Queue Length 95th (ft)	66	0	0	0	0	0	0
Control Delay (s)	24.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C						
Approach Delay (s)	6.5			0.0			
Approach LOS							

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			

7: Dickinson St. & Chris Columbus Blvd.

Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	26
Peak Hour Factor	0.84
Hourly flow rate (vph)	31
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	

7: Dickinson St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Link Speed (mph)		30			30				30			30
Link Distance (ft)		611			184				450			453
Travel Time (s)		13.9			4.2				10.2			10.3
Volume (vph)	0	0	0	0	0	0	111	96	1170	0	0	1745
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.73	0.75	0.82	0.92	0.92	0.84
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	4%	2%	2%
Sign Control		Stop			Stop				Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Turning Speed (mph)	9
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	26
Peak Hour Factor	0.84
Heavy Vehicles (%)	2%
Sign Control	

Intersection Summary

8: Tasker St. & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.91			0.91	
Frt		0.94			0.95			1.00			0.99	
Flt Protected		0.98			1.00			1.00			1.00	
Satd. Flow (prot)		1729			1769			5081			5053	
Flt Permitted		0.83			0.97			0.93			1.00	
Satd. Flow (perm)		1461			1724			4747			5053	
Volume (vph)	76	66	105	10	74	44	4	1250	6	0	1690	75
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.99	0.99
Adj. Flow (vph)	85	74	118	11	80	48	4	1359	7	0	1707	76
RTOR Reduction (vph)	0	26	0	0	21	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	251	0	0	118	0	0	1369	0	0	1778	0
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2					
Actuated Green, G (s)		20.0			20.0			59.0			59.0	
Effective Green, g (s)		22.0			22.0			60.0			60.0	
Actuated g/C Ratio		0.24			0.24			0.67			0.67	
Clearance Time (s)		6.0			6.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		357			421			3165			3369	
v/s Ratio Prot											c0.35	
v/s Ratio Perm		c0.17			0.07			0.29				
v/c Ratio		0.70			0.28			0.43			0.53	
Uniform Delay, d1		31.0			27.6			7.0			7.7	
Progression Factor		1.00			1.00			1.00			0.52	
Incremental Delay, d2		6.2			0.4			0.4			0.3	
Delay (s)		37.2			27.9			7.5			4.3	
Level of Service		D			C			A			A	
Approach Delay (s)		37.2			27.9			7.5			4.3	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

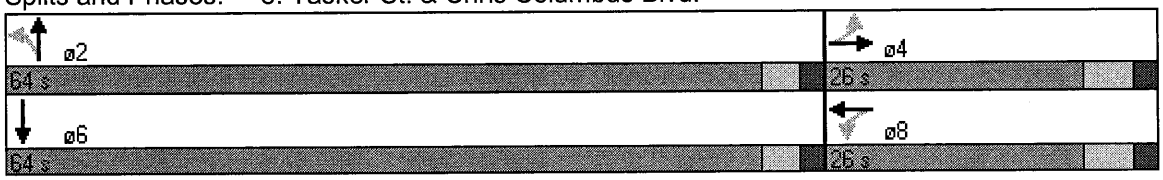
8: Tasker St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		600			820			229			450	
Travel Time (s)		13.6			18.6			5.2			10.2	
Volume (vph)	76	66	105	10	74	44	4	1250	6	0	1690	75
Peak Hour Factor	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.99	0.99
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2					
Detector Phases	4	4		8	8		2	2			6	
Minimum Initial (s)	20.0	20.0		20.0	20.0		59.0	59.0			59.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		64.0	64.0			64.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	64.0	64.0	0.0	0.0	64.0	0.0
Total Split (%)	28.9%	28.9%	0.0%	28.9%	28.9%	0.0%	71.1%	71.1%	0.0%	0.0%	71.1%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Min	C-Min			C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: Tasker St. & Chris Columbus Blvd.



9: Morris St. & Chris Columbus Blvd.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑↑	↑↑↑	↱
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	1260	1398	407
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1370	1520	442
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					229	
pX, platoon unblocked	0.85	0.85	0.85			
vC, conflicting volume	1976	507	1962			
vC1, stage 1 conf vol			0			
vC2, stage 2 conf vol			0			
vCu, unblocked vol	1793	62	1777			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)			3.1			
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	61	840	651			

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	457	457	457	507	507	507	442
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	442
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.27	0.27	0.27	0.30	0.30	0.30	0.26
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

9: Morris St. & Chris Columbus Blvd.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑↑	↑↑↑	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	0	0	0			1
Turning Speed (mph)	15	9	15			9
Link Speed (mph)	30			30	30	
Link Distance (ft)	209			126	229	
Travel Time (s)	4.8			2.9	5.2	
Volume (vph)	0	0	0	1260	1398	407
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized

10: Morris St. & Water St.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	0	394	13	49	374	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	428	14	53	407	0	0	0	0

Direction, Lane #	WB 1	NB 1
Volume Total (vph)	442	460
Volume Left (vph)	0	53
Volume Right (vph)	14	0
Hadj (s)	0.01	0.06
Departure Headway (s)	5.2	5.2
Degree Utilization, x	0.64	0.66
Capacity (veh/h)	667	667
Control Delay (s)	16.8	17.7
Approach Delay (s)	16.8	17.7
Approach LOS	C	C

Intersection Summary				
Delay	17.3			
HCM Level of Service	C			
Intersection Capacity Utilization	50.6%	ICU Level of Service	A	
Analysis Period (min)	15			

10: Morris St. & Water St.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Turning Speed (mph)	15		9	15		9	15		9	15		9
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		44			209			123			125	
Travel Time (s)		1.0			4.8			2.8			2.8	
Volume (vph)	0	0	0	0	394	13	49	374	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0			4.0	4.0		4.0	4.0
Lane Util. Factor					0.95			1.00	0.91		1.00	0.91
Frt					0.94			1.00	0.99		1.00	0.99
Flt Protected					0.98			0.95	1.00		0.95	1.00
Satd. Flow (prot)					3313			1788	5032		1736	5041
Flt Permitted					0.98			0.95	1.00		0.95	1.00
Satd. Flow (perm)					3313			1788	5032		1736	5041
Volume (vph)	0	0	0	7	3	8	6	400	940	57	26	1100
Peak-hour factor, PHF	0.92	0.92	0.92	0.64	0.64	0.64	0.25	0.95	0.82	0.66	0.65	0.85
Adj. Flow (vph)	0	0	0	11	5	12	24	421	1146	86	40	1294
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	5	0	0	7
Lane Group Flow (vph)	0	0	0	0	17	0	0	445	1227	0	40	1379
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	1%	2%	2%	4%	2%
Turn Type				Split			Prot	Prot			Prot	
Protected Phases				8	8		1	1	6		5	2
Permitted Phases												
Actuated Green, G (s)					2.8			28.8	65.9		5.3	42.4
Effective Green, g (s)					4.8			29.8	66.9		6.3	43.4
Actuated g/C Ratio					0.05			0.33	0.74		0.07	0.48
Clearance Time (s)					6.0			5.0	5.0		5.0	5.0
Vehicle Extension (s)					3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)					177			592	3740		122	2431
v/s Ratio Prot					c0.01			c0.25	0.24		0.02	c0.27
v/s Ratio Perm												
v/c Ratio					0.09			0.75	0.33		0.33	0.57
Uniform Delay, d1					40.5			26.8	3.9		39.8	16.6
Progression Factor					1.00			0.69	2.24		1.00	1.00
Incremental Delay, d2					0.2			5.0	0.2		1.6	1.0
Delay (s)					40.8			23.5	9.0		41.4	17.6
Level of Service					D			C	A		D	B
Approach Delay (s)		0.0			40.8				12.8			18.2
Approach LOS		A			D				B			B

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	76
Peak-hour factor, PHF	0.83
Adj. Flow (vph)	92
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

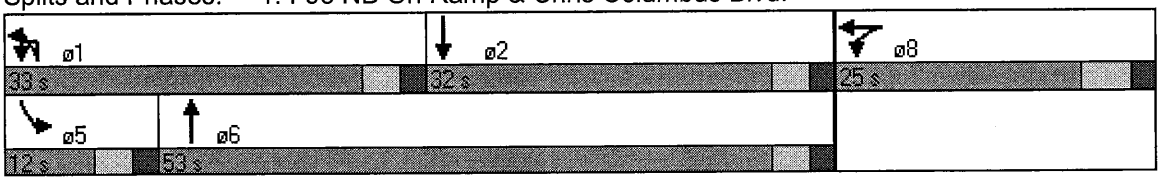
1: I-95 NB On Ramp & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		152		0	320	
Storage Lanes	0		0	0		0		1		0	1	
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
Leading Detector (ft)				50	50		50	50	50		50	50
Trailing Detector (ft)				0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			30
Link Distance (ft)		369			514				1103			527
Travel Time (s)		8.4			11.7				25.1			12.0
Volume (vph)	0	0	0	7	3	8	6	400	940	57	26	1100
Peak Hour Factor	0.92	0.92	0.92	0.64	0.64	0.64	0.25	0.95	0.82	0.66	0.65	0.85
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	1%	2%	2%	4%	2%
Turn Type				Split			Prot	Prot			Prot	
Protected Phases				8	8		1	1	6		5	2
Permitted Phases												
Detector Phases				8	8		1	1	6		5	2
Minimum Initial (s)				7.0	7.0		5.0	5.0	27.0		5.0	27.0
Minimum Split (s)				13.0	13.0		10.0	10.0	53.0		10.0	32.0
Total Split (s)	0.0	0.0	0.0	25.0	25.0	0.0	33.0	33.0	53.0	0.0	12.0	32.0
Total Split (%)	0.0%	0.0%	0.0%	27.8%	27.8%	0.0%	36.7%	36.7%	58.9%	0.0%	13.3%	35.6%
Yellow Time (s)				4.0	4.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)				2.0	2.0		2.0	2.0	2.0		2.0	2.0
Lead/Lag							Lead	Lead	Lag		Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Recall Mode				None	None		None	None	C-Min		None	C-Min

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 28.9 (32%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 1: I-95 NB On Ramp & Chris Columbus Blvd.



1: I-95 NB On Ramp & Chris Columbus Blvd.

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	76
Peak Hour Factor	0.83
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	

Intersection Summary

2: I-676 On & I-676/95 Off Ramp & Chris Columbus Blvd.

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor	0.97	0.88	1.00	0.91		0.91	
Frt	1.00	0.85	1.00	1.00		0.99	
Flt Protected	0.95	1.00	0.95	1.00		1.00	
Satd. Flow (prot)	3400	2814	1787	5085		5064	
Flt Permitted	0.95	1.00	0.95	1.00		1.00	
Satd. Flow (perm)	3400	2814	1787	5085		5064	
Volume (vph)	129	965	527	1270	0	1015	100
Peak-hour factor, PHF	0.81	0.90	0.94	0.84	0.92	0.93	0.89
Adj. Flow (vph)	159	1072	561	1512	0	1091	112
RTOR Reduction (vph)	0	705	0	0	0	14	0
Lane Group Flow (vph)	159	367	561	1512	0	1189	0
Heavy Vehicles (%)	3%	1%	1%	2%	2%	1%	1%
Turn Type		Prot	Prot		Perm		
Protected Phases	3	3	1	6		2	
Permitted Phases					2		
Actuated Green, G (s)	20.0	20.0	25.0	58.0		27.0	
Effective Green, g (s)	22.0	22.0	27.0	60.0		29.0	
Actuated g/C Ratio	0.24	0.24	0.30	0.67		0.32	
Clearance Time (s)	6.0	6.0	6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	831	688	536	3390		1632	
v/s Ratio Prot	0.05	c0.13	c0.31	0.30		c0.23	
v/s Ratio Perm							
v/c Ratio	0.19	0.53	1.05	0.45		0.73	
Uniform Delay, d1	26.9	29.5	31.5	7.1		27.0	
Progression Factor	1.00	1.00	1.36	0.26		0.67	
Incremental Delay, d2	0.1	0.8	43.3	0.3		2.5	
Delay (s)	27.1	30.3	86.3	2.1		20.7	
Level of Service	C	C	F	A		C	
Approach Delay (s)	29.9			24.9		20.7	
Approach LOS	C			C		C	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

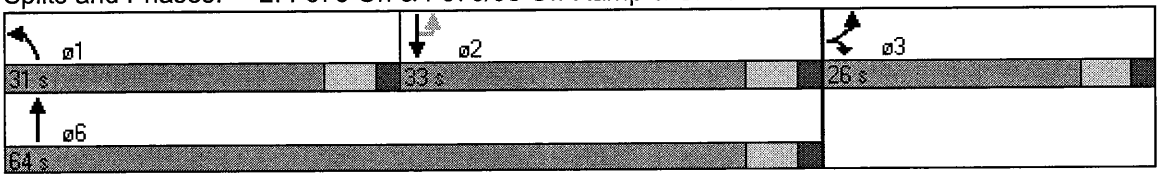
2: I-676 On & I-676/95 Off Ramp & Chris Columbus Blvd.

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		150		0
Storage Lanes	2	2	1		1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	0	
Turning Speed (mph)	15	9	15		9		9
Right Turn on Red		Yes					Yes
Link Speed (mph)	30			30		30	
Link Distance (ft)	589			1367		1103	
Travel Time (s)	13.4			31.1		25.1	
Volume (vph)	129	965	527	1270	0	1015	100
Peak Hour Factor	0.81	0.90	0.94	0.84	0.92	0.93	0.89
Heavy Vehicles (%)	3%	1%	1%	2%	2%	1%	1%
Turn Type		Prot	Prot		Perm		
Protected Phases	3	3	1	6		2	
Permitted Phases					2		
Detector Phases	3	3	1	6	2	2	
Minimum Initial (s)	20.0	20.0	25.0	27.0	27.0	27.0	
Minimum Split (s)	26.0	26.0	31.0	64.0	33.0	33.0	
Total Split (s)	26.0	26.0	31.0	64.0	33.0	33.0	0.0
Total Split (%)	28.9%	28.9%	34.4%	71.1%	36.7%	36.7%	0.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	C-Max	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 40.8 (45%), Referenced to phase 2:SBTU and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 2: I-676 On & I-676/95 Off Ramp & Chris Columbus Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	0.91			1.00	0.91
Frt		0.94			0.98		1.00	1.00			1.00	0.98
Flt Protected		0.97			0.97		0.95	1.00			0.95	1.00
Satd. Flow (prot)		1721			1774		1805	5080			1805	5014
Flt Permitted		0.82			0.78		0.95	1.00			0.61	1.00
Satd. Flow (perm)		1446			1431		1805	5080			1152	5014
Volume (vph)	151	2	136	12	2	2	165	1630	9	5	15	1644
Peak-hour factor, PHF	0.82	0.25	0.89	0.60	0.50	0.50	0.87	0.84	0.56	0.62	0.31	0.95
Adj. Flow (vph)	184	8	153	20	4	4	190	1940	16	8	48	1731
RTOR Reduction (vph)	0	32	0	0	3	0	0	1	0	0	0	30
Lane Group Flow (vph)	0	313	0	0	25	0	190	1955	0	0	56	2026
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%	0%	2%	0%	0%	0%	1%
Turn Type	Perm			Perm			Prot			custom	Prot	
Protected Phases		4			8		1	6			5	2
Permitted Phases	4			8						5		
Actuated Green, G (s)		26.0			26.0		7.0	42.4			5.6	41.0
Effective Green, g (s)		28.0			28.0		8.0	43.4			6.6	42.0
Actuated g/C Ratio		0.31			0.31		0.09	0.48			0.07	0.47
Clearance Time (s)		6.0			6.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		450			445		160	2450			84	2340
v/s Ratio Prot							c0.11	0.38				c0.40
v/s Ratio Perm		c0.22			0.02						0.05	
v/c Ratio		0.70			0.06		1.19	0.80			0.67	0.87
Uniform Delay, d1		27.3			21.7		41.0	19.6			40.6	21.5
Progression Factor		1.00			1.00		1.07	0.49			1.05	0.92
Incremental Delay, d2		4.6			0.1		116.2	1.7			12.1	3.0
Delay (s)		31.9			21.8		160.1	11.4			54.8	22.8
Level of Service		C			C		F	B			D	C
Approach Delay (s)		31.9			21.8			24.5				23.6
Approach LOS		C			C			C				C

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

3: Christian St. & Chris Columbus Blvd.

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	315
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	325
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	1%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

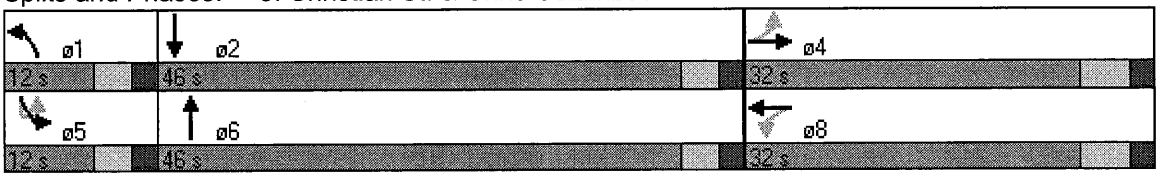
3: Christian St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	130		0		90	
Storage Lanes	0		0	0		0	1		0		1	
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
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Right Turn on Red			Yes			Yes			Yes			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		792			277			631				1367
Travel Time (s)		18.0			6.3			14.3				31.1
Volume (vph)	151	2	136	12	2	2	165	1630	9	5	15	1644
Peak Hour Factor	0.82	0.25	0.89	0.60	0.50	0.50	0.87	0.84	0.56	0.62	0.31	0.95
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%	0%	2%	0%	0%	0%	1%
Turn Type	Perm			Perm			Prot			custom	Prot	
Protected Phases		4			8		1	6			5	2
Permitted Phases	4			8						5		
Detector Phases	4	4		8	8		1	6		5	5	2
Minimum Initial (s)	26.0	26.0		26.0	26.0		7.0	41.0		7.0	7.0	41.0
Minimum Split (s)	32.0	32.0		32.0	32.0		12.0	46.0		12.0	12.0	46.0
Total Split (s)	32.0	32.0	0.0	32.0	32.0	0.0	12.0	46.0	0.0	12.0	12.0	46.0
Total Split (%)	35.6%	35.6%	0.0%	35.6%	35.6%	0.0%	13.3%	51.1%	0.0%	13.3%	13.3%	51.1%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lead/Lag							Lead	Lag		Lead	Lead	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	None	C-Min

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 88.1 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 3: Christian St. & Chris Columbus Blvd.



3: Christian St. & Chris Columbus Blvd.

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	315
Peak Hour Factor	0.97
Heavy Vehicles (%)	1%
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

4: Washington Ave & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	12	12	12	12	10
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	1.00			1.00			1.00	0.91			1.00
Frt	1.00	1.00			0.95			1.00	1.00			1.00
Flt Protected	0.95	1.00			0.99			0.95	1.00			0.95
Satd. Flow (prot)	1752	1925			2019			1770	5081			1652
Flt Permitted	0.74	1.00			0.96			0.95	1.00			0.56
Satd. Flow (perm)	1358	1925			1965			1770	5081			966
Volume (vph)	495	4	0	4	4	5	2	313	1300	3	6	0
Peak-hour factor, PHF	0.96	0.25	0.92	0.50	0.33	0.42	0.91	0.91	0.85	0.38	0.75	0.92
Adj. Flow (vph)	516	16	0	8	12	12	2	344	1529	8	8	0
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	1	0	0	0
Lane Group Flow (vph)	516	16	0	0	25	0	0	346	1536	0	0	8
Heavy Vehicles (%)	3%	2%	2%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot	Prot			custom	Prot
Protected Phases		8			4		1	1	6			5
Permitted Phases	8			4							5	
Actuated Green, G (s)	32.0	32.0			32.0			9.0	35.8			6.2
Effective Green, g (s)	34.0	34.0			34.0			10.0	36.8			7.2
Actuated g/C Ratio	0.38	0.38			0.38			0.11	0.41			0.08
Clearance Time (s)	6.0	6.0			6.0			5.0	5.0			5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	513	727			742			197	2078			77
v/s Ratio Prot		0.01						c0.20	c0.30			
v/s Ratio Perm	c0.38				0.01							0.01
v/c Ratio	1.01	0.02			0.03			1.76	0.74			0.10
Uniform Delay, d1	28.0	17.6			17.6			40.0	22.5			38.4
Progression Factor	1.00	1.00			1.00			0.90	0.74			1.11
Incremental Delay, d2	41.2	0.0			0.0			358.0	2.1			0.3
Delay (s)	69.2	17.6			17.7			394.0	18.9			42.8
Level of Service	E	B			B			F	B			D
Approach Delay (s)		67.6			17.7				87.8			
Approach LOS		E			B				F			

Intersection Summary			
HCM Average Control Delay	61.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Washington Ave & Chris Columbus Blvd.

Movement	SBT	SBR
Lane Configurations	↑↑↑↱	
Ideal Flow (vphpl)	1900	1900
Lane Width	13	12
Total Lost time (s)	4.0	
Lane Util. Factor	0.91	
Frt	0.96	
Flt Protected	1.00	
Satd. Flow (prot)	5067	
Flt Permitted	1.00	
Satd. Flow (perm)	5067	
Volume (vph)	1367	419
Peak-hour factor, PHF	0.92	0.90
Adj. Flow (vph)	1486	466
RTOR Reduction (vph)	63	0
Lane Group Flow (vph)	1889	0
Heavy Vehicles (%)	2%	2%
Turn Type		
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	33.0	
Effective Green, g (s)	34.0	
Actuated g/C Ratio	0.38	
Clearance Time (s)	5.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1914	
v/s Ratio Prot	c0.37	
v/s Ratio Perm		
v/c Ratio	0.99	
Uniform Delay, d1	27.8	
Progression Factor	0.80	
Incremental Delay, d2	12.4	
Delay (s)	34.5	
Level of Service	C	
Approach Delay (s)	34.6	
Approach LOS	C	

Intersection Summary

4: Washington Ave & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	16	12	12	12	12	12	12	10
Storage Length (ft)	0		0	0		0		150		0		150
Storage Lanes	1		0	0		0		1		0		1
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
Leading Detector (ft)	50	50		50	50		50	50	50		50	50
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			
Link Distance (ft)		259			507				180			
Travel Time (s)		5.9			11.5				4.1			
Volume (vph)	495	4	0	4	4	5	2	313	1300	3	6	0
Peak Hour Factor	0.96	0.25	0.92	0.50	0.33	0.42	0.91	0.91	0.85	0.38	0.75	0.92
Heavy Vehicles (%)	3%	2%	2%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot	Prot			custom	Prot
Protected Phases		8			4		1	1	6			5
Permitted Phases	8			4							5	
Detector Phases	8	8		4	4		1	1	6		5	5
Minimum Initial (s)	32.0	32.0		32.0	32.0		9.0	9.0	29.0		5.0	5.0
Minimum Split (s)	38.0	38.0		38.0	38.0		14.0	14.0	34.0		10.0	10.0
Total Split (s)	38.0	38.0	0.0	38.0	38.0	0.0	14.0	14.0	40.0	0.0	12.0	12.0
Total Split (%)	42.2%	42.2%	0.0%	42.2%	42.2%	0.0%	15.6%	15.6%	44.4%	0.0%	13.3%	13.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Lead/Lag							Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		None	None	C-Min		Min	Min

Intersection Summary

Area Type: Other

Cycle Length: 90

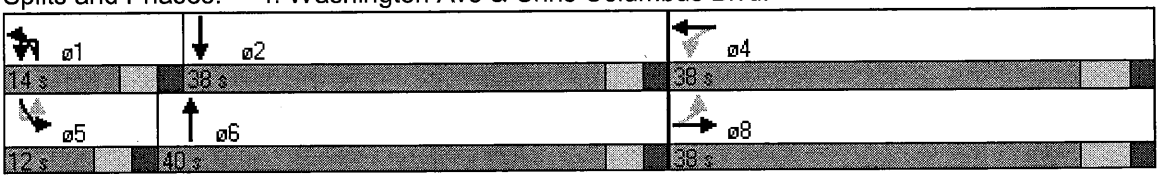
Actuated Cycle Length: 90

Offset: 1.3 (1%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 4: Washington Ave & Chris Columbus Blvd.



4: Washington Ave & Chris Columbus Blvd.

Lane Group	SBT	SBR
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	13	12
Storage Length (ft)		0
Storage Lanes		0
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	
Trailing Detector (ft)	0	
Turning Speed (mph)		9
Right Turn on Red		Yes
Link Speed (mph)	30	
Link Distance (ft)	631	
Travel Time (s)	14.3	
Volume (vph)	1367	419
Peak Hour Factor	0.92	0.90
Heavy Vehicles (%)	2%	2%
Turn Type		
Protected Phases	2	
Permitted Phases		
Detector Phases	2	
Minimum Initial (s)	29.0	
Minimum Split (s)	34.0	
Total Split (s)	38.0	0.0
Total Split (%)	42.2%	0.0%
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	C-Min	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.97		1.00					0.91			1.00	0.91
Frt	1.00		0.85					1.00			1.00	1.00
Flt Protected	0.95		1.00					1.00			0.95	1.00
Satd. Flow (prot)	3433		1568					5085			1805	5136
Flt Permitted	0.95		1.00					1.00			0.95	1.00
Satd. Flow (perm)	3433		1568					5085			1805	5136
Volume (vph)	375	0	202	0	0	0	0	1210	0	23	0	1710
Peak-hour factor, PHF	0.76	0.92	0.72	0.92	0.92	0.92	0.92	0.92	0.92	0.26	0.26	0.96
Adj. Flow (vph)	493	0	281	0	0	0	0	1315	0	88	0	1781
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	493	0	281	0	0	0	0	1315	0	0	88	1781
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	2%	0%	0%	1%
Turn Type	Prot		Free							Prot	Prot	
Protected Phases	3							6		5	5	2
Permitted Phases			Free									
Actuated Green, G (s)	32.0		90.0					36.4			5.6	47.0
Effective Green, g (s)	34.0		90.0					37.4			6.6	48.0
Actuated g/C Ratio	0.38		1.00					0.42			0.07	0.53
Clearance Time (s)	6.0							5.0			5.0	5.0
Vehicle Extension (s)	3.0							3.0			3.0	3.0
Lane Grp Cap (vph)	1297		1568					2113			132	2739
v/s Ratio Prot	c0.14							0.26			0.05	c0.35
v/s Ratio Perm			0.18									
v/c Ratio	0.38		0.18					0.62			0.67	0.65
Uniform Delay, d1	20.3		0.0					20.7			40.6	15.0
Progression Factor	1.00		1.00					0.44			0.73	1.07
Incremental Delay, d2	0.2		0.3					1.2			7.4	0.7
Delay (s)	20.5		0.3					10.4			37.0	16.8
Level of Service	C		A					B			D	B
Approach Delay (s)		13.2			0.0			10.4				17.8
Approach LOS		B			A			B				B

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	0
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

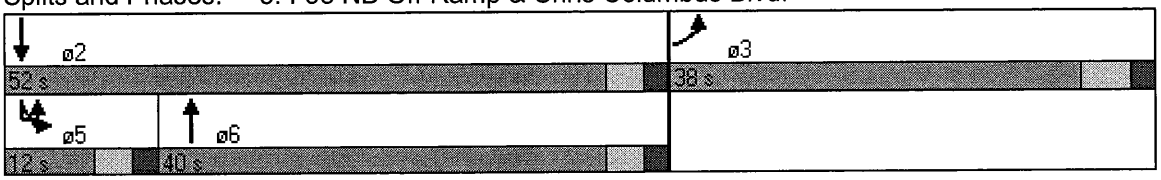
5: I-95 NB Off Ramp & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	148		0		110	
Storage Lanes	2		1	0		0	0		0		1	
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
Leading Detector (ft)	50		50					50		50	50	50
Trailing Detector (ft)	0		0					0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Right Turn on Red			Yes			Yes			Yes			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		596			153			487				641
Travel Time (s)		13.5			3.5			11.1				14.6
Volume (vph)	375	0	202	0	0	0	0	1210	0	23	0	1710
Peak Hour Factor	0.76	0.92	0.72	0.92	0.92	0.92	0.92	0.92	0.92	0.26	0.26	0.96
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	2%	0%	0%	1%
Turn Type	Prot		Free							Prot	Prot	
Protected Phases	3							6		5	5	2
Permitted Phases			Free									
Detector Phases	3							6		5	5	2
Minimum Initial (s)	32.0							35.0		7.0	7.0	35.0
Minimum Split (s)	38.0							40.0		12.0	12.0	52.0
Total Split (s)	38.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	12.0	12.0	52.0
Total Split (%)	42.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	44.4%	0.0%	13.3%	13.3%	57.8%
Yellow Time (s)	4.0							3.0		3.0	3.0	3.0
All-Red Time (s)	2.0							2.0		2.0	2.0	2.0
Lead/Lag								Lag		Lead	Lead	
Lead-Lag Optimize?								Yes		Yes	Yes	
Recall Mode	None							C-Min		None	None	C-Min

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 49.9 (55%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 5: I-95 NB Off Ramp & Chris Columbus Blvd.



5: I-95 NB Off Ramp & Chris Columbus Blvd.

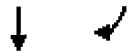
Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	0
Peak Hour Factor	0.92
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

6: Reed St. & Chris Columbus Blvd.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	13	12	12	13	12	10	10	11	12	10	10
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	1.00			1.00			1.00	0.91			1.00
Frt	1.00	0.87			0.96			1.00	1.00			1.00
Flt Protected	0.95	1.00			0.99			0.95	1.00			0.95
Satd. Flow (prot)	1888	1707			1854			1636	4896			1652
Flt Permitted	0.75	1.00			0.91			0.95	1.00			0.95
Satd. Flow (perm)	1488	1707			1712			1636	4896			1652
Volume (vph)	181	20	152	14	16	13	17	116	1014	19	2	20
Peak-hour factor, PHF	0.87	0.83	1.00	0.70	0.50	0.65	0.92	0.92	0.80	0.47	0.69	0.69
Adj. Flow (vph)	208	24	152	20	32	20	18	126	1268	40	3	29
RTOR Reduction (vph)	0	88	0	0	12	0	0	0	3	0	0	0
Lane Group Flow (vph)	208	88	0	0	60	0	0	144	1305	0	0	32
Heavy Vehicles (%)	2%	1%	0%	2%	0%	0%	3%	3%	2%	0%	2%	2%
Turn Type	Perm			Perm			Prot	Prot			Prot	Prot
Protected Phases		3			7		1	1	6		5	5
Permitted Phases	3			7								
Actuated Green, G (s)	32.0	32.0			32.0			7.0	37.8			4.2
Effective Green, g (s)	34.0	34.0			34.0			8.0	38.8			5.2
Actuated g/C Ratio	0.38	0.38			0.38			0.09	0.43			0.06
Clearance Time (s)	6.0	6.0			6.0			5.0	5.0			5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	562	645			647			145	2111			95
v/s Ratio Prot		0.05						c0.09	c0.27			0.02
v/s Ratio Perm	c0.14				0.03							
v/c Ratio	0.37	0.14			0.09			0.99	0.62			0.34
Uniform Delay, d1	20.3	18.4			18.0			41.0	19.9			40.7
Progression Factor	1.00	1.00			1.00			1.38	0.75			1.47
Incremental Delay, d2	0.4	0.1			0.1			69.0	1.2			1.7
Delay (s)	20.7	18.5			18.1			125.5	16.1			61.7
Level of Service	C	B			B			F	B			E
Approach Delay (s)		19.7			18.1				27.0			
Approach LOS		B			B				C			

Intersection Summary			
HCM Average Control Delay	43.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Reed St. & Chris Columbus Blvd.



Movement	SBT	SBR
Lane Configurations	↑↑↑↱	
Ideal Flow (vphpl)	1900	1900
Lane Width	10	12
Total Lost time (s)	4.0	
Lane Util. Factor	0.91	
Frt	0.98	
Flt Protected	1.00	
Satd. Flow (prot)	4657	
Flt Permitted	1.00	
Satd. Flow (perm)	4657	
Volume (vph)	1690	217
Peak-hour factor, PHF	0.94	0.78
Adj. Flow (vph)	1798	278
RTOR Reduction (vph)	23	0
Lane Group Flow (vph)	2053	0
Heavy Vehicles (%)	2%	1%
Turn Type		
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	35.0	
Effective Green, g (s)	36.0	
Actuated g/C Ratio	0.40	
Clearance Time (s)	5.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1863	
v/s Ratio Prot	c0.44	
v/s Ratio Perm		
v/c Ratio	1.10	
Uniform Delay, d1	27.0	
Progression Factor	0.27	
Incremental Delay, d2	53.4	
Delay (s)	60.6	
Level of Service	E	
Approach Delay (s)	60.6	
Approach LOS	E	

Intersection Summary

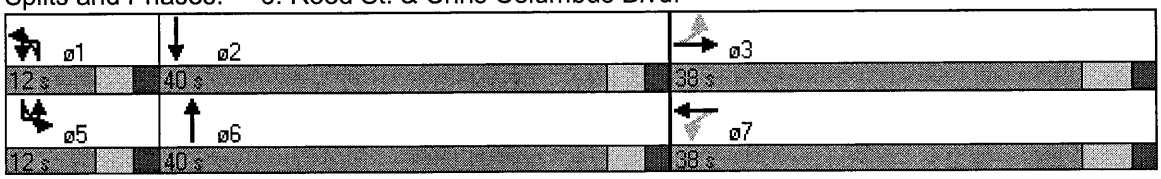
6: Reed St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	13	12	12	13	12	10	10	11	12	10	10
Storage Length (ft)	0		0	0		0		100		0		150
Storage Lanes	1		0	0		0		1		0		1
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
Leading Detector (ft)	50	50		50	50		50	50	50		50	50
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			
Link Distance (ft)		625			893				453			
Travel Time (s)		14.2			20.3				10.3			
Volume (vph)	181	20	152	14	16	13	17	116	1014	19	2	20
Peak Hour Factor	0.87	0.83	1.00	0.70	0.50	0.65	0.92	0.92	0.80	0.47	0.69	0.69
Heavy Vehicles (%)	2%	1%	0%	2%	0%	0%	3%	3%	2%	0%	2%	2%
Turn Type	Perm			Perm			Prot	Prot			Prot	Prot
Protected Phases		3			7		1	1	6		5	5
Permitted Phases	3			7								
Detector Phases	3	3		7	7		1	1	6		5	5
Minimum Initial (s)	32.0	32.0		32.0	32.0		7.0	7.0	35.0		7.0	7.0
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	12.0	40.0		12.0	12.0
Total Split (s)	38.0	38.0	0.0	38.0	38.0	0.0	12.0	12.0	40.0	0.0	12.0	12.0
Total Split (%)	42.2%	42.2%	0.0%	42.2%	42.2%	0.0%	13.3%	13.3%	44.4%	0.0%	13.3%	13.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Lead/Lag							Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None		None	None		None	None	C-Max		None	None

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 47.2 (52%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

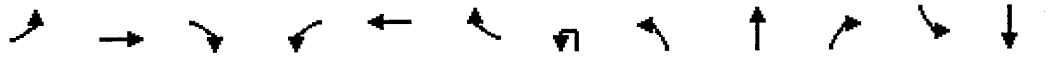
Splits and Phases: 6: Reed St. & Chris Columbus Blvd.



6: Reed St. & Chris Columbus Blvd.

Lane Group	SBT	SBR
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	10	12
Storage Length (ft)		0
Storage Lanes		0
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	
Trailing Detector (ft)	0	
Turning Speed (mph)		9
Right Turn on Red		Yes
Link Speed (mph)	30	
Link Distance (ft)	487	
Travel Time (s)	11.1	
Volume (vph)	1690	217
Peak Hour Factor	0.94	0.78
Heavy Vehicles (%)	2%	1%
Turn Type		
Protected Phases	2	
Permitted Phases		
Detector Phases	2	
Minimum Initial (s)	35.0	
Minimum Split (s)	40.0	
Total Split (s)	40.0	0.0
Total Split (%)	44.4%	0.0%
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	C-Max	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Sign Control		Stop			Stop				Free			Free
Grade		0%			0%				0%			0%
Volume (veh/h)	0	0	0	0	0	0	76	105	1166	0	1	1872
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	121	1372	0	1	2035
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)									450			453
pX, platoon unblocked	0.69	0.69	0.63	0.69	0.69	0.88	0.00	0.63			0.88	
vC, conflicting volume	2736	3650	678	2294	3650	457	0	2035			1372	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1840	3166	0	1199	3166	114	0	1469			1152	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	0.0	4.1			4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	0.0	2.2			2.2	
p0 queue free %	100	100	100	100	100	100	0	58			100	
cM capacity (veh/h)	22	4	684	65	4	808	0	287			531	

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	395	549	549	1	814	814	407
Volume Left	121	0	0	1	0	0	0
Volume Right	0	0	0	0	0	0	0
cSH	287	1700	1700	531	1700	1700	1700
Volume to Capacity	0.42	0.32	0.32	0.00	0.48	0.48	0.24
Queue Length 95th (ft)	50	0	0	0	0	0	0
Control Delay (s)	17.2	0.0	0.0	11.8	0.0	0.0	0.0
Lane LOS	C			B			
Approach Delay (s)	4.6			0.0			
Approach LOS							

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	0
Peak Hour Factor	0.92
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	

7: Dickinson St. & Chris Columbus Blvd.

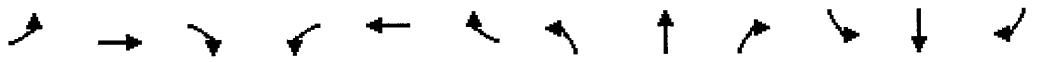
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Link Speed (mph)		30			30				30			30
Link Distance (ft)		611			184				450			453
Travel Time (s)		13.9			4.2				10.2			10.3
Volume (vph)	0	0	0	0	0	0	76	105	1166	0	1	1872
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.85	0.92	0.92	0.92
Sign Control		Stop			Stop				Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Turning Speed (mph)	9
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	0
Peak Hour Factor	0.92
Sign Control	

Intersection Summary

8: Tasker St. & Chris Columbus Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑↕			↑↑↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.91			0.91	
Frt		0.94			0.97			1.00			0.99	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1735			1763			5078			5101	
Flt Permitted		0.76			0.88			0.92			1.00	
Satd. Flow (perm)		1340			1561			4669			5101	
Volume (vph)	87	90	115	17	96	45	6	1215	7	0	1870	82
Peak-hour factor, PHF	0.91	0.83	0.78	0.61	0.77	0.94	0.75	0.88	0.58	0.92	0.94	0.82
Adj. Flow (vph)	96	108	147	28	125	48	8	1381	12	0	1989	100
RTOR Reduction (vph)	0	14	0	0	13	0	0	1	0	0	6	0
Lane Group Flow (vph)	0	337	0	0	188	0	0	1400	0	0	2083	0
Heavy Vehicles (%)	1%	0%	4%	2%	3%	6%	1%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2					
Actuated Green, G (s)		20.0			20.0			59.0			59.0	
Effective Green, g (s)		22.0			22.0			60.0			60.0	
Actuated g/C Ratio		0.24			0.24			0.67			0.67	
Clearance Time (s)		6.0			6.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		328			382			3113			3401	
v/s Ratio Prot											c0.41	
v/s Ratio Perm		c0.25			0.12			0.30				
v/c Ratio		1.03			0.49			0.45			0.61	
Uniform Delay, d1		34.0			29.2			7.1			8.5	
Progression Factor		1.00			1.00			1.00			1.78	
Incremental Delay, d2		56.6			1.0			0.5			0.2	
Delay (s)		90.6			30.2			7.6			15.3	
Level of Service		F			C			A			B	
Approach Delay (s)		90.6			30.2			7.6			15.3	
Approach LOS		F			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

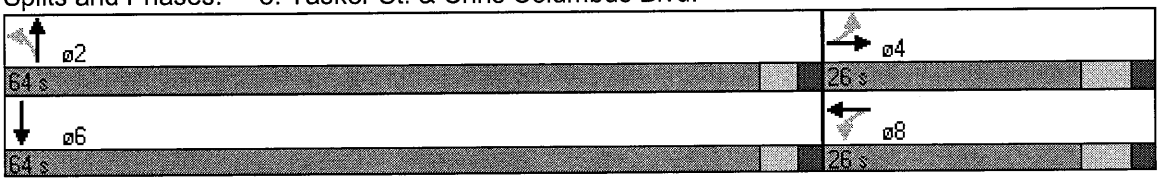
8: Tasker St. & Chris Columbus Blvd.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		600			820			229			450	
Travel Time (s)		13.6			18.6			5.2			10.2	
Volume (vph)	87	90	115	17	96	45	6	1215	7	0	1870	82
Peak Hour Factor	0.91	0.83	0.78	0.61	0.77	0.94	0.75	0.88	0.58	0.92	0.94	0.82
Heavy Vehicles (%)	1%	0%	4%	2%	3%	6%	1%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2					
Detector Phases	4	4		8	8		2	2			6	
Minimum Initial (s)	20.0	20.0		20.0	20.0		59.0	59.0			59.0	
Minimum Split (s)	26.0	26.0		26.0	26.0		64.0	64.0			64.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	64.0	64.0	0.0	0.0	64.0	0.0
Total Split (%)	28.9%	28.9%	0.0%	28.9%	28.9%	0.0%	71.1%	71.1%	0.0%	0.0%	71.1%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Min	C-Min			C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: Tasker St. & Chris Columbus Blvd.



9: Morris St. & Chris Columbus Blvd.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑↑	↑↑↑	↱
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	1228	1557	445
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1335	1692	484
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					229	
pX, platoon unblocked	0.80	0.80	0.80			
vC, conflicting volume	2137	564	2176			
vC1, stage 1 conf vol			0			
vC2, stage 2 conf vol			0			
vCu, unblocked vol	1918	0	1966			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)			3.1			
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	47	864	630			

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	445	445	445	564	564	564	484
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	484
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.26	0.26	0.26	0.33	0.33	0.33	0.28
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

9: Morris St. & Chris Columbus Blvd.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑↑	↑↑↑	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	0	0	0			1
Turning Speed (mph)	15	9	15			9
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			126	229	
Travel Time (s)	4.8			2.9	5.2	
Volume (vph)	0	0	0	1228	1557	445
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

10: Morris St. & Water St.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	0	431	14	71	652	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	468	15	77	709	0	0	0	0

Direction, Lane #	WB 1	NB 1
Volume Total (vph)	484	786
Volume Left (vph)	0	77
Volume Right (vph)	15	0
Hadj (s)	0.02	0.05
Departure Headway (s)	5.8	5.5
Degree Utilization, x	0.78	1.19
Capacity (veh/h)	614	666
Control Delay (s)	26.0	121.7
Approach Delay (s)	26.0	121.7
Approach LOS	D	F

Intersection Summary				
Delay	85.3			
HCM Level of Service	F			
Intersection Capacity Utilization	68.4%	ICU Level of Service	C	
Analysis Period (min)	15			

10: Morris St. & Water St.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Turning Speed (mph)	15		9	15		9	15		9	15		9
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		41			212			138			90	
Travel Time (s)		0.9			4.8			3.1			2.0	
Volume (vph)	0	0	0	0	431	14	71	652	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	