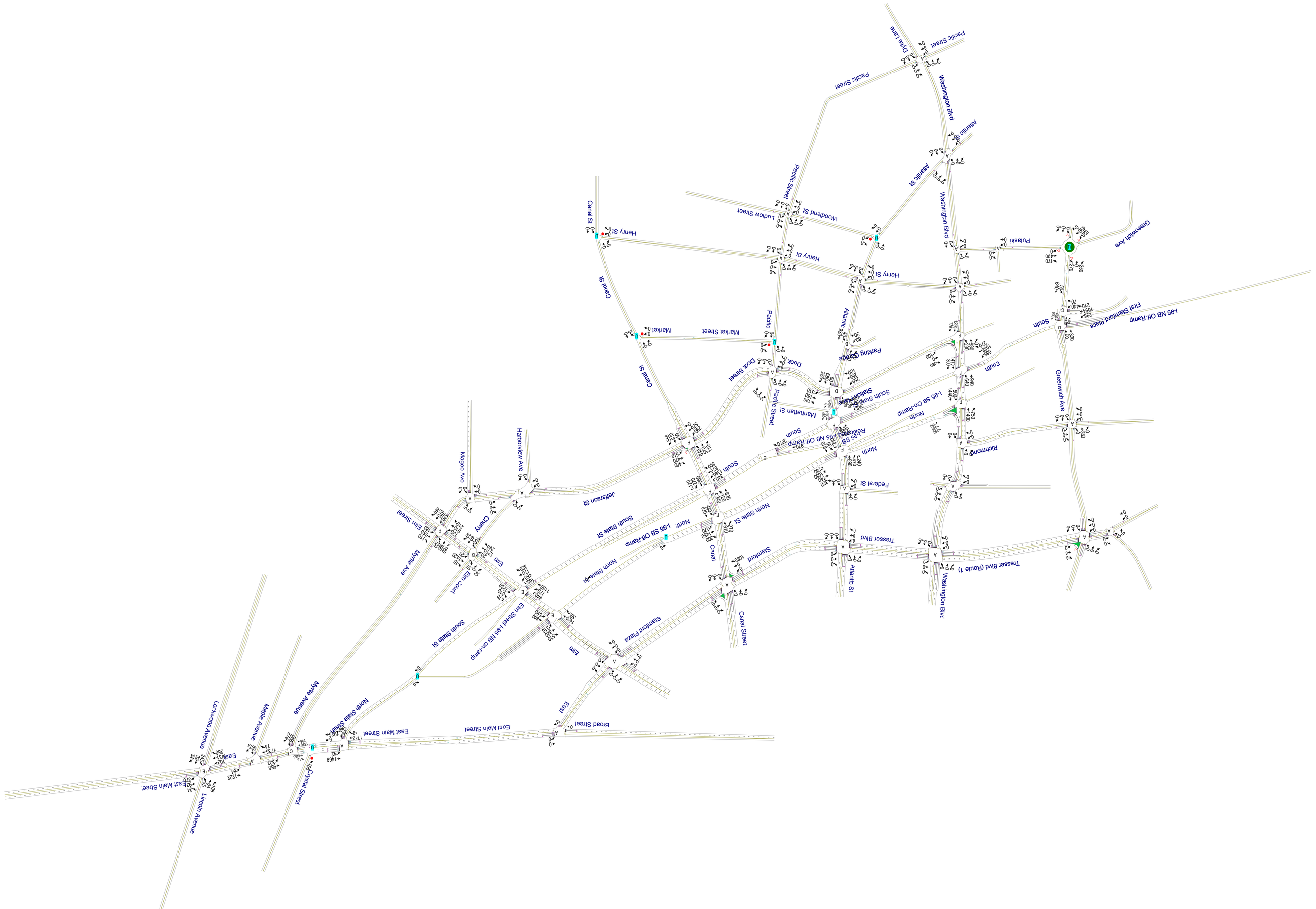

Pacific Street
Washington Blvd
Atlantic St
Woodland St
Ludlow Street
Canal St
Henry St
Pulaski
Greenwich Ave
Canal St
Market Street
Pacific St
Atlantic St
Dock Street
Parking Garage
South
I-95 NB Off-Ramp
Stamford Place
Manhattan St
South Slope
I-95 SB On-Ramp
North
Greenwich Ave
Richmond
Federal St
Jefferson St
Maggie Ave
Harborview Ave
South Slope St
North Slope St
I-95 SB Off-Ramp
Tresser Blvd
Tresser Blvd (Route 1)
Elm Street
Elm Court
Elm Street I-95 NB on-ramp
Stamford Plaza
Canal Street
Atlantic St
Washington Blvd
Myrtle Ave
Locust Ave
Maple Avenue
Lincoln Avenue
East Main Street
East Main Street
Broad Street
Cross Street

MOVEMENT SUMMARY

Site: New Site - 1

Greenwich Avenue at Pulaski Street
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Pulaski Street											
5	T	516	2.0	0.635	7.4	LOS A	7.0	49.5	0.69	0.67	47.5
6	R	179	2.0	0.635	13.5	LOS B	7.0	49.5	0.69	0.81	45.4
Approach		695	2.0	0.635	8.9	LOS B	7.0	49.5	0.69	0.71	46.9
North: Greenwich Avenue											
7	L	284	2.0	0.662	11.3	LOS B	7.9	56.5	0.87	0.95	45.2
9	R	263	2.0	0.663	17.1	LOS B	7.9	56.5	0.87	1.00	42.3
Approach		547	2.0	0.663	14.1	LOS B	7.9	56.5	0.87	0.98	43.7
West: Greenwich Avenue											
10	L	547	2.0	0.855	9.2	LOS A	16.4	117.1	0.88	0.71	46.9
11	T	516	2.0	0.855	8.2	LOS A	16.4	117.1	0.88	0.70	46.5
Approach		1063	2.0	0.855	8.7	LOS A	16.4	117.1	0.88	0.71	46.7
All Vehicles		2305	2.0	0.855	10.1	LOS B	16.4	117.1	0.82	0.77	46.0

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).
Approach LOS values are based on the worst delay for any vehicle movement.
Roundabout LOS Method: Same as Signalised Intersections.
Roundabout Capacity Model: SIDRA Standard.

SIDRA INTERSECTION

DETAILED OUTPUT

Site: New Site - 1

Greenwich Avenue at Pulaski Street
Roundabout

Roundabouts

Roundabout Basic Parameters
Site:New Site - 1

Intersection ID: 1
Roundabout

Island	Cent Diam	Circ Width	Insc Diam.	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width	Circulating/Exiting Stream Flow	%HV	Adjust. Flow	%Exit Incl. Constr. Effect	Cap.	O-D Factor
	m	m	m			m	veh/h		pcu/h			
East: Pulaski Street												
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium					
	30	10	50	2	1	4.00	263	2.0	263	0	N	0.947
North: Greenwich Avenue												
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium					
	30	10	50	2	1	4.00	516	2.0	516	0	N	0.879
West: Greenwich Avenue												
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium					
	30	10	50	2	1	4.00	179	2.0	179	0	N	0.971

Roundabout Capacity Model: SIDRA Standard

Roundabout Gap Acceptance Parameters
Site:New Site - 1

Intersection ID: 1
Roundabout

Turn	Lane No.	Lane Type	Circulating/Exiting Stream Flow Rate	Aver Speed	Aver In-Bnch Dist	In-Bnch Headway	Prop Bunched	Critical Gap Hdwy	Critical Gap Dist	Foll-up Headway
			pcu/h	km/h	m	sec		sec	m	sec
East: Pulaski Street										
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium			
Thru	1	Dominant	263	24.1	91.5	2.00	0.274	4.02	26.9	2.53
Right	1	Dominant	263	24.1	91.5	2.00	0.274	4.02	26.9	2.53
North: Greenwich Avenue										
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium			
Left	1	Dominant	516	39.1	75.8	2.00	0.469	3.85	41.8	2.55
Right	1	Dominant	516	39.1	75.8	2.00	0.469	3.85	41.8	2.55
West: Greenwich Avenue										
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium			
Left	1	Dominant	179	24.1	134.6	2.00	0.195	3.95	26.4	2.45
Thru	1	Dominant	179	24.1	134.6	2.00	0.195	3.95	26.4	2.45

Roundabout Capacity Model: SIDRA Standard
P Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Roundabout Basic Parameters table) allows for priority sharing and priority emphasis.

Dist (Distance): Spacing, i.e. distance between the front ends of two successive vehicles across all lanes in the circulating or exiting stream

Movements

Movement Capacity Parameters
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID	Demand Flow veh/h	HV %	Opposing Flow veh/h	HV %	Movement Adjust. Flow pcu/h	Total Cap. veh/h	Prac. Deg. Satn xp	Prac. Spare Cap. %	Lane Util %	Deg. Satn x
East: Pulaski Street										
5 T	516	2.0	263	2.0	263	812	0.85	34	100	0.635
6 R	179	2.0	263	2.0	263	282	0.85	34	100	0.635
North: Greenwich Avenue										
7 L	284	2.0	516	2.0	516	429	0.85	28	100	0.662
9 R	263	2.0	516	2.0	516	397	0.85	28	100	0.663
West: Greenwich Avenue										
10 L	547	2.0	179	2.0	179	640	0.85	-1	100	0.855*
11 T	516	2.0	179	2.0	179	603	0.85	-1	100	0.855*

* Maximum degree of saturation

Movement Performance
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Eff. Stop Rate	Total Stops	Perf. Index	Tot.Trav. Distance (veh-km/h)	Tot.Trav. Time (veh-h/h)	Aver. Speed (km/h)
East: Pulaski Street									
5 T	1.06	1.27	7.4	0.67	345.4	9.93	313.7	6.6	47.5
6 R	0.67	0.80	13.5	0.81	145.5	4.01	116.0	2.6	45.4
North: Greenwich Avenue									
7 L	0.89	1.07	11.3	0.95	271.0	6.66	172.7	3.8	45.2
9 R	1.25	1.50	17.1	1.00	263.4	6.84	170.6	4.0	42.3
West: Greenwich Avenue									
10 L	1.40	1.67	9.2	0.71	389.6	12.10	332.5	7.1	46.9
11 T	1.18	1.41	8.2	0.70	360.2	11.26	315.6	6.8	46.5

Fuel Consumption, Emissions and Cost (Total)
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID	Cost Total $/h	Fuel Total L/h	CO2 Total kg/h	CO Total kg/h	HC Total kg/h	NOX Total kg/h
East: Pulaski Street						
5 T	216.86	36.0	90.0	6.99	0.146	0.217
6 R	84.89	13.6	34.1	2.68	0.056	0.081
	301.76	49.6	124.1	9.67	0.202	0.298

North: Greenwich Avenue							
7	L	124.55	20.6	51.6	4.17	0.086	0.126
9	R	132.47	20.8	51.9	4.11	0.087	0.123
		257.03	41.4	103.6	8.28	0.172	0.249
West: Greenwich Avenue							
10	L	236.61	39.3	98.4	7.83	0.161	0.240
11	T	222.44	36.9	92.3	7.29	0.151	0.224
		459.05	76.2	190.8	15.11	0.312	0.464
INTERSECTION:		1017.83	167.2	418.4	33.06	0.687	1.011

Fuel Consumption, Emissions and Cost (Rate)
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID		Cost Rate $/km	Fuel Rate L/100km	CO2 Rate g/km	CO Rate g/km	HC Rate g/km	NOX Rate g/km
East: Pulaski Street							
5	T	0.69	11.5	286.8	22.28	0.466	0.691
6	R	0.73	11.8	294.3	23.08	0.485	0.700
		0.70	11.5	288.8	22.49	0.471	0.693
North: Greenwich Avenue							
7	L	0.72	11.9	298.9	24.15	0.496	0.729
9	R	0.78	12.2	304.5	24.11	0.509	0.722
		0.75	12.1	301.7	24.13	0.502	0.726
West: Greenwich Avenue							
10	L	0.71	11.8	296.0	23.53	0.485	0.722
11	T	0.70	11.7	292.5	23.08	0.478	0.711
		0.71	11.8	294.3	23.31	0.481	0.717
INTERSECTION:		0.72	11.8	294.4	23.26	0.483	0.712

Intersection Negotiation Data
Site:New Site - 1

Intersection ID: 1
Roundabout

From Approach	To Approach	Turn	Negn Radius m	Negn Speed km/h	Negn Dist. m	Appr. Dist. m	Downstream Distance m	User Spec?
East: Pulaski Street								
	North	Right	16.0	24.1	62.7	500	141	No
	West	Thru	43.1	35.1	36.2	500	116	No
North: Greenwich Avenue								
	East	Left	39.0	33.8	19.3	500	117	No
	West	Right	16.0	24.1	62.7	500	146	No
West: Greenwich Avenue								
	East	Thru	57.3	39.1	47.1	500	120	No
	North	Left	39.0	33.8	19.3	500	106	No

```
--------------------------------------------------------------------------------

  Maximum Negotiation (Design) Speed =  50.0 km/h

  Downstream distance is distance travelled from the stopline until exit
  cruise speed is reached (includes negotiation distance).  Acceleration
  distance is weighted for light and heavy vehicles.  The same distance
  applies for both stopped and unstopped vehicles.
```

Movement Speeds and Geometric Delay
Site:New Site - 1

```
Intersection ID: 1
Roundabout

--------------------------------------------------------------------------------
                                    Queue Move-up
          App. Speeds    Exit Speeds  -------------  Av. Section Spd  Geom
  Mov     ------------   -----------    1st   2nd    ---------------  Delay
  ID      Cruise  Negn   Negn Cruise    Grn   Grn    Running Overall   sec
--------------------------------------------------------------------------------
 East: Pulaski Street
    5 T     60.0  35.1   35.1  60.0    27.1            47.5    47.5     5.1
    6 R     60.0  24.1   24.1  60.0    27.1            45.4    45.4    11.2
--------------------------------------------------------------------------------
 North: Greenwich Avenue
    7 L     60.0  33.8   33.8  60.0    21.2            45.2    45.2     5.4
    9 R     60.0  24.1   24.1  60.0    21.2            43.4    42.3    11.2
--------------------------------------------------------------------------------
 West: Greenwich Avenue
   10 L     60.0  33.8   33.8  60.0    32.2            46.9    46.9     5.4
   11 T     60.0  39.1   39.1  60.0    32.2            46.5    46.5     4.4
--------------------------------------------------------------------------------
  "Running Speed" is the average speed excluding stopped periods.
```

Lanes

Lane Performance
Site:New Site - 1

```
Intersection ID: 1
Roundabout

------------------------------------------------------------
                                        Q u e u e
          Flow   Cap  Deg.  Aver.  Eff.    95% Back      Lane
 Lane                 Satn  Delay  Stop  ------------   Length
 No.      veh/h veh/h   x     sec   Rate    veh     m       m
------------------------------------------------------------
 East: Pulaski Street
 1 TR       695  1094 0.635    8.9  0.71    7.0   49.5    500.0
------------------------------------------------------------
 North: Greenwich Avenue
 1 LR       547   826 0.663   14.1  0.98    7.9   56.5    500.0
------------------------------------------------------------
 West: Greenwich Avenue
 1 LT      1063  1244 0.855    8.7  0.71   16.4  117.1    500.0
------------------------------------------------------------
```

Lane Flow and Capacity Information
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------
 Lane     Dem Flow (veh/h)     Min    Tot    Deg. Lane
```

No.	Lef	Thru	Rig	Tot	Cap veh/h	Cap veh/h	Satn x	Util %
East: Pulaski Street								
1 TR	0	516	179	695	150	1094	0.635	100
North: Greenwich Avenue								
1 LR	284	0	263	547	150	826	0.663	100
West: Greenwich Avenue								
1 LT	547	516	0	1063	150	1244	0.855	100

The capacity value for priority and continuous movements is obtained by adjusting the basic saturation flow for heavy vehicle and turning vehicle effects. Saturation flow scale applies if specified.

Lane, Approach and Intersection Performance
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Demand Flow (veh/h) L	T	R	Tot	%HV	Adj. Basic Satf.	Eff Grn (sec) 1st	2nd	Deg Sat x	Aver. Delay sec	Longest Queue m	Shrt Lane m
East: Pulaski Street												
1 TR		516	179	695	2				0.635	8.9	50	500
	0	516	179	695	2				0.635	8.9	50	
North: Greenwich Avenue												
1 LR	284		263	547	2				0.663	14.1	56	500
	284	0	263	547	2				0.663	14.1	56	
West: Greenwich Avenue												
1 LT	547	516		1063	2				0.855	8.7	117	500
	547	516	0	1063	2				0.855	8.7	117	
ALL VEHICLES	Total Flow	% HV							Max X	Aver. Delay	Max Queue	
	2305	2							0.855	10.1	117	

Peak flow period = 30 minutes.

Queue values in this table are 95% queue (metres)
Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Driver Characteristics
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Satn Speed km/h	Satn Flow veh/h	Satn Hdwy sec	Satn Spacing m	Average Queue Space m	Driver Response Time sec
East: Pulaski Street						
1 TR	32.3	1422	2.53	22.70	7.12	1.74
North: Greenwich Avenue						
1 LR	29.1	1413	2.55	20.62	7.12	1.67

```
-----------------------------------------------------------
 West: Greenwich Avenue
 1 LT    36.4   1471    2.45    24.73     7.12    1.74
-----------------------------------------------------------

  Saturation Flow and Saturation Headway are derived from follow-up headway.
```

Lane Delays
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Deg. Satn x	Stop-line Delay 1st d1	2nd d2	Total dSL	Acc. Dec. dn	Queuing Total dq	MvUp dqm	Stopd (Idle) di	Geom dig	Control dic
East: Pulaski Street										
1 TR	0.635	1.9	0.4	2.3	3.7	0.1	0.1	0.0	6.7	8.9
North: Greenwich Avenue										
1 LR	0.663	3.7	2.2	5.9	4.2	1.7	1.0	0.7	8.2	14.1
West: Greenwich Avenue										
1 LT	0.855	2.1	1.7	3.8	5.5	0.0	0.0	0.0	4.9	8.7

dn is average stop-start delay for all vehicles queued and unqueued

Lane Queues (Vehicles)
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Deg. Satn x	Ovrfl. Queue No	Back of Queue (veh) Nb1	Nb2	Nb	95%	Queue Stor. Ratio	Prob. Block %	P'ile Block %	Cyc-Av. Queue Nc	95%
East: Pulaski Street											
1 TR	0.635	0.1	2.2	0.2	2.3	7.0	0.10	0.0	100.0	0.4	1.1
North: Greenwich Avenue											
1 LR	0.663	0.4	2.1	0.5	2.7	7.9	0.11	0.0	100.0	0.9	2.2
West: Greenwich Avenue											
1 LT	0.855	0.5	4.7	1.1	5.8	16.4	0.23	0.0	100.0	1.1	2.7

Lane Queues (Distance)
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Deg. Satn x	Ovrfl. Queue No	Back of Queue (m) Nb1	Nb2	Nb	95%	Queue Stor. Ratio	Prob. Block %	P'ile Block %	Cyc-Av. Queue Nc	95%
East: Pulaski Street											
1 TR	0.635	0.6	15.4	1.1	16.6	49.5	0.10	0.0	100.0	3.1	7.7
North: Greenwich Avenue											
1 LR	0.663	2.8	15.1	3.9	19.0	56.5	0.11	0.0	100.0	6.4	15.7

```
-------------------------------------------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.855    3.5   33.5    7.9   41.5  117.1   0.23    0.0  100.0    8.0    19.5
-------------------------------------------------------------------------------------
```

Lane Queue Percentiles (Vehicles)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------
        Deg.              Percentile (veh)
 Lane   Satn   ----------------------------------------
 No.      x     50%    70%    85%    90%    95%    98%
-----------------------------------------------------
 East: Pulaski Street
 1 TR  0.635    2.3    3.1    4.7    5.6    7.0    8.0
-----------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.663    2.7    3.6    5.3    6.4    7.9    9.1
-----------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.855    5.8    7.7   11.3   13.5   16.4   18.7
-----------------------------------------------------
```

Lane Queue Percentiles (Distance)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------
        Deg.              Percentile (metres)
 Lane   Satn   ----------------------------------------
 No.      x     50%    70%    85%    90%    95%    98%
-----------------------------------------------------
 East: Pulaski Street
 1 TR  0.635   16.7   22.1   33.3   40.0   49.5   57.0
-----------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.663   19.1   25.4   38.0   45.7   56.5   64.9
-----------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.855   41.6   54.8   80.7   96.0  117.1  133.4
-----------------------------------------------------
```

Lane Stops
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------------------
                                                  Queue   Total
        Deg.  -- Effective Stop Rate --  Total  Move-up  Queue   Prop.
 Lane   Satn              Geom. Overall  Stops    Rate  Move-ups Queued
 No.      x    he1   he2   hig     h       H      hqm     Hqm     pq
-------------------------------------------------------------------------
 East: Pulaski Street
 1 TR  0.635  0.52  0.02  0.17   0.71    490.9    0.03    21.2   0.69
-------------------------------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.663  0.81  0.09  0.08   0.98    534.5    0.20   110.5   0.87
-------------------------------------------------------------------------
```

```
 West: Greenwich Avenue
 1 LT  0.855  0.60  0.05  0.05   0.71    749.8    0.09    92.7   0.88
-------------------------------------------------------------------------
  hig is the average value for all movements in a shared lane
  hqm is average queue move-up rate for all vehicles queued and unqueued
```

Flow Rates and Demand Analysis

Movement Definitions and Flow Rates (O-D)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------------------
 From      To          Mov           Flow Rate   Flow Scale   Peak Flow
 Approach  Approach    ID    Turn     LV    HV   Fixed   Var    Factor
-------------------------------------------------------------------------
 East: Pulaski Street
           North        6   Right   175     4    1.00   1.00     0.95
           West         5   Thru    505    10    1.00   1.00     0.95
-------------------------------------------------------------------------
 North: Greenwich Avenue
           East         7   Left    279     6    1.00   1.00     0.95
           West         9   Right   258     5    1.00   1.00     0.95
-------------------------------------------------------------------------
 West: Greenwich Avenue
           East        11   Thru    505    10    1.00   1.00     0.95
           North       10   Left    536    11    1.00   1.00     0.95
-------------------------------------------------------------------------
Unit Time for Volumes =  60 minutes
Peak Flow Period =  30 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor
```

Flow Rates (Separate Light and Heavy Vehicles)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------
  Mov          Left       Through       Right
  ID        ---------    ---------    ---------
             LV    HV     LV    HV     LV    HV
-----------------------------------------------
Demand flows in veh/h as used by the program
East: Pulaski Street
    5 T       0     0    505    10      0     0
    6 R       0     0      0     0    175     4
-----------------------------------------------
North: Greenwich Avenue
    7 L     279     6      0     0      0     0
    9 R       0     0      0     0    258     5
-----------------------------------------------
West: Greenwich Avenue
   10 L     536    11      0     0      0     0
   11 T       0     0    505    10      0     0
-----------------------------------------------
Unit Time for Volumes =  60 minutes
Peak Flow Period =  30 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor
```

Flow Rates (Total Vehicles and Percent Heavy)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

------------------------------------------------
  Mov          Left        Through        Right
  ID        ----------    ----------    ----------
            Total  %HV    Total  %HV    Total  %HV
------------------------------------------------
Demand flows in veh/h as used by the program
East: Pulaski Street
    5 T        0   0.0     516   2.0       0   0.0
    6 R        0   0.0       0   0.0     179   2.0
------------------------------------------------
North: Greenwich Avenue
    7 L      284   2.0       0   0.0       0   0.0
    9 R        0   0.0       0   0.0     263   2.0
------------------------------------------------
West: Greenwich Avenue
   10 L      547   2.0       0   0.0       0   0.0
   11 T        0   0.0     516   2.0       0   0.0
------------------------------------------------
Unit Time for Volumes =  60 minutes
Peak Flow Period =  30 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor
```

Other

Model Settings
Site:New Site - 1

```
Intersection ID: 1
Roundabout

* Basic Parameters:
  Intersection Type: Roundabout
  Driving on the left-hand side of the road
  Input data specified in Metric units
  Model Defaults: Standard Left
  Peak Flow Period (for performance): 30 minutes
  Unit time (for volumes): 60 minutes.
  SIDRA Standard Delay model used
  SIDRA Standard Queue model used
  Level of Service based on: Delay (HCM method)
  Queue percentile: 95%
```

Parameters Used in Cost Calculations
Site:New Site - 1

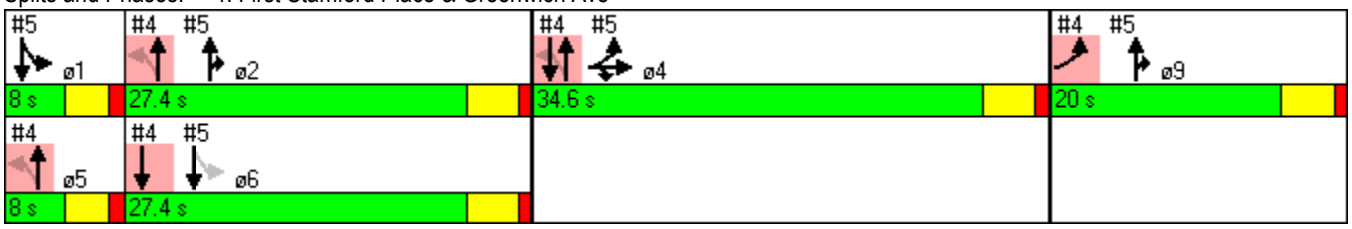
```
Intersection ID: 1
Roundabout


   Pump price of fuel ($/L)                =     1.200
   Fuel resource cost factor               =      0.50
   Ratio of running cost to fuel cost      =       3.0
   Average income ($/h)                    =     32.00
   Time value factor                       =      0.60
   Light vehicle mass (1000 kg)            =       1.4
   Heavy vehicle mass (1000 kg)            =      11.0
   Light vehicle idle fuel rate (L/h)      =     1.350
   Heavy vehicle idle fuel rate (L/h)      =     2.000
```

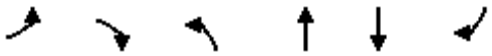
Diagnostics
Site:New Site - 1

Lane Group	EBL	NBL	NBT	SBT	ø1	ø2	ø4	ø5	ø6
Lane Configurations									
Volume (vph)	440	50	640	450					
Lane Group Flow (vph)	554	0	750	576					
Turn Type		Perm							
Protected Phases	9		2 4 5	6 4	1	2	4	5	6
Permitted Phases		2 4 5							
Detector Phase	9	2 4 5	2 4 5	6 4					
Switch Phase									
Minimum Initial (s)	8.0				4.0	12.0	12.0	4.0	12.0
Minimum Split (s)	20.0				8.0	24.5	24.5	8.0	24.5
Total Split (s)	20.0	70.0	70.0	62.0	8.0	27.4	34.6	8.0	27.4
Total Split (%)	22.2%	77.8%	77.8%	68.9%	9%	30%	38%	9%	30%
Yellow Time (s)	3.5				3.0	3.5	3.5	3.0	3.5
All-Red Time (s)	1.0				1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5					
Total Lost Time (s)	4.0	4.0	4.0	4.0					
Lead/Lag					Lead	Lag		Lead	Lag
Lead-Lag Optimize?					Yes	Yes		Yes	Yes
Recall Mode	Min				None	C-Min	None	None	C-Min
v/c Ratio	0.90		0.59	0.26					
Control Delay	54.3		8.0	4.9					
Queue Delay	2.6		0.6	0.6					
Total Delay	56.9		8.6	5.5					
Queue Length 50th (ft)	155		166	106					
Queue Length 95th (ft)	#249		253	27					
Internal Link Dist (ft)	173		181	64					
Turn Bay Length (ft)									
Base Capacity (vph)	618		1270	2244					
Starvation Cap Reductn	0		0	1229					
Spillback Cap Reductn	22		207	0					
Storage Cap Reductn	0		0	0					
Reduced v/c Ratio	0.93		0.71	0.57					

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: First Stamford Place & Greenwich Ave





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	440	70	50	640	450	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.97			1.00	0.95	
Frt	0.98			1.00	0.98	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	3393			1856	3459	
Flt Permitted	0.96			0.93	1.00	
Satd. Flow (perm)	3393			1733	3459	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	478	76	54	696	489	87
RTOR Reduction (vph)	15	0	0	0	16	0
Lane Group Flow (vph)	539	0	0	750	560	0
Turn Type			Perm			
Protected Phases	9			2 4 5	6 4	
Permitted Phases			2 4 5			
Actuated Green, G (s)	15.5			65.5	57.5	
Effective Green, g (s)	16.0			62.5	58.0	
Actuated g/C Ratio	0.18			0.69	0.64	
Clearance Time (s)	4.5					
Vehicle Extension (s)	3.0					
Lane Grp Cap (vph)	603			1203	2229	
v/s Ratio Prot	c0.16				0.16	
v/s Ratio Perm				c0.43		
v/c Ratio	0.89			0.62	0.25	
Uniform Delay, d1	36.2			7.4	6.8	
Progression Factor	1.00			1.00	0.74	
Incremental Delay, d2	15.6			1.2	0.1	
Delay (s)	51.8			8.6	5.1	
Level of Service	D			A	A	
Approach Delay (s)	51.8			8.6	5.1	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

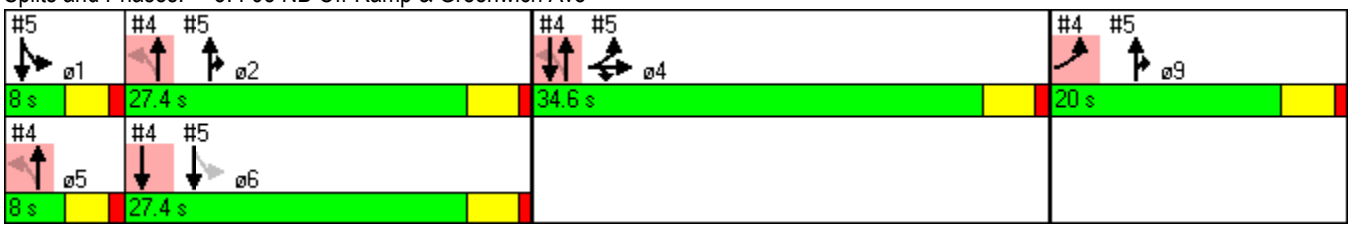
Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT	ø2	ø5	ø6	ø9
Lane Configurations											
Volume (vph)	296	1094	210	480	600	60	320				
Lane Group Flow (vph)	322	1189	228	522	652	65	348				
Turn Type	Split		Prot		Prot	pm+pt					
Protected Phases	4	4	4	2 9	2 9	1	1 6	2	5	6	9
Permitted Phases						1 6					
Detector Phase	4	4	4	2 9	2 9	1	1 6				
Switch Phase											
Minimum Initial (s)	12.0	12.0	12.0			4.0		12.0	4.0	12.0	8.0
Minimum Split (s)	24.5	24.5	24.5			8.0		24.5	8.0	24.5	20.0
Total Split (s)	34.6	34.6	34.6	47.4	47.4	8.0	35.4	27.4	8.0	27.4	20.0
Total Split (%)	38.4%	38.4%	38.4%	52.7%	52.7%	8.9%	39.3%	30%	9%	30%	22%
Yellow Time (s)	3.5	3.5	3.5			3.0		3.5	3.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0			1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5				
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	3.5	3.5				
Lead/Lag						Lead		Lag	Lead	Lag	
Lead-Lag Optimize?						Yes		Yes	Yes	Yes	
Recall Mode	None	None	None			None		C-Min	None	C-Min	Min
v/c Ratio	0.53	0.99	0.33	0.64	0.90	0.38	0.28				
Control Delay	28.0	54.0	4.5	11.3	24.7	26.1	21.6				
Queue Delay	0.0	0.0	0.0	36.2	55.2	0.0	0.1				
Total Delay	28.0	54.0	4.5	47.5	79.9	26.1	21.7				
Queue Length 50th (ft)	146	349	0	83	141	25	73				
Queue Length 95th (ft)	229	#497	48	m108	m#366	53	107				
Internal Link Dist (ft)		2008		64			113				
Turn Bay Length (ft)	300		300			100					
Base Capacity (vph)	602	1203	689	816	728	173	1254				
Starvation Cap Reductn	0	0	0	320	145	0	0				
Spillback Cap Reductn	0	0	15	0	0	0	244				
Storage Cap Reductn	0	0	0	0	0	0	0				
Reduced v/c Ratio	0.53	0.99	0.34	1.05	1.12	0.38	0.34				

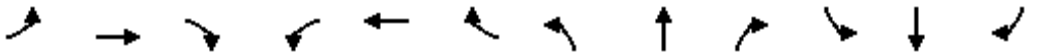
Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: I-95 NB Off-Ramp & Greenwich Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	296	1094	210	0	0	0	0	480	600	60	320	0
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	3.5	3.5	
Lane Util. Factor	1.00	0.95	1.00					1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583					1863	1583	1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00	1.00	0.17	1.00	
Satd. Flow (perm)	1770	3539	1583					1863	1583	318	3539	
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)	322	1189	228	0	0	0	0	522	652	65	348	0
RTOR Reduction (vph)	0	0	150	0	0	0	0	0	35	0	0	0
Lane Group Flow (vph)	322	1189	78	0	0	0	0	522	617	65	348	0
Turn Type	Split		Prot						Prot	pm+pt		
Protected Phases	4	4	4					2 9	2 9	1	1 6	
Permitted Phases										1 6		
Actuated Green, G (s)	30.1	30.1	30.1					38.4	38.4	26.9	30.9	
Effective Green, g (s)	30.6	30.6	30.6					39.4	39.4	27.9	31.4	
Actuated g/C Ratio	0.34	0.34	0.34					0.44	0.44	0.31	0.35	
Clearance Time (s)	4.5	4.5	4.5							4.0		
Vehicle Extension (s)	4.0	4.0	4.0							3.0		
Lane Grp Cap (vph)	602	1203	538					816	693	171	1235	
v/s Ratio Prot	0.18	c0.34	0.05					0.28	c0.39	c0.02	0.10	
v/s Ratio Perm										0.10		
v/c Ratio	0.53	0.99	0.14					0.64	0.89	0.38	0.28	
Uniform Delay, d1	24.0	29.5	20.6					19.8	23.3	23.9	21.2	
Progression Factor	1.00	1.00	1.00					0.62	0.68	1.00	1.00	
Incremental Delay, d2	1.2	22.9	0.2					1.1	9.9	1.4	0.1	
Delay (s)	25.1	52.5	20.8					13.4	25.9	25.3	21.3	
Level of Service	C	D	C					B	C	C	C	
Approach Delay (s)		43.3			0.0			20.3			21.9	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	180	330	790	500	1440	1400	750
Lane Group Flow (vph)	184	337	806	510	1469	1429	765
Turn Type	Perm		Perm	pm+pt			Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8	2			6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	29.0	29.0	29.0	9.0	25.0	25.0	25.0
Total Split (s)	35.0	35.0	35.0	29.0	80.0	51.0	51.0
Total Split (%)	30.4%	30.4%	30.4%	25.2%	69.6%	44.3%	44.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	0.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	Min	C-Max	C-Max	C-Max
v/c Ratio	0.43	0.75	1.15	1.35	0.72	1.14	1.14
Control Delay	41.3	47.5	115.9	203.8	15.3	104.1	107.2
Queue Delay	0.0	0.0	0.0	172.4	95.0	172.7	100.3
Total Delay	41.3	47.5	115.9	376.2	110.3	276.8	207.5
Queue Length 50th (ft)	127	248	~409	~454	338	~649	~594
Queue Length 95th (ft)	m127	m236	m#335	#668	423	#787	#834
Internal Link Dist (ft)		134			155	253	
Turn Bay Length (ft)							
Base Capacity (vph)	429	452	699	378	2035	1258	671
Starvation Cap Reductn	0	0	0	84	818	320	112
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.75	1.15	1.73	1.21	1.52	1.37

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 36 (31%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: North State St & Washington Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	180	330	790	500	1440	0	0	1400	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	13	10	11	11	11	11	12
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00	1.00	0.88	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	2592	1486	3079			3079	1425
Flt Permitted				0.95	1.00	1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	2592	125	3079			3079	1425
Peak-hour factor, PHF	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	184	337	806	510	1469	0	0	1429	765
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	89
Lane Group Flow (vph)	0	0	0	184	337	806	510	1469	0	0	1429	676
Turn Type				Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				30.0	30.0	30.0	75.0	75.0			46.0	46.0
Effective Green, g (s)				31.0	31.0	31.0	75.0	76.0			47.0	47.0
Actuated g/C Ratio				0.27	0.27	0.27	0.65	0.66			0.41	0.41
Clearance Time (s)				5.0	5.0	5.0	4.0	5.0			5.0	5.0
Vehicle Extension (s)				2.0	2.0	2.0	2.0	0.2			0.2	0.2
Lane Grp Cap (vph)				429	452	699	377	2035			1258	582
v/s Ratio Prot					0.20		c0.29	0.48			0.46	
v/s Ratio Perm				0.12		c0.31	c0.59					0.47
v/c Ratio				0.43	0.75	1.15	1.35	0.72			1.14	1.16
Uniform Delay, d1				34.7	38.4	42.0	37.1	12.6			34.0	34.0
Progression Factor				1.15	1.15	1.14	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.1	1.4	73.1	175.3	2.3			71.4	90.7
Delay (s)				39.9	45.4	120.9	212.4	14.9			105.4	124.7
Level of Service				D	D	F	F	B			F	F
Approach Delay (s)		0.0			90.5			65.8			112.2	
Approach LOS		A			F			E			F	

Intersection Summary			
HCM Average Control Delay	90.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	167.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	NBT	SBL	SBT	ø3
Lane Configurations						
Volume (vph)	586	1038	1470	640	940	
Lane Group Flow (vph)	598	1335	1806	653	959	
Turn Type	Split			Prot		
Protected Phases	4	4	2	1	6	3
Permitted Phases						
Detector Phase	4	4	2	1	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	7.0	7.0	4.0	4.0
Minimum Split (s)	20.0	20.0	17.0	11.0	20.0	30.0
Total Split (s)	24.0	24.0	23.0	13.0	36.0	30.0
Total Split (%)	26.7%	26.7%	25.6%	14.4%	40.0%	33%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	C-Min	None	C-Min	Ped
v/c Ratio	1.00	1.13	1.85	2.27	0.88	
Control Delay	41.1	81.8	410.6	603.9	37.9	
Queue Delay	0.0	0.0	0.0	0.0	176.7	
Total Delay	41.1	81.8	410.6	603.9	214.6	
Queue Length 50th (ft)	199	~447	~577	~313	264	
Queue Length 95th (ft)	m#386	m#493	#674	#420	#381	
Internal Link Dist (ft)		355	225		155	
Turn Bay Length (ft)	150					
Base Capacity (vph)	599	1181	977	288	1095	
Starvation Cap Reductn	0	0	0	0	407	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	1.00	1.13	1.85	2.27	1.39	

Intersection Summary

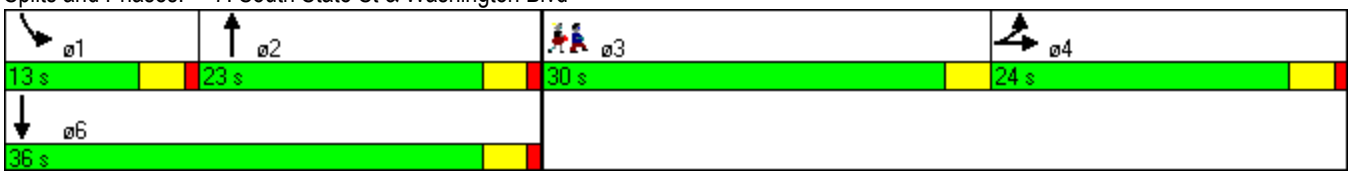
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated

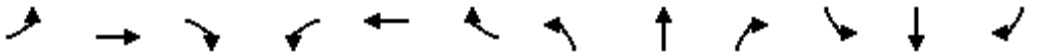
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: South State St & Washington Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	586	1038	270	0	0	0	0	1470	300	640	940	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	10	11	11
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95						0.91		0.97	0.95	
Frt	1.00	0.97						0.97		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1540	2984						4460		2884	3079	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1540	2984						4460		2884	3079	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	598	1059	276	0	0	0	0	1500	306	653	959	0
RTOR Reduction (vph)	0	20	0	0	0	0	0	35	0	0	0	0
Lane Group Flow (vph)	598	1315	0	0	0	0	0	1771	0	653	959	0
Turn Type	Split									Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	35.0	35.0						19.0		9.0	32.0	
Effective Green, g (s)	35.0	35.0						19.0		9.0	32.0	
Actuated g/C Ratio	0.39	0.39						0.21		0.10	0.36	
Clearance Time (s)	4.0	4.0						4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	599	1160						942		288	1095	
v/s Ratio Prot	0.39	c0.44						c0.40		c0.23	0.31	
v/s Ratio Perm												
v/c Ratio	1.00	1.13						1.88		2.27	0.88	
Uniform Delay, d1	27.5	27.5						35.5		40.5	27.1	
Progression Factor	0.56	0.56						1.00		1.00	1.00	
Incremental Delay, d2	21.9	64.6						400.2		581.3	9.9	
Delay (s)	37.3	80.1						435.7		621.8	37.0	
Level of Service	D	F						F		F	D	
Approach Delay (s)		66.9			0.0			435.7			273.9	
Approach LOS		E			A			F			F	

Intersection Summary			
HCM Average Control Delay	253.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	167.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	WBR	NBT	SBL	SBT	ø3
Lane Configurations						
Volume (vph)	0	480	1290	230	980	
Lane Group Flow (vph)	312	298	1537	242	1032	
Turn Type		pt+ov		pm+pt		
Protected Phases	8	1 8	2	1	6	3
Permitted Phases				6		
Detector Phase	8	1 8	2	1	6	
Switch Phase						
Minimum Initial (s)	9.0		15.0	7.0	15.0	4.0
Minimum Split (s)	14.0		20.0	11.0	20.0	20.0
Total Split (s)	24.0	38.0	57.0	14.0	71.0	20.0
Total Split (%)	20.9%	33.0%	49.6%	12.2%	61.7%	17%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	0.0	-1.0	
Total Lost Time (s)	4.0	3.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lead		
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None		C-Max	None	C-Max	Ped
v/c Ratio	0.92	0.62	1.09	1.22	0.56	
Control Delay	75.8	39.9	84.7	164.7	16.3	
Queue Delay	0.0	0.0	130.4	0.0	20.0	
Total Delay	75.8	39.9	215.1	164.7	36.3	
Queue Length 50th (ft)	191	156	~676	~175	234	
Queue Length 95th (ft)	#428	320	#817	#340	293	
Internal Link Dist (ft)	179		86		225	
Turn Bay Length (ft)						
Base Capacity (vph)	340	483	1404	198	1856	
Starvation Cap Reductn	0	0	298	0	843	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.92	0.62	1.39	1.22	1.02	

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 39 (34%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Station Place & Washington Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	100	0	480	0	1290	170	230	980	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	14	12	12	11	12	12	12	12
Total Lost time (s)					4.0	3.0		4.0		4.0	4.0	
Lane Util. Factor					0.95	0.95		0.95		1.00	0.95	
Frt					0.90	0.85		0.98		1.00	1.00	
Flt Protected					0.98	1.00		1.00		0.95	1.00	
Satd. Flow (prot)					1504	1354		3025		1593	3185	
Flt Permitted					0.98	1.00		1.00		0.07	1.00	
Satd. Flow (perm)					1504	1354		3025		120	3185	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	105	0	505	0	1358	179	242	1032	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	312	298	0	1528	0	242	1032	0
Turn Type				Split		pt+ov				pm+pt		
Protected Phases				8	8	1 8		2		1	6	
Permitted Phases										6		
Actuated Green, G (s)					25.0	40.0		52.0		66.0	66.0	
Effective Green, g (s)					26.0	37.0		53.0		66.0	67.0	
Actuated g/C Ratio					0.23	0.32		0.46		0.57	0.58	
Clearance Time (s)					5.0			5.0		4.0	5.0	
Vehicle Extension (s)					2.0			2.0		2.0	2.0	
Lane Grp Cap (vph)					340	436		1394		197	1856	
v/s Ratio Prot					c0.21	0.22		0.51		c0.11	0.32	
v/s Ratio Perm										c0.60		
v/c Ratio					0.92	0.68		1.10		1.23	0.56	
Uniform Delay, d1					43.5	33.9		31.0		35.7	14.8	
Progression Factor					1.00	1.09		1.00		1.00	1.00	
Incremental Delay, d2					27.8	3.5		55.0		139.1	1.2	
Delay (s)					71.2	40.4		86.0		174.8	16.0	
Level of Service					E	D		F		F	B	
Approach Delay (s)		0.0			56.2			86.0			46.2	
Approach LOS		A			E			F			D	

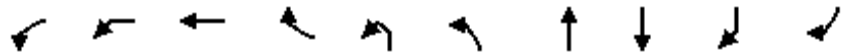
Intersection Summary			
HCM Average Control Delay	65.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBT	SBR
Lane Configurations								
Volume (vph)	1080	740	320	240	30	910	590	470
Lane Group Flow (vph)	1432	779	337	0	0	1243	730	639
Turn Type	Split		Perm	pm+pt	pm+pt			Perm
Protected Phases	8	8		6	6	2	5	
Permitted Phases			8	2	2			5
Detector Phase	8	8	8	6	6	2	5	5
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	5.0	5.0	15.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	9.0	9.0	22.0	9.0	9.0
Total Split (s)	38.0	38.0	38.0	8.0	8.0	77.0	69.0	69.0
Total Split (%)	33.0%	33.0%	33.0%	7.0%	7.0%	67.0%	60.0%	60.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lead	Lead		Lag	Lag
Lead-Lag Optimize?				Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max	None	None
v/c Ratio	1.41	1.41	0.58			1.12dl	0.75	0.75
Control Delay	214.5	217.6	9.7			50.1	24.8	25.9
Queue Delay	0.0	0.0	0.0			125.5	99.8	81.0
Total Delay	214.5	217.6	9.7			175.7	124.6	107.0
Queue Length 50th (ft)	~744	~786	56			~264	406	357
Queue Length 95th (ft)	m#724	m#778	m58			#423	577	528
Internal Link Dist (ft)		1065				128	237	
Turn Bay Length (ft)								
Base Capacity (vph)	1015	551	579			1224	978	850
Starvation Cap Reductn	0	0	0			278	377	304
Spillback Cap Reductn	0	0	0			0	0	0
Storage Cap Reductn	0	0	0			0	0	0
Reduced v/c Ratio	1.41	1.41	0.58			1.31	1.21	1.17

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:NBL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 9: North State St & Atlantic St



Movement	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	SBT	SBR	SBR2
Lane Configurations										
Volume (vph)	280	1080	740	320	240	30	910	590	470	240
Ideal Flow (vphpl)	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		0.97	1.00	1.00			0.95	0.95	0.95	
Frt		1.00	1.00	0.85			1.00	0.98	0.85	
Flt Protected		0.95	1.00	1.00			0.99	1.00	1.00	
Satd. Flow (prot)		3433	1863	1583			3499	1730	1504	
Flt Permitted		0.95	1.00	1.00			0.52	1.00	1.00	
Satd. Flow (perm)		3433	1863	1583			1838	1730	1504	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	1137	779	337	253	32	958	621	495	253
RTOR Reduction (vph)	0	0	0	111	0	0	0	0	0	0
Lane Group Flow (vph)	0	1432	779	226	0	0	1243	730	639	0
Turn Type	Split	Split		Perm	pm+pt	pm+pt			Perm	
Protected Phases	8	8	8		6	6	2	5		
Permitted Phases				8	2	2			5	
Actuated Green, G (s)		34.0	34.0	34.0			73.0	65.0	65.0	
Effective Green, g (s)		34.0	34.0	34.0			73.0	65.0	65.0	
Actuated g/C Ratio		0.30	0.30	0.30			0.63	0.57	0.57	
Clearance Time (s)		4.0	4.0	4.0			4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)		1015	551	468			1225	978	850	
v/s Ratio Prot		0.42	c0.42				c0.04	0.42		
v/s Ratio Perm				0.14			c0.61		0.42	
v/c Ratio		1.41	1.41	0.48			1.12dl	0.75	0.75	
Uniform Delay, d1		40.5	40.5	33.3			21.0	18.8	18.9	
Progression Factor		0.74	0.74	0.44			1.00	1.00	1.00	
Incremental Delay, d2		187.1	190.3	0.3			29.4	3.1	3.8	
Delay (s)		216.9	220.1	15.1			50.4	21.9	22.7	
Level of Service		F	F	B			D	C	C	
Approach Delay (s)			191.2				50.4	22.3		
Approach LOS			F				D	C		

Intersection Summary			
HCM Average Control Delay	112.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	127.3%	ICU Level of Service	H
Analysis Period (min)	15		

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

c Critical Lane Group

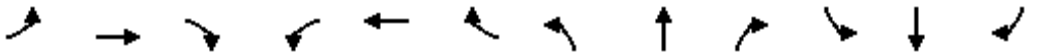
Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	348	1290	1180	460	320	550
Lane Group Flow (vph)	366	1463	1242	484	337	579
Turn Type	Split			Perm	pm+pt	
Protected Phases	7	7	2		1	6
Permitted Phases				2	6	
Detector Phase	7	7	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	12.0	12.0	12.0	12.0
Minimum Split (s)	8.0	8.0	20.0	20.0	20.0	20.0
Total Split (s)	34.0	34.0	36.0	36.0	20.0	56.0
Total Split (%)	37.8%	37.8%	40.0%	40.0%	22.2%	62.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max
v/c Ratio	0.62	0.87	0.88	0.73	0.54	0.54
Control Delay	27.8	31.0	34.2	28.3	14.8	14.0
Queue Delay	0.0	0.0	148.0	35.9	0.2	74.8
Total Delay	27.8	31.0	182.2	64.2	15.0	88.8
Queue Length 50th (ft)	209	327	335	204	42	187
Queue Length 95th (ft)	m137	m207	#476	333	80	276
Internal Link Dist (ft)		1031	25			128
Turn Bay Length (ft)	300					
Base Capacity (vph)	590	1686	1409	662	756	1076
Starvation Cap Reductn	0	0	475	202	68	573
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.87	1.33	1.05	0.49	1.15

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: South State St & Atlantic St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	348	1290	100	0	0	0	0	1180	460	320	550	0
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	0.91						0.95	1.00	0.97	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5031						3539	1583	3433	1863	
Flt Permitted	0.95	1.00						1.00	1.00	0.10	1.00	
Satd. Flow (perm)	1770	5031						3539	1583	363	1863	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	366	1358	105	0	0	0	0	1242	484	337	579	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	32	0	0	0
Lane Group Flow (vph)	366	1453	0	0	0	0	0	1242	452	337	579	0
Turn Type	Split								Perm	pm+pt		
Protected Phases	7	7						2		1	6	
Permitted Phases									2	6		
Actuated Green, G (s)	30.0	30.0						35.8	35.8	52.0	52.0	
Effective Green, g (s)	30.0	30.0						35.8	35.8	52.0	52.0	
Actuated g/C Ratio	0.33	0.33						0.40	0.40	0.58	0.58	
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	590	1677						1408	630	626	1076	
v/s Ratio Prot	0.21	c0.29						c0.35		0.07	c0.31	
v/s Ratio Perm									0.29	0.24		
v/c Ratio	0.62	0.87						0.88	0.72	0.54	0.54	
Uniform Delay, d1	25.2	28.1						25.1	22.8	15.6	11.6	
Progression Factor	1.06	1.07						1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.5						8.3	6.9	0.9	1.9	
Delay (s)	26.8	30.7						33.4	29.7	16.5	13.6	
Level of Service	C	C						C	C	B	B	
Approach Delay (s)		29.9			0.0			32.4			14.6	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	27.7	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	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

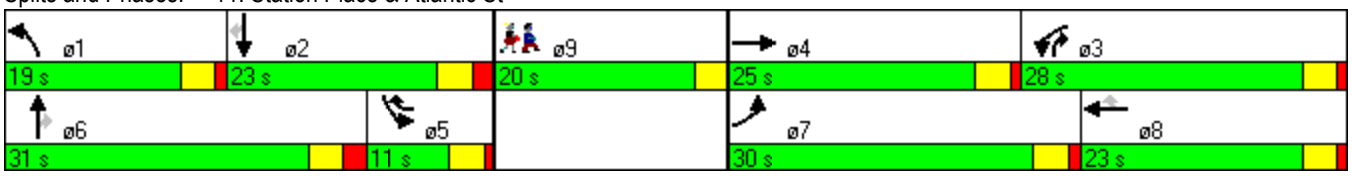
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø9
Lane Configurations												
Volume (vph)	250	200	310	150	130	60	680	250	90	380	180	
Lane Group Flow (vph)	263	316	326	158	137	63	716	263	95	400	189	
Turn Type	Prot		Prot		pm+ov	Prot		pm+ov	Prot		Perm	
Protected Phases	7	4	3	8	5	1	6	3	5	2		9
Permitted Phases					8			6			2	
Detector Phase	7	4	3	8	5	1	6	3	5	2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	5.0	15.0	15.0	7.0
Minimum Split (s)	21.0	21.0	9.0	20.0	9.0	19.0	21.0	9.0	9.0	21.0	21.0	20.0
Total Split (s)	30.0	25.0	28.0	23.0	11.0	19.0	31.0	28.0	11.0	23.0	23.0	20.0
Total Split (%)	26.1%	21.7%	24.3%	20.0%	9.6%	16.5%	27.0%	24.3%	9.6%	20.0%	20.0%	17%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	0.0
Lost Time Adjust (s)	-1.0	0.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0	
Total Lost Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	C-Max	None
v/c Ratio	0.76	0.81	0.83	0.34	0.24	0.26	0.61	0.26	0.88	0.38	0.35	
Control Delay	42.9	41.2	61.4	39.0	3.9	47.3	33.9	4.8	113.1	37.5	20.8	
Queue Delay	0.0	0.0	2.0	0.0	0.0	0.0	0.7	0.4	0.0	0.4	0.3	
Total Delay	42.9	41.2	63.4	39.0	3.9	47.3	34.6	5.2	113.1	37.8	21.1	
Queue Length 50th (ft)	178	196	225	91	0	37	227	12	71	132	52	
Queue Length 95th (ft)	m179	m214	#398	178	30	m58	#361	83	#175	203	134	
Internal Link Dist (ft)		765		481			121			95		
Turn Bay Length (ft)			150			100		100	50		50	
Base Capacity (vph)	416	393	404	458	581	246	1176	1017	108	1047	539	
Starvation Cap Reductn	0	0	0	0	0	0	189	368	0	252	89	
Spillback Cap Reductn	0	0	21	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.63	0.80	0.85	0.34	0.24	0.26	0.73	0.41	0.88	0.50	0.42	

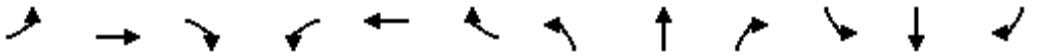
Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Station Place & Atlantic St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	200	100	310	150	130	60	680	250	90	380	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1770		1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1770		1770	1863	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	263	211	105	326	158	137	63	716	263	95	400	189
RTOR Reduction (vph)	0	15	0	0	0	94	0	0	101	0	0	74
Lane Group Flow (vph)	263	301	0	326	158	43	63	716	162	95	400	115
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		Perm
Protected Phases	7	4		3	8	5	1	6	3	5	2	
Permitted Phases						8			6			2
Actuated Green, G (s)	21.5	24.3		25.5	28.3	36.1	12.0	34.0	59.5	7.8	29.8	29.8
Effective Green, g (s)	22.5	24.3		25.5	28.3	36.1	13.0	35.0	59.5	7.8	30.8	30.8
Actuated g/C Ratio	0.20	0.21		0.22	0.25	0.31	0.11	0.30	0.52	0.07	0.27	0.27
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0	4.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	346	374		392	458	497	200	1077	874	120	948	424
v/s Ratio Prot	0.15	c0.17		c0.18	c0.08	0.01	0.04	c0.20	0.04	c0.05	0.11	
v/s Ratio Perm						0.02			0.06			0.07
v/c Ratio	0.76	0.80		0.83	0.34	0.09	0.32	0.66	0.19	0.79	0.42	0.27
Uniform Delay, d1	43.7	43.1		42.7	35.7	27.8	46.9	34.9	14.8	52.8	34.8	33.2
Progression Factor	0.82	0.76		1.00	1.00	1.00	1.02	0.93	1.23	1.00	1.00	1.00
Incremental Delay, d2	4.9	6.3		13.9	0.5	0.1	0.7	2.4	0.1	29.0	1.4	1.6
Delay (s)	40.5	39.2		56.6	36.2	27.9	48.3	34.8	18.3	81.8	36.1	34.8
Level of Service	D	D		E	D	C	D	C	B	F	D	C
Approach Delay (s)		39.8			45.1			31.5			42.1	
Approach LOS		D			D			C			D	

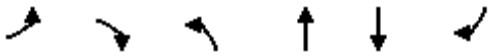
Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	26.4
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Volume (vph)	60	40	930	750	40
Lane Group Flow (vph)	95	0	1021	789	42
Turn Type		pm+pt			Perm
Protected Phases	4	5	2	6	
Permitted Phases		2			6
Detector Phase	4	5	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	24.0	9.0	25.0	25.0	25.0
Total Split (s)	24.0	9.0	91.0	82.0	82.0
Total Split (%)	20.9%	7.8%	79.1%	71.3%	71.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	5.0	5.0
Lead/Lag		Lead		Lag	Lag
Lead-Lag Optimize?		Yes		Yes	Yes
Recall Mode	None	Min	C-Max	C-Max	C-Max
v/c Ratio	0.54		0.70	0.57	0.04
Control Delay	49.9		8.6	11.1	1.2
Queue Delay	0.0		4.3	4.2	0.0
Total Delay	49.9		12.9	15.3	1.2
Queue Length 50th (ft)	55		213	258	3
Queue Length 95th (ft)	102		523	388	m3
Internal Link Dist (ft)	170		445	110	
Turn Bay Length (ft)					
Base Capacity (vph)	300		1452	1385	1187
Starvation Cap Reductn	0		348	503	0
Spillback Cap Reductn	0		62	0	0
Storage Cap Reductn	0		0	0	0
Reduced v/c Ratio	0.32		0.92	0.89	0.04

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 87 (76%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Parking Garage & Atlantic St



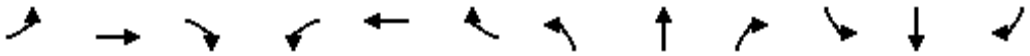
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	60	30	40	930	750	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	0.95			1.00	1.00	0.85
Flt Protected	0.97			1.00	1.00	1.00
Satd. Flow (prot)	1721			1859	1863	1583
Flt Permitted	0.97			0.95	1.00	1.00
Satd. Flow (perm)	1721			1764	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	32	42	979	789	42
RTOR Reduction (vph)	17	0	0	0	0	11
Lane Group Flow (vph)	78	0	0	1021	789	31
Turn Type			pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Actuated Green, G (s)	10.5			94.5	85.5	85.5
Effective Green, g (s)	10.5			94.5	85.5	85.5
Actuated g/C Ratio	0.09			0.82	0.74	0.74
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			0.2	0.2	0.2
Lane Grp Cap (vph)	157			1454	1385	1177
v/s Ratio Prot	c0.05			c0.03	0.42	
v/s Ratio Perm				c0.55		0.02
v/c Ratio	0.50			0.70	0.57	0.03
Uniform Delay, d1	49.7			4.3	6.6	3.9
Progression Factor	1.00			1.00	1.26	0.66
Incremental Delay, d2	0.9			1.3	1.4	0.0
Delay (s)	50.6			5.6	9.7	2.6
Level of Service	D			A	A	A
Approach Delay (s)	50.6			5.6	9.3	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	1480	480	820	810
Lane Group Flow (vph)	2194	490	837	1103
Turn Type		pm+pt		
Protected Phases	8	5	2	6
Permitted Phases		2		
Detector Phase	8	5	2	6
Switch Phase				
Minimum Initial (s)	12.0	6.0	15.0	15.0
Minimum Split (s)	22.0	19.0	27.0	27.0
Total Split (s)	42.0	31.0	73.0	42.0
Total Split (%)	36.5%	27.0%	63.5%	36.5%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	5.0	5.0
Lead/Lag		Lead		Lag
Lead-Lag Optimize?		Yes		Yes
Recall Mode	None	None	C-Min	C-Min
v/c Ratio	1.05	1.02	0.40	0.99
Control Delay	71.4	78.7	13.4	61.5
Queue Delay	0.0	315.3	76.6	0.0
Total Delay	71.4	394.0	89.9	61.5
Queue Length 50th (ft)	~512	~321	164	412
Queue Length 95th (ft)	#589	#543	206	#563
Internal Link Dist (ft)	377		123	492
Turn Bay Length (ft)				
Base Capacity (vph)	2090	482	2093	1124
Starvation Cap Reductn	0	202	1371	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.05	1.75	1.16	0.98

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 107 (93%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: North State St & Canal St



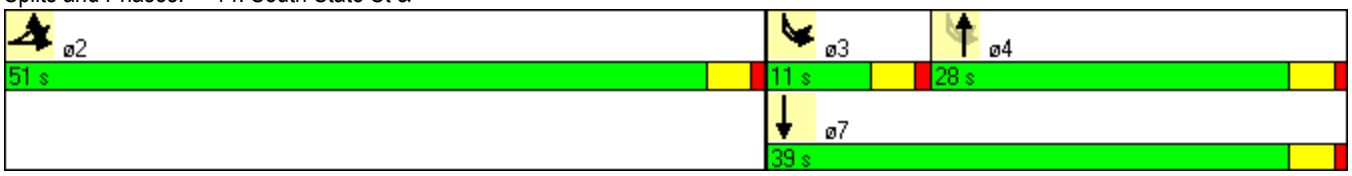
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	370	1480	300	480	820	0	0	810	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	5.0			5.0	
Lane Util. Factor					0.86		1.00	0.95			0.95	
Frt					0.98		1.00	1.00			0.96	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					6220		1770	3539			3406	
Flt Permitted					0.99		0.10	1.00			1.00	
Satd. Flow (perm)					6220		183	3539			3406	
Peak-hour factor, PHF	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	378	1510	306	490	837	0	0	827	276
RTOR Reduction (vph)	0	0	0	0	25	0	0	0	0	0	29	0
Lane Group Flow (vph)	0	0	0	0	2169	0	490	837	0	0	1074	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					38.2		67.8	67.8			36.8	
Effective Green, g (s)					38.2		67.8	67.8			36.8	
Actuated g/C Ratio					0.33		0.59	0.59			0.32	
Clearance Time (s)					4.0		4.0	5.0			5.0	
Vehicle Extension (s)					5.0		1.0	0.2			0.2	
Lane Grp Cap (vph)					2066		480	2086			1090	
v/s Ratio Prot							c0.24	0.24			0.32	
v/s Ratio Perm					0.35		c0.36					
v/c Ratio					1.05		1.02	0.40			0.99	
Uniform Delay, d1					38.4		35.5	12.7			38.8	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					34.3		46.5	0.6			24.0	
Delay (s)					72.7		81.9	13.3			62.9	
Level of Service					E		F	B			E	
Approach Delay (s)		0.0			72.7			38.6			62.9	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM Average Control Delay	60.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	EBT	NBT	SBL2	SBL	SBT
Lane Configurations							
Volume (vph)	340	1360	870	960	240	120	820
Lane Group Flow (vph)	347	1388	1398	1378	0	0	1204
Turn Type	Split	Split			D.P+P	D.P+P	
Protected Phases	2	2	2	4	3	3	7
Permitted Phases					4	4	
Detector Phase	2	2	2	4	3	3	7
Switch Phase							
Minimum Initial (s)	15.0	15.0	15.0	12.0	4.0	4.0	4.0
Minimum Split (s)	25.0	25.0	25.0	20.0	8.0	8.0	8.0
Total Split (s)	51.0	51.0	51.0	28.0	11.0	11.0	39.0
Total Split (%)	56.7%	56.7%	56.7%	31.1%	12.2%	12.2%	43.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	C-Max	C-Max	C-Max	None	None	None	None
v/c Ratio	0.38	1.50	0.78	1.05			4.48dl
Control Delay	15.1	245.2	20.5	66.3			285.9
Queue Delay	0.0	0.0	2.4	0.0			174.9
Total Delay	15.1	245.2	22.9	66.3			460.8
Queue Length 50th (ft)	137	~1084	345	~452			~515
Queue Length 95th (ft)	m155	m#1193	m397	#584			#644
Internal Link Dist (ft)			444	351			123
Turn Bay Length (ft)							
Base Capacity (vph)	924	924	1782	1317			769
Starvation Cap Reductn	0	0	256	0			153
Spillback Cap Reductn	0	0	0	0			0
Storage Cap Reductn	0	0	0	0			0
Reduced v/c Ratio	0.38	1.50	0.92	1.05			1.95

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 14: South State St &



Movement	EBL2	EBL	EBT	EBR	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations										
Volume (vph)	340	1360	870	500	960	270	120	240	120	820
Ideal Flow (vphpl)	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	1.00	1.00	0.95		0.95					0.95
Frt	1.00	1.00	0.95		0.96					1.00
Flt Protected	0.95	0.95	1.00		1.00					0.98
Satd. Flow (prot)	1770	1770	3346		3386					3486
Flt Permitted	0.95	0.95	1.00		1.00					0.56
Satd. Flow (perm)	1770	1770	3346		3386					1978
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	347	1388	888	510	980	276	122	245	122	837
RTOR Reduction (vph)	0	0	35	0	0	0	0	0	0	0
Lane Group Flow (vph)	347	1388	1363	0	1378	0	0	0	0	1204
Turn Type	Split	Split						D.P+P	D.P+P	
Protected Phases	2	2	2		4			3	3	7
Permitted Phases								4	4	
Actuated Green, G (s)	47.0	47.0	47.0		35.0					35.0
Effective Green, g (s)	47.0	47.0	47.0		35.0					35.0
Actuated g/C Ratio	0.52	0.52	0.52		0.39					0.39
Clearance Time (s)	4.0	4.0	4.0		4.0					4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0					3.0
Lane Grp Cap (vph)	924	924	1747		1317					769
v/s Ratio Prot	0.20	c0.78	0.41		0.41					
v/s Ratio Perm										c0.61
v/c Ratio	0.38	1.50	0.78		1.05					4.48dl
Uniform Delay, d1	12.8	21.5	17.3		27.5					27.5
Progression Factor	1.12	0.41	1.14		1.00					1.00
Incremental Delay, d2	0.4	228.0	1.3		37.8					260.9
Delay (s)	14.7	236.8	21.1		65.3					288.4
Level of Service	B	F	C		E					F
Approach Delay (s)			115.9		65.3					288.4
Approach LOS			F		E					F

Intersection Summary			
HCM Average Control Delay	140.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	157.5%	ICU Level of Service	H
Analysis Period (min)	15		

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

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	290	520	510	470	30	610	550	640	570
Lane Group Flow (vph)	296	531	520	939	0	653	561	653	694
Turn Type	Prot		Prot		Perm		pm+ov	pm+pt	
Protected Phases	7	4	3	8		2	3	1	6
Permitted Phases					2		2	6	
Detector Phase	7	4	3	8	2	2	3	1	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	5.0	5.0	10.0
Minimum Split (s)	14.0	20.0	14.0	20.0	21.0	21.0	14.0	15.0	15.0
Total Split (s)	23.0	20.0	34.0	31.0	29.0	29.0	34.0	32.0	61.0
Total Split (%)	20.0%	17.4%	29.6%	27.0%	25.2%	25.2%	29.6%	27.8%	53.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	C-Max
v/c Ratio	1.01	1.08	1.13	1.02		0.99	0.70	1.26	0.40
Control Delay	104.4	110.4	120.6	69.7		77.8	16.2	166.6	17.7
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.7
Total Delay	104.4	110.4	120.6	69.7		77.8	16.2	166.6	18.4
Queue Length 50th (ft)	~226	~231	~446	~325		255	161	~554	154
Queue Length 95th (ft)	#405	#343	#657	#457		#381	238	#783	200
Internal Link Dist (ft)		841		1377		257			351
Turn Bay Length (ft)			150				100		
Base Capacity (vph)	292	492	462	920		659	803	518	1756
Starvation Cap Reductn	0	0	0	0		0	0	0	675
Spillback Cap Reductn	0	0	0	0		0	0	0	0
Storage Cap Reductn	0	0	0	0		0	0	0	0
Reduced v/c Ratio	1.01	1.08	1.13	1.02		0.99	0.70	1.26	0.64

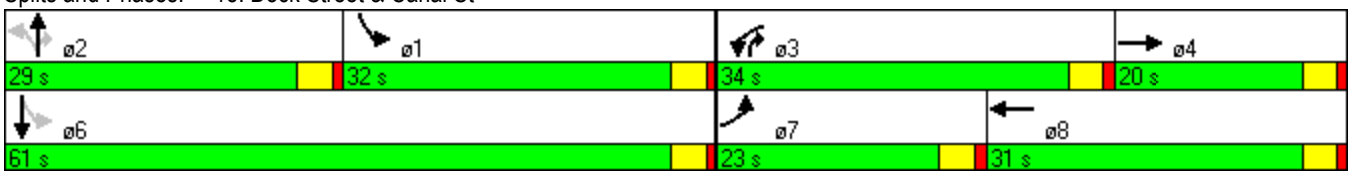
Intersection Summary

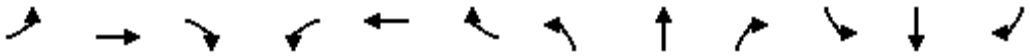
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 104 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 15: Dock Street & Canal St





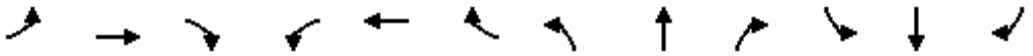
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	520	0	510	470	450	30	610	550	640	570	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95	1.00	1.00	0.95	
Frt	1.00	1.00		1.00	0.93			1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3280			3531	1583	1770	3454	
Flt Permitted	0.95	1.00		0.95	1.00			0.82	1.00	0.15	1.00	
Satd. Flow (perm)	1770	3539		1770	3280			2918	1583	285	3454	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	296	531	0	520	480	459	31	622	561	653	582	112
RTOR Reduction (vph)	0	0	0	0	150	0	0	0	19	0	14	0
Lane Group Flow (vph)	296	531	0	520	789	0	0	653	542	653	680	0
Turn Type	Prot			Prot			Perm		pm+ov	pm+pt		
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	19.0	16.0		30.0	27.0			25.0	55.0	57.0	57.0	
Effective Green, g (s)	19.0	16.0		30.0	27.0			26.0	57.0	58.0	58.0	
Actuated g/C Ratio	0.17	0.14		0.26	0.23			0.23	0.50	0.50	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			0.2	5.0	5.0	0.2	
Lane Grp Cap (vph)	292	492		462	770			660	785	518	1742	
v/s Ratio Prot	0.17	0.15		c0.29	c0.24				0.19	c0.32	0.20	
v/s Ratio Perm								0.22	0.16	c0.32		
v/c Ratio	1.01	1.08		1.13	1.02			0.99	0.69	1.26	0.39	
Uniform Delay, d1	48.0	49.5		42.5	44.0			44.4	22.2	36.9	17.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	56.2	63.6		80.9	38.9			32.5	3.3	132.2	0.7	
Delay (s)	104.2	113.1		123.4	82.9			76.9	25.6	169.1	18.2	
Level of Service	F	F		F	F			E	C	F	B	
Approach Delay (s)		109.9			97.3			53.2			91.4	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	86.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	110.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations						
Volume (vph)	310	320	510	590	800	1450
Lane Group Flow (vph)	316	582	265	602	816	1786
Turn Type	Perm		Perm	pm+pt		
Protected Phases		8		5	2	6
Permitted Phases	8		8	2		
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	6.0	20.0	20.0
Minimum Split (s)	22.0	22.0	22.0	10.0	24.0	24.0
Total Split (s)	26.0	26.0	26.0	41.0	89.0	48.0
Total Split (%)	22.6%	22.6%	22.6%	35.7%	77.4%	41.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Min	C-Min
v/c Ratio	0.95	0.81	0.55	0.98	0.31	0.90
Control Delay	85.1	42.7	10.2	60.5	12.7	39.3
Queue Delay	43.9	0.0	0.0	239.2	2.1	3.8
Total Delay	128.9	42.7	10.2	299.7	14.8	43.1
Queue Length 50th (ft)	233	170	4	459	176	449
Queue Length 95th (ft)	#405	241	86	#632	244	#555
Internal Link Dist (ft)		759			227	555
Turn Bay Length (ft)	500		500			
Base Capacity (vph)	341	733	486	633	2633	1997
Starvation Cap Reductn	0	0	0	244	1621	0
Spillback Cap Reductn	52	0	0	0	0	149
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.79	0.55	1.55	0.81	0.97

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 67 (58%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: North State St & Elm Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	310	320	510	590	800	0	0	1450	300
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	0.91	0.91	1.00	0.95			0.91	
Frt				1.00	0.93	0.85	1.00	1.00			0.97	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1770	3167	1441	1770	3539			4955	
Flt Permitted				0.95	1.00	1.00	0.08	1.00			1.00	
Satd. Flow (perm)				1770	3167	1441	150	3539			4955	
Peak-hour factor, PHF	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	316	327	520	602	816	0	0	1480	306
RTOR Reduction (vph)	0	0	0	0	123	210	0	0	0	0	27	0
Lane Group Flow (vph)	0	0	0	316	459	55	602	816	0	0	1759	0
Turn Type				Perm		Perm	pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					
Actuated Green, G (s)				21.6	21.6	21.6	85.4	85.4			45.6	
Effective Green, g (s)				21.6	21.6	21.6	85.4	85.4			45.6	
Actuated g/C Ratio				0.19	0.19	0.19	0.74	0.74			0.40	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Vehicle Extension (s)				1.0	1.0	1.0	1.0	0.2			0.2	
Lane Grp Cap (vph)				332	595	271	616	2628			1965	
v/s Ratio Prot					0.14		c0.30	0.23			0.35	
v/s Ratio Perm				c0.18		0.04	c0.42					
v/c Ratio				0.95	0.77	0.20	0.98	0.31			0.90	
Uniform Delay, d1				46.2	44.3	39.4	33.6	5.0			32.5	
Progression Factor				1.00	1.00	1.00	1.15	2.47			1.00	
Incremental Delay, d2				36.4	5.6	0.1	24.0	0.2			6.8	
Delay (s)				82.6	49.9	39.6	62.5	12.4			39.3	
Level of Service				F	D	D	E	B			D	
Approach Delay (s)		0.0			56.4			33.7			39.3	
Approach LOS		A			E			C			D	

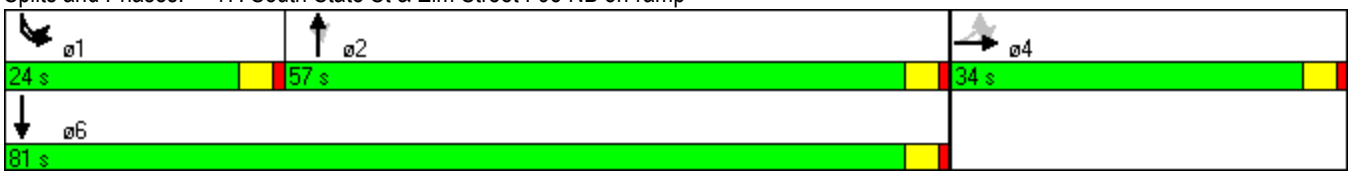
Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBT	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	160	170	1230	310	170	1150
Lane Group Flow (vph)	163	990	1255	387	622	1173
Turn Type	Perm			Perm	Prot	
Protected Phases		4	2		1	6
Permitted Phases	4			2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	12.0	12.0	15.0	15.0	6.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	10.0	22.0
Total Split (s)	34.0	34.0	57.0	57.0	24.0	81.0
Total Split (%)	29.6%	29.6%	49.6%	49.6%	20.9%	70.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.35	1.07	0.78	0.53	1.46dl	0.95
Control Delay	37.0	89.3	26.2	20.4	92.8	21.8
Queue Delay	0.2	0.0	2.7	0.6	11.7	43.6
Total Delay	37.2	89.3	28.9	21.0	104.5	65.5
Queue Length 50th (ft)	99	~414	409	219	~228	365
Queue Length 95th (ft)	162	#547	478	269	m#302	m#509
Internal Link Dist (ft)		1645	420			227
Turn Bay Length (ft)				200		
Base Capacity (vph)	469	922	1631	737	597	1247
Starvation Cap Reductn	0	0	196	116	18	179
Spillback Cap Reductn	43	0	258	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	1.07	0.91	0.62	1.07	1.10

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 96 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 17: South State St & Elm Street I-95 NB on-ramp



Movement	EBL2	EBL	EBT	EBR	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations										
Volume (vph)	160	480	170	320	1230	310	70	440	170	1150
Ideal Flow (vphpl)	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		0.95		0.95	1.00			0.97	1.00
Frt	1.00		0.95		1.00	0.85			1.00	1.00
Flt Protected	0.95		0.98		1.00	1.00			0.95	1.00
Satd. Flow (prot)	1770		3283		3539	1583			3433	1863
Flt Permitted	0.95		0.98		1.00	1.00			0.95	1.00
Satd. Flow (perm)	1770		3283		3539	1583			3433	1863
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	163	490	173	327	1255	316	71	449	173	1173
RTOR Reduction (vph)	0	0	52	0	0	7	0	0	0	0
Lane Group Flow (vph)	163	0	938	0	1255	380	0	0	622	1173
Turn Type	Perm	Perm				Perm		Prot	Prot	
Protected Phases			4		2			1	1	6
Permitted Phases	4	4				2				
Actuated Green, G (s)	30.5		30.5		52.5	52.5			20.0	76.5
Effective Green, g (s)	30.5		30.5		52.5	52.5			20.0	76.5
Actuated g/C Ratio	0.27		0.27		0.46	0.46			0.17	0.67
Clearance Time (s)	4.0		4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	5.0		5.0		0.2	0.2			1.0	0.2
Lane Grp Cap (vph)	469		871		1616	723			597	1239
v/s Ratio Prot					0.35				c0.18	c0.63
v/s Ratio Perm	0.09		0.29			0.24				
v/c Ratio	0.35		1.08		0.78	0.53			1.46dl	0.95
Uniform Delay, d1	34.2		42.2		26.3	22.3			47.5	17.4
Progression Factor	1.00		1.00		0.87	0.83			1.28	0.72
Incremental Delay, d2	0.9		53.3		3.0	2.2			35.4	8.0
Delay (s)	35.1		95.6		26.0	20.7			96.0	20.5
Level of Service	D		F		C	C			F	C
Approach Delay (s)			87.0		24.7					46.7
Approach LOS			F		C					D

Intersection Summary			
HCM Average Control Delay	49.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

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

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	160	40	10	0	20	1420	20	1210
Lane Group Flow (vph)	0	235	0	41	0	1479	0	1500
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	34.0	34.0	34.0	34.0	81.0	81.0	81.0	81.0
Total Split (%)	29.6%	29.6%	29.6%	29.6%	70.4%	70.4%	70.4%	70.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio		0.76		0.12		0.62		0.64
Control Delay		57.0		15.5		4.5		6.3
Queue Delay		0.4		0.0		0.8		2.0
Total Delay		57.5		15.5		5.3		8.3
Queue Length 50th (ft)		160		6		108		185
Queue Length 95th (ft)		234		33		m109		m212
Internal Link Dist (ft)		565		410		256		420
Turn Bay Length (ft)								
Base Capacity (vph)		395		445		2385		2347
Starvation Cap Reductn		0		0		540		514
Spillback Cap Reductn		22		1		162		657
Storage Cap Reductn		0		0		0		0
Reduced v/c Ratio		0.63		0.09		0.80		0.89

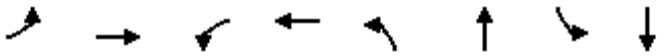
Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 17 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Cherry Street & Elm Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	40	30	10	0	30	20	1420	10	20	1210	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.90			1.00			0.98	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1768			1652			3533			3450	
Flt Permitted		0.79			0.94			0.91			0.91	
Satd. Flow (perm)		1446			1566			3229			3158	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	163	41	31	10	0	31	20	1449	10	20	1235	245
RTOR Reduction (vph)	0	6	0	0	25	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	229	0	0	16	0	0	1479	0	0	1489	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			84.0			84.0	
Effective Green, g (s)		24.0			24.0			85.0			85.0	
Actuated g/C Ratio		0.21			0.21			0.74			0.74	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		302			327			2387			2334	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.01			0.46			c0.47	
v/c Ratio		0.76			0.05			0.62			0.64	
Uniform Delay, d1		42.8			36.4			7.2			7.4	
Progression Factor		1.00			1.00			0.54			0.72	
Incremental Delay, d2		10.5			0.1			0.1			0.4	
Delay (s)		53.3			36.5			4.0			5.7	
Level of Service		D			D			A			A	
Approach Delay (s)		53.3			36.5			4.0			5.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	520	670	130	590	180	750	130	910
Lane Group Flow (vph)	531	929	133	786	184	877	133	1143
Turn Type	pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	7	4	3	8	5	2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	21.0	14.0	21.0	14.0	21.0	21.0	21.0
Total Split (s)	23.0	49.0	14.0	40.0	14.0	52.0	38.0	38.0
Total Split (%)	20.0%	42.6%	12.2%	34.8%	12.2%	45.2%	33.0%	33.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	0.0	-1.0	0.0	-1.0	0.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	1.48	1.28	0.64	1.37	0.84	0.60	0.91	1.10
Control Delay	257.9	169.1	29.6	203.5	55.6	27.6	86.6	95.5
Queue Delay	0.0	158.2	0.0	0.0	0.0	0.1	0.0	64.3
Total Delay	257.9	327.3	29.6	203.5	55.6	27.7	86.6	159.8
Queue Length 50th (ft)	~493	~882	37	~769	87	256	95	~498
Queue Length 95th (ft)	#710	#1133	m67	m#915	#207	322	m#206	#625
Internal Link Dist (ft)		290		495		389		256
Turn Bay Length (ft)	200		150		250		225	
Base Capacity (vph)	359	723	220	572	220	1459	146	1035
Starvation Cap Reductn	0	156	0	0	0	0	0	122
Spillback Cap Reductn	0	0	0	0	0	76	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.48	1.64	0.60	1.37	0.84	0.63	0.91	1.25

Intersection Summary

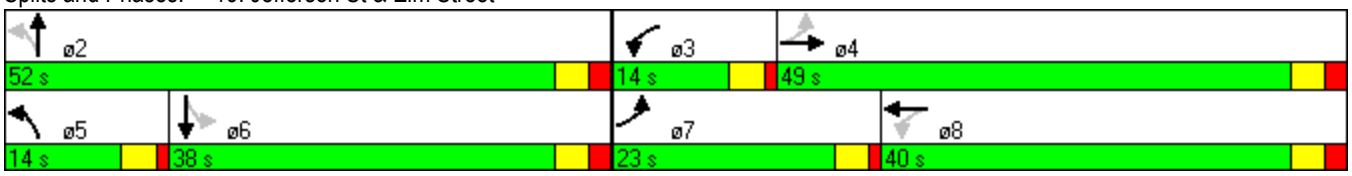
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 26 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

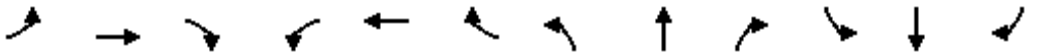
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: Jefferson St & Elm Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	520	670	240	130	590	180	180	750	110	130	910	210
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		5.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1789		1770	1797		1770	3471		1770	3440	
Flt Permitted	0.10	1.00		0.11	1.00		0.11	1.00		0.27	1.00	
Satd. Flow (perm)	191	1789		213	1797		201	3471		510	3440	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	531	684	245	133	602	184	184	765	112	133	929	214
RTOR Reduction (vph)	0	11	0	0	10	0	0	10	0	0	18	0
Lane Group Flow (vph)	531	918	0	133	776	0	184	867	0	133	1125	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	58.0	44.8		44.2	35.0		47.0	47.0		33.0	33.0	
Effective Green, g (s)	58.0	45.8		44.2	36.0		47.0	48.0		33.0	34.0	
Actuated g/C Ratio	0.50	0.40		0.38	0.31		0.41	0.42		0.29	0.30	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	357	712		206	563		219	1449		146	1017	
v/s Ratio Prot	c0.25	0.51		0.05	0.43		c0.07	0.25			c0.33	
v/s Ratio Perm	c0.50			0.20			0.27			0.26		
v/c Ratio	1.49	1.29		0.65	1.38		0.84	0.60		0.91	1.11	
Uniform Delay, d1	35.6	34.6		28.1	39.5		27.7	26.0		39.6	40.5	
Progression Factor	1.00	1.00		0.92	0.76		1.00	1.00		0.97	0.98	
Incremental Delay, d2	233.8	140.7		4.8	178.3		24.1	1.8		45.6	59.4	
Delay (s)	269.3	175.3		30.7	208.5		51.8	27.8		84.1	99.2	
Level of Service	F	F		C	F		D	C		F	F	
Approach Delay (s)		209.5			182.8			32.0			97.6	
Approach LOS		F			F			C			F	

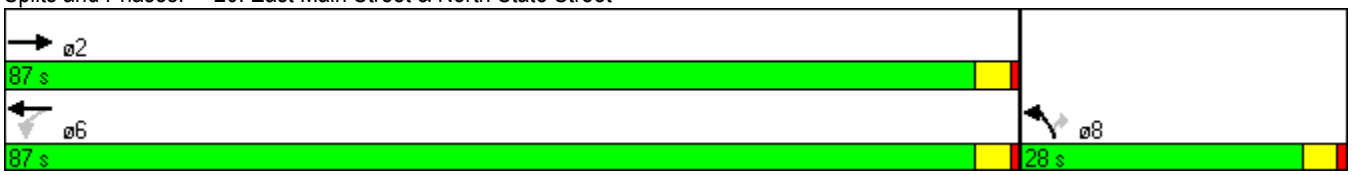
Intersection Summary			
HCM Average Control Delay	134.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	126.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

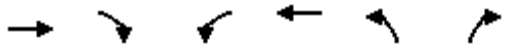
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Volume (vph)	1742	42	1469	24	189
Lane Group Flow (vph)	1828	43	1499	24	193
Turn Type		Perm			Perm
Protected Phases	2		6	8	
Permitted Phases		6			8
Detector Phase	2	6	6	8	8
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	7.0	7.0
Minimum Split (s)	20.0	20.0	20.0	22.0	22.0
Total Split (s)	87.0	87.0	87.0	28.0	28.0
Total Split (%)	75.7%	75.7%	75.7%	24.3%	24.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
v/c Ratio	0.58	0.28	0.48	0.09	0.73
Control Delay	6.3	8.6	5.0	40.5	52.9
Queue Delay	0.0	0.0	1.8	0.0	0.4
Total Delay	6.4	8.6	6.8	40.5	53.2
Queue Length 50th (ft)	229	8	193	16	110
Queue Length 95th (ft)	376	m13	m223	38	178
Internal Link Dist (ft)	821		161	767	
Turn Bay Length (ft)					
Base Capacity (vph)	3142	151	3153	369	362
Starvation Cap Reductn	0	0	1419	0	0
Spillback Cap Reductn	150	0	0	0	23
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.28	0.86	0.07	0.57

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 18 (16%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: East Main Street & North State Street

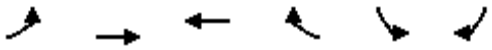




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1742	49	42	1469	24	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	16	12	12
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3995		2006	4011	1770	1583
Flt Permitted	1.00		0.09	1.00	0.95	1.00
Satd. Flow (perm)	3995		192	4011	1770	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1778	50	43	1499	24	193
RTOR Reduction (vph)	1	0	0	0	0	34
Lane Group Flow (vph)	1827	0	43	1499	24	159
Turn Type			Perm			Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	90.4		90.4	90.4	16.6	16.6
Effective Green, g (s)	90.4		90.4	90.4	16.6	16.6
Actuated g/C Ratio	0.79		0.79	0.79	0.14	0.14
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	0.2		0.2	0.2	3.0	3.0
Lane Grp Cap (vph)	3140		151	3153	255	229
v/s Ratio Prot	c0.46			0.37	0.01	
v/s Ratio Perm			0.22			c0.10
v/c Ratio	0.58		0.28	0.48	0.09	0.69
Uniform Delay, d1	4.8		3.4	4.2	42.7	46.8
Progression Factor	1.00		1.01	0.98	1.00	1.00
Incremental Delay, d2	0.8		2.9	0.3	0.2	8.8
Delay (s)	5.6		6.3	4.4	42.8	55.5
Level of Service	A		A	A	D	E
Approach Delay (s)	5.6			4.5	54.1	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	1925	1453	16	0	165
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	2092	1579	17	0	179
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		241	172			
pX, platoon unblocked	0.85				0.86	0.85
vC, conflicting volume	1597				2645	798
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1358				1830	424
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	64
cM capacity (veh/h)	429				58	494

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	703	1395	1053	544	179
Volume Left	5	0	0	0	0
Volume Right	0	0	0	17	179
cSH	429	1700	1700	1700	494
Volume to Capacity	0.01	0.82	0.62	0.32	0.36
Queue Length 95th (ft)	1	0	0	0	41
Control Delay (s)	0.4	0.0	0.0	0.0	16.4
Lane LOS	A				C
Approach Delay (s)	0.1		0.0		16.4
Approach LOS					C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Volume (vph)	1536	322	955	365	274
Lane Group Flow (vph)	1970	0	1303	372	280
Turn Type		Perm			Perm
Protected Phases	2		6	8	
Permitted Phases		6			8
Detector Phase	2	6	6	8	8
Switch Phase					
Minimum Initial (s)	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	22.0	20.0	20.0	22.0	22.0
Total Split (s)	88.0	88.0	88.0	27.0	27.0
Total Split (%)	76.5%	76.5%	76.5%	23.5%	23.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
v/c Ratio	0.78		4.16dl	1.05	0.77
Control Delay	9.6		32.8	74.2	35.9
Queue Delay	0.6		1.1	0.0	0.3
Total Delay	10.2		33.9	74.2	36.2
Queue Length 50th (ft)	467		~130	~305	169
Queue Length 95th (ft)	295		#667	m252	m141
Internal Link Dist (ft)	92		247	1518	
Turn Bay Length (ft)				250	
Base Capacity (vph)	2525		1290	354	366
Starvation Cap Reductn	81		0	0	0
Spillback Cap Reductn	220		5	0	4
Storage Cap Reductn	0		0	0	0
Reduced v/c Ratio	0.85		1.01	1.05	0.77

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 73 (63%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 22: East Main Street & Myrtle Avenue

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1536	395	322	955	365	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.97			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	3431			3495	1770	1583
Flt Permitted	1.00			0.50	0.95	1.00
Satd. Flow (perm)	3431			1766	1770	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1567	403	329	974	372	280
RTOR Reduction (vph)	20	0	0	0	0	50
Lane Group Flow (vph)	1950	0	0	1303	372	230
Turn Type			Perm			Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	84.0			84.0	23.0	23.0
Effective Green, g (s)	84.0			84.0	23.0	23.0
Actuated g/C Ratio	0.73			0.73	0.20	0.20
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	0.2			0.2	3.0	3.0
Lane Grp Cap (vph)	2506			1290	354	317
v/s Ratio Prot	0.57				c0.21	
v/s Ratio Perm				c0.74		0.15
v/c Ratio	0.78			4.16dl	1.05	0.73
Uniform Delay, d1	9.7			15.5	46.0	43.1
Progression Factor	0.78			0.52	0.98	1.00
Incremental Delay, d2	2.1			22.4	30.1	0.8
Delay (s)	9.6			30.4	75.1	44.0
Level of Service	A			C	E	D
Approach Delay (s)	9.6			30.4	61.8	
Approach LOS	A			C	E	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.0%	ICU Level of Service	H
Analysis Period (min)	15		

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

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Volume (vph)	1735	64	1222	55
Lane Group Flow (vph)	1966	0	1398	122
Turn Type		Perm		
Protected Phases	2		6	8
Permitted Phases		6		
Detector Phase	2	6	6	8
Switch Phase				
Minimum Initial (s)	15.0	15.0	15.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	95.0	95.0	95.0	20.0
Total Split (%)	82.6%	82.6%	82.6%	17.4%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	None	None	Max
v/c Ratio	0.71		0.77	0.46
Control Delay	5.4		10.5	37.1
Queue Delay	1.2		0.5	0.1
Total Delay	6.7		11.0	37.2
Queue Length 50th (ft)	274		391	57
Queue Length 95th (ft)	306		m470	118
Internal Link Dist (ft)	247		325	1016
Turn Bay Length (ft)				
Base Capacity (vph)	2787		1809	268
Starvation Cap Reductn	547		122	0
Spillback Cap Reductn	392		0	4
Storage Cap Reductn	0		0	0
Reduced v/c Ratio	0.88		0.83	0.46

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: East Main Street & Maple Avenue

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1735	74	64	1222	55	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.95			0.95	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3518			3530	1693	
Flt Permitted	1.00			0.65	0.98	
Satd. Flow (perm)	3518			2288	1693	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1886	80	70	1328	60	62
RTOR Reduction (vph)	3	0	0	0	33	0
Lane Group Flow (vph)	1963	0	0	1398	89	0
Turn Type			Perm			
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	91.0			91.0	16.0	
Effective Green, g (s)	91.0			91.0	16.0	
Actuated g/C Ratio	0.79			0.79	0.14	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2784			1811	236	
v/s Ratio Prot	0.56				c0.05	
v/s Ratio Perm				c0.61		
v/c Ratio	0.71			0.77	0.38	
Uniform Delay, d1	5.7			6.4	45.0	
Progression Factor	0.76			1.13	1.00	
Incremental Delay, d2	1.0			1.7	4.6	
Delay (s)	5.3			9.0	49.5	
Level of Service	A			A	D	
Approach Delay (s)	5.3			9.0	49.5	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	102	1431	370	931	245	32	34	55	34
Lane Group Flow (vph)	104	1725	378	985	0	283	35	0	202
Turn Type	pm+pt		pm+pt		Perm		Perm	Perm	
Protected Phases	5	2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	8.0	4.0	8.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	8.0	20.0	8.0	20.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	10.0	58.0	23.0	71.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	8.7%	50.4%	20.0%	61.7%	29.6%	29.6%	29.6%	29.6%	29.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.31	1.05	1.06	0.48		1.11	0.08		0.61
Control Delay	7.9	58.3	98.0	14.7		129.4	10.8		36.6
Queue Delay	0.0	29.9	0.0	0.2		0.0	0.0		0.1
Total Delay	7.9	88.2	98.0	14.9		129.4	10.8		36.7
Queue Length 50th (ft)	16	~736	~256	208		~240	0		98
Queue Length 95th (ft)	m30	#323	#449	260		#411	25		183
Internal Link Dist (ft)		325		1546		1598			1086
Turn Bay Length (ft)	120		180						
Base Capacity (vph)	337	1636	357	2060		255	439		329
Starvation Cap Reductn	0	104	0	0		0	0		0
Spillback Cap Reductn	0	0	0	333		0	0		5
Storage Cap Reductn	0	0	0	0		0	0		0
Reduced v/c Ratio	0.31	1.13	1.06	0.57		1.11	0.08		0.62

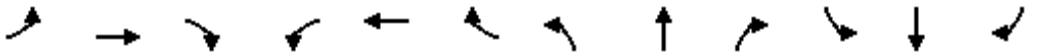
Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 71 (62%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: East Main Street & Lincoln Avenue



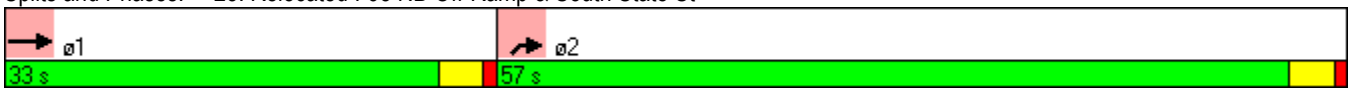
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1431	260	370	931	34	245	32	34	55	34	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	0.99			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1770	3458		1770	3520			1784	1583		1701	
Flt Permitted	0.28	1.00		0.07	1.00			0.53	1.00		0.65	
Satd. Flow (perm)	520	3458		128	3520			978	1583		1113	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	104	1460	265	378	950	35	250	33	35	56	35	111
RTOR Reduction (vph)	0	13	0	0	2	0	0	0	26	0	38	0
Lane Group Flow (vph)	104	1712	0	378	983	0	0	283	9	0	164	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	59.8	54.0		77.0	67.2			30.0	30.0		30.0	
Effective Green, g (s)	59.8	54.0		77.0	67.2			30.0	30.0		30.0	
Actuated g/C Ratio	0.52	0.47		0.67	0.58			0.26	0.26		0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	2.0	0.2		2.0	0.2			3.0	3.0		3.0	
Lane Grp Cap (vph)	333	1624		357	2057			255	413		290	
v/s Ratio Prot	0.02	0.50		c0.17	0.28							
v/s Ratio Perm	0.15			c0.53				c0.29	0.01		0.15	
v/c Ratio	0.31	1.05		1.06	0.48			1.11	0.02		0.56	
Uniform Delay, d1	14.1	30.5		39.0	13.8			42.5	31.6		36.8	
Progression Factor	0.73	0.73		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	35.0		64.0	0.8			89.0	0.0		2.5	
Delay (s)	10.4	57.3		103.0	14.6			131.5	31.6		39.3	
Level of Service	B	E		F	B			F	C		D	
Approach Delay (s)		54.7			39.1			120.5			39.3	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM Average Control Delay	53.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NER
Lane Configurations		
Volume (vph)	970	2070
Lane Group Flow (vph)	1054	2250
Turn Type		custom
Protected Phases	1	2
Permitted Phases		
Detector Phase	1	2
Switch Phase		
Minimum Initial (s)	12.0	12.0
Minimum Split (s)	20.0	20.0
Total Split (s)	33.0	57.0
Total Split (%)	36.7%	63.3%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.0	4.0
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	C-Max
v/c Ratio	0.93	0.94
Control Delay	44.2	27.1
Queue Delay	0.0	2.3
Total Delay	44.2	29.4
Queue Length 50th (ft)	302	450
Queue Length 95th (ft)	#429	#598
Internal Link Dist (ft)	408	
Turn Bay Length (ft)		
Base Capacity (vph)	1140	2401
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	80
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.92	0.97

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NER and 6:, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 25: Relocated I-95 NB Off-Ramp & South State St



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	970	0	0	0	0	2070
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0
Lane Util. Factor	0.95					0.64
Frt	1.00					0.85
Flt Protected	1.00					1.00
Satd. Flow (prot)	3539					4053
Flt Permitted	1.00					1.00
Satd. Flow (perm)	3539					4053
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1054	0	0	0	0	2250
RTOR Reduction (vph)	0	0	0	0	0	13
Lane Group Flow (vph)	1054	0	0	0	0	2237
Turn Type						custom
Protected Phases	1					2
Permitted Phases						
Actuated Green, G (s)	29.0					53.0
Effective Green, g (s)	29.0					53.0
Actuated g/C Ratio	0.32					0.59
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	1140					2387
v/s Ratio Prot	c0.30					c0.55
v/s Ratio Perm						
v/c Ratio	0.92					0.94
Uniform Delay, d1	29.4					17.0
Progression Factor	1.00					1.22
Incremental Delay, d2	12.4					6.0
Delay (s)	41.8					26.7
Level of Service	D					C
Approach Delay (s)	41.8			0.0	26.7	
Approach LOS	D			A	C	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			