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APPENDIX TC-10

Street Improvements, Bi-Directional Condition
(Contract Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

Revision Date: July 22, 2010

STREET IMPROVEMENTS, BI-DIRECTIONAL CONDITION REQUIREMENTS……3

ATTACHMENT A: YEAR 2015 CENTRAL VIADUCT BI-DIRECTIONAL, AM PEAK HOUR

ATTACHMENT B: YEAR 2015 CENTRAL VIADUCT BI-DIRECTIONAL, PM PEAK HOUR

ATTACHMENT C: YEAR 2015 CENTRAL VIADUCT BI-DIRECTIONAL WITH IMPROVEMENTS, AM PEAK HOUR

ATTACHMENT D: YEAR 2015 CENTRAL VIADUCT BI-DIRECTIONAL WITH IMPROVEMENTS, PM PEAK HOUR

STREET IMPROVEMENTS, BI-DIRECTIONAL CONDITION REQUIREMENTS

1.0 Background

The Innerbelt Study incorporated traffic modeling of the 2015 and 2035 Build and No Build traffic conditions, including the *Cleveland Innerbelt: Interchange Justification Study* (March 2009), with certified traffic. This Study is included in Appendix TC-03 Interchange Justification Study (IJS). Completion of CCG1 will create a roadway network that matches neither the No Build nor the Build traffic conditions; it will be an interim configuration termed the Bi-Directional Condition. This interim condition has been analyzed through the development of a Synchro/SimTraffic microsimulation traffic analysis model to evaluate performance of the City's roadway network in the Central Interchange area and to identify roadway and intersection improvements to enhance operational performance during the Bi-Directional Condition. The results of that analysis were used to identify street and intersection improvements to be completed by the DBT to improve anticipated traffic operations. Signing guidance for the Bi-Directional Condition is provided in the Bi-Directional Signing Conceptual Plans, Appendix TC-01.

Comment [rlf1]: Addendum No. 9

Comment [rlf2]: Addendum No. 9

As part of the Innerbelt project research, the city street system was analyzed to identify potential improvements to roadways, intersections and corridors that may be used as detour routes. Recommended improvements are provided in the *Local Alternate Routes Study* (report not dated). Included in Appendix TC-09 B&N Local Route Study. These recommendations were reviewed for applicability within the Bi-Directional Condition, and improvements to be implemented as part of CCG1 are also listed within this document.

Comment [rlf3]: Addendum No. 9

This Appendix document identifies improvements identified by the *Local Alternate Routes Study* and the traffic analysis of the City's roadway network in the Central Interchange and adjacent areas in the Bi-Directional Condition, for implementation in CCG1 of the Innerbelt Project. ***These improvements shall be completed prior to beginning tie-in work at the north and/or south ends of the new bridge and implementation of maintenance of traffic plans***. Modification of signal timing plans will be accomplished after updated traffic volume data is collected when the traffic is operating under the Bi-Directional Condition.

All figures included in this document are conceptual images, not design drawings. They are intended to illustrate concepts to be used by the DBT in the development of the design plans.

All improvements identified within this document shall be implemented by the DBT. Because the improvements are identified in a conceptual manner, the DBT shall review and confirm necessary calculations, and make necessary adjustments while meeting the scope and intent of the identified improvements.

2.0 Signal Interconnect – Coordinated Corridors

The DBT shall implement coordinated signal systems along the W.25th Street, Ontario-Orange, Carnegie, and E.22nd Street corridors. The City currently has signal coordination equipment along Carnegie Ave. The Project Scope includes provision of signal interconnect along the Ontario-Orange corridor (Project

Scope Section 17.2.11). This Appendix requires the DBT to provide signal coordination equipment along the E.22nd Street and W.25th Street corridors, as defined below.

The DBT shall coordinate the provision and installation of the interconnect systems with ODOT and the City of Cleveland. The interconnect systems may be wireless (radio) or hard wire (overhead or underground). Fiber optic interconnect is prohibited. If overhead hard wire interconnect is used, the DBT shall coordinate with appropriate utilities for mounting signal coordination equipment on existing utility poles. If wireless interconnect is used, repeaters shall be provided, as needed. In either case, the DBT shall provide all necessary materials and equipment for complete, functional interconnect systems. This shall include controller upgrades, repeaters, and other items, as needed. Known required improvements ~~include~~are listed below~~:~~. The DBT shall determine and provide additional equipment as necessary to provide complete, functional interconnect systems.

Comment [apg4]: Addendum No. 6

Comment [apg5]: Addendum No. 6

A. Interconnect for the E.22nd Street corridor will require upgrading the controller at E.22nd/Community College to an Eagle controller within the existing cabinet.
B. Signal interconnect for the W.25th Street corridor will require upgrading 5 signal controllers to Eagle controllers within the existing cabinets. They are: Detroit, Vermont, Vestry, and Franklin intersections and the CMHA crosswalk.

Vehicle detection shall be provided by loop detectors and/or video detection systems. Radio interconnect and video detection equipment shall be compatible with Siemen's Eagle controllers and cabinets, capable of providing fully functional interconnect and detection systems. Additionally, the suppliers/system distributors shall be familiar with Eagle controllers; they shall be able to provide acceptable technical support to the City for implementation of their equipment and devices.

Comment [apg6]: Addendum No. 6

The DBT shall verify that loop detectors are functioning. The DBT shall replace non-functioning loops. Note: Loop detectors are not required for major street through movements because those approaches will default to green. All other movements are actuated and require functioning vehicle detection.

The DBT shall conduct turning movement counts for the W.25th Street corridor. Traffic counts shall be conducted for a minimum of three (3) hours during weekday peak hours (6:30 to 9:30 AM and 3:00 to 6:00 PM). Traffic counts for the other corridors are covered in the defined count program in the Project Scope program (Project Scope Section 18.3.5). The DBT shall use the traffic count data to develop AM Peak, PM Peak and Average (off peak) signal timing plans that optimize signal progression along the corridors. The signal timing plans shall be developed using Synchro/SimTraffic microsimulation traffic analysis models. The DBT shall provide electronic files of the traffic models to ODOT and the City of Cleveland.

The DBT shall work with the City of Cleveland (Traffic) staff for implementation of the timing plans into the intersection controllers. City staff will program all signal timing adjustments into the controllers; the DBT will not have access to the controllers.

Comment [apg7]: Addendum No. 6

2.1 E.22nd Street Corridor

Provide signal interconnect along the E.22nd Street corridor between and including the Carnegie and Orange intersections. There are five (5) signalized intersections in this corridor, as listed below. The DBT shall optimize network and intersection signal timing and phasing, as appropriate, to provide

efficient traffic operations along the corridor. The DBT shall consider the Carnegie and Ontario-Orange corridor operations in the development of the timing plans. The Synchro/SimTraffic traffic model of the Bi-Directional Condition shall be used to develop the timing plans. However, the DBT shall update the model with the current traffic volume counts. The DBT shall coordinate all model adjustments with the City of Cleveland (Traffic). Specific interconnect requirements shall be provided as described in Section 2.3.

Comment [apg8]: Addendum No. 6

Carnegie / E.22nd Street
Cedar / E.22nd Street
Central / E.22nd Street
Community College / E.22nd Street
Orange / E.22nd Street

2.2 W.25th Street Corridor

Provide signal interconnect along the W.25th Street corridor between and including the SR 2 (Buckley-Superior Viaduct) and I-71 northbound ramp intersections. There are twenty-five (25) signalized intersections in this corridor, as listed below. The DBT shall optimize network and intersection signal timing and phasing, as appropriate, to provide efficient traffic operations along the corridor. Specific interconnect requirements shall be provided as described in Section 2.3.

Comment [apg9]: Addendum No. 6

Vermont-Superior Viaduct/W.25th Street
Detroit/W.25th Street
Franklin/W.25th Street
Vestry/W.25th Street
CMHA crosswalk across W.25th St (at Jay)
Bridge/W.25th Street
Lorain/W.25th Street
Gehring/Lorain
Gehring/Abbey
Gehring-Chatham/W.25th Street
Monroe/W.25th Street
Columbus/W.25th Street
Potter/W.25th Street
Queen/W.25th Street
Barber/W.25th Street
Wade/W.25th Street
Walton/W.25th Street
Clark/W.25th Street
Meyer/W.25th Street
Metro Health/W.25th Street
Trowbridge/W.25th Street
Woodbridge/W.25th Street
Southpoint-Marvin/W.25th Street
I-71 southbound ramps/W.25th Street
I-71 northbound ramps/W.25th Street

Comment [rlf10]: Addendum No. 9

2.3 Modifications to Existing Signal Interconnect Systems

~~T~~The existing signal interconnect systems are described below. Some modifications to these systems will be required to accommodate and/or incorporate the signals to be interconnected as part of this project, as indicated. Although the interconnect systems can accommodate up to 24 intersections, the DBT shall interconnect a maximum of 21 intersections per interconnect system. Additionally, the DBT shall implement the interconnect systems in accordance with the information provided below. Interconnect systems shall be connected via hardwire (twisted pair, overhead or underground) or radio, in compliance with City standards and in accordance with information provided in the project scope and this document. Fiber interconnect is not acceptable.

Comment [rlf11]: Addendum No. 9

Interconnect system installations and modifications shall be coordinated with the City of Cleveland Division of Traffic Engineering. The interconnect systems will be owned and maintained by the City of

Cleveland. The City of Cleveland Traffic Signal Office serves as the traffic operations center (TOC). It is located at 4150 E.49 Street, Building #4, Cleveland, Ohio 44105.

2.3.1. Prospect Street System (existing)

The existing signal interconnect system on Prospect Street runs from E.14th Street east to Prospect Road with additional connections to adjacent intersections. The signal master is located at E.21st Street/Prospect. Intersections within the existing Prospect Street system are listed below. This system will be modified and the signal master shall be relocated, as described below.

Comment [rlf12]: Addendum No. 9

- E.14th Street/Prospect
- E.18th Street/Prospect
- E.21st Street/Prospect (existing signal master, to be relocated)
- E.22nd Street/Prospect
- I-90 WB ramp/Prospect
- E.30th Street/Prospect
- E.36th Street/Prospect
- E.40th Street/Prospect
- Prospect Rd/Prospect
- E.22nd Street/Carnegie (new/relocated signal master)
- E.22nd Street/Cedar
- E.21st Street/Carnegie
- E.19th Street/Carnegie
- E.18th Street/Carnegie
- E.14th Street/Carnegie

The intersections listed below shall be added to the Prospect Street system. The city will move the signal master from its existing location at E.21st Street/Prospect to E.22nd Street/Carnegie. The DBT shall provide the phone line connection to the relocated signal master at E.22nd Street/Carnegie. The Cedar/E.22nd Street intersection will be reconstructed as part of this project, requiring reconstruction of the interconnect as well as connection to the E.22nd Street intersections to the south. Radio interconnect is preferred from the new signal master at E.22nd Street/Carnegie to the south along E.22nd Street. However, consideration must be given to the St. Vincent's Hospital overhead walkway. If radio communications are blocked, twisted pair is acceptable.

- Central/E.22nd Street
- Community College/E.22nd Street

2.3.2. Lorain Road System (existing)

The existing signal interconnect system on Lorain Road runs from W.20th Street west to W.85th Street, with additional connections to these adjacent intersections: Gehring/Abbey, Chatham-Gehring/W.25th Street, and Monroe-Columbus/W.25th Street. The signal master is located at Fulton Road.

The existing Lorain Road system will be split into two systems to allow interconnection of additional intersections at the east end of the existing network. The first system will be the western section, running from W.28th Street west to W.85th Street with the signal master at Fulton Road. The second system will incorporate intersections on and near the W.25th Street corridor (listed below) with a new

signal master at the W.25th Street/Lorain intersection. The existing twisted pair system will be used to connect to the east and south of the signal master and new radio interconnect will be provided to connect to the north. W.25th Street/Lorain will require an antenna to tie into the signals to the north for radio interconnect.

2.3.3. New/Reconfigured Lorain/W.25th Street Interconnect System

- Vermont/W.25th Street
- Detroit/W.25th Street
- Franklin/W.25th Street
- Vestry/W.25th Street
- CMHA crosswalk/W.25th Street
- Bridge/W.25th Street
- Lorain/W.25th Street (new signal master)
- Lorain/W.24th Street-Gehring
- Lorain/W.20th Street
- Gehring/Abbey
- Chatham-Gehring/W.25th Street
- Monroe-Columbus/W.25th Street

2.3.4. W.25th Street System (existing)

The existing signal interconnect system on W.25th Street runs from Potter Court south to the I-71 ramp intersections. The signal master is located at Meyer Avenue. This system shall remain intact.

Comment [apg13]: Addendum No. 6

~~2.1 E.22nd Street Corridor~~

~~Provide signal interconnect along the E.22nd Street corridor between and including the Carnegie and Orange intersections. There are five (5) signalized intersections in this corridor, as listed below. The DBT shall optimize network and intersection signal timing and phasing, as appropriate, to provide efficient traffic operations along the corridor. The DBT shall consider the Carnegie and Ontario-Orange corridor operations in the development of the timing plans. The Synchro/SimTraffic traffic model of the Bi-Directional Condition shall be used to develop the timing plans. However, the DBT shall update the model with the current traffic volume counts. The DBT shall coordinate all model adjustments with the City of Cleveland (Traffic). Specific interconnect requirements shall be provided as described in Section 2.1.~~

Comment [apg14]: Addendum No. 6

- ~~Carnegie / E.22nd Street~~
- ~~Cedar / E.22nd Street~~
- ~~Central / E.22nd Street~~
- ~~Community College / E.22nd Street~~
- ~~Orange / E.22nd Street~~

~~2.2 W.25th Street Corridor~~

~~Provide signal interconnect along the W.25th Street corridor between and including the SR 2 (Buckley-Superior Viaduct) and I-71 northbound ramp intersections. There are twenty-five (25) signalized intersections in this corridor, as listed below. The DBT shall optimize network and intersection signal~~

~~timing and phasing, as appropriate, to provide efficient traffic operations along the corridor. Specific interconnect requirements shall be provided as described in Section 2.1.~~

Comment [apg15]: Addendum No. 6

~~Vermont-Superior Viaduct/W.25th Street~~
~~Detroit/W.25th Street~~
~~Franklin/W.25th Street~~
~~Vestry/W.25th Street~~
~~CMHA crosswalk across W.25th St (at Jay)~~
~~Bridge/W.25th Street~~
~~Lorain/W.25th Street~~
~~Gehring/Lorain~~
~~Gehring/Abbey~~
~~Gehring-Chatham/W.25th Street~~
~~Monroe/W.25th Street~~
~~Columbus/W.25th Street~~
~~Potter/W.25th Street~~
~~Queen/W.25th Street~~
~~Barber/W.25th Street~~
~~Wade/W.25th Street~~
~~Walton/W.25th Street~~
~~Clark/W.25th Street~~
~~Meyer/W.25th Street~~
~~Metro Health/W.25th Street~~
~~Trowbridge/W.25th Street~~
~~Woodbridge/W.25th Street~~
~~Southpoint-Marvin/W.25th Street~~
~~I-71 southbound ramps/W.25th Street~~
~~I-71 northbound ramps/W.25th Street~~

Comment [rlf16]: Addendum No. 9

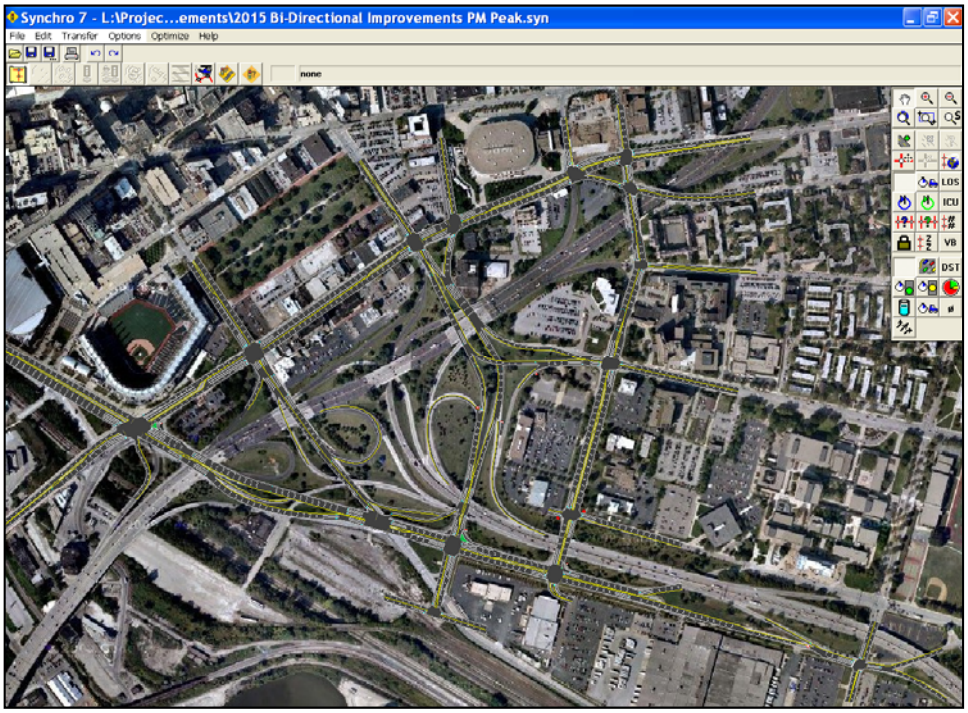
3.0 Intersection Modifications and Improvements

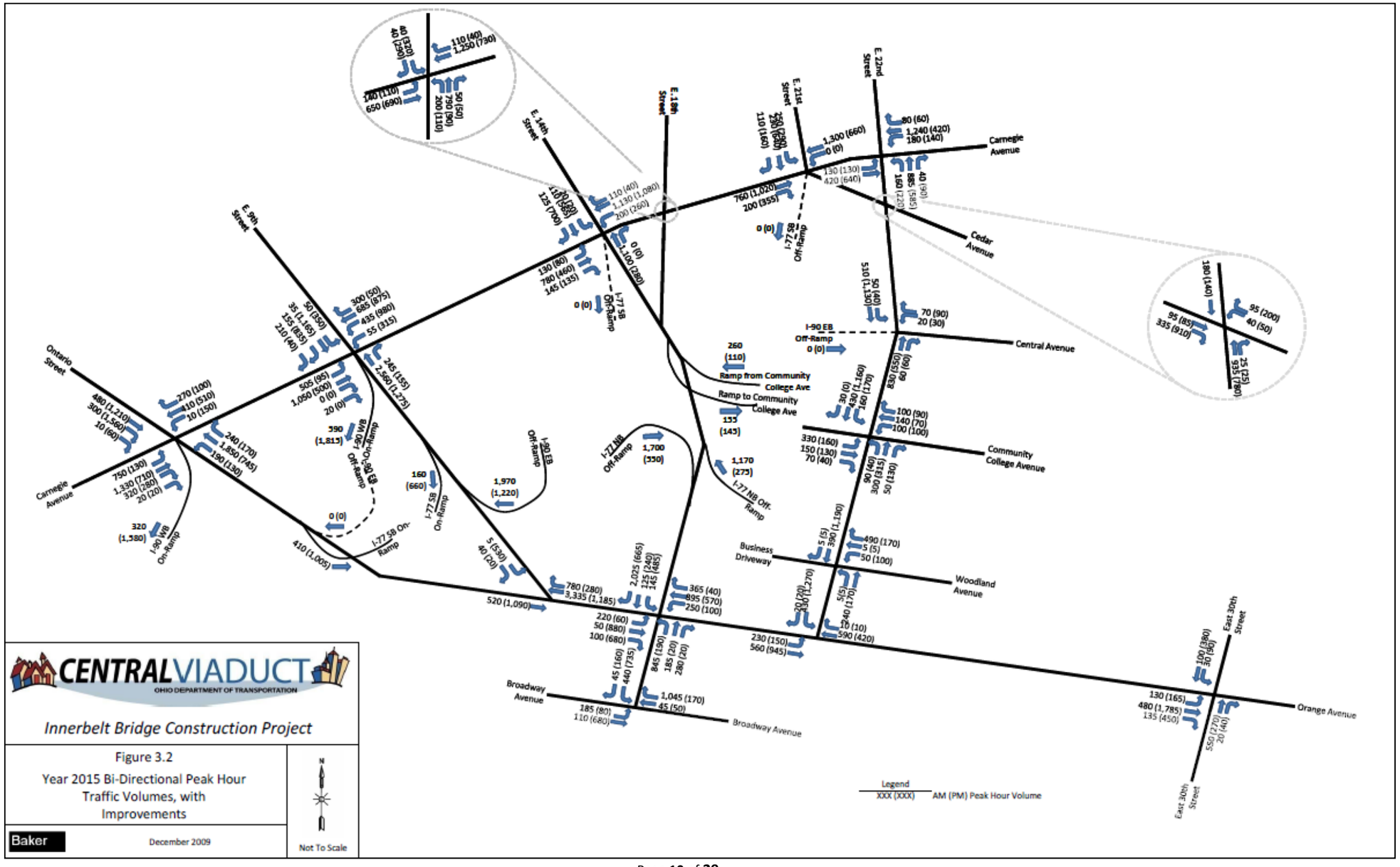
Modifications to intersections in the Central Interchange area were identified based on the performance of the Synchro/SimTraffic microsimulation traffic analysis model developed for the Bi-Directional Condition. The model incorporates the area roughly bounded by Carnegie, E.22nd Street, and Ontario-Orange; it also includes the E.14th Street/ Broadway and E.30th Street/Orange intersections. A Synchro screen capture illustrating the study area is shown in Figure 3.1. The model will be provided to the DBT for use during implementation of CCG1. It is included in Appendix DI-02 Electronic Document Inventory, under Baker Traffic Files. The model does not currently include the E.19th Street/Carnegie signalized intersection since traffic volume data was not available at the time of the model preparation. The DBT shall collect traffic volume data and incorporate this intersection into the Bi-Directional traffic model.

Comment [rlf17]: Addendum No. 9

The model was developed using estimated traffic volumes for the Bi-Directional Condition. The bi-directional traffic volume projections are illustrated in Figure 3.2. These volume estimates were projected from the certified traffic volumes in the *Cleveland Innerbelt: Interchange Justification Study* (March 2009). The DBT shall update the model based upon current traffic volume data, to be collected by the DBT, as defined in the Project Scope (Section 18.3.5).

Figure 3.1 Bi-Directional Synchro Model, Study Area




CENTRALVIADUCT
OHIO DEPARTMENT OF TRANSPORTATION
Innerbelt Bridge Construction Project
Figure 3.2
Year 2015 Bi-Directional Peak Hour Traffic Volumes, with Improvements
Baker
December 2009
Not To Scale
Legend
XXX (XXX) AM (PM) Peak Hour Volume
E. 14th Street
E. 18th Street
E. 21st Street
E. 22nd Street
E. 9th Street
Carnegie Avenue
Cedar Avenue
Central Avenue
Community College Avenue
Ontario Street
Business Driveway
Woodland Avenue
Broadway Avenue
East 30th Street
Orange Avenue
I-90 EB Off-Ramp
I-90 WB On-Ramp
I-90 WB Off-Ramp
I-77 SB Off-Ramp
I-77 SB On-Ramp
I-77 NB Off-Ramp
I-77 NB On-Ramp
Ramp from Community College Ave
Ramp to Community College Ave

3.1 Optimize Network Performance: Carnegie, E.22nd Street and Ontario-Orange Corridors

The DBT shall develop signal timing plans for the AM Peak, PM Peak and Average periods that optimize system performance. The Bi-Directional With Improvements model uses the cycle lengths identified below. The cycle lengths may need to be adjusted based on the updated traffic volume data. Signal phasing shall be consistent with the signal phasing in the Bi-Directional Synchro model.

Table 3.1 Bi-Directional Model Cycle Lengths

Intersection	AM Peak **Cycle Length** (sec)	PM Peak **Cycle Length** (sec)
Ontario / Carnegie	150	120
E.9th Street / Carnegie	120	120
E.14th Street / Carnegie	120	120
E.18th Street / Carnegie	120	120
E.21st Street / Carnegie	120	120
E.22nd Street / Carnegie	120	120
Cedar / E.22nd Street	100	100
Central / E.22nd Street	100	100
Community College / E.22nd Street	100	100
Woodland / E.22nd Street (unsignalized)	N/A	N/A
E.9th Street / Ontario-Orange	75	120
E.14th Street / Orange	150	120
E.14th Street / Broadway	75	60
E.22nd Street / Orange	75	120
E.30th Street / Orange	70	80

3.2 Ontario / Carnegie Modifications

3.2.1 Create NB Double Left

The configuration of the northbound approach at the Ontario/Carnegie intersection shall be: left, left, through, through, through, right (channelized). The outside left turn lane will be provided with a storage lane, as indicated on the CCG1 Roadway Engineering Conceptual Plans (LD-01). The second left turn lane is a trap lane created from the left most northbound through lane. The DBT shall provide appropriate signal heads, signing and pavement markings for the northbound approach.

3.2.2 Modify WB Left

Reduce the configuration of the westbound left turn lane to 220 ft storage plus a 100 ft taper. The pavement marking to accomplish this differs from the CCG1 plans and is necessary to accommodate the required storage for the eastbound double left turn at the E.9th Street/Carnegie intersection to the east. The westbound left at Ontario/Carnegie and the eastbound double left at E.9th Street/Carnegie will be back-to-back left turn lanes; there should be no excess space between them. ODOT's L&D design standards require a storage length of 200 ft for the anticipated westbound left turn volume and cycle length. The additional 20 ft splits the excess available space between the left turn lanes for the two

intersections. If additional length is available, it shall be split equitably between the two back-to-back left turn lanes.

3.2.3 Cycle Length Out of Network During Peaks

The cycle may operate at a length greater than the coordinated system during peak periods to optimize traffic operations. This is acceptable, if coordinated with the City of Cleveland (Traffic).

3.3 E.9th Street / Carnegie Improvements

This intersection is expected to carry a high volume of vehicles in the Bi-Directional Condition, particularly the westbound left during the PM peak.

3.3.1 Create WB Double Left and EB Double Left Turn Lanes

Create eastbound and westbound double left turn lanes at the E.9th Street/Carnegie intersection using the existing, left most westbound through lane within the existing roadway. The eastbound and westbound double left turn lanes will mirror each other.

The eastbound double left turn shall be configured with 300 ft of storage in each lane plus a 100 ft taper across the two lanes. The second eastbound left turn lane will be created by converting the left most westbound through lane (west of the intersection) into the outside left turn lane. This will be a back-to-back turn lane with the westbound left at the adjacent Ontario/Carnegie intersection. ODOT's L&D design standards require a double left storage length of 300 ft for the anticipated eastbound left turn volume and cycle length at E.9th Street/Carnegie. The additional 15 ft splits the excess available space between the left turn lanes for the two intersections, as estimated from the existing drawings. If additional length is available, it shall be split equitably between the two back-to-back left turn lanes.

The westbound double left shall be created within the existing roadway cross section. The left most left turn lane shall be created within the existing center turn lane. The second westbound left turn lane shall be created by converting the left most westbound through lane (east of the intersection) into a left turn trap lane. The outside westbound left turn lane shall direct drivers to westbound I-90, southbound I-77 and southbound E.9th Street. The second westbound left turn lane shall direct drivers to westbound I-90. The DBT shall provide appropriate signal heads, signing and pavement markings for the westbound double left. To provide sufficient notification to westbound drivers, signage shall include ~~an~~ overhead ~~sign bridge located approximately 225 ft west of the E.14th Street/Carnegie intersection, with a second overhead sign bridge located approximately 120 ft east of the E.9th Street/Carnegie intersection~~signs in accordance with the Bi-Directional Signing Conceptual Plans. Supplemental lane use control signs shall be provided on the mast arm at the E.9th Street/Carnegie intersection.

Based on the anticipated volumes and cycle lengths, ODOT's L&D design standards require a storage length of 400 ft for the left turn lane to westbound I-90 and southbound I-77 and a storage length of 1050 ft for the left turn lane exclusively to westbound I-90. There is approximately 1180 ft available on Carnegie between E.9th Street and E.14th Street. However, this length must also accommodate the eastbound left turn lane at E.14th Street, which requires storage length of 175 ft, per ODOT's L&D. (The existing pavement markings provide a storage length of approximately 60 ft, with available spillover into the center turn lane.) The storage length requirements for the westbound left at E.9th Street with the eastbound left at E.14th Street cannot be accommodated within the available roadway length. As such, the DBT shall provide an eastbound left turn lane with 125 ft storage plus 50 ft taper at the E.14th Street

Comment [rlf18]: Addendum No. 9

Comment [rlf19]: Addendum No. 9

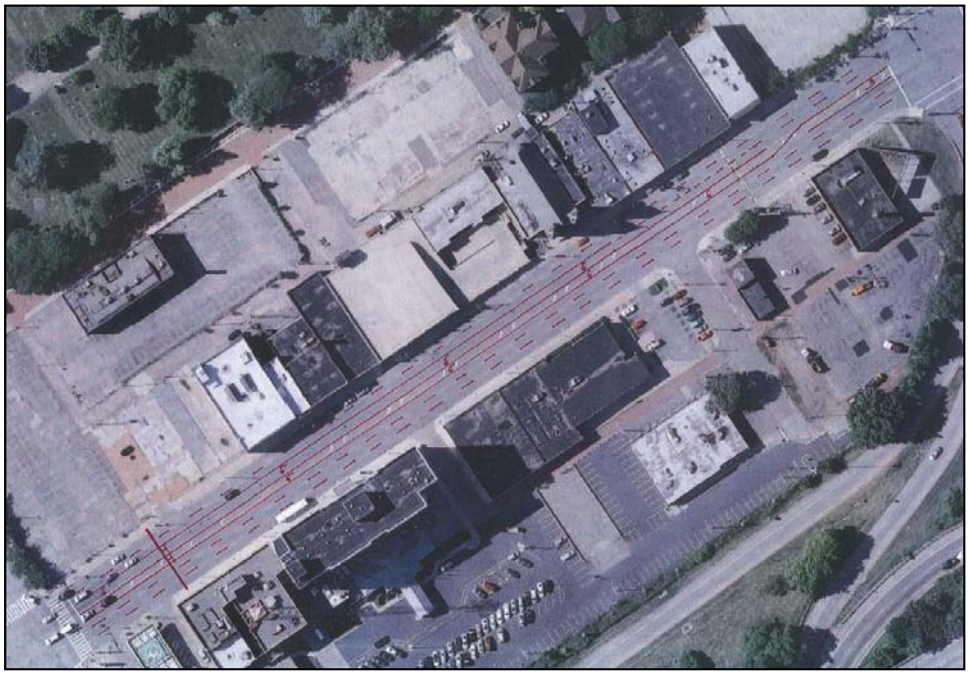
Comment [rlf20]: Addendum No. 9

Comment [rlf21]: Addendum No. 9

intersection and the remaining length shall be dedicated to the westbound double left turn at the E.9th Street intersection. This concept is sketched in Figure 3.3.

Figure 3.3 Conceptual WB Double Left at E.9th Street/Carnegie Intersection

Comment [rlf22]: Replaced Figure 3.3 per Addendum No. 9



3.4 E.14th Street / Carnegie

Reconfigure eastbound left turn lane to provide 125 ft storage plus 50 ft taper, as discussed in Section 3.3.1. Provide signal timing optimization, as appropriate.

3.5 E.18th Street / Carnegie

No recommended modifications other than signal timing optimization.

3.6 E.19th Street / Carnegie

This intersection shall be added to the count program and the DBT shall incorporate this intersection into the Bi-Directional Synchro model, as previously discussed. No recommended modifications other than signal timing optimization.

3.7 E.21st Street / Carnegie

~~No recommended modifications other than~~The southbound approach shall be modified with appropriate signing and pavement marking modifications to accommodate the closure of the E.21st Street on-ramp, as indicated in the Bi-Directional Signing Conceptual Plans. Additionally, signal timing shall be optimized to ~~ation~~account for traffic volume shifts associated with the ramp closure.

Comment [rlf23]: Addendum No. 9

3.8 E.22nd Street / Carnegie and E.22nd Street / Cedar

The DBT shall construct two new southbound lanes on E.22nd Street between Carnegie and Cedar. Two lanes shall be provided for queue storage because of the proximity of the two signalized intersections. The reconstructed roadway shall be consistent with the City of Cleveland roadway design; it shall include asphalt pavement, curb and gutter, sidewalk, curb ramps, pavement marking modifications to include crosswalks and lane-use arrows, etc. Utility coordination is required and relocation of street lighting on the west side of E.22nd Street along the new section of roadway is expected. This new southbound roadway link will affect both the Carnegie/E.22nd Street and the Cedar/E.22nd Street intersections. Along with roadway construction, the DBT shall implement the modifications and improvements listed below.

The DBT shall post signing indicating change in traffic pattern and change in signal operations at appropriate locations for 3 months immediately following implementation of the changes. Signing shall be provided in accordance with the Bi-Directional Signing Conceptual Plans. Signing shall be coordinated with City of Cleveland (Traffic).

Comment [rlf24]: Addendum No. 9

Power supply issues shall be coordinated with Cleveland Public Power (CPP).

3.8.1 Provide WB left at E. 22nd Street/Carnegie

Based on the anticipated volumes and cycle lengths, ODOT's L&D design standards require a storage length of 400 ft for the left turn lane. Provide the westbound left turn lane on Carnegie within the existing center turn lane. Modifications include: remove and replace pavement markings, add a signal head with left turn phase (protected/permitted), add a loop detector in the new westbound left turn lane, modify the controller cabinet equipment as needed, and adjust signal timing and phasing as appropriate. Restriping of the crosswalks on the west and south sides of the intersection is also required.

3.8.2 Modifications at Cedar/E.22nd Street

Add signal heads for the new southbound approach. Provide signal timing and phasing adjustments, and cabinet equipment modifications, as needed. Southbound through movements shall be permitted; southbound rights and southbound lefts shall be prohibited. For operational efficiency, convert the eastbound approach from left/through, through/right to through/right, right. Right turns on red (RTOR) shall be permitted ~~for the curb lane~~ on the eastbound approach for the curb lane only. The westbound approach shall remain unchanged (lane use and RTOR permitted). The DBT shall provide appropriate pavement markings (including lane-use arrows) and signage for the reconfigured intersection. The reconfiguration is illustrated in Figure 3.4. The DBT shall implement the provision of the two southbound lanes and associated modifications at the adjacent intersections in accordance with applicable City of Cleveland and ODOT standards.

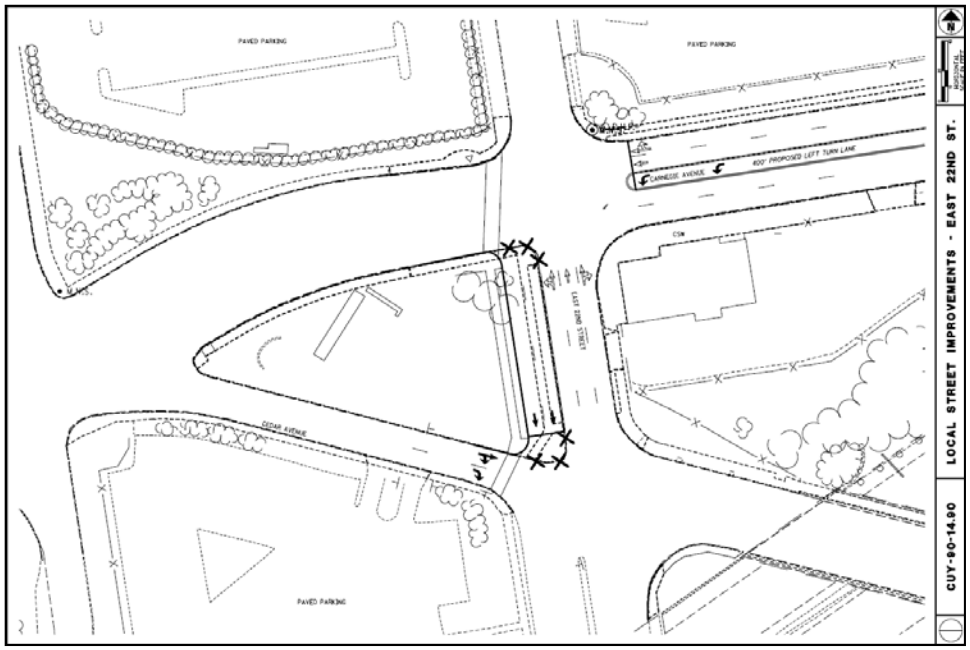
Comment [rlf25]: Addendum No. 9

In addition to the geometric modifications described above, it may be beneficial to adjust the signal timing within the Bi~~d~~-Directional Synchro model. The existing model optimizes signal timing along the three corridors: Ontario-Orange, Carnegie and E.22nd Street. The break between the Carnegie and E.22nd Street corridors occurs between the E.22nd Street/Carnegie and Cedar/E.22nd Street intersections, with Carnegie timed with a 120 sec cycle length and E.22nd Street timed with a 100 sec cycle length. Due to the proximity of the E.22nd Street/Carnegie and Cedar/E.22nd Street intersections, it may be better to match the cycle length at Cedar/E.22nd Street or half-cycle the intersection with the E.22nd Street/Carnegie intersection. This adjustment may reduce the likelihood of southbound queue spillback

Comment [rlf26]: Addendum No. 9

from Cedar to Carnegie. The E.22nd Street corridor could be timed to match the cycle length of the Carnegie corridor or the E.22nd Street corridor timing could begin at the Central/E.22nd Street intersection and continue to the south.

Figure 3.4 Conceptual Reconfiguration of E.22nd Street, Carnegie to Cedar



3.9 Central / E.22nd Street

No recommended modifications other than signal timing optimization.

3.10 Community College / E.22nd Street

No recommended modifications other than signal timing optimization.

3.11 Woodland / E.22nd Street (unsignalized)

No recommended modifications.

3.12 E.9th Street / Ontario-Orange

Prohibit westbound right turns from Orange to E.9th Street for vehicles traveling through the E.14th Street/Orange intersection as either westbound through or northbound left turning vehicles. (See E.14th Street/Orange modifications.)

Maintain the eastbound turn prohibition from Ontario (currently Broadway) to E.9th Street.

3.13 E.14th Street / Orange

Due to the ramp closures associated with CCG1 and the incomplete reconfiguration of the E.9th Street/Ontario-Orange intersection, the E.14th Street/Orange intersection is expected to carry a high volume of vehicles in the Bi-Directional Condition. High volume movements are the southbound right and northbound left movements during the AM peak, and the southbound left and eastbound right during the PM peak. Intersection modifications are necessary to accommodate the anticipated peak volumes, particularly during the AM peak hour. The reconfiguration concept is sketched in Figure 3.5. The DBT shall reconfigure the intersection in accordance with applicable City of Cleveland and ODOT standards.

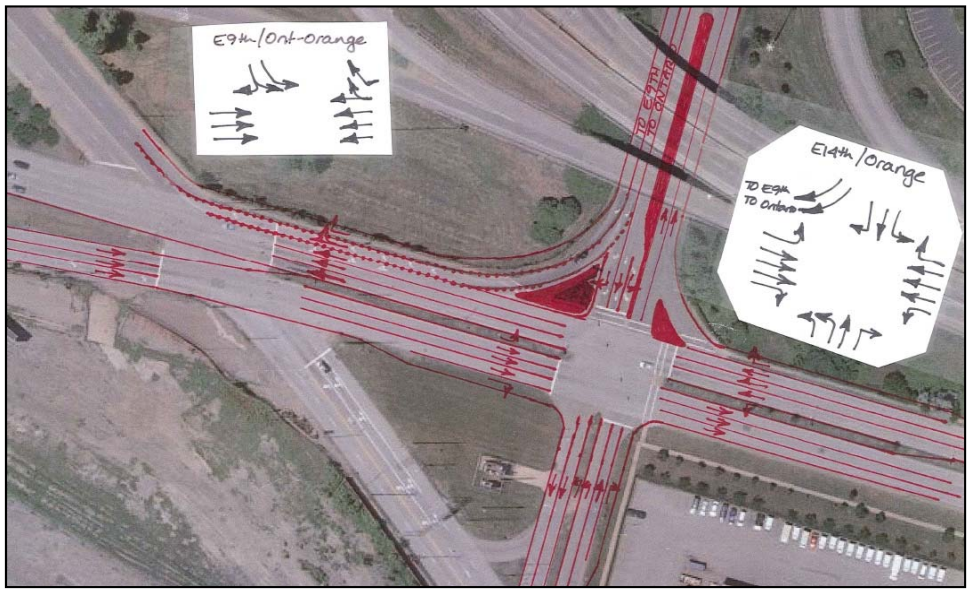
Comment [rlf27]: Addendum No. 9

The DBT shall provide crosswalks on all approaches as well as across the channelized southbound right turn lanes and across the westbound right turn lane. Sidewalk replacement shall be provided, as needed.

Since ODOT and the City of Cleveland own the land on the northwest quadrant of this intersection, right-of-way acquisition is not required.

Utility relocation will be required. At a minimum, street lighting in the Orange median and on the northwest quadrant will need to be relocated.

Figure 3.5 Conceptual Reconfiguration of E.14th Street/Orange



3.13.1 EB and WB Left Turn Lanes

Construct eastbound and westbound left turn lanes within the existing median. This will require utility relocation, including street lighting with overhead wiring. Although ODOT's L&D design standards require a storage length of 375 ft for the eastbound left turn lane (based on through lane back up), the eastbound left turn lane is constrained by the adjacent E.9th Street/Ontario-Orange intersection with approximately 350 ft between intersections along the median. As such, the DBT shall provide an eastbound left turn lane with 300 ft storage plus 50 ft taper.

Based on the anticipated volumes and cycle lengths, ODOT's L&D requires a 450 ft storage plus 50 ft taper (due to through back up) for the westbound left turn lane.

3.13.2 EB and WB Right Turn Lanes

Construct eastbound and westbound right turn lanes outside of the existing travel lanes. The westbound right turn lane shall be configured with 400 ft of storage plus a 50 ft taper beyond the existing right turn bypass channelization, in accordance with ODOT L&D requirements. The eastbound right turn lane requires a storage length of 775 ft to comply with the ODOT L&D. However, this lane is constrained by the adjacent E.9th Street/Ontario-Orange intersection, with approximately 225 ft of separation between the intersections for this lane and a utility pole on the east side of the E.9th Street-Broadway corridor. As such, the eastbound right turn lane shall be configured with 175 ft of storage plus a 50 ft taper, or the maximum storage that will fit within the constraints of the intersection separation and the utility pole serving the line along E.9th Street-Broadway.

3.13.3 Modify NB Approach

Modify the northbound approach to provide a double left turn lane and an exclusive right turn lane; the modified approach configuration shall be: left, left, through, right. The northbound approach is constrained by the proximity of the E.14th Street/Broadway intersection, located approximately 360 ft to the south. As a result, the ODOT L&D storage lengths cannot be accommodated. However, the DBT shall maximize storage lengths within the available roadway length. The northbound double left turn lane shall be created with a 50 ft taper placed as close as feasible to the north side of the E.14th Street/Broadway intersection for the left most lane. The second left turn lane shall be created as a trap lane from the inside through lane. The exclusive right turn lane shall be created with a 50 ft taper placed as close as feasible to the north side of the E.14th Street/Broadway intersection; this lane shall not be a trap lane.

The northbound approach must be built to align with the SB approach to prevent geometric overlap of the northbound and southbound left turn movements. Split phasing is not an acceptable alternative to providing sufficient pavement to allow for simultaneous northbound and southbound left turn movements.

3.13.4 Reconfigure SB Approach

Due to the expected heavy southbound approach volumes, the southbound approach shall be reconstructed within the constraints of the existing I-77 overpass structure and the raised concrete median. The approach configuration shall be: left, through, right. The southbound left turn lane shall be configured with the existing (approximately 60 ft) storage and taper. The southbound right turn lane shall be configured with the maximum possible storage (at least 50 ft) adjacent to the right turn bypass lanes. The DBT shall remove the existing channelized southbound right turn lane and replace it with two channelized, delineated southbound right turn lanes. These two lanes will be developed from the existing outside southbound through lane. They shall be located as far as is feasibly possible from the E.14th Street/Orange intersection to maximize the available storage length for the southbound right turn lane at the E.14th Street/Orange intersection.

Crossing between and into the two channelized southbound right turn lanes shall not be permitted; both lanes shall be delineated with solid double white lines and channelizing devices (tubular markers or vertical panels such as Kwik Curb, Dura-Curb or Versa-Curb). The lanes shall be wide enough to accommodate the design vehicle plus sufficient additional width to accommodate the channelizing devices.

The channelized southbound right turn lanes shall function as free-flow lanes through to the E.9th Street/Ontario-Orange intersection. The outside (right) channelized lane will be required to turn right onto E.9th Street at the E.9th Street/Ontario-Orange intersection. The inside (left) channelized lane will ~~be required to continue through on Ontario at the E.9th Street/Ontario-Orange intersection~~be allowed to either turn right onto E. 9th Street or move through onto Ontario at the E 9th Street/Ontario-Orange intersection. Vehicles traveling westbound on Orange from the E. 14th Street intersection toward northbound Ontario will not be permitted to turn right on E.9th Street at the E.9th Street/Ontario-Orange intersection. This restriction will affect the westbound through and northbound left movements at the E.14th Street/Orange intersection.

Comment [rlf28]: Addendum No. 9

The DBT shall provide signing to clearly indicate lane use, destinations and prohibited turning movements to drivers. Supplemental destination pavement markings shall be provided on the southbound approach prior to channelization.

3.13.5 Signal Modifications

Given the free flow operational nature of the channelized southbound right turn lanes together with the turning radius and anticipated difficulty in drivers seeing and reacting to the presence of pedestrians, the DBT shall provide pedestrian-actuated signal control for the two channelized southbound right turn lanes. The signal heads over each lane shall be green arrows unless a pedestrian activates the signal, at which time it will go to amber then red arrows to allow pedestrians to safely cross the right turn bypass lanes and reach the channelization island. Additionally, the signal heads must be visible sufficiently far in advance of the crossing, or supplemented with appropriate advanced warning devices, to allow for safe stopping sight distance. This requirement is in addition to the signalization requirements defined in the project scope.

Comment [rlf29]: Addendum No. 9

The DBT shall provide appropriate signal timing for this intersection. Provide eastbound protected/permissive left turn phase with southbound right turn overlap during the protected phase. Provide protected/permissive left turn phases for eastbound, westbound and southbound approaches. Provide protected only phase for the northbound double left turn movement. Provide right turn overlaps, as appropriate.

3.14 E.14th Street / Broadway

3.13.1 Provide Two SB Travel Lanes

Provide two (2) southbound travel lanes on E.14th Street between Orange and Broadway. This differs from the CCG1 plans; two southbound lanes are necessary to carry the traffic in the Bi-Directional Condition because the E.9th Street extension will not yet be complete, requiring E.14th Street to carry that traffic as well. The southbound E.14th Street approach configuration at the Broadway intersection will consist of one dedicated left turn lane plus one shared left/right turn lane.

3.13.2 Signal coordination

Incorporate E.14th Street/Broadway intersection with the coordinated Ontario-Orange signal system for operational efficiency.

3.15 E.22nd Street / Orange

3.15.1 Modify SB Approach

Convert the existing southbound approach (left, left/through, channelized right) to left, left, through/right. The double left will be needed to maximize operational efficiency based upon the anticipated volumes. This improvement will require reconstruction of the northwest corner of the intersection; it may require elimination or modification of the approach roadway, including median(s), on the north and/or south approaches to allow for proper lane alignment across the intersection. Utility relocation is not anticipated.

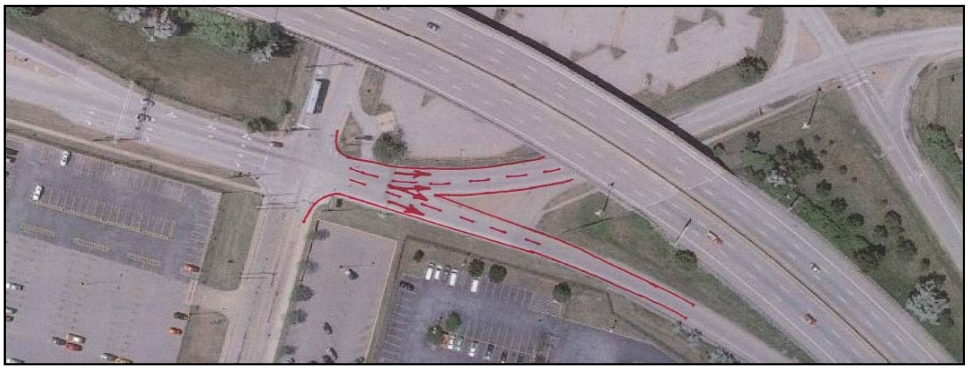
3.16 E.30th Street / Orange

3.15.2 Modify I-77 SB On Ramp

Provide two (2) receiving lanes on the I-77 SB ramp approach immediately east of the E.30th Street/Orange intersection. These two (2) lanes will taper to one (1) lane prior to merging with (or adding to) I-77 SB traffic. Two lanes beyond the gore will be accommodated on the existing ramp and shall merge to one lane prior to reaching the structure; roadway widening may be required but structural work is not expected. Two lanes upstream from the ramp gore will be accommodated by

modifying the approach to a split configuration, from left, left, right to left, left/right, right; the center lane becomes a decision lane. This concept is sketched in Figure 3.6.

Figure 3.6 Conceptual Modification of I-77 SB On Ramp at E.30th Street



4.0 Roadway Modifications

The DBT shall implement the roadway modifications listed below. The DBT shall comply with the signing modification identified below as well as follow the signing guidelines provided in the Bi-Directional Signing Conceptual Plans.

Comment [rlf30]: Addendum No. 9

4.1 West 25th Street Corridor

4.1.1 Prohibit Peak Hour Left Turns

Prohibit northbound lefts during the AM peak (7:00-9:00 AM) and prohibit southbound lefts during PM peak (3:00-6:00 PM) at the intersections listed below, as appropriate given the specific configuration of each intersection. The DBT shall install signage, as appropriate.

Gehring-Chatham W.25th Street
Barber/W.25th Street
Monroe/W.25th Street
Walton/W.25th Street

4.1.2 Reconfigure I-90 EB (Wade Ave) at W.25th Street

Reconfigure the I-90 EB off ramp approach (Wade Ave) at W.25th Street to provide a double left. Provide eastbound approach lanes as follows: left, left/through, right. Add channelization lines and move the stop bar on the southbound approach back to avoid potential conflicts with eastbound left turning vehicles.

Figure 4.1 Conceptual Reconfiguration of I-90 EB at W.25th Street

4.2 Broadway Corridor

4.2.1 Resurface Broadway Corridor

Resurface Broadway ~~between E.14th Street and I-490~~ (SR 14) including E. 34th Street travelled lanes between I-77 and the Project Limits. See Scope Section 18.8 and Appendix PA-02 for coordination of resurfacing limits.

Comment [rlf31]: Addendum No. 9

4.2.2 Provide Vehicle Detection at E.37th Street-Rockefeller/Broadway

Provide video detection for the northbound left turn lane at the E.37th Street-Rockefeller/Broadway intersection to enhance operational efficiency. Detection through the use of loop detectors is not acceptable at this location because of the approach location on a structure.

Provide vehicle detection (loop detectors or video detection) on the east and west approaches of the E.37th Street-Rockefeller/Broadway intersection to enhance operational efficiency.

The DBT shall conduct turning movement counts at this intersection to develop effective AM Peak, PM Peak and Average signal timing plans.

4.2.3 Signalize E.34th Street/Broadway

Install a temporary signal at the E.34th Street/Broadway intersection. Provide vehicle detection for the E.34th Street approach to enhance operational efficiency.

The DBT shall conduct turning movement counts at this intersection to develop effective AM Peak, PM Peak and Average signal timing plans.

4.2.4 Vehicle Detection at E.30th Street/Broadway

Install vehicle detection for the southbound approach of the E.30th Street/Broadway intersection for operational efficiency.

The DBT shall conduct turning movement counts at this intersection to develop effective AM Peak, PM Peak and Average signal timing plans.

4.2.5 Vehicle Detection at Rockefeller-Post Office/Broadway

Install vehicle detection (loop detectors) for the southbound approach (Post Office driveway) at the Rockefeller-Post Office/Broadway intersection to enhance operational efficiency. This shall include installation of the loop itself and all other necessary materials and equipment for fully functioning vehicle detection.

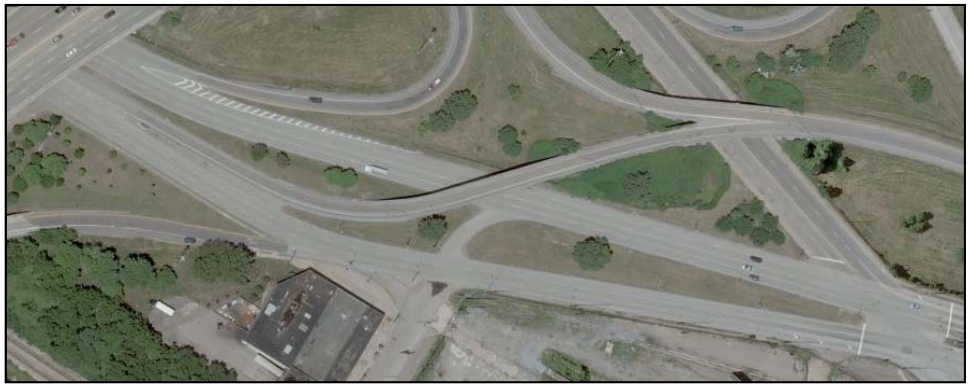
The DBT shall conduct turning movement counts at this intersection to develop effective AM Peak, PM Peak and Average signal timing plans.

4.3 Ontario-Orange Corridor

4.3.1 Restripe NB Ontario between Carnegie and E.9th Street

The existing lane configuration along Ontario tapers from four (4) to three (3) northbound travel lanes between E.9th Street and Carnegie. The DBT shall remove the lane reduction in the vicinity of the I-90 EB off ramp at Ontario to provide four continuous northbound travel lanes to the Ontario/Carnegie intersection approach lanes. This restriping will enhance traffic operations and can be accommodated within the existing pavement because the I-90 EB off ramp at Ontario ramp will be closed in the Bi-Directional Condition. A view of the existing roadway striping to be modified is shown in Figure 4.2.

Figure 4.2 NB Ontario between E.9th Street and Carnegie



5.0 Bi-Directional Synchro Model Development

A Synchro/SimTraffic microsimulation traffic model was developed to represent and analyze the Bi-Directional Conditions, using Synchro Version 7 (Appendix DI-02 Electronic Document Inventory, Baker Traffic Files). The specific immediate goal was to identify improvements to enhance traffic operations on the city streets in the Central Interchange area that would be most directly affected by the modified traffic operations at the completion of CCG1. Traffic patterns will be changed as a result of the ramp closures (listed below) and the incomplete reconfiguration of the E.9th Street/Ontario-Orange intersection.

Comment [rlf32]: Addendum No. 9

Ramp Closures in the Bi-Directional Condition
I-90 EB off ramp to Broadway
I-90 EB off ramp to Ontario
I-90 EB off ramp to Central
E.14th Street on ramp to I-90 WB
E.14th Street on ramp to I-77 SB
E.21st Street on ramp to I-90 WB

The model incorporates the area roughly bounded by Carnegie Avenue, E.22nd Street, and Ontario-Orange; it also includes the E.14th Street/Broadway and E.30th Street/Orange intersections. The model does not currently include the signalized intersection at E.19th Street/Carnegie because traffic volume data was not available. The DBT shall collect traffic volume data and incorporate this intersection into the Bi-Directional traffic model.

5.1 Volume Development, Trip Distribution and Traffic Assignment

Traffic volumes for the Bi-Directional Condition were developed for the AM and PM peaks, based upon certified traffic from the *Cleveland Innerbelt: Interchange Justification Study* (March 2009). The 2015 No Build certified traffic volumes were used, supplemented by the 2015 Build volumes for the Orange corridor, since the Build volumes in that area better represent the roadway configuration for the Bi-

Directional Condition. These volumes were redistributed on the roadway network based on ramp closures and the resulting anticipated traffic diversions. An existing spot traffic count was conducted at the intersection of E. 22nd Street / Cedar to supplement the volume development process. Traffic volumes for the Bi-Directional Condition With Improvements scenario are illustrated in Figure 3.2.

5.2 Traffic Models: "Bi-Directional Condition" and "Bi-Directional Condition With Improvements" Scenarios

Bi-directional AM and PM peak volumes were modeled in the Bi-Directional Condition traffic model, a representation of the anticipated traffic volumes in the Bi-Directional Condition on the existing roadway network. This base model evaluates operational performance of the roadway network with the configuration as defined by the completion of CCG1, with one exception: the model incorporates addition of the southbound link on E.22nd Street between Carnegie and Cedar as a single lane. This improvement was desired by the City of Cleveland and ODOT; incorporating it into the Bi-Directional base model simplified the trip distribution and traffic assignment task. The performance of the Bi-Directional Condition model was then analyzed to identify intersections and approach movements with poor performance that could potentially be enhanced. Potential modifications to improve system performance were added to the roadway network and incorporated into the Bi-Directional Condition With Improvements model. These improvements measurably enhance network performance. They are identified and defined in Section 3.0.

5.3 Application of the Bi-Directional Synchro Model

The Synchro/SimTraffic microsimulation traffic models of the Bi-Directional Condition and the Bi-Directional Condition With Improvements will be provided to the DBT for use during implementation of CCG1.

5.3.1 Traffic Volumes

The DBT will need to make model adjustments based upon real traffic data and associated signal timing adjustments and network optimization. The traffic volumes in the existing model are based on certified traffic, however they are a combination of two scenarios and are thus an estimate. There are known traffic volume balancing issues along the corridors. New traffic counts conducted by the DBT will address the balance issue as well as validate trip distribution assumptions.

5.3.2 Signal Timing and Phasing

Signal timing plans for the Synchro model do not represent existing conditions. Rather, they are based on existing intersection phasing capabilities, particularly protected/permissive lefts, with optimized signal timing for the three corridors. Optimization of signal splits and offsets are assumed for all intersections for both the Bi-Directional Condition and the Bi-Directional Condition With Improvements scenarios.

The analysis (minimum splits) assumes no pedestrian activity along the Orange corridor (E.9th Street/Ontario-Orange, E.14th Street/Orange, E.22nd Street/Orange, and E.14th Street/Broadway). Provision of minimum pedestrian crossing times negatively impacts intersection operations. Although signal timing plans must accommodate pedestrians, given the lack of pedestrian presence in the area, removing pedestrians from the analysis (only) provides a more accurate representation of intersection operations.

Since the Synchro/SimTraffic model used in the Bi-Directional analysis was developed for planning level purposes, the inputs shall be confirmed to prepare the model for use in determining actual signal timings. Inputs including yellow times, red times, and pedestrian walk times shall be modified as needed.

5.3.3 Vehicle Detection

The Synchro model and associated analysis assumes that the street network has vehicle detection, and non-major street approach phases will only be called when vehicles are detected. If loops are malfunctioning or not present, they shall be identified and replaced (or installed) by the DBT.

5.3.4 E.19th Street/Carnegie

As previously mentioned, the DBT shall add this intersection to the Synchro model. This will require traffic volume counts as well as model adjustments. This intersection provides access to a Cleveland State University parking facility on the south side of Carnegie, across from the Wolstein Center. Given the nature of the intersection, clear priority should be given to the through movement on Carnegie and negative impacts to intersection operations that result from accommodating turning vehicles should be minimized.

5.4 Capacity Analysis Results

The results of the traffic analysis include the approach delay (measured in seconds) and level of service for each approach, and the overall intersection delay, level of service and volume-capacity (v/c) ratio results for each of the scenarios and options. Average delay is an indication of the expected delay that would typically be experienced in the lane, on the approach, or at the intersection. The level of service (LOS) is a grading scale based upon average delay, with LOS A representing free-flow conditions, LOS E representing operational capacity, and LOS F being over-capacity. The specific delay thresholds for both signalized and unsignalized intersections are provided by the Transportation Research Board in the Highway Capacity Manual and are given in the table below. A v/c ratio that is less than 1.0 indicates that the lane is operating below capacity. A v/c ratio of 1.0 indicates that the lane is operating at capacity and a v/c greater than one indicates over-capacity conditions. The results of the capacity analysis are provided in Tables 5.2 and 5.3.

Table 5.1 LOS Criteria for Signalized Intersections *(Highway Capacity Manual)*

LEVEL OF SERVICE (LOS)		
LOS	Signalized Intersection Average Delay (sec/veh)	Unsignalized Intersection Average Delay (sec/veh)
A	$x \leq 10$	$x \leq 10$
B	$10 < x \leq 20$	$10 < x \leq 15$
C	$20 < x \leq 35$	$15 < x \leq 25$
D	$35 < x \leq 55$	$25 < x \leq 35$
E	$55 < x \leq 80$	$35 < x \leq 50$
F	$80 < x$	$50 < x$

Table 5.2 Capacity Analysis Results for Bi-Directional Condition

Year 2015 Bi-Directional Synchro Analysis Results									
Intersection	Direction / Movement		AM Peak Hour			PM Peak Hour		
			Level of Service	v/c	Delay (sec/ veh)	Level of Service	v/c	Delay (sec/ veh)
Carnegie Avenue @ Ontario Street	EB	L	F	1.90	443.5	F	1.12	165.7
		TR	F	1.13	94.7	C	0.78	30.9
	WB	L	--	--	--	F	1.50	285.7
		T	B	0.41	11.0	A	0.45	6.9
		R	B	0.60	14.7	A	0.18	0.7
	NB	L	F	1.59	309.2	F	1.80	437.4
		T	C	0.86	29.2	C	0.30	21.9
		R	B	0.21	19.8	C	0.20	21.7
	SB	T	D	0.45	38.8	D	0.84	41.7
		R	D	0.61	44.4	F	2.24	584.1
	Overall		**F**	--	**109.0**	**F**	--	**206.7**
Carnegie Avenue @ E. 9th Street	EB	L	F	1.60	303.1	B	0.23	18.8
		TR	D	0.98	53.4	C	0.44	28.3
	WB	L	F	2.03	496.4	F	3.02	927.1
		TR	D	0.80	48.3	C	0.50	20.2
	NB	TR	F	1.73	353.7	F	1.42	226.9
	SB	Left	F	1.00	158.8	F	2.21	587.3
		TR	A	0.22	8.9	F	1.25	150.7
	Overall		**F**	--	**246.4**	**F**	--	**314.6**
Carnegie Avenue @ E. 14th Street	EB	L	D	0.99	49.0	E	1.00	58.4
		TR	B	0.52	12.5	C	0.56	28.8
	WB	L	E	0.94	72.4	F	1.12	118.3
		TR	A	0.52	5.0	C	0.67	24.6
	NB	TR	E	1.02	69.5	B	0.19	15.4
	SB	L	D	0.39	52.0	B	0.04	14.3
		T	C	0.19	26.4	C	0.71	27.3
		R	B	0.24	15.3	E	1.03	58.1
	Overall		**C**	--	**32.0**	**D**	--	**41.2**
Carnegie Avenue @ E. 18th Street	EB	LT	A	1.46dl	5.6	A	0.53	9.6
	WB	TR	A	0.49	5.7	A	0.28	7.4
	NB	L	C	0.21	22.9	C	0.13	21.4
		TR	C	0.79	34.0	B	0.13	13.2
	SB	L	D	0.48	46.0	D	0.84	50.4
		R	B	0.08	13.2	B	0.50	14.7
	Overall		**B**	--	**14.3**	**B**	--	**15.5**
Carnegie Avenue @ E. 21st Street	EB	TR	A	0.36	5.6	B	0.66	18.9
	WB	T	A	0.48	5.2	B	0.31	15.4
	SB	LT	D	0.66	44.0	D	0.84	38.8
		R	C	0.31	27.9	A	0.28	7.9
	Overall		**B**	--	**12.8**	**C**	--	**23.5**
Carnegie Avenue @ E. 22nd Street	EB	L	D	0.79	49.2	A	0.31	6.8
		T	B	0.23	13.3	A	0.36	6.5
	WB	L	C	0.48	24.0	C	0.47	25.0
		TR	D	0.90	36.0	B	0.33	17.0
	NB	LTR	F	0.94	466.1	F	0.76	231.0
	Overall		**F**	--	**181.6**	**F**	--	**97.7**
E. 22nd Street @ Cedar Avenue	EB	LTR	A	0.46	8.6	B	1.10dr	16.1
		R						
	WB	L	C	0.26	33.0	F	0.84	100.8
		R	B	0.24	13.3	C	0.41	20.1
	NB	TR	A	0.38	1.8	B	0.37	12.1
	SB	T	B	0.19	14.0	B	0.17	17.2
	Overall		**A**	--	**6.2**	**B**	--	**17.0**
E. 22nd Street @ Central Avenue	WB	L	C	0.04	24.6	C	0.07	24.9
		R	A	0.16	6.8	A	0.20	6.3
	NB	TR	B	0.37	10.4	A	0.25	8.3
	SB	LT	A	0.29	9.6	A	0.54	9.3
	Overall		**B**	--	**10.1**	**A**	--	**9.1**

Intersection	Direction / Movement		AM Peak Hour			PM Peak Hour		
			Level of Service	v/c	Delay (sec/ veh)	Level of Service	v/c	Delay (sec/ veh)
E. 22nd Street @ Community College Avenue	EB	LT	D	1.27dl	36.5	C	0.49	31.1
		R	A	0.14	4.8	A	0.09	8.2
	WB	LTR	C	0.52	21.5	B	0.40	19.3
	NB	L	B	0.24	15.1	B	0.19	11.4
		TR	C	0.73	21.4	B	0.25	14.4
	SB	L	A	0.36	7.7	A	0.38	6.6
		TR	B	0.26	11.8	A	0.55	8.2
	Overall		**C**	--	**20.9**	**B**	--	**13.3**
E. 22nd Street @ Woodland Avenue (stop-controlled)	EB	L	F	0.08	59.0	E	0.06	46.4
		R	A	0.01	9.1	A	0.01	8.7
	WB	L	B	0.11	13.0	B	0.16	11.4
		T	C	0.02	15.4	D	0.03	26.8
		R	B	0.57	13.7	A	0.19	9.5
	NB	L	A	0.00	0.0	A	0.01	0.1
		T	A	0.06	0.2	A	0.04	0.3
	SB	T	A	0.10	0.0	A	0.31	0.0
		R	A	0.05	0.0	A	0.16	0.0
	Overall		**A**	--	**6.6**	**A**	--	**1.9**
Orange Avenue @ E. 9th Street	EB	LT	A	0.19	0.9	B	0.43	11.1
	WB	TR	F	0.98	157.7	A	0.45	8.6
		R	A	0.66	7.1	A	0.30	2.3
	SB	LR	D	0.42	54.4	E	0.83	64.2
	Overall		**F**	--	**116.7**	**B**	--	**18.8**
Orange Avenue @ E. 14th Street	EB	L	C	1.77dl	31.9	D	0.96dr	35.4
		T						
		R						
	WB	L	F	1.61	308.8	B	2.41dl	15.1
		T						
		R						
	NB	L	F	1.41	245.8	D	0.58	49.7
		L	A	0.24	1.4	B	0.03	19.0
		T						
		R						
	SB	L	B	0.33	12.9	E	0.97	72.4
		T	A	0.13	9.6	C	0.35	29.4
		R	F	2.00	477.1	C	0.81	34.8
	Overall		**F**	--	**291.2**	**D**	--	**36.5**
Broadway @ E. 14th Street	EB	LT	C	1.84dl	21.5	F	1.08	85.7
	NB	TR	A	0.98dr	9.7	A	0.26	6.8
	SB	LR	C	0.60	20.4	F	1.07	81.0
	Overall		**B**	--	**14.3**	**E**	--	**74.2**
Orange Avenue @ E. 22nd Street	EB	LTR	B	0.44	11.2	E	1.02	63.6
	WB	LTR	B	0.24	10.1	D	0.33	36.8
	NB	LTR	C	0.03	20.5	A	0.01	9.8
	SB	L	E	0.77	55.6	E	1.01	68.3
		L	E	0.79	57.6	F	1.07	84.9
		T						
		R	A	0.06	10.0	A	0.03	5.3
	Overall		**C**	--	**21.5**	**E**	--	**64.6**
Orange Avenue @ E. 30th Street	EB	LT	C	0.55	20.3	D	0.97	35.2
		R	A	0.30	5.0	B	0.60	10.1
	NB	TR	B	0.40	13.0	C	0.38	23.7
	SB	L	A	0.08	8.8	B	0.26	19.5
		T	A	0.12	8.2	C	0.65	25.8
	Overall		**B**	--	**15.0**	**C**	--	**28.9**

Table 5.3 Capacity Analysis Results for Bi-Directional Condition With Improvements

Year 2015 Bi-Directional With Improvements Synchro Analysis Results									
Intersection	Direction / Movement		AM Peak Hour			PM Peak Hour		
			Level of Service	v/c	Delay (sec/	Level of Service	v/c	Delay (sec/
Carnegie Avenue @ Ontario Street	EB	L	F	1.19	148.2	F	1.12	165.7
		TR	F	1.10	88.4	C	0.78	30.9
	WB	L	--	--	--	F	1.50	272.4
		T	D	0.50	46.8	A	0.45	8.4
		R	E	0.73	59.6	A	0.18	1.2
	NB	L	F	0.71	83.9	F	1.12	157.9
		T	F	1.16	114.0	B	0.41	12.3
		R	C	0.48	31.8	B	0.30	11.4
	SB	T	D	0.45	48.7	D	0.82	40.0
		R	D	0.61	54.8	F	2.19	561.1
	Overall		F	--	92.2	F	--	188.2
Carnegie Avenue @ E. 9th Street	EB	L	F	1.21	156.3	E	0.68	72.3
		TR	D	0.91	52.8	C	0.47	33.5
	WB	L	E	0.93	61.0	F	1.88	425.4
		TR	F	1.14	108.8	C	0.75	28.3
	NB	TR	F	1.82	396.2	F	1.36	202.4
	SB	Left	F	1.00	162.0	F	2.61	765.2
		TR	B	0.25	11.7	F	1.37	200.7
	Overall		F	--	221.5	F	--	236.2
Carnegie Avenue @ E. 14th Street	EB	L	E	1.06	72.0	E	1.00	62.0
		TR	B	0.49	16.2	C	0.53	20.7
	WB	L	E	0.92	62.6	F	1.06	98.4
		TR	B	0.54	10.0	C	0.67	23.9
	NB	TR	F	1.10	94.5	B	0.19	16.5
	SB	L	D	0.39	53.8	B	0.05	15.4
		T	C	0.21	28.6	C	0.74	29.7
		R	B	0.26	17.8	E	1.06	79.4
	Overall		D	--	41.5	D	--	40.6
Carnegie Avenue @ E. 18th Street	EB	LT	A	1.51dl	5.7	A	0.53	9.6
	WB	TR	A	0.50	4.8	A	0.28	7.4
	NB	L	C	0.53	31.2	C	0.20	24.2
		TR	D	0.77	36.4	B	0.13	14.5
	SB	L	D	0.44	41.5	D	0.84	50.4
		R	B	0.08	12.8	B	0.50	14.8
	Overall		B	--	15.7	B	--	15.8
Carnegie Avenue @ E. 21st Street	EB	TR	A	0.36	4.1	B	0.66	19.0
	WB	T	A	0.48	4.1	B	0.31	15.4
	SB	LT	D	0.66	44.0	D	0.84	38.8
		R	C	0.31	27.9	A	0.28	7.9
	Overall		B	--	11.7	C	--	23.6
Carnegie Avenue @ E. 22nd Street	EB	L	D	0.79	49.8	A	0.31	6.5
		T	B	0.23	17.1	A	0.36	6.2
	WB	L	C	0.48	24.0	C	0.47	25.0
		TR	D	0.90	36.0	B	0.33	17.0
	NB	LTR	F	0.94	466.1	F	0.76	231.0
	Overall		F	--	182.1	F	--	97.6
E. 22nd Street @ Cedar Avenue	EB	LTR	C	0.54	25.7	B	0.76	15.0
		R	A	0.43	6.4	A	0.66	5.8
	WB	L	C	0.21	30.7	F	0.84	101.2
		R	B	0.24	14.9	C	0.43	22.4
	NB	TR	A	0.38	1.8	A	0.36	8.7
	SB	T	A	0.10	9.2	B	0.09	13.9
	Overall		A	--	7.7	B	--	13.2
E. 22nd Street @ Central Avenue	WB	L	C	0.04	24.6	C	0.07	24.9
		R	A	0.16	6.8	A	0.20	6.3
	NB	TR	B	0.37	10.3	A	0.25	7.0
	SB	LT	A	0.29	9.3	B	0.54	12.0
	Overall		A	--	10.0	B	--	10.3

Intersection	Direction / Movement		AM Peak Hour			PM Peak Hour		
			Level of Service	v/c	Delay (sec/	Level of Service	v/c	Delay (sec/
E. 22nd Street @ Community College Avenue	EB	LT	D	1.27dl	36.9	C	0.49	31.1
		R	A	0.14	4.9	A	0.09	8.2
	WB	LTR	C	0.52	21.7	B	0.40	19.3
	NB	L	B	0.24	15.0	B	0.19	11.4
		TR	C	0.22	21.1	B	0.25	14.4
	SB	L	A	0.36	9.0	A	0.38	5.3
		TR	B	0.25	10.0	A	0.55	8.4
	Overall		C	--	20.7	B	--	13.3
E. 22nd Street @ Woodland Avenue (stop controlled)	EB	L	F	0.08	59.0	E	0.06	46.4
		R	A	0.01	9.1	A	0.01	8.7
	WB	L	B	0.11	13.0	B	0.16	11.4
		T	C	0.02	15.4	D	0.03	26.8
		R	B	0.57	13.7	A	0.19	9.5
	NB	L	A	0.00	0.0	A	0.01	0.1
		T	A	0.06	0.2	A	0.04	0.3
	SB	T	A	0.10	0.0	A	0.31	0.0
		R	A	0.05	0.0	A	0.16	0.0
	Overall		A	--	6.6	A	--	1.9
Orange Avenue @ E. 9th Street	EB	LT	A	0.14	0.8	A	0.40	7.2
	WB	TR	A	0.70	4.8	A	0.37	6.4
		R	D	0.27	37.1	D	0.79	44.5
	SB	LR	A	0.70	7.0	B	0.31	10.3
	Overall		A	--	5.1	B	--	14.2
Orange Avenue @ E. 14th Street	EB	L	B	0.39	16.6	A	0.19	8.7
		T	B	0.03	17.1	B	0.48	14.8
		R	A	0.16	1.8	B	0.82	14.5
	WB	L	C	0.66	27.7	C	0.47	21.7
		T	F	1.12	121.7	B	0.33	14.6
		R	C	0.79	25.5	A	0.07	1.8
	NB	L	F	1.27	181.5	E	0.68	62.0
		L						
		T	D	0.55	53.6	E	0.31	71.2
		R	A	0.56	8.7	D	0.27	35.6
	SB	L	E	0.79	66.9	E	0.94	59.3
		T	F	1.24	217.5	D	0.56	48.7
		R	F	1.34	198.5	C	0.54	25.1
	Overall		F	--	115.4	C	--	26.7
Broadway @ E. 14th Street	EB	LT	C	2.29dl	23.4	C	0.80	23.3
	NB	TR	A	0.97dr	6.1	A	0.21	4.0
	SB	LR	A	0.31	4.7	B	0.70	11.5
	Overall		A	--	8.5	B	--	15.4
Orange Avenue @ E. 22nd Street	EB	LTR	A	0.45	7.8	C	0.82	25.4
	WB	LTR	A	0.25	7.6	C	0.27	23.6
	NB	LTR	C	0.08	27.3	D	0.14	44.9
	SB	L	C	0.72	33.4	E	1.00	55.9
		I						
		T	A	0.07	9.5	A	0.04	6.4
		R						
	Overall		B	--	13.8	D	--	38.6
Orange Avenue @ E. 30th Street	EB	LT	C	0.55	20.3	D	0.97	35.2
		R	A	0.30	5.0	B	0.50	10.1
	NB	TR	B	0.40	13.0	C	0.38	23.7
	SB	L	A	0.08	8.8	B	0.26	19.5
		T	A	0.12	8.2	C	0.55	25.8
	Overall		B	--	15.0	C	--	28.9

5.5 Bi-Directional Synchro Model Output

The Synchro model results for the AM and PM peaks under the Bi-Directional Condition and Bi-Directional Condition With Improvements scenarios are provided on the following pages.

CUY-90-14.90

PID 77332/85531

APPENDIX TC-10: ATTACHMENT A

Year 2015 Central Viaduct Bi-Directional, AM Peak Hour

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	0	0	45	160	0	3170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.91
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	3539	1524	0	5085
Flt Permitted						
Satd. Flow (perm)	0	0	3539	1524	0	5085
Link Speed (mph)	25		30			30
Link Distance (ft)	509		164			485
Travel Time (s)	13.9		3.7			11.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	50	178	0	3522
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	50	178	0	3522
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		30	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Volume (vph)	750	1330	320	20	0	410	270	190	1710	105	480	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%		0%	
Storage Length (ft)	225		0				0	225		200		0
Storage Lanes	1		1				1	1		1		2
Taper Length (ft)	50		50				50	50		50		50
Lane Util. Factor	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.86	1.00	0.91	0.88
Ped Bike Factor												
Frt		0.969					0.850			0.850		0.850
Flt Protected	0.950							0.950				
Satd. Flow (prot)	3090	3081	0	0	1676	3185	1425	1593	5767	1425	4577	2177
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	3090	3081	0	0	1676	3185	1425	1593	5767	1425	4577	2177
Right Turn on Red				No			Yes			No		
Satd. Flow (RTOR)							1					2
Link Speed (mph)		30				30			30		30	
Link Distance (ft)		632				879			369		1209	
Travel Time (s)		14.4				20.0			8.4		27.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	18%	2%	2%	2%	2%	2%	2%	2%	18%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%		0%	
Adj. Flow (vph)	833	1478	356	22	0	456	300	211	1900	117	533	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	833	1856	0	0	0	456	300	211	1900	117	533	344
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		24				24			12		12	
Link Offset(ft)		0				0			0		0	
Crosswalk Width(ft)		16				16			16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	9	15		9	15		9		9
Number of Detectors	1	2			1	2	1	1	2	1	2	1
Detector Template	Left	Thru			Left	Thru	Right	Left	Thru	Right	Thru	Right
Leading Detector (ft)	20	100			20	100	20	20	100	20	100	20
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	0
Turn Type	Prot				Perm		Perm	Prot		Perm		Perm
Protected Phases	5	2				6		3	8		4	
Permitted Phases					6		6			8		4
Detector Phase	5	2			6	6	6	3	8	8	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	SBR2
Lane Configurations	
Volume (vph)	10
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	0.91
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	11
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.14
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Minimum Split (s)	10.0	46.0			46.0	46.0	46.0	10.0	36.0	36.0	36.0	36.0
Total Split (s)	22.0	69.0	0.0	0.0	47.0	47.0	47.0	15.0	51.0	51.0	36.0	36.0
Total Split (%)	18.3%	57.5%	0.0%	0.0%	39.2%	39.2%	39.2%	12.5%	42.5%	42.5%	30.0%	30.0%
Maximum Green (s)	17.0	64.0			42.0	42.0	42.0	10.0	46.0	46.0	31.0	31.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead				Lag	Lag	Lag	Lead			Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max			C-Max	C-Max	C-Max	None	Ped	Ped	Ped	Ped
Walk Time (s)		7.0			7.0	7.0	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)		34.0			34.0	34.0	34.0		24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)		10			10	10	10		10	10	10	10
Act Effct Green (s)	17.0	64.0				42.0	42.0	10.0	46.0	46.0	31.0	31.0
Actuated g/C Ratio	0.14	0.53				0.35	0.35	0.08	0.38	0.38	0.26	0.26
v/c Ratio	1.90	1.13				0.41	0.60	1.59	0.86	0.21	0.45	0.61
Control Delay	443.5	94.7				11.0	14.2	309.2	29.2	19.8	38.8	44.4
Queue Delay	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	443.5	94.7				11.0	14.2	309.2	29.2	19.8	38.8	44.4
LOS	F	F				B	B	F	C	B	D	D
Approach Delay		202.8				12.3			55.3		41.0	
Approach LOS		F				B			E		D	
90th %ile Green (s)	17.0	64.0			42.0	42.0	42.0	10.0	46.0	46.0	31.0	31.0
90th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Max	Max
70th %ile Green (s)	17.0	64.0			42.0	42.0	42.0	10.0	46.0	46.0	31.0	31.0
70th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Ped	Ped
50th %ile Green (s)	17.0	64.0			42.0	42.0	42.0	10.0	46.0	46.0	31.0	31.0
50th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Ped	Ped
30th %ile Green (s)	17.0	64.0			42.0	42.0	42.0	10.0	46.0	46.0	31.0	31.0
30th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Ped	Ped
10th %ile Green (s)	17.0	64.0			42.0	42.0	42.0	10.0	46.0	46.0	31.0	31.0
10th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Ped	Ped
Queue Length 50th (ft)	~510	~877				38	49	~234	371	54	127	132
Queue Length 95th (ft)	#635	#1016				m52	m66	m#244	m389	m56	164	190
Internal Link Dist (ft)		552				799			289		1129	
Turn Bay Length (ft)	225							225		200		
Base Capacity (vph)	438	1643				1115	499	133	2211	546	1182	564
Starvation Cap Reductn	0	0				0	0	0	0	0	0	0
Spillback Cap Reductn	0	0				0	0	0	0	0	0	0
Storage Cap Reductn	0	0				0	0	0	0	0	0	0
Reduced v/c Ratio	1.90	1.13				0.41	0.60	1.59	0.86	0.21	0.45	0.61

Intersection Summary

Area Type: CBD

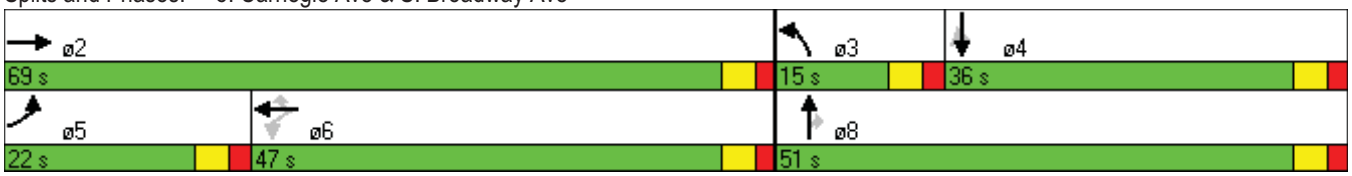
Lane Group	SBR2
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

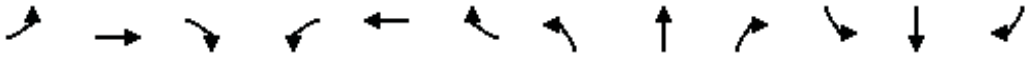
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 21 (18%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.90	
Intersection Signal Delay: 109.0	Intersection LOS: F
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

~ 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: 5: Carnegie Ave & S. Broadway Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	370	1050	20	490	685	210	0	2925	245	50	190	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	230		0	0		0	370		0
Storage Lanes	2		0	1		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.997			0.965			0.988			0.921	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	4559	0	1518	4255	0	0	4356	0	1593	4119	0
Flt Permitted	0.159			0.114						0.071		
Satd. Flow (perm)	267	4559	0	182	4255	0	0	4356	0	119	4119	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			7			15			233	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		879			388			127			701	
Travel Time (s)		20.0			8.8			3.5			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	7%	2%	2%	2%	2%	2%	2%	7%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					2	2		2	2			
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	411	1167	22	544	761	233	0	3250	272	56	211	233
Shared Lane Traffic (%)												
Lane Group Flow (vph)	411	1189	0	544	994	0	0	3522	0	56	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.14	1.14	1.20	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Turn Type	pm+pt			pm+pt						Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6						4		
Detector Phase	5	2		1	6			8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	36.0		10.0	36.0			36.0		36.0	36.0	
Total Split (s)	19.0	37.0	0.0	22.0	40.0	0.0	0.0	61.0	0.0	61.0	61.0	0.0
Total Split (%)	15.8%	30.8%	0.0%	18.3%	33.3%	0.0%	0.0%	50.8%	0.0%	50.8%	50.8%	0.0%
Maximum Green (s)	14.0	32.0		17.0	35.0			56.0		56.0	56.0	
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	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?				Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max			Ped		Ped	Ped	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		24.0			24.0			24.0		24.0	24.0	
Pedestrian Calls (#/hr)		10			10			10		10	10	
Act Effct Green (s)	46.0	32.0		52.0	35.0			56.0		56.0	56.0	
Actuated g/C Ratio	0.38	0.27		0.43	0.29			0.47		0.47	0.47	
v/c Ratio	1.60	0.98		2.03	0.80			1.73		1.00	0.22	
Control Delay	303.1	53.4		496.4	48.3			353.7		158.8	8.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	303.1	53.4		496.4	48.3			353.7		158.8	8.9	
LOS	F	D		F	D			F		F	A	
Approach Delay		117.6			206.8			353.7			25.7	
Approach LOS		F			F			F			C	
90th %ile Green (s)	14.0	32.0		17.0	35.0			56.0		56.0	56.0	
90th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
70th %ile Green (s)	14.0	32.0		17.0	35.0			56.0		56.0	56.0	
70th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
50th %ile Green (s)	14.0	32.0		17.0	35.0			56.0		56.0	56.0	
50th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
30th %ile Green (s)	14.0	32.0		17.0	35.0			56.0		56.0	56.0	
30th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
10th %ile Green (s)	14.0	32.0		17.0	35.0			56.0		56.0	56.0	
10th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
Queue Length 50th (ft)	~410	297		~623	293			~1488		~43	32	
Queue Length 95th (ft)	m#353	m249		#837	342			m#1564		#134	54	
Internal Link Dist (ft)		799			308			47			621	
Turn Bay Length (ft)	280			230						370		
Base Capacity (vph)	257	1217		268	1246			2041		56	2046	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	1.60	0.98		2.03	0.80			1.73		1.00	0.22	

Intersection Summary

Area Type: CBD

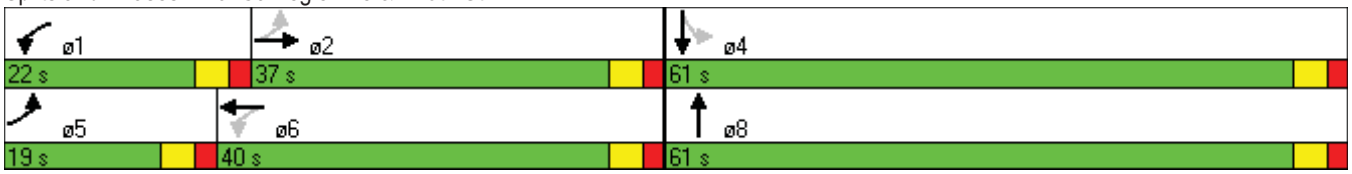
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.03	
Intersection Signal Delay: 246.4	Intersection LOS: F
Intersection Capacity Utilization 134.6%	ICU Level of Service H
Analysis Period (min) 15	

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

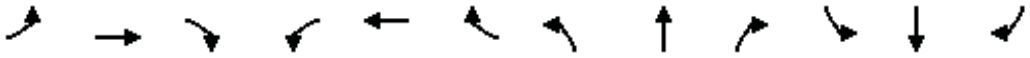
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Carnegie Ave & E. 9th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	780	145	200	1040	110	0	1100	0	20	110	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	0		0	0		0	170		0
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.977			0.986							0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	4308	0	1593	4513	0	0	3185	0	1593	1676	1425
Flt Permitted	0.192			0.188						0.089		
Satd. Flow (perm)	322	4308	0	315	4513	0	0	3185	0	149	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			13							63
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		311			264			150			626	
Travel Time (s)		7.1			6.0			4.1			17.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		2	2									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	867	161	222	1156	122	0	1222	0	22	122	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1028	0	222	1278	0	0	1222	0	22	122	139
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.20	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	1
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100			100		20	100	20
Trailing Detector (ft)	0	0		0	0			0		0	0	0
Turn Type	Perm			pm+pt						Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6						4		4
Detector Phase	2	2		1	6			8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		10.0	29.0			36.0		36.0	36.0	36.0
Total Split (s)	59.0	59.0	0.0	11.0	70.0	0.0	0.0	50.0	0.0	50.0	50.0	50.0
Total Split (%)	49.2%	49.2%	0.0%	9.2%	58.3%	0.0%	0.0%	41.7%	0.0%	41.7%	41.7%	41.7%
Maximum Green (s)	54.0	54.0		6.0	65.0			45.0		45.0	45.0	45.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		None	C-Max			Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0			17.0			24.0		24.0	24.0	24.0
Pedestrian Calls (#/hr)	10	10			10			10		10	10	10
Act Effct Green (s)	54.0	54.0		65.0	65.0			45.0		45.0	45.0	45.0
Actuated g/C Ratio	0.45	0.45		0.54	0.54			0.38		0.38	0.38	0.38
v/c Ratio	0.99	0.52		0.94	0.52			1.02		0.39	0.19	0.24
Control Delay	49.0	12.5		72.4	5.0			69.5		52.0	26.4	15.3
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Total Delay	49.0	12.5		72.4	5.0			69.5		52.0	26.4	15.3
LOS	D	B		E	A			E		D	C	B
Approach Delay		17.0			15.0			69.5			22.9	
Approach LOS		B			B			E			C	
90th %ile Green (s)	54.0	54.0		6.0	65.0			45.0		45.0	45.0	45.0
90th %ile Term Code	Coord	Coord		Max	Coord			Max		Max	Max	Max
70th %ile Green (s)	54.0	54.0		6.0	65.0			45.0		45.0	45.0	45.0
70th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
50th %ile Green (s)	54.0	54.0		6.0	65.0			45.0		45.0	45.0	45.0
50th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
30th %ile Green (s)	54.0	54.0		6.0	65.0			45.0		45.0	45.0	45.0
30th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
10th %ile Green (s)	54.0	54.0		6.0	65.0			45.0		45.0	45.0	45.0
10th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
Queue Length 50th (ft)	71	230		62	43			~530		12	63	39
Queue Length 95th (ft)	m60	m175		#139	51			#666		#49	109	87
Internal Link Dist (ft)		231			184			70			546	
Turn Bay Length (ft)	70									170		
Base Capacity (vph)	145	1961		235	2451			1194		56	629	574
Starvation Cap Reductn	0	0		0	95			0		0	0	0
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	0.99	0.52		0.94	0.54			1.02		0.39	0.19	0.24

Intersection Summary	
Area Type:	CBD

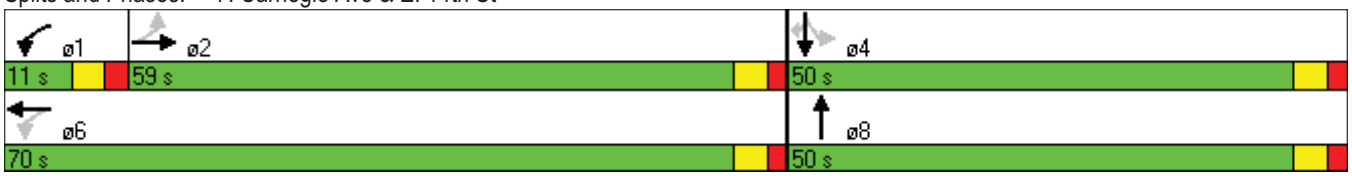
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 63 (53%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 32.0	Intersection LOS: C
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

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

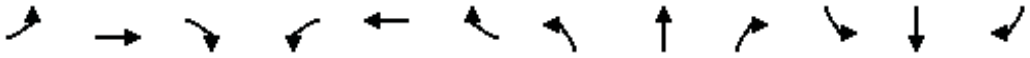
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 7: Carnegie Ave & E. 14th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	650	0	0	1250	110	110	790	50	40	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	160		0	0		0	0		0
Storage Lanes	0		0	1		0	1		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	0.86	0.86	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.988			0.991				0.850
Flt Protected		0.991					0.950			0.950		
Satd. Flow (prot)	0	4536	0	0	5698	0	1593	3157	0	1593	0	1425
Flt Permitted		0.640					0.950			0.147		
Satd. Flow (perm)	0	2929	0	0	5698	0	1593	3157	0	246	0	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22			7				22
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		264			820			359			563	
Travel Time (s)		6.0			18.6			9.8			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	722	0	0	1389	122	122	878	56	44	0	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	878	0	0	1511	0	122	934	0	44	0	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2		1		1
Detector Template	Left	Thru			Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100			100		20	100		20		20
Trailing Detector (ft)	0	0			0		0	0		0		0
Turn Type	Perm						Perm			custom		custom
Protected Phases		2			6			8				
Permitted Phases	2						8			4		4
Detector Phase	2	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	26.0	26.0			26.0		36.0	36.0		36.0		36.0
Total Split (s)	63.0	63.0	0.0	0.0	63.0	0.0	57.0	57.0	0.0	57.0	0.0	57.0
Total Split (%)	52.5%	52.5%	0.0%	0.0%	52.5%	0.0%	47.5%	47.5%	0.0%	47.5%	0.0%	47.5%
Maximum Green (s)	58.0	58.0			58.0		52.0	52.0		52.0		52.0
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		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Minimum Gap (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Time Before Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Time To Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Recall Mode	C-Max	C-Max			C-Max		Ped	Ped		Ped		Ped
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)	14.0	14.0			14.0		24.0	24.0		24.0		24.0
Pedestrian Calls (#/hr)	10	10			10		10	10		10		10
Act Effct Green (s)		65.2			65.2		44.8	44.8		44.8		44.8
Actuated g/C Ratio		0.54			0.54		0.37	0.37		0.37		0.37
v/c Ratio		1.46dl			0.49		0.21	0.79		0.48		0.08
Control Delay		5.6			5.7		22.9	34.0		46.0		13.2
Queue Delay		0.0			0.0		0.0	0.0		0.0		0.0
Total Delay		5.6			5.7		22.9	34.0		46.0		13.2
LOS		A			A		C	C		D		B
Approach Delay		5.6			5.7			32.7				
Approach LOS		A			A			C				
90th %ile Green (s)	58.0	58.0			58.0		52.0	52.0		52.0		52.0
90th %ile Term Code	Coord	Coord			Coord		Max	Max		Hold		Hold
70th %ile Green (s)	60.7	60.7			60.7		49.3	49.3		49.3		49.3
70th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
50th %ile Green (s)	64.5	64.5			64.5		45.5	45.5		45.5		45.5
50th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
30th %ile Green (s)	68.1	68.1			68.1		41.9	41.9		41.9		41.9
30th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
10th %ile Green (s)	74.8	74.8			74.8		35.2	35.2		35.2		35.2
10th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
Queue Length 50th (ft)		41			43		55	269		26		11
Queue Length 95th (ft)		41			48		m71	m252		66		33
Internal Link Dist (ft)		184			740			279			483	
Turn Bay Length (ft)												
Base Capacity (vph)		1592			3107		690	1372		107		630
Starvation Cap Reductn		0			0		0	0		0		0
Spillback Cap Reductn		0			0		0	0		0		0
Storage Cap Reductn		0			0		0	0		0		0
Reduced v/c Ratio		0.55			0.49		0.18	0.68		0.41		0.07

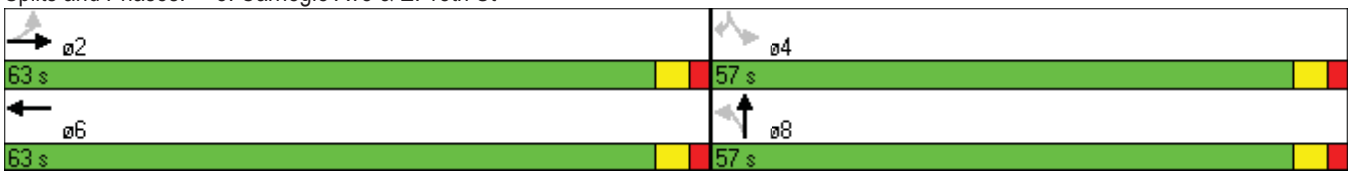
Intersection Summary	
Area Type:	CBD

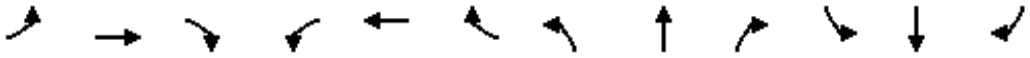
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 66 (55%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 84.5%	ICU Level of Service E
Analysis Period (min) 15	

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

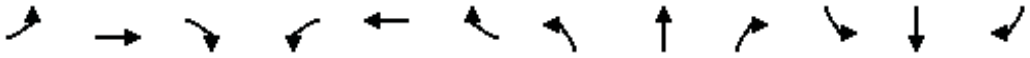
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Carnegie Ave & E. 18th St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	420	0	180	1240	80	160	885	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	400		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.991			0.995				
Flt Protected	0.950			0.950				0.993				
Satd. Flow (prot)	1593	3185	0	1593	3157	0	0	4522	0	0	0	0
Flt Permitted	0.061			0.484				0.993				
Satd. Flow (perm)	102	3185	0	811	3157	0	0	4522	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8			5				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		352			806			182			329	
Travel Time (s)		8.0			18.3			5.0			9.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	467	0	200	1378	89	178	983	44	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	467	0	200	1467	0	0	1205	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2				
Detector Template	Left	Thru		Left	Thru		Left	Thru				
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turn Type	pm+pt			Perm			Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Detector Phase	5	2		6	6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0				



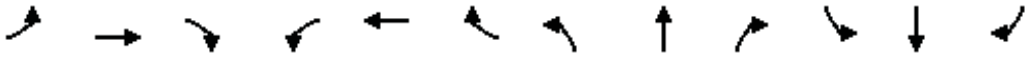
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	26.0		26.0	26.0		29.0	29.0				
Total Split (s)	15.0	81.0	0.0	66.0	66.0	0.0	39.0	39.0	0.0	0.0	0.0	0.0
Total Split (%)	12.5%	67.5%	0.0%	55.0%	55.0%	0.0%	32.5%	32.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Recall Mode	None	C-Max		C-Max	C-Max		Ped	Ped				
Walk Time (s)		7.0		7.0	7.0		7.0	7.0				
Flash Dont Walk (s)		14.0		14.0	14.0		17.0	17.0				
Pedestrian Calls (#/hr)		10		10	10		10	10				
Act Effct Green (s)	76.0	76.0		61.5	61.5			34.0				
Actuated g/C Ratio	0.63	0.63		0.51	0.51			0.28				
v/c Ratio	0.79	0.23		0.48	0.90			0.94				
Control Delay	49.2	12.9		24.0	36.0			56.1				
Queue Delay	0.0	0.4		0.0	0.0			409.9				
Total Delay	49.2	13.3		24.0	36.0			466.1				
LOS	D	B		C	D			F				
Approach Delay		21.7			34.5			466.1				
Approach LOS		C			C			F				
90th %ile Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
90th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
70th %ile Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
70th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
50th %ile Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
50th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
30th %ile Green (s)	9.8	76.0		61.2	61.2		34.0	34.0				
30th %ile Term Code	Gap	Coord		Coord	Coord		Max	Max				
10th %ile Green (s)	7.9	76.0		63.1	63.1		34.0	34.0				
10th %ile Term Code	Gap	Coord		Coord	Coord		Max	Max				
Queue Length 50th (ft)	62	106		98	528			332				
Queue Length 95th (ft)	#167	124		170	#670			#427				
Internal Link Dist (ft)		272			726			102			249	
Turn Bay Length (ft)				400								
Base Capacity (vph)	189	2017		415	1621			1285				
Starvation Cap Reductn	0	1011		0	0			657				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.76	0.46		0.48	0.90			1.92				

Intersection Summary	
Area Type:	CBD

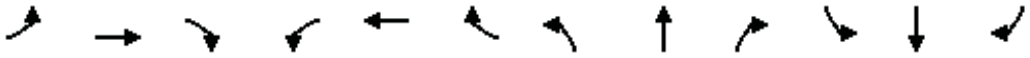
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 32 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 181.6	Intersection LOS: F
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 10: Carnegie Ave & E. 22nd St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	95	335	40	0	95	0	935	25	0	180	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		0	1		1	0		1	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.885				0.850		0.996				
Flt Protected		0.999		0.950								
Satd. Flow (prot)	0	2816	0	1593	0	1425	0	4558	0	0	1676	0
Flt Permitted		0.999		0.359								
Satd. Flow (perm)	0	2816	0	602	0	1425	0	4558	0	0	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		372				68		6				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		360			814			329			182	
Travel Time (s)		9.8			22.2			9.0			5.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	106	372	44	0	106	0	1039	28	0	200	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	484	0	44	0	106	0	1067	0	0	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2			2	
Detector Template	Left	Thru		Left		Right		Thru			Thru	
Leading Detector (ft)	20	100		20		20		100			100	
Trailing Detector (ft)	0	0		0		0		0			0	
Turn Type	Perm			custom		custom						
Protected Phases		4						2			6	
Permitted Phases	4			8		8						
Detector Phase	4	4		8		8		2			6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0			5.0	

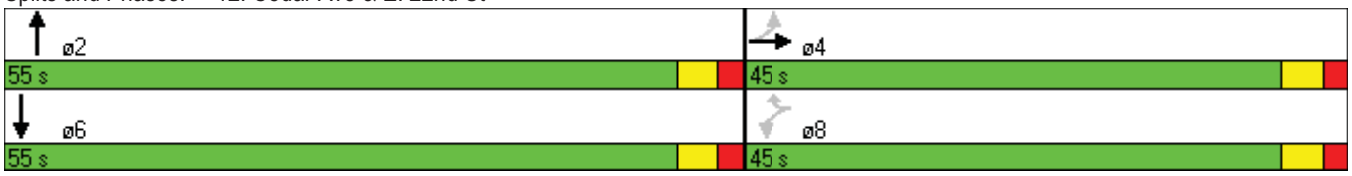


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	33.0	33.0		33.0		33.0		26.0			26.0	
Total Split (s)	45.0	45.0	0.0	45.0	0.0	45.0	0.0	55.0	0.0	0.0	55.0	0.0
Total Split (%)	45.0%	45.0%	0.0%	45.0%	0.0%	45.0%	0.0%	55.0%	0.0%	0.0%	55.0%	0.0%
Maximum Green (s)	40.0	40.0		40.0		40.0		50.0			50.0	
Yellow Time (s)	3.0	3.0		3.0		3.0		3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0		2.0		2.0			2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Minimum Gap (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Time Before Reduce (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Time To Reduce (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Recall Mode	Ped	Ped		Ped		Ped		C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0		7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0		21.0		21.0		14.0			14.0	
Pedestrian Calls (#/hr)	10	10		10		10		10			10	
Act Effct Green (s)		28.0		28.0		28.0		62.0			62.0	
Actuated g/C Ratio		0.28		0.28		0.28		0.62			0.62	
v/c Ratio		0.46		0.26		0.24		0.38			0.19	
Control Delay		8.6		33.0		13.3		1.8			8.8	
Queue Delay		0.0		0.0		0.0		0.0			5.2	
Total Delay		8.6		33.0		13.3		1.8			14.0	
LOS		A		C		B		A			B	
Approach Delay		8.6						1.8			14.0	
Approach LOS		A						A			B	
90th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
90th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
70th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
70th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
50th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
50th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
30th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
30th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
10th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
10th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
Queue Length 50th (ft)		28		22		18		13			50	
Queue Length 95th (ft)		70		54		60		22			83	
Internal Link Dist (ft)		280			734			249			102	
Turn Bay Length (ft)												
Base Capacity (vph)		1350		241		611		2828			1039	
Starvation Cap Reductn		0		0		0		0			768	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.36		0.18		0.17		0.38			0.74	

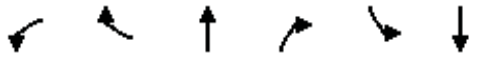
Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 99 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Cedar Ave & E. 22nd St



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	20	70	830	60	50	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	80	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.850	0.990			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1593	1425	4531	0	0	4558
Flt Permitted	0.950					0.786
Satd. Flow (perm)	1593	1425	4531	0	0	3597
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		78	18			
Link Speed (mph)	25		25			25
Link Distance (ft)	739		343			178
Travel Time (s)	20.2		9.4			4.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	22	78	922	67	56	567
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	78	989	0	0	623
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Turn Type		custom			Perm	
Protected Phases			2			6
Permitted Phases	8	8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0



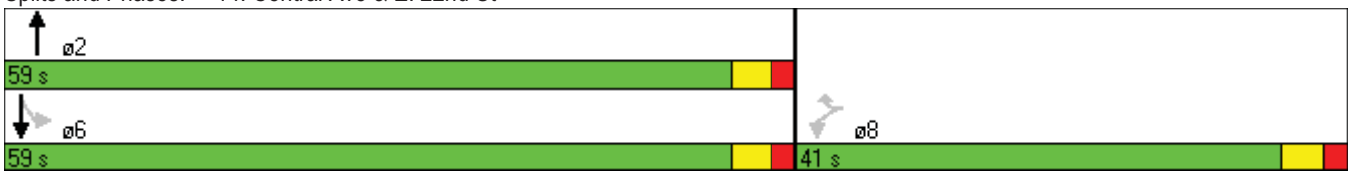
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	36.0	36.0	22.0		22.0	22.0
Total Split (s)	41.0	41.0	59.0	0.0	59.0	59.0
Total Split (%)	41.0%	41.0%	59.0%	0.0%	59.0%	59.0%
Maximum Green (s)	36.0	36.0	54.0		54.0	54.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	Ped	Ped	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	24.0	24.0	10.0		10.0	10.0
Pedestrian Calls (#/hr)	10	10	10		10	10
Act Effct Green (s)	31.0	31.0	59.0			59.0
Actuated g/C Ratio	0.31	0.31	0.59			0.59
v/c Ratio	0.04	0.16	0.37			0.29
Control Delay	24.6	6.8	10.4			9.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.6	6.8	10.4			9.6
LOS	C	A	B			A
Approach Delay	10.7		10.4			9.6
Approach LOS	B		B			A
90th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
10th %ile Term Code	Ped	Ped	Coord		Coord	Coord
Queue Length 50th (ft)	10	0	49			73
Queue Length 95th (ft)	28	33	168			105
Internal Link Dist (ft)	659		263			98
Turn Bay Length (ft)	80					
Base Capacity (vph)	573	563	2681			2122
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.04	0.14	0.37			0.29

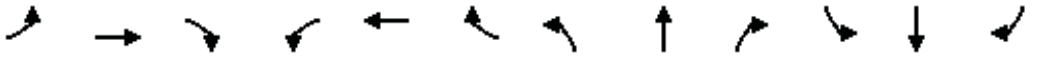
Intersection Summary

Area Type: CBD

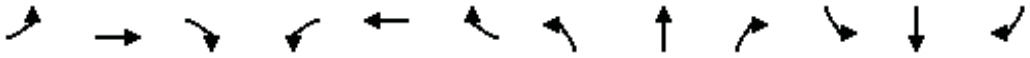
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 84 (84%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 48.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Central Ave & E. 22nd St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	150	70	100	140	100	90	300	50	160	430	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	65		0	60		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850		0.956			0.978			0.990	
Flt Protected		0.967			0.986		0.950			0.950		
Satd. Flow (prot)	0	3080	1425	0	3003	0	1593	4476	0	1593	4531	0
Flt Permitted		0.605			0.625		0.454			0.451		
Satd. Flow (perm)	0	1927	1425	0	1903	0	761	4476	0	756	4531	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78		81			32			12	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		161			827			998			178	
Travel Time (s)		4.4			22.6			27.2			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	367	167	78	111	156	111	100	333	56	178	478	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	534	78	0	378	0	100	389	0	178	511	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	36.0	36.0	36.0	36.0	36.0		10.0	29.0		10.0	29.0	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	0.0	11.0	31.0	0.0	20.0	40.0	0.0
Total Split (%)	49.0%	49.0%	49.0%	49.0%	49.0%	0.0%	11.0%	31.0%	0.0%	20.0%	40.0%	0.0%
Maximum Green (s)	44.0	44.0	44.0	44.0	44.0		6.0	26.0		15.0	35.0	
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)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Ped	Ped	Ped	Ped	Ped		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0			17.0			17.0	
Pedestrian Calls (#/hr)	10	10	10	10	10			10			10	
Act Effct Green (s)		35.7	35.7		35.7		45.6	38.0		52.9	43.9	
Actuated g/C Ratio		0.36	0.36		0.36		0.46	0.38		0.53	0.44	
v/c Ratio		1.27dl	0.14		0.52		0.24	0.23		0.36	0.26	
Control Delay		36.5	4.8		21.5		15.1	21.4		7.7	11.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		36.5	4.8		21.5		15.1	21.4		7.7	11.8	
LOS		D	A		C		B	C		A	B	
Approach Delay		32.5			21.5			20.1			10.7	
Approach LOS		C			C			C			B	
90th %ile Green (s)	43.7	43.7	43.7	43.7	43.7		6.3	26.0		15.3	35.0	
90th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	38.5	38.5	38.5	38.5	38.5		9.8	33.3		13.2	36.7	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Coord		Gap	Coord	
50th %ile Green (s)	34.5	34.5	34.5	34.5	34.5		8.4	39.5		11.0	42.1	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Coord		Gap	Coord	
30th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		7.3	44.7		9.3	46.7	
30th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
10th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		0.0	46.5		7.5	59.0	
10th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Skip	Coord		Gap	Coord	
Queue Length 50th (ft)		160	0		78		29	53		13	74	
Queue Length 95th (ft)		195	26		106		67	96		120	112	
Internal Link Dist (ft)		81			747			918			98	
Turn Bay Length (ft)							65			60		
Base Capacity (vph)		848	671		883		410	1720		536	1996	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.63	0.12		0.43		0.24	0.23		0.33	0.26	

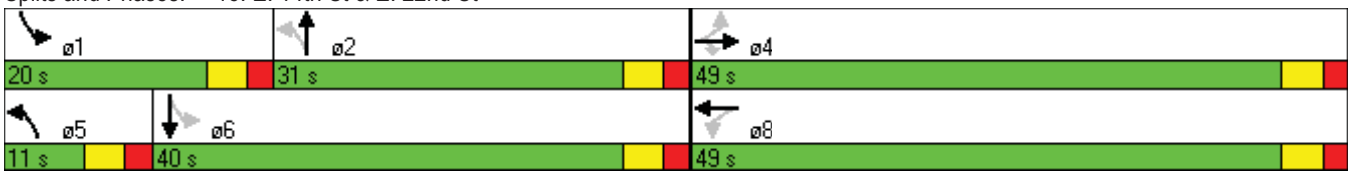
Intersection Summary

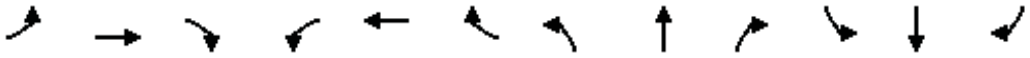
Area Type: CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 15: E. 14th St & E. 22nd St

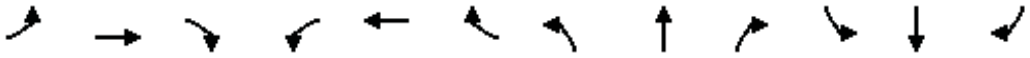




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	5	50	5	490	5	240	0	0	390	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850					0.998	
Flt Protected	0.950			0.950				0.999				
Satd. Flow (prot)	1593	0	1425	1593	1676	1425	0	4572	0	0	4568	0
Flt Permitted	0.950			0.950				0.999				
Satd. Flow (perm)	1593	0	1425	1593	1676	1425	0	4572	0	0	4568	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		146			728			388			998	
Travel Time (s)		4.0			19.9			10.6			27.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	0	6	56	6	544	6	267	0	0	433	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	0	6	56	6	544	0	273	0	0	439	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	560	5	5	590	10	5	5	5	430	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.999			0.998			0.950				0.850
Flt Protected		0.986						0.984		0.950	0.954	
Satd. Flow (prot)	0	4508	0	0	4568	0	0	2978	0	1513	1519	1425
Flt Permitted		0.681			0.932			0.885		0.745	0.718	
Satd. Flow (perm)	0	3114	0	0	4257	0	0	2678	0	1187	1144	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			3			6				22
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		665			540			238			388	
Travel Time (s)		15.1			12.3			6.5			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	256	622	6	6	656	11	6	6	6	478	6	22
Shared Lane Traffic (%)										49%		
Lane Group Flow (vph)	0	884	0	0	673	0	0	18	0	244	240	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

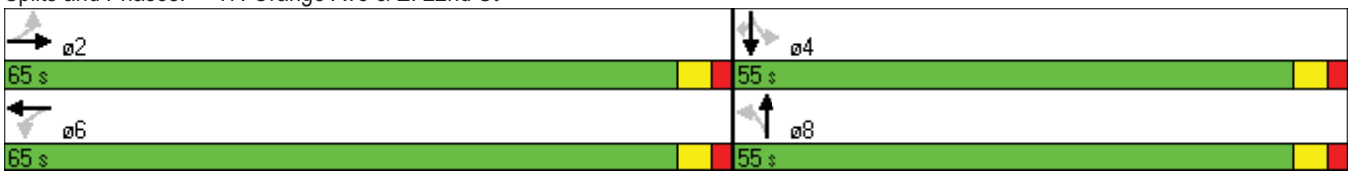


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Total Split (s)	65.0	65.0	0.0	65.0	65.0	0.0	55.0	55.0	0.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	0.0%	54.2%	54.2%	0.0%	45.8%	45.8%	0.0%	45.8%	45.8%	45.8%
Maximum Green (s)	60.0	60.0		60.0	60.0		50.0	50.0		50.0	50.0	50.0
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)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		78.0			78.0			32.0		32.0	32.0	32.0
Actuated g/C Ratio		0.65			0.65			0.27		0.27	0.27	0.27
v/c Ratio		0.44			0.24			0.03		0.77	0.79	0.06
Control Delay		11.2			10.1			20.5		55.6	57.6	10.0
Queue Delay		0.0			0.0			0.0		0.0	0.0	0.0
Total Delay		11.2			10.1			20.5		55.6	57.6	10.0
LOS		B			B			C		E	E	A
Approach Delay		11.2			10.1			20.5			54.5	
Approach LOS		B			B			C			D	
90th %ile Green (s)	65.5	65.5		65.5	65.5		44.5	44.5		44.5	44.5	44.5
90th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	Gap
70th %ile Green (s)	72.4	72.4		72.4	72.4		37.6	37.6		37.6	37.6	37.6
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	Gap
50th %ile Green (s)	77.9	77.9		77.9	77.9		32.1	32.1		32.1	32.1	32.1
50th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	Gap
30th %ile Green (s)	83.5	83.5		83.5	83.5		26.5	26.5		26.5	26.5	26.5
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	Gap
10th %ile Green (s)	90.6	90.6		90.6	90.6		19.4	19.4		19.4	19.4	19.4
10th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	Gap
Queue Length 50th (ft)		106			72			3		184	182	0
Queue Length 95th (ft)		178			124			11		249	248	18
Internal Link Dist (ft)		585			460			158			308	
Turn Bay Length (ft)												
Base Capacity (vph)		2024			2768			1119		495	477	607
Starvation Cap Reductn		0			0			0		0	0	0
Spillback Cap Reductn		0			0			0		0	0	0
Storage Cap Reductn		0			0			0		0	0	0
Reduced v/c Ratio		0.44			0.24			0.02		0.49	0.50	0.04

Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 105 (88%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Orange Ave & E. 22nd St

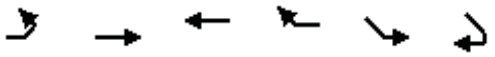


Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	0	3170	110	590	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	0.86	0.86	1.00	1.00
Ped Bike Factor						
Frt			0.891	0.850		
Flt Protected						
Satd. Flow (prot)	0	4899	4134	1298	0	0
Flt Permitted						
Satd. Flow (perm)	0	4899	4134	1298	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		164	127		290	
Travel Time (s)		4.5	3.5		7.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		2				
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	3522	122	656	0	0
Shared Lane Traffic (%)				50%		
Lane Group Flow (vph)	0	3522	450	328	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.05	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

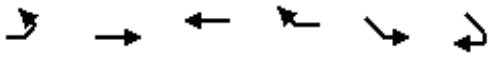
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	2005	0	810	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	3	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	0.76	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	3610	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	873			369	192	
Travel Time (s)	19.8			8.4	4.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	2228	0	900	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2228	0	900	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	30	15			9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	30	490	3335	780	5	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	2	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.91	0.91	0.86	0.86	0.97	0.95
Ped Bike Factor						
Frt			0.997	0.850	0.868	
Flt Protected		0.997			0.994	
Satd. Flow (prot)	0	4563	4312	1225	2806	0
Flt Permitted		0.725			0.994	
Satd. Flow (perm)	0	3318	4312	1225	2806	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			15	780	3	
Link Speed (mph)		30	30		30	
Link Distance (ft)		288	245		607	
Travel Time (s)		6.5	5.6		13.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	33	544	3706	867	6	44
Shared Lane Traffic (%)				10%		
Lane Group Flow (vph)	0	577	3793	780	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Right	Right	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (ft)	20	100	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Perm			Perm		
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	
Total Split (s)	110.0	110.0	110.0	110.0	10.0	0.0
Total Split (%)	91.7%	91.7%	91.7%	91.7%	8.3%	0.0%
Maximum Green (s)	105.0	105.0	105.0	105.0	5.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)		108.0	108.0	108.0	5.0	
Actuated g/C Ratio		0.90	0.90	0.90	0.04	
v/c Ratio		0.19	0.98	0.66	0.42	
Control Delay		0.9	4.4	2.0	54.4	
Queue Delay		0.0	153.3	5.1	0.0	
Total Delay		0.9	157.7	7.1	54.4	
LOS		A	F	A	D	
Approach Delay		0.9	132.0		54.4	
Approach LOS		A	F		D	
90th %ile Green (s)	105.0	105.0	105.0	105.0	5.0	
90th %ile Term Code	Coord	Coord	Coord	Coord	Max	
70th %ile Green (s)	105.0	105.0	105.0	105.0	5.0	
70th %ile Term Code	Coord	Coord	Coord	Coord	Max	
50th %ile Green (s)	105.0	105.0	105.0	105.0	5.0	
50th %ile Term Code	Coord	Coord	Coord	Coord	Max	
30th %ile Green (s)	105.0	105.0	105.0	105.0	5.0	
30th %ile Term Code	Coord	Coord	Coord	Coord	Max	
10th %ile Green (s)	115.0	115.0	115.0	115.0	0.0	
10th %ile Term Code	Coord	Coord	Coord	Coord	Skip	
Queue Length 50th (ft)		12	204	0	18	
Queue Length 95th (ft)		m13	m52	m0	m27	
Internal Link Dist (ft)		208	165		527	
Turn Bay Length (ft)						
Base Capacity (vph)		2986	3882	1180	120	
Starvation Cap Reductn		0	1069	329	0	
Spillback Cap Reductn		0	0	0	0	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.19	1.35	0.92	0.42	

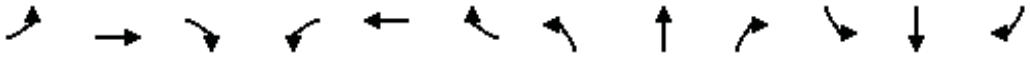
Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 34 (28%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 116.7	Intersection LOS: F
Intersection Capacity Utilization 90.5%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 21: S. Broadway Ave & E. 9th St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	480	135	0	0	0	0	550	20	30	100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.995				
Flt Protected		0.989								0.950		
Satd. Flow (prot)	0	4356	1371	0	0	0	0	3169	0	1593	1676	0
Flt Permitted		0.989								0.380		
Satd. Flow (perm)	0	4356	1371	0	0	0	0	3169	0	637	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150					6				
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		287			171			263			272	
Travel Time (s)		6.5			4.7			7.2			7.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	533	150	0	0	0	0	611	22	33	111	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	677	150	0	0	0	0	633	0	33	111	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Turn Type	Perm		Perm							pm+pt		
Protected Phases		2						8		7	4	
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0	5.0	

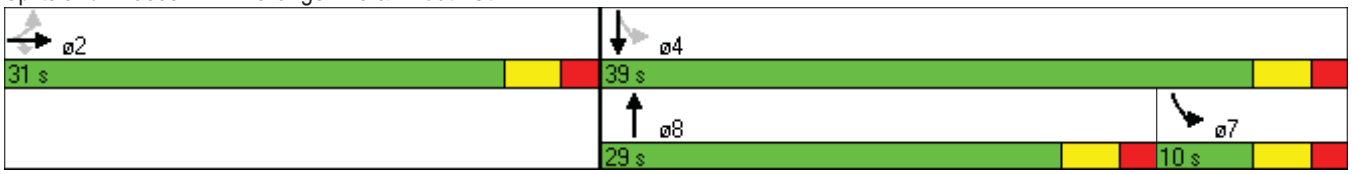


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	26.0	26.0	26.0					26.0		10.0	26.0	
Total Split (s)	31.0	31.0	31.0	0.0	0.0	0.0	0.0	29.0	0.0	10.0	39.0	0.0
Total Split (%)	44.3%	44.3%	44.3%	0.0%	0.0%	0.0%	0.0%	41.4%	0.0%	14.3%	55.7%	0.0%
Maximum Green (s)	26.0	26.0	26.0					24.0		5.0	34.0	
Yellow Time (s)	3.0	3.0	3.0					3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0					2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Recall Mode	None	None	None					Max		None	Max	
Walk Time (s)	7.0	7.0	7.0					7.0			7.0	
Flash Dont Walk (s)	14.0	14.0	14.0					14.0			14.0	
Pedestrian Calls (#/hr)	10	10	10					10			10	
Act Effct Green (s)		17.3	17.3					30.5		34.2	34.2	
Actuated g/C Ratio		0.28	0.28					0.50		0.56	0.56	
v/c Ratio		0.55	0.30					0.40		0.08	0.12	
Control Delay		20.3	5.0					13.0		8.8	8.2	
Queue Delay		0.0	0.0					0.0		0.0	0.0	
Total Delay		20.3	5.0					13.0		8.8	8.2	
LOS		C	A					B		A	A	
Approach Delay		17.6						13.0			8.4	
Approach LOS		B						B			A	
90th %ile Green (s)	24.8	24.8	24.8					24.0		5.0	34.0	
90th %ile Term Code	Gap	Gap	Gap					MaxR		Max	MaxR	
70th %ile Green (s)	19.5	19.5	19.5					24.0		5.0	34.0	
70th %ile Term Code	Gap	Gap	Gap					MaxR		Max	MaxR	
50th %ile Green (s)	17.0	17.0	17.0					34.0		0.0	34.0	
50th %ile Term Code	Gap	Gap	Gap					Hold		Skip	MaxR	
30th %ile Green (s)	14.6	14.6	14.6					34.0		0.0	34.0	
30th %ile Term Code	Gap	Gap	Gap					Hold		Skip	MaxR	
10th %ile Green (s)	11.6	11.6	11.6					34.0		0.0	34.0	
10th %ile Term Code	Gap	Gap	Gap					Hold		Skip	MaxR	
Queue Length 50th (ft)		77	0					60		5	17	
Queue Length 95th (ft)		107	34					161		19	49	
Internal Link Dist (ft)		207			91			183			192	
Turn Bay Length (ft)			200									
Base Capacity (vph)		1851	669					1572		432	931	
Starvation Cap Reductn		0	0					0		0	0	
Spillback Cap Reductn		0	0					0		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.37	0.22					0.40		0.08	0.12	

Intersection Summary	
Area Type:	CBD

Cycle Length: 70	
Actuated Cycle Length: 61.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 68.8	
70th %ile Actuated Cycle: 63.5	
50th %ile Actuated Cycle: 61	
30th %ile Actuated Cycle: 58.6	
10th %ile Actuated Cycle: 55.6	

Splits and Phases: 22: Orange Ave & E. 30th St

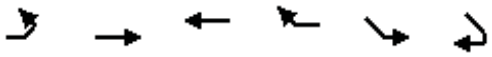


Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	0	650	1880	415	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3539	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	1583	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		255	152		335	
Travel Time (s)		7.0	4.1		9.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	722	2089	461	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	722	2089	461	0	0
Enter Blocked Intersection	No	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	0	410	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	100			0
Storage Lanes	0	0	1			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1770	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1770	5085	0	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	514			192	863	
Travel Time (s)	14.0			4.4	19.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	456	578	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	456	578	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	30			9
Sign Control	Stop			Free	Stop	

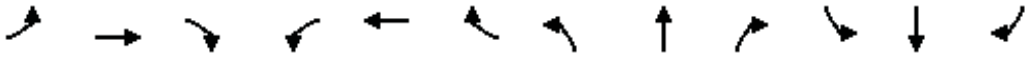
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	550	0	260	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	2787	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	2787	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		264	161		265	
Travel Time (s)		7.2	4.4		7.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	611	0	289	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	611	0	289	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	50	100	250	940	320	890	140	280	145	125	1610
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	260		0	60		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.956			0.968			0.900				0.850
Flt Protected		0.973			0.992		0.950			0.950		
Satd. Flow (prot)	0	4257	0	0	4395	0	1593	2867	0	1593	1676	1425
Flt Permitted		0.812			0.777		0.668			0.470		
Satd. Flow (perm)	0	3553	0	0	3442	0	1120	2867	0	788	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		89			57			311				8
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		203			665			449			255	
Travel Time (s)		4.6			15.1			12.2			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	211	56	111	278	1044	356	989	156	311	161	139	1789
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	378	0	0	1678	0	989	467	0	161	139	1789
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	R NA
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Total Split (s)	40.0	40.0	0.0	40.0	40.0	0.0	80.0	80.0	0.0	80.0	80.0	80.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	66.7%
Maximum Green (s)	35.0	35.0		35.0	35.0		75.0	75.0		75.0	75.0	75.0
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)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		35.0			35.0		75.0	75.0		75.0	75.0	75.0
Actuated g/C Ratio		0.29			0.29		0.62	0.62		0.62	0.62	0.62
v/c Ratio		1.77dl			1.61		1.41	0.24		0.33	0.13	2.00
Control Delay		31.9			306.0		214.5	1.4		12.9	9.6	475.1
Queue Delay		0.0			2.8		31.3	0.0		0.0	0.0	2.0
Total Delay		31.9			308.8		245.8	1.4		12.9	9.6	477.1
LOS		C			F		F	A		B	A	F
Approach Delay		31.9			308.8			167.4			410.2	
Approach LOS		C			F			F			F	
90th %ile Green (s)	35.0	35.0		35.0	35.0		75.0	75.0		75.0	75.0	75.0
90th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Max	Max
70th %ile Green (s)	35.0	35.0		35.0	35.0		75.0	75.0		75.0	75.0	75.0
70th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Max	Max
50th %ile Green (s)	35.0	35.0		35.0	35.0		75.0	75.0		75.0	75.0	75.0
50th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Max	Max
30th %ile Green (s)	35.0	35.0		35.0	35.0		75.0	75.0		75.0	75.0	75.0
30th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Max	Max
10th %ile Green (s)	35.0	35.0		35.0	35.0		75.0	75.0		75.0	75.0	75.0
10th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Max	Max
Queue Length 50th (ft)		71			~676		~1039	7		55	41	~2185
Queue Length 95th (ft)		101			#746		#1291	10		98	69	#2454
Internal Link Dist (ft)		123			585			369			175	
Turn Bay Length (ft)							260			60		
Base Capacity (vph)		1099			1044		700	1909		493	1048	894
Starvation Cap Reductn		0			0		33	0		0	0	0
Spillback Cap Reductn		0			4		2	0		0	0	2
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		0.34			1.61		1.48	0.24		0.33	0.13	2.01

Intersection Summary

Area Type: CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 68 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.00	
Intersection Signal Delay: 291.2	Intersection LOS: F
Intersection Capacity Utilization 211.8%	ICU Level of Service H
Analysis Period (min) 15	

~ 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.

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

Splits and Phases: 36: Orange Ave & E. 14th St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	760	200	0	1300	0	250	230	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%		0%	
Storage Length (ft)	0		0	130		0		0	0	0	0
Storage Lanes	0		0	1		0		2	1	0	0
Taper Length (ft)	50		50	50		50		50	50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	0.95	0.97	1.00	1.00	1.00
Ped Bike Factor											
Frt		0.969							0.850		
Flt Protected								0.950			
Satd. Flow (prot)	0	4435	0	0	4577	0	0	3090	1425	0	0
Flt Permitted								0.950			
Satd. Flow (perm)	0	4435	0	0	4577	0	0	3090	1425	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		90							33		
Link Speed (mph)		30			30			25		25	
Link Distance (ft)		820			352			375		360	
Travel Time (s)		18.6			8.0			10.2		9.8	
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											
Mid-Block Traffic (%)		0%			0%			0%		0%	
Adj. Flow (vph)	0	844	222	0	1444	0	278	256	122	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1066	0	0	1444	0	0	534	122	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		12			12			24		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15	15	9	15	9
Number of Detectors		2			2		1	1	1		
Detector Template		Thru			Thru		Left	Left	Right		
Leading Detector (ft)		100			100		20	20	20		
Trailing Detector (ft)		0			0		0	0	0		
Turn Type							custom		custom		
Protected Phases		2			6						
Permitted Phases							4	4	4		
Detector Phase		2			6		4	4	4		
Switch Phase											
Minimum Initial (s)		5.0			5.0		5.0	5.0	5.0		

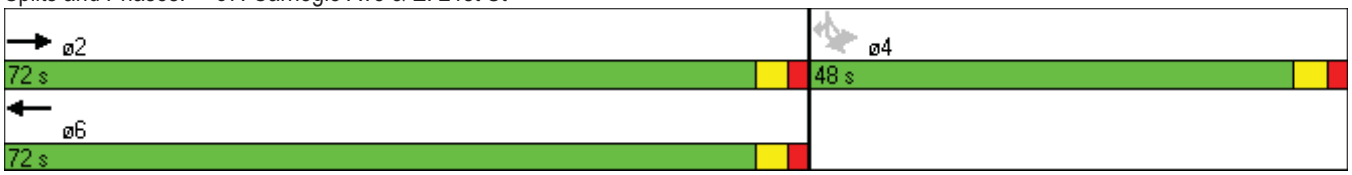
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Minimum Split (s)		26.0			26.0		36.0	36.0	36.0		
Total Split (s)	0.0	72.0	0.0	0.0	72.0	0.0	48.0	48.0	48.0	0.0	0.0
Total Split (%)	0.0%	60.0%	0.0%	0.0%	60.0%	0.0%	40.0%	40.0%	40.0%	0.0%	0.0%
Maximum Green (s)		67.0			67.0		43.0	43.0	43.0		
Yellow Time (s)		3.0			3.0		3.0	3.0	3.0		
All-Red Time (s)		2.0			2.0		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0	4.0	4.0
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0		
Minimum Gap (s)		3.0			3.0		3.0	3.0	3.0		
Time Before Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Time To Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Recall Mode		C-Max			C-Max		Ped	Ped	Ped		
Walk Time (s)		7.0			7.0		7.0	7.0	7.0		
Flash Dont Walk (s)		14.0			14.0		24.0	24.0	24.0		
Pedestrian Calls (#/hr)		10			10		10	10	10		
Act Effct Green (s)		78.6			78.6			31.4	31.4		
Actuated g/C Ratio		0.66			0.66			0.26	0.26		
v/c Ratio		0.36			0.48			0.66	0.31		
Control Delay		5.6			3.6			44.0	27.9		
Queue Delay		0.0			1.6			0.0	0.0		
Total Delay		5.6			5.2			44.0	27.9		
LOS		A			A			D	C		
Approach Delay		5.6			5.2			41.0			
Approach LOS		A			A			D			
90th %ile Green (s)		76.9			76.9		33.1	33.1	33.1		
90th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
70th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
70th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
50th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
50th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
30th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
30th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
10th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
10th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
Queue Length 50th (ft)		47			67			191	55		
Queue Length 95th (ft)		100			m115			246	108		
Internal Link Dist (ft)		740			272			295		280	
Turn Bay Length (ft)											
Base Capacity (vph)		2935			2997			1107	532		
Starvation Cap Reductn		0			1300			0	0		
Spillback Cap Reductn		0			0			0	0		
Storage Cap Reductn		0			0			0	0		
Reduced v/c Ratio		0.36			0.85			0.48	0.23		

Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 51.6%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 37: Carnegie Ave & E. 21st St

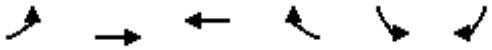


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	155	595	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950	0.999		
Satd. Flow (prot)	0	0	1610	3387	0	0
Flt Permitted			0.950	0.999		
Satd. Flow (perm)	0	0	1610	3387	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	174			478	494	
Travel Time (s)	4.7			13.0	13.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	172	661	0	0
Shared Lane Traffic (%)			10%			
Lane Group Flow (vph)	0	0	155	678	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	25		15	9
Sign Control	Free			Free	Free	

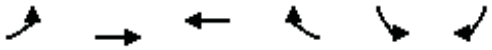
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	650	0	2295	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		2	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.88	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	5085	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			419	500	
Travel Time (s)	4.1			11.4	13.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	722	0	2550	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	722	0	2550	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		25	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	185	110	45	1045	440	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.856		0.987	
Flt Protected		0.970			0.957	
Satd. Flow (prot)	0	3090	2727	0	1584	0
Flt Permitted		0.702			0.957	
Satd. Flow (perm)	0	2236	2727	0	1584	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			1091		12	
Link Speed (mph)		25	25		25	
Link Distance (ft)		318	355		449	
Travel Time (s)		8.7	9.7		12.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	206	122	50	1161	489	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	328	1211	0	539	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	10.0	10.0	10.0		10.0	
Total Split (s)	26.0	26.0	26.0	0.0	34.0	0.0
Total Split (%)	43.3%	43.3%	43.3%	0.0%	56.7%	0.0%
Maximum Green (s)	21.0	21.0	21.0		29.0	
Yellow Time (s)	3.0	3.0	3.0		3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Minimum Gap (s)	3.0	3.0	3.0		3.0	
Time Before Reduce (s)	0.0	0.0	0.0		0.0	
Time To Reduce (s)	0.0	0.0	0.0		0.0	
Recall Mode	None	None	None		C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)		16.4	16.4		33.6	
Actuated g/C Ratio		0.27	0.27		0.56	
v/c Ratio		1.84dl	0.98dr		0.60	
Control Delay		21.0	6.5		20.4	
Queue Delay		0.5	3.2		0.0	
Total Delay		21.5	9.7		20.4	
LOS		C	A		C	
Approach Delay		21.5	9.7		20.4	
Approach LOS		C	A		C	
90th %ile Green (s)	21.0	21.0	21.0		29.0	
90th %ile Term Code	Hold	Hold	Max		Coord	
70th %ile Green (s)	21.0	21.0	21.0		29.0	
70th %ile Term Code	Hold	Hold	Max		Coord	
50th %ile Green (s)	18.0	18.0	18.0		32.0	
50th %ile Term Code	Hold	Hold	Gap		Coord	
30th %ile Green (s)	12.5	12.5	12.5		37.5	
30th %ile Term Code	Gap	Gap	Hold		Coord	
10th %ile Green (s)	9.5	9.5	9.5		40.5	
10th %ile Term Code	Gap	Gap	Gap		Coord	
Queue Length 50th (ft)		50	16		291	
Queue Length 95th (ft)		78	56		m268	
Internal Link Dist (ft)		238	275		369	
Turn Bay Length (ft)						
Base Capacity (vph)		783	1664		892	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		165	343		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.53	0.92		0.60	

Intersection Summary	
Area Type:	CBD

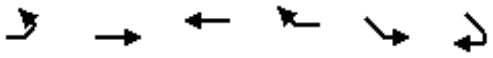
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 52 (87%), Referenced to phase 6:SBL, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 93.1%	ICU Level of Service F
Analysis Period (min) 15	

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

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

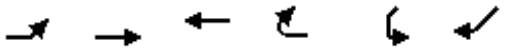
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 40: Broadway Ave & E. 14th St



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	435	0	0	310	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3406	0	0	1656	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3406	0	0	1656	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		494	287		482	
Travel Time (s)		11.2	6.5		13.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	483	0	0	344	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	483	0	0	344	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		10	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	25	9
Sign Control		Free	Stop		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	55	475	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	2			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	1681	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1681	0	0	0	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		171	435		366	
Travel Time (s)		3.9	9.9		10.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	13%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	61	528	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	528	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	30			9	15	9
Sign Control		Free	Stop		Stop	

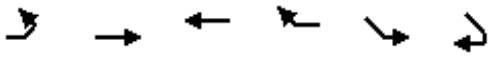
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	0	0	595	0	0	1700
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	1611
Link Speed (mph)		25	25		25	
Link Distance (ft)		419	300		413	
Travel Time (s)		11.4	8.2		11.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	661	0	0	1889
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	661	0	0	1889
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Left	L NA	Right	Right	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	25
Sign Control		Free	Yield		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	128.4%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	1100	950	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	2			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.97	0.91	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	0	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		323	359		156	
Travel Time (s)		8.8	9.8		4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	1222	1056	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1222	1056	0	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	25			9	15	9
Sign Control		Free	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	520	0	3375	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			4	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.64	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	4053	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	4053	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		863	288		163	
Travel Time (s)		19.6	6.5		3.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	578	0	3750	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	578	0	3750	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			30	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	0	455	0	1100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	2
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	2787
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	2787
Link Speed (mph)	25			25	25	
Link Distance (ft)	123			150	156	
Travel Time (s)	3.4			4.1	4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	506	0	1222
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	506	0	1222
Enter Blocked Intersection	No	No	Yes	Yes	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	155	0	0	0	0	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1611
Link Speed (mph)	25			25	25	
Link Distance (ft)	494			264	236	
Travel Time (s)	13.5			7.2	6.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	172	0	0	0	0	444
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	0	0	0	444
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

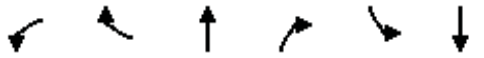
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	1970	0	45	810	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1596	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1596	0	3539	3539	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	277			485	607	
Travel Time (s)	7.6			11.0	13.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	2189	0	50	900	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2189	0	50	900	0
Enter Blocked Intersection	No	Yes	No	No	Yes	No
Lane Alignment	Left	R NA	Left	Left	L NA	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 151.0%		ICU Level of Service H	
Analysis Period (min) 15			

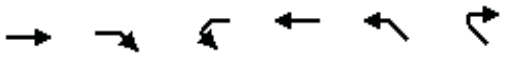
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	650	0	0	0	0	1170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1627
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1627
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			282	360	
Travel Time (s)	13.6			7.7	9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	722	0	0	0	0	1300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	722	0	0	0	0	1300
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 97.1%		ICU Level of Service F	
Analysis Period (min) 15			



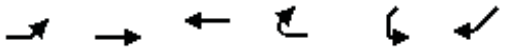
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	260	1820	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	2		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	0.88	0.91	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	5085	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	5085	0	0	0
Link Speed (mph)	25		25			25
Link Distance (ft)	508		306			323
Travel Time (s)	13.9		8.3			8.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	289	2022	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	289	2022	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	L NA	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25		9	15	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	995	0	605	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		3	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.76	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	3610	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			295	705	
Travel Time (s)	12.3			6.7	16.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	1106	0	672	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1106	0	672	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		30	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑↑	↑↑↑			↱
Volume (vph)	0	340	3440	0	0	415
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	5085	5085	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	5085	5085	0	0	1611
Link Speed (mph)		30	30		25	
Link Distance (ft)		245	203		335	
Travel Time (s)		5.6	4.6		9.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	378	3822	0	0	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	378	3822	0	0	461
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	L NA	Right	Left	R NA
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

CUY-90-14.90

PID 77332/85531

APPENDIX TC-10: ATTACHMENT B

Year 2015 Central Viaduct Bi-Directional, PM Peak Hour

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	0	0	550	660	0	1585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.91
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	3539	1583	0	5085
Flt Permitted						
Satd. Flow (perm)	0	0	3539	1583	0	5085
Link Speed (mph)	25		30			30
Link Distance (ft)	509		164			485
Travel Time (s)	13.9		3.7			11.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	611	733	0	1761
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	611	733	0	1761
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		30	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Volume (vph)	130	710	280	20	150	510	100	130	685	115	1210	1560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%		0%	
Storage Length (ft)	225		0				0	225		200		0
Storage Lanes	1		1				1	1		1		2
Taper Length (ft)	50		50				50	50		50		50
Lane Util. Factor	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00	0.86	1.00	0.91	0.88
Ped Bike Factor												
Frt		0.955					0.850			0.850		0.850
Flt Protected	0.950				0.950			0.950				
Satd. Flow (prot)	3090	3036	0	0	1593	3185	1425	1593	5767	1425	4577	2292
Flt Permitted	0.950				0.169			0.950				
Satd. Flow (perm)	3090	3036	0	0	283	3185	1425	1593	5767	1425	4577	2292
Right Turn on Red				No			Yes			No		
Satd. Flow (RTOR)							102					3
Link Speed (mph)		30				30			30		30	
Link Distance (ft)		632				879			369		1209	
Travel Time (s)		14.4				20.0			8.4		27.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	12%	2%	2%	2%	2%	2%	2%	2%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%		0%	
Adj. Flow (vph)	144	789	311	22	167	567	111	144	761	128	1344	1733
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1122	0	0	167	567	111	144	761	128	1344	1800
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		24				24			12		12	
Link Offset(ft)		0				0			0		0	
Crosswalk Width(ft)		16				16			16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	9	15		9	15		9		9
Number of Detectors	1	2			1	2	1	1	2	1	2	1
Detector Template	Left	Thru			Left	Thru	Right	Left	Thru	Right	Thru	Right
Leading Detector (ft)	20	100			20	100	20	20	100	20	100	20
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	0
Turn Type	Prot				Perm		Perm	Prot		Perm		Perm
Protected Phases	5	2				6		3	8		4	
Permitted Phases					6		6			8		4
Detector Phase	5	2			6	6	6	3	8	8	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	SBR2
Lane Configurations	
Volume (vph)	60
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	0.91
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	67
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.14
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Minimum Split (s)	10.0	46.0			46.0	46.0	46.0	10.0	36.0	36.0	36.0	36.0
Total Split (s)	10.0	62.0	0.0	0.0	52.0	52.0	52.0	11.0	58.0	58.0	47.0	47.0
Total Split (%)	8.3%	51.7%	0.0%	0.0%	43.3%	43.3%	43.3%	9.2%	48.3%	48.3%	39.2%	39.2%
Maximum Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead				Lag	Lag	Lag	Lead			Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max			C-Max	C-Max	C-Max	None	Ped	Ped	Ped	Ped
Walk Time (s)		7.0			7.0	7.0	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)		34.0			34.0	34.0	34.0		24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)		10			10	10	10		10	10	10	10
Act Effct Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
Actuated g/C Ratio	0.04	0.48			0.39	0.39	0.39	0.05	0.44	0.44	0.35	0.35
v/c Ratio	1.12	0.78			1.50	0.45	0.18	1.80	0.30	0.20	0.84	2.24
Control Delay	165.7	30.9			285.7	6.9	0.7	437.4	21.9	21.7	41.7	584.1
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	165.7	30.9			285.7	6.9	0.7	437.4	21.9	21.7	41.7	584.1
LOS	F	C			F	A	A	F	C	C	D	F
Approach Delay		46.3				61.2			79.8		352.2	
Approach LOS		D				E			E		F	
90th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
90th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
70th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
70th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
50th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
50th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
30th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
30th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
10th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	6.0	53.0	53.0	42.0	42.0
10th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
Queue Length 50th (ft)	~65	371			~183	25	0	~168	107	60	348	~1294
Queue Length 95th (ft)	#135	462			m#315	m40	m0	#302	132	103	411	#1447
Internal Link Dist (ft)		552				799			289		1129	
Turn Bay Length (ft)	225				350			225		200		
Base Capacity (vph)	129	1442			111	1247	620	80	2547	629	1602	804
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	0.78			1.50	0.45	0.18	1.80	0.30	0.20	0.84	2.24

Intersection Summary

Area Type: CBD

Lane Group	SBR2
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

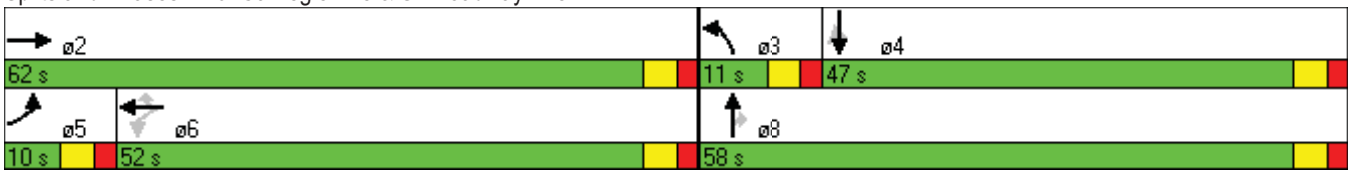
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.24	
Intersection Signal Delay: 206.7	Intersection LOS: F
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

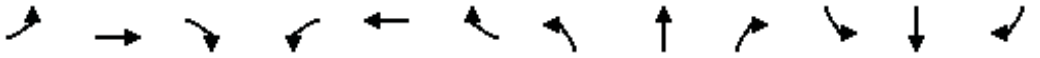
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

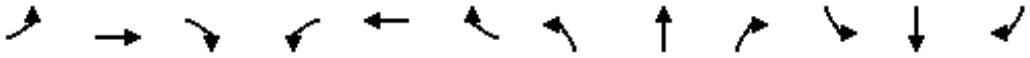
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Carnegie Ave & S. Broadway Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	500	0	1295	875	10	0	1430	155	350	2000	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	230		0	0		0	370		0
Storage Lanes	2		0	1		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt					0.998			0.985			0.997	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	4577	0	1577	4400	0	0	4343	0	1593	4520	0
Flt Permitted	0.279			0.307						0.103		
Satd. Flow (perm)	468	4577	0	510	4400	0	0	4343	0	173	4520	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2			15			3	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		879			388			127			701	
Travel Time (s)		20.0			8.8			3.5			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%	3%	2%	2%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					2	2		2	2			
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	44	556	0	1439	972	11	0	1589	172	389	2222	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	556	0	1439	983	0	0	1761	0	389	2266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.20	1.14	1.14	1.20	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Turn Type	pm+pt			pm+pt						pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6						4		
Detector Phase	5	2		1	6			8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	36.0		10.0	36.0			36.0		10.0	36.0	
Total Split (s)	10.0	38.0	0.0	29.0	57.0	0.0	0.0	39.0	0.0	14.0	53.0	0.0
Total Split (%)	8.3%	31.7%	0.0%	24.2%	47.5%	0.0%	0.0%	32.5%	0.0%	11.7%	44.2%	0.0%
Maximum Green (s)	5.0	33.0		24.0	52.0			34.0		9.0	48.0	
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	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag			Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max			Ped		None	Ped	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		24.0			24.0			24.0			24.0	
Pedestrian Calls (#/hr)		10			10			10			10	
Act Effct Green (s)	38.0	33.0		62.0	54.0			34.0		48.0	48.0	
Actuated g/C Ratio	0.32	0.28		0.52	0.45			0.28		0.40	0.40	
v/c Ratio	0.23	0.44		3.02	0.50			1.42		2.21	1.25	
Control Delay	18.8	28.3		927.1	20.2			226.9		587.3	150.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	18.8	28.3		927.1	20.2			226.9		587.3	150.7	
LOS	B	C		F	C			F		F	F	
Approach Delay		27.6			559.0			226.9			214.7	
Approach LOS		C			F			F			F	
90th %ile Green (s)	5.0	33.0		24.0	52.0			34.0		9.0	48.0	
90th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
70th %ile Green (s)	5.0	33.0		24.0	52.0			34.0		9.0	48.0	
70th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
50th %ile Green (s)	5.0	33.0		24.0	52.0			34.0		9.0	48.0	
50th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
30th %ile Green (s)	5.0	33.0		24.0	52.0			34.0		9.0	48.0	
30th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
10th %ile Green (s)	0.0	33.0		24.0	62.0			34.0		9.0	48.0	
10th %ile Term Code	Skip	Coord		Max	Coord			Max		Max	Max	
Queue Length 50th (ft)	13	64		~1804	179			~675		~444	~807	
Queue Length 95th (ft)	m23	111		m#1977	m196			#773		#643	#903	
Internal Link Dist (ft)		799			308			47			621	
Turn Bay Length (ft)	280			230						370		
Base Capacity (vph)	195	1259		477	1981			1241		176	1810	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.23	0.44		3.02	0.50			1.42		2.21	1.25	

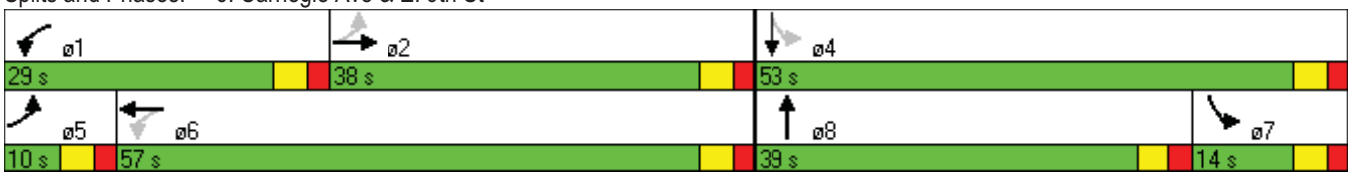
Intersection Summary

Area Type: CBD

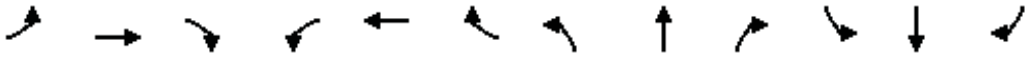
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 115 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 3.02	
Intersection Signal Delay: 314.6	Intersection LOS: F
Intersection Capacity Utilization 163.2%	ICU Level of Service H
Analysis Period (min) 15	

~ 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: Carnegie Ave & E. 9th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	460	135	260	1040	40	0	280	0	20	565	700
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	0		0	0		0	170		0
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.994							0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	4259	0	1593	4549	0	0	3185	0	1593	1676	1425
Flt Permitted	0.198			0.245						0.556		
Satd. Flow (perm)	332	4259	0	411	4549	0	0	3185	0	932	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60			5							20
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		311			264			150			626	
Travel Time (s)		7.1			6.0			4.1			17.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		2	2									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	89	511	150	289	1156	44	0	311	0	22	628	778
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	661	0	289	1200	0	0	311	0	22	628	778
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.20	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	1
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100			100		20	100	20
Trailing Detector (ft)	0	0		0	0			0		0	0	0
Turn Type	Perm			pm+pt						Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6						4		4
Detector Phase	2	2		1	6			8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		10.0	29.0			36.0		36.0	36.0	36.0
Total Split (s)	37.0	37.0	0.0	15.0	52.0	0.0	0.0	68.0	0.0	68.0	68.0	68.0
Total Split (%)	30.8%	30.8%	0.0%	12.5%	43.3%	0.0%	0.0%	56.7%	0.0%	56.7%	56.7%	56.7%
Maximum Green (s)	32.0	32.0		10.0	47.0			63.0		63.0	63.0	63.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		None	C-Max			Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0			17.0			24.0		24.0	24.0	24.0
Pedestrian Calls (#/hr)	10	10			10			10		10	10	10
Act Effct Green (s)	32.0	32.0		47.0	47.0			63.0		63.0	63.0	63.0
Actuated g/C Ratio	0.27	0.27		0.39	0.39			0.52		0.52	0.52	0.52
v/c Ratio	1.00	0.56		1.12	0.67			0.19		0.04	0.71	1.03
Control Delay	68.4	28.8		118.3	23.0			15.4		14.3	27.3	68.1
Queue Delay	0.0	0.0		0.0	1.6			0.0		0.0	0.0	0.0
Total Delay	68.4	28.8		118.3	24.6			15.4		14.3	27.3	68.1
LOS	E	C		F	C			B		B	C	E
Approach Delay		33.5			42.8			15.4			49.3	
Approach LOS		C			D			B			D	
90th %ile Green (s)	32.0	32.0		10.0	47.0			63.0		63.0	63.0	63.0
90th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
70th %ile Green (s)	32.0	32.0		10.0	47.0			63.0		63.0	63.0	63.0
70th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
50th %ile Green (s)	32.0	32.0		10.0	47.0			63.0		63.0	63.0	63.0
50th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
30th %ile Green (s)	32.0	32.0		10.0	47.0			63.0		63.0	63.0	63.0
30th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
10th %ile Green (s)	32.0	32.0		10.0	47.0			63.0		63.0	63.0	63.0
10th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
Queue Length 50th (ft)	~73	132		~150	192			64		8	356	~636
Queue Length 95th (ft)	m#96	m112		#317	192			91		22	504	#879
Internal Link Dist (ft)		231			184			70			546	
Turn Bay Length (ft)	70									170		
Base Capacity (vph)	89	1180		259	1785			1672		489	880	758
Starvation Cap Reductn	0	0		0	387			0		0	0	0
Spillback Cap Reductn	0	21		0	0			0		0	0	0
Storage Cap Reductn	0	0		0	0			0		0	0	0
Reduced v/c Ratio	1.00	0.57		1.12	0.86			0.19		0.04	0.71	1.03

Intersection Summary	
Area Type:	CBD

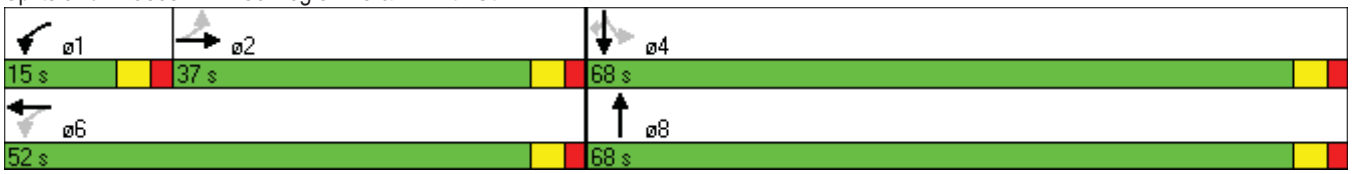
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 82 (68%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 41.2	Intersection LOS: D
Intersection Capacity Utilization 79.8%	ICU Level of Service D
Analysis Period (min) 15	

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

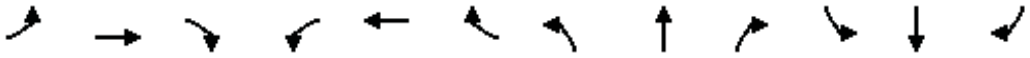
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 7: Carnegie Ave & E. 14th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	690	0	0	730	40	70	90	50	320	0	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	160		0	0		0	0		0
Storage Lanes	0		0	1		0	1		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	0.86	0.86	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.992			0.946				0.850
Flt Protected		0.993					0.950			0.950		
Satd. Flow (prot)	0	4545	0	0	5721	0	1593	3013	0	1593	0	1425
Flt Permitted		0.697					0.950			0.653		
Satd. Flow (perm)	0	3190	0	0	5721	0	1593	3013	0	1095	0	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10			56				158
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		264			820			359			563	
Travel Time (s)		6.0			18.6			9.8			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	122	767	0	0	811	44	78	100	56	356	0	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	889	0	0	855	0	78	156	0	356	0	322
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2		1		1
Detector Template	Left	Thru			Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100			100		20	100		20		20
Trailing Detector (ft)	0	0			0		0	0		0		0
Turn Type	pm+pt						Perm			custom		custom
Protected Phases	5	2			6			8				
Permitted Phases	2						8			4		4
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0

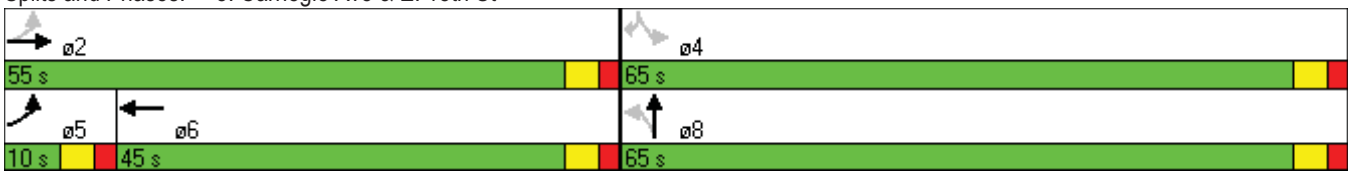


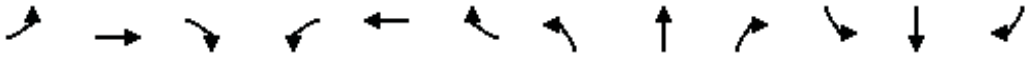
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	26.0			26.0		36.0	36.0		36.0		36.0
Total Split (s)	10.0	55.0	0.0	0.0	45.0	0.0	65.0	65.0	0.0	65.0	0.0	65.0
Total Split (%)	8.3%	45.8%	0.0%	0.0%	37.5%	0.0%	54.2%	54.2%	0.0%	54.2%	0.0%	54.2%
Maximum Green (s)	5.0	50.0			40.0		60.0	60.0		60.0		60.0
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		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Minimum Gap (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Time Before Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Time To Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Recall Mode	None	C-Max			C-Max		Ped	Ped		Ped		Ped
Walk Time (s)		7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		14.0			14.0		24.0	24.0		24.0		24.0
Pedestrian Calls (#/hr)		10			10		10	10		10		10
Act Effct Green (s)		63.7			63.7		46.3	46.3		46.3		46.3
Actuated g/C Ratio		0.53			0.53		0.39	0.39		0.39		0.39
v/c Ratio		0.53			0.28		0.13	0.13		0.84		0.50
Control Delay		9.4			7.4		21.4	13.2		50.4		14.7
Queue Delay		0.1			0.0		0.0	0.0		0.0		0.1
Total Delay		9.6			7.4		21.4	13.2		50.4		14.7
LOS		A			A		C	B		D		B
Approach Delay		9.6			7.4			15.9				
Approach LOS		A			A			B				
90th %ile Green (s)	0.0	50.6			50.6		59.4	59.4		59.4		59.4
90th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
70th %ile Green (s)	0.0	56.5			56.5		53.5	53.5		53.5		53.5
70th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
50th %ile Green (s)	0.0	62.7			62.7		47.3	47.3		47.3		47.3
50th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
30th %ile Green (s)	0.0	69.7			69.7		40.3	40.3		40.3		40.3
30th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
10th %ile Green (s)	0.0	79.0			79.0		31.0	31.0		31.0		31.0
10th %ile Term Code	Skip	Coord			Coord		Ped	Ped		Ped		Ped
Queue Length 50th (ft)		61			35		38	25		244		90
Queue Length 95th (ft)		91			51		59	39		316		143
Internal Link Dist (ft)		184			740			279			483	
Turn Bay Length (ft)												
Base Capacity (vph)		1693			3042		797	1535		548		792
Starvation Cap Reductn		153			0		0	0		0		0
Spillback Cap Reductn		0			174		42	0		0		38
Storage Cap Reductn		0			0		0	0		0		0
Reduced v/c Ratio		0.58			0.30		0.10	0.10		0.65		0.43

Intersection Summary	
Area Type:	CBD

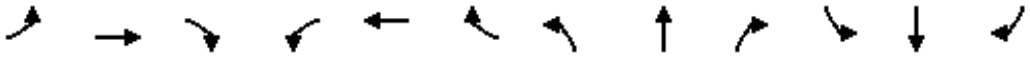
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 94 (78%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Carnegie Ave & E. 18th St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	640	0	140	420	60	220	585	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	400		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.981			0.985				
Flt Protected	0.950			0.950				0.988				
Satd. Flow (prot)	1593	3185	0	1593	3125	0	0	4454	0	0	0	0
Flt Permitted	0.382			0.381				0.988				
Satd. Flow (perm)	640	3185	0	639	3125	0	0	4454	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					19			17				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		352			806			182			329	
Travel Time (s)		8.0			18.3			5.0			9.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	711	0	156	467	67	244	650	100	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	711	0	156	534	0	0	994	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2				
Detector Template	Left	Thru		Left	Thru		Left	Thru				
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turn Type	pm+pt			Perm			Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Detector Phase	5	2		6	6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	26.0		26.0	26.0		29.0	29.0				
Total Split (s)	11.0	76.0	0.0	65.0	65.0	0.0	44.0	44.0	0.0	0.0	0.0	0.0
Total Split (%)	9.2%	63.3%	0.0%	54.2%	54.2%	0.0%	36.7%	36.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	6.0	71.0		60.0	60.0		39.0	39.0				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Recall Mode	None	C-Max		C-Max	C-Max		Ped	Ped				
Walk Time (s)		7.0		7.0	7.0		7.0	7.0				
Flash Dont Walk (s)		14.0		14.0	14.0		17.0	17.0				
Pedestrian Calls (#/hr)		10		10	10		10	10				
Act Effct Green (s)	75.1	75.1		62.7	62.7			34.9				
Actuated g/C Ratio	0.63	0.63		0.52	0.52			0.29				
v/c Ratio	0.31	0.36		0.47	0.33			0.76				
Control Delay	6.8	6.2		25.0	17.0			42.0				
Queue Delay	0.0	0.3		0.0	0.0			189.0				
Total Delay	6.8	6.5		25.0	17.0			231.0				
LOS	A	A		C	B			F				
Approach Delay		6.5			18.8			231.0				
Approach LOS		A			B			F				
90th %ile Green (s)	6.0	71.0		60.0	60.0		39.0	39.0				
90th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
70th %ile Green (s)	6.0	71.0		60.0	60.0		39.0	39.0				
70th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
50th %ile Green (s)	9.6	74.6		60.0	60.0		35.4	35.4				
50th %ile Term Code	Max	Coord		Coord	Coord		Gap	Gap				
30th %ile Green (s)	8.6	77.5		63.9	63.9		32.5	32.5				
30th %ile Term Code	Gap	Coord		Coord	Coord		Gap	Gap				
10th %ile Green (s)	7.0	81.6		69.6	69.6		28.4	28.4				
10th %ile Term Code	Gap	Coord		Coord	Coord		Gap	Gap				
Queue Length 50th (ft)	27	73		77	122			250				
Queue Length 95th (ft)	m37	85		146	162			290				
Internal Link Dist (ft)		272			726			102			249	
Turn Bay Length (ft)				400								
Base Capacity (vph)	460	1994		334	1642			1459				
Starvation Cap Reductn	0	658		0	0			757				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.31	0.53		0.47	0.33			1.42				

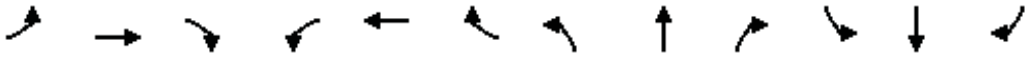
Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 97 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 97.7	Intersection LOS: F
Intersection Capacity Utilization 60.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 10: Carnegie Ave & E. 22nd St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	85	910	50	0	200	0	780	25	0	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		0	1		1	0		1	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.864				0.850		0.995				
Flt Protected				0.950								
Satd. Flow (prot)	0	2752	0	1593	0	1425	0	4554	0	0	1676	0
Flt Permitted				0.110								
Satd. Flow (perm)	0	2752	0	184	0	1425	0	4554	0	0	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		617				39		5				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		360			814			329			182	
Travel Time (s)		9.8			22.2			9.0			5.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	94	1011	56	0	222	0	867	28	0	156	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1111	0	56	0	222	0	895	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2			2	
Detector Template	Left	Thru		Left		Right		Thru			Thru	
Leading Detector (ft)	20	100		20		20		100			100	
Trailing Detector (ft)	0	0		0		0		0			0	
Turn Type	Perm			custom		custom						
Protected Phases		4						2			6	
Permitted Phases	4			8		8						
Detector Phase	4	4		8		8		2			6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0			5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	33.0	33.0		33.0		33.0		26.0			26.0	
Total Split (s)	60.0	60.0	0.0	60.0	0.0	60.0	0.0	40.0	0.0	0.0	40.0	0.0
Total Split (%)	60.0%	60.0%	0.0%	60.0%	0.0%	60.0%	0.0%	40.0%	0.0%	0.0%	40.0%	0.0%
Maximum Green (s)	55.0	55.0		55.0		55.0		35.0			35.0	
Yellow Time (s)	3.0	3.0		3.0		3.0		3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0		2.0		2.0			2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Minimum Gap (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Time Before Reduce (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Time To Reduce (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Recall Mode	Ped	Ped		Ped		Ped		C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0		7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0		21.0		21.0		14.0			14.0	
Pedestrian Calls (#/hr)	10	10		10		10		10			10	
Act Effct Green (s)		36.4		36.4		36.4		53.6			53.6	
Actuated g/C Ratio		0.36		0.36		0.36		0.54			0.54	
v/c Ratio		1.10dr		0.84		0.41		0.37			0.17	
Control Delay		15.9		100.8		20.1		12.1			14.9	
Queue Delay		0.2		0.0		0.0		0.0			2.4	
Total Delay		16.1		100.8		20.1		12.1			17.2	
LOS		B		F		C		B			B	
Approach Delay		16.1						12.1			17.3	
Approach LOS		B						B			B	
90th %ile Green (s)	49.6	49.6		49.6		49.6		40.4			40.4	
90th %ile Term Code	Gap	Gap		Hold		Hold		Coord			Coord	
70th %ile Green (s)	41.6	41.6		41.6		41.6		48.4			48.4	
70th %ile Term Code	Gap	Gap		Hold		Hold		Coord			Coord	
50th %ile Green (s)	34.9	34.9		34.9		34.9		55.1			55.1	
50th %ile Term Code	Gap	Gap		Hold		Hold		Coord			Coord	
30th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
30th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
10th %ile Green (s)	28.0	28.0		28.0		28.0		62.0			62.0	
10th %ile Term Code	Ped	Ped		Ped		Ped		Coord			Coord	
Queue Length 50th (ft)		156		33		87		127			47	
Queue Length 95th (ft)		183		#95		116		169			110	
Internal Link Dist (ft)		280			734			249			102	
Turn Bay Length (ft)												
Base Capacity (vph)		1791		101		801		2442			898	
Starvation Cap Reductn		163		0		0		0			621	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.68		0.55		0.28		0.37			0.56	

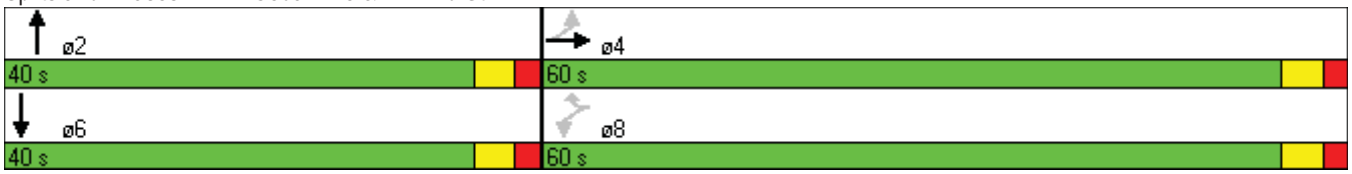
Intersection Summary

Area Type: CBD

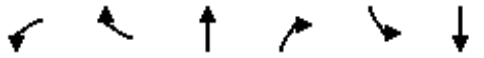
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 25 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 12: Cedar Ave & E. 22nd St



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	30	90	550	60	40	1130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	80	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.850	0.985			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1593	1425	4508	0	0	4568
Flt Permitted	0.950					0.887
Satd. Flow (perm)	1593	1425	4508	0	0	4060
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		100	31			
Link Speed (mph)	25		25			25
Link Distance (ft)	739		343			178
Travel Time (s)	20.2		9.4			4.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	33	100	611	67	44	1256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	100	678	0	0	1300
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Turn Type		custom			Perm	
Protected Phases			2			6
Permitted Phases	8	8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0



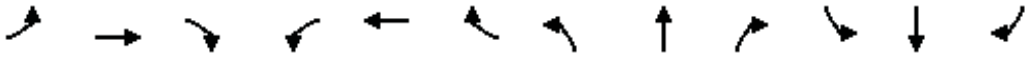
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	36.0	36.0	22.0		22.0	22.0
Total Split (s)	38.0	38.0	62.0	0.0	62.0	62.0
Total Split (%)	38.0%	38.0%	62.0%	0.0%	62.0%	62.0%
Maximum Green (s)	33.0	33.0	57.0		57.0	57.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	Ped	Ped	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	24.0	24.0	10.0		10.0	10.0
Pedestrian Calls (#/hr)	10	10	10		10	10
Act Effct Green (s)	31.0	31.0	59.0			59.0
Actuated g/C Ratio	0.31	0.31	0.59			0.59
v/c Ratio	0.07	0.20	0.25			0.54
Control Delay	24.9	6.3	8.3			9.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.9	6.3	8.3			9.3
LOS	C	A	A			A
Approach Delay	10.9		8.3			9.3
Approach LOS	B		A			A
90th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
10th %ile Term Code	Ped	Ped	Coord		Coord	Coord
Queue Length 50th (ft)	15	0	82			108
Queue Length 95th (ft)	37	37	94			149
Internal Link Dist (ft)	659		263			98
Turn Bay Length (ft)	80					
Base Capacity (vph)	526	537	2672			2395
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.06	0.19	0.25			0.54

Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 2 (2%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Central Ave & E. 22nd St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	130	40	100	70	90	40	315	130	170	1160	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	65		0	60		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850		0.948			0.956				
Flt Protected		0.973			0.981		0.950			0.950		
Satd. Flow (prot)	0	3099	1425	0	2962	0	1593	4375	0	1593	4577	0
Flt Permitted		0.667			0.691		0.173			0.400		
Satd. Flow (perm)	0	2125	1425	0	2087	0	290	4375	0	671	4577	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		100			119				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		161			827			998			178	
Travel Time (s)		4.4			22.6			27.2			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	178	144	44	111	78	100	44	350	144	189	1289	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	44	0	289	0	44	494	0	189	1289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	

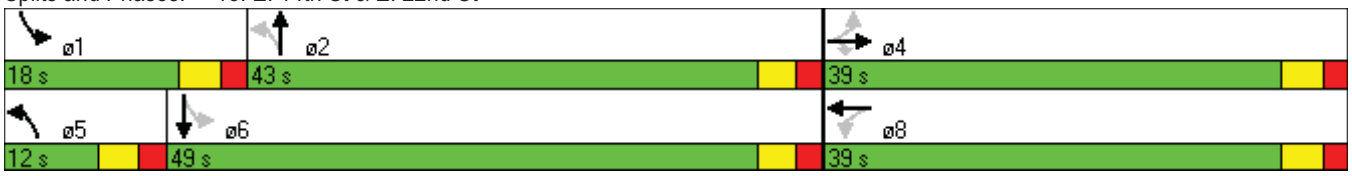


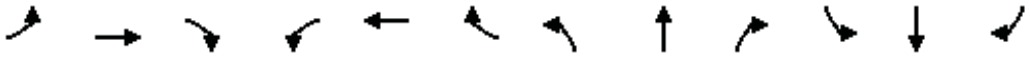
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	36.0	36.0	36.0	36.0	36.0		10.0	29.0		10.0	29.0	
Total Split (s)	39.0	39.0	39.0	39.0	39.0	0.0	12.0	43.0	0.0	18.0	49.0	0.0
Total Split (%)	39.0%	39.0%	39.0%	39.0%	39.0%	0.0%	12.0%	43.0%	0.0%	18.0%	49.0%	0.0%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0		7.0	38.0		13.0	44.0	
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)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Ped	Ped	Ped	Ped	Ped		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0			17.0			17.0	
Pedestrian Calls (#/hr)	10	10	10	10	10			10			10	
Act Effct Green (s)		31.0	31.0		31.0		49.6	42.9		58.9	51.6	
Actuated g/C Ratio		0.31	0.31		0.31		0.50	0.43		0.59	0.52	
v/c Ratio		0.49	0.09		0.40		0.19	0.25		0.38	0.55	
Control Delay		31.1	8.2		19.3		11.4	14.4		6.6	8.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		31.1	8.2		19.3		11.4	14.4		6.6	8.2	
LOS		C	A		B		B	B		A	A	
Approach Delay		28.4			19.3			14.2			8.0	
Approach LOS		C			B			B			A	
90th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		8.1	39.2		14.8	45.9	
90th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
70th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		7.2	41.6		12.4	46.8	
70th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
50th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		6.6	43.0		11.0	47.4	
50th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
30th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		0.0	44.4		9.6	59.0	
30th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Skip	Coord		Gap	Coord	
10th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		0.0	46.3		7.7	59.0	
10th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Skip	Coord		Gap	Coord	
Queue Length 50th (ft)		87	0		47		11	53		17	49	
Queue Length 95th (ft)		131	25		86		25	83		30	89	
Internal Link Dist (ft)		81			747			918			98	
Turn Bay Length (ft)							65			60		
Base Capacity (vph)		723	514		776		240	1945		519	2362	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.45	0.09		0.37		0.18	0.25		0.36	0.55	

Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 8 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: E. 14th St & E. 22nd St

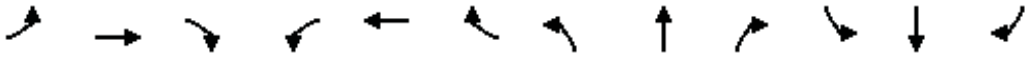




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	5	100	5	170	5	170	0	0	1190	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850					0.999	
Flt Protected	0.950			0.950				0.998				
Satd. Flow (prot)	1593	0	1425	1593	1676	1425	0	4568	0	0	4572	0
Flt Permitted	0.950			0.950				0.998				
Satd. Flow (perm)	1593	0	1425	1593	1676	1425	0	4568	0	0	4572	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		146			728			388			998	
Travel Time (s)		4.0			19.9			10.6			27.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	0	6	111	6	189	6	189	0	0	1322	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	0	6	111	6	189	0	195	0	0	1328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	945	5	5	420	10	5	5	5	1270	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.999			0.997			0.950				0.850
Flt Protected		0.993			0.999			0.984		0.950	0.953	
Satd. Flow (prot)	0	4540	0	0	4558	0	0	2978	0	1513	1518	1425
Flt Permitted		0.754			0.921			0.856		0.745	0.714	
Satd. Flow (perm)	0	3447	0	0	4203	0	0	2590	0	1187	1137	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2			6				20
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		665			540			238			388	
Travel Time (s)		15.1			12.3			6.5			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	167	1050	6	6	467	11	6	6	6	1411	6	22
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	1223	0	0	484	0	0	18	0	705	712	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0



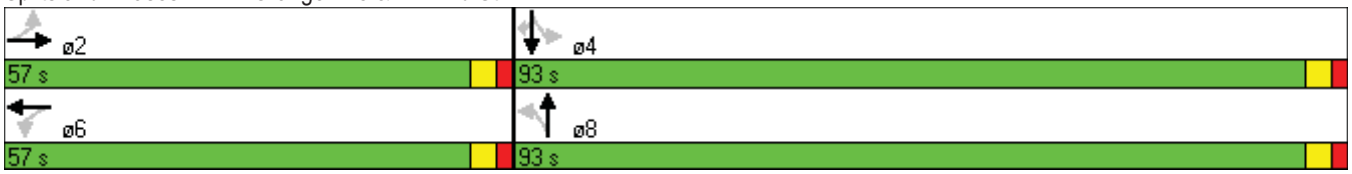
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Total Split (s)	57.0	57.0	0.0	57.0	57.0	0.0	93.0	93.0	0.0	93.0	93.0	93.0
Total Split (%)	38.0%	38.0%	0.0%	38.0%	38.0%	0.0%	62.0%	62.0%	0.0%	62.0%	62.0%	62.0%
Maximum Green (s)	52.0	52.0		52.0	52.0		88.0	88.0		88.0	88.0	88.0
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)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		52.0			52.0			88.0		88.0	88.0	88.0
Actuated g/C Ratio		0.35			0.35			0.59		0.59	0.59	0.59
v/c Ratio		1.02			0.33			0.01		1.01	1.07	0.03
Control Delay		63.6			36.8			9.8		68.3	84.9	5.3
Queue Delay		0.0			0.0			0.0		0.0	0.0	0.0
Total Delay		63.6			36.8			9.8		68.3	84.9	5.3
LOS		E			D			A		E	F	A
Approach Delay		63.6			36.8			9.8			75.6	
Approach LOS		E			D			A			E	
90th %ile Green (s)	52.0	52.0		52.0	52.0		88.0	88.0		88.0	88.0	88.0
90th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
70th %ile Green (s)	52.0	52.0		52.0	52.0		88.0	88.0		88.0	88.0	88.0
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
50th %ile Green (s)	52.0	52.0		52.0	52.0		88.0	88.0		88.0	88.0	88.0
50th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
30th %ile Green (s)	52.0	52.0		52.0	52.0		88.0	88.0		88.0	88.0	88.0
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
10th %ile Green (s)	52.0	52.0		52.0	52.0		88.0	88.0		88.0	88.0	88.0
10th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
Queue Length 50th (ft)		~460			127			2		~733	~808	1
Queue Length 95th (ft)		m#517			161			8		#1022	#1068	14
Internal Link Dist (ft)		585			460			158			308	
Turn Bay Length (ft)												
Base Capacity (vph)		1195			1458			1522		696	667	844
Starvation Cap Reductn		0			0			0		0	0	0
Spillback Cap Reductn		0			0			0		0	0	0
Storage Cap Reductn		0			0			0		0	0	0
Reduced v/c Ratio		1.02			0.33			0.01		1.01	1.07	0.03

Intersection Summary	
Area Type:	CBD

Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 143 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 64.6	Intersection LOS: E
Intersection Capacity Utilization 91.6%	ICU Level of Service F
Analysis Period (min) 15	

~ 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: 17: Orange Ave & E. 22nd St

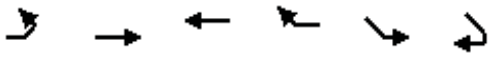


Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	0	1585	1480	1815	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	0.86	0.86	1.00	1.00
Ped Bike Factor						
Frt			0.943	0.850		
Flt Protected						
Satd. Flow (prot)	0	4899	4449	1298	0	0
Flt Permitted						
Satd. Flow (perm)	0	4899	4449	1298	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		164	127		290	
Travel Time (s)		4.5	3.5		7.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		2				
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	1761	1644	2017	0	0
Shared Lane Traffic (%)				50%		
Lane Group Flow (vph)	0	1761	2653	1008	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.05	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

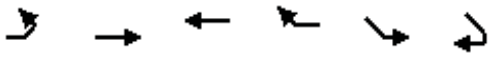
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	930	0	1640	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	3	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	0.76	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	3610	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	874			369	192	
Travel Time (s)	19.9			8.4	4.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	1033	0	1822	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1033	0	1822	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	30	15			9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	20	1070	1185	280	530	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	2	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.91	0.91	0.86	0.86	0.97	0.95
Ped Bike Factor						
Frt			0.997	0.850	0.995	
Flt Protected		0.999			0.954	
Satd. Flow (prot)	0	4572	4312	1225	3087	0
Flt Permitted		0.875			0.954	
Satd. Flow (perm)	0	4005	4312	1225	3087	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			4	280	3	
Link Speed (mph)		30	30		30	
Link Distance (ft)		288	245		607	
Travel Time (s)		6.5	5.6		13.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	22	1189	1317	311	589	22
Shared Lane Traffic (%)				10%		
Lane Group Flow (vph)	0	1211	1348	280	611	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Right	Right	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (ft)	20	100	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Perm			Perm		
Protected Phases		2	6		4	
Permitted Phases	2			6		
Detector Phase	2	2	6	6	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	
Total Split (s)	91.0	91.0	91.0	91.0	59.0	0.0
Total Split (%)	60.7%	60.7%	60.7%	60.7%	39.3%	0.0%
Maximum Green (s)	86.0	86.0	86.0	86.0	54.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)		104.3	104.3	104.3	35.7	
Actuated g/C Ratio		0.70	0.70	0.70	0.24	
v/c Ratio		0.43	0.45	0.30	0.83	
Control Delay		11.1	8.2	1.7	63.9	
Queue Delay		0.0	0.4	0.6	0.3	
Total Delay		11.1	8.6	2.3	64.2	
LOS		B	A	A	E	
Approach Delay		11.1	7.6		64.2	
Approach LOS		B	A		E	
90th %ile Green (s)	96.2	96.2	96.2	96.2	43.8	
90th %ile Term Code	Coord	Coord	Coord	Coord	Gap	
70th %ile Green (s)	101.2	101.2	101.2	101.2	38.8	
70th %ile Term Code	Coord	Coord	Coord	Coord	Gap	
50th %ile Green (s)	104.4	104.4	104.4	104.4	35.6	
50th %ile Term Code	Coord	Coord	Coord	Coord	Gap	
30th %ile Green (s)	107.6	107.6	107.6	107.6	32.4	
30th %ile Term Code	Coord	Coord	Coord	Coord	Gap	
10th %ile Green (s)	112.1	112.1	112.1	112.1	27.9	
10th %ile Term Code	Coord	Coord	Coord	Coord	Gap	
Queue Length 50th (ft)		174	135	4	293	
Queue Length 95th (ft)		245	278	m22	340	
Internal Link Dist (ft)		208	165		527	
Turn Bay Length (ft)						
Base Capacity (vph)		2785	2999	937	1113	
Starvation Cap Reductn		0	1032	351	0	
Spillback Cap Reductn		0	0	0	132	
Storage Cap Reductn		0	0	0	0	
Reduced v/c Ratio		0.43	0.69	0.48	0.62	

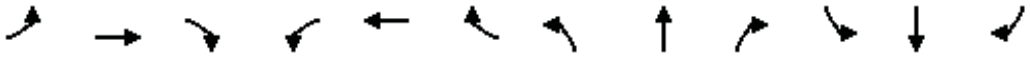
Intersection Summary	
Area Type:	CBD

Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 56 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 18.8	Intersection LOS: B
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 21: S. Broadway Ave & E. 9th St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1785	450	0	0	0	0	270	40	90	380	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.981				
Flt Protected		0.996								0.950		
Satd. Flow (prot)	0	4558	1425	0	0	0	0	3125	0	1593	1676	0
Flt Permitted		0.996								0.516		
Satd. Flow (perm)	0	4558	1425	0	0	0	0	3125	0	865	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			264					20				
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		287			171			263			272	
Travel Time (s)		6.5			4.7			7.2			7.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	183	1983	500	0	0	0	0	300	44	100	422	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2166	500	0	0	0	0	344	0	100	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Turn Type	Perm		Perm							pm+pt		
Protected Phases		2						8		7	4	
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	26.0	26.0	26.0					26.0		10.0	26.0	
Total Split (s)	44.0	44.0	44.0	0.0	0.0	0.0	0.0	26.0	0.0	10.0	36.0	0.0
Total Split (%)	55.0%	55.0%	55.0%	0.0%	0.0%	0.0%	0.0%	32.5%	0.0%	12.5%	45.0%	0.0%
Maximum Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
Yellow Time (s)	3.0	3.0	3.0					3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0					2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Recall Mode	None	None	None					Max		None	Max	
Walk Time (s)	7.0	7.0	7.0					7.0			7.0	
Flash Dont Walk (s)	14.0	14.0	14.0					14.0			14.0	
Pedestrian Calls (#/hr)	10	10	10					10			10	
Act Effct Green (s)		39.0	39.0					23.0		31.0	31.0	
Actuated g/C Ratio		0.49	0.49					0.29		0.39	0.39	
v/c Ratio		0.97	0.60					0.38		0.26	0.65	
Control Delay		35.2	10.1					23.7		19.5	25.8	
Queue Delay		0.0	0.0					0.0		0.0	0.0	
Total Delay		35.2	10.1					23.7		19.5	25.8	
LOS		D	B					C		B	C	
Approach Delay		30.5						23.7			24.6	
Approach LOS		C						C			C	
90th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
90th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
70th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
70th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
50th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
50th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
30th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
30th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
10th %ile Green (s)	39.0	39.0	39.0					31.0		0.0	31.0	
10th %ile Term Code	Max	Max	Max					Hold		Skip	MaxR	
Queue Length 50th (ft)		367	72					70		32	168	
Queue Length 95th (ft)		#503	167					108		64	268	
Internal Link Dist (ft)		207			91			183			192	
Turn Bay Length (ft)			200									
Base Capacity (vph)		2222	830					913		381	649	
Starvation Cap Reductn		0	0					0		0	0	
Spillback Cap Reductn		0	0					0		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.97	0.60					0.38		0.26	0.65	

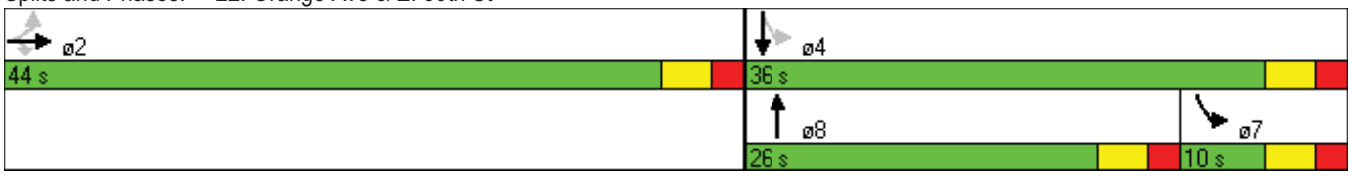
Intersection Summary

Area Type: CBD

Cycle Length: 80	
Actuated Cycle Length: 80	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	
90th %ile Actuated Cycle: 80	
70th %ile Actuated Cycle: 80	
50th %ile Actuated Cycle: 80	
30th %ile Actuated Cycle: 80	
10th %ile Actuated Cycle: 80	

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

Splits and Phases: 22: Orange Ave & E. 30th St

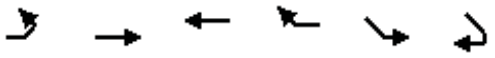


Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	0	60	1265	125	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	3539	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	1583	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		255	152		334	
Travel Time (s)		7.0	4.1		9.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	67	1406	139	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	67	1406	139	0	0
Enter Blocked Intersection	No	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	0	1005	1090	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	100			0
Storage Lanes	0	0	1			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1770	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1770	5085	0	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	516			192	870	
Travel Time (s)	14.1			4.4	19.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	1117	1211	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1117	1211	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	30			9
Sign Control	Stop			Free	Stop	

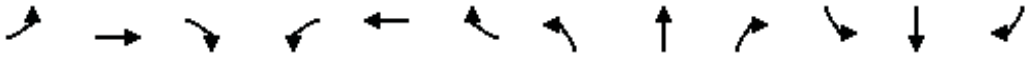
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	330	0	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	2787	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	2787	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		264	161		264	
Travel Time (s)		7.2	4.4		7.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	367	0	122	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	367	0	122	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	9.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	880	680	100	600	10	200	10	20	485	240	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	260		0	60		0
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.936			0.998			0.900				0.850
Flt Protected		0.999			0.993		0.950			0.950		
Satd. Flow (prot)	0	4280	0	0	4536	0	1593	2867	0	1593	1676	1425
Flt Permitted		0.880			0.641		0.512			0.734		
Satd. Flow (perm)	0	3770	0	0	2928	0	858	2867	0	1231	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		171			2			22				176
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		203			665			449			255	
Travel Time (s)		4.6			15.1			12.2			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	44	978	756	111	667	11	222	11	22	539	267	600
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1778	0	0	789	0	222	33	0	539	267	600
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	R NA
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0



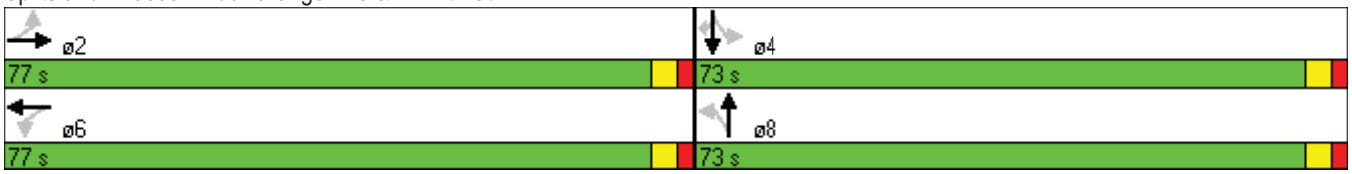
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Total Split (s)	77.0	77.0	0.0	77.0	77.0	0.0	73.0	73.0	0.0	73.0	73.0	73.0
Total Split (%)	51.3%	51.3%	0.0%	51.3%	51.3%	0.0%	48.7%	48.7%	0.0%	48.7%	48.7%	48.7%
Maximum Green (s)	72.0	72.0		72.0	72.0		68.0	68.0		68.0	68.0	68.0
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)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		72.5			72.5		67.5	67.5		67.5	67.5	67.5
Actuated g/C Ratio		0.48			0.48		0.45	0.45		0.45	0.45	0.45
v/c Ratio		0.96dr			2.41dl		0.58	0.03		0.97	0.35	0.81
Control Delay		31.5			15.1		48.6	19.0		72.4	28.6	34.8
Queue Delay		3.9			0.1		1.1	0.0		0.0	0.9	0.0
Total Delay		35.4			15.1		49.7	19.0		72.4	29.4	34.8
LOS		D			B		D	B		E	C	C
Approach Delay		35.4			15.1			45.7			48.2	
Approach LOS		D			B			D			D	
90th %ile Green (s)	72.0	72.0		72.0	72.0		68.0	68.0		68.0	68.0	68.0
90th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
70th %ile Green (s)	72.0	72.0		72.0	72.0		68.0	68.0		68.0	68.0	68.0
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
50th %ile Green (s)	72.0	72.0		72.0	72.0		68.0	68.0		68.0	68.0	68.0
50th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
30th %ile Green (s)	72.0	72.0		72.0	72.0		68.0	68.0		68.0	68.0	68.0
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Max	Max	Max
10th %ile Green (s)	74.4	74.4		74.4	74.4		65.6	65.6		65.6	65.6	65.6
10th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	Gap
Queue Length 50th (ft)		383			75		198	3		506	168	374
Queue Length 95th (ft)		#353			91		m265	m8		#759	241	560
Internal Link Dist (ft)		123			585			369			175	
Turn Bay Length (ft)							260			60		
Base Capacity (vph)		1910			1415		389	1312		558	760	742
Starvation Cap Reductn		74			0		49	0		0	0	0
Spillback Cap Reductn		90			63		0	0		0	264	0
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		0.98			0.58		0.65	0.03		0.97	0.54	0.81

Intersection Summary	
Area Type:	CBD

Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 36.5	Intersection LOS: D
Intersection Capacity Utilization 102.8%	ICU Level of Service G
Analysis Period (min) 15	

\# 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.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 36: Orange Ave & E. 14th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	1020	355	0	660	0	290	640	160	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%		0%	
Storage Length (ft)	0		0	130		0		0	0	0	0
Storage Lanes	0		0	1		0		2	1	0	0
Taper Length (ft)	50		50	50		50		50	50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	0.95	0.97	1.00	1.00	1.00
Ped Bike Factor											
Frt		0.961							0.850		
Flt Protected								0.950			
Satd. Flow (prot)	0	4398	0	0	4577	0	0	3090	1425	0	0
Flt Permitted								0.950			
Satd. Flow (perm)	0	4398	0	0	4577	0	0	3090	1425	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		95							127		
Link Speed (mph)		30			30			25		25	
Link Distance (ft)		820			352			375		360	
Travel Time (s)		18.6			8.0			10.2		9.8	
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											
Mid-Block Traffic (%)		0%			0%			0%		0%	
Adj. Flow (vph)	0	1133	394	0	733	0	322	711	178	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1527	0	0	733	0	0	1033	178	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		12			12			24		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15	15	9	15	9
Number of Detectors		2			2		1	1	1		
Detector Template		Thru			Thru		Left	Left	Right		
Leading Detector (ft)		100			100		20	20	20		
Trailing Detector (ft)		0			0		0	0	0		
Turn Type							custom		custom		
Protected Phases		2			6						
Permitted Phases							4	4	4		
Detector Phase		2			6		4	4	4		
Switch Phase											
Minimum Initial (s)		5.0			5.0		5.0	5.0	5.0		

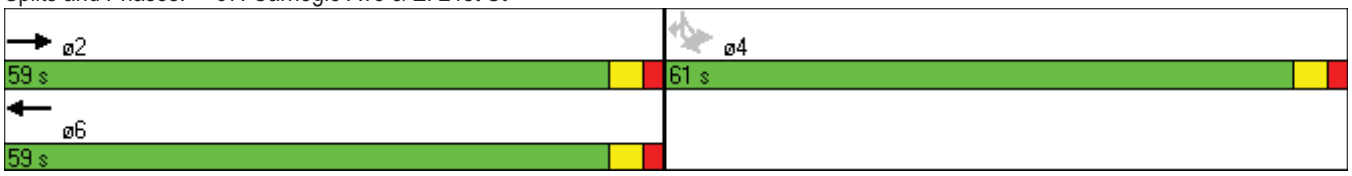
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Minimum Split (s)		26.0			26.0		36.0	36.0	36.0		
Total Split (s)	0.0	59.0	0.0	0.0	59.0	0.0	61.0	61.0	61.0	0.0	0.0
Total Split (%)	0.0%	49.2%	0.0%	0.0%	49.2%	0.0%	50.8%	50.8%	50.8%	0.0%	0.0%
Maximum Green (s)		54.0			54.0		56.0	56.0	56.0		
Yellow Time (s)		3.0			3.0		3.0	3.0	3.0		
All-Red Time (s)		2.0			2.0		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0	4.0	4.0
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0		
Minimum Gap (s)		3.0			3.0		3.0	3.0	3.0		
Time Before Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Time To Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Recall Mode		C-Max			C-Max		Ped	Ped	Ped		
Walk Time (s)		7.0			7.0		7.0	7.0	7.0		
Flash Dont Walk (s)		14.0			14.0		24.0	24.0	24.0		
Pedestrian Calls (#/hr)		10			10		10	10	10		
Act Effct Green (s)		62.0			62.0			48.0	48.0		
Actuated g/C Ratio		0.52			0.52			0.40	0.40		
v/c Ratio		0.66			0.31			0.84	0.28		
Control Delay		18.9			15.2			38.8	7.9		
Queue Delay		0.0			0.2			0.0	0.0		
Total Delay		18.9			15.4			38.8	7.9		
LOS		B			B			D	A		
Approach Delay		18.9			15.4			34.2			
Approach LOS		B			B			C			
90th %ile Green (s)		54.3			54.3		55.7	55.7	55.7		
90th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
70th %ile Green (s)		58.0			58.0		52.0	52.0	52.0		
70th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
50th %ile Green (s)		61.5			61.5		48.5	48.5	48.5		
50th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
30th %ile Green (s)		64.9			64.9		45.1	45.1	45.1		
30th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
10th %ile Green (s)		71.2			71.2		38.8	38.8	38.8		
10th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
Queue Length 50th (ft)		223			97			363	24		
Queue Length 95th (ft)		287			116			404	64		
Internal Link Dist (ft)		740			272			295		280	
Turn Bay Length (ft)											
Base Capacity (vph)		2317			2364			1442	733		
Starvation Cap Reductn		0			802			0	0		
Spillback Cap Reductn		0			0			0	0		
Storage Cap Reductn		0			0			0	0		
Reduced v/c Ratio		0.66			0.47			0.72	0.24		

Intersection Summary

Area Type: CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 90 (75%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 37: Carnegie Ave & E. 21st St

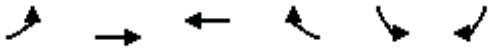


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	145	840	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950	0.999		
Satd. Flow (prot)	0	0	1610	3387	0	0
Flt Permitted			0.950	0.999		
Satd. Flow (perm)	0	0	1610	3387	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	174			478	494	
Travel Time (s)	4.7			13.0	13.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	161	933	0	0
Shared Lane Traffic (%)			10%			
Lane Group Flow (vph)	0	0	145	949	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	25		15	9
Sign Control	Free			Free	Free	

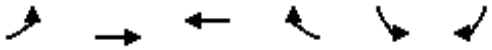
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	60	0	1390	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		2	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.88	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	5085	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			419	500	
Travel Time (s)	4.1			11.4	13.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	67	0	1544	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	67	0	1544	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		25	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	680	50	170	735	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.884		0.976	
Flt Protected		0.995			0.961	
Satd. Flow (prot)	0	3169	2816	0	1572	0
Flt Permitted		0.875			0.961	
Satd. Flow (perm)	0	2787	2816	0	1572	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			189		25	
Link Speed (mph)		25	25		25	
Link Distance (ft)		318	355		449	
Travel Time (s)		8.7	9.7		12.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	89	756	56	189	817	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	845	245	0	995	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	10.0	10.0	10.0		10.0	
Total Split (s)	26.0	26.0	26.0	0.0	49.0	0.0
Total Split (%)	34.7%	34.7%	34.7%	0.0%	65.3%	0.0%
Maximum Green (s)	21.0	21.0	21.0		44.0	
Yellow Time (s)	3.0	3.0	3.0		3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Minimum Gap (s)	3.0	3.0	3.0		3.0	
Time Before Reduce (s)	0.0	0.0	0.0		0.0	
Time To Reduce (s)	0.0	0.0	0.0		0.0	
Recall Mode	None	None	None		C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)		21.0	21.0		44.0	
Actuated g/C Ratio		0.28	0.28		0.59	
v/c Ratio		1.08	0.26		1.07	
Control Delay		85.7	6.8		61.1	
Queue Delay		0.0	0.0		19.9	
Total Delay		85.7	6.8		81.0	
LOS		F	A		F	
Approach Delay		85.7	6.8		81.0	
Approach LOS		F	A		F	
90th %ile Green (s)	21.0	21.0	21.0		44.0	
90th %ile Term Code	Max	Max	Hold		Coord	
70th %ile Green (s)	21.0	21.0	21.0		44.0	
70th %ile Term Code	Max	Max	Hold		Coord	
50th %ile Green (s)	21.0	21.0	21.0		44.0	
50th %ile Term Code	Max	Max	Hold		Coord	
30th %ile Green (s)	21.0	21.0	21.0		44.0	
30th %ile Term Code	Max	Max	Hold		Coord	
10th %ile Green (s)	21.0	21.0	21.0		44.0	
10th %ile Term Code	Max	Max	Hold		Coord	
Queue Length 50th (ft)		~236	10		~875	
Queue Length 95th (ft)		#346	36		m#1267	
Internal Link Dist (ft)		238	275		369	
Turn Bay Length (ft)						
Base Capacity (vph)		780	925		933	
Starvation Cap Reductn		0	0		41	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		1.08	0.26		1.12	

Intersection Summary	
Area Type:	CBD

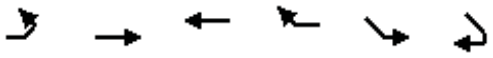
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 60 (80%), Referenced to phase 6:SBL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 74.2	Intersection LOS: E
Intersection Capacity Utilization 99.7%	ICU Level of Service F
Analysis Period (min) 15	

~ 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.

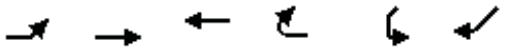
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 40: Broadway Ave & E. 14th St



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	2155	0	0	245	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	0	0	1656	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	0	0	1656	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		494	287		381	
Travel Time (s)		11.2	6.5		10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	2394	0	0	272	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2394	0	0	272	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	25	9
Sign Control		Free	Stop		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	170	1745	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	2			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	1681	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	1681	0	0	0	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		171	435		366	
Travel Time (s)		3.9	9.9		10.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	13%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	189	1939	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	1939	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	30			9	15	9
Sign Control		Free	Stop		Stop	

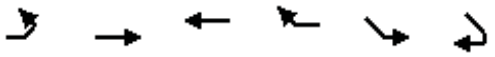
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 95.2%		ICU Level of Service F	
Analysis Period (min) 15			

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	0	0	840	0	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	1611
Link Speed (mph)		25	25		25	
Link Distance (ft)		419	300		413	
Travel Time (s)		11.4	8.2		11.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	933	0	0	611
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	933	0	0	611
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Left	L NA	Right	Right	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	25
Sign Control		Free	Yield		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	280	210	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	2			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.97	0.91	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	0	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		323	359		156	
Travel Time (s)		8.8	9.8		4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	311	233	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	233	0	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	25			9	15	9
Sign Control		Free	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 11.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	1090	0	1205	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			4	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.64	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	4053	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	4053	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		870	288		163	
Travel Time (s)		19.8	6.5		3.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	1211	0	1339	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1211	0	1339	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			30	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	0	960	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	2
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	2787
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	2787
Link Speed (mph)	25			25	25	
Link Distance (ft)	123			150	156	
Travel Time (s)	3.4			4.1	4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	1067	0	311
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1067	0	311
Enter Blocked Intersection	No	No	No	Yes	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	145	0	0	0	0	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1611
Link Speed (mph)	25			25	25	
Link Distance (ft)	494			264	236	
Travel Time (s)	13.5			7.2	6.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	161	0	0	0	0	206
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	0	0	206
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

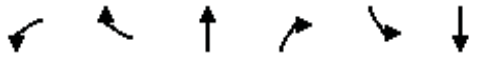
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	1220	0	550	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1580	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1580	0	3539	3539	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	277			485	607	
Travel Time (s)	7.6			11.0	13.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	1356	0	611	333	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1356	0	611	333	0
Enter Blocked Intersection	No	Yes	No	No	Yes	No
Lane Alignment	Left	R NA	Left	Left	L NA	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 90.5%		ICU Level of Service E	
Analysis Period (min) 15			

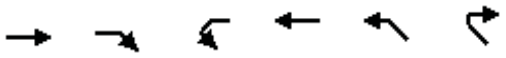
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	60	0	0	0	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1580
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1580
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			282	360	
Travel Time (s)	13.6			7.7	9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	67	0	0	0	0	306
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	0	0	0	306
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.0%		ICU Level of Service A	
Analysis Period (min) 15			



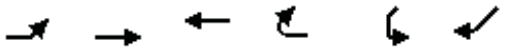
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	110	335	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	2		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	0.88	0.91	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	5085	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	5085	0	0	0
Link Speed (mph)	25		25			25
Link Distance (ft)	508		306			323
Travel Time (s)	13.9		8.3			8.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	122	372	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	122	372	0	0	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	R NA	L NA	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25		9	15	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	2220	0	435	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		3	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.76	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	3610	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			295	705	
Travel Time (s)	12.3			6.7	16.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	2467	0	483	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2467	0	483	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		30	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑↑	↑↑↑			↱
Volume (vph)	0	1600	1340	0	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	5085	5085	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	5085	5085	0	0	1611
Link Speed (mph)		30	30		25	
Link Distance (ft)		245	203		334	
Travel Time (s)		5.6	4.6		9.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	1778	1489	0	0	139
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1778	1489	0	0	139
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	L NA	Right	Left	R NA
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

CUY-90-14.90

PID 77332/85531

APPENDIX TC-10: ATTACHMENT C

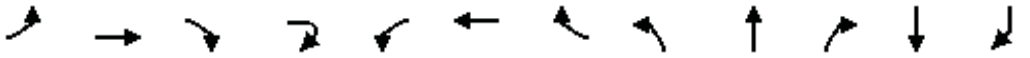
Year 2015 Central Viaduct Bi-Directional With Improvements, AM Peak Hour

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	0	0	45	160	0	2805
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.91
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	3539	1524	0	5085
Flt Permitted						
Satd. Flow (perm)	0	0	3539	1524	0	5085
Link Speed (mph)	25		30			30
Link Distance (ft)	509		164			485
Travel Time (s)	13.9		3.7			11.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	50	178	0	3117
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	50	178	0	3117
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		30	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Volume (vph)	750	1330	320	20	0	410	270	190	1850	240	480	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%		0%	
Storage Length (ft)	225		0				0	150		200		0
Storage Lanes	1		1				1	1		1		2
Taper Length (ft)	50		50				50	50		50		50
Lane Util. Factor	0.97	0.95	0.95	0.95	1.00	0.95	1.00	0.97	0.91	1.00	0.91	0.88
Ped Bike Factor												
Frt		0.969					0.850			0.850		0.850
Flt Protected	0.950							0.950				
Satd. Flow (prot)	3090	3081	0	0	1676	3185	1425	3090	4577	1425	4577	2177
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	3090	3081	0	0	1676	3185	1425	3090	4577	1425	4577	2177
Right Turn on Red				No			Yes			No		
Satd. Flow (RTOR)							3					2
Link Speed (mph)		30				30			30		30	
Link Distance (ft)		632				879			370		1209	
Travel Time (s)		14.4				20.0			8.4		27.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	18%	2%	2%	2%	2%	2%	2%	2%	18%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%		0%	
Adj. Flow (vph)	833	1478	356	22	0	456	300	211	2056	267	533	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	833	1856	0	0	0	456	300	211	2056	267	533	344
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		24				24			24		24	
Link Offset(ft)		0				0			0		0	
Crosswalk Width(ft)		16				16			16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	9	15		9	15		9		9
Number of Detectors	1	2			1	2	1	1	2	1	2	1
Detector Template	Left	Thru			Left	Thru	Right	Left	Thru	Right	Thru	Right
Leading Detector (ft)	20	100			20	100	20	20	100	20	100	20
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	0
Turn Type	Prot				Perm		Perm	Prot		Perm		Perm
Protected Phases	5	2				6		3	8		4	
Permitted Phases					6		6			8		4
Detector Phase	5	2			6	6	6	3	8	8	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	SBR2
Lane Configurations	
Volume (vph)	10
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	0.91
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	11
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.14
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Minimum Split (s)	10.0	46.0			46.0	46.0	46.0	10.0	36.0	36.0	36.0	36.0
Total Split (s)	39.0	87.0	0.0	0.0	48.0	48.0	48.0	21.0	63.0	63.0	42.0	42.0
Total Split (%)	26.0%	58.0%	0.0%	0.0%	32.0%	32.0%	32.0%	14.0%	42.0%	42.0%	28.0%	28.0%
Maximum Green (s)	34.0	82.0			43.0	43.0	43.0	16.0	58.0	58.0	37.0	37.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead				Lag	Lag	Lag	Lead			Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max			C-Max	C-Max	C-Max	None	Ped	Ped	Ped	Ped
Walk Time (s)		7.0			7.0	7.0	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)		34.0			34.0	34.0	34.0		24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)		10			10	10	10		10	10	10	10
Act Effct Green (s)	34.0	82.0				43.0	43.0	14.5	58.0	58.0	38.5	38.5
Actuated g/C Ratio	0.23	0.55				0.29	0.29	0.10	0.39	0.39	0.26	0.26
v/c Ratio	1.19	1.10				0.50	0.73	0.71	1.16	0.48	0.45	0.61
Control Delay	148.2	88.4				46.8	59.6	83.9	114.0	31.8	48.7	54.8
Queue Delay	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.2	88.4				46.8	59.6	83.9	114.0	31.8	48.7	54.8
LOS	F	F				D	E	F	F	C	D	D
Approach Delay		107.0				51.9			102.8		51.1	
Approach LOS		F				D			F		D	
90th %ile Green (s)	34.0	82.0			43.0	43.0	43.0	16.0	58.0	58.0	37.0	37.0
90th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Max	Max
70th %ile Green (s)	34.0	82.0			43.0	43.0	43.0	16.0	58.0	58.0	37.0	37.0
70th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Max	Max	Hold	Hold
50th %ile Green (s)	34.0	82.0			43.0	43.0	43.0	15.5	58.0	58.0	37.5	37.5
50th %ile Term Code	Max	Coord			Coord	Coord	Coord	Gap	Max	Max	Hold	Hold
30th %ile Green (s)	34.0	82.0			43.0	43.0	43.0	13.7	58.0	58.0	39.3	39.3
30th %ile Term Code	Max	Coord			Coord	Coord	Coord	Gap	Max	Max	Hold	Hold
10th %ile Green (s)	34.0	82.0			43.0	43.0	43.0	11.2	58.0	58.0	41.8	41.8
10th %ile Term Code	Max	Coord			Coord	Coord	Coord	Gap	Max	Max	Hold	Hold
Queue Length 50th (ft)	~504	~1082				196	264	101	~869	155	163	170
Queue Length 95th (ft)	#636	#1217				253	382	147	#960	242	205	234
Internal Link Dist (ft)		552				799			290		1129	
Turn Bay Length (ft)	225							150		200		
Base Capacity (vph)	700	1684				913	411	330	1770	551	1175	561
Starvation Cap Reductn	0	0				0	0	0	0	0	0	0
Spillback Cap Reductn	0	0				0	0	0	0	0	0	0
Storage Cap Reductn	0	0				0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	1.10				0.50	0.73	0.64	1.16	0.48	0.45	0.61

Intersection Summary	
Area Type:	CBD

Lane Group	SBR2
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

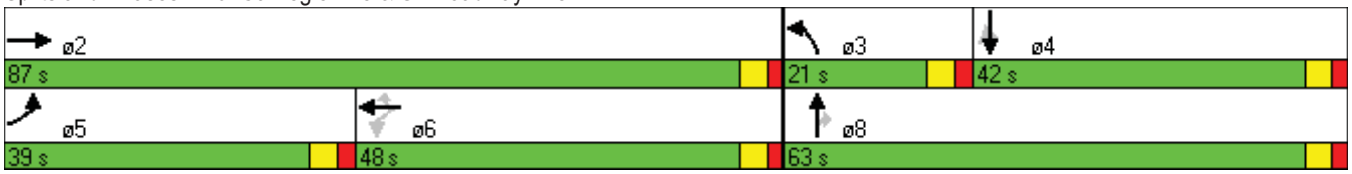
Intersection Summary

Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 6 (4%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 92.2	Intersection LOS: F
Intersection Capacity Utilization 109.3%	ICU Level of Service H
Analysis Period (min) 15	

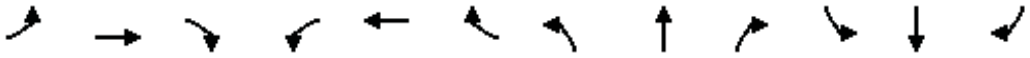
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 5: Carnegie Ave & S. Broadway Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	505	1050	20	490	685	300	0	2560	245	50	190	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	800		0	0		0	370		0
Storage Lanes	3		0	1		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.97	0.91	0.91	0.97	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.997			0.954			0.987			0.921	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3090	4559	0	2945	2872	0	0	4352	0	1593	4119	0
Flt Permitted	0.950			0.950						0.085		
Satd. Flow (perm)	3090	4559	0	2945	2872	0	0	4352	0	143	4119	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			2			15			233	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		879			1240			127			701	
Travel Time (s)		20.0			28.2			3.5			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	7%	7%	2%	2%	2%	2%	2%	2%	7%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					2	2		2	2			
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	561	1167	22	544	761	333	0	2844	272	56	211	233
Shared Lane Traffic (%)												
Lane Group Flow (vph)	561	1189	0	544	1094	0	0	3116	0	56	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.23	1.14	1.14	1.20	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Turn Type	Prot			Prot						Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases										4		
Detector Phase	5	2		1	6			8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	36.0		10.0	36.0			36.0		36.0	36.0	
Total Split (s)	23.0	39.0	0.0	29.0	45.0	0.0	0.0	52.0	0.0	52.0	52.0	0.0
Total Split (%)	19.2%	32.5%	0.0%	24.2%	37.5%	0.0%	0.0%	43.3%	0.0%	43.3%	43.3%	0.0%
Maximum Green (s)	18.0	34.0		24.0	40.0			47.0		47.0	47.0	
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	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?				Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max			Ped		Ped	Ped	
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	
Flash Dont Walk (s)		24.0			24.0			24.0		24.0	24.0	
Pedestrian Calls (#/hr)		10			10			10		10	10	
Act Effct Green (s)	18.0	34.3		23.7	40.0			47.0		47.0	47.0	
Actuated g/C Ratio	0.15	0.29		0.20	0.33			0.39		0.39	0.39	
v/c Ratio	1.21	0.91		0.93	1.14			1.82		1.00	0.25	
Control Delay	156.3	52.8		61.0	108.8			396.2		162.0	11.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	156.3	52.8		61.0	108.8			396.2		162.0	11.7	
LOS	F	D		E	F			F		F	B	
Approach Delay		86.0			92.9			396.2			28.5	
Approach LOS		F			F			F			C	
90th %ile Green (s)	18.0	34.0		24.0	40.0			47.0		47.0	47.0	
90th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
70th %ile Green (s)	18.0	34.0		24.0	40.0			47.0		47.0	47.0	
70th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
50th %ile Green (s)	18.0	34.0		24.0	40.0			47.0		47.0	47.0	
50th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
30th %ile Green (s)	18.0	34.0		24.0	40.0			47.0		47.0	47.0	
30th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
10th %ile Green (s)	18.0	35.5		22.5	40.0			47.0		47.0	47.0	
10th %ile Term Code	Max	Coord		Gap	Coord			Max		Max	Max	
Queue Length 50th (ft)	~273	326		208	~534			~1345		43	37	
Queue Length 95th (ft)	#386	#415		#320	#665			#1429		#134	62	
Internal Link Dist (ft)		799			1160			47			621	
Turn Bay Length (ft)	280			800						370		
Base Capacity (vph)	464	1304		589	959			1714		56	1755	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	1.21	0.91		0.92	1.14			1.82		1.00	0.25	

Intersection Summary	
Area Type:	CBD

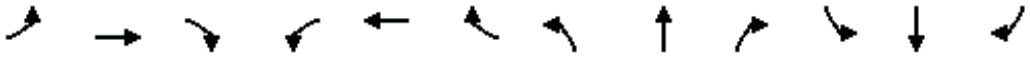
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.82	
Intersection Signal Delay: 221.5	Intersection LOS: F
Intersection Capacity Utilization 121.2%	ICU Level of Service H
Analysis Period (min) 15	

~ 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: 6: Carnegie Ave & E. 9th St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	780	145	200	1130	110	0	1100	0	20	110	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	0		0	0		0	170		0
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.977			0.987							0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	4308	0	1593	4517	0	0	3185	0	1593	1676	1425
Flt Permitted	0.168			0.197						0.095		
Satd. Flow (perm)	282	4308	0	330	4517	0	0	3185	0	159	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			9							56
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1240			264			150			626	
Travel Time (s)		28.2			6.0			4.1			17.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		2	2									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	867	161	222	1256	122	0	1222	0	22	122	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1028	0	222	1378	0	0	1222	0	22	122	139
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.20	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	1
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100			100		20	100	20
Trailing Detector (ft)	0	0		0	0			0		0	0	0
Turn Type	Perm			pm+pt						Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6						4		4
Detector Phase	2	2		1	6			8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		10.0	29.0			36.0		36.0	36.0	36.0
Total Split (s)	63.0	63.0	0.0	10.0	73.0	0.0	0.0	47.0	0.0	47.0	47.0	47.0
Total Split (%)	52.5%	52.5%	0.0%	8.3%	60.8%	0.0%	0.0%	39.2%	0.0%	39.2%	39.2%	39.2%
Maximum Green (s)	58.0	58.0		5.0	68.0			42.0		42.0	42.0	42.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		None	C-Max			Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0			17.0			24.0		24.0	24.0	24.0
Pedestrian Calls (#/hr)	10	10			10			10		10	10	10
Act Effct Green (s)	58.0	58.0		68.0	68.0			42.0		42.0	42.0	42.0
Actuated g/C Ratio	0.48	0.48		0.57	0.57			0.35		0.35	0.35	0.35
v/c Ratio	1.06	0.49		0.92	0.54			1.10		0.39	0.21	0.26
Control Delay	72.0	16.2		60.8	10.0			94.5		53.8	28.6	17.8
Queue Delay	0.0	0.0		1.8	0.1			0.0		0.0	0.0	0.0
Total Delay	72.0	16.2		62.6	10.0			94.5		53.8	28.6	17.8
LOS	E	B		E	B			F		D	C	B
Approach Delay		23.1			17.3			94.5			25.2	
Approach LOS		C			B			F			C	
90th %ile Green (s)	58.0	58.0		5.0	68.0			42.0		42.0	42.0	42.0
90th %ile Term Code	Coord	Coord		Max	Coord			Max		Max	Max	Max
70th %ile Green (s)	58.0	58.0		5.0	68.0			42.0		42.0	42.0	42.0
70th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
50th %ile Green (s)	58.0	58.0		5.0	68.0			42.0		42.0	42.0	42.0
50th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
30th %ile Green (s)	58.0	58.0		5.0	68.0			42.0		42.0	42.0	42.0
30th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
10th %ile Green (s)	58.0	58.0		5.0	68.0			42.0		42.0	42.0	42.0
10th %ile Term Code	Coord	Coord		Max	Coord			Max		Hold	Hold	Hold
Queue Length 50th (ft)	~112	246		59	101			~563		13	66	44
Queue Length 95th (ft)	m#101	m244		#144	133			#700		#49	114	95
Internal Link Dist (ft)		1160			184			70			546	
Turn Bay Length (ft)	70									170		
Base Capacity (vph)	136	2104		240	2564			1115		56	587	535
Starvation Cap Reductn	0	0		3	194			0		0	0	0
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	1.06	0.49		0.94	0.58			1.10		0.39	0.21	0.26

Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 76 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 41.5	Intersection LOS: D
Intersection Capacity Utilization 81.3%	ICU Level of Service D
Analysis Period (min) 15	

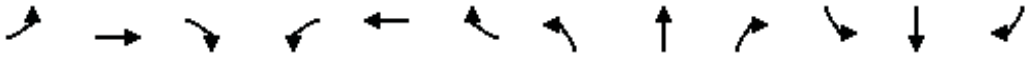
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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: Carnegie Ave & E. 14th St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	650	0	0	1250	110	290	790	50	40	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	160		0	0		0	0		0
Storage Lanes	0		0	1		0	1		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	0.86	0.86	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.988			0.991				0.850
Flt Protected		0.991					0.950			0.950		
Satd. Flow (prot)	0	4536	0	0	5698	0	1593	3157	0	1593	0	1425
Flt Permitted		0.641					0.950			0.154		
Satd. Flow (perm)	0	2934	0	0	5698	0	1593	3157	0	258	0	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22			7				22
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		264			820			359			563	
Travel Time (s)		6.0			18.6			9.8			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	722	0	0	1389	122	322	878	56	44	0	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	878	0	0	1511	0	322	934	0	44	0	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2		1		1
Detector Template	Left	Thru			Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100			100		20	100		20		20
Trailing Detector (ft)	0	0			0		0	0		0		0
Turn Type	Perm						Perm			custom		custom
Protected Phases		2			6			8				
Permitted Phases	2						8			4		4
Detector Phase	2	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0



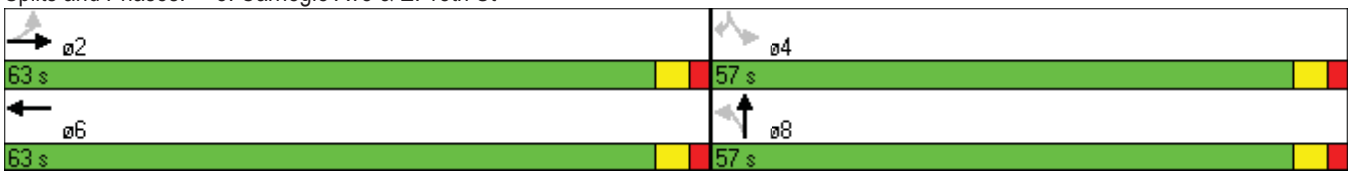
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	26.0	26.0			26.0		36.0	36.0		36.0		36.0
Total Split (s)	63.0	63.0	0.0	0.0	63.0	0.0	57.0	57.0	0.0	57.0	0.0	57.0
Total Split (%)	52.5%	52.5%	0.0%	0.0%	52.5%	0.0%	47.5%	47.5%	0.0%	47.5%	0.0%	47.5%
Maximum Green (s)	58.0	58.0			58.0		52.0	52.0		52.0		52.0
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		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Minimum Gap (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Time Before Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Time To Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Recall Mode	C-Max	C-Max			C-Max		Ped	Ped		Ped		Ped
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)	14.0	14.0			14.0		24.0	24.0		24.0		24.0
Pedestrian Calls (#/hr)	10	10			10		10	10		10		10
Act Effct Green (s)		64.0			64.0		46.0	46.0		46.0		46.0
Actuated g/C Ratio		0.53			0.53		0.38	0.38		0.38		0.38
v/c Ratio		1.51dl			0.50		0.53	0.77		0.44		0.08
Control Delay		5.7			4.8		31.2	36.4		41.5		12.8
Queue Delay		0.0			0.0		0.0	0.0		0.0		0.0
Total Delay		5.7			4.8		31.2	36.4		41.5		12.8
LOS		A			A		C	D		D		B
Approach Delay		5.7			4.8			35.1				
Approach LOS		A			A			D				
90th %ile Green (s)	58.0	58.0			58.0		52.0	52.0		52.0		52.0
90th %ile Term Code	Coord	Coord			Coord		Max	Max		Hold		Hold
70th %ile Green (s)	58.6	58.6			58.6		51.4	51.4		51.4		51.4
70th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
50th %ile Green (s)	62.7	62.7			62.7		47.3	47.3		47.3		47.3
50th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
30th %ile Green (s)	66.9	66.9			66.9		43.1	43.1		43.1		43.1
30th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
10th %ile Green (s)	73.8	73.8			73.8		36.2	36.2		36.2		36.2
10th %ile Term Code	Coord	Coord			Coord		Gap	Gap		Hold		Hold
Queue Length 50th (ft)		37			41		187	321		25		10
Queue Length 95th (ft)		38			46		259	373		64		33
Internal Link Dist (ft)		184			740			279			483	
Turn Bay Length (ft)												
Base Capacity (vph)		1565			3049		690	1372		112		630
Starvation Cap Reductn		0			0		0	0		0		0
Spillback Cap Reductn		0			0		0	0		0		0
Storage Cap Reductn		0			0		0	0		0		0
Reduced v/c Ratio		0.56			0.50		0.47	0.68		0.39		0.07

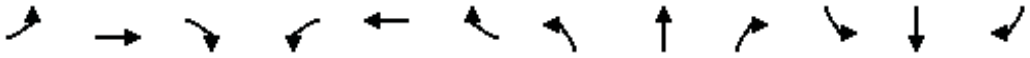
Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 79 (66%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 84.5%	ICU Level of Service E
Analysis Period (min) 15	

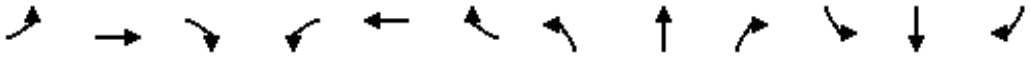
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: Carnegie Ave & E. 18th St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	420	0	180	1240	80	160	885	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	400		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.991			0.995				
Flt Protected	0.950			0.950				0.993				
Satd. Flow (prot)	1593	3185	0	1593	3157	0	0	4522	0	0	0	0
Flt Permitted	0.061			0.484				0.993				
Satd. Flow (perm)	102	3185	0	811	3157	0	0	4522	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8			5				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		352			806			182			329	
Travel Time (s)		8.0			18.3			5.0			9.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	467	0	200	1378	89	178	983	44	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	467	0	200	1467	0	0	1205	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2				
Detector Template	Left	Thru		Left	Thru		Left	Thru				
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turn Type	pm+pt			Perm			Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Detector Phase	5	2		6	6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	26.0		26.0	26.0		29.0	29.0				
Total Split (s)	15.0	81.0	0.0	66.0	66.0	0.0	39.0	39.0	0.0	0.0	0.0	0.0
Total Split (%)	12.5%	67.5%	0.0%	55.0%	55.0%	0.0%	32.5%	32.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Recall Mode	None	C-Max		C-Max	C-Max		Ped	Ped				
Walk Time (s)		7.0		7.0	7.0		7.0	7.0				
Flash Dont Walk (s)		14.0		14.0	14.0		17.0	17.0				
Pedestrian Calls (#/hr)		10		10	10		10	10				
Act Effct Green (s)	76.0	76.0		61.5	61.5			34.0				
Actuated g/C Ratio	0.63	0.63		0.51	0.51			0.28				
v/c Ratio	0.79	0.23		0.48	0.90			0.94				
Control Delay	49.8	16.7		24.0	36.0			56.1				
Queue Delay	0.0	0.4		0.0	0.0			409.9				
Total Delay	49.8	17.1		24.0	36.0			466.1				
LOS	D	B		C	D			F				
Approach Delay		24.8			34.5			466.1				
Approach LOS		C			C			F				
90th %ile Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
90th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
70th %ile Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
70th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
50th %ile Green (s)	10.0	76.0		61.0	61.0		34.0	34.0				
50th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
30th %ile Green (s)	9.8	76.0		61.2	61.2		34.0	34.0				
30th %ile Term Code	Gap	Coord		Coord	Coord		Max	Max				
10th %ile Green (s)	7.9	76.0		63.1	63.1		34.0	34.0				
10th %ile Term Code	Gap	Coord		Coord	Coord		Max	Max				
Queue Length 50th (ft)	62	112		98	528			332				
Queue Length 95th (ft)	#167	147		170	#670			#427				
Internal Link Dist (ft)		272			726			102			249	
Turn Bay Length (ft)				400								
Base Capacity (vph)	189	2017		415	1621			1285				
Starvation Cap Reductn	0	997		0	0			657				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.76	0.46		0.48	0.90			1.92				

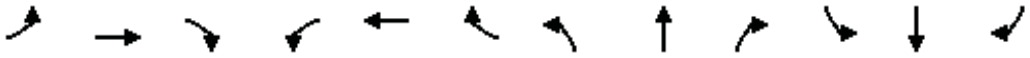
Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 52 (43%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 182.1	Intersection LOS: F
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 10: Carnegie Ave & E. 22nd St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	95	335	40	0	95	0	935	25	0	180	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	1		1	0		1	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.917	0.850			0.850		0.996				
Flt Protected		0.999		0.950								
Satd. Flow (prot)	0	1459	1354	1593	0	1425	0	4558	0	0	3185	0
Flt Permitted		0.999		0.442								
Satd. Flow (perm)	0	1459	1354	741	0	1425	0	4558	0	0	3185	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76	234			60		5				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		360			814			329			182	
Travel Time (s)		9.8			22.2			9.0			5.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	106	372	44	0	106	0	1039	28	0	200	0
Shared Lane Traffic (%)			37%									
Lane Group Flow (vph)	0	250	234	44	0	106	0	1067	0	0	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2			2	
Detector Template	Left	Thru	Right	Left		Right		Thru			Thru	
Leading Detector (ft)	20	100	20	20		20		100			100	
Trailing Detector (ft)	0	0	0	0		0		0			0	
Turn Type	Perm		Perm	custom		custom						
Protected Phases		4						2			6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8		8		2			6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0			5.0	

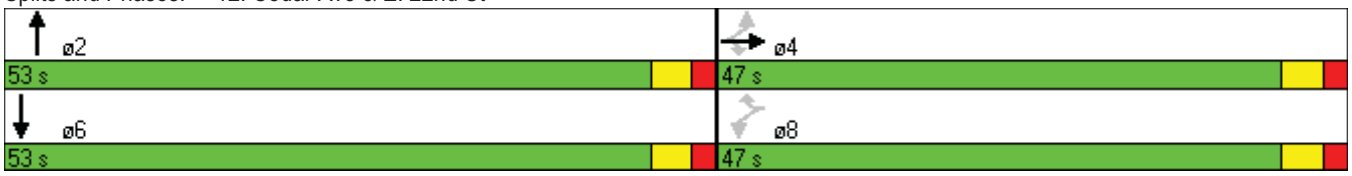


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	33.0	33.0	33.0	33.0		33.0		26.0			26.0	
Total Split (s)	47.0	47.0	47.0	47.0	0.0	47.0	0.0	53.0	0.0	0.0	53.0	0.0
Total Split (%)	47.0%	47.0%	47.0%	47.0%	0.0%	47.0%	0.0%	53.0%	0.0%	0.0%	53.0%	0.0%
Maximum Green (s)	42.0	42.0	42.0	42.0		42.0		48.0			48.0	
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	2.0		2.0		2.0			2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0			3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0		3.0		3.0			3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0		0.0			0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0		0.0			0.0	
Recall Mode	Ped	Ped	Ped	Ped		Ped		C-Max			C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0		21.0		14.0			14.0	
Pedestrian Calls (#/hr)	10	10	10	10		10		10			10	
Act Effct Green (s)		28.1	28.1	28.1		28.1		61.9			61.9	
Actuated g/C Ratio		0.28	0.28	0.28		0.28		0.62			0.62	
v/c Ratio		0.54	0.43	0.21		0.24		0.38			0.10	
Control Delay		25.7	6.4	30.7		14.9		1.8			8.0	
Queue Delay		0.0	0.0	0.0		0.0		0.0			1.2	
Total Delay		25.7	6.4	30.7		14.9		1.8			9.2	
LOS		C	A	C		B		A			A	
Approach Delay		16.4						1.8			9.2	
Approach LOS		B						A			A	
90th %ile Green (s)	28.7	28.7	28.7	28.7		28.7		61.3			61.3	
90th %ile Term Code	Gap	Gap	Gap	Hold		Hold		Coord			Coord	
70th %ile Green (s)	28.0	28.0	28.0	28.0		28.0		62.0			62.0	
70th %ile Term Code	Ped	Ped	Ped	Ped		Ped		Coord			Coord	
50th %ile Green (s)	28.0	28.0	28.0	28.0		28.0		62.0			62.0	
50th %ile Term Code	Ped	Ped	Ped	Ped		Ped		Coord			Coord	
30th %ile Green (s)	28.0	28.0	28.0	28.0		28.0		62.0			62.0	
30th %ile Term Code	Ped	Ped	Ped	Ped		Ped		Coord			Coord	
10th %ile Green (s)	28.0	28.0	28.0	28.0		28.0		62.0			62.0	
10th %ile Term Code	Ped	Ped	Ped	Ped		Ped		Coord			Coord	
Queue Length 50th (ft)		97	0	22		22		13			24	
Queue Length 95th (ft)		180	58	51		63		23			40	
Internal Link Dist (ft)		280			734			249			102	
Turn Bay Length (ft)												
Base Capacity (vph)		657	704	311		633		2822			1970	
Starvation Cap Reductn		13	0	0		0		0			1556	
Spillback Cap Reductn		0	0	0		0		0			0	
Storage Cap Reductn		0	0	0		0		0			0	
Reduced v/c Ratio		0.39	0.33	0.14		0.17		0.38			0.48	

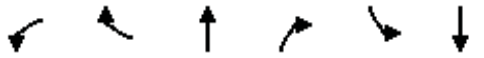
Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 98 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Cedar Ave & E. 22nd St



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	20	70	830	60	50	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	80	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.850	0.990			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1593	1425	4531	0	0	4558
Flt Permitted	0.950					0.786
Satd. Flow (perm)	1593	1425	4531	0	0	3597
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		78	18			
Link Speed (mph)	25		25			25
Link Distance (ft)	739		343			178
Travel Time (s)	20.2		9.4			4.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	22	78	922	67	56	567
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	78	989	0	0	623
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Turn Type		custom			Perm	
Protected Phases			2			6
Permitted Phases	8	8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0

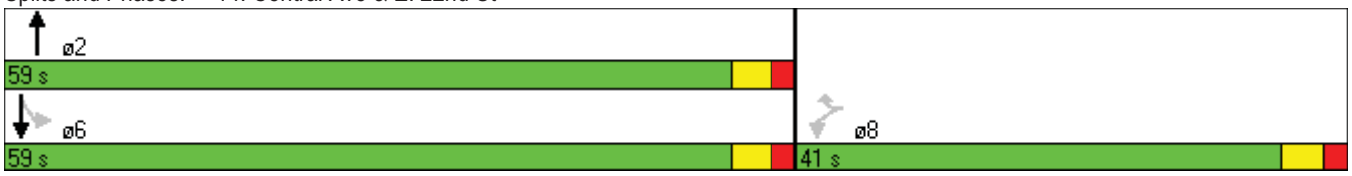


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	36.0	36.0	22.0		22.0	22.0
Total Split (s)	41.0	41.0	59.0	0.0	59.0	59.0
Total Split (%)	41.0%	41.0%	59.0%	0.0%	59.0%	59.0%
Maximum Green (s)	36.0	36.0	54.0		54.0	54.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	Ped	Ped	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	24.0	24.0	10.0		10.0	10.0
Pedestrian Calls (#/hr)	10	10	10		10	10
Act Effct Green (s)	31.0	31.0	59.0			59.0
Actuated g/C Ratio	0.31	0.31	0.59			0.59
v/c Ratio	0.04	0.16	0.37			0.29
Control Delay	24.6	6.8	10.3			9.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.6	6.8	10.3			9.3
LOS	C	A	B			A
Approach Delay	10.7		10.3			9.3
Approach LOS	B		B			A
90th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
10th %ile Term Code	Ped	Ped	Coord		Coord	Coord
Queue Length 50th (ft)	10	0	141			74
Queue Length 95th (ft)	28	33	145			100
Internal Link Dist (ft)	659		263			98
Turn Bay Length (ft)	80					
Base Capacity (vph)	573	563	2681			2122
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.04	0.14	0.37			0.29

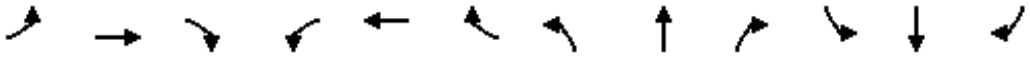
Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 84 (84%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 48.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Central Ave & E. 22nd St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	150	70	100	140	100	90	300	50	160	430	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	65		0	60		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850		0.956			0.978			0.990	
Flt Protected		0.967			0.986		0.950			0.950		
Satd. Flow (prot)	0	3080	1425	0	3003	0	1593	4476	0	1593	4531	0
Flt Permitted		0.605			0.625		0.454			0.451		
Satd. Flow (perm)	0	1927	1425	0	1903	0	761	4476	0	756	4531	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78		80			32			12	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		161			827			998			178	
Travel Time (s)		4.4			22.6			27.2			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	367	167	78	111	156	111	100	333	56	178	478	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	534	78	0	378	0	100	389	0	178	511	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	



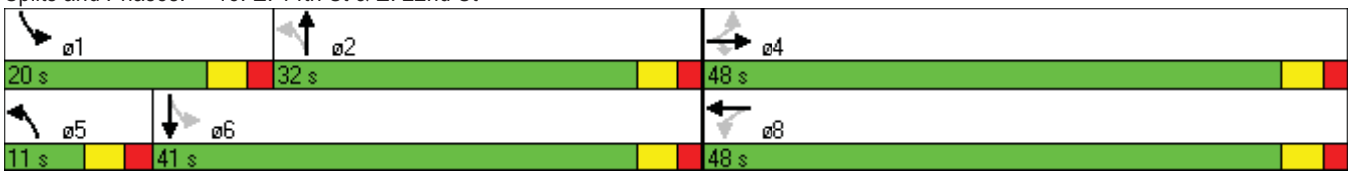
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	36.0	36.0	36.0	36.0	36.0		10.0	29.0		10.0	29.0	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	0.0	11.0	32.0	0.0	20.0	41.0	0.0
Total Split (%)	48.0%	48.0%	48.0%	48.0%	48.0%	0.0%	11.0%	32.0%	0.0%	20.0%	41.0%	0.0%
Maximum Green (s)	43.0	43.0	43.0	43.0	43.0		6.0	27.0		15.0	36.0	
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)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Ped	Ped	Ped	Ped	Ped		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0			17.0			17.0	
Pedestrian Calls (#/hr)	10	10	10	10	10			10			10	
Act Effct Green (s)		35.6	35.6		35.6		45.8	38.2		53.0	44.1	
Actuated g/C Ratio		0.36	0.36		0.36		0.46	0.38		0.53	0.44	
v/c Ratio		1.27dl	0.14		0.52		0.24	0.22		0.36	0.25	
Control Delay		36.9	4.9		21.7		15.0	21.1		9.0	10.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		36.9	4.9		21.7		15.0	21.1		9.0	10.0	
LOS		D	A		C		B	C		A	B	
Approach Delay		32.9			21.7			19.9			9.8	
Approach LOS		C			C			B			A	
90th %ile Green (s)	43.0	43.0	43.0	43.0	43.0		6.0	27.0		15.0	36.0	
90th %ile Term Code	Max	Max	Max	Hold	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	38.3	38.3	38.3	38.3	38.3		9.8	33.5		13.2	36.9	
70th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Coord		Gap	Coord	
50th %ile Green (s)	34.5	34.5	34.5	34.5	34.5		8.4	39.5		11.0	42.1	
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold		Gap	Coord		Gap	Coord	
30th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		7.3	44.7		9.3	46.7	
30th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
10th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		0.0	46.5		7.5	59.0	
10th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Skip	Coord		Gap	Coord	
Queue Length 50th (ft)		160	0		78		29	53		25	27	
Queue Length 95th (ft)		198	27		107		66	94		38	61	
Internal Link Dist (ft)		81			747			918			98	
Turn Bay Length (ft)							65			60		
Base Capacity (vph)		829	657		864		411	1731		537	2007	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.64	0.12		0.44		0.24	0.22		0.33	0.25	

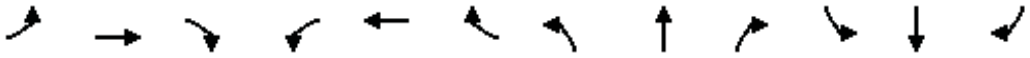
Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 84 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 15: E. 14th St & E. 22nd St

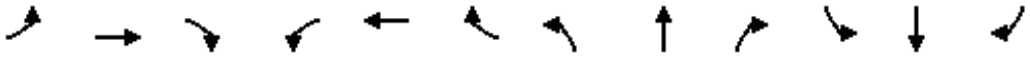




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	5	50	5	490	5	240	0	0	390	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850					0.998	
Flt Protected	0.950			0.950				0.999				
Satd. Flow (prot)	1593	0	1425	1593	1676	1425	0	4572	0	0	4568	0
Flt Permitted	0.950			0.950				0.999				
Satd. Flow (perm)	1593	0	1425	1593	1676	1425	0	4572	0	0	4568	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		146			728			388			998	
Travel Time (s)		4.0			19.9			10.6			27.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	0	6	56	6	544	6	267	0	0	433	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	0	6	56	6	544	0	273	0	0	439	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	560	5	5	590	10	5	5	5	430	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	2		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.998			0.950			0.882	
Flt Protected		0.986						0.984		0.950		
Satd. Flow (prot)	0	4508	0	0	4568	0	0	2978	0	3090	1479	0
Flt Permitted		0.689			0.933			0.955		0.950		
Satd. Flow (perm)	0	3150	0	0	4262	0	0	2890	0	3090	1479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4			6			22	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		665			540			238			388	
Travel Time (s)		15.1			12.3			6.5			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	256	622	6	6	656	11	6	6	6	478	6	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	884	0	0	673	0	0	18	0	478	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm			Perm			Perm			Prot		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8					
Detector Phase	2	2		6	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Total Split (s)	41.0	41.0	0.0	41.0	41.0	0.0	10.0	10.0	0.0	24.0	34.0	0.0
Total Split (%)	54.7%	54.7%	0.0%	54.7%	54.7%	0.0%	13.3%	13.3%	0.0%	32.0%	45.3%	0.0%
Maximum Green (s)	36.0	36.0		36.0	36.0		5.0	5.0		19.0	29.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		46.8			46.8			5.5		16.2	18.2	
Actuated g/C Ratio		0.62			0.62			0.07		0.22	0.24	
v/c Ratio		0.45			0.25			0.08		0.72	0.07	
Control Delay		7.8			7.6			27.3		33.4	9.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		7.8			7.6			27.3		33.4	9.5	
LOS		A			A			C		C	A	
Approach Delay		7.8			7.6			27.3			32.1	
Approach LOS		A			A			C			C	
90th %ile Green (s)	36.0	36.0		36.0	36.0		5.0	5.0		19.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Hold	
70th %ile Green (s)	46.5	46.5		46.5	46.5		0.0	0.0		18.5	18.5	
70th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Gap	Hold	
50th %ile Green (s)	48.3	48.3		48.3	48.3		0.0	0.0		16.7	16.7	
50th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Gap	Hold	
30th %ile Green (s)	50.2	50.2		50.2	50.2		0.0	0.0		14.8	14.8	
30th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Gap	Hold	
10th %ile Green (s)	52.9	52.9		52.9	52.9		0.0	0.0		12.1	12.1	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Gap	Hold	
Queue Length 50th (ft)		68			41			2		105	2	
Queue Length 95th (ft)		162			91			12		148	16	
Internal Link Dist (ft)		585			460			158			308	
Turn Bay Length (ft)												
Base Capacity (vph)		1965			2660			216		783	585	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.45			0.25			0.08		0.61	0.05	

Intersection Summary	
Area Type:	CBD

Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 70 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Orange Ave & E. 22nd St

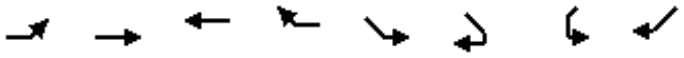
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	0	2805	90	610	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	0.86	0.86	1.00	1.00
Ped Bike Factor						
Frt			0.884	0.850		
Flt Protected						
Satd. Flow (prot)	0	4899	4093	1298	0	0
Flt Permitted						
Satd. Flow (perm)	0	4899	4093	1298	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		164	127		290	
Travel Time (s)		4.5	3.5		7.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		2				
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	3117	100	678	0	0
Shared Lane Traffic (%)				50%		
Lane Group Flow (vph)	0	3117	439	339	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.05	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	2280	0	810	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	4	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	0.64	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	4053	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	4053	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	537			370	193	
Travel Time (s)	12.2			8.4	4.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	2533	0	900	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2533	0	900	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	8			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	30	15			9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	WBT	WBR	SEL	SER	SWL	SWR
Lane Configurations								
Volume (vph)	0	520	2545	0	5	40	0	805
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12
Grade (%)		0%	0%		0%		0%	
Storage Length (ft)	0			0	0	0	0	0
Storage Lanes	0			0	2	0	0	1
Taper Length (ft)	50			50	50	50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	0.95	1.00	1.00
Ped Bike Factor								
Frt					0.868			0.865
Flt Protected					0.994			
Satd. Flow (prot)	0	4577	4577	0	2806	0	0	1450
Flt Permitted					0.994			
Satd. Flow (perm)	0	4577	4577	0	2806	0	0	1450
Right Turn on Red						No		
Satd. Flow (RTOR)								
Link Speed (mph)		30	30		30		25	
Link Distance (ft)		288	448		224		379	
Travel Time (s)		6.5	10.2		5.1		10.3	
Confl. Peds. (#/hr)								
Confl. Bikes (#/hr)								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0
Parking (#/hr)								
Mid-Block Traffic (%)		0%	0%		0%		0%	
Adj. Flow (vph)	0	578	2828	0	6	44	0	894
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	578	2828	0	50	0	0	894
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	L NA	Right	Left	Right	Left	R NA
Median Width(ft)		12	12		24		0	
Link Offset(ft)		0	0		0		0	
Crosswalk Width(ft)		16	16		16		16	
Two way Left Turn Lane								
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9	15	30
Number of Detectors		2	2		1			1
Detector Template		Thru	Thru		Left			Right
Leading Detector (ft)		100	100		20			20
Trailing Detector (ft)		0	0		0			0
Turn Type								custom
Protected Phases		2	6		4			
Permitted Phases								6
Detector Phase		2	6		4			6
Switch Phase								
Minimum Initial (s)		5.0	5.0		5.0			5.0



Lane Group	EBL	EBT	WBT	WBR	SEL	SER	SWL	SWR
Minimum Split (s)		10.0	10.0		10.0			10.0
Total Split (s)	0.0	65.0	65.0	0.0	10.0	0.0	0.0	65.0
Total Split (%)	0.0%	86.7%	86.7%	0.0%	13.3%	0.0%	0.0%	86.7%
Maximum Green (s)		60.0	60.0		5.0			60.0
Yellow Time (s)		3.0	3.0		3.0			3.0
All-Red Time (s)		2.0	2.0		2.0			2.0
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	5.0	5.0	4.0	5.0	4.0	4.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0			3.0
Minimum Gap (s)		3.0	3.0		3.0			3.0
Time Before Reduce (s)		0.0	0.0		0.0			0.0
Time To Reduce (s)		0.0	0.0		0.0			0.0
Recall Mode		C-Max	C-Max		None			C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
Act Effct Green (s)		66.0	66.0		5.0			66.0
Actuated g/C Ratio		0.88	0.88		0.07			0.88
v/c Ratio		0.14	0.70		0.27			0.70
Control Delay		0.8	3.7		37.1			7.0
Queue Delay		0.0	1.1		0.0			0.0
Total Delay		0.8	4.8		37.1			7.0
LOS		A	A		D			A
Approach Delay		0.8	4.8		37.1			
Approach LOS		A	A		D			
90th %ile Green (s)		60.0	60.0		5.0			60.0
90th %ile Term Code		Coord	Coord		Max			Coord
70th %ile Green (s)		60.0	60.0		5.0			60.0
70th %ile Term Code		Coord	Coord		Max			Coord
50th %ile Green (s)		60.0	60.0		5.0			60.0
50th %ile Term Code		Coord	Coord		Max			Coord
30th %ile Green (s)		70.0	70.0		0.0			70.0
30th %ile Term Code		Coord	Coord		Skip			Coord
10th %ile Green (s)		70.0	70.0		0.0			70.0
10th %ile Term Code		Coord	Coord		Skip			Coord
Queue Length 50th (ft)		11	236		11			147
Queue Length 95th (ft)		m12	m187		28			301
Internal Link Dist (ft)		208	368		144		299	
Turn Bay Length (ft)								
Base Capacity (vph)		4028	4028		187			1276
Starvation Cap Reductn		0	866		0			0
Spillback Cap Reductn		0	0		0			0
Storage Cap Reductn		0	0		0			0
Reduced v/c Ratio		0.14	0.89		0.27			0.70

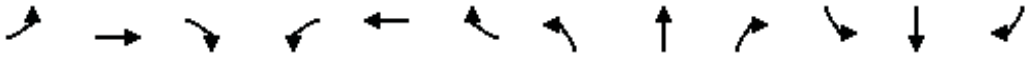
Intersection Summary	
Area Type:	CBD

Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 28 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 118.4%	ICU Level of Service H
Analysis Period (min) 15	

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

Splits and Phases: 21: S. Broadway Ave &

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	480	135	0	0	0	0	550	20	30	100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.995				
Flt Protected		0.989								0.950		
Satd. Flow (prot)	0	4356	1371	0	0	0	0	3169	0	1593	1676	0
Flt Permitted		0.989								0.380		
Satd. Flow (perm)	0	4356	1371	0	0	0	0	3169	0	637	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150					6				
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		287			171			263			272	
Travel Time (s)		6.5			4.7			7.2			7.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	533	150	0	0	0	0	611	22	33	111	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	677	150	0	0	0	0	633	0	33	111	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Turn Type	Perm		Perm							pm+pt		
Protected Phases		2						8		7	4	
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0	5.0	

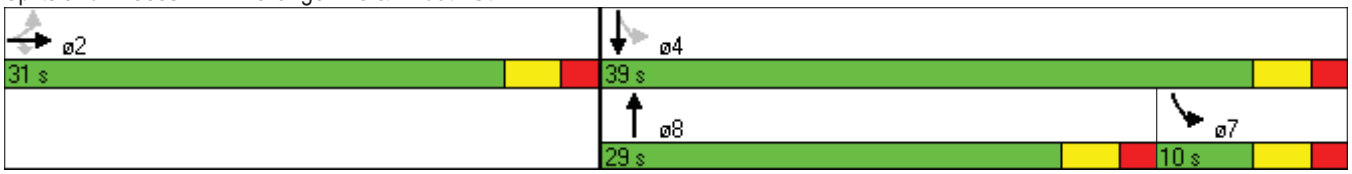


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	26.0	26.0	26.0					26.0		10.0	26.0	
Total Split (s)	31.0	31.0	31.0	0.0	0.0	0.0	0.0	29.0	0.0	10.0	39.0	0.0
Total Split (%)	44.3%	44.3%	44.3%	0.0%	0.0%	0.0%	0.0%	41.4%	0.0%	14.3%	55.7%	0.0%
Maximum Green (s)	26.0	26.0	26.0					24.0		5.0	34.0	
Yellow Time (s)	3.0	3.0	3.0					3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0					2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Recall Mode	None	None	None					Max		None	Max	
Walk Time (s)	7.0	7.0	7.0					7.0			7.0	
Flash Dont Walk (s)	14.0	14.0	14.0					14.0			14.0	
Pedestrian Calls (#/hr)	10	10	10					10			10	
Act Effct Green (s)		17.3	17.3					30.5		34.2	34.2	
Actuated g/C Ratio		0.28	0.28					0.50		0.56	0.56	
v/c Ratio		0.55	0.30					0.40		0.08	0.12	
Control Delay		20.3	5.0					13.0		8.8	8.2	
Queue Delay		0.0	0.0					0.0		0.0	0.0	
Total Delay		20.3	5.0					13.0		8.8	8.2	
LOS		C	A					B		A	A	
Approach Delay		17.6						13.0			8.4	
Approach LOS		B						B			A	
90th %ile Green (s)	24.8	24.8	24.8					24.0		5.0	34.0	
90th %ile Term Code	Gap	Gap	Gap					MaxR		Max	MaxR	
70th %ile Green (s)	19.5	19.5	19.5					24.0		5.0	34.0	
70th %ile Term Code	Gap	Gap	Gap					MaxR		Max	MaxR	
50th %ile Green (s)	17.0	17.0	17.0					34.0		0.0	34.0	
50th %ile Term Code	Gap	Gap	Gap					Hold		Skip	MaxR	
30th %ile Green (s)	14.6	14.6	14.6					34.0		0.0	34.0	
30th %ile Term Code	Gap	Gap	Gap					Hold		Skip	MaxR	
10th %ile Green (s)	11.6	11.6	11.6					34.0		0.0	34.0	
10th %ile Term Code	Gap	Gap	Gap					Hold		Skip	MaxR	
Queue Length 50th (ft)		77	0					60		5	17	
Queue Length 95th (ft)		107	34					161		19	49	
Internal Link Dist (ft)		207			91			183			192	
Turn Bay Length (ft)			200									
Base Capacity (vph)		1851	669					1572		432	931	
Starvation Cap Reductn		0	0					0		0	0	
Spillback Cap Reductn		0	0					0		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.37	0.22					0.40		0.08	0.12	

Intersection Summary	
Area Type:	CBD

Cycle Length: 70	
Actuated Cycle Length: 61.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 68.8	
70th %ile Actuated Cycle: 63.5	
50th %ile Actuated Cycle: 61	
30th %ile Actuated Cycle: 58.6	
10th %ile Actuated Cycle: 55.6	

Splits and Phases: 22: Orange Ave & E. 30th St

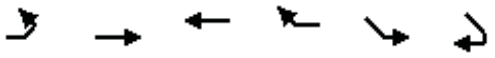


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	0	770	1075	1220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	0	0			1
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	0.91
Ped Bike Factor						
Frt					0.952	0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	3227	1441
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	3227	1441
Link Speed (mph)	25			25	25	
Link Distance (ft)	151			255	152	
Travel Time (s)	4.1			7.0	4.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	856	1194	1356
Shared Lane Traffic (%)						42%
Lane Group Flow (vph)	0	0	0	856	1764	786
Enter Blocked Intersection	No	No	No	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	0	410	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	100			0
Storage Lanes	0	0	1			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1770	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1770	5085	0	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	514			193	861	
Travel Time (s)	14.0			4.4	19.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	456	578	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	456	578	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	30			9
Sign Control	Stop			Free	Stop	

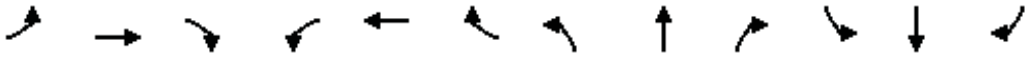
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	550	0	260	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	2787	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	2787	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		264	161		265	
Travel Time (s)		7.2	4.4		7.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	611	0	289	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	611	0	289	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	50	100	250	895	365	845	185	280	145	125	805
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		150	200		200	260		150	60		0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	4577	1425	1593	4577	1425	3090	1676	1425	1593	1676	1425
Flt Permitted	0.118			0.717			0.950			0.629		
Satd. Flow (perm)	198	4577	1425	1202	4577	1425	3090	1676	1425	1055	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			111			299			311			3
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		448			665			449			255	
Travel Time (s)		10.2			15.1			12.2			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	244	56	111	278	994	406	939	206	311	161	139	894
Shared Lane Traffic (%)												
Lane Group Flow (vph)	244	56	111	278	994	406	939	206	311	161	139	894
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	R NA
Median Width(ft)		12			12			24			16	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	pm+pt		pm+ov
Protected Phases	5	2		1	6		7	4		3	8	5
Permitted Phases	2		2	6		6			4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	60.0	67.0	67.0	27.0	34.0	34.0	41.0	38.0	38.0	18.0	15.0	60.0
Total Split (%)	40.0%	44.7%	44.7%	18.0%	22.7%	22.7%	27.3%	25.3%	25.3%	12.0%	10.0%	40.0%
Maximum Green (s)	55.0	62.0	62.0	22.0	29.0	29.0	36.0	33.0	33.0	13.0	10.0	55.0
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)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?												
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	3.0
Minimum Gap (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
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	89.0	66.0	66.0	47.0	29.0	29.0	36.0	33.3	33.3	22.7	10.0	70.0
Actuated g/C Ratio	0.59	0.44	0.44	0.31	0.19	0.19	0.24	0.22	0.22	0.15	0.07	0.47
v/c Ratio	0.39	0.03	0.16	0.66	1.12	0.79	1.27	0.55	0.56	0.79	1.24	1.34
Control Delay	15.8	17.1	1.8	27.7	121.7	25.5	171.5	53.6	8.4	66.9	217.5	196.7
Queue Delay	0.8	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.3	0.0	0.0	1.8
Total Delay	16.6	17.1	1.8	27.7	121.7	25.5	181.5	53.6	8.7	66.9	217.5	198.5
LOS	B	B	A	C	F	C	F	D	A	E	F	F
Approach Delay		12.7			82.8			126.5			182.9	
Approach LOS		B			F			F			F	
90th %ile Green (s)	55.0	62.0	62.0	22.0	29.0	29.0	36.0	33.0	33.0	13.0	10.0	55.0
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	55.0	63.2	63.2	20.8	29.0	29.0	36.0	33.0	33.0	13.0	10.0	55.0
70th %ile Term Code	Max	Coord	Coord	Gap	Coord	Coord	Max	Hold	Hold	Max	Max	Max
50th %ile Green (s)	55.0	65.7	65.7	18.3	29.0	29.0	36.0	33.0	33.0	13.0	10.0	55.0
50th %ile Term Code	Max	Coord	Coord	Gap	Coord	Coord	Max	Hold	Hold	Max	Max	Max
30th %ile Green (s)	55.0	68.0	68.0	16.0	29.0	29.0	36.0	33.0	33.0	13.0	10.0	55.0
30th %ile Term Code	Max	Coord	Coord	Gap	Coord	Coord	Max	Hold	Hold	Max	Max	Max
10th %ile Green (s)	55.0	71.1	71.1	12.9	29.0	29.0	36.0	34.4	34.4	11.6	10.0	55.0
10th %ile Term Code	Max	Coord	Coord	Gap	Coord	Coord	Max	Hold	Hold	Gap	Max	Max
Queue Length 50th (ft)	85	6	0	129	~410	105	~590	172	27	116	~169	~1142
Queue Length 95th (ft)	128	14	5	185	#508	247	#715	264	66	#196	#315	#1405
Internal Link Dist (ft)		368			585			369			175	
Turn Bay Length (ft)	220		150	200		200	260		150	60		
Base Capacity (vph)	629	2014	689	466	885	517	742	372	558	208	112	667
Starvation Cap Reductn	176	0	0	0	0	0	13	0	34	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	8	0	0	0	0	2
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.03	0.16	0.60	1.12	0.79	1.29	0.55	0.59	0.77	1.24	1.34

Intersection Summary

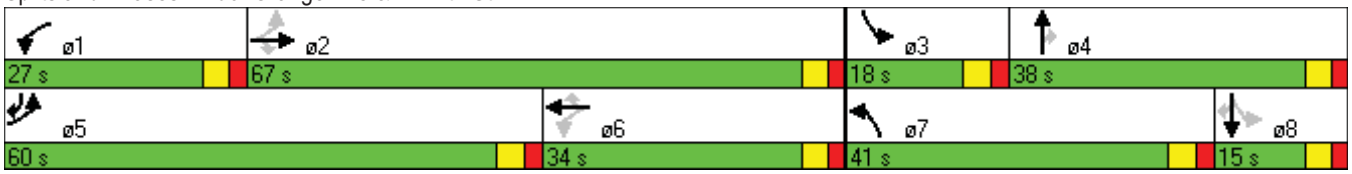
Area Type: CBD

Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay: 115.4	Intersection LOS: F
Intersection Capacity Utilization 113.9%	ICU Level of Service H
Analysis Period (min) 15	

~ 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: 36: Orange Ave & E. 14th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	760	200	0	1300	0	250	230	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%		0%	
Storage Length (ft)	0		0	130		0		0	0	0	0
Storage Lanes	0		0	1		0		2	1	0	0
Taper Length (ft)	50		50	50		50		50	50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	0.95	0.97	1.00	1.00	1.00
Ped Bike Factor											
Frt		0.969							0.850		
Flt Protected								0.950			
Satd. Flow (prot)	0	4435	0	0	4577	0	0	3090	1425	0	0
Flt Permitted								0.950			
Satd. Flow (perm)	0	4435	0	0	4577	0	0	3090	1425	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		90							33		
Link Speed (mph)		30			30			25		25	
Link Distance (ft)		820			352			375		360	
Travel Time (s)		18.6			8.0			10.2		9.8	
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											
Mid-Block Traffic (%)		0%			0%			0%		0%	
Adj. Flow (vph)	0	844	222	0	1444	0	278	256	122	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1066	0	0	1444	0	0	534	122	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		12			12			24		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15	15	9	15	9
Number of Detectors		2			2		1	1	1		
Detector Template		Thru			Thru		Left	Left	Right		
Leading Detector (ft)		100			100		20	20	20		
Trailing Detector (ft)		0			0		0	0	0		
Turn Type							custom		custom		
Protected Phases		2			6						
Permitted Phases							4	4	4		
Detector Phase		2			6		4	4	4		
Switch Phase											
Minimum Initial (s)		5.0			5.0		5.0	5.0	5.0		

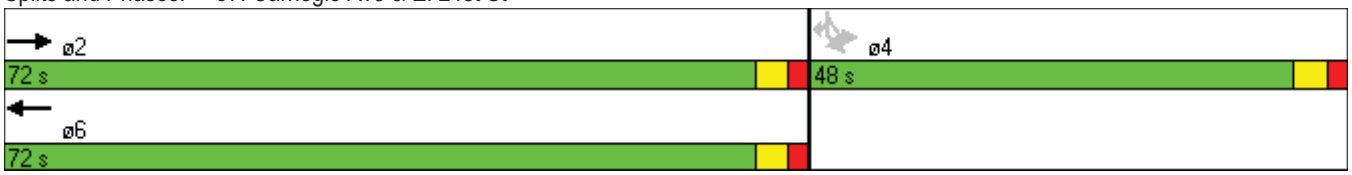
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Minimum Split (s)		26.0			26.0		36.0	36.0	36.0		
Total Split (s)	0.0	72.0	0.0	0.0	72.0	0.0	48.0	48.0	48.0	0.0	0.0
Total Split (%)	0.0%	60.0%	0.0%	0.0%	60.0%	0.0%	40.0%	40.0%	40.0%	0.0%	0.0%
Maximum Green (s)		67.0			67.0		43.0	43.0	43.0		
Yellow Time (s)		3.0			3.0		3.0	3.0	3.0		
All-Red Time (s)		2.0			2.0		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0	4.0	4.0
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0		
Minimum Gap (s)		3.0			3.0		3.0	3.0	3.0		
Time Before Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Time To Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Recall Mode		C-Max			C-Max		Ped	Ped	Ped		
Walk Time (s)		7.0			7.0		7.0	7.0	7.0		
Flash Dont Walk (s)		14.0			14.0		24.0	24.0	24.0		
Pedestrian Calls (#/hr)		10			10		10	10	10		
Act Effct Green (s)		78.6			78.6			31.4	31.4		
Actuated g/C Ratio		0.66			0.66			0.26	0.26		
v/c Ratio		0.36			0.48			0.66	0.31		
Control Delay		4.1			3.0			44.0	27.9		
Queue Delay		0.0			1.2			0.0	0.0		
Total Delay		4.1			4.1			44.0	27.9		
LOS		A			A			D	C		
Approach Delay		4.1			4.1			41.0			
Approach LOS		A			A			D			
90th %ile Green (s)		76.9			76.9		33.1	33.1	33.1		
90th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
70th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
70th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
50th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
50th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
30th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
30th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
10th %ile Green (s)		79.0			79.0		31.0	31.0	31.0		
10th %ile Term Code		Coord			Coord		Ped	Ped	Ped		
Queue Length 50th (ft)		50			25			191	55		
Queue Length 95th (ft)		57			m60			246	108		
Internal Link Dist (ft)		740			272			295		280	
Turn Bay Length (ft)											
Base Capacity (vph)		2935			2997			1107	532		
Starvation Cap Reductn		0			1229			0	0		
Spillback Cap Reductn		0			0			0	0		
Storage Cap Reductn		0			0			0	0		
Reduced v/c Ratio		0.36			0.82			0.48	0.23		

Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 81 (68%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 51.6%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 37: Carnegie Ave & E. 21st St

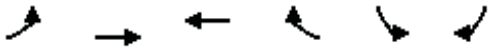


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	155	595	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950	0.999		
Satd. Flow (prot)	0	0	1610	3387	0	0
Flt Permitted			0.950	0.999		
Satd. Flow (perm)	0	0	1610	3387	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	174			478	494	
Travel Time (s)	4.7			13.0	13.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	172	661	0	0
Shared Lane Traffic (%)			10%			
Lane Group Flow (vph)	0	0	155	678	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	25		15	9
Sign Control	Free			Free	Free	

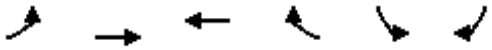
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	770	0	2295	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		2	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.88	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	5085	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			419	500	
Travel Time (s)	4.1			11.4	13.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	856	0	2550	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	856	0	2550	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		25	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	185	110	45	1045	440	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	2	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	0.95
Ped Bike Factor						
Frt			0.856		0.986	
Flt Protected		0.970			0.957	
Satd. Flow (prot)	0	3090	2727	0	3069	0
Flt Permitted		0.677			0.957	
Satd. Flow (perm)	0	2156	2727	0	3069	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			1091		15	
Link Speed (mph)		25	25		25	
Link Distance (ft)		318	355		449	
Travel Time (s)		8.7	9.7		12.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	206	122	50	1161	489	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	328	1211	0	539	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		36	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	



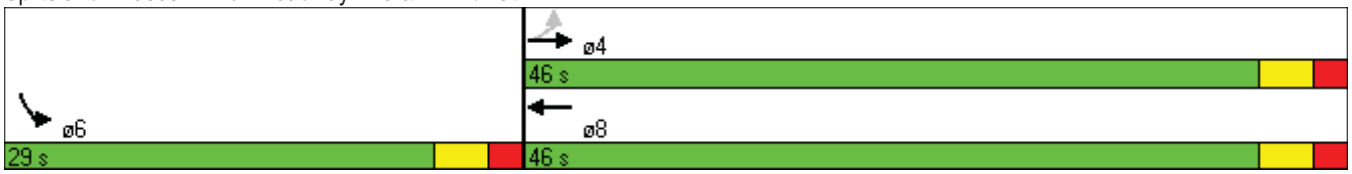
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	10.0	10.0	10.0		10.0	
Total Split (s)	46.0	46.0	46.0	0.0	29.0	0.0
Total Split (%)	61.3%	61.3%	61.3%	0.0%	38.7%	0.0%
Maximum Green (s)	41.0	41.0	41.0		24.0	
Yellow Time (s)	3.0	3.0	3.0		3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Minimum Gap (s)	3.0	3.0	3.0		3.0	
Time Before Reduce (s)	0.0	0.0	0.0		0.0	
Time To Reduce (s)	0.0	0.0	0.0		0.0	
Recall Mode	None	None	None		C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)		22.1	22.1		42.9	
Actuated g/C Ratio		0.29	0.29		0.57	
v/c Ratio		2.29dl	0.97dr		0.31	
Control Delay		23.4	5.9		4.7	
Queue Delay		0.0	0.2		0.0	
Total Delay		23.4	6.1		4.7	
LOS		C	A		A	
Approach Delay		23.4	6.1		4.7	
Approach LOS		C	A		A	
90th %ile Green (s)	36.1	36.1	36.1		28.9	
90th %ile Term Code	Hold	Hold	Gap		Coord	
70th %ile Green (s)	26.2	26.2	26.2		38.8	
70th %ile Term Code	Hold	Hold	Gap		Coord	
50th %ile Green (s)	19.2	19.2	19.2		45.8	
50th %ile Term Code	Hold	Hold	Gap		Coord	
30th %ile Green (s)	16.7	16.7	16.7		48.3	
30th %ile Term Code	Gap	Gap	Hold		Coord	
10th %ile Green (s)	12.5	12.5	12.5		52.5	
10th %ile Term Code	Gap	Gap	Hold		Coord	
Queue Length 50th (ft)		70	23		31	
Queue Length 95th (ft)		74	49		m63	
Internal Link Dist (ft)		238	275		369	
Turn Bay Length (ft)						
Base Capacity (vph)		1179	1985		1760	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		99	224		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.30	0.69		0.31	

Intersection Summary	
Area Type:	CBD

Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 12 (16%), Referenced to phase 6:SBL, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 78.5%	ICU Level of Service D
Analysis Period (min) 15	

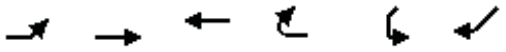
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 40: Broadway Ave & E. 14th St



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	435	0	0	310	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3406	0	0	1656	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3406	0	0	1656	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		494	287		482	
Travel Time (s)		11.2	6.5		13.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	483	0	0	344	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	483	0	0	344	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		10	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	25	9
Sign Control		Free	Stop		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	55	475	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950	0.999				
Satd. Flow (prot)	1610	3060	0	0	0	0
Flt Permitted	0.950	0.999				
Satd. Flow (perm)	1610	3060	0	0	0	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		171	435		366	
Travel Time (s)		3.9	9.9		10.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	13%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	61	528	0	0	0	0
Shared Lane Traffic (%)	10%					
Lane Group Flow (vph)	55	534	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	30			9	15	9
Sign Control		Free	Stop		Stop	

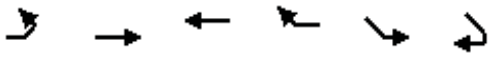
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	0	0	595	0	0	1700
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	1611
Link Speed (mph)		25	25		25	
Link Distance (ft)		419	300		413	
Travel Time (s)		11.4	8.2		11.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	661	0	0	1889
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	661	0	0	1889
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Left	L NA	Right	Right	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	25
Sign Control		Free	Yield		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	128.4%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	1100	1040	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	2			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.97	0.91	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	0	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		323	359		156	
Travel Time (s)		8.8	9.8		4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	1222	1156	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1222	1156	0	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	25			9	15	9
Sign Control		Free	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	520	0	3390	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			4	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.64	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	4053	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	4053	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		861	288		500	
Travel Time (s)		19.6	6.5		11.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	578	0	3767	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	578	0	3767	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			30	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	0	455	0	1100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	2
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	2787
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	2787
Link Speed (mph)	25			25	25	
Link Distance (ft)	123			150	156	
Travel Time (s)	3.4			4.1	4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	506	0	1222
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	506	0	1222
Enter Blocked Intersection	No	No	Yes	Yes	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	155	0	0	0	0	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1611
Link Speed (mph)	25			25	25	
Link Distance (ft)	494			264	236	
Travel Time (s)	13.5			7.2	6.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	172	0	0	0	0	444
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	0	0	0	444
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

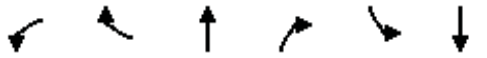
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	1970	0	45	835	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1596	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1596	0	3539	3539	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	277			485	381	
Travel Time (s)	7.6			11.0	8.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	2189	0	50	928	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2189	0	50	928	0
Enter Blocked Intersection	No	Yes	No	No	Yes	No
Lane Alignment	Left	R NA	Left	Left	L NA	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 151.7%		ICU Level of Service H	
Analysis Period (min) 15			

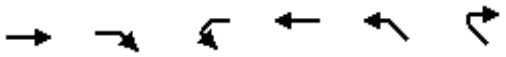
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	770	0	0	0	0	1170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1627
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1627
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			282	360	
Travel Time (s)	13.6			7.7	9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	856	0	0	0	0	1300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	856	0	0	0	0	1300
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		



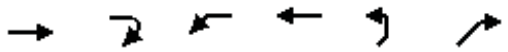
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	260	1910	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	2		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	0.88	0.91	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	5085	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	5085	0	0	0
Link Speed (mph)	25		25			25
Link Distance (ft)	508		306			323
Travel Time (s)	13.9		8.3			8.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	289	2122	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	289	2122	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	L NA	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25		9	15	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	995	0	605	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		3	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.76	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	3610	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			295	705	
Travel Time (s)	12.3			6.7	16.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	1106	0	672	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1106	0	672	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		30	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	805	415	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1770	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1770	1863	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	531			151	379	
Travel Time (s)	14.5			4.1	10.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	894	461	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	894	461	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	25		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	415	0	45	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	1863	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	531			381	224	
Travel Time (s)	14.5			8.7	5.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	461	0	50	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	461	0	50	0	0
Enter Blocked Intersection	No	No	No	Yes	No	No
Lane Alignment	Left	R NA	Left	Left	L NA	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

CUY-90-14.90

PID 77332/85531

APPENDIX TC-10: ATTACHMENT D

Year 2015 Central Viaduct Bi-Directional With Improvements, PM Peak Hour

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	0	0	550	660	0	1430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.91
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	3539	1583	0	5085
Flt Permitted						
Satd. Flow (perm)	0	0	3539	1583	0	5085
Link Speed (mph)	25		30			30
Link Distance (ft)	509		164			485
Travel Time (s)	13.9		3.7			11.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	0	611	733	0	1589
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	611	733	0	1589
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		30	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Volume (vph)	130	710	280	20	150	510	100	130	745	170	1210	1560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%		0%	
Storage Length (ft)	225		0				0	150		200		0
Storage Lanes	1		1				1	1		1		2
Taper Length (ft)	50		50				50	50		50		50
Lane Util. Factor	0.97	0.95	0.95	0.95	1.00	0.95	1.00	0.97	0.91	1.00	0.91	0.88
Ped Bike Factor												
Frt		0.955					0.850			0.850		0.850
Flt Protected	0.950				0.950			0.950				
Satd. Flow (prot)	3090	3036	0	0	1593	3185	1425	3090	4577	1425	4577	2292
Flt Permitted	0.950				0.169			0.950				
Satd. Flow (perm)	3090	3036	0	0	283	3185	1425	3090	4577	1425	4577	2292
Right Turn on Red				No			Yes			No		
Satd. Flow (RTOR)							83					3
Link Speed (mph)		30				30			30		30	
Link Distance (ft)		632				879			370		1209	
Travel Time (s)		14.4				20.0			8.4		27.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	12%	2%	2%	2%	2%	2%	2%	2%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%		0%	
Adj. Flow (vph)	144	789	311	22	167	567	111	144	828	189	1344	1733
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1122	0	0	167	567	111	144	828	189	1344	1800
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		24				24			24		24	
Link Offset(ft)		0				0			0		0	
Crosswalk Width(ft)		16				16			16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	9	15		9	15		9		9
Number of Detectors	1	2			1	2	1	1	2	1	2	1
Detector Template	Left	Thru			Left	Thru	Right	Left	Thru	Right	Thru	Right
Leading Detector (ft)	20	100			20	100	20	20	100	20	100	20
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	0
Turn Type	Prot				Perm		Perm	Prot		Perm		Perm
Protected Phases	5	2				6		3	8		4	
Permitted Phases					6		6			8		4
Detector Phase	5	2			6	6	6	3	8	8	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Lane Group	SBR2
Lane Configurations	
Volume (vph)	60
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	0.91
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	67
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.14
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Minimum Split (s)	10.0	46.0			46.0	46.0	46.0	10.0	36.0	36.0	36.0	36.0
Total Split (s)	10.0	62.0	0.0	0.0	52.0	52.0	52.0	10.0	58.0	58.0	48.0	48.0
Total Split (%)	8.3%	51.7%	0.0%	0.0%	43.3%	43.3%	43.3%	8.3%	48.3%	48.3%	40.0%	40.0%
Maximum Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead				Lag	Lag	Lag	Lead			Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max			C-Max	C-Max	C-Max	None	Ped	Ped	Ped	Ped
Walk Time (s)		7.0			7.0	7.0	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)		34.0			34.0	34.0	34.0		24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)		10			10	10	10		10	10	10	10
Act Effct Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
Actuated g/C Ratio	0.04	0.48			0.39	0.39	0.39	0.04	0.44	0.44	0.36	0.36
v/c Ratio	1.12	0.78			1.50	0.45	0.18	1.12	0.41	0.30	0.82	2.19
Control Delay	165.7	30.9			272.4	8.4	1.2	157.9	12.3	11.4	40.0	561.1
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	165.7	30.9			272.4	8.4	1.2	157.9	12.3	11.4	40.0	561.1
LOS	F	C			F	A	A	F	B	B	D	F
Approach Delay		46.3				59.6			30.2		338.4	
Approach LOS		D				E			C		F	
90th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
90th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
70th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
70th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
50th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
50th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
30th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
30th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
10th %ile Green (s)	5.0	57.0			47.0	47.0	47.0	5.0	53.0	53.0	43.0	43.0
10th %ile Term Code	Max	Coord			Coord	Coord	Coord	Max	Hold	Hold	Max	Max
Queue Length 50th (ft)	~65	371			~185	27	0	~63	166	100	343	~1285
Queue Length 95th (ft)	#135	462			m#257	m55	m9	#136	160	119	405	#1438
Internal Link Dist (ft)		552				799			290		1129	
Turn Bay Length (ft)	225				350			150		200		
Base Capacity (vph)	129	1442			111	1247	609	129	2022	629	1640	823
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	0.78			1.50	0.45	0.18	1.12	0.41	0.30	0.82	2.19

Intersection Summary

Area Type: CBD

Lane Group	SBR2
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

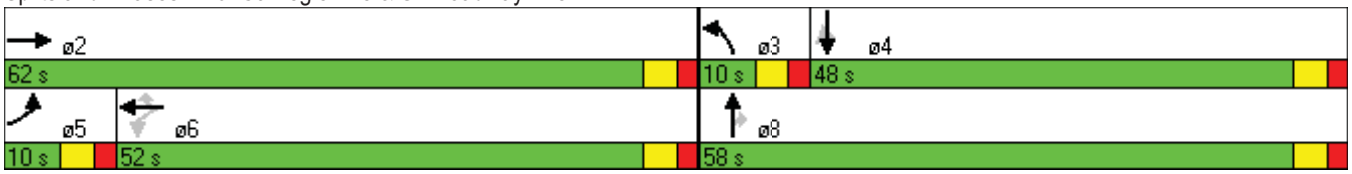
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 5 (4%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.19	
Intersection Signal Delay: 188.2	Intersection LOS: F
Intersection Capacity Utilization 112.1%	ICU Level of Service H
Analysis Period (min) 15	

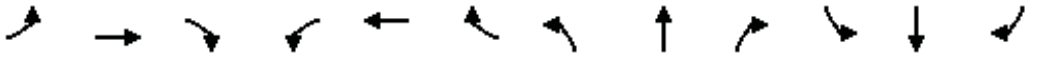
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

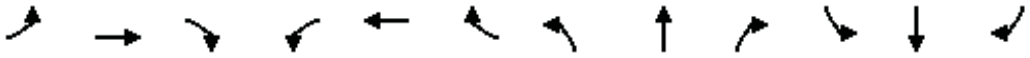
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Carnegie Ave & S. Broadway Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	500	0	1295	875	50	0	1275	155	350	2000	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	800		0	0		0	370		0
Storage Lanes	3		0	1		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.97	0.91	0.91	0.97	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt					0.992			0.984			0.997	
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3090	4577	0	3060	2986	0	0	4338	0	1593	4520	0
Flt Permitted	0.950			0.950						0.108		
Satd. Flow (perm)	3090	4577	0	3060	2986	0	0	4338	0	181	4520	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6			17			3	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		879			1240			127			701	
Travel Time (s)		20.0			28.2			3.5			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%	3%	2%	2%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					2	2		2	2			
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	106	556	0	1439	972	56	0	1417	172	389	2222	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	556	0	1439	1028	0	0	1589	0	389	2266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.23	1.14	1.14	1.20	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Turn Type	Prot			Prot						pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases										4		
Detector Phase	5	2		1	6			8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	36.0		10.0	36.0			36.0		10.0	36.0	
Total Split (s)	11.0	36.0	0.0	35.0	60.0	0.0	0.0	37.0	0.0	12.0	49.0	0.0
Total Split (%)	9.2%	30.0%	0.0%	29.2%	50.0%	0.0%	0.0%	30.8%	0.0%	10.0%	40.8%	0.0%
Maximum Green (s)	6.0	31.0		30.0	55.0			32.0		7.0	44.0	
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	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag			Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max			Ped		None	Ped	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		24.0			24.0			24.0			24.0	
Pedestrian Calls (#/hr)		10			10			10			10	
Act Effct Green (s)	6.0	31.0		30.0	55.0			32.0		44.0	44.0	
Actuated g/C Ratio	0.05	0.26		0.25	0.46			0.27		0.37	0.37	
v/c Ratio	0.68	0.47		1.88	0.75			1.36		2.61	1.37	
Control Delay	72.3	33.5		425.4	28.3			202.4		765.2	200.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	72.3	33.5		425.4	28.3			202.4		765.2	200.7	
LOS	E	C		F	C			F		F	F	
Approach Delay		39.7			259.9			202.4			283.4	
Approach LOS		D			F			F			F	
90th %ile Green (s)	6.0	31.0		30.0	55.0			32.0		7.0	44.0	
90th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
70th %ile Green (s)	6.0	31.0		30.0	55.0			32.0		7.0	44.0	
70th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
50th %ile Green (s)	6.0	31.0		30.0	55.0			32.0		7.0	44.0	
50th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
30th %ile Green (s)	6.0	31.0		30.0	55.0			32.0		7.0	44.0	
30th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
10th %ile Green (s)	6.0	31.0		30.0	55.0			32.0		7.0	44.0	
10th %ile Term Code	Max	Coord		Max	Coord			Max		Max	Max	
Queue Length 50th (ft)	45	80		~887	366			~593		~467	~853	
Queue Length 95th (ft)	m61	128		m#953	m422			#691		#666	#949	
Internal Link Dist (ft)		799			1160			47			621	
Turn Bay Length (ft)	280			800						370		
Base Capacity (vph)	155	1182		765	1372			1169		149	1659	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.68	0.47		1.88	0.75			1.36		2.61	1.37	

Intersection Summary

Area Type: CBD

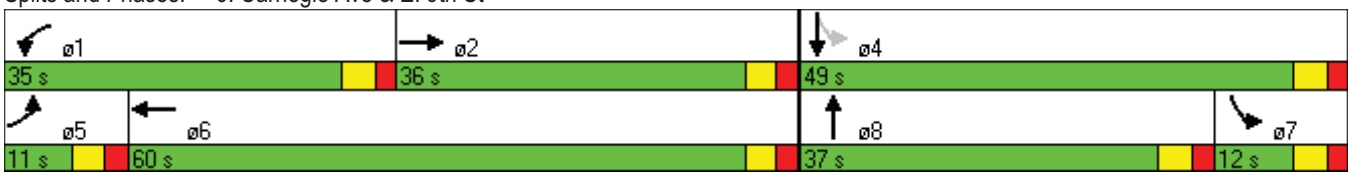
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 117 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.61	
Intersection Signal Delay: 236.2	Intersection LOS: F
Intersection Capacity Utilization 121.2%	ICU Level of Service H
Analysis Period (min) 15	

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

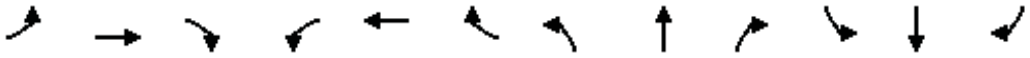
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Carnegie Ave & E. 9th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	460	135	260	1080	40	0	280	0	20	565	700
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		0	0		0	0		0	170		0
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.995							0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1593	4259	0	1593	4554	0	0	3185	0	1593	1676	1425
Flt Permitted	0.187			0.256						0.554		
Satd. Flow (perm)	314	4259	0	429	4554	0	0	3185	0	929	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			5							20
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1240			264			150			626	
Travel Time (s)		28.2			6.0			4.1			17.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		2	2									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	89	511	150	289	1200	44	0	311	0	22	628	778
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	661	0	289	1244	0	0	311	0	22	628	778
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.20	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	1
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100			100		20	100	20
Trailing Detector (ft)	0	0		0	0			0		0	0	0
Turn Type	Perm			pm+pt						Perm		Perm
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6						4		4
Detector Phase	2	2		1	6			8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		10.0	29.0			36.0		36.0	36.0	36.0
Total Split (s)	39.0	39.0	0.0	15.0	54.0	0.0	0.0	66.0	0.0	66.0	66.0	66.0
Total Split (%)	32.5%	32.5%	0.0%	12.5%	45.0%	0.0%	0.0%	55.0%	0.0%	55.0%	55.0%	55.0%
Maximum Green (s)	34.0	34.0		10.0	49.0			61.0		61.0	61.0	61.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max		None	C-Max			Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	17.0	17.0			17.0			24.0		24.0	24.0	24.0
Pedestrian Calls (#/hr)	10	10			10			10		10	10	10
Act Effct Green (s)	34.0	34.0		49.0	49.0			61.0		61.0	61.0	61.0
Actuated g/C Ratio	0.28	0.28		0.41	0.41			0.51		0.51	0.51	0.51
v/c Ratio	1.00	0.53		1.06	0.67			0.19		0.05	0.74	1.06
Control Delay	62.0	20.7		98.4	22.4			16.5		15.4	29.7	79.4
Queue Delay	0.0	0.0		0.0	1.6			0.0		0.0	0.0	0.0
Total Delay	62.0	20.7		98.4	23.9			16.5		15.4	29.7	79.4
LOS	E	C		F	C			B		B	C	E
Approach Delay		25.6			38.0			16.5			56.5	
Approach LOS		C			D			B			E	
90th %ile Green (s)	34.0	34.0		10.0	49.0			61.0		61.0	61.0	61.0
90th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
70th %ile Green (s)	34.0	34.0		10.0	49.0			61.0		61.0	61.0	61.0
70th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
50th %ile Green (s)	34.0	34.0		10.0	49.0			61.0		61.0	61.0	61.0
50th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
30th %ile Green (s)	34.0	34.0		10.0	49.0			61.0		61.0	61.0	61.0
30th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
10th %ile Green (s)	34.0	34.0		10.0	49.0			61.0		61.0	61.0	61.0
10th %ile Term Code	Coord	Coord		Max	Coord			Hold		Max	Max	Max
Queue Length 50th (ft)	57	117		~138	200			66		8	370	~655
Queue Length 95th (ft)	m#82	m96		#302	193			94		23	524	#898
Internal Link Dist (ft)		1160			184			70			546	
Turn Bay Length (ft)	70									170		
Base Capacity (vph)	89	1251		272	1863			1619		472	852	734
Starvation Cap Reductn	0	0		0	410			0		0	0	0
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	1.00	0.53		1.06	0.86			0.19		0.05	0.74	1.06

Intersection Summary	
Area Type:	CBD

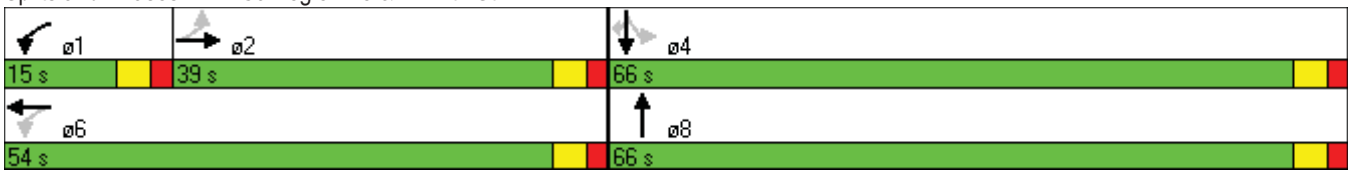
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 74 (62%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 40.6	Intersection LOS: D
Intersection Capacity Utilization 80.7%	ICU Level of Service D
Analysis Period (min) 15	

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

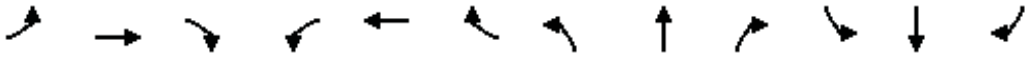
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 7: Carnegie Ave & E. 14th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	690	0	0	730	40	110	90	50	320	0	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	160		0	0		0	0		0
Storage Lanes	0		0	1		0	1		0	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	0.86	0.86	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.992			0.946				0.850
Flt Protected		0.993					0.950			0.950		
Satd. Flow (prot)	0	4545	0	0	5721	0	1593	3013	0	1593	0	1425
Flt Permitted		0.697					0.950			0.653		
Satd. Flow (perm)	0	3190	0	0	5721	0	1593	3013	0	1095	0	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10			56				158
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		264			820			359			563	
Travel Time (s)		6.0			18.6			9.8			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	122	767	0	0	811	44	122	100	56	356	0	322
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	889	0	0	855	0	122	156	0	356	0	322
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2		1		1
Detector Template	Left	Thru			Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100			100		20	100		20		20
Trailing Detector (ft)	0	0			0		0	0		0		0
Turn Type	pm+pt						Perm			custom		custom
Protected Phases	5	2			6			8				
Permitted Phases	2						8			4		4
Detector Phase	5	2			6		8	8		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0		5.0

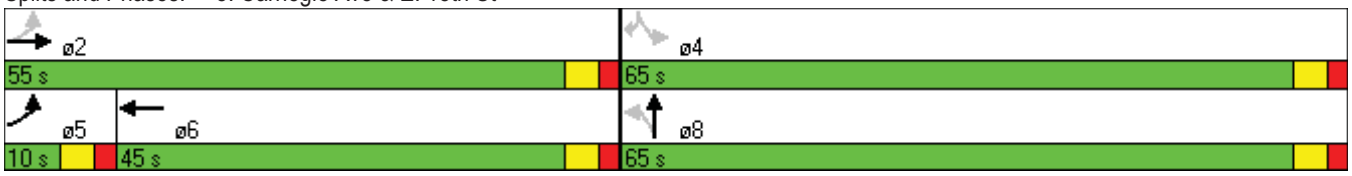


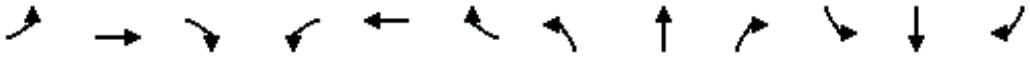
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	26.0			26.0		36.0	36.0		36.0		36.0
Total Split (s)	10.0	55.0	0.0	0.0	45.0	0.0	65.0	65.0	0.0	65.0	0.0	65.0
Total Split (%)	8.3%	45.8%	0.0%	0.0%	37.5%	0.0%	54.2%	54.2%	0.0%	54.2%	0.0%	54.2%
Maximum Green (s)	5.0	50.0			40.0		60.0	60.0		60.0		60.0
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		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	4.0	5.0
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Minimum Gap (s)	3.0	3.0			3.0		3.0	3.0		3.0		3.0
Time Before Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Time To Reduce (s)	0.0	0.0			0.0		0.0	0.0		0.0		0.0
Recall Mode	None	C-Max			C-Max		Ped	Ped		Ped		Ped
Walk Time (s)		7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		14.0			14.0		24.0	24.0		24.0		24.0
Pedestrian Calls (#/hr)		10			10		10	10		10		10
Act Effct Green (s)		63.7			63.7		46.3	46.3		46.3		46.3
Actuated g/C Ratio		0.53			0.53		0.39	0.39		0.39		0.39
v/c Ratio		0.53			0.28		0.20	0.13		0.84		0.50
Control Delay		9.6			7.4		24.2	14.5		50.4		14.7
Queue Delay		0.1			0.0		0.0	0.0		0.0		0.1
Total Delay		9.6			7.4		24.2	14.5		50.4		14.8
LOS		A			A		C	B		D		B
Approach Delay		9.6			7.4			18.7				
Approach LOS		A			A			B				
90th %ile Green (s)	0.0	50.6			50.6		59.4	59.4		59.4		59.4
90th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
70th %ile Green (s)	0.0	56.5			56.5		53.5	53.5		53.5		53.5
70th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
50th %ile Green (s)	0.0	62.7			62.7		47.3	47.3		47.3		47.3
50th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
30th %ile Green (s)	0.0	69.7			69.7		40.3	40.3		40.3		40.3
30th %ile Term Code	Skip	Coord			Coord		Hold	Hold		Gap		Gap
10th %ile Green (s)	0.0	79.0			79.0		31.0	31.0		31.0		31.0
10th %ile Term Code	Skip	Coord			Coord		Ped	Ped		Ped		Ped
Queue Length 50th (ft)		63			35		60	24		244		90
Queue Length 95th (ft)		92			51		85	39		316		143
Internal Link Dist (ft)		184			740			279			483	
Turn Bay Length (ft)												
Base Capacity (vph)		1693			3042		797	1535		548		792
Starvation Cap Reductn		100			0		0	0		0		0
Spillback Cap Reductn		0			324		50	0		0		52
Storage Cap Reductn		0			0		0	0		0		0
Reduced v/c Ratio		0.56			0.31		0.16	0.10		0.65		0.44

Intersection Summary	
Area Type:	CBD

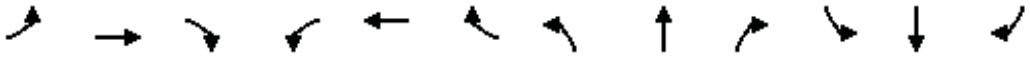
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 83 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Carnegie Ave & E. 18th St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	640	0	140	420	60	220	585	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	400		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.981			0.985				
Flt Protected	0.950			0.950				0.988				
Satd. Flow (prot)	1593	3185	0	1593	3125	0	0	4454	0	0	0	0
Flt Permitted	0.382			0.381				0.988				
Satd. Flow (perm)	640	3185	0	639	3125	0	0	4454	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					19			17				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		352			806			182			329	
Travel Time (s)		8.0			18.3			5.0			9.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	144	711	0	156	467	67	244	650	100	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	711	0	156	534	0	0	994	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2				
Detector Template	Left	Thru		Left	Thru		Left	Thru				
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turn Type	pm+pt			Perm			Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Detector Phase	5	2		6	6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	26.0		26.0	26.0		29.0	29.0				
Total Split (s)	11.0	76.0	0.0	65.0	65.0	0.0	44.0	44.0	0.0	0.0	0.0	0.0
Total Split (%)	9.2%	63.3%	0.0%	54.2%	54.2%	0.0%	36.7%	36.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	6.0	71.0		60.0	60.0		39.0	39.0				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Recall Mode	None	C-Max		C-Max	C-Max		Ped	Ped				
Walk Time (s)		7.0		7.0	7.0		7.0	7.0				
Flash Dont Walk (s)		14.0		14.0	14.0		17.0	17.0				
Pedestrian Calls (#/hr)		10		10	10		10	10				
Act Effct Green (s)	75.1	75.1		62.7	62.7			34.9				
Actuated g/C Ratio	0.63	0.63		0.52	0.52			0.29				
v/c Ratio	0.31	0.36		0.47	0.33			0.76				
Control Delay	6.5	5.9		25.0	17.0			42.0				
Queue Delay	0.0	0.3		0.0	0.0			189.0				
Total Delay	6.5	6.2		25.0	17.0			231.0				
LOS	A	A		C	B			F				
Approach Delay		6.3			18.8			231.0				
Approach LOS		A			B			F				
90th %ile Green (s)	6.0	71.0		60.0	60.0		39.0	39.0				
90th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
70th %ile Green (s)	6.0	71.0		60.0	60.0		39.0	39.0				
70th %ile Term Code	Max	Coord		Coord	Coord		Max	Max				
50th %ile Green (s)	9.6	74.6		60.0	60.0		35.4	35.4				
50th %ile Term Code	Max	Coord		Coord	Coord		Gap	Gap				
30th %ile Green (s)	8.6	77.5		63.9	63.9		32.5	32.5				
30th %ile Term Code	Gap	Coord		Coord	Coord		Gap	Gap				
10th %ile Green (s)	7.0	81.6		69.6	69.6		28.4	28.4				
10th %ile Term Code	Gap	Coord		Coord	Coord		Gap	Gap				
Queue Length 50th (ft)	26	70		77	122			250				
Queue Length 95th (ft)	m36	82		146	162			290				
Internal Link Dist (ft)		272			726			102			249	
Turn Bay Length (ft)				400								
Base Capacity (vph)	460	1994		334	1642			1459				
Starvation Cap Reductn	0	658		0	0			757				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.31	0.53		0.47	0.33			1.42				

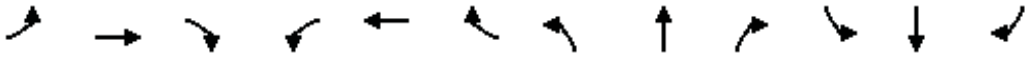
Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 87 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 97.6	Intersection LOS: F
Intersection Capacity Utilization 60.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 10: Carnegie Ave & E. 22nd St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	85	910	50	0	200	0	780	25	0	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	1		1	0		1	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.877	0.850			0.850		0.995				
Flt Protected		0.999		0.950								
Satd. Flow (prot)	0	1395	1354	1593	0	1425	0	4554	0	0	3185	0
Flt Permitted		0.999		0.115								
Satd. Flow (perm)	0	1395	1354	193	0	1425	0	4554	0	0	3185	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		389	546			31		5				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		360			814			329			182	
Travel Time (s)		9.8			22.2			9.0			5.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	94	1011	56	0	222	0	867	28	0	156	0
Shared Lane Traffic (%)			46%									
Lane Group Flow (vph)	0	565	546	56	0	222	0	895	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1		1		2			2	
Detector Template	Left	Thru	Right	Left		Right		Thru			Thru	
Leading Detector (ft)	20	100	20	20		20		100			100	
Trailing Detector (ft)	0	0	0	0		0		0			0	
Turn Type	Perm		Perm	custom		custom						
Protected Phases		4						2			6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8		8		2			6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0		5.0			5.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	33.0	33.0	33.0	33.0		33.0		26.0			26.0	
Total Split (s)	62.0	62.0	62.0	62.0	0.0	62.0	0.0	38.0	0.0	0.0	38.0	0.0
Total Split (%)	62.0%	62.0%	62.0%	62.0%	0.0%	62.0%	0.0%	38.0%	0.0%	0.0%	38.0%	0.0%
Maximum Green (s)	57.0	57.0	57.0	57.0		57.0		33.0			33.0	
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	2.0		2.0		2.0			2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.0	4.0	5.0	4.0	4.0	5.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0			3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0		3.0		3.0			3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0		0.0		0.0			0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0		0.0		0.0			0.0	
Recall Mode	Ped	Ped	Ped	Ped		Ped		C-Max			C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0		21.0		14.0			14.0	
Pedestrian Calls (#/hr)	10	10	10	10		10		10			10	
Act Effct Green (s)		34.9	34.9	34.9		34.9		55.1			55.1	
Actuated g/C Ratio		0.35	0.35	0.35		0.35		0.55			0.55	
v/c Ratio		0.76	0.66	0.84		0.43		0.36			0.09	
Control Delay		14.9	5.7	101.2		22.4		8.7			13.1	
Queue Delay		0.2	0.1	0.0		0.0		0.0			0.8	
Total Delay		15.0	5.8	101.2		22.4		8.7			13.9	
LOS		B	A	F		C		A			B	
Approach Delay		10.5						8.7			13.9	
Approach LOS		B						A			B	
90th %ile Green (s)	51.5	51.5	51.5	51.5		51.5		38.5			38.5	
90th %ile Term Code	Gap	Gap	Gap	Hold		Hold		Coord			Coord	
70th %ile Green (s)	38.7	38.7	38.7	38.7		38.7		51.3			51.3	
70th %ile Term Code	Gap	Gap	Gap	Hold		Hold		Coord			Coord	
50th %ile Green (s)	28.2	28.2	28.2	28.2		28.2		61.8			61.8	
50th %ile Term Code	Gap	Gap	Gap	Hold		Hold		Coord			Coord	
30th %ile Green (s)	28.0	28.0	28.0	28.0		28.0		62.0			62.0	
30th %ile Term Code	Ped	Ped	Ped	Ped		Ped		Coord			Coord	
10th %ile Green (s)	28.0	28.0	28.0	28.0		28.0		62.0			62.0	
10th %ile Term Code	Ped	Ped	Ped	Ped		Ped		Coord			Coord	
Queue Length 50th (ft)		113	0	~38		102		27			19	
Queue Length 95th (ft)		177	53	#90		114		184			55	
Internal Link Dist (ft)		280			734			249			102	
Turn Bay Length (ft)												
Base Capacity (vph)		962	1007	110		826		2512			1756	
Starvation Cap Reductn		50	46	0		0		0			1355	
Spillback Cap Reductn		0	0	0		0		0			0	
Storage Cap Reductn		0	0	0		0		0			0	
Reduced v/c Ratio		0.62	0.57	0.51		0.27		0.36			0.39	

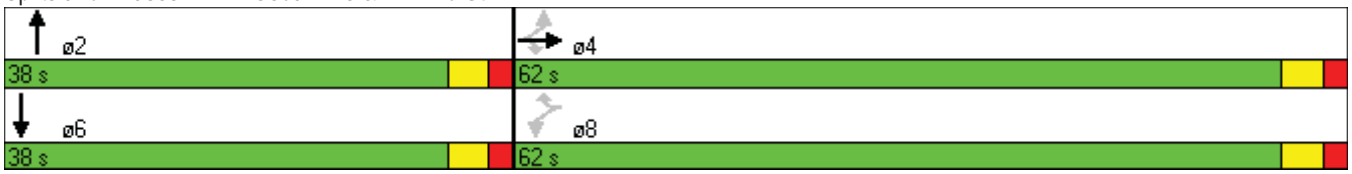
Intersection Summary	
Area Type:	CBD

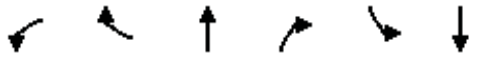
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 6 (6%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

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

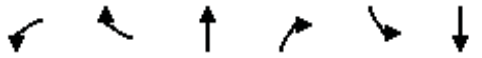
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Cedar Ave & E. 22nd St





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	30	90	550	60	40	1130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	80	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.850	0.985			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1593	1425	4508	0	0	4568
Flt Permitted	0.950					0.887
Satd. Flow (perm)	1593	1425	4508	0	0	4060
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		100	31			
Link Speed (mph)	25		25			25
Link Distance (ft)	739		343			178
Travel Time (s)	20.2		9.4			4.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	33	100	611	67	44	1256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	100	678	0	0	1300
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Turn Type		custom			Perm	
Protected Phases			2			6
Permitted Phases	8	8			6	
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0



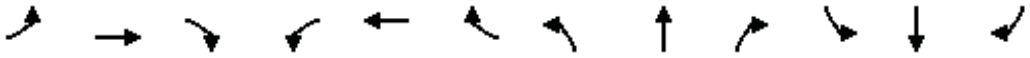
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	36.0	36.0	22.0		22.0	22.0
Total Split (s)	38.0	38.0	62.0	0.0	62.0	62.0
Total Split (%)	38.0%	38.0%	62.0%	0.0%	62.0%	62.0%
Maximum Green (s)	33.0	33.0	57.0		57.0	57.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	Ped	Ped	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	24.0	24.0	10.0		10.0	10.0
Pedestrian Calls (#/hr)	10	10	10		10	10
Act Effct Green (s)	31.0	31.0	59.0			59.0
Actuated g/C Ratio	0.31	0.31	0.59			0.59
v/c Ratio	0.07	0.20	0.25			0.54
Control Delay	24.9	6.3	7.0			12.0
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.9	6.3	7.0			12.0
LOS	C	A	A			B
Approach Delay	10.9		7.0			12.0
Approach LOS	B		A			B
90th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	31.0	31.0	59.0		59.0	59.0
10th %ile Term Code	Ped	Ped	Coord		Coord	Coord
Queue Length 50th (ft)	15	0	58			180
Queue Length 95th (ft)	37	37	65			203
Internal Link Dist (ft)	659		263			98
Turn Bay Length (ft)	80					
Base Capacity (vph)	526	537	2672			2395
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.06	0.19	0.25			0.54

Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 92 (92%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Central Ave & E. 22nd St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	130	40	100	70	90	40	315	130	170	1160	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	65		0	60		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850		0.948			0.956				
Flt Protected		0.973			0.981		0.950			0.950		
Satd. Flow (prot)	0	3099	1425	0	2962	0	1593	4375	0	1593	4577	0
Flt Permitted		0.667			0.691		0.173			0.400		
Satd. Flow (perm)	0	2125	1425	0	2087	0	290	4375	0	671	4577	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			44		100			119				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		161			827			998			178	
Travel Time (s)		4.4			22.6			27.2			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	178	144	44	111	78	100	44	350	144	189	1289	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	44	0	289	0	44	494	0	189	1289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	

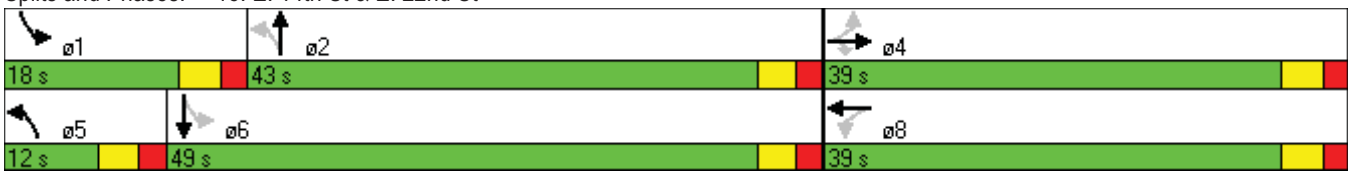


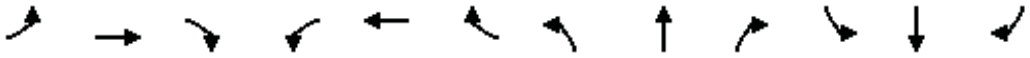
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	36.0	36.0	36.0	36.0	36.0		10.0	29.0		10.0	29.0	
Total Split (s)	39.0	39.0	39.0	39.0	39.0	0.0	12.0	43.0	0.0	18.0	49.0	0.0
Total Split (%)	39.0%	39.0%	39.0%	39.0%	39.0%	0.0%	12.0%	43.0%	0.0%	18.0%	49.0%	0.0%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0		7.0	38.0		13.0	44.0	
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)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Ped	Ped	Ped	Ped	Ped		None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	24.0	24.0	24.0	24.0	24.0			17.0			17.0	
Pedestrian Calls (#/hr)	10	10	10	10	10			10			10	
Act Effct Green (s)		31.0	31.0		31.0		49.6	42.9		58.9	51.6	
Actuated g/C Ratio		0.31	0.31		0.31		0.50	0.43		0.59	0.52	
v/c Ratio		0.49	0.09		0.40		0.19	0.25		0.38	0.55	
Control Delay		31.1	8.2		19.3		11.4	14.4		5.3	8.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		31.1	8.2		19.3		11.4	14.4		5.3	8.4	
LOS		C	A		B		B	B		A	A	
Approach Delay		28.4			19.3			14.2			8.0	
Approach LOS		C			B			B			A	
90th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		8.1	39.2		14.8	45.9	
90th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
70th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		7.2	41.6		12.4	46.8	
70th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
50th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		6.6	43.0		11.0	47.4	
50th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Gap	Coord		Gap	Coord	
30th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		0.0	44.4		9.6	59.0	
30th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Skip	Coord		Gap	Coord	
10th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		0.0	46.3		7.7	59.0	
10th %ile Term Code	Ped	Ped	Ped	Ped	Ped		Skip	Coord		Gap	Coord	
Queue Length 50th (ft)		87	0		47		11	53		14	178	
Queue Length 95th (ft)		131	25		86		25	83		22	226	
Internal Link Dist (ft)		81			747			918			98	
Turn Bay Length (ft)							65			60		
Base Capacity (vph)		723	514		776		240	1945		519	2362	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.45	0.09		0.37		0.18	0.25		0.36	0.55	

Intersection Summary	
Area Type:	CBD

Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: E. 14th St & E. 22nd St

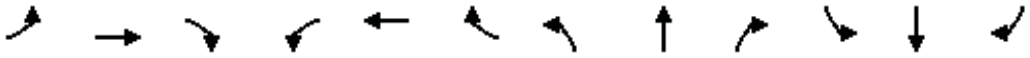




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	5	100	5	170	5	170	0	0	1190	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850					0.999	
Flt Protected	0.950			0.950				0.998				
Satd. Flow (prot)	1593	0	1425	1593	1676	1425	0	4568	0	0	4572	0
Flt Permitted	0.950			0.950				0.998				
Satd. Flow (perm)	1593	0	1425	1593	1676	1425	0	4568	0	0	4572	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		146			728			388			998	
Travel Time (s)		4.0			19.9			10.6			27.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	0	6	111	6	189	6	189	0	0	1322	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	0	6	111	6	189	0	195	0	0	1328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	945	5	5	420	10	5	5	5	1270	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	2		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.997			0.950			0.882	
Flt Protected		0.993			0.999			0.984		0.950		
Satd. Flow (prot)	0	4540	0	0	4558	0	0	2978	0	3090	1479	0
Flt Permitted		0.766			0.922			0.955		0.950		
Satd. Flow (perm)	0	3502	0	0	4207	0	0	2890	0	3090	1479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			3			6			22	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		665			540			238			388	
Travel Time (s)		15.1			12.3			6.5			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	167	1050	6	6	467	11	6	6	6	1411	6	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1223	0	0	484	0	0	18	0	1411	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm			Perm			Perm			Prot		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8					
Detector Phase	2	2		6	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	



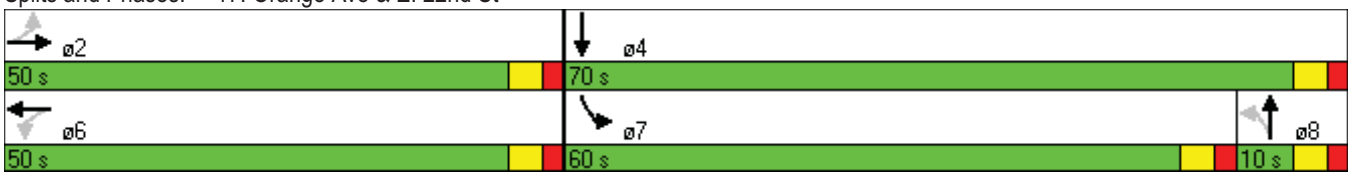
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Total Split (s)	50.0	50.0	0.0	50.0	50.0	0.0	10.0	10.0	0.0	60.0	70.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	8.3%	8.3%	0.0%	50.0%	58.3%	0.0%
Maximum Green (s)	45.0	45.0		45.0	45.0		5.0	5.0		55.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		51.0			51.0			5.0		55.0	59.0	
Actuated g/C Ratio		0.42			0.42			0.04		0.46	0.49	
v/c Ratio		0.82			0.27			0.14		1.00	0.04	
Control Delay		25.4			23.6			44.9		55.9	6.4	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		25.4			23.6			44.9		55.9	6.4	
LOS		C			C			D		E	A	
Approach Delay		25.4			23.6			44.9			54.9	
Approach LOS		C			C			D			D	
90th %ile Green (s)	45.0	45.0		45.0	45.0		5.0	5.0		55.0	65.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Hold	
70th %ile Green (s)	45.0	45.0		45.0	45.0		5.0	5.0		55.0	65.0	
70th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Hold	
50th %ile Green (s)	55.0	55.0		55.0	55.0		0.0	0.0		55.0	55.0	
50th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Max	Hold	
30th %ile Green (s)	55.0	55.0		55.0	55.0		0.0	0.0		55.0	55.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Max	Hold	
10th %ile Green (s)	55.0	55.0		55.0	55.0		0.0	0.0		55.0	55.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Max	Hold	
Queue Length 50th (ft)		146			81			4		548	3	
Queue Length 95th (ft)		m#414			125			17		#719	16	
Internal Link Dist (ft)		585			460			158			308	
Turn Bay Length (ft)												
Base Capacity (vph)		1489			1790			126		1416	811	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.82			0.27			0.14		1.00	0.03	

Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 117 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 38.6	Intersection LOS: D
Intersection Capacity Utilization 92.6%	ICU Level of Service F
Analysis Period (min) 15	

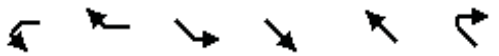
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Orange Ave & E. 22nd St



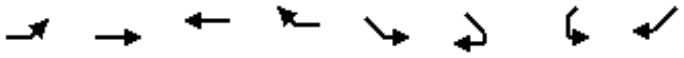
Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	0	1430	1480	1815	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	0.86	0.86	1.00	1.00
Ped Bike Factor						
Frt			0.943	0.850		
Flt Protected						
Satd. Flow (prot)	0	4899	4449	1298	0	0
Flt Permitted						
Satd. Flow (perm)	0	4899	4449	1298	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		164	127		290	
Travel Time (s)		4.5	3.5		7.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		2				
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	1589	1644	2017	0	0
Shared Lane Traffic (%)				50%		
Lane Group Flow (vph)	0	1589	2653	1008	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.05	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

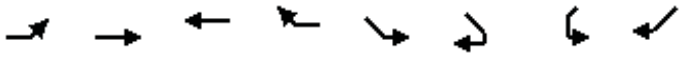


Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	1045	0	1640	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	4	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	0.64	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	4053	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	4053	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	537			370	193	
Travel Time (s)	12.2			8.4	4.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	1161	0	1822	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1161	0	1822	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	8			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	30	15			9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.6%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER	SWL	SWR
Lane Configurations		↑↑↑	↑↑↑		↰↑↑			↱
Volume (vph)	0	1090	1030	0	530	20	0	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12
Grade (%)		0%	0%		0%		0%	
Storage Length (ft)	0			0	0	0	0	0
Storage Lanes	0			0	2	0	0	1
Taper Length (ft)	50			50	50	50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	0.95	1.00	1.00
Ped Bike Factor								
Frt					0.995			0.865
Flt Protected					0.954			
Satd. Flow (prot)	0	4577	4577	0	3087	0	0	1450
Flt Permitted					0.954			
Satd. Flow (perm)	0	4577	4577	0	3087	0	0	1450
Right Turn on Red						No		
Satd. Flow (RTOR)								
Link Speed (mph)		30	30		30		25	
Link Distance (ft)		288	448		224		380	
Travel Time (s)		6.5	10.2		5.1		10.4	
Confl. Peds. (#/hr)								
Confl. Bikes (#/hr)								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0
Parking (#/hr)								
Mid-Block Traffic (%)		0%	0%		0%		0%	
Adj. Flow (vph)	0	1211	1144	0	589	22	0	300
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1211	1144	0	611	0	0	300
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	L NA	Right	Left	Right	Left	R NA
Median Width(ft)		12	12		24		0	
Link Offset(ft)		0	0		0		0	
Crosswalk Width(ft)		16	16		16		16	
Two way Left Turn Lane								
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9	15	30
Number of Detectors		2	2		1			1
Detector Template		Thru	Thru		Left			Right
Leading Detector (ft)		100	100		20			20
Trailing Detector (ft)		0	0		0			0
Turn Type								custom
Protected Phases		2	6		4			
Permitted Phases								6
Detector Phase		2	6		4			6
Switch Phase								
Minimum Initial (s)		5.0	5.0		5.0			5.0



Lane Group	EBL	EBT	WBT	WBR	SEL	SER	SWL	SWR
Minimum Split (s)		10.0	10.0		10.0			10.0
Total Split (s)	0.0	66.0	66.0	0.0	54.0	0.0	0.0	66.0
Total Split (%)	0.0%	55.0%	55.0%	0.0%	45.0%	0.0%	0.0%	55.0%
Maximum Green (s)		61.0	61.0		49.0			61.0
Yellow Time (s)		3.0	3.0		3.0			3.0
All-Red Time (s)		2.0	2.0		2.0			2.0
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	5.0	5.0	4.0	5.0	4.0	4.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0	3.0		3.0			3.0
Minimum Gap (s)		3.0	3.0		3.0			3.0
Time Before Reduce (s)		0.0	0.0		0.0			0.0
Time To Reduce (s)		0.0	0.0		0.0			0.0
Recall Mode		C-Max	C-Max		None			C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
Act Effct Green (s)		80.0	80.0		30.0			80.0
Actuated g/C Ratio		0.67	0.67		0.25			0.67
v/c Ratio		0.40	0.37		0.79			0.31
Control Delay		7.2	6.3		44.5			10.3
Queue Delay		0.0	0.1		0.0			0.0
Total Delay		7.2	6.4		44.5			10.3
LOS		A	A		D			B
Approach Delay		7.2	6.4		44.5			
Approach LOS		A	A		D			
90th %ile Green (s)		72.5	72.5		37.5			72.5
90th %ile Term Code		Coord	Coord		Gap			Coord
70th %ile Green (s)		77.3	77.3		32.7			77.3
70th %ile Term Code		Coord	Coord		Gap			Coord
50th %ile Green (s)		80.1	80.1		29.9			80.1
50th %ile Term Code		Coord	Coord		Gap			Coord
30th %ile Green (s)		83.0	83.0		27.0			83.0
30th %ile Term Code		Coord	Coord		Gap			Coord
10th %ile Green (s)		87.3	87.3		22.7			87.3
10th %ile Term Code		Coord	Coord		Gap			Coord
Queue Length 50th (ft)		131	69		197			89
Queue Length 95th (ft)		m245	90		m87			165
Internal Link Dist (ft)		208	368		144		300	
Turn Bay Length (ft)								
Base Capacity (vph)		3053	3053		1261			967
Starvation Cap Reductn		0	674		0			0
Spillback Cap Reductn		0	0		0			0
Storage Cap Reductn		0	0		0			0
Reduced v/c Ratio		0.40	0.48		0.48			0.31

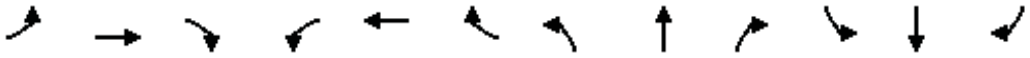
Intersection Summary	
Area Type:	CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 28 (23%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: S. Broadway Ave &

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1785	450	0	0	0	0	270	40	90	380	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.981				
Flt Protected		0.996								0.950		
Satd. Flow (prot)	0	4558	1425	0	0	0	0	3125	0	1593	1676	0
Flt Permitted		0.996								0.516		
Satd. Flow (perm)	0	4558	1425	0	0	0	0	3125	0	865	1676	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			264					20				
Link Speed (mph)		30			25			25			25	
Link Distance (ft)		287			171			263			272	
Travel Time (s)		6.5			4.7			7.2			7.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	183	1983	500	0	0	0	0	300	44	100	422	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2166	500	0	0	0	0	344	0	100	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1					2		1	2	
Detector Template	Left	Thru	Right					Thru		Left	Thru	
Leading Detector (ft)	20	100	20					100		20	100	
Trailing Detector (ft)	0	0	0					0		0	0	
Turn Type	Perm		Perm							pm+pt		
Protected Phases		2						8		7	4	
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0	5.0	



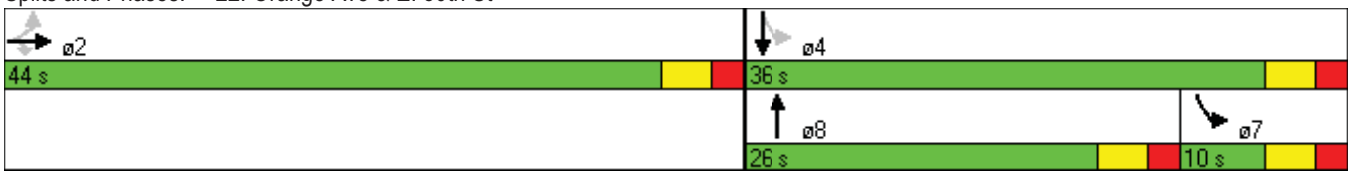
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	26.0	26.0	26.0					26.0		10.0	26.0	
Total Split (s)	44.0	44.0	44.0	0.0	0.0	0.0	0.0	26.0	0.0	10.0	36.0	0.0
Total Split (%)	55.0%	55.0%	55.0%	0.0%	0.0%	0.0%	0.0%	32.5%	0.0%	12.5%	45.0%	0.0%
Maximum Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
Yellow Time (s)	3.0	3.0	3.0					3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0					2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0		0.0	0.0	
Recall Mode	None	None	None					Max		None	Max	
Walk Time (s)	7.0	7.0	7.0					7.0			7.0	
Flash Dont Walk (s)	14.0	14.0	14.0					14.0			14.0	
Pedestrian Calls (#/hr)	10	10	10					10			10	
Act Effct Green (s)		39.0	39.0					23.0		31.0	31.0	
Actuated g/C Ratio		0.49	0.49					0.29		0.39	0.39	
v/c Ratio		0.97	0.60					0.38		0.26	0.65	
Control Delay		35.2	10.1					23.7		19.5	25.8	
Queue Delay		0.0	0.0					0.0		0.0	0.0	
Total Delay		35.2	10.1					23.7		19.5	25.8	
LOS		D	B					C		B	C	
Approach Delay		30.5						23.7			24.6	
Approach LOS		C						C			C	
90th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
90th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
70th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
70th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
50th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
50th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
30th %ile Green (s)	39.0	39.0	39.0					21.0		5.0	31.0	
30th %ile Term Code	Max	Max	Max					MaxR		Max	MaxR	
10th %ile Green (s)	39.0	39.0	39.0					31.0		0.0	31.0	
10th %ile Term Code	Max	Max	Max					Hold		Skip	MaxR	
Queue Length 50th (ft)		367	72					70		32	168	
Queue Length 95th (ft)		#503	167					108		64	268	
Internal Link Dist (ft)		207			91			183			192	
Turn Bay Length (ft)			200									
Base Capacity (vph)		2222	830					913		381	649	
Starvation Cap Reductn		0	0					0		0	0	
Spillback Cap Reductn		0	0					0		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.97	0.60					0.38		0.26	0.65	

Intersection Summary	
Area Type:	CBD

Cycle Length: 80	
Actuated Cycle Length: 80	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	
90th %ile Actuated Cycle: 80	
70th %ile Actuated Cycle: 80	
50th %ile Actuated Cycle: 80	
30th %ile Actuated Cycle: 80	
10th %ile Actuated Cycle: 80	

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

Splits and Phases: 22: Orange Ave & E. 30th St

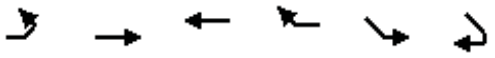


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	0	120	995	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	0	0			1
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.91	0.91
Ped Bike Factor						
Frt					0.994	0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	3370	1441
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	3370	1441
Link Speed (mph)	25			25	25	
Link Distance (ft)	151			255	152	
Travel Time (s)	4.1			7.0	4.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	133	1106	439
Shared Lane Traffic (%)						10%
Lane Group Flow (vph)	0	0	0	133	1150	395
Enter Blocked Intersection	No	No	No	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	0	1005	1090	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	100			0
Storage Lanes	0	0	1			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1770	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1770	5085	0	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	516			193	869	
Travel Time (s)	14.1			4.4	19.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	1117	1211	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1117	1211	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	30			9
Sign Control	Stop			Free	Stop	

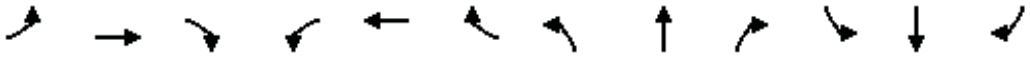
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	330	0	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	2787	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	2787	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		264	161		264	
Travel Time (s)		7.2	4.4		7.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	367	0	122	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	367	0	122	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			25	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 9.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	880	680	100	570	40	190	20	20	485	240	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		150	200		200	260		150	60		0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	50		50	50		50	50		50	50		50
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	4577	1425	1593	4577	1425	3090	1676	1425	1593	1676	1425
Flt Permitted	0.341			0.223			0.950			0.500		
Satd. Flow (perm)	572	4577	1425	374	4577	1425	3090	1676	1425	838	1676	1425
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			532			44			22			82
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		448			665			449			255	
Travel Time (s)		10.2			15.1			12.2			7.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	67	978	756	111	633	44	211	22	22	539	267	300
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	978	756	111	633	44	211	22	22	539	267	300
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	R NA
Median Width(ft)		12			12			24			16	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	pm+pt		pm+ov
Protected Phases	5	2		1	6		7	4		3	8	5
Permitted Phases	2		2	6		6			4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	5
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	20.0	54.0	54.0	10.0	44.0	44.0	18.0	10.0	10.0	46.0	38.0	20.0
Total Split (%)	16.7%	45.0%	45.0%	8.3%	36.7%	36.7%	15.0%	8.3%	8.3%	38.3%	31.7%	16.7%
Maximum Green (s)	15.0	49.0	49.0	5.0	39.0	39.0	13.0	5.0	5.0	41.0	33.0	15.0
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)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?												
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	3.0
Minimum Gap (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
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	60.9	52.9	52.9	56.7	50.8	50.8	12.1	5.1	5.1	46.1	29.0	42.1
Actuated g/C Ratio	0.51	0.44	0.44	0.47	0.42	0.42	0.10	0.04	0.04	0.38	0.24	0.35
v/c Ratio	0.19	0.48	0.82	0.47	0.33	0.07	0.68	0.31	0.27	0.94	0.66	0.54
Control Delay	8.7	14.6	14.1	21.7	14.6	1.8	62.0	71.2	35.6	59.3	48.7	25.1
Queue Delay	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	14.8	14.5	21.7	14.6	1.8	62.0	71.2	35.6	59.3	48.7	25.1
LOS	A	B	B	C	B	A	E	E	D	E	D	C
Approach Delay		14.4			14.8			60.6			47.4	
Approach LOS		B			B			E			D	
90th %ile Green (s)	10.6	49.0	49.0	5.0	43.4	43.4	13.0	5.0	5.0	41.0	33.0	10.6
90th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Max	Max	Max	Max	Hold	Gap
70th %ile Green (s)	9.1	49.0	49.0	5.0	44.9	44.9	13.0	5.0	5.0	41.0	33.0	9.1
70th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Max	Max	Max	Max	Hold	Gap
50th %ile Green (s)	8.1	49.0	49.0	5.0	45.9	45.9	13.0	5.0	5.0	41.0	33.0	8.1
50th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Max	Max	Max	Max	Hold	Gap
30th %ile Green (s)	6.9	55.8	55.8	8.2	57.1	57.1	11.9	0.0	0.0	41.0	24.1	6.9
30th %ile Term Code	Gap	Coord	Coord	Gap	Coord	Coord	Gap	Skip	Skip	Max	Hold	Gap
10th %ile Green (s)	5.8	61.7	61.7	6.6	62.5	62.5	9.6	0.0	0.0	36.7	22.1	5.8
10th %ile Term Code	Gap	Coord	Coord	Gap	Coord	Coord	Gap	Skip	Skip	Gap	Hold	Gap
Queue Length 50th (ft)	18	144	125	25	62	0	74	18	3	357	179	126
Queue Length 95th (ft)	30	158	#181	59	80	3	m101	m39	m22	#532	270	204
Internal Link Dist (ft)		368			585			369			175	
Turn Bay Length (ft)	220		150	200		200	260		150	60		
Base Capacity (vph)	432	2018	926	237	1936	628	335	71	81	586	461	631
Starvation Cap Reductn	0	336	22	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.58	0.84	0.47	0.33	0.07	0.63	0.31	0.27	0.92	0.58	0.48

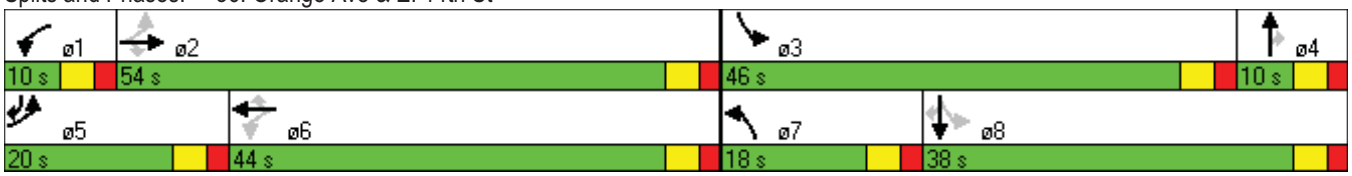
Intersection Summary

Area Type: CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 118 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 26.7	Intersection LOS: C
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

\# 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: 36: Orange Ave & E. 14th St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Volume (vph)	0	1020	355	0	660	0	290	640	160	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%		0%	
Storage Length (ft)	0		0	130		0		0	0	0	0
Storage Lanes	0		0	1		0		2	1	0	0
Taper Length (ft)	50		50	50		50		50	50	50	50
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	0.95	0.97	1.00	1.00	1.00
Ped Bike Factor											
Frt		0.961							0.850		
Flt Protected								0.950			
Satd. Flow (prot)	0	4398	0	0	4577	0	0	3090	1425	0	0
Flt Permitted								0.950			
Satd. Flow (perm)	0	4398	0	0	4577	0	0	3090	1425	0	0
Right Turn on Red			Yes			Yes			Yes		
Satd. Flow (RTOR)		95							127		
Link Speed (mph)		30			30			25		25	
Link Distance (ft)		820			352			375		360	
Travel Time (s)		18.6			8.0			10.2		9.8	
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											
Mid-Block Traffic (%)		0%			0%			0%		0%	
Adj. Flow (vph)	0	1133	394	0	733	0	322	711	178	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1527	0	0	733	0	0	1033	178	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)		12			12			24		0	
Link Offset(ft)		0			0			0		0	
Crosswalk Width(ft)		16			16			16		16	
Two way Left Turn Lane											
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15	15	9	15	9
Number of Detectors		2			2		1	1	1		
Detector Template		Thru			Thru		Left	Left	Right		
Leading Detector (ft)		100			100		20	20	20		
Trailing Detector (ft)		0			0		0	0	0		
Turn Type							custom		custom		
Protected Phases		2			6						
Permitted Phases							4	4	4		
Detector Phase		2			6		4	4	4		
Switch Phase											
Minimum Initial (s)		5.0			5.0		5.0	5.0	5.0		

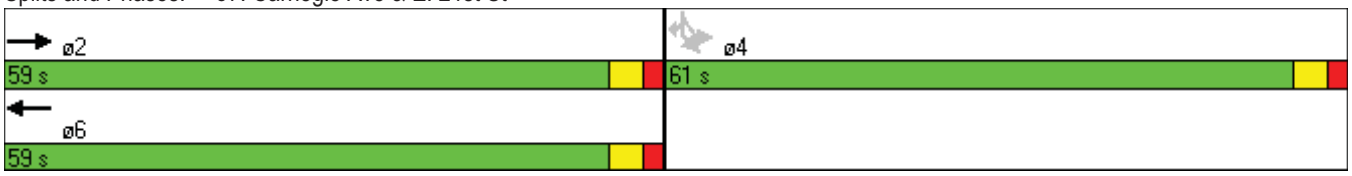
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Minimum Split (s)		26.0			26.0		36.0	36.0	36.0		
Total Split (s)	0.0	59.0	0.0	0.0	59.0	0.0	61.0	61.0	61.0	0.0	0.0
Total Split (%)	0.0%	49.2%	0.0%	0.0%	49.2%	0.0%	50.8%	50.8%	50.8%	0.0%	0.0%
Maximum Green (s)		54.0			54.0		56.0	56.0	56.0		
Yellow Time (s)		3.0			3.0		3.0	3.0	3.0		
All-Red Time (s)		2.0			2.0		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0	4.0	4.0
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0		
Minimum Gap (s)		3.0			3.0		3.0	3.0	3.0		
Time Before Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Time To Reduce (s)		0.0			0.0		0.0	0.0	0.0		
Recall Mode		C-Max			C-Max		Ped	Ped	Ped		
Walk Time (s)		7.0			7.0		7.0	7.0	7.0		
Flash Dont Walk (s)		14.0			14.0		24.0	24.0	24.0		
Pedestrian Calls (#/hr)		10			10		10	10	10		
Act Effct Green (s)		62.0			62.0			48.0	48.0		
Actuated g/C Ratio		0.52			0.52			0.40	0.40		
v/c Ratio		0.66			0.31			0.84	0.28		
Control Delay		19.0			15.2			38.8	7.9		
Queue Delay		0.0			0.2			0.0	0.0		
Total Delay		19.0			15.4			38.8	7.9		
LOS		B			B			D	A		
Approach Delay		19.0			15.4			34.2			
Approach LOS		B			B			C			
90th %ile Green (s)		54.3			54.3		55.7	55.7	55.7		
90th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
70th %ile Green (s)		58.0			58.0		52.0	52.0	52.0		
70th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
50th %ile Green (s)		61.5			61.5		48.5	48.5	48.5		
50th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
30th %ile Green (s)		64.9			64.9		45.1	45.1	45.1		
30th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
10th %ile Green (s)		71.2			71.2		38.8	38.8	38.8		
10th %ile Term Code		Coord			Coord		Gap	Gap	Gap		
Queue Length 50th (ft)		229			98			363	24		
Queue Length 95th (ft)		289			118			404	64		
Internal Link Dist (ft)		740			272			295		280	
Turn Bay Length (ft)											
Base Capacity (vph)		2317			2364			1442	733		
Starvation Cap Reductn		0			802			0	0		
Spillback Cap Reductn		0			0			0	0		
Storage Cap Reductn		0			0			0	0		
Reduced v/c Ratio		0.66			0.47			0.72	0.24		

Intersection Summary

Area Type: CBD

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 79 (66%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 37: Carnegie Ave & E. 21st St

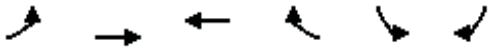


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	145	840	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950	0.999		
Satd. Flow (prot)	0	0	1610	3387	0	0
Flt Permitted			0.950	0.999		
Satd. Flow (perm)	0	0	1610	3387	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	174			478	494	
Travel Time (s)	4.7			13.0	13.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	161	933	0	0
Shared Lane Traffic (%)			10%			
Lane Group Flow (vph)	0	0	145	949	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	25		15	9
Sign Control	Free			Free	Free	

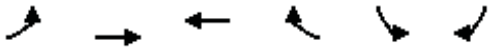
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	120	0	1390	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		2	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.88	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	5085	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			419	500	
Travel Time (s)	4.1			11.4	13.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	133	0	1544	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	133	0	1544	0	0
Enter Blocked Intersection	No	Yes	No	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		25	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	680	50	170	735	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	2	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.95	0.95	0.95	0.95	0.97	0.95
Ped Bike Factor						
Frt			0.884		0.973	
Flt Protected		0.995			0.961	
Satd. Flow (prot)	0	3169	2816	0	3041	0
Flt Permitted		0.881			0.961	
Satd. Flow (perm)	0	2806	2816	0	3041	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			189		56	
Link Speed (mph)		25	25		25	
Link Distance (ft)		318	355		449	
Travel Time (s)		8.7	9.7		12.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	89	756	56	189	817	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	845	245	0	995	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		36	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	

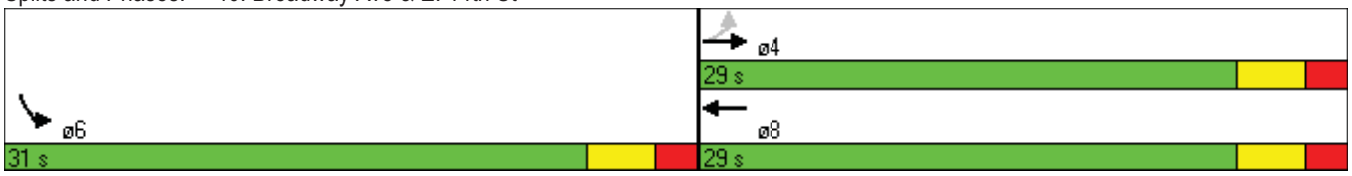


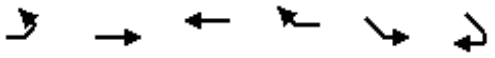
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)	10.0	10.0	10.0		10.0	
Total Split (s)	29.0	29.0	29.0	0.0	31.0	0.0
Total Split (%)	48.3%	48.3%	48.3%	0.0%	51.7%	0.0%
Maximum Green (s)	24.0	24.0	24.0		26.0	
Yellow Time (s)	3.0	3.0	3.0		3.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Minimum Gap (s)	3.0	3.0	3.0		3.0	
Time Before Reduce (s)	0.0	0.0	0.0		0.0	
Time To Reduce (s)	0.0	0.0	0.0		0.0	
Recall Mode	None	None	None		C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)		22.5	22.5		27.5	
Actuated g/C Ratio		0.38	0.38		0.46	
v/c Ratio		0.80	0.21		0.70	
Control Delay		23.3	4.0		11.5	
Queue Delay		0.0	0.0		0.0	
Total Delay		23.3	4.0		11.5	
LOS		C	A		B	
Approach Delay		23.3	4.0		11.5	
Approach LOS		C	A		B	
90th %ile Green (s)	24.0	24.0	24.0		26.0	
90th %ile Term Code	Max	Max	Hold		Coord	
70th %ile Green (s)	24.0	24.0	24.0		26.0	
70th %ile Term Code	Max	Max	Hold		Coord	
50th %ile Green (s)	24.0	24.0	24.0		26.0	
50th %ile Term Code	Max	Max	Hold		Coord	
30th %ile Green (s)	22.7	22.7	22.7		27.3	
30th %ile Term Code	Gap	Gap	Hold		Coord	
10th %ile Green (s)	18.0	18.0	18.0		32.0	
10th %ile Term Code	Gap	Gap	Hold		Coord	
Queue Length 50th (ft)		132	6		90	
Queue Length 95th (ft)		196	25		160	
Internal Link Dist (ft)		238	275		369	
Turn Bay Length (ft)						
Base Capacity (vph)		1122	1240		1422	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.75	0.20		0.70	

Intersection Summary	
Area Type:	CBD

Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 51 (85%), Referenced to phase 6:SBL, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

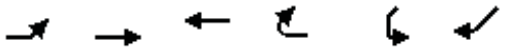
Splits and Phases: 40: Broadway Ave & E. 14th St





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	2155	0	0	245	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	0	0	1656	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	0	0	1656	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		494	287		381	
Travel Time (s)		11.2	6.5		10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	2394	0	0	272	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2394	0	0	272	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	25	9
Sign Control		Free	Stop		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (vph)	170	1745	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1610	3063	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1610	3063	0	0	0	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		171	435		366	
Travel Time (s)		3.9	9.9		10.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	13%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	189	1939	0	0	0	0
Shared Lane Traffic (%)	10%					
Lane Group Flow (vph)	170	1958	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	30			9	15	9
Sign Control		Free	Stop		Stop	

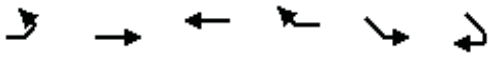
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	0	0	840	0	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	1611
Link Speed (mph)		25	25		25	
Link Distance (ft)		419	300		413	
Travel Time (s)		11.4	8.2		11.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	933	0	0	611
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	933	0	0	611
Enter Blocked Intersection	No	No	Yes	No	No	Yes
Lane Alignment	Left	Left	L NA	Right	Right	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	25
Sign Control		Free	Yield		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Volume (vph)	280	250	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	2			0	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	0.97	0.91	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	0	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	0	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		323	359		156	
Travel Time (s)		8.8	9.8		4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	311	278	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	278	0	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	25			9	15	9
Sign Control		Free	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 11.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	1090	0	1320	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			4	0	0
Taper Length (ft)	50			50	50	50
Lane Util. Factor	1.00	0.91	1.00	0.64	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	5085	0	4053	0	0
Flt Permitted						
Satd. Flow (perm)	0	5085	0	4053	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		869	288		500	
Travel Time (s)		19.8	6.5		11.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	1211	0	1467	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1211	0	1467	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			30	15	9
Sign Control		Free	Free		Stop	

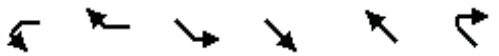
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	0	0	960	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	2
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	3539	0	2787
Flt Permitted						
Satd. Flow (perm)	0	0	0	3539	0	2787
Link Speed (mph)	25			25	25	
Link Distance (ft)	123			150	156	
Travel Time (s)	3.4			4.1	4.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	1067	0	311
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1067	0	311
Enter Blocked Intersection	No	No	No	Yes	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	145	0	0	0	0	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1611
Link Speed (mph)	25			25	25	
Link Distance (ft)	494			264	236	
Travel Time (s)	13.5			7.2	6.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	161	0	0	0	0	206
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	0	0	206
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			

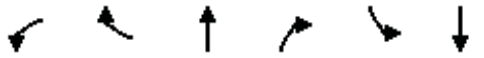


Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	1220	0	550	210	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1580	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1580	0	3539	3539	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	277			485	381	
Travel Time (s)	7.6			11.0	8.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	1356	0	611	233	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1356	0	611	233	0
Enter Blocked Intersection	No	Yes	No	No	Yes	No
Lane Alignment	Left	R NA	Left	Left	L NA	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

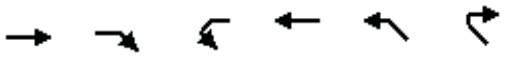
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	120	0	0	0	0	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		50	50		50	50
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	1580
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	1580
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			282	360	
Travel Time (s)	13.6			7.7	9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	133	0	0	0	0	306
Shared Lane Traffic (%)						
Lane Group Flow (vph)	133	0	0	0	0	306
Enter Blocked Intersection	Yes	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	25
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		



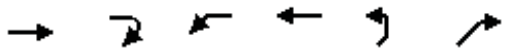
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	110	375	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	2		0	0	
Taper Length (ft)	50	50		50	50	
Lane Util. Factor	1.00	0.88	0.91	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	2787	5085	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2787	5085	0	0	0
Link Speed (mph)	25		25			25
Link Distance (ft)	508		306			323
Travel Time (s)	13.9		8.3			8.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	122	417	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	122	417	0	0	0
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	R NA	L NA	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25		9	15	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (vph)	0	2220	0	435	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		3	0		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	0.76	1.00	0.91	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	0	3610	0	5085	0	0
Flt Permitted						
Satd. Flow (perm)	0	3610	0	5085	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			295	705	
Travel Time (s)	12.3			6.7	16.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	2467	0	483	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2467	0	483	0	0
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		30	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	270	125	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)		50	50		50	50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1770	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1770	1863	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	534			151	380	
Travel Time (s)	14.6			4.1	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	300	139	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	300	139	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	25		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	0	125	0	550	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	50	50	50			50
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	3539	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	1863	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	534			381	224	
Travel Time (s)	14.6			8.7	5.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	139	0	611	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	139	0	611	0	0
Enter Blocked Intersection	No	No	No	Yes	No	No
Lane Alignment	Left	R NA	Left	Left	L NA	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	25	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			