

CAPITOL REGION COUNCIL OF
GOVERNMENTS

FUTURE CONDITIONS TECHNICAL MEMORANDUM

ROUTE 5 CORRIDOR STUDY
EAST WINDSOR, CT
NOVEMBER 18, 2020



Route 5 Corridor Study

Future Conditions Technical Memorandum

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Capitol Region Council of Governments

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Future Conditions Assessment

The purpose of the future conditions assessment is to evaluate the potential for economic development within the study area and estimate potential impacts to the transportation system in the *future design year* (2040). The understanding of effects potential development would have on traffic growth, traffic operations and mobility in the Route 5 corridor allows local, regional and state officials to make informed decisions about land use proposals and transportation improvements within the corridor. This technical memorandum assesses the potential for future development, documents the expected traffic growth, presents the expected traffic operational results and identifies changes in transit demand. This document builds off the previously published Existing Conditions Technical Memorandum, which contains a more thorough introduction for the study. It can be found at the study website (http://crcog.org/wp-content/uploads/2019/01/RT5-Existing-Conditions-Report_Final.pdf).

Future Design Year: Planning projects look at how development is expected to progress over a 20-year planning horizon. This ensures that transportation recommendations account for future growth.

I. Future Development Potential

Future economic development within the study corridor was assessed under two scenarios, base and build, as defined below:

Base: Considers ambient growth in traffic from development in and around the study corridor that will occur independently of actions taken as a result of this study.

Build: Considers additional development concepts that have been identified by the study team as part of the vision for the corridor.

I.1 Base Scenario Development

In order to compile expected developments for the base scenario, the study team worked closely with the Connecticut Department of Transportation (CTDOT), the Route 5 Advisory Committee and local stakeholders to identify specific developments that have been approved or planned in and around the study corridor. The identified developments are documented in Table I, below, and Figure I, following. While development proposals do not always come to fruition as originally intended, the identified developments represent the current thinking of the Town of East Windsor for the development or redevelopment of these properties, and potential developers for these sites have already been identified. It is reasonable to conclude, that if any of the proposed developments were to fall through, the Town would work with developers to pursue similar developments at these sites.

Table I: Base Scenario Developments

Development Site	Use	Notes
Sardilli Distribution Center*	Commercial	200,000 sq. ft. distribution center
Crossroads Cathedral	Church / Hotel	Church and 90 unit hotel with conference center
MMCT Casino	Recreational / Gaming	Planned casino with over 2,000 gaming positions
Calamar Housing	Residential	122 units of over-55 housing
Montgomery Mill	Residential	160 apartment units
Relocated Train Station	Transportation	Windsor Locks train station serving CTrail and Amtrak service
Metro Park North	Warehouse / Industrial	800,000 sq. ft. distribution center

* Sardilli announced in September 2019 that they would not be developing this site as originally planned.

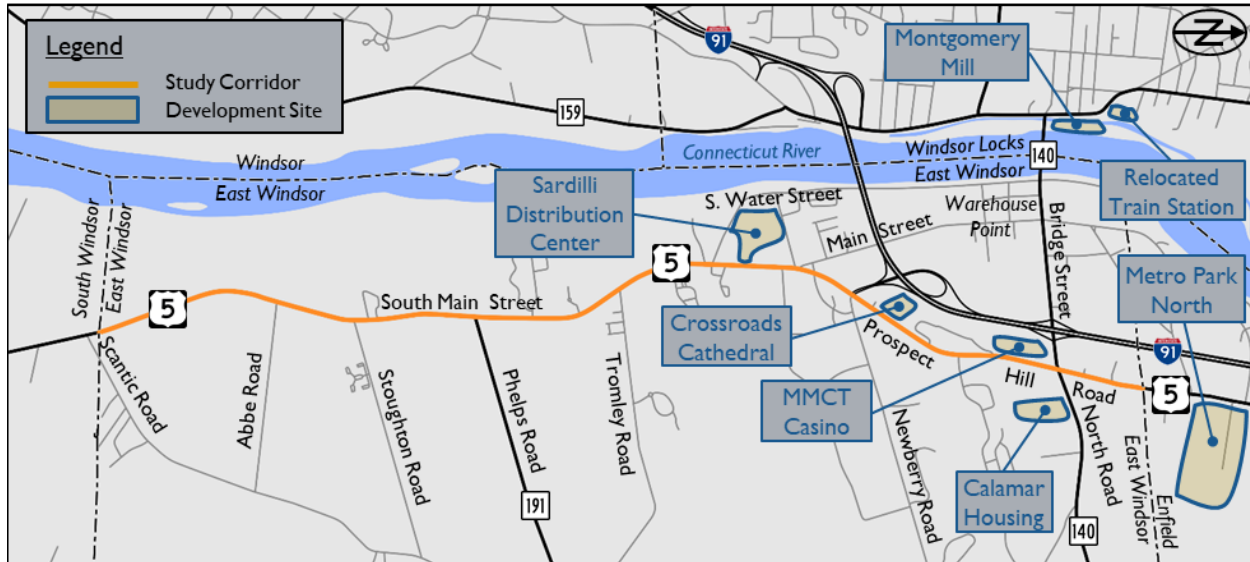


Figure 1: Base Scenario Development Sites

As noted above, Sardilli has announced that they will be creating their new distribution center in Windsor, rather than the site planned for East Windsor. Through discussions with Town of East Windsor staff, the study team believes that the Town will continue to pursue development opportunities of this scale at this site. Therefore, the base scenario and ensuing traffic forecasts continue to include the previously planned development.

1.2 Build Scenario Development

The study team worked with the Route 5 Advisory Committee to identify additional development or redevelopment opportunities that would impact the traffic within the study corridor. Initially, a development scheme was proposed that closely adhered to the Town's adopted *Plan of Conservation and Development (PoCD)*. However, the advisory committee felt that the corridor should provide for more commercial development and less residential development than identified in the PoCD. This was based on the corridor's status as one of the only locations in town that provides sanitary sewer service along with access to the regional highway system (Interstate 91) and Bradley International Airport. Therefore, the study team developed new development concepts that focus on enhancing the amount of commercial development within the corridor. The potential developments are identified in Table 2 and Figure 2, both following, and described in the following sections. Conceptual site plans for the build scenario developments are included as Appendix I – Build Development Sites.

Plan of Conservation and Development (PoCD): A PoCD is a tool for guiding future development of a community. By Connecticut state statute, municipalities are required to update their PoCD every ten years. East Windsor's PoCD was updated in 2016 and is available on the Town website: https://www.eastwindsor-ct.gov/sites/eastwindsorct/files/uploads/2016_plan_of_conservation_development.pdf

Table 2: Build Scenario Developments

Development Site	Use	Notes
1 - 151 Prospect Hill Road	Hotel with supporting commercial	115-room hotel with restaurant and retail. Total 54,250 sf
2 - 49 Prosepct Hill Road	Restaurant	Small-scale restaurant, likely fast or fast-casual. 4,500 sf
3 - Route 5 at Main Street and Route 5 at Thompson Road	Mixed-use commerical	Introduction of neighborhood commerical such as banks and retail with infill at Propsect Hill Plaza. 27,900 sf
4 - 44 South Main Street	Mixed-use commerical	Expansion of commercial development at Riverview Plaza. 9,500 sf
5 - 67 South Main Street	Industrial / business park	New industrial, business park or distribution center. 380,000 sf
6 - 111 South Main Street & 49 Phelps Road	Industrial / business park	New industrial, business park or distribution center. 380,000 sf
7 - 248 & 250 South Main Street	Commercial	Agricultural distribution facility with retail component. 40,000 sf

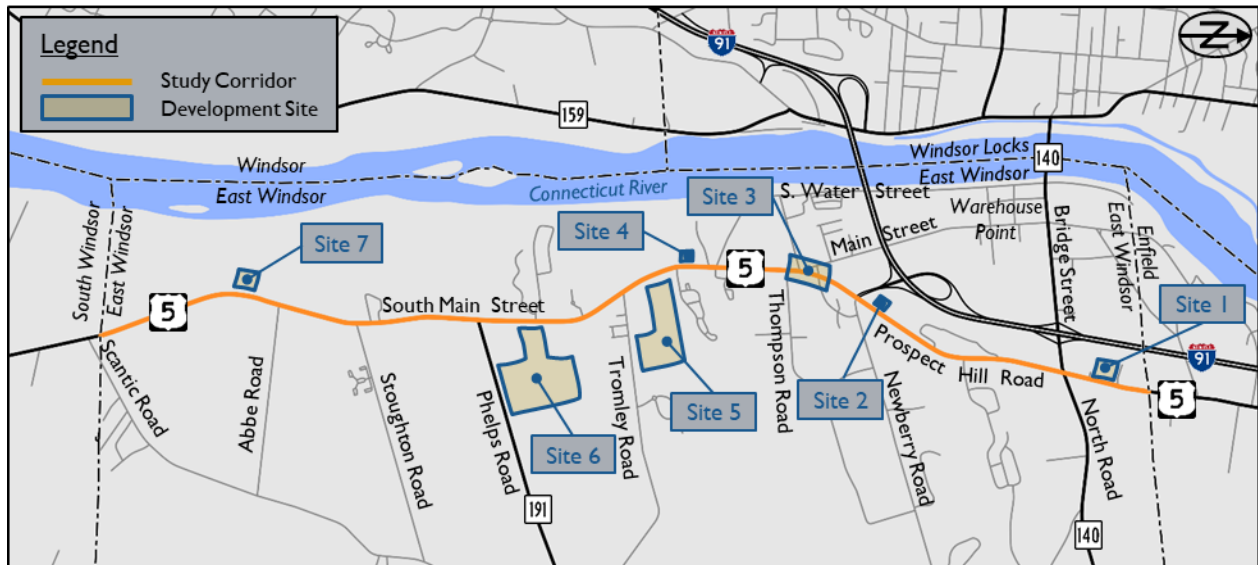


Figure 2: Build Scenario Development Sites

1.2.1 Site 1 – Hotel with Supporting Commercial Uses

The proposed development of this site consists of a 115-room hotel, a general retail site and a restaurant. The site’s location on Route 5, north of the intersection with Route 140, with easy access to Interstate 91 (I-91), provides an appropriate setting for these uses which would complement the existing nearby shopping plaza and restaurants. Furthermore, with the expected MMCT Casino, or other similar large-scale development set to take place in the near future, a hotel and restaurant could be well utilized by casino patrons.

1.2.2 Site 2 – Restaurant

The proposed development of this site consists of a small-scale restaurant. Site 2 is an undeveloped parcel located north of Newberry Road and the I-91 Ramps. It is adjacent to an existing Wendy’s and KFC. This segment of Route 5 is heavily commercialized with other businesses such as Walmart and United Bank. As such, it is feasible that another restaurant use would be an appropriate tenant for the site. To enhance traffic safety and operations on Route 5, it is recommended that this site share access with the adjacent restaurant site at the traffic signal opposite the Walmart driveway. This recommendation is accounted for in the traffic analysis.

1.2.3 Site 3 – Mixed-use Commercial

The proposed development of this site consists of several general retail or commercial sites near the Route 5 intersections with Main Street and Thompson Road. Site 3 consists of parcels that are either currently vacant or for sale, in addition to the Prospect Hill Plaza which has ample parking. Mixed commercial uses could be added to this area as *infill development* that could serve the surrounding residential areas in addition to regional traffic. This area features high traffic volumes on Route 5 that would make the area attractive for additional commercial development. Given the operational characteristics, shared access and consolidation of access at existing signalized intersections is recommended as part of development in this area.

Infill development refers to the addition of development space within a vacant or under-utilized parcel. This can economize transportation by requiring fewer car trips and can enhance tax revenue for the Town.

1.2.4 Site 4 – Mixed-use Commercial

The proposed development of this site consists of infill general retail and restaurants at the existing Riverview Plaza, across Route 5 from Regina Drive. Neighborhood retail uses in this location would support the surrounding residential areas to the north and east of the site.

1.2.5 Site 5 – Industrial Park

The proposed development of this site consists of a large industrial park on several large agricultural parcels north of Tromley Road. Driveway access to the site could be provided via a new right-in / right-out driveway on Route 5 with two-way access to Tromley Road. This use would require a zone change as the site is currently zoned for agricultural uses.

1.2.6 Site 6 – Industrial Park

The proposed development of this site consists of a large industrial park on several large agricultural parcels north of Phelps Road. Driveway access to the site could be provided via a new right-in / right-out driveway on Route 5 with two-way access to Phelps Road. This use would also require a zone change as the site is currently zoned for agricultural uses.

1.2.7 Site 7 – Agricultural Distribution

The proposed development of this site consists of a large agricultural distribution facility in the southern part of the corridor, midway between the Route 5 intersections with Abbe Road and Scantic Road. This use is similar to the proposed Sardilli distribution center (see Section 1.1, Base Scenario Development, page 1) and would support the many remaining agricultural uses in the area.

2. Future Traffic Forecasts

Based on the developments previously discussed for the Base and Build scenarios, the study team prepared future year (2040) traffic forecasts for each. The CRCOG-maintained *travel demand model* was used to identify background (also known as ambient) growth. This growth is based on CTDOT’s published socioeconomic projections for employment and population growth. The background growth was applied to the existing condition volumes to create a background future growth forecast which serves as the foundation for the Base and Build forecasts, which were defined on page 1.

Travel Demand Model: A travel demand model is a complex planning tool used to understand travel behavior and trips. It consists of a series of mathematical equations that represent travel choices within a transportation network. Trips are assigned to the network based on the shortest calculated travel times between trip origins and destinations. As traffic volumes increase and increasing travel times cause decreasing speeds on roadways in the network, the model reassigns trips to the network according to the shortest travel time for each trip. The number of trips on the network changes as demographic and land use factors (such as population, employment, and number of households) change over time with development in the region.

2.1 Base Scenario Traffic Forecast

In order to create the Base scenario traffic forecast, the study team gathered traffic projection data from the proposed developments and added the respective traffic volumes to the background future growth forecast generated by the travel demand model. In all cases, recent traffic studies were referenced for use in assessing the *trip generation* for each of the development sites. These proposed volumes were reviewed by the Connecticut Department of Transportation (CTDOT) for use in the study. The 2040 Base Scenario peak hour traffic volumes are illustrated in Figure 4 (weekday AM peak hour), following, and Figure 5, page 7, (weekday PM). An intersection by intersection volume comparison between the Base and Existing volumes is included in Table 3 (AM), page 11, and Table 4 (PM), page 12, and summarized on Figure 3, below.

Trip generation is the process of predicting the number of trips originating in or destined for a particular site or area. Key variables include the use and size of the generator.

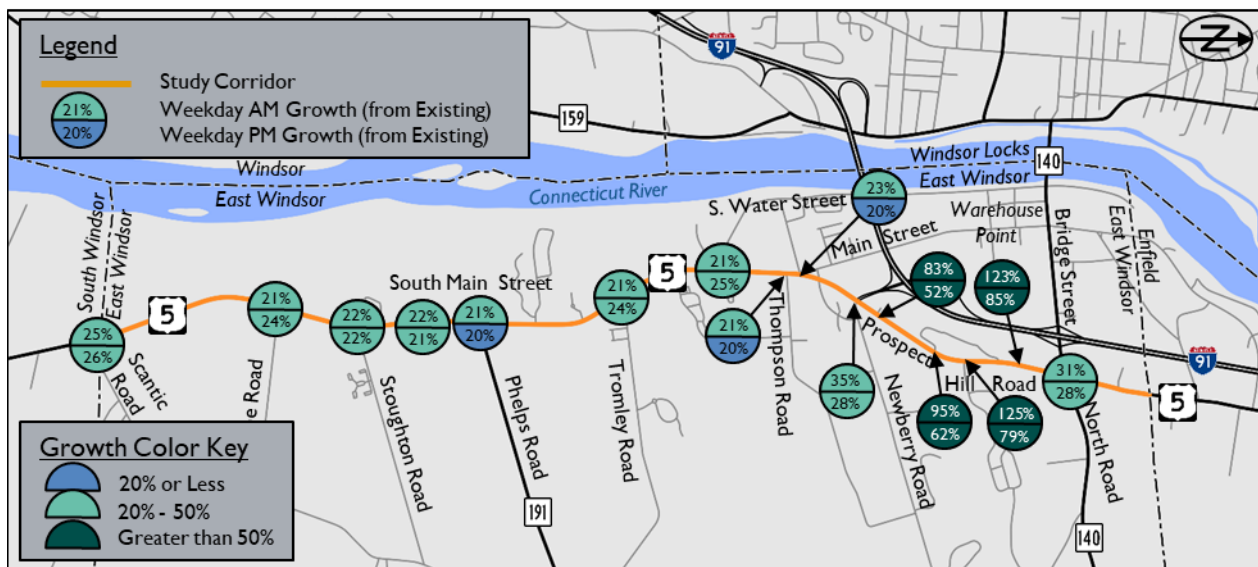


Figure 3: Base Scenario (2040) Intersection Traffic Volume Growth

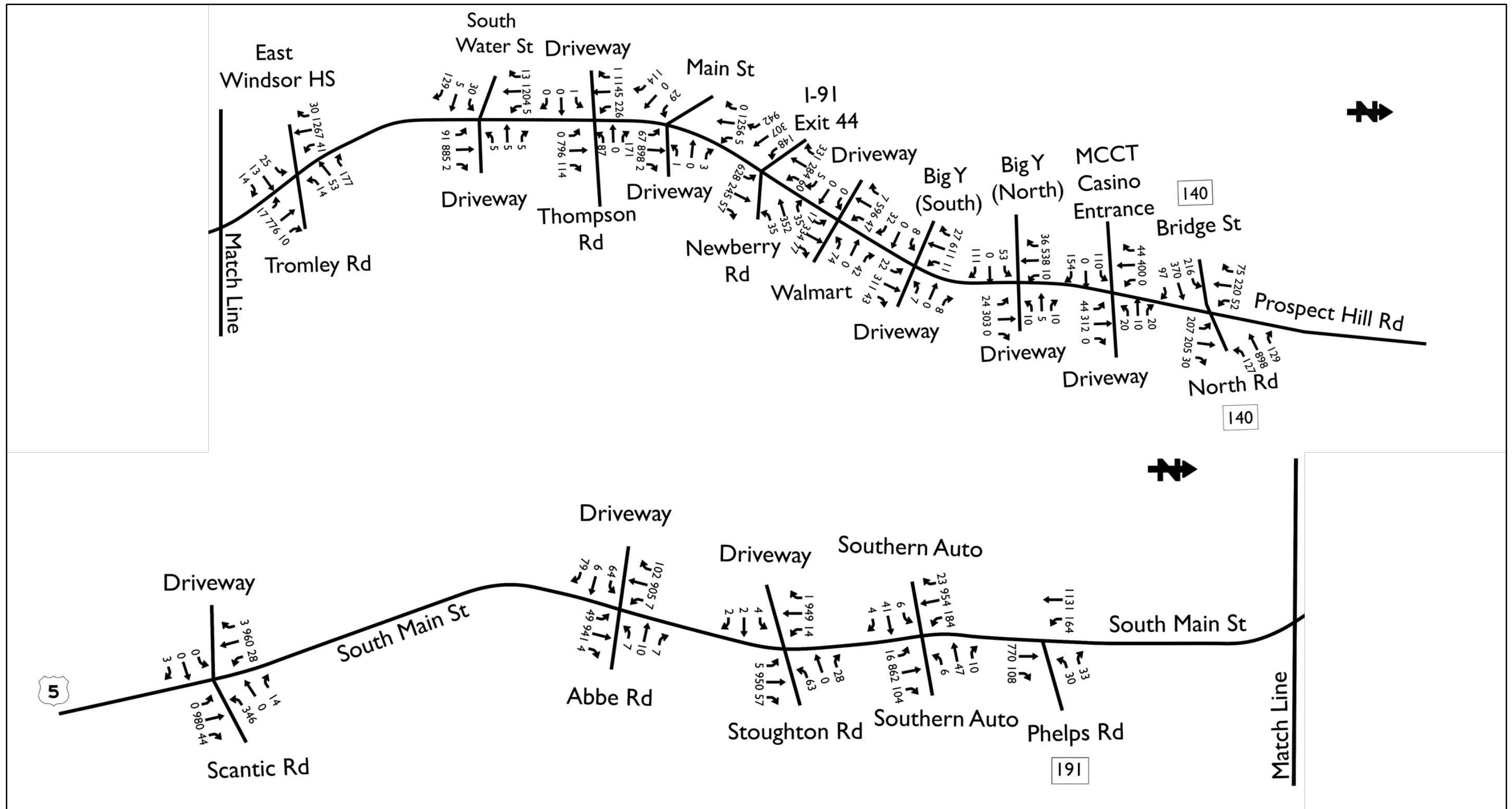


Figure 4: Weekday AM Peak Base Scenario (2040) Traffic Volumes

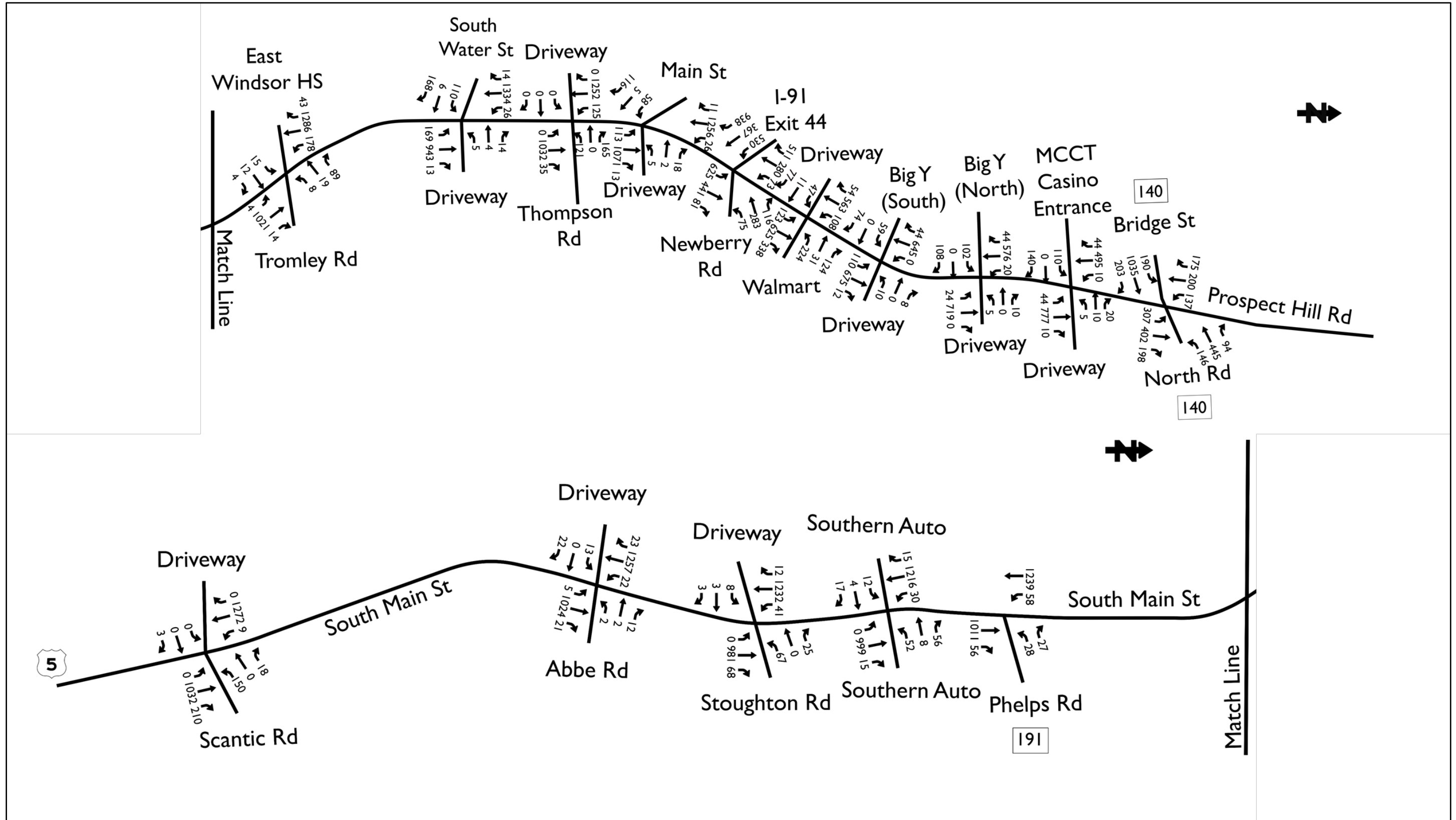


Figure 5: Weekday PM Peak Base Scenario (2040) Traffic Volume

Background (ambient) growth rates are forecast between 10% and 22% throughout the corridor. The background growth rates are lower at the higher-volume intersections (such as Route 140 and the I-91 Ramps / Newberry Road).

The highest growth, both in net change and by percentage, occurs north of the I-91 Ramps / Newberry Road intersection. Increases in this part of the corridor are forecasted at 500 to 600 vehicles per hour in the weekday AM peak (a near 100 percent increase) to 700 to 800 vehicles per hour in the weekday PM peak. The primary reason for these increases is the development of the MMCT Casino.

Growth is relatively consistent south of the I-91 Ramps / Newberry Road intersection, typically between 350 and 500 vehicles per hour in the weekday AM peak and between 400 and 550 vehicles per hour in the weekday PM peak.

2.2 Build Scenario Traffic Forecast

In order to create the Build scenario traffic forecast, the study team projected traffic volume data from the proposed developments using industry-standard trip generation formulae. These calculations are included in Appendix 2 – Build Scenario Trip Generation. These volumes were then added to the Base Scenario forecast. The 2040 Build Scenario peak hour traffic volumes are illustrated in Figure 7 (weekday AM peak hour), following, and Figure 8, page 10, (weekday PM). An intersection by intersection volume comparison between the Build, Base and Existing volumes is included in Table 3 (AM), page 11, and Table 4 (PM), page 12, and summarized on Figure 6, below.



Figure 6: Build Scenario (2040) Intersection Traffic Volume Growth

The largest increases in traffic volumes between the Base and Build scenario occur between the I-91 Ramps / Newberry Road intersection and Phelps Road. The volumes at these intersections increase by 400 to 500 vehicles per hour during the weekday AM peak hour and by 600 to 800 vehicles per hour in the weekday PM peak. This is primarily caused by the concentration of new commercial development proposed in this area as part of the Build scenario, especially the two large industrial parks near Tromley Road and Phelps Road. When compared with the existing volumes, traffic growth rates are forecast to be fairly consistently through the southern part of the corridor between 43% and 52%.

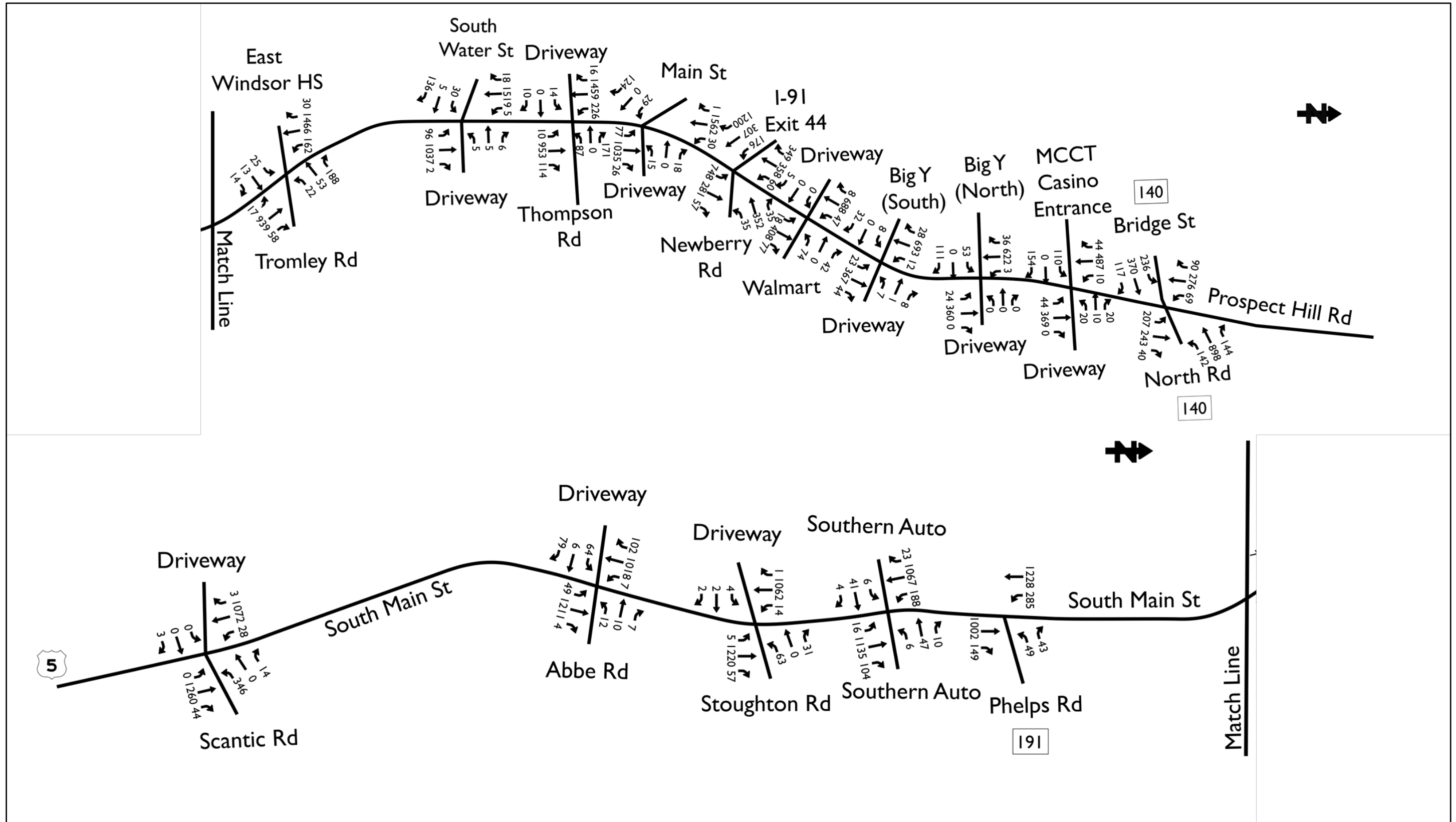


Figure 7: Weekday AM Peak Build Scenario (2040) Traffic Volumes

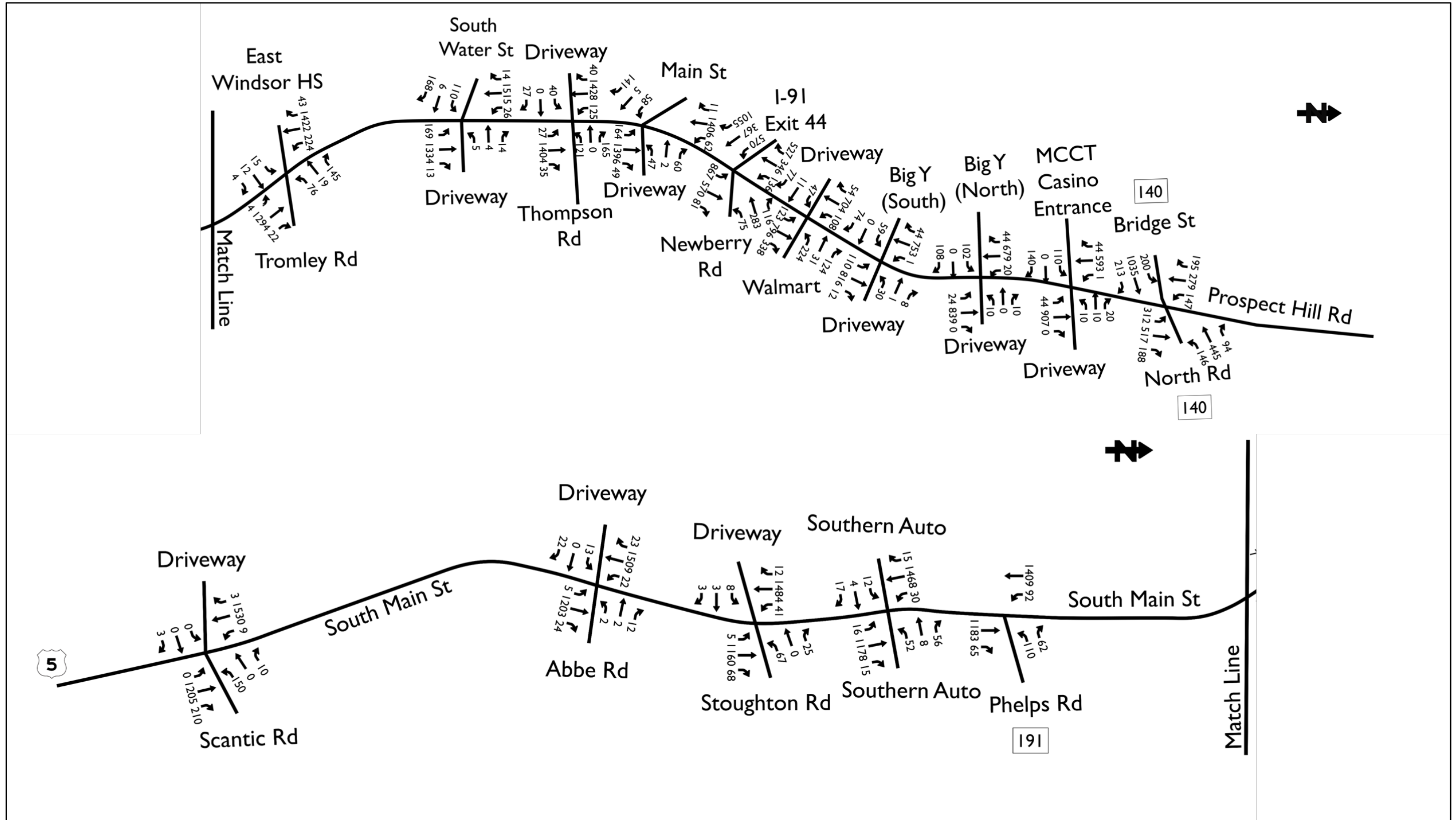


Figure 8: Weekday PM Peak Build Scenario (2040) Traffic Volumes

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Table 3: Weekday AM Base (2040) and Build (2040) Growth Summary

Intersection / Approach	Weekday AM Peak								
	Exiting (2017) Volumes	Base (2040) Volumes	Net Change (Existing to Base)	% Change (Existing to Base)	Build (2040) Volumes	Net Change (Existing to Build)	Net Change (Base to Build)	% Change (Existing to Build)	% Change (Base to Build)
Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)									
Route 5 (Prospect Hill Road) Northbound	186	442	256	137.6%	490	304	48	163.4%	10.9%
Route 5 (Prospect Hill Road) Southbound	235	347	112	47.7%	435	200	88	85.1%	25.4%
Overall	1,904	2,497	593	31.1%	2,832	928	335	48.7%	13.4%
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversour Driveway									
Route 5 (Prospect Hill Road) Northbound	221	356	135	61.1%	413	192	57	86.9%	16.0%
Route 5 (Prospect Hill Road) Southbound	279	444	165	59.1%	541	262	97	93.9%	21.8%
Overall	500	1,114	614	122.8%	1,268	768	154	153.6%	13.8%
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway									
Route 5 (Prospect Hill Road) Northbound	216	327	111	51.4%	384	168	57	77.8%	17.4%
Route 5 (Prospect Hill Road) Southbound	266	584	318	119.5%	661	395	77	148.5%	13.2%
Overall	489	1,100	611	124.9%	1,209	720	109	147.2%	9.9%
Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways									
Route 5 (Prospect Hill Road) Northbound	240	376	136	56.7%	464	224	88	93.3%	23.4%
Route 5 (Prospect Hill Road) Southbound	275	649	374	136.0%	733	458	84	166.5%	12.9%
Overall	533	1,080	527	95.3%	1,253	700	173	126.6%	16.0%
Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways									
Route 5 (Prospect Hill Road) Northbound	279	428	149	53.4%	503	224	75	80.3%	17.5%
Route 5 (Prospect Hill Road) Southbound	283	650	367	129.7%	743	460	93	162.5%	14.3%
Overall	654	1,199	545	83.3%	1,367	713	168	109.0%	14.0%
Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road									
Route 5 (Prospect Hill Road) Northbound	785	930	145	18.5%	1,086	301	156	38.3%	16.8%
Route 5 (Prospect Hill Road) Southbound	284	675	391	137.7%	797	513	122	180.6%	18.1%
Overall	2,536	3,424	888	35.0%	3,958	1,422	534	56.1%	15.6%
Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway									
Route 5 (South Main Street) Northbound	830	967	137	16.5%	1,138	308	171	37.1%	17.7%
Route 5 (Prospect Hill Road) Southbound	971	1,261	290	29.9%	1,603	632	342	65.1%	27.1%
Overall	1,931	2,375	444	23.0%	2,927	996	552	51.6%	23.2%
Route 5 (South Main Street) at Thompson Road									
Route 5 (South Main Street) Northbound	788	910	122	15.5%	1,077	289	167	36.7%	18.4%
Route 5 (South Main Street) Southbound	1,105	1,372	267	24.2%	1,701	596	329	53.9%	24.0%
Overall	2,114	2,541	427	20.2%	3,060	946	519	44.7%	20.4%
Route 5 (South Main Street) at South Water Street / Pasco Drive									
Route 5 (South Main Street) Northbound	853	978	125	14.7%	1,135	282	157	33.1%	16.1%
Route 5 (South Main Street) Southbound	943	1,222	279	29.6%	1,542	599	320	63.5%	26.2%
Overall	1,973	2,379	406	20.6%	2,864	891	485	45.2%	20.4%
Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHHS) Driveway									
Route 5 (South Main Street) Northbound	685	803	118	17.2%	1,014	329	211	48.0%	26.3%
Route 5 (South Main Street) Southbound	1,107	1,338	231	20.9%	1,658	551	320	49.8%	23.9%
Overall	2,018	2,437	419	20.8%	2,987	969	550	48.0%	22.6%
Route 5 (South Main Street) at Route 191 (Phelps Road)									
Route 5 (South Main Street) Northbound	720	878	158	21.9%	1,151	431	273	59.9%	31.1%
Route 5 (South Main Street) Southbound	1,085	1,294	209	19.3%	1,513	428	219	39.4%	16.9%
Overall	1,856	2,235	379	20.4%	2,756	900	521	48.5%	23.3%

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Table 4: Weekday PM Base (2040) and Build (2040) Growth Summary

Intersection / Approach	Weekday PM Peak								
	Exiting (2017) Volumes	Base (2040) Volumes	Net Change (Existing to Base)	% Change (Existing to Base)	Build (2040) Volumes	Net Change (Existing to Build)	Net Change (Base to Build)	% Change (Existing to Build)	% Change (Base to Build)
Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)									
Route 5 (Prospect Hill Road) Northbound	550	904	354	64.4%	1,017	467	113	84.9%	12.5%
Route 5 (Prospect Hill Road) Southbound	367	512	145	39.5%	621	254	109	69.2%	21.3%
Overall	2,619	3352	733	28.0%	3,771	1,152	419	44.0%	12.5%
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway									
Route 5 (Prospect Hill Road) Northbound	524	831	307	58.6%	951	427	120	81.5%	14.4%
Route 5 (Prospect Hill Road) Southbound	374	549	175	46.8%	638	264	89	70.6%	16.2%
Overall	898	1,665	767	85.4%	1,879	981	214	109.2%	12.9%
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway									
Route 5 (Prospect Hill Road) Northbound	496	743	247	49.8%	863	367	120	74.0%	16.2%
Route 5 (Prospect Hill Road) Southbound	371	640	269	72.5%	743	372	103	100.3%	16.1%
Overall	899	1,608	709	78.9%	1,836	937	228	104.2%	14.2%
Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways									
Route 5 (Prospect Hill Road) Northbound	539	797	258	47.9%	938	399	141	74.0%	17.7%
Route 5 (Prospect Hill Road) Southbound	344	689	345	100.3%	798	454	109	132.0%	15.8%
Overall	1,009	1,637	628	62.2%	1,908	899	271	89.1%	16.6%
Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways									
Route 5 (Prospect Hill Road) Northbound	724	1,086	362	50.0%	1,257	533	171	73.6%	15.7%
Route 5 (Prospect Hill Road) Southbound	392	725	333	84.9%	866	474	141	120.9%	19.4%
Overall	1,527	2,325	798	52.3%	2,637	1,110	312	72.7%	13.4%
Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road									
Route 5 (Prospect Hill Road) Northbound	885	1,147	262	29.6%	1,518	633	371	71.5%	32.3%
Route 5 (Prospect Hill Road) Southbound	571	864	293	51.3%	1,009	438	145	76.7%	16.8%
Overall	3,374	4,320	946	28.0%	4,993	1,619	673	48.0%	15.6%
Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway									
Route 5 (South Main Street) Northbound	977	1,197	220	22.5%	1,609	632	412	64.7%	34.4%
Route 5 (Prospect Hill Road) Southbound	1,120	1,293	173	15.4%	1,479	359	186	32.1%	14.4%
Overall	2,290	2,686	396	17.3%	3,401	1,111	715	48.5%	26.6%
Route 5 (South Main Street) at Thompson Road									
Route 5 (South Main Street) Northbound	858	1,067	209	24.4%	1,466	608	399	70.9%	37.4%
Route 5 (South Main Street) Southbound	1,166	1,377	211	18.1%	1,593	427	216	36.6%	15.7%
Overall	2,283	2,730	447	19.6%	3,412	1,129	682	49.5%	25.0%
Route 5 (South Main Street) at South Water Street / Pasco Drive									
Route 5 (South Main Street) Northbound	943	1,125	182	19.3%	1,516	573	391	60.8%	34.8%
Route 5 (South Main Street) Southbound	1,131	1,374	243	21.5%	1,555	424	181	37.5%	13.2%
Overall	2,246	2,806	560	24.9%	3,378	1,132	572	50.4%	20.4%
Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHS) Driveway									
Route 5 (South Main Street) Northbound	867	1,039	172	19.8%	1,320	453	281	52.2%	27.0%
Route 5 (South Main Street) Southbound	1,188	1,507	319	26.9%	1,689	501	182	42.2%	12.1%
Overall	2,168	2,693	525	24.2%	3,280	1,112	587	51.3%	21.8%
Route 5 (South Main Street) at Route 191 (Phelps Road)									
Route 5 (South Main Street) Northbound	902	1,067	165	18.3%	1,248	346	181	38.4%	17.0%
Route 5 (South Main Street) Southbound	1,019	1,297	278	27.3%	1,501	482	204	47.3%	15.7%
Overall	1,972	2,364	392	19.9%	2,921	949	557	48.1%	23.6%
Route 5 (South Main Street) at Southern Auto Auction Driveways									
Route 5 (South Main Street) Northbound	869	1,014	145	16.7%	1,209	340	195	39.1%	19.2%
Route 5 (South Main Street) Southbound	1,012	1,261	249	24.6%	1,513	501	252	49.5%	20.0%
Overall	1,997	2,424	427	21.4%	2,871	874	447	43.8%	18.4%
Route 5 (South Main Street) at Stoughton Road / Commercial Driveway									
Route 5 (South Main Street) Northbound	881	1,014	133	15.1%	1,233	352	219	40.0%	21.6%
Route 5 (South Main Street) Southbound	1,027	1,261	234	22.8%	1,537	510	276	49.7%	21.9%
Overall	1,987	2,424	437	22.0%	2,876	889	452	44.7%	18.6%
Route 5 (South Main Street) at Abbe Road / Commercial Driveway									
Route 5 (South Main Street) Northbound	863	1,050	187	21.7%	1,232	369	182	42.8%	17.3%
Route 5 (South Main Street) Southbound	1,047	1,302	255	24.4%	1,554	507	252	48.4%	19.4%
Overall	1,941	2,403	462	23.8%	2,837	896	434	46.2%	18.1%
Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road									
Route 5 (John Fitch Boulevard) Northbound	975	1,242	267	27.4%	1,415	440	173	45.1%	13.9%
Route 5 (John Fitch Boulevard) Southbound	1,061	1,281	220	20.7%	1,542	481	261	45.3%	20.4%
Overall	2,144	2,694	550	25.7%	3,120	976	426	45.5%	15.8%

3. Future Traffic Operations

The study team evaluated traffic operations in the corridor for the Base and Build scenarios by determining *levels of service (LOS)* and *the volume-to-capacity ratio (v/c)* at corridor intersections. The traffic analysis assumes that traffic signal cycle lengths and timings would be optimized for future traffic conditions, but that the existing number of lanes and signal phasing would remain. Queues were also analyzed in order to test whether they would grow to excessive lengths and block adjacent intersections.

3.1 Base Scenario Traffic Operations

The results of the traffic operational analysis for the Base scenario are illustrated in Figure 9, Table 5 (following) and Table 6, page 15. Levels of service E or worse and queue lengths over 500 feet are highlighted with maroon text in the two tables.

Level of Service (LOS) for an intersection is a qualitative measure of traffic operations that reflects the delay experienced by vehicles at the intersection. LOS values range from A to F. LOS A represents the best operational conditions with little delay. LOS F represents generally congested conditions with long delays and traffic queues. For the Route 5 corridor, LOS D or better represents an acceptable degree of congestion; LOS E and F represent an unacceptable degree of congestion.

Volume-to-capacity ratio (v/c) for an intersection represents the ability of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected. Under these conditions, vehicles may require more than one signal cycle to pass through the intersection (known as a cycle failure). (FHWA)

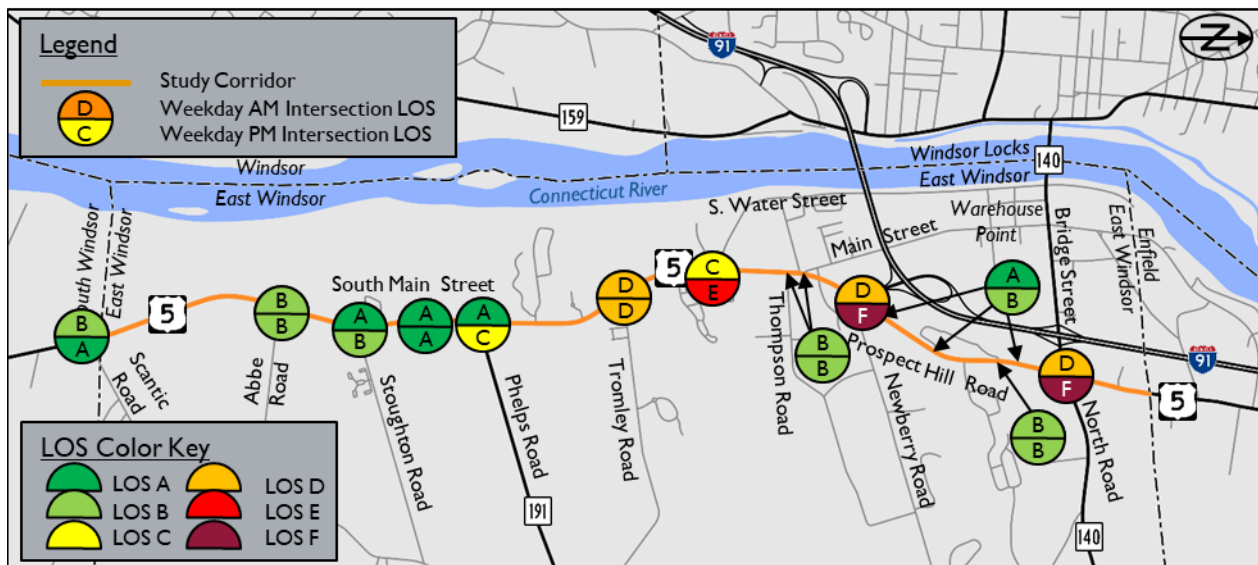


Figure 9: Base Scenario (2040) Weekday AM and PM Intersection Levels of Service

Under the Base scenario traffic operational deficiencies are expected at Route 140, the I-91 Ramps / Newberry Road, South Water Street and Tromley Road. At Route 140, the intersection is expected to operate at LOS F during the PM peak, with both Route 5 northbound and southbound experiencing heavy delays (both LOS F). During the AM peak, the intersection as a whole is expected to operate at LOS D, though the southbound Route 5 approach will experience heavier delays and operate at LOS F.

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The intersection of Route 5 with the I-91 Ramps and Newberry Road is expected to operate at LOS F during the PM peak with significant delays and queuing on westbound Newberry Road and the I-91 off-ramps. Queueing on the ramps back towards the freeway presents a safety concern due to the speed differential between stopped, queued vehicles and those traveling at freeway speeds. During the AM peak, the intersection as a whole is expected to operate at LOS D, though the westbound Newberry Road approach will experience heavier delays and operate at LOS F.

Traffic is expected to flow acceptably through the southern part of the corridor (south of Tromley Road) and between the I-91 Ramps / Newberry Road and Route 140. However, several lengthy queues are expected, in particular for southbound Route 5 at Stoughton Road and Abbe Road.

Table 5: Base Scenario (2040) Weekday AM and PM Traffic Operations (1 of 2)

Intersection / Approach	Weekday AM Peak				Weekday PM Peak			
	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max. V/C Ratio	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max V/C Ratio
Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)								
Route 5 (Prospect Hill Road) Northbound	D	50.9	190	0.89	F	128.4	483*	1.28
Route 5 (Prospect Hill Road) Southbound	F	80.3	349*	0.97	F	240.1	482*	1.59
Route 140 (Bridge Street) Eastbound	D	35.6	240*	0.96	D	36.3	462*	0.96
Route 140 (North Road) Westbound	D	43.5	455*	0.96	C	29.4	184	0.81
Overall	D	47.6		0.97	F	88.1		1.59
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway								
Route 5 (Prospect Hill Road) Northbound	A	1.9	66	0.24	A	7.1	384	0.60
Route 5 (Prospect Hill Road) Southbound	A	3.9	51**	0.37	A	5.4	108**	0.45
MMCT Casino Driveway Eastbound	C	25.4	140*	0.69	C	31.1	153*	0.76
Eversource Driveway Westbound	C	33.0	54	0.38	C	22.8	37	0.18
Overall	A	9.6		0.69	B	10.5		0.76
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway								
Route 5 (Prospect Hill Road) Northbound	A	1.1	26	0.23	A	6.7	110	0.58
Route 5 (Prospect Hill Road) Southbound	B	11.9	389	0.49	B	11.8	241	0.55
MMCT Casino Driveway Eastbound	C	23.5	67	0.47	C	33.4	141*	0.69
Commercial Driveway Westbound	C	25.6	31	0.15	A	0.3	0	0.05
Overall	B	10.7		0.49	B	12.1		0.69
Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways								
Route 5 (Prospect Hill Road) Northbound	A	2.8	170	0.24	B	11.3	20	0.52
Route 5 (Prospect Hill Road) Southbound	A	1.8	63	0.44	A	5.6	51	0.58
Big Y Driveway Eastbound	D	42.2	20	0.2	C	33.3	117*	0.57
Ethos Energy Driveway Westbound	B	13.2	18	0.09	C	22.3	23	0.10
Overall	A	2.8		0.44	B	10.8		0.58
Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways								
Route 5 (Prospect Hill Road) Northbound	A	3.1	40**	0.14	A	9.8	22*	0.39
Route 5 (Prospect Hill Road) Southbound	A	2.8	144	0.47	B	11.6	74	0.72
Commercial Driveway Eastbound	A	0.0	0	0.01	C	26.7	57*	0.56
Walmart Driveway Westbound	C	26.7	77	0.41	C	28.2	241*	0.61
Overall	A	5.2		0.47	B	14.4		0.72
Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road								
Route 5 (Prospect Hill Road) Northbound	D	44.5	304*	0.98	D	40.9	304*	0.98
Route 5 (Prospect Hill Road) Southbound	C	28.0	110	0.69	C	30.3	200	0.84
I-91 Off-Ramps Eastbound	C	24.8	389*	0.97	F	126.2	606*	1.48
Newberry Road Westbound	F	87.0	244*	1.02	F	105.2	269*	1.10
Overall	D	38.4		1.02	F	82.1		1.48
Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway								
Route 5 (South Main Street) Northbound	B	11.6	94	0.55	B	12.7	94	0.71
Route 5 (Prospect Hill Road) Southbound	B	12.9	460**	0.64	B	16.8	463**	0.71
Main Street (SR 510) Eastbound	B	12.5	44	0.39	B	19.8	79	0.45
Prospect Hill Plaza Driveway Westbound	A	0.0	0	0.01	C	20.2	28	0.13
Overall	B	12.3		0.64	B	15.2		0.71

*95% queue length exceeds capacity, queue may be longer

**95% queue length metered by adjacent traffic signal

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Table 6: Base Scenario (2040) Weekday AM and PM Traffic Operations (2 of 2)

Intersection / Approach	Weekday AM Peak				Weekday PM Peak			
	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max. V/C Ratio	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max V/C Ratio
Route 5 (South Main Street) at Thompson Road								
Route 5 (South Main Street) Northbound	C	20.9	292	0.56	B	19.3	335**	0.60
Route 5 (South Main Street) Southbound	B	12.2	229	0.78	A	7.1	120**	0.64
Thompson Road Westbound	C	26.3	101	0.61	D	40.0	159*	0.76
Overall	B	16.8		0.78	B	15.4		0.76
Route 5 (South Main Street) at South Water Street / Pasco Drive								
Route 5 (South Main Street) Northbound	B	12.6	713	0.7	C	23.1	617**	1.03
Route 5 (South Main Street) Southbound	D	49.2	330*	1.04	F	106.2	540*	1.18
South Water Street Eastbound	C	27.6	58*	0.61	F	137.7	210*	1.44
Pasco Drive Westbound	D	35.7	25	0.15	C	31.8	30	0.26
Overall	C	32.6		1.04	E	75.5		1.44
Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHS) Driveway								
Route 5 (South Main Street) Northbound	B	14.3	751*	0.71	D	54.7	887*/**	1.06
Route 5 (South Main Street) Southbound	D	54.6	1133*/**	1.08	C	28.7	974*/**	1.02
EWHS Eastbound	E	58.1	66*	0.5	D	51.9	45	0.35
Tromley Road Westbound	D	37.9	111*	0.73	B	19.4	45	0.46
Overall	D	39.7		1.08	D	38.6		1.06
Route 5 (South Main Street) at Route 191 (Phelps Road)								
Route 5 (South Main Street) Northbound	B	12.4	419	0.75	D	37.6	845*	0.98
Route 5 (South Main Street) Southbound	A	6.1	156**	0.79	A	9.6	264**	0.86
Route 191 (Phelps Road) Westbound	D	41.1	71*	0.55	D	39.7	61*	0.50
Overall	A	9.6		0.79	C	22.7		0.98
Route 5 (South Main Street) at Southern Auto Auction Driveways								
Route 5 (South Main Street) Northbound	A	2.9	146	0.42	A	3.2	151	0.40
Route 5 (South Main Street) Southbound	A	3.9	36	0.75	A	1.1	16	0.56
Southern Auto Auction Driveway Eastbound	D	50.5	68	0.46	C	33.9	39	0.34
Southern Auto Auction Driveway Westbound	D	41.5	71	0.42	D	44.8	101*	0.65
Overall	A	5.6		0.75	A	4.5		0.65
Route 5 (South Main Street) at Stoughton Road / Commercial Driveway								
Route 5 (South Main Street) Northbound	A	8.9	567	0.75	A	9.3	597	0.79
Route 5 (South Main Street) Southbound	A	2.0	16	0.70	B	15.1	1036*	0.92
Commercial Driveway Eastbound	C	33.9	17	0.06	C	34.5	25	0.11
Stoughton Road Westbound	D	48.2	90*	0.62	D	52.2	99*	0.66
Overall	A	7.5		0.75	B	14.1		0.92
Route 5 (South Main Street) at Abbe Road / Commercial Driveway								
Route 5 (South Main Street) Northbound	B	16.8	396**	0.71	B	12.2	498	0.72
Route 5 (South Main Street) Southbound	A	3.2	106	0.70	B	11.3	1010**	0.93
Commercial Driveway Eastbound	D	37.0	88*	0.64	C	20.4	26	0.18
Abbe Road Westbound	C	30.9	35	0.17	C	26.6	23	0.17
Overall	B	12.1		0.71	B	11.9		0.93
Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road								
Route 5 (John Fitch Boulevard) Northbound	A	8.9	202	0.51	A	6.2	231	0.55
Route 5 (John Fitch Boulevard) Southbound	A	6.1	104	0.55	A	4.9	116**	0.60
Crow Park Drive Eastbound	A	0.0	0	0.01	A	0.0	0	0.01
Scantic Road Westbound	D	54.6	354*	0.89	D	38.8	139	0.63
Overall	B	14.6		0.89	A	7.6		0.63

*95% queue length exceeds capacity, queue may be longer

**95% queue length metered by adjacent traffic signal

3.2 Build Scenario Traffic Operations

The results of the traffic operational analysis for the Build scenario are illustrated in Figure 10, Table 7 (following) and Table 8, page 15. Levels of service E or worse and queue lengths over 500 feet are highlighted with maroon text in the two tables.

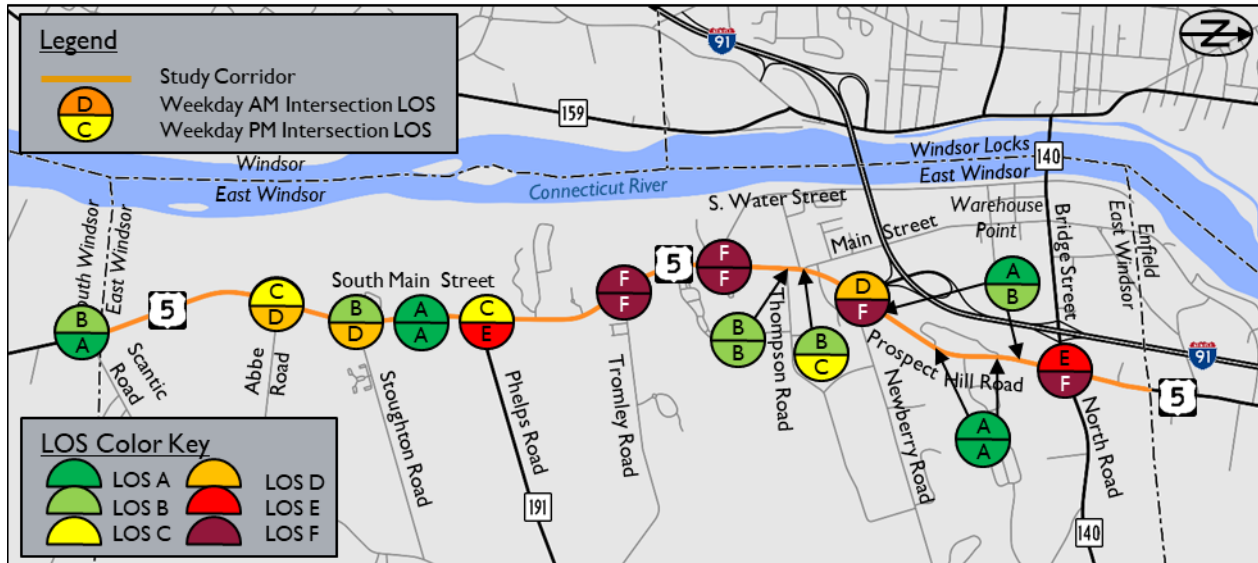


Figure 10: Build Scenario (2040) Weekday AM and PM Intersection Levels of Service

Under the Build scenario traffic operational deficiencies are expected at Route 140, the I-91 Ramps / Newberry Road, and many of the intersections in the southern part of the corridor, particularly South Water Street and Tromley Road.

At Route 140, the intersection is expected to operate at LOS F during the PM peak, with both Route 5 northbound and southbound and Route 140 eastbound experiencing heavy delays. During the AM peak, the intersection as a whole is expected to operate at LOS E, with both Route 5 northbound and southbound and Route 140 westbound experiencing heavy delays. Traffic is expected to flow acceptably between Route 5 and the I-91 Ramps / Newberry Road.

The intersection of Route 5 with the I-91 Ramps and Newberry Road is expected to operate at LOS F during the PM peak with significant delays and queuing on northbound Route 5, westbound Newberry Road and the I-91 off-ramps. Queueing on the ramps back towards the freeway presents a safety concern due to the speed differential between stopped, queued vehicles and those traveling at freeway speeds. During the AM peak, the intersection as a whole is expected to operate at LOS D, though the westbound Newberry Road approach will experience heavier delays and operate at LOS F.

Traffic is expected to flow acceptably at the intersections with Thompson Road and Main Street, the section that carries two travel lanes in each direction. South of Thompson Road the existing roadway transitions to one lane in each direction. Operations in this segment, with one lane in each direction, are expected to deteriorate south of Thompson Road, with both the intersections with South Water Street and Tromley Road forecast to operate at LOS F during both peak periods and Phelps Road operating at LOS E during the PM peak.

At South Water Street, delays primarily affect Route 5 Southbound which would operate at LOS F in both peak periods with queues of approximately 1,500 feet (1/4 mile). At Tromley Road, both Road 5

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approaches would experience significant delays, with northbound operating at LOS E during the AM and LOS F during the PM peak and southbound operating at LOS F during both periods. Queues on both approaches during both peak periods would approach 1,000 feet. At Phelps Road, the intersection would operate at LOS E during the PM peak. The northbound Route 5 approach would operate at LOS F with queues exceeding 1,000 feet. Traffic would flow acceptably through the southern part of the corridor. However, lengthy queues on Route 5 southbound are forecast at Stoughton Road and Abbe Road.

Table 7: Build Scenario (2040) Weekday AM and PM Traffic Operations

Intersection / Approach	Weekday AM Peak				Weekday PM Peak			
	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max. V/C Ratio	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max V/C Ratio
Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)								
Route 5 (Prospect Hill Road) Northbound	E	59.5	248*	0.94	F	128.0	595*	1.24
Route 5 (Prospect Hill Road) Southbound	F	93.3	426*	1.06	F	186.8	564*	1.37
Route 140 (Bridge Street) Eastbound	D	46.5	269*	1.03	E	66.3	510*	1.11
Route 140 (North Road) Westbound	E	67.2	501*	1.05	D	42.5	210	0.95
Overall	E	64.6		1.06	F	98.4		1.37
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway								
Route 5 (Prospect Hill Road) Northbound	A	6.7	146	0.29	A	7.2	464	0.69
Route 5 (Prospect Hill Road) Southbound	A	4.9	38**	0.45	A	7.6	159**	0.52
MMCT Casino Driveway Eastbound	B	19.8	112	0.56	C	26.0	136*	0.67
Eversource Driveway Westbound	C	24.9	48	0.26	C	25.9	43	0.25
Overall	A	9.4		0.56	B	10.3		0.69
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway								
Route 5 (Prospect Hill Road) Northbound	A	1.0	8	0.28	A	5.7	388	0.68
Route 5 (Prospect Hill Road) Southbound	A	5.3	78	0.53	A	7.4	75	0.64
MMCT Casino Driveway Eastbound	C	23.5	67	0.47	C	33.6	118*	0.70
Commercial Driveway Westbound	A	0.0	0	0.00	A	0.5	0	0.08
Overall	A	6.4		0.53	A	9.5		0.70
Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways								
Route 5 (Prospect Hill Road) Northbound	A	2.7	74	0.28	A	8.1	292	0.61
Route 5 (Prospect Hill Road) Southbound	A	1.8	53	0.51	A	4.7	65	0.66
Big Y Driveway Eastbound	B	13.2	20	0.19	C	31.5	75	0.58
Ethos Energy Driveway Westbound	C	21.3	20	0.09	D	35.7	47	0.32
Overall	A	2.8		0.51	A	8.9		0.66
Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways								
Route 5 (Prospect Hill Road) Northbound	A	2.0	22**	0.17	A	4.7	25**	0.46
Route 5 (Prospect Hill Road) Southbound	A	4.6	123	0.54	B	18.6	628*	0.82
Commercial Driveway Eastbound	A	0.0	0	0.01	C	26.8	55*	0.55
Walmart Driveway Westbound	C	28.2	80	0.44	C	33.5	208*	0.75
Overall	A	5.6		0.54	B	14.5		0.82
Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road								
Route 5 (Prospect Hill Road) Northbound	D	54.9	397*	1.07	F	163.2	469*/**	1.52
Route 5 (Prospect Hill Road) Southbound	C	29.6	145	0.76	C	31.3	144**	0.88
I-91 Off-Ramps Eastbound	C	29.2	416*	1.01	F	89.2	606*	1.31
Newberry Road Westbound	F	87.0	244*	1.02	F	188.6	294*	1.31
Overall	D	42.5		1.07	F	109.5		1.52
Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway								
Route 5 (South Main Street) Northbound	B	15.4	128	0.75	B	17.9	132**	0.87
Route 5 (Prospect Hill Road) Southbound	C	22.1	668*/**	0.92	D	38.7	592*/**	0.97
Main Street (SR 510) Eastbound	B	13.1	47	0.34	B	14.9	73	0.35
Prospect Hill Plaza Driveway Westbound	A	0.5	0	0.09	C	20.6	77	0.36
Overall	B	18.7		0.92	C	26.8		0.97

*95% queue length exceeds capacity, queue may be longer

**95% queue length metered by adjacent traffic signal

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Table 8: Build Scenario (2040) Weekday AM and PM Traffic Operations (2 of 2)

Intersection / Approach	Weekday AM Peak				Weekday PM Peak			
	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max. V/C Ratio	LOS	Delay (sec / veh)	95% Queue Length (ft)	Max V/C Ratio
Route 5 (South Main Street) at Thompson Road / Proposed Commercial Driveway								
Route 5 (South Main Street) Northbound	B	15.9	316	0.76	B	18.8	213**	0.88
Route 5 (South Main Street) Southbound	B	13.4	171**	0.83	B	12.5	120**	0.86
Proposed Commercial Driveway Eastbound	B	17.9	24	0.06	C	20.2	51	0.20
Thompson Road Westbound	C	20.7	95	0.31	C	21.2	122	0.44
Overall	B	14.9		0.83	B	16.1		0.88
Route 5 (South Main Street) at South Water Street / Pasco Drive								
Route 5 (South Main Street) Northbound	A	7.3	90**	0.82	E	66.6	85**	1.12
Route 5 (South Main Street) Southbound	F	161.0	1488*	1.30	F	189.7	1502*	1.37
South Water Street Eastbound	D	39.0	103*	0.72	F	104.1	200*	1.22
Pasco Drive Westbound	D	35.3	27	0.18	C	27.9	29	0.20
Overall	F	92.1		1.30	F	126.2		1.37
Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHS) Driveway								
Route 5 (South Main Street) Northbound	E	62.0	857**	1.10	F	280.2	950**	1.59
Route 5 (South Main Street) Southbound	F	128.1	1103**	1.28	F	90.5	966**	1.19
EWHS Eastbound	D	48.1	56	0.39	D	54.1	46*	0.39
Tromley Road Westbound	C	31.4	105*	0.69	F	98.5	174*	1.21
Overall	F	95.7		1.28	F	167.1		1.59
Route 5 (South Main Street) at Route 191 (Phelps Road)								
Route 5 (South Main Street) Northbound	D	37.2	881*	1.01	F	121.7	1138*	1.23
Route 5 (South Main Street) Southbound	C	20.5	367**	1.02	C	28.3	429**	1.04
Route 191 (Phelps Road) Westbound	E	66.4	122*	0.78	F	204.5	257*	1.29
Overall	C	29.0		1.02	E	78.6		1.29
Route 5 (South Main Street) at Southern Auto Auction Driveways								
Route 5 (South Main Street) Northbound	A	4.4	170**	0.54	A	5.6	243**	0.54
Route 5 (South Main Street) Southbound	B	10.2	177**	0.91	A	4.3	129**	0.69
Southern Auto Auction Driveway Eastbound	D	51.6	70*	0.47	C	28.2	37	0.27
Southern Auto Auction Driveway Westbound	D	42.3	71	0.43	C	33.7	76	0.51
Overall	A	9.0		0.91	A	6.3		0.69
Route 5 (South Main Street) at Stoughton Road / Commercial Driveway								
Route 5 (South Main Street) Northbound	B	11.5	80**	0.96	B	11.2	974*	0.92
Route 5 (South Main Street) Southbound	A	2.3	1**	0.78	E	64.1	1348*	1.11
Commercial Driveway Eastbound	D	38.7	17	0.10	D	41.1	27	0.19
Stoughton Road Westbound	F	92.9	121*	0.92	F	111.5	130*	0.99
Overall	B	10.7		0.96	D	42.8		1.11
Route 5 (South Main Street) at Abbe Road / Commercial Driveway								
Route 5 (South Main Street) Northbound	C	26.6	600*	0.93	B	15.1	630*	0.84
Route 5 (South Main Street) Southbound	B	10.2	593**	0.80	E	61.8	986**	1.11
Commercial Driveway Eastbound	E	57.8	125*	0.84	C	21.5	27	0.20
Abbe Road Westbound	D	38.6	42	0.28	C	28.3	23	0.18
Overall	C	21.4		0.93	D	40.8		1.11
Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road								
Route 5 (John Fitch Boulevard) Northbound	B	12.7	355	0.66	A	6.5	244	0.61
Route 5 (John Fitch Boulevard) Southbound	A	9.3	233	0.64	A	7	204**	0.71
Crow Park Drive Eastbound	A	0.0	0	0.01	A	0.0	0	0.00
Scantic Road Westbound	D	44.3	284	0.83	D	42.1	147	0.67
Overall	B	15.4		0.83	A	8.6		0.71

*95% queue length exceeds capacity, queue may be longer

**95% queue length metered by adjacent traffic signal

4. Future Transit Demand

The study team evaluated the future transit demand in East Windsor. A design year of 2025 was selected due to the desire to understand the near-term implementation potential for transit service. The analysis is based on projected *socioeconomic* changes forecast by the State and qualitative assessments based on the developments included in the base and build scenarios. Three different methodologies for calculating transit demand are detailed, each of these could be funded through the Federal Transportation Equity Act.

Key **socioeconomic** indicators used in transportation planning include:

- Land use
- Population, income and housing
- Economics and employment
- Community facilities

Demand-Response Transit: Involves small- or medium-sized vehicles operating on flexible routes with flexible schedules that depend on passenger requests.

- **Program demand** - Applies to areas that may have a need for “limited” *demand response* services. This service can encompass subscription trips for clients to a social service agency or a demand response service only open to certain populations. This type of service is funded under Section 5310 of the Federal Transportation Equity Act.
- **Non-program demand** - applies to demand response services, flex route services open to the general public and can be funded through Section 5307 or Section 5311.
- **Commuter demand** – Applies to East Windsor residents and workers traveling farther distances to/from town via transit and can be funded through Section 5307 or Section 5311.

The potential future demand in the corridor is calculated using population projection data from the State for 2025. The percentage of those without access with a vehicle and with a disability are assumed to remain constant. Employment projections from Connecticut and Massachusetts come from each state’s respective labor market Information department. Appendix 4 – Future Transit Demand Calculations includes detailed calculations for the transit demand.

4.1 Program and Non-Program Demand

The calculated future program demand and non-program demand are listed in Table 9, below.

Table 9: Program and Non-Program Transit Demand

Demand Methodology	Annual Demand (trips per year)
Program	13,317
Non-Program	9,951
Total	23,268

The program demand can be seen as a proxy for paratransit/ADA/demand response service; the non-program demand would be for fixed route demand. Therefore, two nearby demand response/fixed route systems nearby will be used to determine how much service should be provided to East Windsor.

- *Northeastern Connecticut Transit District* provides 1.4 trips per revenue hour for demand response and 5.0 for fixed route
- *Northwestern Connecticut Transit District* 1.1 trips per revenue hour for demand response and 6.1 for fixed route

This would average 1.25 trips per hour for demand response service and 5.55 trips per hour for fixed route. This translates to 1,572 service hours needed annually for local fixed routes by 2025 and 12,106

service hours on local demand response service if 100 percent of transit demand was met. However, expecting to meet all possible demand in the town may be unrealistic. The transit demand met for Northeastern Connecticut Transit, for instance, is 22 percent.¹ Using this percentage as a guide, **3,098** service hours would be needed to be provided locally between the two modes by 2025; this low amount of needed service hours means that a local fixed route would not be feasible. One small vehicle could be used to provide those service hours via demand response service, assuming a weekday service span of 6:00 AM to 6:00 PM (12 hours)².

Transit-oriented development includes a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities.

Qualitatively, the opening of the new Windsor Locks rail station and planned surrounding *transit-oriented development* (TOD) in Warehouse Point should could provide additional demand. As development patterns continue for the Route 5 corridor, the potential linkages and provisions for transit service should be accounted for.

4.2 Commuter Demand Methodology

Due to East Windsor’s equidistance from Springfield and Hartford, there may be enough residents traveling north and south along US 5 for commuter transit service to be an option. There is already a route along US 5 (Route 905) that operates local service between Windsor Locks and Hartford, but no transit service operates to the east or north of town.

In order to calculate the need for commuter routes, the “On the Map” function on the US Census Website³ was used to calculate demand for commuter trips. A metric of estimated commuters riding public transit could then be established, and a flex commuter route was conceptualized, if necessary. Because East Windsor is both an employment center and residential community, both inflow and outflow commuting was used. In order to determine the threshold for establishing a new commuter route, the current demand for trips to and from Hartford is used as a threshold. This would indicate the threshold needed to establish a commuter route at 208 daily estimated trips. The calculated commuter service demand for three potential destinations is included in Table 10.

Table 10: Commuter Transit Demand

Potential Commuter Route Destination	Daily Commutes to / from East Windsor	Miles to Potential Destination	Transit Mode Share	Existing		2025	
				Annual Rides	Daily Rides	Annual Rides	Daily Rides
Hartford	2,235	17	5%	53,000	208	56,710	222
Springfield	425	17	2%	4,600	18	4,775	19
Windsor Locks	428	6	2%	5,400	21	5,778	23

The analysis yields the conclusion that there will not be enough demand to establish new commuter routes to surrounding towns. The potential new developments in the corridor should be tracked, particularly the two industrial / business parks (Sites 5 and 6) and whether changes in employment patterns increase demand to levels where a new commuter route could be warranted.

¹ There was a potential demand of 191,696 for transit rides in the Northeastern Connecticut Transit District (NECTD), but only 43,414 rides were taken last year.

² Formula to determine the number of vehicles needed: number of service hours divided by 255 days (annual weekdays), and then divided again by the proposed 12 hour service span to get the number of vehicles needed.

³ <http://onthemap.ces.census.gov/>

5. Conclusion and Next Steps

This technical memorandum has outlined two future development scenarios and assessed their potential to impact traffic growth and operations. Under both scenarios traffic operations are expected to deteriorate at key locations including the Route 5 intersections with Route 140, the I-91 ramps and Newberry Road, and the series of signalized intersections south of Thompson Road. The expected changes in traffic operations from existing conditions through the two future development scenarios are summarized in Table II below.

Table II: Summary of Intersection LOS – Existing and Future Scenarios

Intersection	Existing Conditions (2017)		Future Base Scenario (2040)		Future Build Scenario (2040)	
	AM LOS	PM LOS	AM LOS	PM LOS	AM LOS	PM LOS
Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)	D	D	D	F	E	F
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway	*	*	A	B	A	B
Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway	A	A	B	B	A	A
Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways	A	A	A	B	A	A
Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways	B	B	A	B	A	B
Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road	E	E	D	F	D	F
Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway	B	B	B	B	B	C
Route 5 (South Main Street) at Thompson Road / Proposed Commercial Driveway	B	B	B	B	B	B
Route 5 (South Main Street) at South Water Street / Pasco Drive	B	B	C	E	F	F
Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHS) Driveway	E	C	D	D	F	F
Route 5 (South Main Street) at Route 191 (Phelps Road)	B	B	A	C	C	E
Route 5 (South Main Street) at Southern Auto Auction Driveways	A	A	A	A	A	A
Route 5 (South Main Street) at Stoughton Road / Commercial Driveway	A	A	A	B	B	D
Route 5 (South Main Street) at Abbe Road / Commercial Driveway	A	A	B	B	C	D
Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road	B	B	B	A	B	A

*Intersection would be constructed as part of the MMCT casino development and was not in place for the existing conditions assessment.

The study team has identified the potential for a demand response transit service based on proposed 2025 demographics. Continued growth in employment in the Route 5 corridor and population density in the Warehouse Point neighborhood could strengthen demand. At this time, it does not appear that a new commuter transit service would be warranted.

The next steps for the study team are to develop concepts to address the deficiencies identified in this technical memorandum as well as those identified in the Existing Conditions Technical Memorandum. A Needs and Objectives memorandum will be prepared for summarizing the needs of the corridor and identifying objectives that should be met by proposed improvements. The current status of the Route 5 Corridor Study is highlighted in Figure II, following.

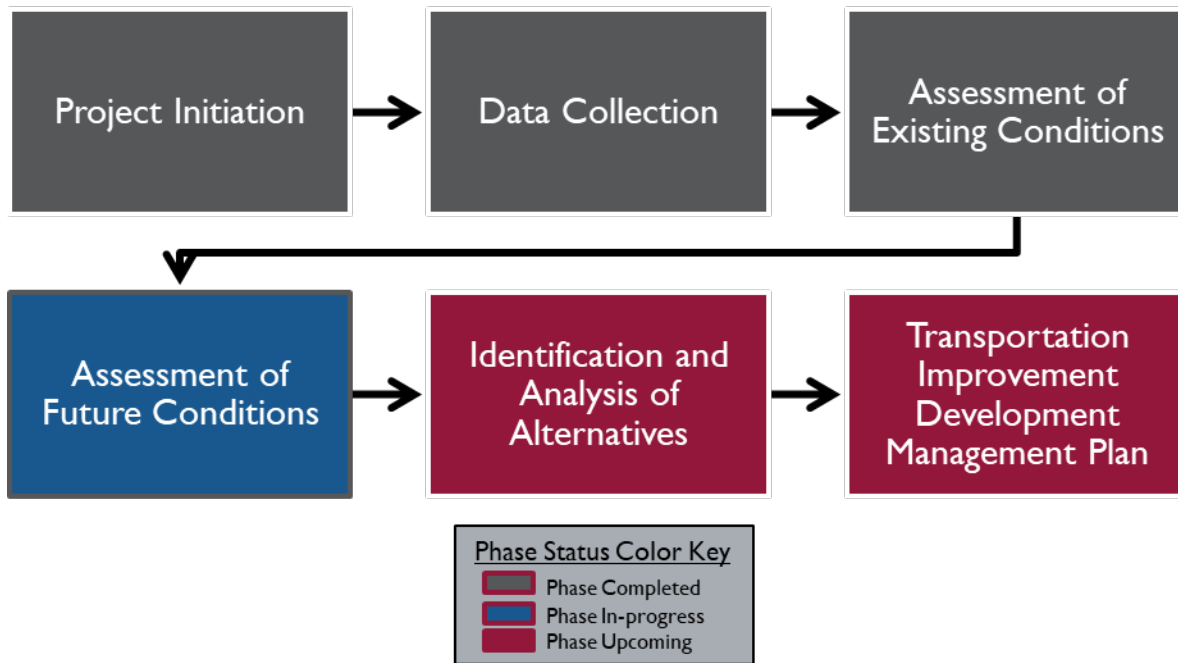
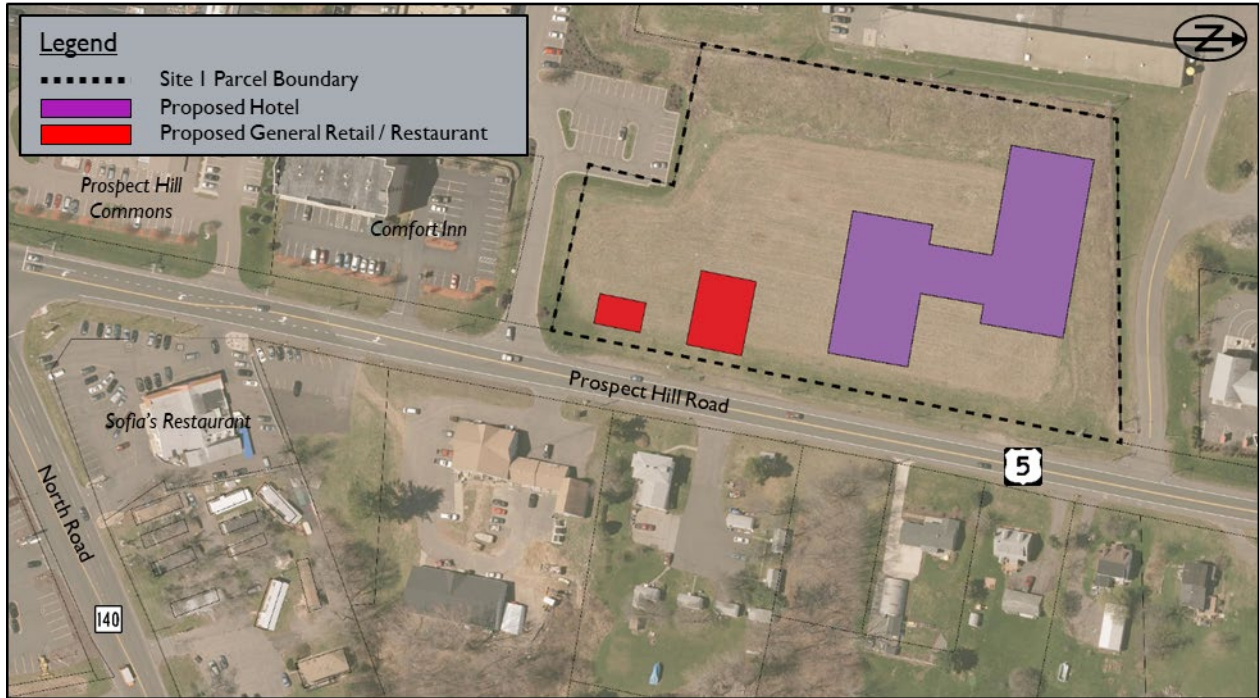
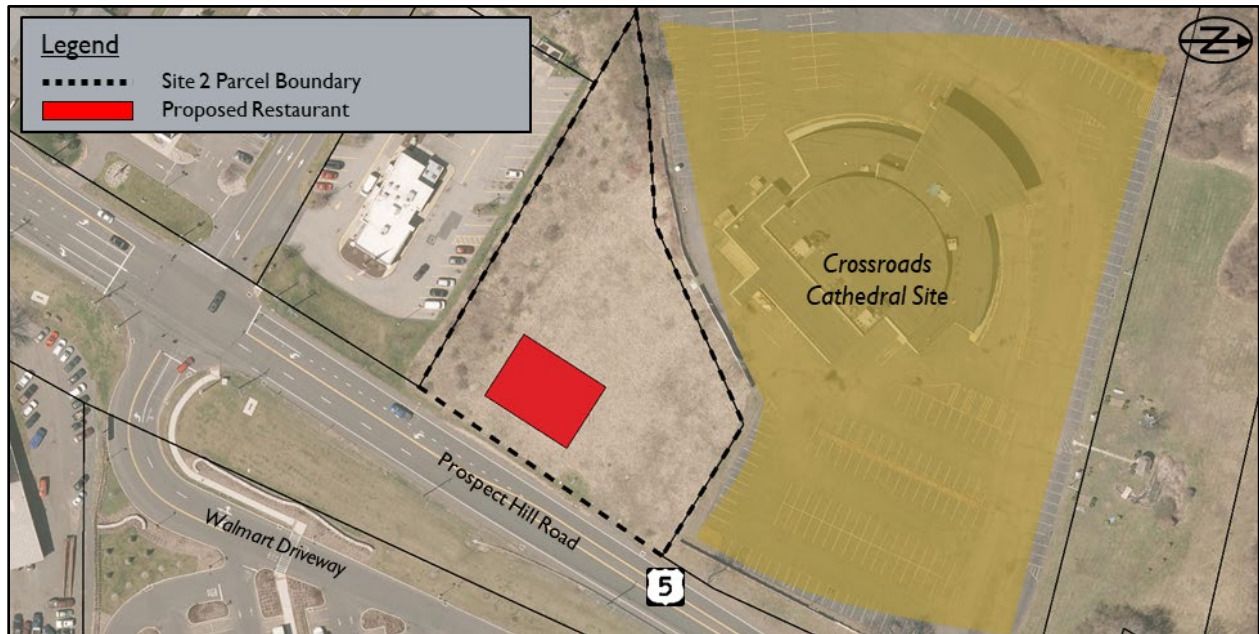


Figure 11: Study Process Flow Chart

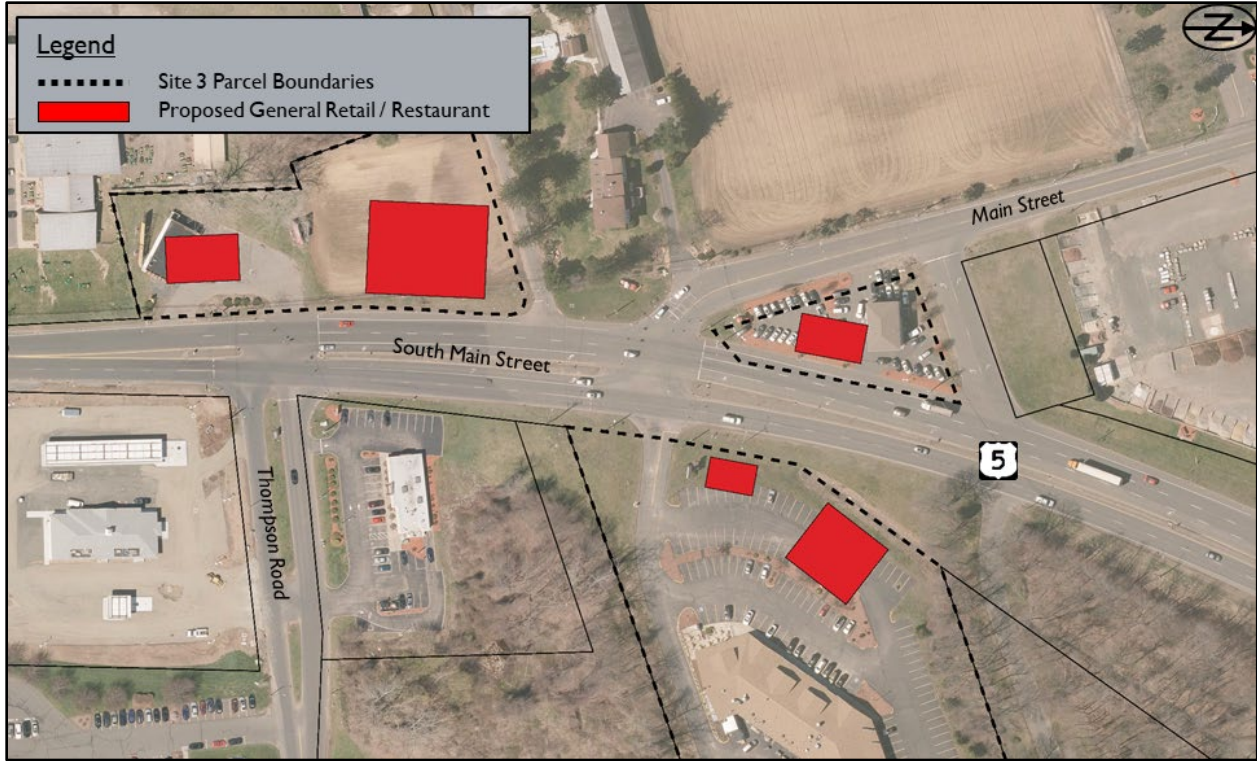
Appendix I – Build Development Sites



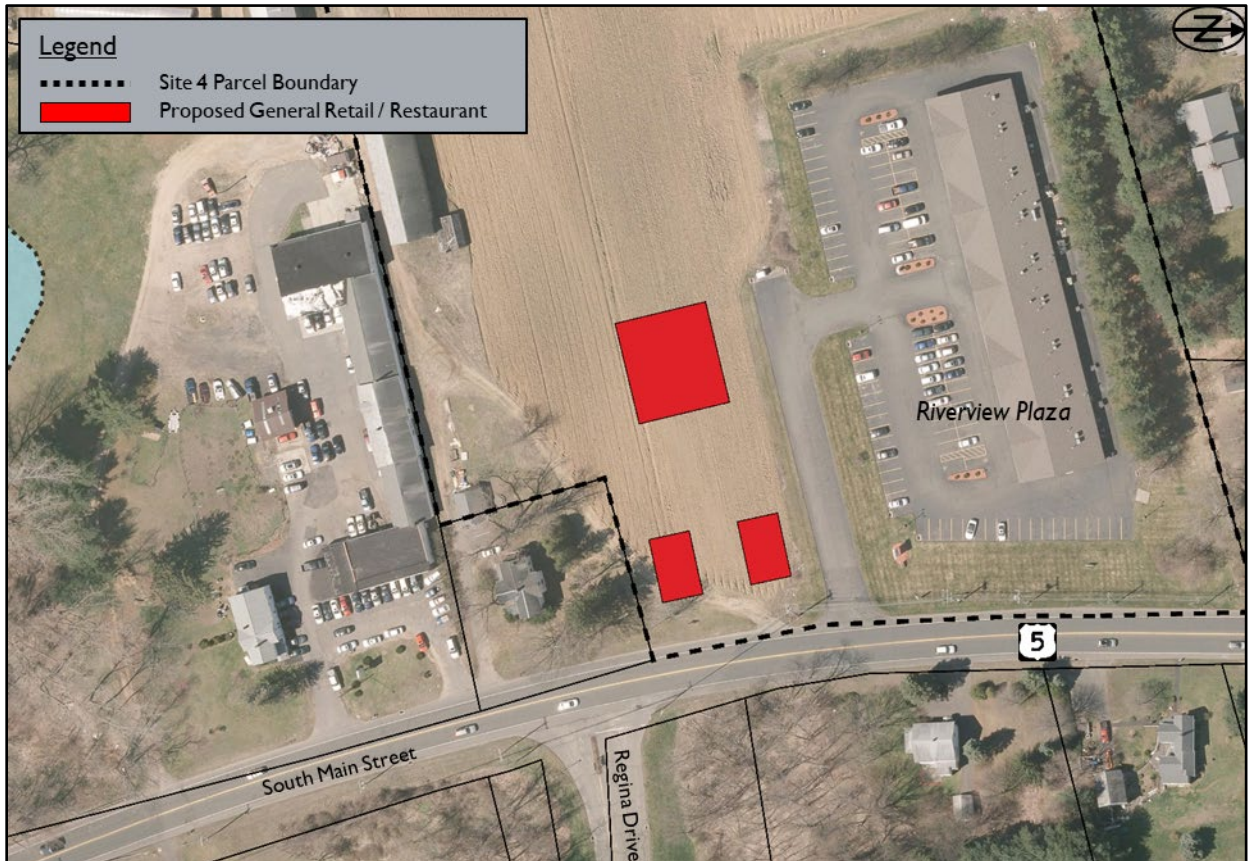
Site 1 – Hotel with Supporting Commercial Uses



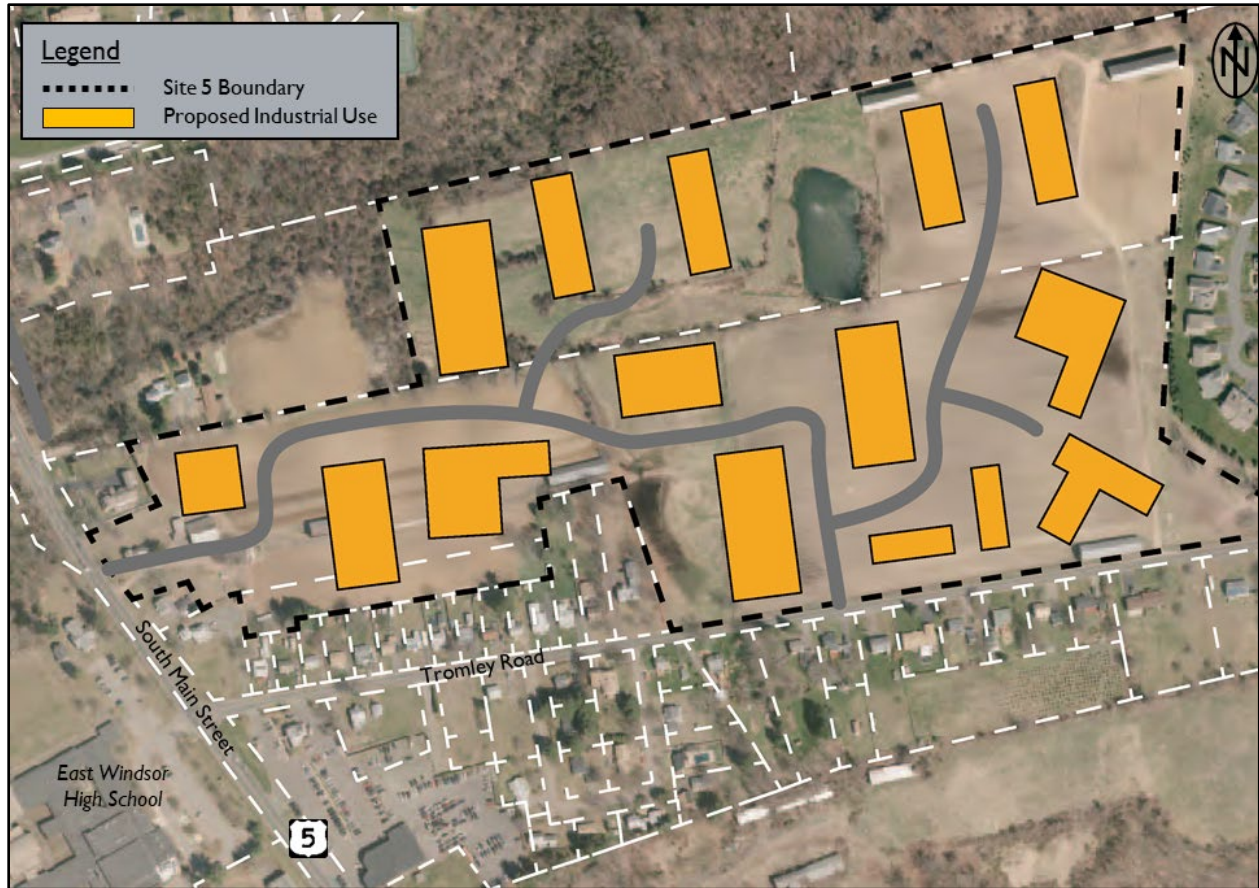
Site 2 - Restaurant



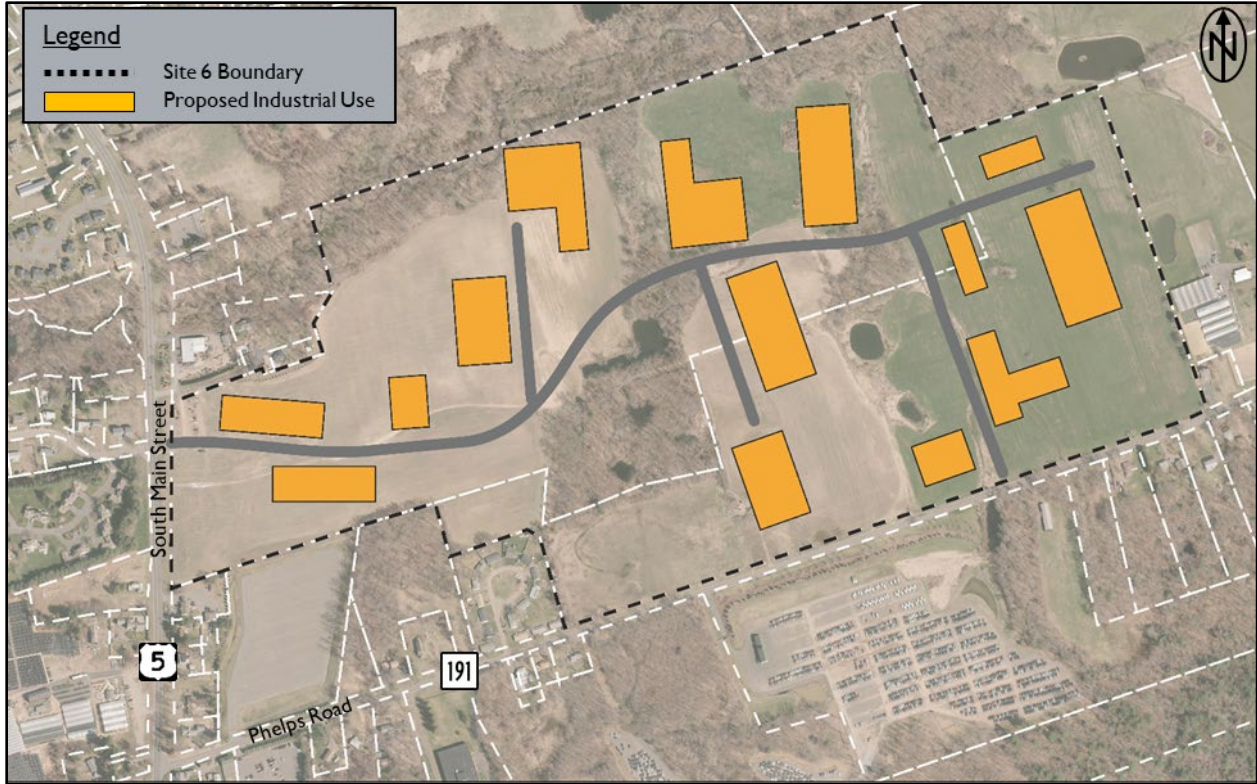
Site 3 – Mixed-use Commercial



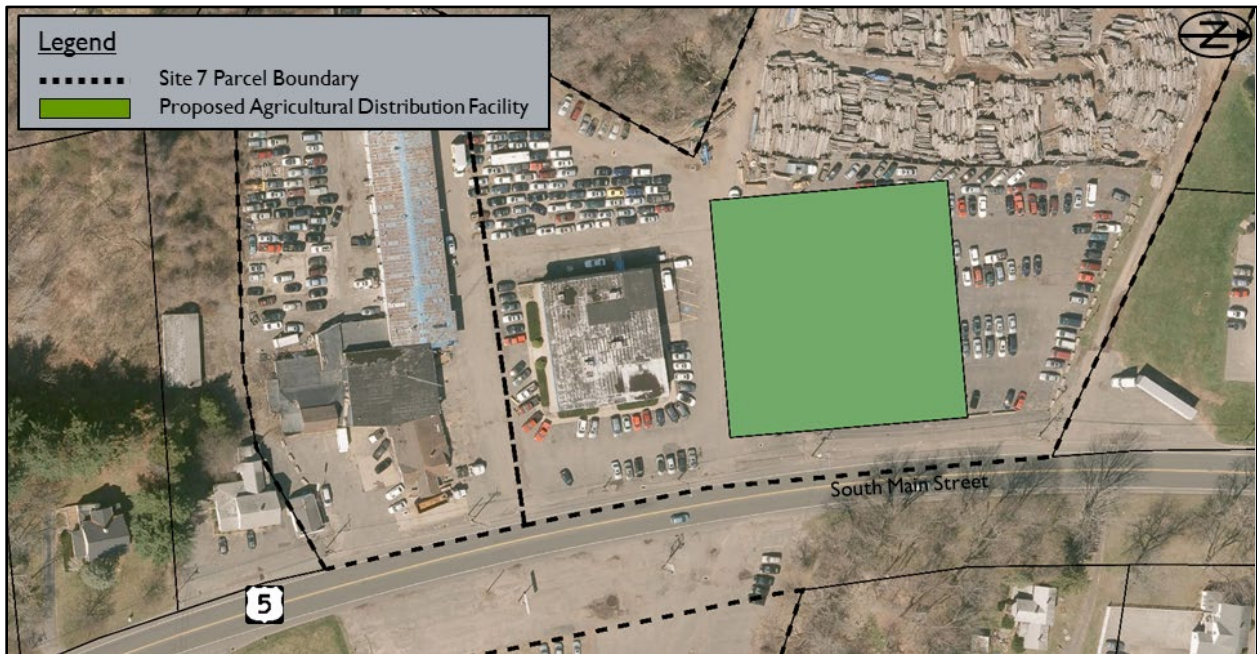
Site 4 – Mixed-use Commercial



Site 5 – Industrial Park



Site 6 – Industrial Park



Site 7 – Agricultural Distribution

Appendix 2 – Build Scenario Trip Generation

Site 1

Route 5 North of Route 140

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Remove Existing	Time Frame	Employees	ITE LUC
1	Hotel- 115 Rooms	48000	48000	2	2.5	4.15	B-2	No	5+ Years	70	310
2	Mixed Commercial, Suggested Restaurant	4000	5000	0.5	1.5	4.15	B-2	No	2+ Years	20	932
3	Mixed Commercial	1500	2000	0.5	1	4.15	B-2	No	2+ Years	4	816
Total		53500	55000	3	5					94	TOTAL
Average		54250 square feet		4 acres							

Daily	Trip Generation					
	AM			PM		
	Enter	Exit	Total	Enter	Exit	Total
871	32	22	54	30	30	60
505	25	20	45	27	17	44
18	1	1	2	2	3	5
1394	58	43	101	59	50	109

Site 2

Route 5 North of I-91 x44

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Remove Existing	Time Frame	Employees	ITE LUC
1	Mixed Commercial	4000	5000	0.5	1.5	8.23	HIFZ	Yes (not currently in use)	5+ Years	20	932
2	Large-Clinic	40000	40000	3.5	4	8.23	HIFZ	Yes (not currently in use)	5+ Years		
Total		44000	45000	4	5.5						
Average		4500 square feet		4.75 acres							

Daily	Trip Generation						
	AM			PM			
	Enter	Exit	Total	Enter	Exit	Total	
505	25	20	45	27	17	44	
TOTAL	505	25	20	45	27	17	44

Site 3

Route 5 at Main Street

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Employees	ITE LUC
1	Mixed Commercial (example Fast-casual Restaurant, ex. Chipotle)	2600	2600	0.5	1	0.43	B-2	25	932
2	Mixed Commercial (Office Use)	6000	6000	1	1.5	6.53	B-2	25	720
3	Mixed Commercial	2800	2800	0.5	1.5	6.53	B-2	8	820
4	Mixed Commercial, (example CVS Pharmacy)	10000	13000	1	2	0.81	B-1	20	881
5	Mixed Commercial (Service like Bank of America)	4000	6000	1	1	1.37	B-1	20	912
Total		25400	30400	4	7				
Average		27900 square feet		5.5 acres					

Daily	Trip Generation					
	AM			PM		
	Enter	Exit	Total	Enter	Exit	Total
292	14	12	26	15	10	25
209	14	4	18	6	16	22
106	2	1	3	5	6	11
1419	26	24	50	67	67	134
614	33	24	57	61	62	123
TOTAL	89	65	154	154	161	315

Site 4
Route 5 at Regina Drive

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Remove Existing	Employees	ITE LUC
1	Mixed Commercial	1500	2000	0.25	1	20.7	B-2	No (Assumes dividing parcel)	10	937
2	Mixed Commercial	1500	2000	0.25	1	20.7	B-2	No (Assumes dividing parcel)	4	816
3	Mixed Commercial (suggested, office or restaurant use)	6000	6000	1	1.5	20.7	B-2	No (Assumes dividing parcel)	30	931
Total		9000	10000	1.5	3.5					
Average		9500 square feet		2.5 acres						

Daily	Trip Generation					
	AM			PM		
	Enter	Exit	Total	Enter	Exit	Total
1641	91	87	178	43	44	87
18	1	1	2	2	3	5
503	2	2	4	31	16	47
2162	94	90	184	76	63	139

Site 5

Tromley Road Industrial Park

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Remove Existing
4-44	Industrial or Office Park	4000	50000	50	150	160	Agricultural Residential	All new development- Combine 2 parcels
Total		56000	700000	50	150			
Average		378000 square feet		100 acres				

Employees	ITE LUC	Trip Generation						
		Daily	AM			PM		
			Enter	Exit	Total	Enter	Exit	Total
650	130	2583	227	53	280	59	221	280
	TOTAL	2583	227	53	280	59	221	280

Site 6

Phelps Road Industrial Park

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Remove Existing
1-14	Industrial or Office Park	4000	50000	50	150	160	Agricultural Residential	All new development- Combine 2 parcels
Total		56000	700000	50	150			
Average		378000 square feet		100 acres				

Employees	ITE LUC	Trip Generation						
		Daily	AM			PM		
			Enter	Exit	Total	Enter	Exit	Total
650	130	2583	227	53	280	59	221	280
TOTAL		2583	227	53	280	59	221	280

Site 7

Route 5 South of Abbe Road

Parcel	Use	Square Footage (min)	Square Footage (max)	Acreage (min)	Acreage (max)	Acres Available	Existing Zone	Remove Existing	Employees	ITE LUC
1	Agricultural Distribution Facility	40000	40000	3	5	17.24 (Assumes Combining Parcels)	B-2	Yes	55	150
Total		40000	40000	3	5					
Average		40000 square feet		3.4 acres						

Daily	Trip Generation						
	AM			PM			
	Enter	Exit	Total	Enter	Exit	Total	
109	23	7	30	9	24	33	
TOTAL	109	23	7	30	9	24	33

Appendix 3 – Traffic Operational Analysis

Lanes, Volumes, Timings
3: N Rd. (CT-140)

07/07/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↗
Traffic Volume (vph)	642	0	0	1180	0	41
Future Volume (vph)	642	0	0	1180	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	5085	0	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	5085	0	0	3539	0	1611
Link Speed (mph)	35			35	30	
Link Distance (ft)	323			381	386	
Travel Time (s)	6.3			7.4	8.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	698	0	0	1283	0	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	698	0	0	1283	0	45
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)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	36.0%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: MMCT Casino/Eversource

07/07/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	0	154	20	10	20	44	312	0	10	400	44
Future Volume (vph)	110	0	154	20	10	20	44	312	0	10	400	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.946							0.985
Flt Protected	0.950				0.980		0.950			0.950		
Satd. Flow (prot)	1770	1583	0	0	1727	0	1770	1863	0	1770	1835	0
Flt Permitted	0.822				0.623		0.425			0.950		
Satd. Flow (perm)	1531	1583	0	0	1098	0	792	1863	0	1770	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		504			22							11
Link Speed (mph)		30			30			45				45
Link Distance (ft)		335			295			682				908
Travel Time (s)		7.6			6.7			10.3				13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	0	167	22	11	22	48	339	0	11	435	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	167	0	0	55	0	48	339	0	11	483	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				20
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		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	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2				6	

Lanes, Volumes, Timings
7: MMCT Casino/Eversource

07/07/2020

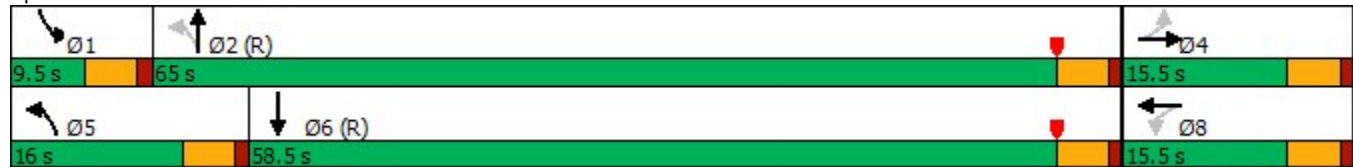


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		9.5	22.5		9.5	22.5	
Total Split (s)	15.5	15.5		15.5	15.5		16.0	65.0		9.5	58.5	
Total Split (%)	17.2%	17.2%		17.2%	17.2%		17.8%	72.2%		10.6%	65.0%	
Maximum Green (s)	11.0	11.0		11.0	11.0		11.5	60.5		5.0	54.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	10.2	10.2			10.2		70.2	68.9		5.2	64.3	
Actuated g/C Ratio	0.11	0.11			0.11		0.78	0.77		0.06	0.71	
v/c Ratio	0.69	0.27			0.38		0.07	0.24		0.11	0.37	
Control Delay	59.3	1.0			33.0		1.0	2.0		47.7	2.9	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	59.3	1.0			33.0		1.0	2.0		47.7	2.9	
LOS	E	A			C		A	A		D	A	
Approach Delay		25.4			33.0			1.9			3.9	
Approach LOS		C			C			A			A	
90th %ile Green (s)	11.0	11.0		11.0	11.0		6.7	60.5		5.0	58.8	
90th %ile Term Code	Max	Max		Max	Max		Gap	Coord		Max	Coord	
70th %ile Green (s)	11.0	11.0		11.0	11.0		6.3	70.0		0.0	59.2	
70th %ile Term Code	Max	Max		Hold	Hold		Gap	Coord		Skip	Coord	
50th %ile Green (s)	11.0	11.0		11.0	11.0		6.0	70.0		0.0	59.5	
50th %ile Term Code	Max	Max		Hold	Hold		Gap	Coord		Skip	Coord	
30th %ile Green (s)	10.6	10.6		10.6	10.6		0.0	70.4		0.0	70.4	
30th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
10th %ile Green (s)	7.6	7.6		7.6	7.6		0.0	73.4		0.0	73.4	
10th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
Stops (vph)	100	0			32		4	43		12	65	
Fuel Used(gal)	2	0			1		0	2		0	4	
CO Emissions (g/hr)	152	30			44		18	143		21	257	
NOx Emissions (g/hr)	29	6			9		3	28		4	50	
VOC Emissions (g/hr)	35	7			10		4	33		5	60	
Dilemma Vehicles (#)	0	0			0		0	14		0	11	
Queue Length 50th (ft)	66	0			17		3	20		6	48	
Queue Length 95th (ft)	#140	0			54		1	66		m14	m51	
Internal Link Dist (ft)		255			215			602			828	
Turn Bay Length (ft)							150			150		
Base Capacity (vph)	187	635			153		747	1425		102	1313	
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	0.26			0.36		0.06	0.24		0.11	0.37	

Intersection Summary

Area Type:	Other		
Cycle Length:	90		
Actuated Cycle Length:	90		
Offset:	2 (2%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow		
Natural Cycle:	45		
Control Type:	Actuated-Coordinated		
Maximum v/c Ratio:	0.69		
Intersection Signal Delay:	9.6	Intersection LOS:	A
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
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: 7: MMCT Casino/Eversource



Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø2
Lane Configurations								
Traffic Volume (vph)	87	171	796	114	226	1145		
Future Volume (vph)	87	171	796	114	226	1145		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	100		0	0			
Storage Lanes	1	1		0	1			
Taper Length (ft)	25				25			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95		
Frt		0.850	0.981					
Flt Protected	0.950				0.950			
Satd. Flow (prot)	1517	1495	3294	0	1770	3406		
Flt Permitted	0.950				0.950			
Satd. Flow (perm)	1517	1495	3294	0	1770	3406		
Right Turn on Red		Yes		Yes				
Satd. Flow (RTOR)		86	23					
Link Speed (mph)	25		45			45		
Link Distance (ft)	1258		264			430		
Travel Time (s)	34.3		4.0			6.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	19%	8%	8%	4%	2%	6%		
Adj. Flow (vph)	95	186	865	124	246	1245		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	95	186	989	0	246	1245		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Right	Left	Left		
Median Width(ft)	30		12			20		
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		9	15			
Number of Detectors	1	1	2		1	0		
Detector Template								
Leading Detector (ft)	34	34	100		34	0		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	34	34	6		34	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	8.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Prot	pm+ov	NA		Prot	NA		
Protected Phases	4	5	6		5	1 2 5	1	2

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø2
Permitted Phases		4						
Detector Phase	4	4	6		5			
Switch Phase								
Minimum Initial (s)	7.0	5.0	15.0		5.0		5.0	15.0
Minimum Split (s)	12.6	10.2	21.2		10.2		11.6	21.2
Total Split (s)	16.8	26.2	47.0		26.2		19.2	54.0
Total Split (%)	18.7%	29.1%	52.2%		29.1%		21%	60%
Maximum Green (s)	11.2	21.0	40.8		21.0		12.6	47.8
Yellow Time (s)	3.0	3.0	4.8		3.0		3.0	4.8
All-Red Time (s)	2.6	2.2	1.4		2.2		3.6	1.4
Lost Time Adjust (s)	0.0	0.0	0.0		0.0			
Total Lost Time (s)	5.6	5.2	6.2		5.2			
Lead/Lag		Lead	Lag		Lead		Lead	Lag
Lead-Lag Optimize?								
Vehicle Extension (s)	1.5	1.5	2.5		1.5		1.5	2.5
Recall Mode	None	None	C-Min		None		None	C-Min
Act Effct Green (s)	9.3	31.0	47.6		16.0	68.3		
Actuated g/C Ratio	0.10	0.34	0.53		0.18	0.76		
v/c Ratio	0.61	0.33	0.56		0.78	0.48		
Control Delay	54.6	11.9	20.9		64.9	1.8		
Queue Delay	0.0	0.0	0.0		0.0	0.0		
Total Delay	54.6	11.9	20.9		64.9	1.8		
LOS	D	B	C		E	A		
Approach Delay	26.3		20.9			12.2		
Approach LOS	C		C			B		
90th %ile Green (s)	11.2	21.0	40.8		21.0		12.2	48.2
90th %ile Term Code	Max	Max	Coord		Max		Gap	Coord
70th %ile Green (s)	11.4	19.0	42.6		19.0		9.8	50.4
70th %ile Term Code	Gap	Gap	Coord		Gap		Gap	Coord
50th %ile Green (s)	9.5	16.4	47.1		16.4		8.2	53.9
50th %ile Term Code	Gap	Gap	Coord		Gap		Gap	Coord
30th %ile Green (s)	7.6	13.8	51.6		13.8		6.6	57.4
30th %ile Term Code	Gap	Gap	Coord		Gap		Gap	Coord
10th %ile Green (s)	7.0	10.0	56.0		10.0		0.0	71.2
10th %ile Term Code	Min	Gap	Coord		Gap		Skip	Coord
Stops (vph)	82	63	621		223	83		
Fuel Used(gal)	2	2	21		6	5		
CO Emissions (g/hr)	155	174	1501		447	324		
NOx Emissions (g/hr)	30	34	292		87	63		
VOC Emissions (g/hr)	36	40	348		104	75		
Dilemma Vehicles (#)	0	0	83		0	59		
Queue Length 50th (ft)	52	39	189		152	26		
Queue Length 95th (ft)	101	79	292		229	40		
Internal Link Dist (ft)	1178		184			350		
Turn Bay Length (ft)		100						
Base Capacity (vph)	189	551	1753		413	2584		
Starvation Cap Reductn	0	0	0		0	189		
Spillback Cap Reductn	0	0	0		0	0		
Storage Cap Reductn	0	0	0		0	0		

Lanes, Volumes, Timings
 21: Thompson Rd

07/07/2020

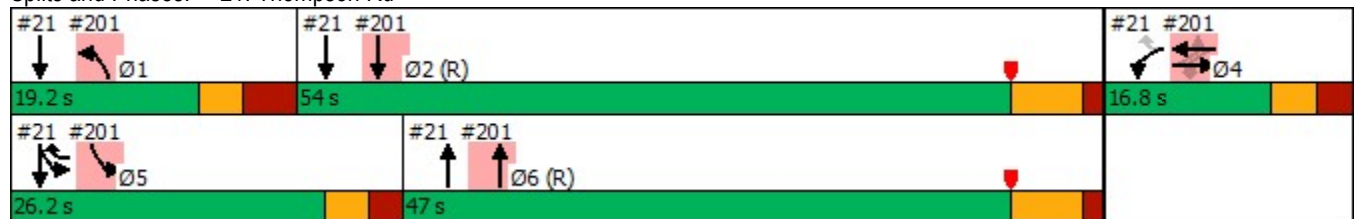


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø2
Reduced v/c Ratio	0.50	0.34	0.56		0.60	0.52		

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	16.8
Intersection LOS:	B
Intersection Capacity Utilization	58.2%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 21: Thompson Rd



Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↑↑		↖	↕	
Traffic Volume (vph)	29	0	114	1	0	3	67	898	2	5	1256	0
Future Volume (vph)	29	0	114	1	0	3	67	898	2	5	1256	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	700		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.899							
Flt Protected		0.950			0.988		0.950			0.950		
Satd. Flow (prot)	0	1719	1509	0	1688	0	1530	3374	0	1805	3406	0
Flt Permitted		0.755			0.935		0.950			0.950		
Satd. Flow (perm)	0	1366	1509	0	1597	0	1530	3374	0	1804	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182		182							
Link Speed (mph)		30			25			45				45
Link Distance (ft)		731			393			430				1397
Travel Time (s)		16.6			10.7			6.5				21.2
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	7%	0%	0%	0%	18%	7%	0%	0%	6%	0%
Adj. Flow (vph)	32	0	124	1	0	3	73	976	2	5	1365	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	124	0	4	0	73	978	0	5	1365	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	Right	Right
Median Width(ft)		0			0			24			30	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	2	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	29	29	20	29		34	0		29	306	
Trailing Detector (ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Position(ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Size(ft)	20	34	34	20	34		34	6		34	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)												300
Detector 2 Size(ft)												6
Detector 2 Type												Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)												0.0

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4								
Detector Phase	4	4	4	4	4		1			5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	12.6	12.6	12.6	12.6	12.6		11.6	21.2		10.2	21.2	
Total Split (s)	16.8	16.8	16.8	16.8	16.8		19.2	47.0		26.2	54.0	
Total Split (%)	18.7%	18.7%	18.7%	18.7%	18.7%		21.3%	52.2%		29.1%	60.0%	
Maximum Green (s)	11.2	11.2	11.2	11.2	11.2		12.6	40.8		21.0	47.8	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	4.8		3.0	4.8	
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6		3.6	1.4		2.2	1.4	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6	5.6		5.6		6.6	6.2		5.2	6.2	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Act Effct Green (s)		9.3	9.3		9.3		8.4	47.6		16.0	56.2	
Actuated g/C Ratio		0.10	0.10		0.10		0.09	0.53		0.18	0.62	
v/c Ratio		0.23	0.39		0.01		0.51	0.55		0.02	0.64	
Control Delay		40.1	5.4		0.0		53.3	8.4		30.2	12.8	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay		40.1	5.4		0.0		53.3	8.5		30.2	12.8	
LOS		D	A		A		D	A		C	B	
Approach Delay		12.5						11.6			12.9	
Approach LOS		B						B			B	
90th %ile Green (s)	11.2	11.2	11.2	11.2	11.2		12.2	40.8		21.0	48.2	
90th %ile Term Code	Max	Max	Max	Max	Max		Gap	Coord		Max	Coord	
70th %ile Green (s)	11.4	11.4	11.4	11.4	11.4		9.8	42.6		19.0	50.4	
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Coord		Gap	Coord	
50th %ile Green (s)	9.5	9.5	9.5	9.5	9.5		8.2	47.1		16.4	53.9	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Coord		Gap	Coord	
30th %ile Green (s)	7.6	7.6	7.6	7.6	7.6		6.6	51.6		13.8	57.4	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Coord		Gap	Coord	
10th %ile Green (s)	7.0	7.0	7.0	7.0	7.0		0.0	56.0		10.0	71.2	
10th %ile Term Code	Min	Min	Min	Min	Min		Skip	Coord		Gap	Coord	
Stops (vph)		28	6		0		66	212		6	824	
Fuel Used(gal)		1	1		0		2	7		0	25	
CO Emissions (g/hr)		39	56		1		121	468		11	1742	
NOx Emissions (g/hr)		8	11		0		24	91		2	339	
VOC Emissions (g/hr)		9	13		0		28	108		2	404	
Dilemma Vehicles (#)		0	0		0		0	55		0	45	
Queue Length 50th (ft)		17	0		0		44	79		3	177	
Queue Length 95th (ft)		44	18		0		m81	94		m3	m460	
Internal Link Dist (ft)		651			313			350			1317	
Turn Bay Length (ft)			100							700		
Base Capacity (vph)		170	348		359		214	1785		421	2127	
Starvation Cap Reductn		0	0		0		0	107		0	0	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



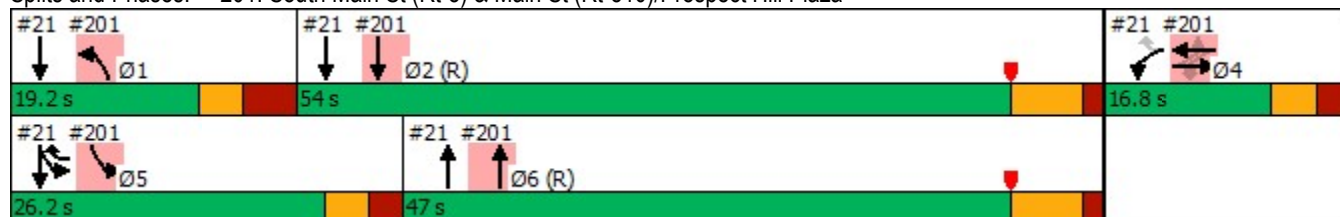
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.19	0.36		0.01		0.34	0.58		0.01	0.64	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	12.3
Intersection LOS:	B
Intersection Capacity Utilization	62.1%
ICU Level of Service	B
Analysis Period (min)	15












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

Splits and Phases: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza



Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	33	770	108	164	1131
Future Volume (vph)	30	33	770	108	164	1131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	8	12
Storage Length (ft)	0	0		250	75	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.930			0.850		
Fl _t Protected	0.977				0.950	
Satd. Flow (prot)	1652	0	1743	1615	1564	1776
Fl _t Permitted	0.977				0.222	
Satd. Flow (perm)	1652	0	1743	1615	366	1776
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	36			117		
Link Speed (mph)	30		45			45
Link Distance (ft)	1378		1115			1349
Travel Time (s)	31.3		16.9			20.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	5%	9%	0%	0%	7%
Adj. Flow (vph)	33	36	837	117	178	1229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	0	837	117	178	1229
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			8
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	1.20	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		0	0	0	0
Detector Template						
Leading Detector (ft)	25		0	0	0	0
Trailing Detector (ft)	-5		0	0	0	0
Detector 1 Position(ft)	-5		0	0	0	0
Detector 1 Size(ft)	30		6	20	20	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	Prot		NA	pm+ov	D.P+P	NA
Protected Phases	4		2	4	1	12
Permitted Phases				2	2	
Detector Phase	4					
Switch Phase						
Minimum Initial (s)	5.0		15.0	5.0	5.0	

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	9.4		22.8	9.4	9.0	
Total Split (s)	9.4		65.6	9.4	15.0	
Total Split (%)	10.4%		72.9%	10.4%	16.7%	
Maximum Green (s)	5.0		57.8	5.0	11.0	
Yellow Time (s)	3.0		4.8	3.0	3.0	
All-Red Time (s)	1.4		3.0	1.4	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.4		7.8	4.4	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		3.0	1.5	3.0	
Recall Mode	None		C-Max	None	Max	
Act Effect Green (s)	5.0		57.8	68.7	74.5	79.3
Actuated g/C Ratio	0.06		0.64	0.76	0.83	0.88
v/c Ratio	0.55		0.75	0.09	0.38	0.79
Control Delay	41.1		14.1	0.5	5.2	6.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	41.1		14.1	0.5	5.2	6.2
LOS	D		B	A	A	A
Approach Delay	41.1		12.4			6.1
Approach LOS	D		B			A
90th %ile Green (s)	5.0		57.8	5.0	11.0	
90th %ile Term Code	Max		Coord	Max	MaxR	
70th %ile Green (s)	5.0		57.8	5.0	11.0	
70th %ile Term Code	Max		Coord	Max	MaxR	
50th %ile Green (s)	5.0		57.8	5.0	11.0	
50th %ile Term Code	Max		Coord	Max	MaxR	
30th %ile Green (s)	5.0		57.8	5.0	11.0	
30th %ile Term Code	Max		Coord	Max	MaxR	
10th %ile Green (s)	0.0		57.8	0.0	20.4	
10th %ile Term Code	Skip		Coord	Skip	MaxR	
Stops (vph)	34		478	5	37	389
Fuel Used(gal)	1		17	1	4	33
CO Emissions (g/hr)	97		1154	87	310	2273
NOx Emissions (g/hr)	19		225	17	60	442
VOC Emissions (g/hr)	23		267	20	72	527
Dilemma Vehicles (#)	0		64	0	0	7
Queue Length 50th (ft)	18		280	2	2	110
Queue Length 95th (ft)	#71		419	4	m0	m156
Internal Link Dist (ft)	1298		1035			1269
Turn Bay Length (ft)				250	75	
Base Capacity (vph)	125		1119	1261	474	1564
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	0.55		0.75	0.09	0.38	0.79

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 205: Phelps Rd (CT-191)

07/07/2020

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 55 (61%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 9.6 Intersection LOS: A
 Intersection Capacity Utilization 70.7% ICU Level of Service C
 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: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings
209: I-91 Access/Egress/Newberry Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	307	942	35	352	35	628	245	57	60	284	331
Future Volume (vph)	148	307	942	35	352	35	628	245	57	60	284	331
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		290	0		200	400		0	205		130
Storage Lanes	1		2	0		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.88	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor								1.00		0.99		
Frt			0.850		0.988			0.972				0.850
Flt Protected	0.950	0.998			0.996		0.950			0.950		
Satd. Flow (prot)	1603	1762	2733	0	3242	0	3273	3249	0	1703	3374	1583
Flt Permitted	0.950	0.998			0.996		0.950			0.950		
Satd. Flow (perm)	1603	1762	2733	0	3242	0	3273	3249	0	1693	3374	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			697		9			34				177
Link Speed (mph)		45			35			45				45
Link Distance (ft)		734			813			1397				571
Travel Time (s)		11.1			15.8			21.2				8.7
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	0%	10%	15%	7%	7%	10%	6%	7%	2%
Adj. Flow (vph)	161	334	1024	38	383	38	683	266	62	65	309	360
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	145	350	1024	0	459	0	683	328	0	65	309	360
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)		33			12			32				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	0
Detector Template				Left								
Leading Detector (ft)	29	34	29	20	48		34	326		39	326	0
Trailing Detector (ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Position(ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Size(ft)	34	34	39	20	48		34	6		34	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								320			320	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	

Lanes, Volumes, Timings
209: I-91 Access/Egress/Newberry Rd

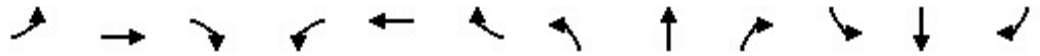
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	4	4	1	8	8		1	6		5	2	4
Permitted Phases			4								2	2
Detector Phase	4	4	4	8	8		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0	5.0	9.0	9.0		5.0	15.0		5.0	15.0	9.0
Minimum Split (s)	15.5	15.5	10.9	15.7	15.7		10.9	21.0		10.0	21.0	15.5
Total Split (s)	25.0	25.0	25.0	19.0	19.0		25.0	36.0		10.0	21.0	25.0
Total Split (%)	27.8%	27.8%	27.8%	21.1%	21.1%		27.8%	40.0%		11.1%	23.3%	27.8%
Maximum Green (s)	18.5	18.5	19.1	12.3	12.3		19.1	30.0		5.0	15.0	18.5
Yellow Time (s)	3.3	3.3	3.0	4.1	4.1		3.0	4.8		3.0	4.8	3.3
All-Red Time (s)	3.2	3.2	2.9	2.6	2.6		2.9	1.2		2.0	1.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	5.9		6.7		5.9	6.0		5.0	6.0	6.5
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	2.0	2.0	2.0		2.0	2.5		2.0	2.5	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	18.5	18.5	38.2		12.3		19.1	32.0		5.0	15.0	39.5
Actuated g/C Ratio	0.21	0.21	0.42		0.14		0.21	0.36		0.06	0.17	0.44
v/c Ratio	0.44	0.97	0.66		1.02		0.98	0.28		0.69	0.55	0.45
Control Delay	36.2	77.2	5.2		87.0		56.5	19.4		78.1	36.6	11.6
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	36.2	77.2	5.2		87.0		56.5	19.4		78.1	36.6	11.6
LOS	D	E	A		F		E	B		E	D	B
Approach Delay		24.8			87.0			44.5			28.0	
Approach LOS		C			F			D			C	
90th %ile Green (s)	18.5	18.5	19.1	12.3	12.3		19.1	30.0		5.0	15.0	18.5
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
70th %ile Green (s)	18.5	18.5	19.1	12.3	12.3		19.1	30.0		5.0	15.0	18.5
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
50th %ile Green (s)	18.5	18.5	19.1	12.3	12.3		19.1	30.0		5.0	15.0	18.5
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
30th %ile Green (s)	18.5	18.5	19.1	12.3	12.3		19.1	30.0		5.0	15.0	18.5
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
10th %ile Green (s)	18.5	18.5	19.1	12.3	12.3		19.1	40.0		0.0	15.0	18.5
10th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	Max
Stops (vph)	114	276	218		357		552	320		53	256	149
Fuel Used(gal)	3	10	8		13		20	8		2	6	4
CO Emissions (g/hr)	212	701	573		883		1383	553		128	444	270
NOx Emissions (g/hr)	41	136	111		172		269	108		25	86	53
VOC Emissions (g/hr)	49	162	133		205		320	128		30	103	63
Dilemma Vehicles (#)	0	16	0		21		0	5		0	12	0
Queue Length 50th (ft)	76	209	30		~140		198	87		38	92	105
Queue Length 95th (ft)	136	#389	53		#244		#304	87		#108	110	18
Internal Link Dist (ft)		654			733			1317			491	
Turn Bay Length (ft)	350		290				400			205		130
Base Capacity (vph)	329	362	1561		450		694	1176		94	562	794
Starvation Cap Reductn	0	0	0		0		0	0		0	0	0

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

07/07/2020

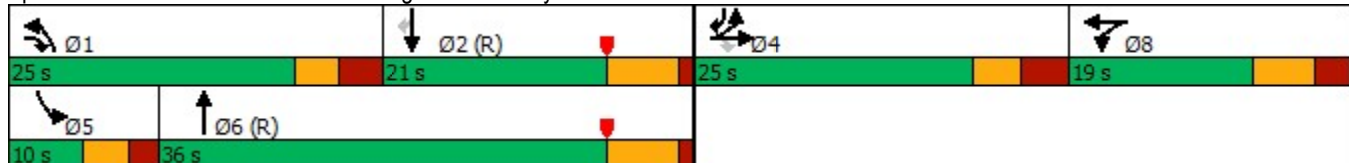


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0	0		0		0	0		0	0	0
Storage Cap Reductn	0	0	0		0		0	0		0	0	0
Reduced v/c Ratio	0.44	0.97	0.66		1.02		0.98	0.28		0.69	0.55	0.45

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	79 (88%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	38.4
Intersection LOS:	D
Intersection Capacity Utilization	79.4%
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.	

Splits and Phases: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	370	97	127	898	129	207	205	30	52	220	75
Future Volume (vph)	216	370	97	127	898	129	207	205	30	52	220	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	12	11	12	12
Storage Length (ft)	0		0	260		475	300		200	200		0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850		0.981				0.850		0.962	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	3172	1516	1504	3276	0	3083	1640	1442	1517	1605	0
Flt Permitted	0.121			0.511			0.950			0.950		
Satd. Flow (perm)	198	3172	1516	809	3276	0	3083	1640	1423	1511	1605	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		381			922			908			783	
Travel Time (s)		7.4			14.0			13.8			11.9	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	10%	3%	16%	4%	8%	6%	12%	12%	15%	8%	31%
Adj. Flow (vph)	235	402	105	138	976	140	225	223	33	57	239	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	402	105	138	1116	0	225	223	33	57	321	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)		11			11			20			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.04	1.00	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		12	15		12
Number of Detectors	1	1	0	1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	29	256	0	30	315		29	29	29	29	29	
Trailing Detector (ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	34	6	20	35	5		34	34	34	34	34	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	

Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.0	15.0	4.0	6.0	15.0		4.0	9.0	6.0	4.0	5.0	
Minimum Split (s)	11.8	20.5	8.0	12.6	20.5		8.0	15.8	12.6	8.0	11.8	
Total Split (s)	15.7	39.3	11.0	14.5	38.1		11.0	27.2	14.5	9.0	25.2	
Total Split (%)	17.4%	43.7%	12.2%	16.1%	42.3%		12.2%	30.2%	16.1%	10.0%	28.0%	
Maximum Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5		3.0	4.4	3.0	3.0	4.4	
All-Red Time (s)	2.8	1.0	1.0	3.6	1.0		1.0	2.4	3.6	1.0	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.5	4.0	6.6	5.5		4.0	6.8	6.6	4.0	6.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	2.5	1.5	1.5	2.5	
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	43.4	33.8	46.7	38.3	32.0		7.4	22.8	30.3	4.9	18.6	
Actuated g/C Ratio	0.48	0.38	0.52	0.43	0.36		0.08	0.25	0.34	0.05	0.21	
v/c Ratio	0.96	0.34	0.13	0.34	0.96		0.89	0.54	0.07	0.69	0.97	
Control Delay	70.8	21.9	9.7	14.4	47.1		74.6	32.5	14.2	81.7	80.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	70.8	21.9	9.7	14.4	47.1		74.6	32.5	14.2	81.7	80.1	
LOS	E	C	A	B	D		E	C	B	F	F	
Approach Delay		35.6			43.5			50.9			80.3	
Approach LOS		D			D			D			F	
90th %ile Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
90th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
70th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Hold	Max	Max	Max	
50th %ile Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
50th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Hold	Max	Max	Max	
30th %ile Green (s)	9.9	34.7	7.0	7.0	32.6		7.0	20.4	7.0	5.0	18.4	
30th %ile Term Code	Max	Coord	Max	Gap	Coord		Max	Hold	Gap	Max	Max	
10th %ile Green (s)	9.9	32.9	8.9	6.0	29.8		8.9	32.2	6.0	0.0	19.3	
10th %ile Term Code	Max	Coord	Gap	Min	Coord		Gap	Hold	Min	Skip	Max	
Stops (vph)	139	258	44	72	907		159	166	21	46	250	
Fuel Used(gal)	5	5	1	2	27		6	5	1	2	9	
CO Emissions (g/hr)	332	322	55	142	1907		443	324	37	119	658	
NOx Emissions (g/hr)	65	63	11	28	371		86	63	7	23	128	
VOC Emissions (g/hr)	77	75	13	33	442		103	75	9	28	153	
Dilemma Vehicles (#)	0	33	0	0	55		0	12	0	0	15	
Queue Length 50th (ft)	91	84	29	39	318		54	107	10	33	183	
Queue Length 95th (ft)	#240	135	44	71	#455		#132	190	m21	#95	#349	
Internal Link Dist (ft)		301			842			828			703	
Turn Bay Length (ft)				260			300		200	200		
Base Capacity (vph)	245	1197	775	410	1186		252	414	480	84	331	
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	0.96	0.34	0.14	0.34	0.94		0.89	0.54	0.07	0.68	0.97	

Lanes, Volumes, Timings
 210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	47.6
Intersection LOS:	D
Intersection Capacity Utilization:	81.4%
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: 210: N Rd. (CT-140)/N Rd. (CT140)

 Ø1	 Ø2 (R)	 Ø3	 Ø4
14.5 s	39.3 s	11 s	25.2 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
15.7 s	38.1 s	9 s	27.2 s

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

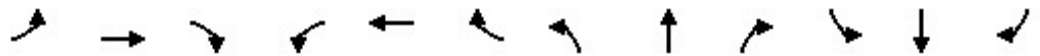
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗		↔			↕			↖	
Traffic Volume (vph)	0	0	3	346	0	14	0	980	44	28	960	3
Future Volume (vph)	0	0	3	346	0	14	0	980	44	28	960	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Fr _t			0.865		0.995			0.994				
Fl _t Protected					0.954						0.999	
Satd. Flow (prot)	0	0	1096	0	1779	0	0	3333	0	0	3337	0
Fl _t Permitted					0.954						0.894	
Satd. Flow (perm)	0	0	1096	0	1779	0	0	3333	0	0	2987	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		33			10			1	
Link Speed (mph)		30			30			50			45	
Link Distance (ft)		417			1615			1146			576	
Travel Time (s)		9.5			36.7			15.6			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	50%	1%	0%	11%	14%	8%	0%	6%	8%	50%
Adj. Flow (vph)	0	0	3	376	0	15	0	1065	48	30	1043	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	3	0	391	0	0	1113	0	0	1076	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			26			26	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			0	1	1			0		1	0	
Detector Template				Left						Left		
Leading Detector (ft)			0	20	25			0		20	0	
Trailing Detector (ft)			0	0	0			0		0	0	
Detector 1 Position(ft)			0	0	0			0		0	0	
Detector 1 Size(ft)			20	20	25			0		20	0	
Detector 1 Type			Extend	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Turn Type			Perm	Perm	NA			NA		Perm	NA	
Protected Phases					4			2			2	
Permitted Phases			4	4						2		
Detector Phase			4	4	4							
Switch Phase												
Minimum Initial (s)			9.0	9.0	9.0			15.0		15.0	15.0	
Minimum Split (s)			13.0	13.0	13.0			20.7		20.7	20.7	
Total Split (s)			26.0	26.0	26.0			64.0		64.0	64.0	
Total Split (%)			28.9%	28.9%	28.9%			71.1%		71.1%	71.1%	

Lanes, Volumes, Timings
 211: Crow Park Rd / Scantic Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)			22.0	22.0	22.0			58.3		58.3	58.3	
Yellow Time (s)			3.0	3.0	3.0			4.7		4.7	4.7	
All-Red Time (s)			1.0	1.0	1.0			1.0		1.0	1.0	
Lost Time Adjust (s)			0.0		0.0			0.0			0.0	
Total Lost Time (s)			4.0		4.0			5.7			5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)			3.0	3.0	3.0			3.0		3.0	3.0	
Recall Mode			None	None	None			C-Max		C-Max	C-Max	
Act Effct Green (s)			20.9		20.9			59.4			59.4	
Actuated g/C Ratio			0.23		0.23			0.66			0.66	
v/c Ratio			0.01		0.89			0.51			0.55	
Control Delay			0.0		54.6			8.9			6.1	
Queue Delay			0.0		0.0			0.0			0.0	
Total Delay			0.0		54.6			8.9			6.1	
LOS			A		D			A			A	
Approach Delay					54.6			8.9			6.1	
Approach LOS					D			A			A	
90th %ile Green (s)			22.0	22.0	22.0			58.3		58.3	58.3	
90th %ile Term Code			Max	Max	Max			Coord		Coord	Coord	
70th %ile Green (s)			22.0	22.0	22.0			58.3		58.3	58.3	
70th %ile Term Code			Max	Max	Max			Coord		Coord	Coord	
50th %ile Green (s)			22.0	22.0	22.0			58.3		58.3	58.3	
50th %ile Term Code			Max	Max	Max			Coord		Coord	Coord	
30th %ile Green (s)			21.6	21.6	21.6			58.7		58.7	58.7	
30th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
10th %ile Green (s)			17.0	17.0	17.0			63.3		63.3	63.3	
10th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
Stops (vph)			0		297			485			245	
Fuel Used(gal)			0		10			17			34	
CO Emissions (g/hr)			1		711			1171			2388	
NOx Emissions (g/hr)			0		138			228			465	
VOC Emissions (g/hr)			0		165			271			553	
Dilemma Vehicles (#)			0		0			57			55	
Queue Length 50th (ft)			0		196			155			65	
Queue Length 95th (ft)			0		#354			202			104	
Internal Link Dist (ft)		337			1535			1066			496	
Turn Bay Length (ft)												
Base Capacity (vph)			366		459			2202			1971	
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			0.01		0.85			0.51			0.55	
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											
Actuated Cycle Length:	90											
Offset:	0 (0%), Referenced to phase 2:NBSB, Start of Yellow											

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 14.6

Intersection LOS: B

Intersection Capacity Utilization 74.9%

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.

Splits and Phases: 211: Crow Park Rd / Scantic Rd



Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	25	13	14	14	53	177	17	776	10	41	1267	30
Future Volume (vph)	25	13	14	14	53	177	17	776	10	41	1267	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		80	0		30	120		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		1.00							
Frt			0.850			0.850		0.998			0.996	
Flt Protected		0.968			0.990		0.950			0.950		
Satd. Flow (prot)	0	1758	1313	0	1881	1400	1703	1736	0	1687	1801	0
Flt Permitted		0.757			0.918		0.069			0.211		
Satd. Flow (perm)	0	1368	1276	0	1741	1400	124	1736	0	375	1801	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						192		1				2
Link Speed (mph)		25			35			45				45
Link Distance (ft)		551			1467			2227				2334
Travel Time (s)		15.0			28.6			33.7				35.4
Confl. Peds. (#/hr)	1		1	1								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	0%	23%	0%	0%	0%	6%	9%	25%	7%	5%	7%
Adj. Flow (vph)	27	14	15	15	58	192	18	843	11	45	1377	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	15	0	73	192	18	854	0	45	1410	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	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	3		1	3	
Detector Template	Left			Left								
Leading Detector (ft)	20	20	15	20	25	20	33	326		33	326	
Trailing Detector (ft)	0	0	0	0	0	0	-5	0		-5	0	
Detector 1 Position(ft)	0	0	0	0	0	0	-5	0		-5	0	
Detector 1 Size(ft)	20	20	15	20	25	20	38	6		38	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	2.0	8.0	0.0	8.0	8.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								144			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

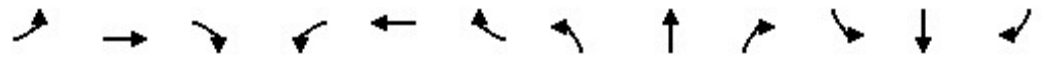


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	
Detector 3 Position(ft)								320			320	
Detector 3 Size(ft)								6			6	
Detector 3 Type								Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Detector Phase	4	4	4	4	4	4	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	15.0		5.0	15.0	
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	8.0	22.8		9.0	22.8	
Total Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	8.0	49.0		9.0	50.0	
Total Split (%)	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	8.9%	54.4%		10.0%	55.6%	
Maximum Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.0	41.2		5.0	42.2	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0	4.8		3.0	4.8	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	3.0		1.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	3.0	7.8		4.0	7.8	
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		5.4	5.4		5.4	5.4	70.1	62.6		71.2	65.2	
Actuated g/C Ratio		0.06	0.06		0.06	0.06	0.78	0.70		0.79	0.72	
v/c Ratio		0.50	0.20		0.70	0.73	0.10	0.71		0.12	1.08	
Control Delay		62.4	46.4		75.5	23.6	5.1	14.5		4.4	56.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		62.4	46.4		75.5	23.6	5.1	14.5		4.4	56.2	
LOS		E	D		E	C	A	B		A	E	
Approach Delay		58.1			37.9			14.3			54.6	
Approach LOS		E			D			B			D	
90th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.1	42.0		6.2	44.1	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Coord		Gap	Coord	
70th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.3	63.2		5.0	64.9	
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Coord		Min	Coord	
50th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	0.0	63.2		5.0	72.2	
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Min	Coord	
30th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	0.0	72.2		0.0	72.2	
30th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Skip	Coord	
10th %ile Green (s)	5.2	5.2	5.2	5.2	5.2	5.2	0.0	72.5		0.0	72.5	
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Skip	Coord		Skip	Coord	
Stops (vph)		37	16		59	24	6	341		11	504	
Fuel Used(gal)		1	0		2	3	0	25		1	41	
CO Emissions (g/hr)		56	18		153	203	34	1734		56	2848	

Lane Group	Ø3
Detector 2 Extend (s)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	24%
Maximum Green (s)	18.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	9.0
Pedestrian Calls (#/hr)	10
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)	16.0
90th %ile Term Code	Ped
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

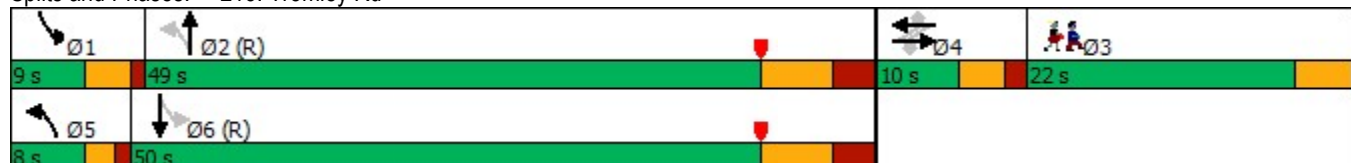


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		11	4		30	40	7	337		11	554	
VOC Emissions (g/hr)		13	4		35	47	8	402		13	660	
Dilemma Vehicles (#)		0	0		3	0	0	28		0	78	
Queue Length 50th (ft)		23	8		42	0	1	215		4	380	
Queue Length 95th (ft)		#66	28		#111	#90	m5	#751		m9	m#1133	
Internal Link Dist (ft)		471			1387			2147			2254	
Turn Bay Length (ft)			80			30	120			200		
Base Capacity (vph)		83	77		106	265	185	1208		372	1305	
Starvation Cap Reductn		0	0		0	0	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		0.49	0.19		0.69	0.72	0.10	0.71		0.12	1.08	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 83 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 39.7
 Intersection LOS: D
 Intersection Capacity Utilization 90.8%
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 213: Tromley Rd



Lane Group	Ø3
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
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	

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↘			↕	↗
Traffic Volume (vph)	64	6	79	7	10	7	49	941	4	7	905	102
Future Volume (vph)	64	6	79	7	10	7	49	941	4	7	905	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	8	12	12	8	12	8
Storage Length (ft)	0		30	0		0	50		0	0		50
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.960			0.999				0.850
Flt Protected		0.957			0.985		0.950					
Satd. Flow (prot)	0	1667	1386	0	1710	0	1384	1774	0	0	1754	1386
Flt Permitted		0.726			0.894		0.234				0.992	
Satd. Flow (perm)	0	1264	1386	0	1552	0	341	1774	0	0	1740	1386
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86		8			1				55
Link Speed (mph)		25			35			45				45
Link Distance (ft)		801			1499			4074				1892
Travel Time (s)		21.8			29.2			61.7				28.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	0%	1%	0%	0%	17%	13%	7%	0%	50%	8%	1%
Adj. Flow (vph)	70	7	86	8	11	8	53	1023	4	8	984	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	86	0	27	0	53	1027	0	0	992	111
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)		10			0			8				8
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		0	0		0	0	1
Detector Template	Left		Right	Left								Right
Leading Detector (ft)	20	20	20	20	29		0	0		0	0	20
Trailing Detector (ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Size(ft)	20	20	20	20	34		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2				2
Permitted Phases	4		4	4			2			2		2
Detector Phase	4	4	4	4	4							2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		15.0	15.0		15.0	15.0	15.0

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.3	9.3	9.3	9.3	9.3		22.0	22.0		22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0		75.0	75.0		75.0	75.0	75.0
Total Split (%)	16.7%	16.7%	16.7%	16.7%	16.7%		83.3%	83.3%		83.3%	83.3%	83.3%
Maximum Green (s)	10.7	10.7	10.7	10.7	10.7		68.0	68.0		68.0	68.0	68.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.8	4.8		4.8	4.8	4.8
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2		2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		4.3	4.3		4.3		7.0	7.0			7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		8.6	8.6		8.6		73.3	73.3			73.3	73.3
Actuated g/C Ratio		0.10	0.10		0.10		0.81	0.81			0.81	0.81
v/c Ratio		0.64	0.41		0.17		0.19	0.71			0.70	0.10
Control Delay		61.8	14.8		30.9		4.7	17.5			3.5	0.6
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		61.8	14.8		30.9		4.7	17.5			3.5	0.6
LOS		E	B		C		A	B			A	A
Approach Delay		37.0			30.9			16.8			3.2	
Approach LOS		D			C			B			A	
90th %ile Green (s)	10.7	10.7	10.7	10.7	10.7		68.0	68.0		68.0	68.0	68.0
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
70th %ile Green (s)	10.7	10.7	10.7	10.7	10.7		68.0	68.0		68.0	68.0	68.0
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
50th %ile Green (s)	9.4	9.4	9.4	9.4	9.4		69.3	69.3		69.3	69.3	69.3
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	Coord
30th %ile Green (s)	7.4	7.4	7.4	7.4	7.4		71.3	71.3		71.3	71.3	71.3
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		83.0	83.0		83.0	83.0	83.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Coord	Coord		Coord	Coord	Coord
Stops (vph)		67	17		19		13	610			136	5
Fuel Used(gal)		2	1		1		2	39			14	1
CO Emissions (g/hr)		114	59		40		118	2759			948	93
NOx Emissions (g/hr)		22	11		8		23	537			184	18
VOC Emissions (g/hr)		26	14		9		27	640			220	22
Dilemma Vehicles (#)		0	0		1		0	46			19	0
Queue Length 50th (ft)		43	0		10		6	339			47	0
Queue Length 95th (ft)		#88	42		35		m16	m396			106	m2
Internal Link Dist (ft)		721			1419			3994			1812	
Turn Bay Length (ft)			30				50					50
Base Capacity (vph)		150	240		191		277	1445			1417	1139
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		0.51	0.36		0.14		0.19	0.71			0.70	0.10

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings

214: DD/Abbe Rd

07/07/2020

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 12.1

Intersection LOS: B

Intersection Capacity Utilization 81.7%

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: 214: DD/Abbe Rd



Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗		↖	↗	
Traffic Volume (vph)	30	5	129	5	5	5	91	885	2	5	1204	13
Future Volume (vph)	30	5	129	5	5	5	91	885	2	5	1204	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		300	0		0	150		0	320		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.955							0.998
Flt Protected		0.958			0.984		0.950			0.950		
Satd. Flow (prot)	0	1820	1599	0	1785	0	1719	1760	0	1805	1773	0
Flt Permitted		0.743			0.874		0.060			0.233		
Satd. Flow (perm)	0	1412	1599	0	1586	0	109	1760	0	443	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140		5							1
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1143			286			2334			1410	
Travel Time (s)		26.0			6.5			35.4			21.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	5%	8%	0%	0%	7%	0%
Adj. Flow (vph)	33	5	140	5	5	5	99	962	2	5	1309	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	140	0	15	0	99	964	0	5	1323	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	0	
Detector Template	Left		Right	Left								
Leading Detector (ft)	20	45	20	20	45		15	0		15	0	
Trailing Detector (ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	50	20	20	50		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4			6			2		
Detector Phase	4	4	4	4	4		1			5		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.1	10.1	10.1	10.1	10.1		9.0	22.3		9.0	22.3	

Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	10.9	10.9	10.9	10.9	10.9		9.0	70.1		9.0	70.1	
Total Split (%)	12.1%	12.1%	12.1%	12.1%	12.1%		10.0%	77.9%		10.0%	77.9%	
Maximum Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	62.8		5.0	62.8	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8		1.0	2.5		1.0	2.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.1	5.1		5.1		4.0	7.3		4.0	7.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		5.5	5.5		5.5		74.6	70.3		72.2	64.9	
Actuated g/C Ratio		0.06	0.06		0.06		0.83	0.78		0.80	0.72	
v/c Ratio		0.44	0.61		0.15		0.55	0.70		0.01	1.04	
Control Delay		57.0	19.6		35.7		21.6	11.6		0.4	49.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		57.0	19.6		35.7		21.6	11.6		0.4	49.4	
LOS		E	B		D		C	B		A	D	
Approach Delay		27.6			35.7			12.6			49.2	
Approach LOS		C			D			B			D	
90th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	62.8		5.0	62.8	
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	71.8		0.0	62.8	
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
50th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	71.8		0.0	62.8	
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
30th %ile Green (s)	5.2	5.2	5.2	5.2	5.2		5.0	72.4		0.0	63.4	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Min	Coord		Skip	Coord	
10th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		0.0	72.6		0.0	72.6	
10th %ile Term Code	Min	Min	Min	Min	Min		Skip	Coord		Skip	Coord	
Stops (vph)		35	25		13		56	549		0	862	
Fuel Used(gal)		1	2		0		2	22		0	36	
CO Emissions (g/hr)		64	126		14		173	1563		4	2530	
NOx Emissions (g/hr)		12	25		3		34	304		1	492	
VOC Emissions (g/hr)		15	29		3		40	362		1	586	
Dilemma Vehicles (#)		0	0		0		0	40		0	46	
Queue Length 50th (ft)		21	0		5		8	355		0	~862	
Queue Length 95th (ft)		#54	#58		25		m24	713		m0	#330	
Internal Link Dist (ft)		1063			206			2254			1330	
Turn Bay Length (ft)			300				150			320		
Base Capacity (vph)		90	234		106		179	1374		430	1278	
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		0.42	0.60		0.14		0.55	0.70		0.01	1.04	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	4	2	2	63	0	28	5	950	57	14	949	1
Future Volume (vph)	4	2	2	63	0	28	5	950	57	14	949	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	8	12	12	8	12	12
Storage Length (ft)	0		0	0		50	50		0	50		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.98						
Frt		0.966				0.850		0.992				
Flt Protected		0.976			0.950		0.950			0.950		
Satd. Flow (prot)	0	1780	0	0	1612	1400	1564	1744	0	1448	1776	0
Flt Permitted		0.851			0.752		0.225			0.199		
Satd. Flow (perm)	0	1549	0	0	1269	1365	371	1744	0	303	1776	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				41		11				
Link Speed (mph)		30			35			45				45
Link Distance (ft)		411			816			1892				693
Travel Time (s)		9.3			15.9			28.7				10.5
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	12%	0%	0%	0%	8%	9%	8%	7%	0%
Adj. Flow (vph)	4	2	2	68	0	30	5	1033	62	15	1032	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	68	30	5	1095	0	15	1033	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			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.00	1.00	1.20	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	0	0		0	0	
Detector Template	Left			Left		Right						
Leading Detector (ft)	20	12		20	36	20	0	0		0	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	12		20	36	20	20	36		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0	9.0	21.4	21.4		21.4	21.4	
Total Split (s)	13.0	13.0		13.0	13.0	13.0	77.0	77.0		77.0	77.0	
Total Split (%)	14.4%	14.4%		14.4%	14.4%	14.4%	85.6%	85.6%		85.6%	85.6%	
Maximum Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	6.4	6.4		6.4	6.4	
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		7.8			7.8	7.8	74.9	74.9		74.9	74.9	
Actuated g/C Ratio		0.09			0.09	0.09	0.83	0.83		0.83	0.83	
v/c Ratio		0.06			0.62	0.19	0.02	0.75		0.06	0.70	
Control Delay		33.9			64.2	11.9	3.2	8.9		0.5	2.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		33.9			64.2	11.9	3.2	8.9		0.5	2.0	
LOS		C			E	B	A	A		A	A	
Approach Delay		33.9			48.2			8.9			2.0	
Approach LOS		C			D			A			A	
90th %ile Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	8.9	8.9		8.9	8.9	8.9	70.7	70.7		70.7	70.7	
50th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Coord	Coord		Coord	Coord	
30th %ile Green (s)	7.0	7.0		7.0	7.0	7.0	72.6	72.6		72.6	72.6	
30th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Coord	Coord		Coord	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	83.6	83.6		83.6	83.6	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Coord	Coord		Coord	Coord	
Stops (vph)		8			58	7	2	434		0	14	
Fuel Used(gal)		0			2	0	0	20		0	9	
CO Emissions (g/hr)		8			114	20	6	1369		8	604	
NOx Emissions (g/hr)		2			22	4	1	266		2	118	
VOC Emissions (g/hr)		2			26	5	1	317		2	140	
Dilemma Vehicles (#)		0			3	0	0	66		0	22	
Queue Length 50th (ft)		3			38	0	0	119		0	5	
Queue Length 95th (ft)		17			#90	20	m1	567		m0	16	
Internal Link Dist (ft)		331			736			1812			613	
Turn Bay Length (ft)						50	50			50		
Base Capacity (vph)		156			126	173	309	1453		252	1478	
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		0.05			0.54	0.17	0.02	0.75		0.06	0.70	

Lanes, Volumes, Timings
 216: Stoughton Rd

07/07/2020

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 7.5 Intersection LOS: A
 Intersection Capacity Utilization 73.8% 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: 216: Stoughton Rd



Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖	↖
Traffic Volume (vph)	0	247	310	386	672	0	0	0	0	191	0	206
Future Volume (vph)	0	247	310	386	672	0	0	0	0	191	0	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		50
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925										0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	1723	0	1770	1863	0	0	0	0	0	1770	1583
Flt Permitted				0.250							0.950	
Satd. Flow (perm)	0	1723	0	466	1863	0	0	0	0	0	1770	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86										154
Link Speed (mph)		30			35			30				30
Link Distance (ft)		684			478			428				360
Travel Time (s)		15.5			9.3			9.7				8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	268	337	420	730	0	0	0	0	208	0	224
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	605	0	420	730	0	0	0	0	0	208	224
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			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0					1	1	1
Detector Template										Left		
Leading Detector (ft)		0		36	0					20	15	15
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		36	6					20	15	15
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	6.0	6.0
Turn Type		NA		D,P+P	NA					Split	NA	Prot
Protected Phases		2		3	3 2					4	4	4
Permitted Phases				2								
Detector Phase				3						4	4	4
Switch Phase												
Minimum Initial (s)		20.0		5.0						5.0	5.0	5.0
Minimum Split (s)		25.5		9.9						10.3	10.3	10.3
Total Split (s)		43.0		27.0						20.0	20.0	20.0

Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)		47.8%		30.0%						22.2%	22.2%	22.2%
Maximum Green (s)		37.5		22.1						14.7	14.7	14.7
Yellow Time (s)		4.5		3.9						3.0	3.0	3.0
All-Red Time (s)		1.0		1.0						2.3	2.3	2.3
Lost Time Adjust (s)		0.0		0.0							0.0	0.0
Total Lost Time (s)		5.5		4.9							5.3	5.3
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		2.0						3.0	3.0	3.0
Recall Mode		C-Max		None						None	None	None
Act Effct Green (s)		43.0		60.8	65.7						14.1	14.1
Actuated g/C Ratio		0.48		0.68	0.73						0.16	0.16
v/c Ratio		0.70		0.75	0.54						0.75	0.59
Control Delay		22.6		16.8	7.1						53.9	19.1
Queue Delay		0.0		0.2	0.1						0.0	0.0
Total Delay		22.6		17.0	7.1						53.9	19.1
LOS		C		B	A						D	B
Approach Delay		22.6			10.7						35.8	
Approach LOS		C			B						D	
90th %ile Green (s)		37.5		22.1						14.7	14.7	14.7
90th %ile Term Code		Coord		Max						Max	Max	Max
70th %ile Green (s)		37.5		21.2						15.6	15.6	15.6
70th %ile Term Code		Coord		Gap						Max	Max	Max
50th %ile Green (s)		40.1		18.1						16.1	16.1	16.1
50th %ile Term Code		Coord		Gap						Gap	Gap	Gap
30th %ile Green (s)		45.7		14.8						13.8	13.8	13.8
30th %ile Term Code		Coord		Gap						Gap	Gap	Gap
10th %ile Green (s)		54.1		9.8						10.4	10.4	10.4
10th %ile Term Code		Coord		Gap						Gap	Gap	Gap
Stops (vph)		382		220	177						173	70
Fuel Used(gal)		8		4	5						4	2
CO Emissions (g/hr)		534		301	323						251	123
NOx Emissions (g/hr)		104		59	63						49	24
VOC Emissions (g/hr)		124		70	75						58	29
Dilemma Vehicles (#)		0		0	77						0	0
Queue Length 50th (ft)		238		68	118						111	35
Queue Length 95th (ft)		#406		71	114						#212	107
Internal Link Dist (ft)		604			398			348			280	
Turn Bay Length (ft)												50
Base Capacity (vph)		868		660	1359						298	394
Starvation Cap Reductn		0		23	63						0	0
Spillback Cap Reductn		0		0	0						0	0
Storage Cap Reductn		0		0	0						0	0
Reduced v/c Ratio		0.70		0.66	0.56						0.70	0.57

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Lanes, Volumes, Timings

219: Bridge St (CT-140)

07/07/2020

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 19.0

Intersection LOS: B

Intersection Capacity Utilization 77.0%

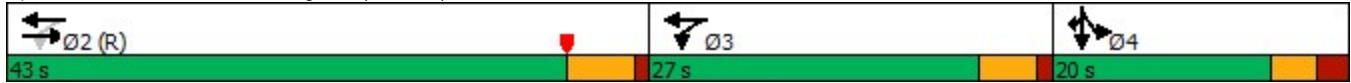
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕↕			
Traffic Volume (vph)	164	274	0	0	946	234	112	0	368	0	0	0
Future Volume (vph)	164	274	0	0	946	234	112	0	368	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		300	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.970				0.850			
Flt Protected		0.982						0.950				
Satd. Flow (prot)	0	3476	0	0	3433	0	0	1770	2787	0	0	0
Flt Permitted		0.535						0.950				
Satd. Flow (perm)	0	1893	0	0	3433	0	0	1770	2787	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					53				400			
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		478			323			585			321	
Travel Time (s)		9.3			6.3			13.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	298	0	0	1028	254	122	0	400	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	476	0	0	1282	0	0	122	400	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)		0			6			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			0		1	1	1			
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			0		20	6	21			
Trailing Detector (ft)	0	0			0		0	0	-3			
Detector 1 Position(ft)	0	0			0		0	0	-3			
Detector 1 Size(ft)	20	6			6		20	6	24			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	9.0			
Detector 2 Position(ft)		94										
Detector 2 Size(ft)		6										
Detector 2 Type		Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)		0.0										
Turn Type	custom	NA			NA		Split	NA	custom			
Protected Phases	3	2 3			2 5		4	4	4 5			
Permitted Phases	2											

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Lane Group	Ø2	Ø5
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	5
Permitted Phases		

Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3					4	4	5			
Switch Phase												
Minimum Initial (s)	5.0						7.0	7.0				
Minimum Split (s)	10.4						12.1	12.1				
Total Split (s)	16.4						18.4	18.4				
Total Split (%)	18.2%						20.4%	20.4%				
Maximum Green (s)	11.0						13.3	13.3				
Yellow Time (s)	4.1						3.0	3.0				
All-Red Time (s)	1.3						2.1	2.1				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.1				
Lead/Lag	Lag						Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5						3.0	3.0				
Recall Mode	Max						None	None				
Act Effct Green (s)		50.3			51.1			10.9	21.6			
Actuated g/C Ratio		0.56			0.57			0.12	0.24			
v/c Ratio		0.39			0.65			0.57	0.41			
Control Delay		13.9			8.2			47.4	4.2			
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		13.9			8.2			47.4	4.2			
LOS		B			A			D	A			
Approach Delay		13.9			8.2			14.3				
Approach LOS		B			A			B				
90th %ile Green (s)	11.0						13.3	13.3				
90th %ile Term Code	MaxR						Max	Max				
70th %ile Green (s)	11.0						13.3	13.3				
70th %ile Term Code	MaxR						Max	Max				
50th %ile Green (s)	11.0						11.5	11.5				
50th %ile Term Code	MaxR						Gap	Gap				
30th %ile Green (s)	11.0						9.6	9.6				
30th %ile Term Code	MaxR						Gap	Gap				
10th %ile Green (s)	11.0						7.0	7.0				
10th %ile Term Code	MaxR						Min	Min				
Stops (vph)		263			440			103	33			
Fuel Used(gal)		5			8			2	2			
CO Emissions (g/hr)		330			561			151	152			
NOx Emissions (g/hr)		64			109			29	30			
VOC Emissions (g/hr)		77			130			35	35			
Dilemma Vehicles (#)		75			78			0	0			
Queue Length 50th (ft)		67			95			66	0			
Queue Length 95th (ft)		128			m102			119	36			
Internal Link Dist (ft)		398			243			505			241	
Turn Bay Length (ft)									300			
Base Capacity (vph)		1231			1970			261	1018			
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		0.39			0.65			0.47	0.39			

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Lane Group	Ø2	Ø5
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	5.0
Minimum Split (s)	21.5	10.7
Total Split (s)	42.8	12.4
Total Split (%)	48%	14%
Maximum Green (s)	36.3	6.7
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	1.2
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	1.5
Recall Mode	C-Max	None
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)	38.0	5.0
90th %ile Term Code	Coord	Min
70th %ile Green (s)	38.0	5.0
70th %ile Term Code	Coord	Min
50th %ile Green (s)	39.8	5.0
50th %ile Term Code	Coord	Min
30th %ile Green (s)	41.7	5.0
30th %ile Term Code	Coord	Min
10th %ile Green (s)	44.3	5.0
10th %ile Term Code	Coord	Min
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
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		

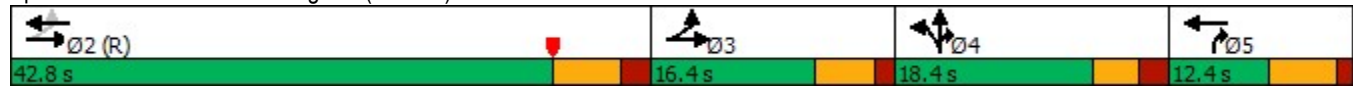
Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	32 (36%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization	67.4%
ICU Level of Service	C
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 220: Bridge St (CT-140)



Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	6	41	4	6	47	10	16	862	104	184	954	23
Future Volume (vph)	6	41	4	6	47	10	16	862	104	184	954	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	200		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990				0.850		0.984			0.997	
Flt Protected		0.994			0.994			0.999			0.992	
Satd. Flow (prot)	0	1572	0	0	1774	1482	0	3278	0	0	3278	0
Flt Permitted		0.945			0.969			0.922			0.607	
Satd. Flow (perm)	0	1495	0	0	1729	1482	0	3026	0	0	2006	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				46		48			7	
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		484			1094			527			557	
Travel Time (s)		13.2			29.8			8.0			8.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	8%	0%	10%	6%	9%	8%	9%	2%	3%	10%	11%
Adj. Flow (vph)	7	45	4	7	51	11	17	937	113	200	1037	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	58	11	0	1067	0	0	1262	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	0		1	0	
Detector Template	Left			Left		Right	Left			Left		
Leading Detector (ft)	20	15		20	20	20	20	0		20	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	15		20	20	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	11.7	11.7		11.7	11.7	11.7	21.8	21.8		21.8	21.8	

Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	12.0	12.0		12.0	12.0	12.0	78.0	78.0		78.0	78.0	
Total Split (%)	13.3%	13.3%		13.3%	13.3%	13.3%	86.7%	86.7%		86.7%	86.7%	
Maximum Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.7	1.7		1.7	1.7	1.7	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		4.7			4.7	4.7		6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)		7.2			7.2	7.2		75.0			75.0	
Actuated g/C Ratio		0.08			0.08	0.08		0.83			0.83	
v/c Ratio		0.46			0.42	0.07		0.42			0.75	
Control Delay		50.5			49.2	0.8		2.9			3.9	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		50.5			49.2	0.8		2.9			3.9	
LOS		D			D	A		A			A	
Approach Delay		50.5			41.5			2.9			3.9	
Approach LOS		D			D			A			A	
90th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
50th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
30th %ile Green (s)	7.0	7.0		7.0	7.0	7.0	71.5	71.5		71.5	71.5	
30th %ile Term Code	Min	Min		Min	Min	Min	Coord	Coord		Coord	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	83.2	83.2		83.2	83.2	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Coord	Coord		Coord	Coord	
Stops (vph)		48			50	0		204			380	
Fuel Used(gal)		1			1	0		11			18	
CO Emissions (g/hr)		65			85	7		762			1275	
NOx Emissions (g/hr)		13			17	1		148			248	
VOC Emissions (g/hr)		15			20	2		176			295	
Dilemma Vehicles (#)		0			0	0		60			20	
Queue Length 50th (ft)		29			32	0		38			6	
Queue Length 95th (ft)		68			71	0		146			36	
Internal Link Dist (ft)		404			1014			447			477	
Turn Bay Length (ft)												
Base Capacity (vph)		124			140	162		2530			1673	
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			0.41	0.07		0.42			0.75	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings

222: Southern Auto Auction

07/07/2020

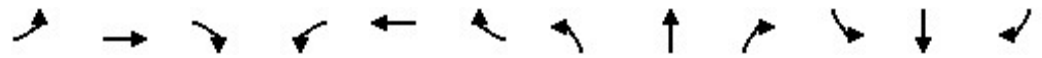
Actuated Cycle Length: 90	
Offset: 83 (92%), Referenced to phase 2:NBSB, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 82.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 222: Southern Auto Auction



Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↕	↗
Traffic Volume (vph)	53	0	111	10	5	10	24	303	0	10	538	36
Future Volume (vph)	53	0	111	10	5	10	24	303	0	10	538	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		400
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor							1.00					
Frt			0.850		0.945							0.850
Flt Protected		0.950			0.980		0.950			0.950		
Satd. Flow (prot)	0	1399	1615	0	1725	0	1203	1759	0	1681	1656	1272
Flt Permitted		0.740			0.887		0.377			0.562		
Satd. Flow (perm)	0	1090	1615	0	1561	0	477	1759	0	995	1656	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		11							61
Link Speed (mph)		25			30			45				45
Link Distance (ft)		532			223			1555				682
Travel Time (s)		14.5			5.1			23.6				10.3
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	29%	2%	0%	2%	2%	2%	50%	8%	2%	2%	9%	27%
Adj. Flow (vph)	58	0	121	11	5	11	26	329	0	11	585	39
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	0	58	121	0	27	0	26	329	0	10	586	39
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			24				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left			Left		Right
Leading Detector (ft)	20	100	20	20	100		20	293		20	283	20
Trailing Detector (ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Position(ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			287				277
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Prot	Perm	NA		D,P+P	NA		Perm	NA	Perm
Protected Phases		4	4		4		1	1 2			2	
Permitted Phases	4			4			2			2		2
Detector Phase	4	4	4	4	4		1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5		4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0		9.0			21.0	21.0	21.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0		11.0			62.0	62.0	62.0
Total Split (%)	18.9%	18.9%	18.9%	18.9%	18.9%		12.2%			68.9%	68.9%	68.9%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0		7.0			56.0	56.0	56.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0			1.2	1.2	1.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0		4.0			6.0	6.0	6.0
Lead/Lag							Lead			Lag	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
Recall Mode	None	None	None	None	None		None			C-Min	C-Min	C-Min
Act Effct Green (s)		10.2	10.2		10.2		70.2	71.8		65.6	65.6	65.6
Actuated g/C Ratio		0.11	0.11		0.11		0.78	0.80		0.73	0.73	0.73
v/c Ratio		0.47	0.42		0.15		0.06	0.23		0.01	0.49	0.04
Control Delay		48.8	11.4		25.6		1.4	1.1		9.8	12.4	4.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		48.8	11.4		25.6		1.4	1.1		9.8	12.4	4.2
LOS		D	B		C		A	A		A	B	A
Approach Delay		23.5			25.6			1.1			11.9	
Approach LOS		C			C			A			B	
90th %ile Green (s)	15.0	15.0	15.0	15.0	15.0		6.8			54.2	54.2	54.2
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap			Coord	Coord	Coord
70th %ile Green (s)	12.1	12.1	12.1	12.1	12.1		6.2			57.7	57.7	57.7
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap			Coord	Coord	Coord
50th %ile Green (s)	10.1	10.1	10.1	10.1	10.1		0.0			69.9	69.9	69.9
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
30th %ile Green (s)	8.1	8.1	8.1	8.1	8.1		0.0			71.9	71.9	71.9
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
10th %ile Green (s)	5.5	5.5	5.5	5.5	5.5		0.0			74.5	74.5	74.5
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
Stops (vph)		48	20		18		2	13		5	274	11
Fuel Used(gal)		1	1		0		0	3		0	7	0
CO Emissions (g/hr)		66	59		19		19	230		8	500	23
NOx Emissions (g/hr)		13	11		4		4	45		2	97	4
VOC Emissions (g/hr)		15	14		4		4	53		2	116	5
Dilemma Vehicles (#)		0	0		0		0	11		0	23	0
Queue Length 50th (ft)		31	0		8		0	4		1	72	0
Queue Length 95th (ft)		67	46		31		4	26		m10	389	12
Internal Link Dist (ft)		452			143			1475			602	
Turn Bay Length (ft)							300					400
Base Capacity (vph)		162	343		241		429	1411		729	1214	949
Starvation Cap Reductn		0	0		0		0	0		0	0	0

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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		0.36	0.35		0.11		0.06	0.23		0.01	0.48	0.04

Intersection Summary






















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 68 (76%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 10.7 Intersection LOS: B
 Intersection Capacity Utilization 43.9% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 225: MMCT Casino



Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	32	7	0	8	22	311	43	11	611	27
Future Volume (vph)	8	0	32	7	0	8	22	311	43	11	611	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		50	360		0	0		370
Storage Lanes	0		1	0		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98									
Frt			0.850			0.850		0.982				0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1543	1615	0	1583	1615	1583	1737	0	1805	1792	1482
Flt Permitted							0.387			0.534		
Satd. Flow (perm)	0	1624	1577	0	1667	1615	645	1737	0	1015	1792	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			112		39				61
Link Speed (mph)		25			25			45				45
Link Distance (ft)		626			337			1217				1555
Travel Time (s)		17.1			9.2			18.4				23.6
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	0%	0%	14%	0%	0%	14%	8%	3%	0%	6%	9%
Adj. Flow (vph)	9	0	35	8	0	9	24	338	47	12	664	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	35	0	8	9	24	385	0	12	664	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			24				0
Link Offset(ft)		0			0			0				6
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	2		1	2	2
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	29	29	20	14	14	24	366		20	366	366
Trailing Detector (ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Position(ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Size(ft)	20	34	34	20	24	24	34	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								360			360	360
Detector 2 Size(ft)								6			6	6
Detector 2 Type								Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	0.0
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	D.P+P	NA		Perm	NA	Perm
Protected Phases		4	1		4		1	1 2			2	
Permitted Phases	4		4	4		4	2			2		2
Detector Phase	4	4	4	4	4	4	1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			23.4	23.4	23.4
Total Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			72.0	72.0	72.0
Total Split (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%			80.0%	80.0%	80.0%
Maximum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0			63.8	63.8	63.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0			3.4	3.4	3.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0			8.2	8.2	8.2
Lead/Lag			Lead				Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			2.5	2.5	2.5
Recall Mode	None	None	None	None	None	None	None			C-Min	C-Min	C-Min
Act Effct Green (s)		5.1	6.9		5.1	5.1	78.7	81.9		76.0	76.0	76.0
Actuated g/C Ratio		0.06	0.08		0.06	0.06	0.87	0.91		0.84	0.84	0.84
v/c Ratio		0.10	0.20		0.09	0.05	0.04	0.24		0.01	0.44	0.02
Control Delay		42.2	5.8		41.7	0.5	2.0	2.8		1.6	1.9	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		42.2	5.8		41.7	0.5	2.0	2.8		1.6	1.9	0.1
LOS		D	A		D	A	A	A		A	A	A
Approach Delay		13.2			19.9			2.8			1.8	
Approach LOS		B			B			A			A	
90th %ile Green (s)	6.3	6.3	4.7	6.3	6.3	6.3	4.7			62.8	62.8	62.8
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
70th %ile Green (s)	5.3	5.3	4.5	5.3	5.3	5.3	4.5			64.0	64.0	64.0
70th %ile Term Code	Gap	Gap	Min	Gap	Gap	Gap	Min			Coord	Coord	Coord
50th %ile Green (s)	4.7	4.7	0.0	4.7	4.7	4.7	0.0			73.1	73.1	73.1
50th %ile Term Code	Gap	Gap	Skip	Gap	Gap	Gap	Skip			Coord	Coord	Coord
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0			81.8	81.8	81.8
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Skip			Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0			81.8	81.8	81.8
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Skip			Coord	Coord	Coord
Stops (vph)		10	3		9	0	6	90		1	39	0
Fuel Used(gal)		0	0		0	0	0	5		0	7	0
CO Emissions (g/hr)		10	15		8	2	22	352		9	481	19
NOx Emissions (g/hr)		2	3		2	0	4	69		2	94	4
VOC Emissions (g/hr)		2	4		2	0	5	82		2	112	4
Dilemma Vehicles (#)		0	0		0	0	0	7		0	8	0
Queue Length 50th (ft)		5	0		4	0	1	12		0	15	0
Queue Length 95th (ft)		20	12		18	0	12	170		m2	63	m0
Internal Link Dist (ft)		546			257			1137			1475	
Turn Bay Length (ft)						50	360					370
Base Capacity (vph)		96	184		98	200	617	1589		859	1517	1264

Lanes, Volumes, Timings

226: Big Y/Ethos

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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		0.09	0.19		0.08	0.04	0.04	0.24		0.01	0.44	0.02

Intersection Summary























Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	6 (7%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.44
Intersection Signal Delay:	2.8
Intersection LOS:	A
Intersection Capacity Utilization	53.2%
ICU Level of Service	A
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 226: Big Y/Ethos



Lanes, Volumes, Timings
228: Walmart

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	74	0	42	17	334	77	47	596	7
Future Volume (vph)	0	0	5	74	0	42	17	334	77	47	596	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	110		140	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97										
Frt		0.850			0.850				0.850		0.998	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1837	1573	0	1736	1568	0	1805	3312	1524	1770	1774	0
Flt Permitted				0.976			0.361			0.525		
Satd. Flow (perm)	1837	1573	0	1783	1568	0	686	3312	1524	978	1774	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		366			600				96			1
Link Speed (mph)		25			25			45				45
Link Distance (ft)		349			546			571				400
Travel Time (s)		9.5			14.9			8.7				6.1
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	4%	0%	3%	0%	9%	6%	2%	7%	0%
Adj. Flow (vph)	0	0	5	80	0	46	18	363	84	51	648	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	80	46	0	18	363	84	51	656	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	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2	1	1		2
Detector Template									Right			Thru
Leading Detector (ft)	30	30		33	46		48	356	20	38		100
Trailing Detector (ft)	-5	-5		-5	0		0	165	0	0		0
Detector 1 Position(ft)	-5	-5		-5	0		0	165	0	0		0
Detector 1 Size(ft)	35	35		38	46		48	6	20	38		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)								350				94
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings

228: Walmart

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1		6
Switch Phase												
Minimum Initial (s)	3.6	5.0		3.6	5.0		3.6	13.1	13.1	4.1		13.1
Minimum Split (s)	8.1	9.7		8.1	9.7		8.1	24.3	24.3	8.1		21.3
Total Split (s)	8.1	10.0		10.0	11.9		8.1	61.8	61.8	8.2		61.9
Total Split (%)	9.0%	11.1%		11.1%	13.2%		9.0%	68.7%	68.7%	9.1%		68.8%
Maximum Green (s)	5.0	5.3		6.9	7.2		5.0	55.5	55.5	5.1		55.6
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.5	4.5	3.0		4.5
All-Red Time (s)	0.1	1.7		0.1	1.7		0.1	1.8	1.8	0.1		1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.1	4.7		3.1	4.7		3.1	6.3	6.3	3.1		6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.5	2.5	2.0		2.5
Recall Mode	None	None		None	None		None	C-Min	C-Min	None		C-Min
Act Effct Green (s)		5.0		9.8	8.5		73.4	68.5	68.5	74.6		70.4
Actuated g/C Ratio		0.06		0.11	0.09		0.82	0.76	0.76	0.83		0.78
v/c Ratio		0.01		0.41	0.07		0.03	0.14	0.07	0.06		0.47
Control Delay		0.0		41.9	0.2		1.6	3.5	1.6	0.6		3.0
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay		0.0		41.9	0.2		1.6	3.5	1.6	0.6		3.0
LOS		A		D	A		A	A	A	A		A
Approach Delay					26.7			3.1				2.8
Approach LOS					C			A				A
90th %ile Green (s)	0.0	5.0		9.8	17.9		5.2	51.9	51.9	6.1		52.8
90th %ile Term Code	Skip	Min		Gap	Hold		Gap	Coord	Coord	Gap		Coord
70th %ile Green (s)	0.0	0.0		9.6	8.0		4.7	62.8	62.8	5.1		63.2
70th %ile Term Code	Skip	Skip		Gap	Hold		Gap	Coord	Coord	Gap		Coord
50th %ile Green (s)	0.0	0.0		8.1	6.5		0.0	64.5	64.5	4.9		72.5
50th %ile Term Code	Skip	Skip		Gap	Hold		Skip	Coord	Coord	Gap		Coord
30th %ile Green (s)	0.0	0.0		7.1	0.0		0.0	73.5	73.5	0.0		73.5
30th %ile Term Code	Skip	Skip		Gap	Skip		Skip	Coord	Coord	Skip		Coord
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	83.7	83.7	0.0		83.7
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Coord	Coord	Skip		Coord
Stops (vph)		0		65	0		3	64	6	1		126
Fuel Used(gal)		0		1	0		0	2	0	1		8
CO Emissions (g/hr)		1		86	14		7	159	27	36		578
NOx Emissions (g/hr)		0		17	3		1	31	5	7		113
VOC Emissions (g/hr)		0		20	3		2	37	6	8		134
Dilemma Vehicles (#)		0		0	0		0	15	0	0		10
Queue Length 50th (ft)		0		44	0		0	2	0	1		14
Queue Length 95th (ft)		0		77	0		m4	m40	m0	2		144
Internal Link Dist (ft)		269			466			491				320
Turn Bay Length (ft)							110		140	250		
Base Capacity (vph)		437		201	702		623	2548	1195	857		1399

Lanes, Volumes, Timings

228: Walmart

07/07/2020

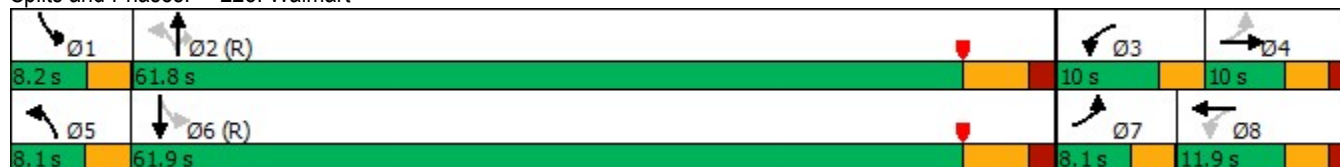


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0		0	0		0	0	0	0	0	
Spillback Cap Reductn		0		0	0		0	0	0	0	0	
Storage Cap Reductn		0		0	0		0	0	0	0	0	
Reduced v/c Ratio		0.01		0.40	0.07		0.03	0.14	0.07	0.06	0.47	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.47
Intersection Signal Delay:	5.2
Intersection LOS:	A
Intersection Capacity Utilization	58.4%
ICU Level of Service	B
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 228: Walmart



Lanes, Volumes, Timings
3: N Rd. (CT-140)

07/07/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↗
Traffic Volume (vph)	1331	0	0	927	0	97
Future Volume (vph)	1331	0	0	927	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	5085	0	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	5085	0	0	3539	0	1611
Link Speed (mph)	35			35	30	
Link Distance (ft)	323			381	386	
Travel Time (s)	6.3			7.4	8.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1447	0	0	1008	0	105
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1447	0	0	1008	0	105
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)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.4%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
7: MMCT Casino/Eversource

07/07/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	0	140	5	10	20	44	777	10	10	495	44
Future Volume (vph)	110	0	140	5	10	20	44	777	10	10	495	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.922			0.998			0.988	
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	1770	1583	0	0	1705	0	1770	1859	0	1770	1840	0
Flt Permitted	0.732				0.952		0.364			0.950		
Satd. Flow (perm)	1364	1583	0	0	1635	0	678	1859	0	1770	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		427			22			2			9	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		335			295			682			908	
Travel Time (s)		7.6			6.7			10.3			13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	0	152	5	11	22	48	845	11	11	538	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	152	0	0	38	0	48	856	0	11	586	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			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		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	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2				6	

Lanes, Volumes, Timings
7: MMCT Casino/Eversource

07/07/2020

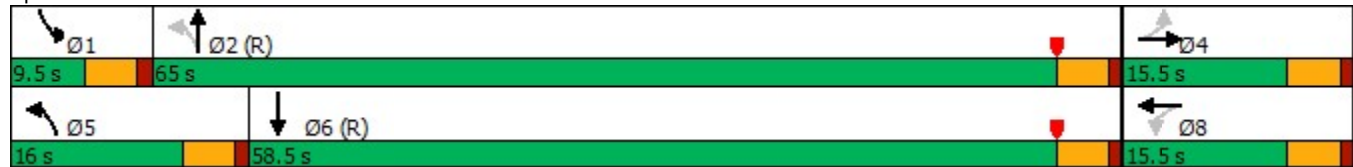


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		9.5	22.5		9.5	22.5	
Total Split (s)	15.5	15.5		15.5	15.5		16.0	65.0		9.5	58.5	
Total Split (%)	17.2%	17.2%		17.2%	17.2%		17.8%	72.2%		10.6%	65.0%	
Maximum Green (s)	11.0	11.0		11.0	11.0		11.5	60.5		5.0	54.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	10.4	10.4			10.4		70.0	68.7		5.1	64.1	
Actuated g/C Ratio	0.12	0.12			0.12		0.78	0.76		0.06	0.71	
v/c Ratio	0.76	0.27			0.18		0.08	0.60		0.11	0.45	
Control Delay	68.9	1.2			22.8		2.5	7.0		41.5	4.8	
Queue Delay	0.0	0.0			0.0		0.0	0.4		0.0	0.0	
Total Delay	68.9	1.2			22.8		2.5	7.3		41.5	4.8	
LOS	E	A			C		A	A		D	A	
Approach Delay		31.1			22.8			7.1			5.4	
Approach LOS		C			C			A			A	
90th %ile Green (s)	11.0	11.0		11.0	11.0		6.7	60.5		5.0	58.8	
90th %ile Term Code	Max	Max		Hold	Hold		Gap	Coord		Max	Coord	
70th %ile Green (s)	11.0	11.0		11.0	11.0		6.3	70.0		0.0	59.2	
70th %ile Term Code	Max	Max		Hold	Hold		Gap	Coord		Skip	Coord	
50th %ile Green (s)	11.0	11.0		11.0	11.0		6.0	70.0		0.0	59.5	
50th %ile Term Code	Max	Max		Hold	Hold		Gap	Coord		Skip	Coord	
30th %ile Green (s)	11.0	11.0		11.0	11.0		0.0	70.0		0.0	70.0	
30th %ile Term Code	Max	Max		Hold	Hold		Skip	Coord		Skip	Coord	
10th %ile Green (s)	8.2	8.2		8.2	8.2		0.0	72.8		0.0	72.8	
10th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
Stops (vph)	98	0			19		9	289		12	112	
Fuel Used(gal)	2	0			0		0	8		0	5	
CO Emissions (g/hr)	166	28			24		23	574		20	356	
NOx Emissions (g/hr)	32	5			5		4	112		4	69	
VOC Emissions (g/hr)	38	6			6		5	133		5	82	
Dilemma Vehicles (#)	0	0			0		0	32		0	44	
Queue Length 50th (ft)	67	0			8		2	43		6	73	
Queue Length 95th (ft)	#153	0			37		m7	384		m12	m108	
Internal Link Dist (ft)		255			215			602			828	
Turn Bay Length (ft)							150			150		
Base Capacity (vph)	166	568			219		670	1418		100	1312	
Starvation Cap Reductn	0	0			0		0	167		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	0.72	0.27			0.17		0.07	0.68		0.11	0.45	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2 (2%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	10.5
Intersection LOS:	B
Intersection Capacity Utilization:	61.8%
ICU Level of Service:	B
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: 7: MMCT Casino/Eversource



Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø2
Lane Configurations								
Traffic Volume (vph)	121	165	1032	35	125	1252		
Future Volume (vph)	121	165	1032	35	125	1252		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)	0	100		0	0			
Storage Lanes	1	1		0	1			
Taper Length (ft)	25				25			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95		
Frt		0.850	0.995					
Flt Protected	0.950				0.950			
Satd. Flow (prot)	1517	1495	3330	0	1770	3406		
Flt Permitted	0.950				0.950			
Satd. Flow (perm)	1517	1495	3330	0	1770	3406		
Right Turn on Red		Yes		Yes				
Satd. Flow (RTOR)		39	5					
Link Speed (mph)	25		45			45		
Link Distance (ft)	1258		264			430		
Travel Time (s)	34.3		4.0			6.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	19%	8%	8%	4%	2%	6%		
Adj. Flow (vph)	132	179	1122	38	136	1361		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	132	179	1160	0	136	1361		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Right	Right	Left	Left		
Median Width(ft)	30		12			20		
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		9	15			
Number of Detectors	1	1	2		1	0		
Detector Template								
Leading Detector (ft)	34	34	100		34	0		
Trailing Detector (ft)	0	0	0		0	0		
Detector 1 Position(ft)	0	0	0		0	0		
Detector 1 Size(ft)	34	34	6		34	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	8.0	0.0		0.0	0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type	Prot	pm+ov	NA		Prot	NA		
Protected Phases	4	5	6		5	1 2 5	1	2

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø2
Permitted Phases		4			5			
Detector Phase	4	4	6		5			
Switch Phase								
Minimum Initial (s)	7.0	5.0	15.0		5.0		5.0	15.0
Minimum Split (s)	12.6	10.2	21.2		10.2		11.6	21.2
Total Split (s)	16.8	26.2	47.0		26.2		19.2	54.0
Total Split (%)	18.7%	29.1%	52.2%		29.1%		21%	60%
Maximum Green (s)	11.2	21.0	40.8		21.0		12.6	47.8
Yellow Time (s)	3.0	3.0	4.8		3.0		3.0	4.8
All-Red Time (s)	2.6	2.2	1.4		2.2		3.6	1.4
Lost Time Adjust (s)	0.0	0.0	0.0		0.0			
Total Lost Time (s)	5.6	5.2	6.2		5.2			
Lead/Lag		Lead	Lag		Lead		Lead	Lag
Lead-Lag Optimize?								
Vehicle Extension (s)	1.5	1.5	2.5		1.5		1.5	2.5
Recall Mode	None	None	C-Min		None		None	C-Min
Act Effct Green (s)	10.3	26.7	51.9		10.8	66.5		
Actuated g/C Ratio	0.11	0.30	0.58		0.12	0.74		
v/c Ratio	0.76	0.38	0.60		0.64	0.54		
Control Delay	66.3	20.7	19.3		58.3	2.0		
Queue Delay	0.0	0.0	0.0		0.0	0.0		
Total Delay	66.3	20.7	19.3		58.3	2.0		
LOS	E	C	B		E	A		
Approach Delay	40.0		19.3			7.1		
Approach LOS	D		B			A		
90th %ile Green (s)	11.2	15.6	46.2		15.6		12.6	47.8
90th %ile Term Code	Max	Gap	Coord		Gap		Max	Coord
70th %ile Green (s)	11.2	12.8	49.0		12.8		12.6	47.8
70th %ile Term Code	Max	Gap	Coord		Gap		Max	Coord
50th %ile Green (s)	12.2	10.8	50.0		10.8		11.1	48.3
50th %ile Term Code	Gap	Gap	Coord		Gap		Gap	Coord
30th %ile Green (s)	10.0	8.8	54.2		8.8		8.9	52.7
30th %ile Term Code	Gap	Gap	Coord		Gap		Gap	Coord
10th %ile Green (s)	7.0	6.0	60.0		6.0		5.9	58.7
10th %ile Term Code	Min	Gap	Coord		Gap		Gap	Coord
Stops (vph)	108	95	718		125	97		
Fuel Used(gal)	3	3	25		3	5		
CO Emissions (g/hr)	234	198	1728		237	364		
NOx Emissions (g/hr)	45	38	336		46	71		
VOC Emissions (g/hr)	54	46	401		55	84		
Dilemma Vehicles (#)	0	0	90		0	71		
Queue Length 50th (ft)	72	60	210		84	22		
Queue Length 95th (ft)	#159	107	m335		m120	52		
Internal Link Dist (ft)	1178		184			350		
Turn Bay Length (ft)		100						
Base Capacity (vph)	191	455	1921		413	2515		
Starvation Cap Reductn	0	0	0		0	74		
Spillback Cap Reductn	0	0	0		0	0		
Storage Cap Reductn	0	0	0		0	0		

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020

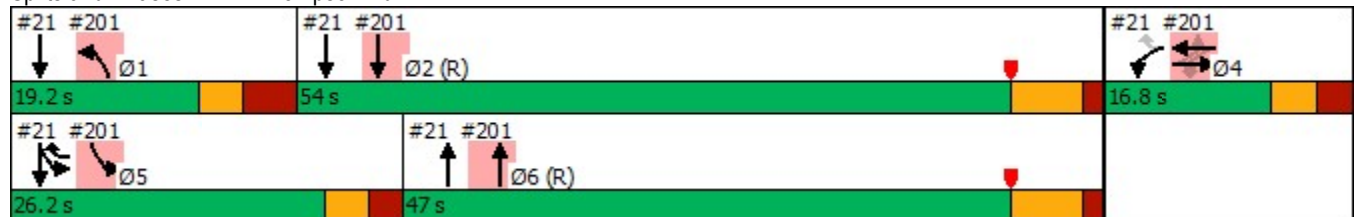


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø2
Reduced v/c Ratio	0.69	0.39	0.60		0.33	0.56		

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 15.4 Intersection LOS: B
 Intersection Capacity Utilization 57.4% ICU Level of Service B
 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: 21: Thompson Rd



Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↕		↖	↕	
Traffic Volume (vph)	58	5	116	5	2	18	113	1071	13	26	1256	11
Future Volume (vph)	58	5	116	5	2	18	113	1071	13	26	1256	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	700		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.900			0.998				0.999
Flt Protected		0.956			0.991		0.950			0.950		
Satd. Flow (prot)	0	1736	1509	0	1695	0	1530	3369	0	1805	3404	0
Flt Permitted		0.722			0.939		0.950			0.950		
Satd. Flow (perm)	0	1311	1509	0	1606	0	1530	3369	0	1804	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182		20			2				1
Link Speed (mph)		30			25			45				45
Link Distance (ft)		731			393			430				1397
Travel Time (s)		16.6			10.7			6.5				21.2
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	7%	0%	0%	0%	18%	7%	0%	0%	6%	0%
Adj. Flow (vph)	63	5	126	5	2	20	123	1164	14	28	1365	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	126	0	27	0	123	1178	0	28	1377	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	Right	Right
Median Width(ft)		0			0			24			30	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	2	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	29	29	20	29		34	0		29	306	
Trailing Detector (ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Position(ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Size(ft)	20	34	34	20	34		34	6		34	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)												300
Detector 2 Size(ft)												6
Detector 2 Type												Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)												0.0

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

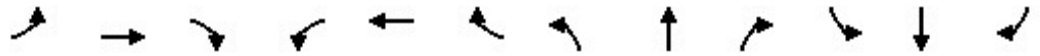


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4								
Detector Phase	4	4	4	4	4		1			5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	12.6	12.6	12.6	12.6	12.6		11.6	21.2		10.2	21.2	
Total Split (s)	16.8	16.8	16.8	16.8	16.8		19.2	47.0		26.2	54.0	
Total Split (%)	18.7%	18.7%	18.7%	18.7%	18.7%		21.3%	52.2%		29.1%	60.0%	
Maximum Green (s)	11.2	11.2	11.2	11.2	11.2		12.6	40.8		21.0	47.8	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	4.8		3.0	4.8	
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6		3.6	1.4		2.2	1.4	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6	5.6		5.6		6.6	6.2		5.2	6.2	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Act Effct Green (s)		10.3	10.3		10.3		10.2	51.9		10.8	51.1	
Actuated g/C Ratio		0.11	0.11		0.11		0.11	0.58		0.12	0.57	
v/c Ratio		0.45	0.38		0.13		0.71	0.61		0.13	0.71	
Control Delay		46.9	5.2		20.2		64.5	7.2		39.0	16.3	
Queue Delay		0.0	0.0		0.0		0.0	0.1		0.0	0.0	
Total Delay		46.9	5.2		20.2		64.5	7.3		39.0	16.3	
LOS		D	A		C		E	A		D	B	
Approach Delay		19.8			20.2			12.7			16.8	
Approach LOS		B			C			B			B	
90th %ile Green (s)	11.2	11.2	11.2	11.2	11.2		12.6	46.2		15.6	47.8	
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Gap	Coord	
70th %ile Green (s)	11.2	11.2	11.2	11.2	11.2		12.6	49.0		12.8	47.8	
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Gap	Coord	
50th %ile Green (s)	12.2	12.2	12.2	12.2	12.2		11.1	50.0		10.8	48.3	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Coord		Gap	Coord	
30th %ile Green (s)	10.0	10.0	10.0	10.0	10.0		8.9	54.2		8.8	52.7	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Coord		Gap	Coord	
10th %ile Green (s)	7.0	7.0	7.0	7.0	7.0		5.9	60.0		6.0	58.7	
10th %ile Term Code	Min	Min	Min	Min	Min		Gap	Coord		Gap	Coord	
Stops (vph)		57	6		13		113	236		25	927	
Fuel Used(gal)		1	1		0		3	8		1	27	
CO Emissions (g/hr)		89	57		17		224	528		53	1903	
NOx Emissions (g/hr)		17	11		3		44	103		10	370	
VOC Emissions (g/hr)		21	13		4		52	122		12	441	
Dilemma Vehicles (#)		0	0		0		0	65		0	49	
Queue Length 50th (ft)		36	0		4		76	83		14	313	
Queue Length 95th (ft)		79	19		28		m127	94		m20	m463	
Internal Link Dist (ft)		651			313			350			1317	
Turn Bay Length (ft)			100							700		
Base Capacity (vph)		166	350		220		214	1942		421	1931	
Starvation Cap Reductn		0	0		0		0	90		0	0	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



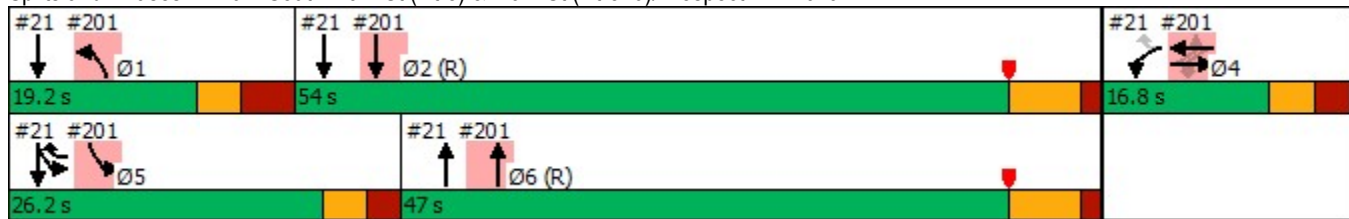
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.41	0.36		0.12		0.57	0.64		0.07	0.71	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization	66.8%
ICU Level of Service	C
Analysis Period (min)	15












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

Splits and Phases: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza



Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	28	27	1011	56	58	1239
Future Volume (vph)	28	27	1011	56	58	1239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	8	12
Storage Length (ft)	0	0		250	75	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.934			0.850		
Fl _t Protected	0.975				0.950	
Satd. Flow (prot)	1656	0	1743	1615	1564	1776
Fl _t Permitted	0.975				0.070	
Satd. Flow (perm)	1656	0	1743	1615	115	1776
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	29			61		
Link Speed (mph)	30		45			45
Link Distance (ft)	1378		1115			1349
Travel Time (s)	31.3		16.9			20.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	5%	9%	0%	0%	7%
Adj. Flow (vph)	30	29	1099	61	63	1347
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	1099	61	63	1347
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			8
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	1.20	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		0	0	0	0
Detector Template						
Leading Detector (ft)	25		0	0	0	0
Trailing Detector (ft)	-5		0	0	0	0
Detector 1 Position(ft)	-5		0	0	0	0
Detector 1 Size(ft)	30		6	20	20	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	Prot		NA	pm+ov	D.P+P	NA
Protected Phases	4		2	4	1	12
Permitted Phases				2	2	
Detector Phase	4					
Switch Phase						
Minimum Initial (s)	5.0		15.0	5.0	5.0	

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	9.4		22.8	9.4	9.0	
Total Split (s)	9.4		65.6	9.4	15.0	
Total Split (%)	10.4%		72.9%	10.4%	16.7%	
Maximum Green (s)	5.0		57.8	5.0	11.0	
Yellow Time (s)	3.0		4.8	3.0	3.0	
All-Red Time (s)	1.4		3.0	1.4	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.4		7.8	4.4	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		3.0	1.5	3.0	
Recall Mode	None		C-Max	None	Max	
Act Effect Green (s)	5.0		57.8	68.7	74.5	79.3
Actuated g/C Ratio	0.06		0.64	0.76	0.83	0.88
v/c Ratio	0.50		0.98	0.05	0.21	0.86
Control Delay	39.7		39.7	0.4	10.9	9.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	39.7		39.7	0.4	10.9	9.6
LOS	D		D	A	B	A
Approach Delay	39.7		37.6			9.6
Approach LOS	D		D			A
90th %ile Green (s)	5.0		57.8	5.0	11.0	
90th %ile Term Code	Max		Coord	Max	MaxR	
70th %ile Green (s)	5.0		57.8	5.0	11.0	
70th %ile Term Code	Max		Coord	Max	MaxR	
50th %ile Green (s)	5.0		57.8	5.0	11.0	
50th %ile Term Code	Max		Coord	Max	MaxR	
30th %ile Green (s)	5.0		57.8	5.0	11.0	
30th %ile Term Code	Max		Coord	Max	MaxR	
10th %ile Green (s)	0.0		57.8	0.0	20.4	
10th %ile Term Code	Skip		Coord	Skip	MaxR	
Stops (vph)	33		798	2	24	727
Fuel Used(gal)	1		29	1	2	40
CO Emissions (g/hr)	84		2032	45	124	2811
NOx Emissions (g/hr)	16		395	9	24	547
VOC Emissions (g/hr)	19		471	10	29	651
Dilemma Vehicles (#)	0		58	0	0	1
Queue Length 50th (ft)	17		467	1	1	382
Queue Length 95th (ft)	#61		#845	3	m2	m264
Internal Link Dist (ft)	1298		1035			1269
Turn Bay Length (ft)				250	75	
Base Capacity (vph)	119		1119	1247	302	1564
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	0.50		0.98	0.05	0.21	0.86

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 55 (61%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 22.7 Intersection LOS: C
 Intersection Capacity Utilization 76.4% 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: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings
209: I-91 Access/Egress/Newberry Rd

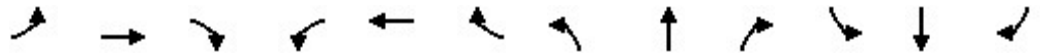
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	530	367	938	75	283	116	625	441	81	73	280	511
Future Volume (vph)	530	367	938	75	283	116	625	441	81	73	280	511
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		290	0		200	400		0	205		130
Storage Lanes	1		2	0		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.88	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.963			0.977				0.850
Flt Protected	0.950	0.990			0.992		0.950			0.950		
Satd. Flow (prot)	1603	1735	2733	0	3146	0	3273	3271	0	1703	3374	1583
Flt Permitted	0.950	0.990			0.992		0.950			0.950		
Satd. Flow (perm)	1603	1735	2733	0	3146	0	3273	3271	0	1696	3374	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			502		40			25				177
Link Speed (mph)		45			35			45				45
Link Distance (ft)		734			813			1397				571
Travel Time (s)		11.1			15.8			21.2				8.7
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	0%	10%	15%	7%	7%	10%	6%	7%	2%
Adj. Flow (vph)	576	399	1020	82	308	126	679	479	88	79	304	555
Shared Lane Traffic (%)	17%											
Lane Group Flow (vph)	478	497	1020	0	516	0	679	567	0	79	304	555
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)		33			12			32				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	0
Detector Template				Left								
Leading Detector (ft)	29	34	29	20	48		34	326		39	326	0
Trailing Detector (ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Position(ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Size(ft)	34	34	39	20	48		34	6		34	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								320			320	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	4	4	1	8	8		1	6		5	2	4
Permitted Phases			4								2	2
Detector Phase	4	4	4	8	8		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0	5.0	9.0	9.0		5.0	15.0		5.0	15.0	9.0
Minimum Split (s)	15.5	15.5	10.9	15.7	15.7		10.9	21.0		10.0	21.0	15.5
Total Split (s)	24.6	24.6	25.0	19.2	19.2		25.0	36.2		10.0	21.2	24.6
Total Split (%)	27.3%	27.3%	27.8%	21.3%	21.3%		27.8%	40.2%		11.1%	23.6%	27.3%
Maximum Green (s)	18.1	18.1	19.1	12.5	12.5		19.1	30.2		5.0	15.2	18.1
Yellow Time (s)	3.3	3.3	3.0	4.1	4.1		3.0	4.8		3.0	4.8	3.3
All-Red Time (s)	3.2	3.2	2.9	2.6	2.6		2.9	1.2		2.0	1.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	5.9		6.7		5.9	6.0		5.0	6.0	6.5
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	2.0	2.0	2.0		2.0	2.5		2.0	2.5	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	18.1	18.1	37.8		12.5		19.1	30.2		5.0	15.2	39.3
Actuated g/C Ratio	0.20	0.20	0.42		0.14		0.21	0.34		0.06	0.17	0.44
v/c Ratio	1.48	1.42	0.71		1.10		0.98	0.51		0.84	0.54	0.70
Control Delay	262.4	237.6	8.2		105.2		54.7	24.3		94.4	37.3	17.1
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.3
Total Delay	262.4	237.6	8.2		105.2		54.7	24.3		94.4	37.3	17.3
LOS	F	F	A		F		D	C		F	D	B
Approach Delay		126.2			105.2			40.9			30.3	
Approach LOS		F			F			D			C	
90th %ile Green (s)	18.1	18.1	19.1	12.5	12.5		19.1	30.2		5.0	15.2	18.1
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
70th %ile Green (s)	18.1	18.1	19.1	12.5	12.5		19.1	30.2		5.0	15.2	18.1
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
50th %ile Green (s)	18.1	18.1	19.1	12.5	12.5		19.1	30.2		5.0	15.2	18.1
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
30th %ile Green (s)	18.1	18.1	19.1	12.5	12.5		19.1	30.2		5.0	15.2	18.1
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
10th %ile Green (s)	18.3	18.3	19.1	12.5	12.5		19.1	30.0		5.0	15.0	18.3
10th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
Stops (vph)	332	348	371		369		560	467		61	237	296
Fuel Used(gal)	30	29	11		16		20	13		2	6	7
CO Emissions (g/hr)	2078	2000	744		1100		1370	918		170	427	514
NOx Emissions (g/hr)	404	389	145		214		267	179		33	83	100
VOC Emissions (g/hr)	482	463	173		255		317	213		39	99	119
Dilemma Vehicles (#)	0	17	0		22		0	19		0	19	0
Queue Length 50th (ft)	~398	~406	53		~165		201	152		47	68	112
Queue Length 95th (ft)	#595	#606	86		#269		#304	197		m#97	118	200
Internal Link Dist (ft)		654			733			1317			491	
Turn Bay Length (ft)	350		290				400			205		130
Base Capacity (vph)	323	349	1440		471		694	1114		94	569	770
Starvation Cap Reductn	0	0	0		0		0	0		0	0	22

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

07/07/2020

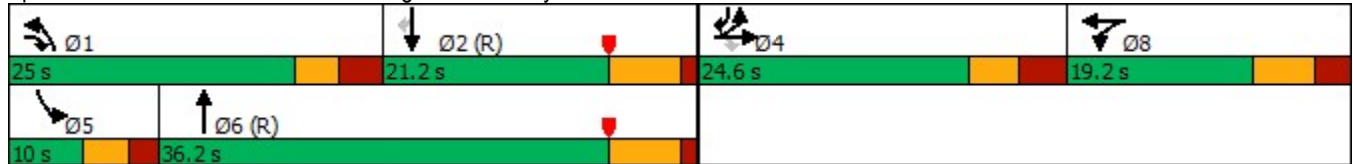


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0	0		0		0	0		0	0	0
Storage Cap Reductn	0	0	0		0		0	0		0	0	0
Reduced v/c Ratio	1.48	1.42	0.71		1.10		0.98	0.51		0.84	0.53	0.74

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 79 (88%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 82.1 Intersection LOS: F
 Intersection Capacity Utilization 89.3% ICU Level of Service E
 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: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1035	203	146	445	94	307	402	198	137	200	175
Future Volume (vph)	190	1035	203	146	445	94	307	402	198	137	200	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	12	11	12	12
Storage Length (ft)	0		0	260		475	300		200	200		0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850		0.974				0.850		0.930	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	3172	1516	1504	3246	0	3083	1640	1442	1517	1488	0
Flt Permitted	0.342			0.122			0.950			0.950		
Satd. Flow (perm)	561	3172	1516	193	3246	0	3083	1640	1423	1513	1488	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		381			922			908			783	
Travel Time (s)		7.4			14.0			13.8			11.9	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	10%	3%	16%	4%	8%	6%	12%	12%	15%	8%	31%
Adj. Flow (vph)	207	1125	221	159	484	102	334	437	215	149	217	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	1125	221	159	586	0	334	437	215	149	407	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)		11			11			20			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.04	1.00	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		12	15		12
Number of Detectors	1	1	0	1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	29	256	0	30	315		29	29	29	29	29	
Trailing Detector (ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	34	6	20	35	5		34	34	34	34	34	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	

Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020


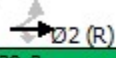



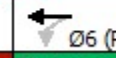




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.0	15.0	4.0	6.0	15.0		4.0	9.0	6.0	4.0	5.0	
Minimum Split (s)	11.8	20.5	8.0	12.6	20.5		8.0	15.8	12.6	8.0	11.8	
Total Split (s)	15.7	39.3	11.0	14.5	38.1		11.0	27.2	14.5	9.0	25.2	
Total Split (%)	17.4%	43.7%	12.2%	16.1%	42.3%		12.2%	30.2%	16.1%	10.0%	28.0%	
Maximum Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5		3.0	4.4	3.0	3.0	4.4	
All-Red Time (s)	2.8	1.0	1.0	3.6	1.0		1.0	2.4	3.6	1.0	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.5	4.0	6.6	5.5		4.0	6.8	6.6	4.0	6.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	2.5	1.5	1.5	2.5	
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	42.1	33.4	46.5	39.4	32.8		7.6	20.4	28.3	5.6	18.4	
Actuated g/C Ratio	0.47	0.37	0.52	0.44	0.36		0.08	0.23	0.31	0.06	0.20	
v/c Ratio	0.57	0.96	0.28	0.81	0.50		1.28	1.18	0.48	1.59	1.34	
Control Delay	17.6	44.5	12.2	49.2	24.0		186.4	135.9	23.2	336.8	204.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	17.6	44.5	12.2	49.2	24.0		186.4	135.9	23.2	336.8	204.8	
LOS	B	D	B	D	C		F	F	C	F	F	
Approach Delay		36.3			29.4			128.4			240.1	
Approach LOS		D			C			F			F	
90th %ile Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
90th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
70th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	9.9	33.8	7.0	7.9	32.6		7.0	20.4	7.9	5.0	18.4	
50th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	8.8	33.8	7.0	7.9	33.7		7.0	20.4	7.9	5.0	18.4	
30th %ile Term Code	Gap	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
10th %ile Green (s)	6.8	31.6	10.1	7.0	32.6		10.1	20.4	7.0	8.1	18.4	
10th %ile Term Code	Gap	Coord	Max	Gap	Coord		Max	Max	Gap	Max	Max	
Stops (vph)	99	919	103	81	403		223	316	134	89	289	
Fuel Used(gal)	2	19	2	3	11		16	17	4	11	21	
CO Emissions (g/hr)	136	1338	129	234	760		1135	1218	263	783	1474	
NOx Emissions (g/hr)	26	260	25	45	148		221	237	51	152	287	
VOC Emissions (g/hr)	32	310	30	54	176		263	282	61	181	342	
Dilemma Vehicles (#)	0	70	0	0	30		0	26	0	0	15	
Queue Length 50th (ft)	58	333	55	47	134		~131	~313	81	~128	~305	
Queue Length 95th (ft)	m83	#462	m90	#152	184		m#219	#483	m143	#246	#482	
Internal Link Dist (ft)		301			842			828			703	
Turn Bay Length (ft)				260			300		200	200		
Base Capacity (vph)	377	1191	776	199	1183		260	371	449	94	304	
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	0.55	0.94	0.28	0.80	0.50		1.28	1.18	0.48	1.59	1.34	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.59
 Intersection Signal Delay: 88.1 Intersection LOS: F
 Intersection Capacity Utilization 85.8% ICU Level of Service E
 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: 210: N Rd. (CT-140)/N Rd. (CT140)

 Ø1	 Ø2 (R)	 Ø3	 Ø4
14.5 s	39.3 s	11 s	25.2 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
15.7 s	38.1 s	9 s	27.2 s

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗		↔			↕			↖	
Traffic Volume (vph)	0	0	3	150	0	18	0	1032	210	9	1272	0
Future Volume (vph)	0	0	3	150	0	18	0	1032	210	9	1272	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Fr _t			0.865		0.985			0.975				
Fl _t Protected					0.957							
Satd. Flow (prot)	0	0	1096	0	1754	0	0	3300	0	0	3343	0
Fl _t Permitted					0.957						0.942	
Satd. Flow (perm)	0	0	1096	0	1754	0	0	3300	0	0	3149	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63		33			54				
Link Speed (mph)		30			30			50				45
Link Distance (ft)		417			1615			1146				576
Travel Time (s)		9.5			36.7			15.6				8.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	50%	1%	0%	11%	14%	8%	0%	6%	8%	50%
Adj. Flow (vph)	0	0	3	163	0	20	0	1122	228	10	1383	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	3	0	183	0	0	1350	0	0	1393	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			26				26
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			0	1	1			0		1	0	
Detector Template				Left						Left		
Leading Detector (ft)			0	20	25			0		20	0	
Trailing Detector (ft)			0	0	0			0		0	0	
Detector 1 Position(ft)			0	0	0			0		0	0	
Detector 1 Size(ft)			20	20	25			0		20	0	
Detector 1 Type			Extend	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Turn Type			Perm	Perm	NA			NA		Perm	NA	
Protected Phases					4			2				2
Permitted Phases			4	4						2		
Detector Phase			4	4	4							
Switch Phase												
Minimum Initial (s)			9.0	9.0	9.0			15.0		15.0	15.0	
Minimum Split (s)			13.0	13.0	13.0			20.7		20.7	20.7	
Total Split (s)			26.0	26.0	26.0			64.0		64.0	64.0	
Total Split (%)			28.9%	28.9%	28.9%			71.1%		71.1%	71.1%	

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)			22.0	22.0	22.0			58.3		58.3	58.3	
Yellow Time (s)			3.0	3.0	3.0			4.7		4.7	4.7	
All-Red Time (s)			1.0	1.0	1.0			1.0		1.0	1.0	
Lost Time Adjust (s)			0.0		0.0			0.0			0.0	
Total Lost Time (s)			4.0		4.0			5.7			5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)			3.0	3.0	3.0			3.0		3.0	3.0	
Recall Mode			None	None	None			C-Max		C-Max	C-Max	
Act Effct Green (s)			13.4		13.4			66.9			66.9	
Actuated g/C Ratio			0.15		0.15			0.74			0.74	
v/c Ratio			0.01		0.63			0.55			0.60	
Control Delay			0.0		38.8			6.2			4.9	
Queue Delay			0.0		0.0			0.0			0.0	
Total Delay			0.0		38.8			6.2			4.9	
LOS			A		D			A			A	
Approach Delay					38.8			6.2			4.9	
Approach LOS					D			A			A	
90th %ile Green (s)			18.7	18.7	18.7			61.6		61.6	61.6	
90th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
70th %ile Green (s)			15.4	15.4	15.4			64.9		64.9	64.9	
70th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
50th %ile Green (s)			13.1	13.1	13.1			67.2		67.2	67.2	
50th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
30th %ile Green (s)			10.8	10.8	10.8			69.5		69.5	69.5	
30th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
10th %ile Green (s)			9.0	9.0	9.0			71.3		71.3	71.3	
10th %ile Term Code			Min	Min	Min			Coord		Coord	Coord	
Stops (vph)			0		125			485			332	
Fuel Used(gal)			0		4			18			44	
CO Emissions (g/hr)			1		289			1262			3084	
NOx Emissions (g/hr)			0		56			245			600	
VOC Emissions (g/hr)			0		67			292			715	
Dilemma Vehicles (#)			0		0			69			81	
Queue Length 50th (ft)			0		81			133			102	
Queue Length 95th (ft)			0		139			231			m116	
Internal Link Dist (ft)		337			1535			1066			496	
Turn Bay Length (ft)												
Base Capacity (vph)			315		453			2466			2340	
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			0.01		0.40			0.55			0.60	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020

Natural Cycle: 45	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 63.7%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 211: Crow Park Rd / Scantic Rd



Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	15	12	4	8	19	89	4	1021	14	178	1286	43
Future Volume (vph)	15	12	4	8	19	89	4	1021	14	178	1286	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		80	0		30	120		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		1.00							
Frt			0.850			0.850		0.998			0.995	
Flt Protected		0.973			0.985		0.950			0.950		
Satd. Flow (prot)	0	1780	1313	0	1872	1400	1703	1736	0	1687	1799	0
Flt Permitted		0.812			0.888		0.079			0.073		
Satd. Flow (perm)	0	1478	1275	0	1683	1400	142	1736	0	130	1799	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						143		1				3
Link Speed (mph)		25			35			45				45
Link Distance (ft)		551			1467			2227				2334
Travel Time (s)		15.0			28.6			33.7				35.4
Confl. Peds. (#/hr)	1		1	1								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	0%	23%	0%	0%	0%	6%	9%	25%	7%	5%	7%
Adj. Flow (vph)	16	13	4	9	21	97	4	1110	15	193	1398	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	4	0	30	97	4	1125	0	193	1445	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	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	3		1	3	
Detector Template	Left			Left								
Leading Detector (ft)	20	20	15	20	25	20	33	326		33	326	
Trailing Detector (ft)	0	0	0	0	0	0	-5	0		-5	0	
Detector 1 Position(ft)	0	0	0	0	0	0	-5	0		-5	0	
Detector 1 Size(ft)	20	20	15	20	25	20	38	6		38	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	2.0	8.0	0.0	8.0	8.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								144			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	
Detector 3 Position(ft)								320			320	
Detector 3 Size(ft)								6			6	
Detector 3 Type								Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Detector Phase	4	4	4	4	4	4	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	15.0		5.0	15.0	
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	8.0	22.8		9.0	22.8	
Total Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	8.0	49.5		9.0	50.5	
Total Split (%)	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	8.9%	55.0%		10.0%	56.1%	
Maximum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	41.7		5.0	42.7	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0	4.8		3.0	4.8	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	3.0		1.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	3.0	7.8		4.0	7.8	
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		5.0	5.0		5.0	5.0	63.8	54.8		74.3	70.7	
Actuated g/C Ratio		0.06	0.06		0.06	0.06	0.71	0.61		0.83	0.79	
v/c Ratio		0.35	0.06		0.32	0.46	0.02	1.06		0.62	1.02	
Control Delay		53.2	42.2		50.4	9.9	5.8	54.9		22.2	29.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		53.2	42.2		50.4	9.9	5.8	54.9		22.2	29.6	
LOS		D	D		D	A	A	D		C	C	
Approach Delay		51.9			19.4			54.7			28.7	
Approach LOS		D			B			D			C	
90th %ile Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.4	41.7		7.0	45.3	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Coord		Max	Coord	
70th %ile Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	0.0	55.3		13.4	72.7	
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
50th %ile Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	0.0	56.0		12.7	72.7	
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
30th %ile Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	0.0	56.3		12.4	72.7	
30th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.7		13.5	82.2	
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Skip	Coord		Gap	Coord	
Stops (vph)		28	7		29	6	2	474		110	496	
Fuel Used(gal)		1	0		1	1	0	41		5	34	
CO Emissions (g/hr)		37	6		56	82	9	2900		340	2398	

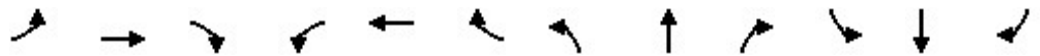
Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

Lane Group	Ø3
Detector 2 Extend (s)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	24%
Maximum Green (s)	18.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	9.0
Pedestrian Calls (#/hr)	10
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)	16.0
90th %ile Term Code	Ped
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

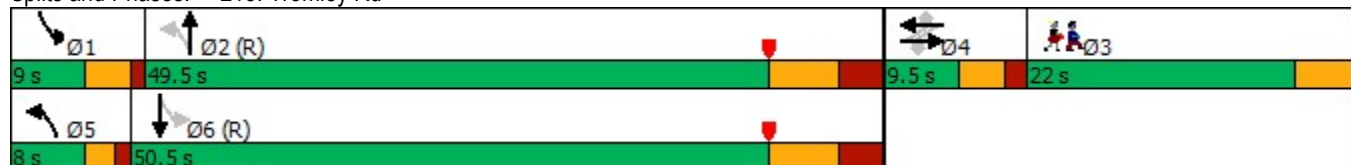


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		7	1		11	16	2	564		66	467	
VOC Emissions (g/hr)		9	1		13	19	2	672		79	556	
Dilemma Vehicles (#)		0	0		2	0	0	67		0	71	
Queue Length 50th (ft)		16	2		17	0	0	~684		63	15	
Queue Length 95th (ft)		45	13		45	20	m1	m#887		m68	m#974	
Internal Link Dist (ft)		471			1387			2147			2254	
Turn Bay Length (ft)			80			30	120			200		
Base Capacity (vph)		82	70		93	212	188	1057		311	1413	
Starvation Cap Reductn		0	0		0	0	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		0.35	0.06		0.32	0.46	0.02	1.06		0.62	1.02	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 83 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 38.6
 Intersection LOS: D
 Intersection Capacity Utilization 95.3%
 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: 213: Tromley Rd



Lane Group	Ø3
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
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	

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗			↕	↗
Traffic Volume (vph)	13	0	22	2	2	12	5	1024	21	22	1257	23
Future Volume (vph)	13	0	22	2	2	12	5	1024	21	22	1257	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	8	12	12	8	12	8
Storage Length (ft)	0		30	0		0	50		0	0		50
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.897			0.997				0.850
Fl _t Protected		0.950			0.994		0.950				0.999	
Satd. Flow (prot)	0	1641	1386	0	1499	0	1384	1773	0	0	1746	1386
Fl _t Permitted					0.955		0.087				0.970	
Satd. Flow (perm)	0	1727	1386	0	1440	0	127	1773	0	0	1695	1386
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			48		13			3				16
Link Speed (mph)		25			35			45				45
Link Distance (ft)		801			1499			4074				1892
Travel Time (s)		21.8			29.2			61.7				28.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	0%	1%	0%	0%	17%	13%	7%	0%	50%	8%	1%
Adj. Flow (vph)	14	0	24	2	2	13	5	1113	23	24	1366	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	24	0	17	0	5	1136	0	0	1390	25
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)		10			0			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		0	0		0	0	1
Detector Template	Left		Right	Left								Right
Leading Detector (ft)	20	20	20	20	29		0	0		0	0	20
Trailing Detector (ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Size(ft)	20	20	20	20	34		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2				2
Permitted Phases	4		4	4			2			2		2
Detector Phase	4	4	4	4	4							2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		15.0	15.0		15.0	15.0	15.0

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.3	9.3	9.3	9.3	9.3		22.0	22.0		22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0		75.0	75.0		75.0	75.0	75.0
Total Split (%)	16.7%	16.7%	16.7%	16.7%	16.7%		83.3%	83.3%		83.3%	83.3%	83.3%
Maximum Green (s)	10.7	10.7	10.7	10.7	10.7		68.0	68.0		68.0	68.0	68.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.8	4.8		4.8	4.8	4.8
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2		2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		4.3	4.3		4.3		7.0	7.0			7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		5.6	5.6		5.6		79.6	79.6			79.6	79.6
Actuated g/C Ratio		0.06	0.06		0.06		0.88	0.88			0.88	0.88
v/c Ratio		0.13	0.18		0.17		0.04	0.72			0.93	0.02
Control Delay		42.2	7.6		26.6		2.8	12.3			11.5	0.7
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		42.2	7.6		26.6		2.8	12.3			11.5	0.7
LOS		D	A		C		A	B			B	A
Approach Delay		20.4			26.6			12.2			11.3	
Approach LOS		C			C			B			B	
90th %ile Green (s)	7.1	7.1	7.1	7.1	7.1		71.6	71.6		71.6	71.6	71.6
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	Coord
70th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		72.9	72.9		72.9	72.9	72.9
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	Coord
50th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		73.7	73.7		73.7	73.7	73.7
50th %ile Term Code	Min	Min	Min	Min	Min		Coord	Coord		Coord	Coord	Coord
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		83.0	83.0		83.0	83.0	83.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Coord	Coord		Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		83.0	83.0		83.0	83.0	83.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Coord	Coord		Coord	Coord	Coord
Stops (vph)		15	3		10		1	468			203	1
Fuel Used(gal)		0	0		0		0	40			21	0
CO Emissions (g/hr)		18	14		23		12	2795			1483	21
NOx Emissions (g/hr)		4	3		5		2	544			289	4
VOC Emissions (g/hr)		4	3		5		3	648			344	5
Dilemma Vehicles (#)		0	0		1		0	44			51	0
Queue Length 50th (ft)		8	0		2		0	274			~118	0
Queue Length 95th (ft)		26	11		23		m1	498			m#1010	m1
Internal Link Dist (ft)		721			1419			3994			1812	
Turn Bay Length (ft)			30					50				50
Base Capacity (vph)		205	207		182		112	1569			1500	1228
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		0.07	0.12		0.09		0.04	0.72			0.93	0.02

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings

214: DD/Abbe Rd

07/07/2020

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 97.4%

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.

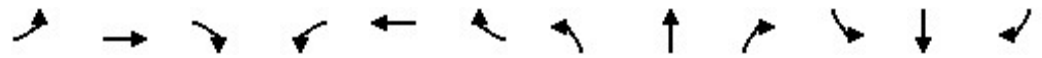
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 214: DD/Abbe Rd



Lanes, Volumes, Timings
215: S Water St

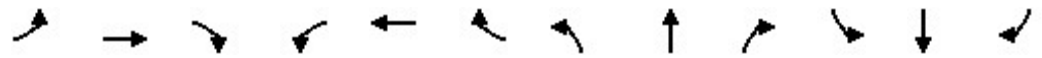
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	6	168	5	4	14	169	943	13	26	1334	14
Future Volume (vph)	110	6	168	5	4	14	169	943	13	26	1334	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		300	0		0	150		0	320		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.916			0.998			0.998	
Flt Protected		0.955			0.990		0.950			0.950		
Satd. Flow (prot)	0	1814	1599	0	1723	0	1719	1757	0	1805	1773	0
Flt Permitted		0.720			0.694		0.061			0.185		
Satd. Flow (perm)	0	1368	1599	0	1208	0	110	1757	0	352	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144		15			2			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1143			286			2334			1410	
Travel Time (s)		26.0			6.5			35.4			21.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	5%	8%	0%	0%	7%	0%
Adj. Flow (vph)	120	7	183	5	4	15	184	1025	14	28	1450	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	183	0	24	0	184	1039	0	28	1465	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	0	
Detector Template	Left		Right	Left								
Leading Detector (ft)	20	45	20	20	45		15	0		15	0	
Trailing Detector (ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	50	20	20	50		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4			6			2		
Detector Phase	4	4	4	4	4		1			5		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.1	10.1	10.1	10.1	10.1		9.0	22.3		9.0	22.3	

Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	10.9	10.9	10.9	10.9	10.9		9.0	70.1		9.0	70.1	
Total Split (%)	12.1%	12.1%	12.1%	12.1%	12.1%		10.0%	77.9%		10.0%	77.9%	
Maximum Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	62.8		5.0	62.8	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8		1.0	2.5		1.0	2.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.1	5.1		5.1		4.0	7.3		4.0	7.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		5.8	5.8		5.8		73.5	68.2		71.1	62.8	
Actuated g/C Ratio		0.06	0.06		0.06		0.82	0.76		0.79	0.70	
v/c Ratio		1.44	0.77		0.26		1.03	0.78		0.08	1.18	
Control Delay		286.0	34.8		31.8		51.1	18.1		0.8	108.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		286.0	34.8		31.8		51.1	18.1		0.8	108.2	
LOS		F	C		C		D	B		A	F	
Approach Delay		137.7			31.8			23.1			106.2	
Approach LOS		F			C			C			F	
90th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	62.8		5.0	62.8	
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	62.8		5.0	62.8	
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	71.8		0.0	62.8	
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
30th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	71.8		0.0	62.8	
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
10th %ile Green (s)	5.8	5.8	5.8	5.8	5.8		5.0	71.8		0.0	62.8	
10th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
Stops (vph)		84	41		15		104	729		1	925	
Fuel Used(gal)		8	3		0		6	27		0	56	
CO Emissions (g/hr)		582	204		19		392	1893		21	3904	
NOx Emissions (g/hr)		113	40		4		76	368		4	759	
VOC Emissions (g/hr)		135	47		4		91	439		5	905	
Dilemma Vehicles (#)		0	0		0		0	52		0	50	
Queue Length 50th (ft)		~99	22		5		~50	535		1	~445	
Queue Length 95th (ft)		#210	#124		30		m#53	m617		m1	#540	
Internal Link Dist (ft)		1063			206			2254			1330	
Turn Bay Length (ft)			300				150			320		
Base Capacity (vph)		88	237		91		179	1332		358	1237	
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		1.44	0.77		0.26		1.03	0.78		0.08	1.18	

Intersection Summary
Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings

215: S Water St

07/07/2020

Actuated Cycle Length: 90

Offset: 71 (79%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.44

Intersection Signal Delay: 75.5 Intersection LOS: E

Intersection Capacity Utilization 107.2% ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.



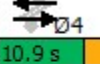


Queue shown is maximum after two cycles.

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: 215: S Water St

 Ø1 9 s	 Ø2 (R) 70.1 s	 Ø4 10.9 s
 Ø5 9 s	 Ø6 (R) 70.1 s	

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	8	3	3	67	0	25	0	981	68	41	1232	12
Future Volume (vph)	8	3	3	67	0	25	0	981	68	41	1232	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	8	12	12	8	12	12
Storage Length (ft)	0		0	0		50	50		0	50		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.98						
Frt		0.973				0.850		0.990			0.999	
Flt Protected		0.971			0.950					0.950		
Satd. Flow (prot)	0	1786	0	0	1612	1400	1647	1741	0	1448	1775	0
Flt Permitted		0.804			0.748					0.179		
Satd. Flow (perm)	0	1475	0	0	1263	1365	1647	1741	0	273	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				41		13				2
Link Speed (mph)		30			35			45				45
Link Distance (ft)		411			816			1892				693
Travel Time (s)		9.3			15.9			28.7				10.5
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	12%	0%	0%	0%	8%	9%	8%	7%	0%
Adj. Flow (vph)	9	3	3	73	0	27	0	1066	74	45	1339	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	73	27	0	1140	0	45	1352	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			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.00	1.00	1.20	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	0	0		0	0	
Detector Template	Left			Left		Right						
Leading Detector (ft)	20	12		20	36	20	0	0		0	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	12		20	36	20	20	36		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0	9.0	21.4	21.4		21.4	21.4	
Total Split (s)	13.0	13.0		13.0	13.0	13.0	77.0	77.0		77.0	77.0	
Total Split (%)	14.4%	14.4%		14.4%	14.4%	14.4%	85.6%	85.6%		85.6%	85.6%	
Maximum Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	6.4	6.4		6.4	6.4	
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		7.9			7.9	7.9		74.8		74.8	74.8	
Actuated g/C Ratio		0.09			0.09	0.09		0.83		0.83	0.83	
v/c Ratio		0.11			0.66	0.17		0.79		0.20	0.92	
Control Delay		34.5			67.8	10.0		9.3		2.3	15.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		34.5			67.8	10.0		9.3		2.3	15.5	
LOS		C			E	B		A		A	B	
Approach Delay		34.5			52.2			9.3			15.1	
Approach LOS		C			D			A			B	
90th %ile Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	9.0	9.0		9.0	9.0	9.0	70.6	70.6		70.6	70.6	
50th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
30th %ile Green (s)	7.4	7.4		7.4	7.4	7.4	72.2	72.2		72.2	72.2	
30th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Coord	Coord		Coord	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	83.6	83.6		83.6	83.6	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Coord	Coord		Coord	Coord	
Stops (vph)		13			61	6		384		3	668	
Fuel Used(gal)		0			2	0		20		0	20	
CO Emissions (g/hr)		15			124	17		1373		28	1412	
NOx Emissions (g/hr)		3			24	3		267		5	275	
VOC Emissions (g/hr)		3			29	4		318		6	327	
Dilemma Vehicles (#)		0			3	0		47		0	20	
Queue Length 50th (ft)		6			40	0		22		1	389	
Queue Length 95th (ft)		25			#99	17		597		m3	#1036	
Internal Link Dist (ft)		331			736			1812			613	
Turn Bay Length (ft)						50				50		
Base Capacity (vph)		150			126	173		1449		227	1475	
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		0.10			0.58	0.16		0.79		0.20	0.92	

Lanes, Volumes, Timings

216: Stoughton Rd

07/07/2020

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	14 (16%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	14.1
Intersection LOS:	B
Intersection Capacity Utilization	81.7%
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: 216: Stoughton Rd



Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	549	124	403	478	0	0	0	0	235	0	235
Future Volume (vph)	0	549	124	403	478	0	0	0	0	235	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		50
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975										0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	1816	0	1770	1863	0	0	0	0	0	1770	1583
Flt Permitted				0.102							0.950	
Satd. Flow (perm)	0	1816	0	190	1863	0	0	0	0	0	1770	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16										143
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		684			478			428			360	
Travel Time (s)		15.5			9.3			9.7			8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	597	135	438	520	0	0	0	0	255	0	255
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	732	0	438	520	0	0	0	0	0	255	255
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			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0					1	1	1
Detector Template										Left		
Leading Detector (ft)		0		36	0					20	15	15
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		36	6					20	15	15
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	6.0	6.0
Turn Type		NA		D,P+P	NA					Split	NA	Prot
Protected Phases		2		3	3 2					4	4	4
Permitted Phases				2								
Detector Phase				3						4	4	4
Switch Phase												
Minimum Initial (s)		20.0		5.0						5.0	5.0	5.0
Minimum Split (s)		25.5		9.9						10.3	10.3	10.3
Total Split (s)		43.0		27.0						20.0	20.0	20.0

Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)		47.8%		30.0%						22.2%	22.2%	22.2%
Maximum Green (s)		37.5		22.1						14.7	14.7	14.7
Yellow Time (s)		4.5		3.9						3.0	3.0	3.0
All-Red Time (s)		1.0		1.0						2.3	2.3	2.3
Lost Time Adjust (s)		0.0		0.0							0.0	0.0
Total Lost Time (s)		5.5		4.9							5.3	5.3
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		2.0						3.0	3.0	3.0
Recall Mode		C-Max		None						None	None	None
Act Effect Green (s)		39.1		60.0	64.9						14.9	14.9
Actuated g/C Ratio		0.43		0.67	0.72						0.17	0.17
v/c Ratio		0.92		0.91	0.39						0.87	0.67
Control Delay		42.9		34.5	1.6						66.3	25.2
Queue Delay		0.0		0.0	0.2						0.0	0.0
Total Delay		42.9		34.5	1.8						66.3	25.2
LOS		D		C	A						E	C
Approach Delay		42.9			16.7						45.8	
Approach LOS		D			B						D	
90th %ile Green (s)		37.5		22.1						14.7	14.7	14.7
90th %ile Term Code		Coord		Max						Max	Max	Max
70th %ile Green (s)		37.5		22.1						14.7	14.7	14.7
70th %ile Term Code		Coord		Max						Max	Max	Max
50th %ile Green (s)		37.5		22.1						14.7	14.7	14.7
50th %ile Term Code		Coord		Max						Max	Max	Max
30th %ile Green (s)		37.5		20.0						16.8	16.8	16.8
30th %ile Term Code		Coord		Gap						Max	Max	Max
10th %ile Green (s)		45.5		15.1						13.7	13.7	13.7
10th %ile Term Code		Coord		Gap						Gap	Gap	Gap
Stops (vph)		546		407	27						205	102
Fuel Used(gal)		12		7	2						5	2
CO Emissions (g/hr)		873		509	140						347	170
NOx Emissions (g/hr)		170		99	27						68	33
VOC Emissions (g/hr)		202		118	33						80	39
Dilemma Vehicles (#)		0		0	10						0	0
Queue Length 50th (ft)		386		209	14						143	58
Queue Length 95th (ft)		#630		m#329	m17						#280	#143
Internal Link Dist (ft)		604			398			348			280	
Turn Bay Length (ft)												50
Base Capacity (vph)		798		518	1343						297	385
Starvation Cap Reductn		0		0	220						0	0
Spillback Cap Reductn		0		0	0						0	0
Storage Cap Reductn		0		0	0						0	0
Reduced v/c Ratio		0.92		0.85	0.46						0.86	0.66

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Lanes, Volumes, Timings
 219: Bridge St (CT-140)

07/07/2020

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 32.2

Intersection LOS: C

Intersection Capacity Utilization 84.9%

ICU Level of Service E

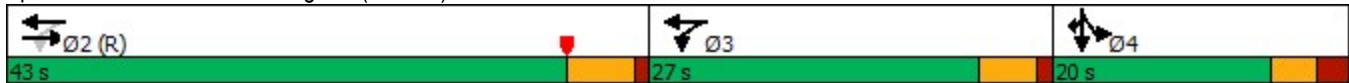
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↕↕			↕	↕↕			
Traffic Volume (vph)	178	606	0	0	665	262	216	0	725	0	0	0
Future Volume (vph)	178	606	0	0	665	262	216	0	725	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		300	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.958				0.850			
Flt Protected		0.989						0.950				
Satd. Flow (prot)	0	3500	0	0	3391	0	0	1770	2787	0	0	0
Flt Permitted		0.534						0.950				
Satd. Flow (perm)	0	1890	0	0	3391	0	0	1770	2787	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					101				389			
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		478			323			585			321	
Travel Time (s)		9.3			6.3			13.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	659	0	0	723	285	235	0	788	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	852	0	0	1008	0	0	235	788	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)		0			6			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			0		1	1	1			
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			0		20	6	21			
Trailing Detector (ft)	0	0			0		0	0	-3			
Detector 1 Position(ft)	0	0			0		0	0	-3			
Detector 1 Size(ft)	20	6			6		20	6	24			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	9.0			
Detector 2 Position(ft)		94										
Detector 2 Size(ft)		6										
Detector 2 Type		Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)		0.0										
Turn Type	custom	NA			NA		Split	NA	custom			
Protected Phases	3	2 3			2 5		4	4	4 5			
Permitted Phases	2											

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Lane Group	Ø2	Ø5
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	5
Permitted Phases		

Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3					4	4	5			
Switch Phase												
Minimum Initial (s)	5.0						7.0	7.0				
Minimum Split (s)	10.4						12.1	12.1				
Total Split (s)	16.4						18.4	18.4				
Total Split (%)	18.2%						20.4%	20.4%				
Maximum Green (s)	11.0						13.3	13.3				
Yellow Time (s)	4.1						3.0	3.0				
All-Red Time (s)	1.3						2.1	2.1				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.1				
Lead/Lag	Lag						Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5						3.0	3.0				
Recall Mode	Max						None	None				
Act Effct Green (s)		47.1			48.7			13.3	24.8			
Actuated g/C Ratio		0.52			0.54			0.15	0.28			
v/c Ratio		0.73			0.54			0.90	0.75			
Control Delay		24.8			18.4			74.8	19.7			
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		24.8			18.4			74.8	19.7			
LOS		C			B			E	B			
Approach Delay		24.8			18.4			32.4				
Approach LOS		C			B			C				
90th %ile Green (s)	11.0						13.3	13.3				
90th %ile Term Code	MaxR						Max	Max				
70th %ile Green (s)	11.0						13.3	13.3				
70th %ile Term Code	MaxR						Max	Max				
50th %ile Green (s)	11.0						13.3	13.3				
50th %ile Term Code	MaxR						Max	Max				
30th %ile Green (s)	11.0						13.3	13.3				
30th %ile Term Code	MaxR						Max	Max				
10th %ile Green (s)	11.0						13.3	13.3				
10th %ile Term Code	MaxR						Max	Max				
Stops (vph)		673			755			185	351			
Fuel Used(gal)		12			11			5	8			
CO Emissions (g/hr)		820			791			370	570			
NOx Emissions (g/hr)		160			154			72	111			
VOC Emissions (g/hr)		190			183			86	132			
Dilemma Vehicles (#)		72			109			0	0			
Queue Length 50th (ft)		228			162			133	118			
Queue Length 95th (ft)		m267			m157			#268	192			
Internal Link Dist (ft)		398			243			505			241	
Turn Bay Length (ft)									300			
Base Capacity (vph)		1167			1881			261	1073			
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		0.73			0.54			0.90	0.73			

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Lane Group	Ø2	Ø5
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	5.0
Minimum Split (s)	21.5	10.7
Total Split (s)	42.8	12.4
Total Split (%)	48%	14%
Maximum Green (s)	36.3	6.7
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	1.2
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	1.5
Recall Mode	C-Max	None
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)	36.3	6.7
90th %ile Term Code	Coord	Max
70th %ile Green (s)	36.3	6.7
70th %ile Term Code	Coord	Max
50th %ile Green (s)	37.6	5.4
50th %ile Term Code	Coord	Gap
30th %ile Green (s)	38.0	5.0
30th %ile Term Code	Coord	Min
10th %ile Green (s)	38.0	5.0
10th %ile Term Code	Coord	Min
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
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		

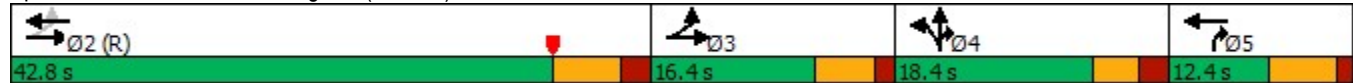
Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Intersection Summary

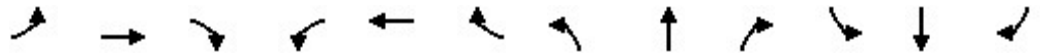
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	32 (36%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	25.3
Intersection LOS:	C
Intersection Capacity Utilization	75.7%
ICU Level 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: 220: Bridge St (CT-140)



Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Volume (vph)	12	4	17	52	8	56	0	999	15	30	1216	15
Future Volume (vph)	12	4	17	52	8	56	0	999	15	30	1216	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	200		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.931				0.850		0.998			0.998	
Flt Protected		0.982			0.959						0.999	
Satd. Flow (prot)	0	1258	0	0	1665	1482	0	3308	0	0	3277	0
Flt Permitted		0.850			0.730						0.898	
Satd. Flow (perm)	0	1089	0	0	1267	1482	0	3308	0	0	2945	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				61		5			4	
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		484			1094			527			557	
Travel Time (s)		13.2			29.8			8.0			8.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	8%	0%	10%	6%	9%	8%	9%	2%	3%	10%	11%
Adj. Flow (vph)	13	4	18	57	9	61	0	1086	16	33	1322	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	66	61	0	1102	0	0	1371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	0		1	0	
Detector Template	Left			Left		Right	Left			Left		
Leading Detector (ft)	20	15		20	20	20	20	0		20	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	15		20	20	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	11.7	11.7		11.7	11.7	11.7	21.8	21.8		21.8	21.8	

Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	12.0	12.0		12.0	12.0	12.0	78.0	78.0		78.0	78.0	
Total Split (%)	13.3%	13.3%		13.3%	13.3%	13.3%	86.7%	86.7%		86.7%	86.7%	
Maximum Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.7	1.7		1.7	1.7	1.7	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		4.7			4.7	4.7		6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		7.2			7.2	7.2		75.0			75.0	
Actuated g/C Ratio		0.08			0.08	0.08		0.83			0.83	
v/c Ratio		0.34			0.65	0.35		0.40			0.56	
Control Delay		33.9			70.7	16.8		3.2			1.1	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		33.9			70.7	16.8		3.2			1.1	
LOS		C			E	B		A			A	
Approach Delay		33.9			44.8			3.2			1.1	
Approach LOS		C			D			A			A	
90th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
50th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
30th %ile Green (s)	7.3	7.3		7.3	7.3	7.3	71.2	71.2		71.2	71.2	
30th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	83.2	83.2		83.2	83.2	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Coord	Coord		Coord	Coord	
Stops (vph)		20			54	16		261			117	
Fuel Used(gal)		0			2	1		12			15	
CO Emissions (g/hr)		30			116	54		834			1078	
NOx Emissions (g/hr)		6			22	11		162			210	
VOC Emissions (g/hr)		7			27	13		193			250	
Dilemma Vehicles (#)		0			0	0		64			17	
Queue Length 50th (ft)		9			37	0		29			5	
Queue Length 95th (ft)		39			#101	37		151			16	
Internal Link Dist (ft)		404			1014			447			477	
Turn Bay Length (ft)												
Base Capacity (vph)		104			102	176		2756			2453	
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		0.34			0.65	0.35		0.40			0.56	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings

222: Southern Auto Auction

07/07/2020




















Actuated Cycle Length: 90
Offset: 83 (92%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 4.5 Intersection LOS: A
Intersection Capacity Utilization 73.8% 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.

Splits and Phases: 222: Southern Auto Auction



Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	0	108	5	0	10	24	719	0	20	576	44
Future Volume (vph)	102	0	108	5	0	10	24	719	0	20	576	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		400
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt			0.850		0.907							0.850
Flt Protected		0.950			0.985		0.950				0.998	
Satd. Flow (prot)	0	1399	1615	0	1664	0	1203	1759	0	0	1743	1272
Flt Permitted		0.747			0.926		0.343				0.965	
Satd. Flow (perm)	0	1100	1615	0	1564	0	434	1759	0	0	1686	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117		85							61
Link Speed (mph)		25			30			45				45
Link Distance (ft)		532			223			1555				682
Travel Time (s)		14.5			5.1			23.6				10.3
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	29%	2%	0%	2%	2%	2%	50%	8%	2%	2%	9%	27%
Adj. Flow (vph)	111	0	117	5	0	11	26	782	0	22	626	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	117	0	16	0	26	782	0	0	648	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left			Left		Right
Leading Detector (ft)	20	100	20	20	100		20	293		20	283	20
Trailing Detector (ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Position(ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			287				277
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Prot	Perm	NA		D.P+P	NA		Perm	NA	Perm
Protected Phases		4	4		4		1	1 2			2	
Permitted Phases	4			4			2			2		2
Detector Phase	4	4	4	4	4		1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5		4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0		9.0			21.0	21.0	21.0
Total Split (s)	17.0	17.0	17.0	17.0	17.0		11.0			62.0	62.0	62.0
Total Split (%)	18.9%	18.9%	18.9%	18.9%	18.9%		12.2%			68.9%	68.9%	68.9%
Maximum Green (s)	13.0	13.0	13.0	13.0	13.0		7.0			56.0	56.0	56.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0			1.2	1.2	1.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0				0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0		4.0				6.0	6.0
Lead/Lag							Lead			Lag	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
Recall Mode	None	None	None	None	None		None			C-Min	C-Min	C-Min
Act Effct Green (s)		13.3	13.3		13.3		67.1	68.7			62.5	62.5
Actuated g/C Ratio		0.15	0.15		0.15		0.75	0.76			0.69	0.69
v/c Ratio		0.69	0.35		0.05		0.07	0.58			0.55	0.05
Control Delay		58.3	9.8		0.3		4.3	6.7			12.5	3.0
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		58.3	9.8		0.3		4.3	6.7			12.5	3.0
LOS		E	A		A		A	A			B	A
Approach Delay		33.4			0.3			6.7			11.8	
Approach LOS		C			A			A			B	
90th %ile Green (s)	13.3	13.3	13.3	13.3	13.3		6.7			56.0	56.0	56.0
90th %ile Term Code	Max	Max	Max	Max	Max		Gap			Coord	Coord	Coord
70th %ile Green (s)	17.7	17.7	17.7	17.7	17.7		6.4			51.9	51.9	51.9
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap			Coord	Coord	Coord
50th %ile Green (s)	15.0	15.0	15.0	15.0	15.0		0.0			65.0	65.0	65.0
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
30th %ile Green (s)	12.2	12.2	12.2	12.2	12.2		0.0			67.8	67.8	67.8
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
10th %ile Green (s)	8.3	8.3	8.3	8.3	8.3		0.0			71.7	71.7	71.7
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
Stops (vph)		89	20		0		6	185			304	10
Fuel Used(gal)		2	1		0		0	11			8	0
CO Emissions (g/hr)		141	55		2		24	737			554	24
NOx Emissions (g/hr)		27	11		0		5	143			108	5
VOC Emissions (g/hr)		33	13		0		5	171			128	6
Dilemma Vehicles (#)		0	0		0		0	68			51	0
Queue Length 50th (ft)		59	0		0		5	184			270	1
Queue Length 95th (ft)		#141	47		0		m4	110			241	m10
Internal Link Dist (ft)		452			143			1475			602	
Turn Bay Length (ft)							300					400
Base Capacity (vph)		175	356		321		384	1358			1186	912
Starvation Cap Reductn		0	0		0		0	0			0	0

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0		0		0	10			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.63	0.33		0.05		0.07	0.58			0.55	0.05

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 68 (76%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 12.1 Intersection LOS: B
 Intersection Capacity Utilization 67.1% ICU Level of Service C
 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: 225: MMCT Casino



Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗			↖	↗
Traffic Volume (vph)	59	0	74	10	0	8	110	675	12	0	645	44
Future Volume (vph)	59	0	74	10	0	8	110	675	12	0	645	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		50	360		0	0		370
Storage Lanes	0		1	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98									
Frt			0.850			0.850		0.997				0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1543	1615	0	1583	1615	1583	1755	0	0	1792	1482
Flt Permitted		0.750			0.715		0.328					
Satd. Flow (perm)	0	1218	1577	0	1192	1615	547	1755	0	0	1792	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			112		5				61
Link Speed (mph)		25			25			45				45
Link Distance (ft)		626			337			1217				1555
Travel Time (s)		17.1			9.2			18.4				23.6
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	0%	0%	14%	0%	0%	14%	8%	3%	0%	6%	9%
Adj. Flow (vph)	64	0	80	11	0	9	120	734	13	0	701	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	80	0	11	9	120	747	0	0	701	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			12				0
Link Offset(ft)		0			0			0				6
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	2		1	2	2
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	29	29	20	14	14	24	366		20	366	366
Trailing Detector (ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Position(ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Size(ft)	20	34	34	20	24	24	34	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								360			360	360
Detector 2 Size(ft)								6			6	6
Detector 2 Type								Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
226: Big Y/Ethos

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	0.0
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	D.P+P	NA			NA	Perm
Protected Phases		4	1		4		1	1 2			2	
Permitted Phases	4		4	4		4	2			2		2
Detector Phase	4	4	4	4	4	4	1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			23.4	23.4	23.4
Total Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			72.0	72.0	72.0
Total Split (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%			80.0%	80.0%	80.0%
Maximum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0			63.8	63.8	63.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0			3.4	3.4	3.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0				0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0				8.2	8.2
Lead/Lag			Lead				Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			2.5	2.5	2.5
Recall Mode	None	None	None	None	None	None	None			C-Min	C-Min	C-Min
Act Effct Green (s)		8.3	13.6		8.3	8.3	69.7	73.7			60.2	60.2
Actuated g/C Ratio		0.09	0.15		0.09	0.09	0.77	0.82			0.67	0.67
v/c Ratio		0.57	0.26		0.10	0.04	0.25	0.52			0.58	0.05
Control Delay		62.1	10.2		40.4	0.2	6.1	12.1			6.0	0.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Delay		62.1	10.2		40.4	0.2	6.1	12.1			6.0	0.3
LOS		E	B		D	A	A	B			A	A
Approach Delay		33.3			22.3			11.3			5.6	
Approach LOS		C			C			B			A	
90th %ile Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0			63.8	63.8	63.8
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max			Coord	Coord	Coord
70th %ile Green (s)	11.2	11.2	6.1	11.2	11.2	11.2	6.1			56.5	56.5	56.5
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
50th %ile Green (s)	10.2	10.2	5.5	10.2	10.2	10.2	5.5			58.1	58.1	58.1
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
30th %ile Green (s)	8.9	8.9	5.0	8.9	8.9	8.9	5.0			59.9	59.9	59.9
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
10th %ile Green (s)	6.4	6.4	4.5	6.4	6.4	6.4	4.5			62.9	62.9	62.9
10th %ile Term Code	Gap	Gap	Min	Gap	Gap	Gap	Min			Coord	Coord	Coord
Stops (vph)		46	17		12	0	42	402			241	1
Fuel Used(gal)		1	1		0	0	2	14			10	0
CO Emissions (g/hr)		86	43		11	2	127	972			719	32
NOx Emissions (g/hr)		17	8		2	0	25	189			140	6
VOC Emissions (g/hr)		20	10		3	0	29	225			167	7
Dilemma Vehicles (#)		0	0		0	0	0	87			14	0
Queue Length 50th (ft)		35	0		6	0	49	395			310	1
Queue Length 95th (ft)		#117	39		23	0	4	20			51	m0
Internal Link Dist (ft)		546			257			1137			1475	
Turn Bay Length (ft)						50	360					370
Base Capacity (vph)		112	307		110	251	485	1506			1270	1068

Lanes, Volumes, Timings
226: Big Y/Ethos

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0	0	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		0.57	0.26		0.10	0.04	0.25	0.50			0.55	0.04

Intersection Summary























Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	6 (7%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization	93.6%
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: 226: Big Y/Ethos



Lanes, Volumes, Timings
228: Walmart

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	11	77	224	31	124	123	625	338	108	563	54
Future Volume (vph)	47	11	77	224	31	124	123	625	338	108	563	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	110		140	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98										
Frt		0.869			0.880				0.850		0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1745	1613	0	1736	1633	0	1805	3312	1524	1770	1763	0
Flt Permitted	0.889			0.526			0.235			0.356		
Satd. Flow (perm)	1633	1613	0	961	1633	0	446	3312	1524	663	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		84			135				367			10
Link Speed (mph)		25			25			45				45
Link Distance (ft)		349			546			571				400
Travel Time (s)		9.5			14.9			8.7				6.1
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	4%	0%	3%	0%	9%	6%	2%	7%	0%
Adj. Flow (vph)	51	12	84	243	34	135	134	679	367	117	612	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	96	0	243	169	0	134	679	367	117	671	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	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2	1	1		2
Detector Template									Right			Thru
Leading Detector (ft)	30	30		33	46		48	356	20	38		100
Trailing Detector (ft)	-5	-5		-5	0		0	165	0	0		0
Detector 1 Position(ft)	-5	-5		-5	0		0	165	0	0		0
Detector 1 Size(ft)	35	35		38	46		48	6	20	38		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)								350				94
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
228: Walmart

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1		6
Switch Phase												
Minimum Initial (s)	3.6	5.0		3.6	5.0		3.6	13.1	13.1	4.1		13.1
Minimum Split (s)	8.1	9.7		8.1	9.7		8.1	24.3	24.3	8.1		21.3
Total Split (s)	8.1	10.0		10.0	11.9		8.1	61.8	61.8	8.2		61.9
Total Split (%)	9.0%	11.1%		11.1%	13.2%		9.0%	68.7%	68.7%	9.1%		68.8%
Maximum Green (s)	5.0	5.3		6.9	7.2		5.0	55.5	55.5	5.1		55.6
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.5	4.5	3.0		4.5
All-Red Time (s)	0.1	1.7		0.1	1.7		0.1	1.8	1.8	0.1		1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.1	4.7		3.1	4.7		3.1	6.3	6.3	3.1		6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.5	2.5	2.0		2.5
Recall Mode	None	None		None	None		None	C-Min	C-Min	None		C-Min
Act Effct Green (s)	11.4	5.2		24.0	17.0		56.5	47.6	47.6	56.3		47.5
Actuated g/C Ratio	0.13	0.06		0.27	0.19		0.63	0.53	0.53	0.63		0.53
v/c Ratio	0.24	0.56		0.61	0.41		0.37	0.39	0.38	0.24		0.72
Control Delay	29.1	25.4		38.0	14.2		8.1	13.3	4.0	2.4		13.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	29.1	25.4		38.0	14.2		8.1	13.3	4.0	2.4		13.3
LOS	C	C		D	B		A	B	A	A		B
Approach Delay		26.7			28.2			9.8				11.6
Approach LOS		C			C			A				B
90th %ile Green (s)	5.2	5.3		7.1	7.2		5.0	55.3	55.3	5.1		55.4
90th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max		Coord
70th %ile Green (s)	7.4	5.3		18.8	16.7		5.0	43.6	43.6	5.1		43.7
70th %ile Term Code	Gap	Max		Max	Hold		Max	Coord	Coord	Max		Coord
50th %ile Green (s)	6.5	5.4		19.8	18.7		7.3	40.6	40.6	7.0		40.3
50th %ile Term Code	Gap	Gap		Gap	Hold		Gap	Coord	Coord	Gap		Coord
30th %ile Green (s)	0.0	5.0		16.6	24.7		6.3	45.2	45.2	6.0		44.9
30th %ile Term Code	Skip	Min		Gap	Hold		Gap	Coord	Coord	Gap		Coord
10th %ile Green (s)	0.0	0.0		19.3	17.7		5.0	53.3	53.3	4.9		53.2
10th %ile Term Code	Skip	Skip		Gap	Hold		Gap	Coord	Coord	Gap		Coord
Stops (vph)	40	28		161	39		46	302	55	11		437
Fuel Used(gal)	1	1		3	1		1	8	2	1		14
CO Emissions (g/hr)	40	58		237	92		86	543	155	92		949
NOx Emissions (g/hr)	8	11		46	18		17	106	30	18		185
VOC Emissions (g/hr)	9	13		55	21		20	126	36	21		220
Dilemma Vehicles (#)	0	0		0	0		0	29	0	0		32
Queue Length 50th (ft)	20	7		106	16		48	134	67	4		388
Queue Length 95th (ft)	56	#57		#241	#98		m10	m22	m0	11		74
Internal Link Dist (ft)		269			466			491				320
Turn Bay Length (ft)							110		140	250		
Base Capacity (vph)	215	174		397	417		366	2042	1080	484		1092

Lanes, Volumes, Timings

228: Walmart

07/07/2020

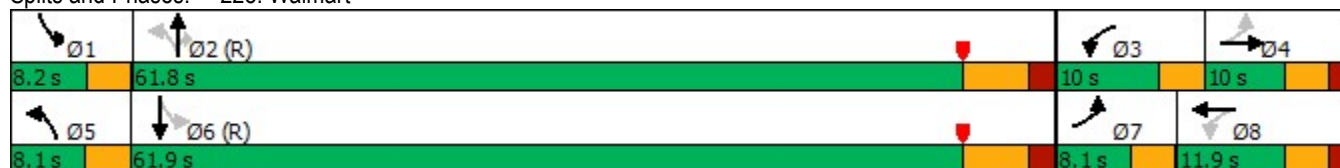


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.55		0.61	0.41		0.37	0.33	0.34	0.24	0.61	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 14.4 Intersection LOS: B
 Intersection Capacity Utilization 73.3% 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: 228: Walmart



Lanes, Volumes, Timings
3: N Rd. (CT-140)

07/07/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↗
Traffic Volume (vph)	682	0	0	1195	0	41
Future Volume (vph)	682	0	0	1195	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	5085	0	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	5085	0	0	3539	0	1611
Link Speed (mph)	35			35	30	
Link Distance (ft)	323			381	386	
Travel Time (s)	6.3			7.4	8.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	741	0	0	1299	0	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	741	0	0	1299	0	45
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)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	36.4%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings

7: Eversource

07/07/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	0	154	20	10	20	44	369	0	10	487	44
Future Volume (vph)	110	0	154	20	10	20	44	369	0	10	487	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.946							0.988
Flt Protected	0.950				0.980		0.950			0.950		
Satd. Flow (prot)	1770	1583	0	0	1727	0	1770	1863	0	1770	1840	0
Flt Permitted	0.810				0.782		0.361			0.950		
Satd. Flow (perm)	1509	1583	0	0	1378	0	672	1863	0	1770	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		408			22							9
Link Speed (mph)		30			30			45				45
Link Distance (ft)		335			295			682				908
Travel Time (s)		7.6			6.7			10.3				13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	0	167	22	11	22	48	401	0	11	529	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	167	0	0	55	0	48	401	0	11	577	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				20
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		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	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2				6	

Lanes, Volumes, Timings

7: Eversource

07/07/2020

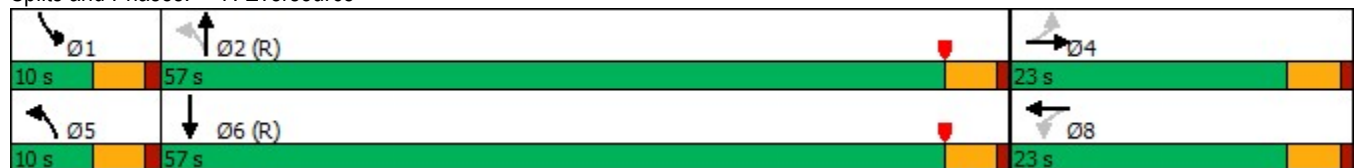


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	9.5		9.5	9.5		9.5	22.5		9.5	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		10.0	57.0		10.0	57.0	
Total Split (%)	25.6%	25.6%		25.6%	25.6%		11.1%	63.3%		11.1%	63.3%	
Maximum Green (s)	18.5	18.5		18.5	18.5		5.5	52.5		5.5	52.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	12.7	12.7			12.7		67.4	66.3		5.8	62.0	
Actuated g/C Ratio	0.14	0.14			0.14		0.75	0.74		0.06	0.69	
v/c Ratio	0.56	0.29			0.26		0.08	0.29		0.10	0.45	
Control Delay	45.5	1.3			24.9		4.3	7.0		56.4	3.9	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	45.5	1.3			24.9		4.3	7.0		56.4	3.9	
LOS	D	A			C		A	A		E	A	
Approach Delay		19.8			24.9			6.7			4.9	
Approach LOS		B			C			A			A	
90th %ile Green (s)	18.5	18.5		18.5	18.5		5.5	52.5		5.5	52.5	
90th %ile Term Code	Max	Max		Hold	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	14.7	14.7		14.7	14.7		6.4	66.3		0.0	55.4	
70th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Coord		Skip	Coord	
50th %ile Green (s)	12.6	12.6		12.6	12.6		6.1	68.4		0.0	57.8	
50th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Coord		Skip	Coord	
30th %ile Green (s)	10.4	10.4		10.4	10.4		0.0	70.6		0.0	70.6	
30th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
10th %ile Green (s)	7.3	7.3		7.3	7.3		0.0	73.7		0.0	73.7	
10th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
Stops (vph)	100	0			30		14	146		8	148	
Fuel Used(gal)	2	0			1		0	4		0	5	
CO Emissions (g/hr)	130	31			38		28	278		19	377	
NOx Emissions (g/hr)	25	6			7		6	54		4	73	
VOC Emissions (g/hr)	30	7			9		7	64		4	87	
Dilemma Vehicles (#)	0	0			0		0	29		0	14	
Queue Length 50th (ft)	65	0			17		10	99		7	38	
Queue Length 95th (ft)	112	0			48		20	146		m13	m38	
Internal Link Dist (ft)		255			215			602			828	
Turn Bay Length (ft)							150			150		
Base Capacity (vph)	310	649			300		574	1372		114	1270	
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	0.39	0.26			0.18		0.08	0.29		0.10	0.45	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	26 (29%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	9.4
Intersection LOS:	A
Intersection Capacity Utilization	61.2%
ICU Level of Service	B
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Eversource



Lanes, Volumes, Timings

13: Site 1

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	37	50	573	396	8
Future Volume (vph)	6	37	50	573	396	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885				0.997	
Flt Protected	0.993		0.950			
Satd. Flow (prot)	1637	0	1770	1863	1857	0
Flt Permitted	0.993		0.950			
Satd. Flow (perm)	1637	0	1770	1863	1857	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	203			517	266	
Travel Time (s)	4.6			7.8	4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	40	54	623	430	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	54	623	439	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			23	23	
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	40.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

17: Site 2

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	16	20	430	727	5
Future Volume (vph)	4	16	20	430	727	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.891				0.999	
Flt Protected	0.991		0.950			
Satd. Flow (prot)	1645	0	1770	1863	1861	0
Flt Permitted	0.991		0.950			
Satd. Flow (perm)	1645	0	1770	1863	1861	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	236			390	828	
Travel Time (s)	5.4			5.9	12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	17	22	467	790	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	22	467	795	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			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	48.6%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

21: Thompson Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	10	87	0	171	10	953	114	226	1459	16
Future Volume (vph)	14	0	10	87	0	171	10	953	114	226	1459	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	1		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.984			0.998	
Flt Protected	0.950				0.950		0.950			0.950		
Satd. Flow (prot)	1770	0	1583	0	1517	1495	1770	3302	0	1770	3400	0
Flt Permitted	0.695				0.950		0.156			0.950		
Satd. Flow (perm)	1295	0	1583	0	1517	1495	291	3302	0	1770	3400	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			45		18			2	
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		283			1258			264			430	
Travel Time (s)		6.4			34.3			4.0			6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	19%	2%	8%	2%	8%	4%	2%	6%	2%
Adj. Flow (vph)	15	0	11	95	0	186	11	1036	124	246	1586	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	0	11	0	95	186	11	1160	0	246	1603	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	Right	Right	Left	Left	Right
Median Width(ft)		12			30			12			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2		1	0	
Detector Template	Left		Right		Thru		Left					
Leading Detector (ft)	20		20	34	100	34	20	100		34	0	
Trailing Detector (ft)	0		0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0		0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20		20	34	6	34	20	6		34	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	8.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type	D.Pm		Perm	Prot	NA	custom	Perm	NA		Prot	NA	
Protected Phases				4	8	5		6		5	1 2 5	

Lanes, Volumes, Timings
 21: Thompson Rd

07/07/2020

Lane Group	Ø1	Ø2
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	2

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			4	6					
Detector Phase	4		4	4	8	4	6	6		5		
Switch Phase												
Minimum Initial (s)	7.0		7.0	7.0	5.0	5.0	15.0	15.0		5.0		
Minimum Split (s)	12.6		12.6	12.6	22.5	10.2	21.2	21.2		10.2		
Total Split (s)	22.5		22.5	22.5	22.5	22.0	45.5	45.5		22.0		
Total Split (%)	25.0%		25.0%	25.0%	25.0%	24.4%	50.6%	50.6%		24.4%		
Maximum Green (s)	16.9		16.9	16.9	18.0	16.8	39.3	39.3		16.8		
Yellow Time (s)	3.0		3.0	3.0	3.5	3.0	4.8	4.8		3.0		
All-Red Time (s)	2.6		2.6	2.6	1.0	2.2	1.4	1.4		2.2		
Lost Time Adjust (s)	0.0		0.0		0.0	0.0	0.0	0.0		0.0		
Total Lost Time (s)	5.6		5.6		4.5	5.2	6.2	6.2		5.2		
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5		1.5	1.5	3.0	1.5	2.5	2.5		1.5		
Recall Mode	None		None	None	None	None	C-Min	C-Min		None		
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	16.9		16.9		18.0	37.5	41.1	41.1		15.0	60.1	
Actuated g/C Ratio	0.19		0.19		0.20	0.42	0.46	0.46		0.17	0.67	
v/c Ratio	0.06		0.03		0.31	0.29	0.08	0.76		0.83	0.71	
Control Delay	30.9		0.1		34.1	13.8	13.8	15.9		63.4	5.6	
Queue Delay	0.0		0.0		0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay	30.9		0.1		34.1	13.8	13.8	15.9		63.4	5.7	
LOS	C		A		C	B	B	B		E	A	
Approach Delay		17.9			20.7			15.9			13.4	
Approach LOS		B			C			B			B	
90th %ile Green (s)	16.9		16.9	16.9	18.0	16.8	39.3	39.3		16.8		
90th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
70th %ile Green (s)	16.9		16.9	16.9	18.0	16.8	39.3	39.3		16.8		
70th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
50th %ile Green (s)	16.9		16.9	16.9	18.0	16.8	39.3	39.3		16.8		
50th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
30th %ile Green (s)	16.9		16.9	16.9	18.0	14.2	41.9	41.9		14.2		
30th %ile Term Code	Hold		Hold	Hold	Max	Gap	Coord	Coord		Gap		
10th %ile Green (s)	16.9		16.9	16.9	18.0	10.5	45.6	45.6		10.5		
10th %ile Term Code	Hold		Hold	Hold	Hold	Gap	Coord	Coord		Gap		
Stops (vph)	12		0		72	82	5	679		217	236	
Fuel Used(gal)	0		0		2	3	0	17		6	9	
CO Emissions (g/hr)	13		2		127	184	10	1190		437	610	
NOx Emissions (g/hr)	3		0		25	36	2	232		85	119	
VOC Emissions (g/hr)	3		0		29	43	2	276		101	141	
Dilemma Vehicles (#)	0		0		0	0	0	77		0	129	
Queue Length 50th (ft)	7		0		46	48	2	207		152	77	
Queue Length 95th (ft)	24		0		91	95	m4	316		m171	m109	
Internal Link Dist (ft)		203			1178			184			350	
Turn Bay Length (ft)						100						
Base Capacity (vph)	243		393		303	649	133	1517		330	2270	

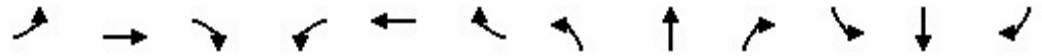
Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020

Lane Group	Ø1	Ø2
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	15.0
Minimum Split (s)	11.6	21.2
Total Split (s)	17.0	50.5
Total Split (%)	19%	56%
Maximum Green (s)	10.4	44.3
Yellow Time (s)	3.0	4.8
All-Red Time (s)	3.6	1.4
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	1.5	2.5
Recall Mode	None	C-Min
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)	10.4	44.3
90th %ile Term Code	Max	Coord
70th %ile Green (s)	10.4	44.3
70th %ile Term Code	Max	Coord
50th %ile Green (s)	8.8	45.9
50th %ile Term Code	Gap	Coord
30th %ile Green (s)	7.1	47.6
30th %ile Term Code	Gap	Coord
10th %ile Green (s)	0.0	61.3
10th %ile Term Code	Skip	Coord
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020

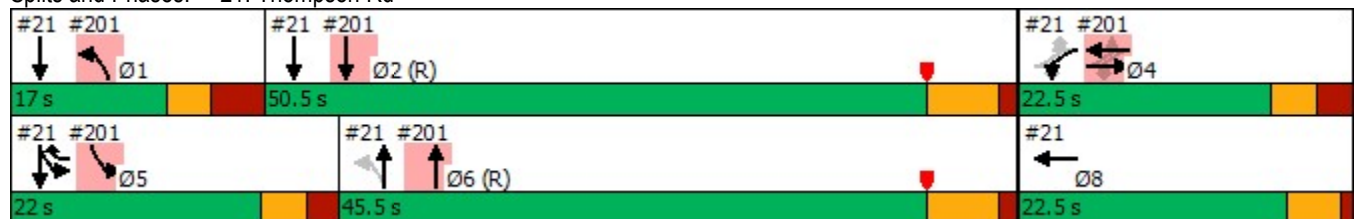


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0		0		0	0	0	0		0	101	
Spillback Cap Reductn	0		0		0	0	0	4		0	0	
Storage Cap Reductn	0		0		0	0	0	0		0	0	
Reduced v/c Ratio	0.06		0.03		0.31	0.29	0.08	0.77		0.75	0.74	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	14.9
Intersection LOS:	B
Intersection Capacity Utilization	79.2%
ICU Level of Service	D
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 21: Thompson Rd



Lane Group	Ø1	Ø2
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings

23: Site 4

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	40	40	1029	1502	54
Future Volume (vph)	50	40	40	1029	1502	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.995	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1853	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1853	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	274			934	476	
Travel Time (s)	6.2			14.2	7.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	43	43	1118	1633	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	43	43	1118	1692	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			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	92.3%
ICU Level of Service	F
Analysis Period (min)	15

Lanes, Volumes, Timings

27:

07/07/2020



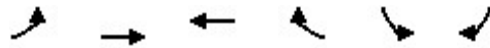
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↘		↕
Traffic Volume (vph)	0	21	1109	43	0	1658
Future Volume (vph)	0	21	1109	43	0	1658
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	1863	1583	0	1863
Flt Permitted						
Satd. Flow (perm)	0	1611	1863	1583	0	1863
Link Speed (mph)	30		45			45
Link Distance (ft)	323		349			1965
Travel Time (s)	7.3		5.3			29.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	23	1205	47	0	1802
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	23	1205	47	0	1802
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	90.6%
ICU Level of Service	E
Analysis Period (min)	15

Lanes, Volumes, Timings
29: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	169	64	233	15	2	30
Future Volume (vph)	169	64	233	15	2	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.992		0.873	
Flt Protected	0.950				0.997	
Satd. Flow (prot)	1770	1863	1848	0	1621	0
Flt Permitted	0.950				0.997	
Satd. Flow (perm)	1770	1863	1848	0	1621	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		479	988		197	
Travel Time (s)		9.3	19.2		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	70	253	16	2	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	184	70	269	0	35	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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		Free	Free		Stop	

Intersection Summary

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

Lanes, Volumes, Timings

32:

07/07/2020



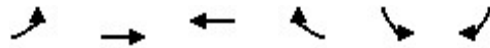
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗	↗		↗
Traffic Volume (vph)	0	32	995	50	0	1513
Future Volume (vph)	0	32	995	50	0	1513
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	1863	1583	0	1863
Flt Permitted						
Satd. Flow (perm)	0	1611	1863	1583	0	1863
Link Speed (mph)	30		45			45
Link Distance (ft)	166		248			1100
Travel Time (s)	3.8		3.8			16.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	35	1082	54	0	1645
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	35	1082	54	0	1645
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		8			8
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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	83.0%
ICU Level of Service	E
Analysis Period (min)	15

Lanes, Volumes, Timings
34: Phelps Rd (CT-191)

07/07/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	162	272	73	15	2	19
Future Volume (vph)	162	272	73	15	2	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.977		0.877	
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1770	1863	1820	0	1627	0
Flt Permitted	0.950				0.996	
Satd. Flow (perm)	1770	1863	1820	0	1627	0
Link Speed (mph)		40	30		30	
Link Distance (ft)		419	959		137	
Travel Time (s)		7.1	21.8		3.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	296	79	16	2	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	176	296	95	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.6%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

37:

07/07/2020



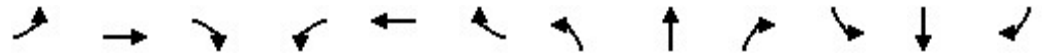
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	4	13	1261	1099	10
Future Volume (vph)	3	4	13	1261	1099	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	100			100
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Link Speed (mph)	30			45	45	
Link Distance (ft)	783			1377	2673	
Travel Time (s)	17.8			20.9	40.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	4	14	1371	1195	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	4	14	1371	1195	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			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	76.4%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↕		↗	↕	
Traffic Volume (vph)	29	0	124	15	0	18	77	1035	26	30	1562	1
Future Volume (vph)	29	0	124	15	0	18	77	1035	26	30	1562	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	700		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.925			0.996				
Flt Protected		0.950			0.978		0.950			0.950		
Satd. Flow (prot)	0	1719	1509	0	1719	0	1530	3364	0	1805	3406	0
Flt Permitted		0.734			0.887		0.950			0.950		
Satd. Flow (perm)	0	1328	1509	0	1559	0	1530	3364	0	1804	3406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135		119			3				
Link Speed (mph)		30			25			45				45
Link Distance (ft)		731			393			430				1397
Travel Time (s)		16.6			10.7			6.5				21.2
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	7%	0%	0%	0%	18%	7%	0%	0%	6%	0%
Adj. Flow (vph)	32	0	135	16	0	20	84	1125	28	33	1698	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	135	0	36	0	84	1153	0	33	1699	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	Right	Right
Median Width(ft)		0			0			24			30	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	2	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	29	29	20	29		34	0		29	306	
Trailing Detector (ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Position(ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Size(ft)	20	34	34	20	34		34	6		34	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)												300
Detector 2 Size(ft)												6
Detector 2 Type												Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)												0.0

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4								
Detector Phase	4	4	4	4	4		1			5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	12.6	12.6	12.6	12.6	12.6		11.6	21.2		10.2	21.2	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		17.0	45.5		22.0	50.5	
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%		18.9%	50.6%		24.4%	56.1%	
Maximum Green (s)	16.9	16.9	16.9	16.9	16.9		10.4	39.3		16.8	44.3	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	4.8		3.0	4.8	
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6		3.6	1.4		2.2	1.4	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6	5.6		5.6		6.6	6.2		5.2	6.2	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		16.9	16.9		16.9		8.3	41.1		15.0	48.7	
Actuated g/C Ratio		0.19	0.19		0.19		0.09	0.46		0.17	0.54	
v/c Ratio		0.13	0.34		0.09		0.60	0.75		0.11	0.92	
Control Delay		32.1	8.6		0.5		56.5	12.2		33.7	21.8	
Queue Delay		0.0	0.0		0.0		0.0	0.2		0.0	0.0	
Total Delay		32.1	8.6		0.5		56.5	12.4		33.7	21.8	
LOS		C	A		A		E	B		C	C	
Approach Delay		13.1			0.5			15.4			22.1	
Approach LOS		B			A			B			C	
90th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		10.4	39.3		16.8	44.3	
90th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		10.4	39.3		16.8	44.3	
70th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Max	Coord		Max	Coord	
50th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		8.8	39.3		16.8	45.9	
50th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Gap	Coord		Max	Coord	
30th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		7.1	41.9		14.2	47.6	
30th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Gap	Coord		Gap	Coord	
10th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		0.0	45.6		10.5	61.3	
10th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Skip	Coord		Gap	Coord	
Stops (vph)		25	20		0		77	340		25	1140	
Fuel Used(gal)		0	1		0		2	10		1	35	
CO Emissions (g/hr)		34	72		8		144	686		55	2468	
NOx Emissions (g/hr)		7	14		2		28	134		11	480	
VOC Emissions (g/hr)		8	17		2		33	159		13	572	
Dilemma Vehicles (#)		0	0		0		0	80		0	63	
Queue Length 50th (ft)		15	0		0		52	90		15	415	
Queue Length 95th (ft)		41	47		0		m72	128		m18	m#668	
Internal Link Dist (ft)		651			313			350			1317	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

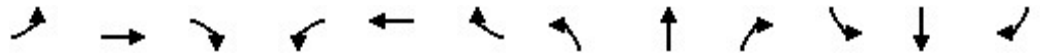
07/07/2020

Lane Group	Ø8
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	25%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
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)	18.0
90th %ile Term Code	Max
70th %ile Green (s)	18.0
70th %ile Term Code	Max
50th %ile Green (s)	18.0
50th %ile Term Code	Max
30th %ile Green (s)	18.0
30th %ile Term Code	Max
10th %ile Green (s)	18.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

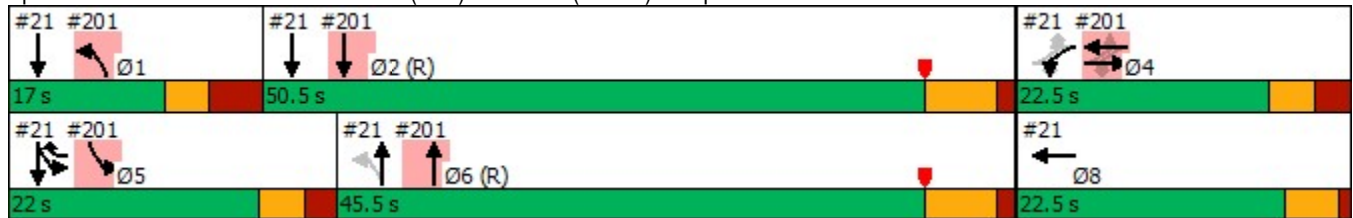


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			100							700		
Base Capacity (vph)		249	393		389		176	1536		336	1842	
Starvation Cap Reductn		0	0		0		0	61		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.13	0.34		0.09		0.48	0.78		0.10	0.92	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	18.7
Intersection LOS:	B
Intersection Capacity Utilization	71.4%
ICU Level of Service	C
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: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza



Lane Group	Ø8
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	43	1002	149	285	1228
Future Volume (vph)	49	43	1002	149	285	1228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	8	10
Storage Length (ft)	0	0		250	75	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.937			0.850		
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1660	0	1743	1615	1564	1657
Flt Permitted	0.974				0.072	
Satd. Flow (perm)	1660	0	1743	1615	118	1657
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	38			133		
Link Speed (mph)	30		45			45
Link Distance (ft)	419		1115			248
Travel Time (s)	9.5		16.9			3.8
Confl. Peds. (#/hr)					11	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	5%	9%	0%	0%	7%
Adj. Flow (vph)	53	47	1089	162	310	1335
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	0	1089	162	310	1335
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			8
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	1.20	1.09
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		0	0	0	0
Detector Template						
Leading Detector (ft)	25		0	0	0	0
Trailing Detector (ft)	-5		0	0	0	0
Detector 1 Position(ft)	-5		0	0	0	0
Detector 1 Size(ft)	30		6	20	20	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	Prot		NA	pm+ov	D.P+P	NA
Protected Phases	4		2	4	1	12
Permitted Phases				2	2	
Detector Phase	4					

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

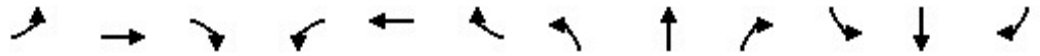
07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	5.0		15.0	5.0	5.0	
Minimum Split (s)	9.4		22.8	9.4	9.0	
Total Split (s)	9.4		63.6	9.4	17.0	
Total Split (%)	10.4%		70.7%	10.4%	18.9%	
Maximum Green (s)	5.0		55.8	5.0	13.0	
Yellow Time (s)	3.0		4.8	3.0	3.0	
All-Red Time (s)	1.4		3.0	1.4	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.4		7.8	4.4	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		3.0	1.5	3.0	
Recall Mode	None		C-Max	None	Max	
Act Effect Green (s)	5.0		55.8	68.6	72.6	76.6
Actuated g/C Ratio	0.06		0.62	0.76	0.81	0.85
v/c Ratio	0.78		1.01	0.13	1.02	0.95
Control Delay	66.4		42.5	1.5	49.8	13.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	66.4		42.5	1.5	49.8	13.7
LOS	E		D	A	D	B
Approach Delay	66.4		37.2			20.5
Approach LOS	E		D			C
90th %ile Green (s)	5.0		55.8	5.0	13.0	
90th %ile Term Code	Max		Coord	Max	MaxR	
70th %ile Green (s)	5.0		55.8	5.0	13.0	
70th %ile Term Code	Max		Coord	Max	MaxR	
50th %ile Green (s)	5.0		55.8	5.0	13.0	
50th %ile Term Code	Max		Coord	Max	MaxR	
30th %ile Green (s)	5.0		55.8	5.0	13.0	
30th %ile Term Code	Max		Coord	Max	MaxR	
10th %ile Green (s)	5.0		55.8	5.0	13.0	
10th %ile Term Code	Max		Coord	Max	MaxR	
Stops (vph)	51		563	17	210	425
Fuel Used(gal)	2		27	2	6	11
CO Emissions (g/hr)	128		1856	131	417	746
NOx Emissions (g/hr)	25		361	26	81	145
VOC Emissions (g/hr)	30		430	30	97	173
Dilemma Vehicles (#)	0		8	0	0	96
Queue Length 50th (ft)	35		~332	8	~147	205
Queue Length 95th (ft)	#122		#881	22	m131	m367
Internal Link Dist (ft)	339		1035			168
Turn Bay Length (ft)				250	75	
Base Capacity (vph)	128		1080	1262	304	1410
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	0.78		1.01	0.13	1.02	0.95

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

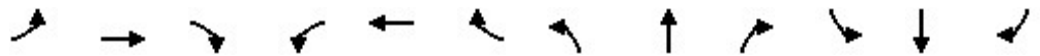
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	307	1200	35	352	35	748	281	57	60	358	349
Future Volume (vph)	176	307	1200	35	352	35	748	281	57	60	358	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		290	0		200	400		0	205		130
Storage Lanes	1		2	0		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.88	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.988			0.975				0.850
Flt Protected	0.950	0.997			0.996		0.950			0.950		
Satd. Flow (prot)	1603	1760	2733	0	3242	0	3273	3262	0	1703	3374	1583
Flt Permitted	0.950	0.997			0.996		0.950			0.950		
Satd. Flow (perm)	1603	1760	2733	0	3242	0	3273	3262	0	1698	3374	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			651		9			27				177
Link Speed (mph)		45			35			45				45
Link Distance (ft)		734			813			1397				571
Travel Time (s)		11.1			15.8			21.2				8.7
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	0%	10%	15%	7%	7%	10%	6%	7%	2%
Adj. Flow (vph)	191	334	1304	38	383	38	813	305	62	65	389	379
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	172	353	1304	0	459	0	813	367	0	65	389	379
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)		33			12			32				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	0
Detector Template				Left								
Leading Detector (ft)	29	34	29	20	48		34	326		39	326	0
Trailing Detector (ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Position(ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Size(ft)	34	34	39	20	48		34	6		34	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								320			320	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	4	4	1	8	8		1	6		5	2	4
Permitted Phases			4								2	2
Detector Phase	4	4	4	8	8		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0	5.0	9.0	9.0		5.0	15.0		5.0	11.0	9.0
Minimum Split (s)	15.5	15.5	10.9	15.7	15.7		10.9	21.0		10.0	21.0	15.5
Total Split (s)	23.0	23.0	26.8	19.0	19.0		26.8	34.0		14.0	21.2	23.0
Total Split (%)	25.6%	25.6%	29.8%	21.1%	21.1%		29.8%	37.8%		15.6%	23.6%	25.6%
Maximum Green (s)	16.5	16.5	20.9	12.3	12.3		20.9	28.0		9.0	15.2	16.5
Yellow Time (s)	3.3	3.3	3.0	4.1	4.1		3.0	4.8		3.0	4.8	3.3
All-Red Time (s)	3.2	3.2	2.9	2.6	2.6		2.9	1.2		2.0	1.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	5.9		6.7		5.9	6.0		5.0	6.0	6.5
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	2.0	2.0	2.0		2.0	2.5		2.0	2.5	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	18.0	18.0	39.5		12.3		20.9	30.1		7.4	13.7	37.7
Actuated g/C Ratio	0.20	0.20	0.44		0.14		0.23	0.33		0.08	0.15	0.42
v/c Ratio	0.54	1.01	0.83		1.02		1.07	0.33		0.46	0.76	0.50
Control Delay	40.1	88.6	11.7		87.0		69.7	22.3		49.7	45.4	9.8
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	40.1	88.6	11.7		87.0		69.7	22.3		49.7	45.4	9.8
LOS	D	F	B		F		E	C		D	D	A
Approach Delay		29.2			87.0			54.9			29.6	
Approach LOS		C			F			D			C	
90th %ile Green (s)	16.5	16.5	20.9	12.3	12.3		20.9	28.0		9.0	15.2	16.5
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
70th %ile Green (s)	16.5	16.5	20.9	12.3	12.3		20.9	28.0		9.0	15.2	16.5
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
50th %ile Green (s)	16.8	16.8	20.9	12.3	12.3		20.9	29.0		7.7	14.9	16.8
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Gap	Coord	Max
30th %ile Green (s)	19.4	19.4	20.9	12.3	12.3		20.9	27.8		6.3	12.3	19.4
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Gap	Coord	Max
10th %ile Green (s)	20.7	20.7	20.9	12.3	12.3		20.9	37.8		0.0	11.0	20.7
10th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	Max
Stops (vph)	141	259	543		357		668	309		57	317	156
Fuel Used(gal)	4	11	15		13		26	8		2	9	4
CO Emissions (g/hr)	265	743	1071		883		1797	590		108	600	275
NOx Emissions (g/hr)	52	145	208		172		350	115		21	117	53
VOC Emissions (g/hr)	61	172	248		205		416	137		25	139	64
Dilemma Vehicles (#)	0	15	0		21		0	1		0	29	0
Queue Length 50th (ft)	94	~237	73		~140		~279	112		37	94	53
Queue Length 95th (ft)	165	#416	131		#244		#397	m151		m74	145	32
Internal Link Dist (ft)		654			733			1317			491	
Turn Bay Length (ft)	350		290				400			205		130
Base Capacity (vph)	320	351	1564		450		760	1111		170	569	728
Starvation Cap Reductn	0	0	0		0		0	0		0	0	0

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

07/07/2020

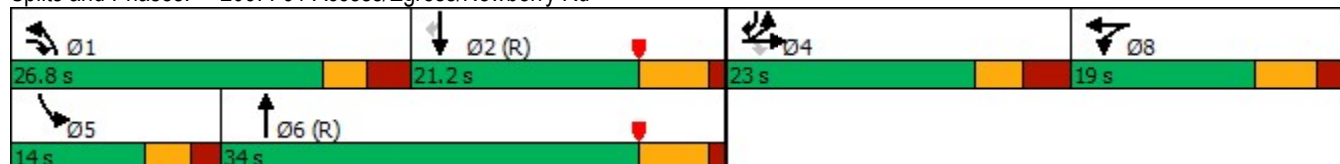


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0	0		0		0	0		0	0	0
Storage Cap Reductn	0	0	0		0		0	0		0	0	0
Reduced v/c Ratio	0.54	1.01	0.83		1.02		1.07	0.33		0.38	0.68	0.52

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 42.5 Intersection LOS: D
 Intersection Capacity Utilization 80.2% 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: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	370	117	142	898	144	207	243	40	69	276	90
Future Volume (vph)	236	370	117	142	898	144	207	243	40	69	276	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	12	11	12	12
Storage Length (ft)	0		0	260		475	300		200	200		0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850		0.979				0.850		0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	3172	1516	1504	3268	0	3083	1640	1442	1517	1610	0
Flt Permitted	0.136			0.480			0.950			0.950		
Satd. Flow (perm)	223	3172	1516	760	3268	0	3083	1640	1423	1513	1610	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		381			922			908			517	
Travel Time (s)		7.4			14.0			13.8			7.8	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	10%	3%	16%	4%	8%	6%	12%	12%	15%	8%	31%
Adj. Flow (vph)	257	402	127	154	976	157	225	264	43	75	300	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	257	402	127	154	1133	0	225	264	43	75	398	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)		11			11			20			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.04	1.00	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		12	15		12
Number of Detectors	1	1	0	1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	29	256	0	30	315		29	29	29	29	29	
Trailing Detector (ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	34	6	20	35	5		34	34	34	34	34	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	

Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.0	15.0	4.0	6.0	15.0		4.0	9.0	6.0	4.0	5.0	
Minimum Split (s)	11.8	20.5	8.0	12.6	20.5		8.0	15.8	12.6	8.0	11.8	
Total Split (s)	16.0	33.9	11.0	17.2	35.1		11.0	27.9	17.2	11.0	27.9	
Total Split (%)	17.8%	37.7%	12.2%	19.1%	39.0%		12.2%	31.0%	19.1%	12.2%	31.0%	
Maximum Green (s)	10.2	28.4	7.0	10.6	29.6		7.0	21.1	10.6	7.0	21.1	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5		3.0	4.4	3.0	3.0	4.4	
All-Red Time (s)	2.8	1.0	1.0	3.6	1.0		1.0	2.4	3.6	1.0	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.5	4.0	6.6	5.5		4.0	6.8	6.6	4.0	6.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	2.5	1.5	1.5	2.5	
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	40.1	30.2	42.7	37.3	29.6		7.0	23.3	32.3	6.6	21.1	
Actuated g/C Ratio	0.45	0.34	0.47	0.41	0.33		0.08	0.26	0.36	0.07	0.23	
v/c Ratio	1.03	0.38	0.18	0.40	1.05		0.94	0.62	0.08	0.68	1.06	
Control Delay	89.2	28.8	15.9	16.5	74.1		95.7	36.0	13.9	71.7	97.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	89.2	28.8	15.9	16.5	74.1		95.7	36.0	13.9	71.7	97.3	
LOS	F	C	B	B	E		F	D	B	E	F	
Approach Delay		46.5			67.2			59.5			93.3	
Approach LOS		D			E			E			F	
90th %ile Green (s)	10.2	28.4	7.0	10.6	29.6		7.0	21.1	10.6	7.0	21.1	
90th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	10.2	28.4	7.0	10.6	29.6		7.0	21.1	10.6	7.0	21.1	
70th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	10.2	29.9	7.0	9.1	29.6		7.0	21.1	9.1	7.0	21.1	
50th %ile Term Code	Max	Coord	Max	Gap	Coord		Max	Hold	Gap	Max	Max	
30th %ile Green (s)	10.2	31.4	7.0	7.6	29.6		7.0	21.1	7.6	7.0	21.1	
30th %ile Term Code	Max	Coord	Max	Gap	Coord		Max	Hold	Gap	Max	Max	
10th %ile Green (s)	10.2	33.0	7.0	6.0	29.6		7.0	32.1	6.0	0.0	21.1	
10th %ile Term Code	Max	Coord	Max	Min	Coord		Max	Hold	Min	Skip	Max	
Stops (vph)	152	313	67	84	899		182	193	22	62	304	
Fuel Used(gal)	6	6	1	2	33		8	6	1	2	12	
CO Emissions (g/hr)	425	387	84	166	2315		525	392	44	140	857	
NOx Emissions (g/hr)	83	75	16	32	451		102	76	8	27	167	
VOC Emissions (g/hr)	99	90	20	38	537		122	91	10	33	199	
Dilemma Vehicles (#)	0	15	0	0	52		0	22	0	0	17	
Queue Length 50th (ft)	~99	109	43	47	~374		67	123	9	42	~250	
Queue Length 95th (ft)	#269	134	80	84	#501		#141	#248	33	#108	#426	
Internal Link Dist (ft)		301			842			828			437	
Turn Bay Length (ft)				260			300		200	200		
Base Capacity (vph)	250	1064	719	417	1074		239	424	512	117	377	
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	1.03	0.38	0.18	0.37	1.05		0.94	0.62	0.08	0.64	1.06	

Lanes, Volumes, Timings
 210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	30 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle:	120
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.06
Intersection Signal Delay:	64.6
Intersection LOS:	E
Intersection Capacity Utilization	86.6%
ICU Level of Service	E
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: 210: N Rd. (CT-140)/N Rd. (CT140)

 Ø1 17.2 s	 Ø2 (R) 33.9 s	 Ø3 11 s	 Ø4 27.9 s
 Ø5 16 s	 Ø6 (R) 35.1 s	 Ø7 11 s	 Ø8 27.9 s

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	346	0	14	0	1260	44	28	1072	3
Future Volume (vph)	0	0	3	346	0	14	0	1260	44	28	1072	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Fr _t			0.865		0.995			0.995				
Fl _t Protected					0.954						0.999	
Satd. Flow (prot)	0	0	1096	0	1779	0	0	3334	0	0	3338	0
Fl _t Permitted					0.954						0.877	
Satd. Flow (perm)	0	0	1096	0	1779	0	0	3334	0	0	2930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80		33			7				
Link Speed (mph)		30			30			50			45	
Link Distance (ft)		417			1615			1146			576	
Travel Time (s)		9.5			36.7			15.6			8.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	50%	1%	0%	11%	14%	8%	0%	6%	8%	50%
Adj. Flow (vph)	0	0	3	376	0	15	0	1370	48	30	1165	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	3	0	391	0	0	1418	0	0	1198	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			26			26	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			0	1	1			0		1	0	
Detector Template				Left						Left		
Leading Detector (ft)			0	20	25			0		20	0	
Trailing Detector (ft)			0	0	0			0		0	0	
Detector 1 Position(ft)			0	0	0			0		0	0	
Detector 1 Size(ft)			20	20	25			0		20	0	
Detector 1 Type			Extend	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Turn Type			Perm	Perm	NA			NA		Perm	NA	
Protected Phases					4			2			2	
Permitted Phases			4	4						2		
Detector Phase			4	4	4							
Switch Phase												
Minimum Initial (s)			9.0	9.0	9.0			15.0		15.0	15.0	
Minimum Split (s)			13.0	13.0	13.0			20.7		20.7	20.7	
Total Split (s)			31.0	31.0	31.0			59.0		59.0	59.0	
Total Split (%)			34.4%	34.4%	34.4%			65.6%		65.6%	65.6%	

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)			27.0	27.0	27.0			53.3		53.3	53.3	
Yellow Time (s)			3.0	3.0	3.0			4.7		4.7	4.7	
All-Red Time (s)			1.0	1.0	1.0			1.0		1.0	1.0	
Lost Time Adjust (s)			0.0		0.0			0.0			0.0	
Total Lost Time (s)			4.0		4.0			5.7			5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)			3.0	3.0	3.0			3.0		3.0	3.0	
Recall Mode			None	None	None			C-Max		C-Max	C-Max	
Act Effct Green (s)			22.6		22.6			57.7			57.7	
Actuated g/C Ratio			0.25		0.25			0.64			0.64	
v/c Ratio			0.01		0.83			0.66			0.64	
Control Delay			0.0		44.2			12.7			9.3	
Queue Delay			0.0		0.0			0.0			0.0	
Total Delay			0.0		44.2			12.7			9.3	
LOS			A		D			B			A	
Approach Delay					44.3			12.7			9.3	
Approach LOS					D			B			A	
90th %ile Green (s)			27.0	27.0	27.0			53.3		53.3	53.3	
90th %ile Term Code			Max	Max	Max			Coord		Coord	Coord	
70th %ile Green (s)			26.6	26.6	26.6			53.7		53.7	53.7	
70th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
50th %ile Green (s)			23.6	23.6	23.6			56.7		56.7	56.7	
50th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
30th %ile Green (s)			20.3	20.3	20.3			60.0		60.0	60.0	
30th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
10th %ile Green (s)			15.5	15.5	15.5			64.8		64.8	64.8	
10th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
Stops (vph)			0		306			786			453	
Fuel Used(gal)			0		9			25			22	
CO Emissions (g/hr)			1		662			1743			1516	
NOx Emissions (g/hr)			0		129			339			295	
VOC Emissions (g/hr)			0		153			404			351	
Dilemma Vehicles (#)			0		0			73			47	
Queue Length 50th (ft)			0		191			245			121	
Queue Length 95th (ft)			0		284			355			233	
Internal Link Dist (ft)		337			1535			1066			496	
Turn Bay Length (ft)												
Base Capacity (vph)			384		556			2140			1878	
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			0.01		0.70			0.66			0.64	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 33 (37%), Referenced to phase 2:NBSB, Start of Yellow

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020

Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 211: Crow Park Rd / Scantic Rd



Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	25	13	14	22	53	188	17	939	58	162	1466	30
Future Volume (vph)	25	13	14	22	53	188	17	939	58	162	1466	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		80	0		30	120		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		1.00							
Frt			0.850			0.850		0.991			0.997	
Flt Protected		0.968			0.986		0.950			0.950		
Satd. Flow (prot)	0	1758	1313	0	1873	1400	1703	1713	0	1687	1803	0
Flt Permitted		0.752			0.887		0.083			0.076		
Satd. Flow (perm)	0	1361	1279	0	1683	1400	149	1713	0	135	1803	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						204		4				1
Link Speed (mph)		25			35			45				45
Link Distance (ft)		551			479			2227				349
Travel Time (s)		15.0			9.3			33.7				5.3
Confl. Peds. (#/hr)	1		1	1								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	0%	23%	0%	0%	0%	6%	9%	25%	7%	5%	7%
Adj. Flow (vph)	27	14	15	24	58	204	18	1021	63	176	1593	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	15	0	82	204	18	1084	0	176	1626	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	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	3		1		3
Detector Template	Left			Left								
Leading Detector (ft)	20	20	15	20	25	20	33	326		33		326
Trailing Detector (ft)	0	0	0	0	0	0	-5	0		-5		0
Detector 1 Position(ft)	0	0	0	0	0	0	-5	0		-5		0
Detector 1 Size(ft)	20	20	15	20	25	20	38	6		38		6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	2.0	8.0	0.0	8.0	8.0	0.0	0.0		0.0		0.0
Detector 2 Position(ft)								144				94
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

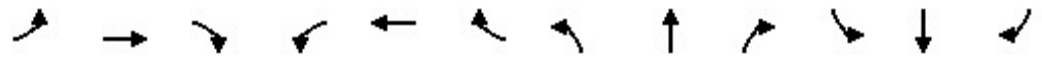


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	
Detector 3 Position(ft)								320			320	
Detector 3 Size(ft)								6			6	
Detector 3 Type								Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Detector Phase	4	4	4	4	4	4	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	15.0		5.0	15.0	
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	8.0	22.8		9.0	22.8	
Total Split (s)	12.0	12.0	12.0	12.0	12.0	12.0	8.0	48.0		8.0	48.0	
Total Split (%)	13.3%	13.3%	13.3%	13.3%	13.3%	13.3%	8.9%	53.3%		8.9%	53.3%	
Maximum Green (s)	7.5	7.5	7.5	7.5	7.5	7.5	5.0	40.2		4.0	40.2	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0	4.8		3.0	4.8	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	3.0		1.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	3.0	7.8		4.0	7.8	
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.0	7.0		7.0	7.0	60.8	51.6		70.1	63.6	
Actuated g/C Ratio		0.08	0.08		0.08	0.08	0.68	0.57		0.78	0.71	
v/c Ratio		0.39	0.15		0.63	0.69	0.10	1.10		0.60	1.28	
Control Delay		50.3	42.1		61.8	19.1	1.7	63.0		22.9	139.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		50.3	42.1		61.8	19.1	1.7	63.0		22.9	139.5	
LOS		D	D		E	B	A	E		C	F	
Approach Delay		48.1			31.4			62.0			128.1	
Approach LOS		D			C			E			F	
90th %ile Green (s)	7.5	7.5	7.5	7.5	7.5	7.5	5.2	40.2		6.0	42.0	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Coord		Max	Coord	
70th %ile Green (s)	7.5	7.5	7.5	7.5	7.5	7.5	4.3	53.8		12.4	62.9	
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Coord		Gap	Coord	
50th %ile Green (s)	7.5	7.5	7.5	7.5	7.5	7.5	0.0	54.5		11.7	70.2	
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
30th %ile Green (s)	7.4	7.4	7.4	7.4	7.4	7.4	0.0	54.8		11.5	70.3	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Skip	Coord		Gap	Coord	
10th %ile Green (s)	5.1	5.1	5.1	5.1	5.1	5.1	0.0	54.9		13.7	72.6	
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Skip	Coord		Gap	Coord	
Stops (vph)		37	15		69	29	2	589		111	760	
Fuel Used(gal)		1	0		2	2	0	42		3	55	
CO Emissions (g/hr)		50	17		120	112	28	2911		175	3867	

Lane Group	Ø3
Detector 2 Extend (s)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	24%
Maximum Green (s)	18.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	9.0
Pedestrian Calls (#/hr)	10
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)	16.0
90th %ile Term Code	Ped
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

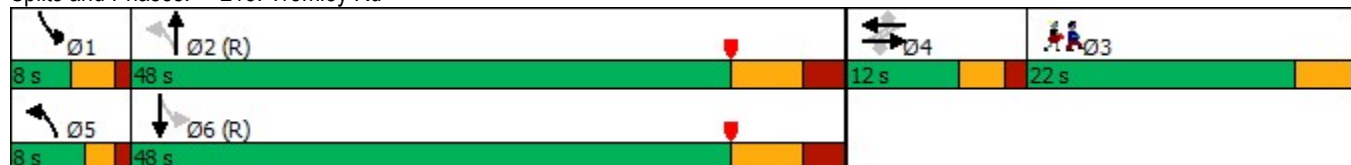


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		10	3		23	22	5	566		34	752	
VOC Emissions (g/hr)		11	4		28	26	6	675		41	896	
Dilemma Vehicles (#)		0	0		4	0	0	4		0	8	
Queue Length 50th (ft)		22	8		46	0	1	~681		34	~1152	
Queue Length 95th (ft)		56	28		#105	#82	m1	m#857		m35	m#1103	
Internal Link Dist (ft)		471			399			2147			269	
Turn Bay Length (ft)			80			30	120			200		
Base Capacity (vph)		113	106		140	303	188	984		295	1274	
Starvation Cap Reductn		0	0		0	0	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		0.36	0.14		0.59	0.67	0.10	1.10		0.60	1.28	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.28
 Intersection Signal Delay: 95.7
 Intersection LOS: F
 Intersection Capacity Utilization 106.6%
 ICU Level of Service G
 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: 213: Tromley Rd



Lane Group	Ø3
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
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	

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗			↕	↗
Traffic Volume (vph)	64	6	79	12	10	7	49	1211	4	7	1018	102
Future Volume (vph)	64	6	79	12	10	7	49	1211	4	7	1018	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	8	12	12	8	12	8
Storage Length (ft)	0		30	0		0	50		0	0		50
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.966							0.850
Fl _t Protected		0.957			0.980		0.950					
Satd. Flow (prot)	0	1667	1386	0	1725	0	1384	1776	0	0	1754	1386
Fl _t Permitted		0.722			0.834		0.187				0.990	
Satd. Flow (perm)	0	1257	1386	0	1468	0	273	1776	0	0	1737	1386
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86		8			1				60
Link Speed (mph)		25			35			45				45
Link Distance (ft)		801			1499			2673				1892
Travel Time (s)		21.8			29.2			40.5				28.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	0%	1%	0%	0%	17%	13%	7%	0%	50%	8%	1%
Adj. Flow (vph)	70	7	86	13	11	8	53	1316	4	8	1107	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	86	0	32	0	53	1320	0	0	1115	111
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)		10			0			8				8
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		0	0		0	0	1
Detector Template	Left		Right	Left								Right
Leading Detector (ft)	20	20	20	20	29		0	0		0	0	20
Trailing Detector (ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Size(ft)	20	20	20	20	34		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2				2
Permitted Phases	4		4	4			2			2		2
Detector Phase	4	4	4	4	4							2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		15.0	15.0		15.0	15.0	15.0

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.3	9.3	9.3	9.3	9.3		22.0	22.0		22.0	22.0	22.0
Total Split (s)	11.0	11.0	11.0	11.0	11.0		79.0	79.0		79.0	79.0	79.0
Total Split (%)	12.2%	12.2%	12.2%	12.2%	12.2%		87.8%	87.8%		87.8%	87.8%	87.8%
Maximum Green (s)	6.7	6.7	6.7	6.7	6.7		72.0	72.0		72.0	72.0	72.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.8	4.8		4.8	4.8	4.8
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2		2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		4.3	4.3		4.3		7.0	7.0			7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		6.6	6.6		6.6		72.1	72.1		72.1	72.1	72.1
Actuated g/C Ratio		0.07	0.07		0.07		0.80	0.80		0.80	0.80	0.80
v/c Ratio		0.84	0.48		0.28		0.24	0.93		0.80	0.10	0.10
Control Delay		101.6	18.7		38.6		4.8	27.5		11.1	1.5	1.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		101.6	18.7		38.6		4.8	27.5		11.1	1.5	1.5
LOS		F	B		D		A	C		B	A	A
Approach Delay		57.8			38.6			26.6		10.2		
Approach LOS		E			D			C		B		
90th %ile Green (s)	6.7	6.7	6.7	6.7	6.7		72.0	72.0		72.0	72.0	72.0
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
70th %ile Green (s)	6.7	6.7	6.7	6.7	6.7		72.0	72.0		72.0	72.0	72.0
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
50th %ile Green (s)	6.7	6.7	6.7	6.7	6.7		72.0	72.0		72.0	72.0	72.0
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
30th %ile Green (s)	6.7	6.7	6.7	6.7	6.7		72.0	72.0		72.0	72.0	72.0
30th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
10th %ile Green (s)	6.3	6.3	6.3	6.3	6.3		72.4	72.4		72.4	72.4	72.4
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	Coord
Stops (vph)		58	19		24		11	671		645	14	14
Fuel Used(gal)		2	1		1		1	36		23	1	1
CO Emissions (g/hr)		152	64		50		72	2531		1603	102	102
NOx Emissions (g/hr)		30	12		10		14	492		312	20	20
VOC Emissions (g/hr)		35	15		12		17	587		372	24	24
Dilemma Vehicles (#)		0	0		2		0	78		67	0	0
Queue Length 50th (ft)		44	0		13		5	513		438	7	7
Queue Length 95th (ft)		#125	44		42		m13	#600		m593	m10	m10
Internal Link Dist (ft)		721			1419			2593		1812		
Turn Bay Length (ft)			30				50					50
Base Capacity (vph)		93	182		116		218	1422		1391	1121	1121
Starvation Cap Reductn		0	0		0		0	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		0.83	0.47		0.28		0.24	0.93		0.80	0.10	0.10

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings

214: DD/Abbe Rd

07/07/2020

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 21.4

Intersection LOS: C

Intersection Capacity Utilization 95.9%

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: 214: DD/Abbe Rd



Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗		↖	↗	
Traffic Volume (vph)	30	5	136	5	5	6	96	1037	2	5	1519	18
Future Volume (vph)	30	5	136	5	5	6	96	1037	2	5	1519	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		300	0		0	150		0	320		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.944							0.998
Flt Protected		0.958			0.986		0.950			0.950		
Satd. Flow (prot)	0	1820	1599	0	1768	0	1719	1759	0	1805	1774	0
Flt Permitted		0.747			0.887		0.059			0.154		
Satd. Flow (perm)	0	1419	1599	0	1591	0	107	1759	0	293	1774	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		7							2
Link Speed (mph)		30			30			45				45
Link Distance (ft)		1143			286			1965				934
Travel Time (s)		26.0			6.5			29.8				14.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	5%	8%	0%	0%	7%	0%
Adj. Flow (vph)	33	5	148	5	5	7	104	1127	2	5	1651	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	148	0	17	0	104	1129	0	5	1671	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	0	
Detector Template	Left		Right	Left								
Leading Detector (ft)	20	45	20	20	45		15	0		15	0	
Trailing Detector (ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	50	20	20	50		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4			6			2		
Detector Phase	4	4	4	4	4		1			5		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.1	10.1	10.1	10.1	10.1		9.0	22.3		9.0	22.3	

Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	10.1	10.1	10.1	10.1	10.1		9.0	70.9		9.0	70.9	
Total Split (%)	11.2%	11.2%	11.2%	11.2%	11.2%		10.0%	78.8%		10.0%	78.8%	
Maximum Green (s)	5.0	5.0	5.0	5.0	5.0		5.0	63.6		5.0	63.6	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8		1.0	2.5		1.0	2.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.1	5.1		5.1		4.0	7.3		4.0	7.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		5.0	5.0		5.0		75.1	70.8		72.7	65.4	
Actuated g/C Ratio		0.06	0.06		0.06		0.83	0.79		0.81	0.73	
v/c Ratio		0.49	0.72		0.18		0.58	0.82		0.02	1.30	
Control Delay		62.9	32.9		35.3		24.4	5.7		2.2	161.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		62.9	32.9		35.3		24.4	5.7		2.2	161.4	
LOS		E	C		D		C	A		A	F	
Approach Delay		39.0			35.3			7.3			161.0	
Approach LOS		D			D			A			F	
90th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		5.0	63.6		5.0	63.6	
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		5.0	72.6		0.0	63.6	
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
50th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		5.0	72.6		0.0	63.6	
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
30th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		5.0	72.6		0.0	63.6	
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
10th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		0.0	72.6		0.0	72.6	
10th %ile Term Code	Max	Max	Max	Max	Max		Skip	Coord		Skip	Coord	
Stops (vph)		33	33		13		84	137		2	1099	
Fuel Used(gal)		1	2		0		3	16		0	74	
CO Emissions (g/hr)		66	161		16		192	1130		4	5138	
NOx Emissions (g/hr)		13	31		3		37	220		1	1000	
VOC Emissions (g/hr)		15	37		4		44	262		1	1191	
Dilemma Vehicles (#)		0	0		0		0	15		0	118	
Queue Length 50th (ft)		21	14		6		16	19		1	~1224	
Queue Length 95th (ft)		#63	#103		27		m25	m90		m1	#1488	
Internal Link Dist (ft)		1063			206			1885			854	
Turn Bay Length (ft)			300				150			320		
Base Capacity (vph)		78	205		95		178	1383		321	1289	
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		0.49	0.72		0.18		0.58	0.82		0.02	1.30	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	4	2	2	63	0	31	5	1220	57	14	1062	1
Future Volume (vph)	4	2	2	63	0	31	5	1220	57	14	1062	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	8	12	12	8	12	12
Storage Length (ft)	0		0	0		50	50		0	50		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99	0.97						
Frt		0.966				0.850		0.993				
Flt Protected		0.976			0.950		0.950			0.950		
Satd. Flow (prot)	0	1778	0	0	1612	1400	1564	1746	0	1448	1776	0
Flt Permitted		0.810			0.800		0.186			0.081		
Satd. Flow (perm)	0	1470	0	0	1345	1359	306	1746	0	124	1776	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				41		11				
Link Speed (mph)		30			35			45				45
Link Distance (ft)		411			816			1892				693
Travel Time (s)		9.3			15.9			28.7				10.5
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	12%	0%	0%	0%	8%	9%	8%	7%	0%
Adj. Flow (vph)	4	2	2	68	0	34	5	1326	62	15	1154	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	68	34	5	1388	0	15	1155	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			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.00	1.00	1.20	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	0	0		0	0	
Detector Template	Left			Left		Right						
Leading Detector (ft)	20	12		20	36	20	0	0		0	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	12		20	36	20	20	36		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0	9.0	21.4	21.4		21.4	21.4	
Total Split (s)	9.0	9.0		9.0	9.0	9.0	81.0	81.0		81.0	81.0	
Total Split (%)	10.0%	10.0%		10.0%	10.0%	10.0%	90.0%	90.0%		90.0%	90.0%	
Maximum Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	6.4	6.4		6.4	6.4	
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		5.0			5.0	5.0	74.6	74.6		74.6	74.6	
Actuated g/C Ratio		0.06			0.06	0.06	0.83	0.83		0.83	0.83	
v/c Ratio		0.10			0.92	0.30	0.02	0.96		0.15	0.78	
Control Delay		38.7			130.2	18.3	0.4	11.5		1.3	2.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		38.7			130.2	18.3	0.4	11.5		1.3	2.4	
LOS		D			F	B	A	B		A	A	
Approach Delay		38.7			92.9			11.5			2.3	
Approach LOS		D			F			B			A	
90th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
50th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
30th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
30th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
10th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
10th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
Stops (vph)		8			48	9	0	89		0	70	
Fuel Used(gal)		0			2	0	0	20		0	10	
CO Emissions (g/hr)		9			168	26	4	1383		9	714	
NOx Emissions (g/hr)		2			33	5	1	269		2	139	
VOC Emissions (g/hr)		2			39	6	1	321		2	165	
Dilemma Vehicles (#)		0			3	0	0	28		0	13	
Queue Length 50th (ft)		3			39	0	0	22		0	1	
Queue Length 95th (ft)		17			#121	26	m0	m#80		m0	m1	
Internal Link Dist (ft)		331			736			1812			613	
Turn Bay Length (ft)						50	50			50		
Base Capacity (vph)		83			74	114	253	1449		102	1472	
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		0.10			0.92	0.30	0.02	0.96		0.15	0.78	

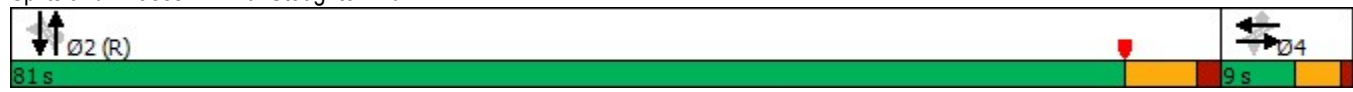
Lanes, Volumes, Timings
 216: Stoughton Rd

07/07/2020

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	23 (26%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	10.7
Intersection LOS:	B
Intersection Capacity Utilization	88.0%
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.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 216: Stoughton Rd



Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↗	↗
Traffic Volume (vph)	0	257	310	391	677	0	0	0	0	206	0	206
Future Volume (vph)	0	257	310	391	677	0	0	0	0	206	0	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		50
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926										0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	1725	0	1770	1863	0	0	0	0	0	1770	1583
Flt Permitted				0.216							0.950	
Satd. Flow (perm)	0	1725	0	402	1863	0	0	0	0	0	1770	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80										145
Link Speed (mph)		30			35			30				30
Link Distance (ft)		684			478			428				360
Travel Time (s)		15.5			9.3			9.7				8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	279	337	425	736	0	0	0	0	224	0	224
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	616	0	425	736	0	0	0	0	0	224	224
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			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0					1	1	1
Detector Template										Left		
Leading Detector (ft)		0		36	0					20	15	15
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		36	6					20	15	15
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	6.0	6.0
Turn Type		NA		D,P+P	NA					Split	NA	Prot
Protected Phases		2		3	3 2					4	4	4
Permitted Phases				2								
Detector Phase				3						4	4	4
Switch Phase												
Minimum Initial (s)		20.0		5.0						5.0	5.0	5.0
Minimum Split (s)		25.5		9.9						10.3	10.3	10.3
Total Split (s)		41.2		27.8						21.0	21.0	21.0

Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)		45.8%		30.9%						23.3%	23.3%	23.3%
Maximum Green (s)		35.7		22.9						15.7	15.7	15.7
Yellow Time (s)		4.5		3.9						3.0	3.0	3.0
All-Red Time (s)		1.0		1.0						2.3	2.3	2.3
Lost Time Adjust (s)		0.0		0.0							0.0	0.0
Total Lost Time (s)		5.5		4.9							5.3	5.3
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		2.0						3.0	3.0	3.0
Recall Mode		C-Max		None						None	None	None
Act Effct Green (s)		40.5		60.1	65.0						14.8	14.8
Actuated g/C Ratio		0.45		0.67	0.72						0.16	0.16
v/c Ratio		0.75		0.76	0.55						0.77	0.59
Control Delay		26.6		15.0	5.0						54.7	19.8
Queue Delay		0.0		0.0	0.1						0.0	0.0
Total Delay		26.6		15.0	5.0						54.7	19.8
LOS		C		B	A						D	B
Approach Delay		26.6			8.7						37.3	
Approach LOS		C			A						D	
90th %ile Green (s)		35.7		22.9						15.7	15.7	15.7
90th %ile Term Code		Coord		Max						Max	Max	Max
70th %ile Green (s)		35.7		22.9						15.7	15.7	15.7
70th %ile Term Code		Coord		Max						Max	Max	Max
50th %ile Green (s)		37.2		20.2						16.9	16.9	16.9
50th %ile Term Code		Coord		Gap						Gap	Gap	Gap
30th %ile Green (s)		42.8		17.0						14.5	14.5	14.5
30th %ile Term Code		Coord		Gap						Gap	Gap	Gap
10th %ile Green (s)		51.3		12.0						11.0	11.0	11.0
10th %ile Term Code		Coord		Gap						Gap	Gap	Gap
Stops (vph)		404		203	132						185	75
Fuel Used(gal)		8		4	4						4	2
CO Emissions (g/hr)		582		284	280						272	128
NOx Emissions (g/hr)		113		55	55						53	25
VOC Emissions (g/hr)		135		66	65						63	30
Dilemma Vehicles (#)		0		0	44						0	0
Queue Length 50th (ft)		266		50	87						119	39
Queue Length 95th (ft)		#474		59	95						#224	112
Internal Link Dist (ft)		604			398			348			280	
Turn Bay Length (ft)												50
Base Capacity (vph)		820		634	1346						313	399
Starvation Cap Reductn		0		0	63						0	0
Spillback Cap Reductn		0		0	0						0	0
Storage Cap Reductn		0		0	0						0	0
Reduced v/c Ratio		0.75		0.67	0.57						0.72	0.56

Intersection Summary

Area Type: Other

Cycle Length: 90

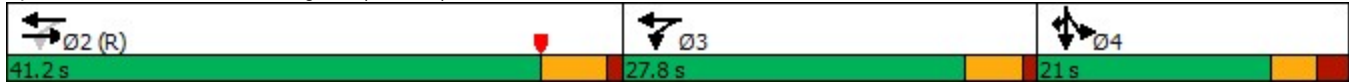
Actuated Cycle Length: 90

Lanes, Volumes, Timings
 219: Bridge St (CT-140)

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Offset: 26 (29%), Referenced to phase 2:EBWB, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 19.4 Intersection LOS: B
 Intersection Capacity Utilization 78.7% 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.

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020

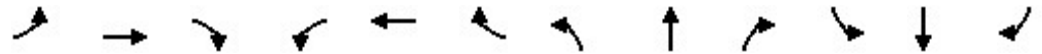


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕↕			
Traffic Volume (vph)	164	299	0	0	956	239	112	0	383	0	0	0
Future Volume (vph)	164	299	0	0	956	239	112	0	383	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		300	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.970				0.850			
Flt Protected		0.983						0.950				
Satd. Flow (prot)	0	3479	0	0	3433	0	0	1770	2787	0	0	0
Flt Permitted		0.534						0.950				
Satd. Flow (perm)	0	1890	0	0	3433	0	0	1770	2787	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					53				416			
Link Speed (mph)		35			35			30				30
Link Distance (ft)		478			323			585				321
Travel Time (s)		9.3			6.3			13.3				7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	325	0	0	1039	260	122	0	416	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	503	0	0	1299	0	0	122	416	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)		0			6			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			0		1	1	1			
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			0		20	6	21			
Trailing Detector (ft)	0	0			0		0	0	-3			
Detector 1 Position(ft)	0	0			0		0	0	-3			
Detector 1 Size(ft)	20	6			6		20	6	24			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	9.0			
Detector 2 Position(ft)		94										
Detector 2 Size(ft)		6										
Detector 2 Type		Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)		0.0										
Turn Type	custom	NA			NA		Split	NA	custom			
Protected Phases	3	2 3			2 5		4	4	4 5			
Permitted Phases	2											

Lane Group	Ø2	Ø5
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	5
Permitted Phases		

Lanes, Volumes, Timings
220: Bridge St (CT-140)

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3					4	4	5			
Switch Phase												
Minimum Initial (s)	5.0						7.0	7.0				
Minimum Split (s)	10.4						12.1	12.1				
Total Split (s)	17.0						18.0	18.0				
Total Split (%)	18.9%						20.0%	20.0%				
Maximum Green (s)	11.6						12.9	12.9				
Yellow Time (s)	4.1						3.0	3.0				
All-Red Time (s)	1.3						2.1	2.1				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.1				
Lead/Lag	Lag						Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5						3.0	3.0				
Recall Mode	Max						None	None				
Act Effct Green (s)		50.4			50.6			10.8	21.5			
Actuated g/C Ratio		0.56			0.56			0.12	0.24			
v/c Ratio		0.40			0.66			0.58	0.42			
Control Delay		13.7			2.3			48.1	4.3			
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		13.7			2.3			48.1	4.3			
LOS		B			A			D	A			
Approach Delay		13.7			2.3			14.2				
Approach LOS		B			A			B				
90th %ile Green (s)	11.6						12.9	12.9				
90th %ile Term Code	MaxR						Max	Max				
70th %ile Green (s)	11.6						12.9	12.9				
70th %ile Term Code	MaxR						Max	Max				
50th %ile Green (s)	11.6						11.5	11.5				
50th %ile Term Code	MaxR						Gap	Gap				
30th %ile Green (s)	11.6						9.6	9.6				
30th %ile Term Code	MaxR						Gap	Gap				
10th %ile Green (s)	11.6						7.0	7.0				
10th %ile Term Code	MaxR						Min	Min				
Stops (vph)		280			94			104	34			
Fuel Used(gal)		5			4			2	2			
CO Emissions (g/hr)		349			283			153	158			
NOx Emissions (g/hr)		68			55			30	31			
VOC Emissions (g/hr)		81			66			35	37			
Dilemma Vehicles (#)		78			13			0	0			
Queue Length 50th (ft)		70			22			66	0			
Queue Length 95th (ft)		132			m21			120	37			
Internal Link Dist (ft)		398			243			505			241	
Turn Bay Length (ft)									300			
Base Capacity (vph)		1244			1954			253	1042			
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		0.40			0.66			0.48	0.40			

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

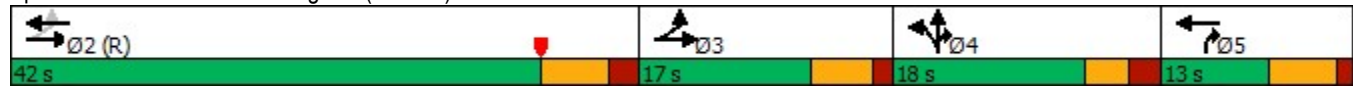
07/07/2020

Lane Group	Ø2	Ø5
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	5.0
Minimum Split (s)	21.5	10.7
Total Split (s)	42.0	13.0
Total Split (%)	47%	14%
Maximum Green (s)	35.5	7.3
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	1.2
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	1.5
Recall Mode	C-Max	None
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)	37.8	5.0
90th %ile Term Code	Coord	Min
70th %ile Green (s)	37.8	5.0
70th %ile Term Code	Coord	Min
50th %ile Green (s)	39.2	5.0
50th %ile Term Code	Coord	Min
30th %ile Green (s)	41.1	5.0
30th %ile Term Code	Coord	Min
10th %ile Green (s)	43.7	5.0
10th %ile Term Code	Coord	Min
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
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

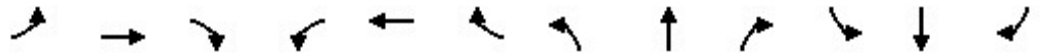
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	60 (67%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	7.5
Intersection LOS:	A
Intersection Capacity Utilization	68.4%
ICU Level of Service	C
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 220: Bridge St (CT-140)



Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	6	41	4	6	47	10	16	1135	104	188	1067	23
Future Volume (vph)	6	41	4	6	47	10	16	1135	104	188	1067	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	200		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990				0.850		0.988			0.997	
Flt Protected		0.994			0.994			0.999			0.993	
Satd. Flow (prot)	0	1572	0	0	1774	1482	0	3287	0	0	3279	0
Flt Permitted		0.945			0.969			0.924			0.554	
Satd. Flow (perm)	0	1495	0	0	1729	1482	0	3040	0	0	1829	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				46		36			7	
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		484			1094			527			557	
Travel Time (s)		13.2			29.8			8.0			8.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	8%	0%	10%	6%	9%	8%	9%	2%	3%	10%	11%
Adj. Flow (vph)	7	45	4	7	51	11	17	1234	113	204	1160	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	58	11	0	1364	0	0	1389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	0		1	0	
Detector Template	Left			Left		Right	Left			Left		
Leading Detector (ft)	20	15		20	20	20	20	0		20	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	15		20	20	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2				2
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	11.7	11.7		11.7	11.7	11.7	21.8	21.8		21.8	21.8	

Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	11.7	11.7		11.7	11.7	11.7	78.3	78.3		78.3	78.3	
Total Split (%)	13.0%	13.0%		13.0%	13.0%	13.0%	87.0%	87.0%		87.0%	87.0%	
Maximum Green (s)	7.0	7.0		7.0	7.0	7.0	71.5	71.5		71.5	71.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.7	1.7		1.7	1.7	1.7	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		4.7			4.7	4.7		6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		7.0			7.0	7.0		75.2			75.2	
Actuated g/C Ratio		0.08			0.08	0.08		0.84			0.84	
v/c Ratio		0.47			0.43	0.07		0.54			0.91	
Control Delay		51.6			50.2	0.9		4.4			10.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		51.6			50.2	0.9		4.4			10.2	
LOS		D			D	A		A			B	
Approach Delay		51.6			42.3			4.4			10.2	
Approach LOS		D			D			A			B	
90th %ile Green (s)	7.0	7.0		7.0	7.0	7.0	71.5	71.5		71.5	71.5	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	7.0	7.0		7.0	7.0	7.0	71.5	71.5		71.5	71.5	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	7.0	7.0		7.0	7.0	7.0	71.5	71.5		71.5	71.5	
50th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
30th %ile Green (s)	7.0	7.0		7.0	7.0	7.0	71.5	71.5		71.5	71.5	
30th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	83.2	83.2		83.2	83.2	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Coord	Coord		Coord	Coord	
Stops (vph)		48			51	0		491			530	
Fuel Used(gal)		1			1	0		17			23	
CO Emissions (g/hr)		66			86	7		1200			1615	
NOx Emissions (g/hr)		13			17	1		233			314	
VOC Emissions (g/hr)		15			20	2		278			374	
Dilemma Vehicles (#)		0			0	0		57			67	
Queue Length 50th (ft)		29			32	0		128			85	
Queue Length 95th (ft)		#70			71	0		m170			m#177	
Internal Link Dist (ft)		404			1014			447			477	
Turn Bay Length (ft)												
Base Capacity (vph)		119			134	157		2546			1529	
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		0.47			0.43	0.07		0.54			0.91	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings

222: Southern Auto Auction

07/07/2020

Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 9.0 Intersection LOS: A
Intersection Capacity Utilization 93.6% 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: 222: Southern Auto Auction



Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	0	111	0	0	0	24	360	0	3	622	36
Future Volume (vph)	53	0	111	0	0	0	24	360	0	3	622	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		400
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00					
Fr _t			0.850									0.850
Fl _t Protected		0.950					0.950					
Satd. Flow (prot)	0	1399	1615	0	1863	0	1203	1759	0	0	1744	1272
Fl _t Permitted		0.757					0.342				0.999	
Satd. Flow (perm)	0	1115	1615	0	1863	0	433	1759	0	0	1742	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121									61
Link Speed (mph)		25			30			45				45
Link Distance (ft)		532			223			1555				682
Travel Time (s)		14.5			5.1			23.6				10.3
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	29%	2%	0%	2%	2%	2%	50%	8%	2%	2%	9%	27%
Adj. Flow (vph)	58	0	121	0	0	0	26	391	0	3	676	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	121	0	0	0	26	391	0	0	679	39
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left			Left		Right
Leading Detector (ft)	20	100	20	20	100		20	293		20	283	20
Trailing Detector (ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Position(ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			287				277
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Prot				D,P+P	NA		Perm	NA	Perm
Protected Phases		4	4		4		1	1 2			2	
Permitted Phases	4			4			2			2		2
Detector Phase	4	4	4	4	4		1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5		4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0		9.0			21.0	21.0	21.0
Total Split (s)	15.0	15.0	15.0	15.0	15.0		9.0			66.0	66.0	66.0
Total Split (%)	16.7%	16.7%	16.7%	16.7%	16.7%		10.0%			73.3%	73.3%	73.3%
Maximum Green (s)	11.0	11.0	11.0	11.0	11.0		5.0			60.0	60.0	60.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0			1.2	1.2	1.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0				0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0		4.0				6.0	6.0
Lead/Lag							Lead			Lag	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
Recall Mode	None	None	None	None	None		None			C-Min	C-Min	C-Min
Act Effct Green (s)		10.0	10.0				70.4	72.0			65.8	65.8
Actuated g/C Ratio		0.11	0.11				0.78	0.80			0.73	0.73
v/c Ratio		0.47	0.42				0.07	0.28			0.53	0.04
Control Delay		48.5	11.5				0.7	1.0			5.6	0.3
Queue Delay		0.0	0.0				0.0	0.0			0.0	0.0
Total Delay		48.5	11.5				0.7	1.0			5.6	0.3
LOS		D	B				A	A			A	A
Approach Delay		23.5						1.0			5.3	
Approach LOS		C						A			A	
90th %ile Green (s)	14.8	14.8	14.8	14.8	14.8		6.8			54.4	54.4	54.4
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap			Coord	Coord	Coord
70th %ile Green (s)	11.9	11.9	11.9	11.9	11.9		6.2			57.9	57.9	57.9
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap			Coord	Coord	Coord
50th %ile Green (s)	10.0	10.0	10.0	10.0	10.0		0.0			70.0	70.0	70.0
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
30th %ile Green (s)	8.0	8.0	8.0	8.0	8.0		0.0			72.0	72.0	72.0
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
10th %ile Green (s)	5.5	5.5	5.5	5.5	5.5		0.0			74.5	74.5	74.5
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
Stops (vph)		48	20				1	29			193	0
Fuel Used(gal)		1	1				0	4			6	0
CO Emissions (g/hr)		66	59				18	285			411	11
NOx Emissions (g/hr)		13	11				4	55			80	2
VOC Emissions (g/hr)		15	14				4	66			95	3
Dilemma Vehicles (#)		0	0				0	3			25	0
Queue Length 50th (ft)		31	0				0	4			132	1
Queue Length 95th (ft)		67	46				1	8			78	m1
Internal Link Dist (ft)		452			143			1475			602	
Turn Bay Length (ft)							300					400
Base Capacity (vph)		148	319				389	1436			1302	966
Starvation Cap Reductn		0	0				0	0			0	0

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0				0	0			0	0
Storage Cap Reductn		0	0				0	0			0	0
Reduced v/c Ratio		0.39	0.38				0.07	0.27			0.52	0.04

Intersection Summary





















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 44 (49%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 6.4
 Intersection LOS: A
 Intersection Capacity Utilization 48.1%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 225: MMCT Casino















Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	32	7	1	8	23	367	44	12	693	28
Future Volume (vph)	8	0	32	7	1	8	23	367	44	12	693	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		50	360		0	0		370
Storage Lanes	0		1	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98									
Frt			0.850			0.850		0.984				0.850
Flt Protected		0.950			0.957		0.950				0.999	
Satd. Flow (prot)	0	1543	1615	0	1617	1615	1583	1740	0	0	1792	1482
Flt Permitted							0.334				0.991	
Satd. Flow (perm)	0	1624	1577	0	1690	1615	557	1740	0	0	1778	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			112		33				61
Link Speed (mph)		25			25			45				45
Link Distance (ft)		626			337			828				1555
Travel Time (s)		17.1			9.2			12.5				23.6
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	0%	0%	14%	0%	0%	14%	8%	3%	0%	6%	9%
Adj. Flow (vph)	9	0	35	8	1	9	25	399	48	13	753	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	35	0	9	9	25	447	0	0	766	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			12				0
Link Offset(ft)		0			0			0				6
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	2		1	2	2
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	29	29	20	14	14	24	366		20	366	366
Trailing Detector (ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Position(ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Size(ft)	20	34	34	20	24	24	34	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								360			360	360
Detector 2 Size(ft)								6			6	6
Detector 2 Type								Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	0.0
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	D.P+P	NA		Perm	NA	Perm
Protected Phases		4	1		4		1	1 2			2	
Permitted Phases	4		4	4		4	2			2		2
Detector Phase	4	4	4	4	4	4	1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			23.4	23.4	23.4
Total Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			72.0	72.0	72.0
Total Split (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%			80.0%	80.0%	80.0%
Maximum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0			63.8	63.8	63.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0			3.4	3.4	3.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0				0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0				8.2	8.2
Lead/Lag			Lead				Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			2.5	2.5	2.5
Recall Mode	None	None	None	None	None	None	None			C-Min	C-Min	C-Min
Act Effct Green (s)		5.1	6.9		5.1	5.1	78.7	81.9			76.0	76.0
Actuated g/C Ratio		0.06	0.08		0.06	0.06	0.87	0.91			0.84	0.84
v/c Ratio		0.10	0.19		0.09	0.05	0.05	0.28			0.51	0.02
Control Delay		42.1	5.8		42.0	0.5	1.5	2.8			1.9	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Delay		42.1	5.8		42.0	0.5	1.5	2.8			1.9	0.1
LOS		D	A		D	A	A	A			A	A
Approach Delay		13.2			21.3			2.7			1.8	
Approach LOS		B			C			A			A	
90th %ile Green (s)	6.3	6.3	4.7	6.3	6.3	6.3	4.7			62.8	62.8	62.8
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
70th %ile Green (s)	5.4	5.4	4.5	5.4	5.4	5.4	4.5			63.9	63.9	63.9
70th %ile Term Code	Gap	Gap	Min	Gap	Gap	Gap	Min			Coord	Coord	Coord
50th %ile Green (s)	4.7	4.7	0.0	4.7	4.7	4.7	0.0			73.1	73.1	73.1
50th %ile Term Code	Gap	Gap	Skip	Gap	Gap	Gap	Skip			Coord	Coord	Coord
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0			81.8	81.8	81.8
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Skip			Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0			81.8	81.8	81.8
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Skip			Coord	Coord	Coord
Stops (vph)		10	3		10	0	4	105			32	0
Fuel Used(gal)		0	0		0	0	0	4			8	0
CO Emissions (g/hr)		10	15		9	2	13	262			544	20
NOx Emissions (g/hr)		2	3		2	0	2	51			106	4
VOC Emissions (g/hr)		2	4		2	0	3	61			126	5
Dilemma Vehicles (#)		0	0		0	0	0	23			11	0
Queue Length 50th (ft)		5	0		5	0	0	9			11	0
Queue Length 95th (ft)		20	12		20	0	7	74			53	m0
Internal Link Dist (ft)		546			257			748			1475	
Turn Bay Length (ft)						50	360					370
Base Capacity (vph)		96	184		100	201	545	1590			1504	1263

Lanes, Volumes, Timings

226: Big Y/Ethos

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0	0	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		0.09	0.19		0.09	0.04	0.05	0.28			0.51	0.02

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	66 (73%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	2.8
Intersection LOS:	A
Intersection Capacity Utilization	62.9%
ICU Level of Service	B
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 226: Big Y/Ethos



Lanes, Volumes, Timings
228: Walmart

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	74	0	42	18	408	77	47	688	8
Future Volume (vph)	0	0	5	74	0	42	18	408	77	47	688	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	110		140	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97										
Frt		0.850			0.850				0.850		0.998	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1837	1572	0	1736	1568	0	1805	3312	1524	1770	1774	0
Flt Permitted				0.976			0.307			0.487		
Satd. Flow (perm)	1837	1572	0	1783	1568	0	583	3312	1524	907	1774	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		321			533				96			1
Link Speed (mph)		25			25			45				45
Link Distance (ft)		349			546			571				400
Travel Time (s)		9.5			14.9			8.7				6.1
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	4%	0%	3%	0%	9%	6%	2%	7%	0%
Adj. Flow (vph)	0	0	5	80	0	46	20	443	84	51	748	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	80	46	0	20	443	84	51	757	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	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2	1	1		2
Detector Template									Right			Thru
Leading Detector (ft)	30	30		33	46		48	356	20	38		100
Trailing Detector (ft)	-5	-5		-5	0		0	165	0	0		0
Detector 1 Position(ft)	-5	-5		-5	0		0	165	0	0		0
Detector 1 Size(ft)	35	35		38	46		48	6	20	38		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)								350				94
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
228: Walmart

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1		6
Switch Phase												
Minimum Initial (s)	3.6	5.0		3.6	5.0		3.6	13.1	13.1	4.1		13.1
Minimum Split (s)	8.1	9.7		8.1	9.7		8.1	24.3	24.3	8.1		21.3
Total Split (s)	8.1	9.8		10.0	11.7		8.2	61.8	61.8	8.4		62.0
Total Split (%)	9.0%	10.9%		11.1%	13.0%		9.1%	68.7%	68.7%	9.3%		68.9%
Maximum Green (s)	5.0	5.1		6.9	7.0		5.1	55.5	55.5	5.3		55.7
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.5	4.5	3.0		4.5
All-Red Time (s)	0.1	1.7		0.1	1.7		0.1	1.8	1.8	0.1		1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.1	4.7		3.1	4.7		3.1	6.3	6.3	3.1		6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.5	2.5	2.0		2.5
Recall Mode	None	None		None	None		None	C-Min	C-Min	None		C-Min
Act Effct Green (s)		5.0		9.2	7.8		74.2	69.3	69.3	75.1		71.0
Actuated g/C Ratio		0.06		0.10	0.09		0.82	0.77	0.77	0.83		0.79
v/c Ratio		0.01		0.44	0.07		0.04	0.17	0.07	0.06		0.54
Control Delay		0.0		44.2	0.2		1.0	2.2	0.9	1.5		4.8
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay		0.0		44.2	0.2		1.0	2.2	0.9	1.5		4.8
LOS		A		D	A		A	A	A	A		A
Approach Delay					28.2			2.0				4.6
Approach LOS					C			A				A
90th %ile Green (s)	0.0	5.0		6.9	15.0		5.2	55.5	55.5	5.4		55.7
90th %ile Term Code	Skip	Min		Max	Hold		Max	Coord	Coord	Max		Coord
70th %ile Green (s)	0.0	0.0		9.5	7.9		4.8	62.9	62.9	5.1		63.2
70th %ile Term Code	Skip	Skip		Gap	Hold		Gap	Coord	Coord	Gap		Coord
50th %ile Green (s)	0.0	0.0		7.9	6.3		0.0	64.7	64.7	4.9		72.7
50th %ile Term Code	Skip	Skip		Gap	Hold		Skip	Coord	Coord	Gap		Coord
30th %ile Green (s)	0.0	0.0		7.1	0.0		0.0	73.5	73.5	0.0		73.5
30th %ile Term Code	Skip	Skip		Gap	Skip		Skip	Coord	Coord	Skip		Coord
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	83.7	83.7	0.0		83.7
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Coord	Coord	Skip		Coord
Stops (vph)		0		66	0		2	59	5	5		172
Fuel Used(gal)		0		1	0		0	2	0	0		6
CO Emissions (g/hr)		1		88	14		7	170	25	22		447
NOx Emissions (g/hr)		0		17	3		1	33	5	4		87
VOC Emissions (g/hr)		0		20	3		2	39	6	5		104
Dilemma Vehicles (#)		0		0	0		0	10	0	0		44
Queue Length 50th (ft)		0		44	0		0	1	0	4		91
Queue Length 95th (ft)		0		80	0		m2	m22	m0	m4		123
Internal Link Dist (ft)		269			466			491				320
Turn Bay Length (ft)							110		140	250		
Base Capacity (vph)		391		188	633		551	2550	1196	807		1400

Lanes, Volumes, Timings

228: Walmart

07/07/2020

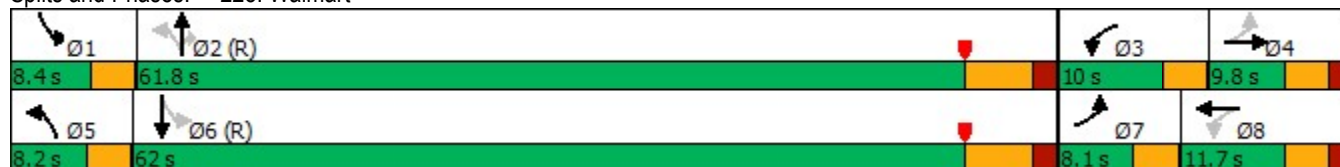


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0		0	0		0	0	0	0	0	0
Spillback Cap Reductn		0		0	0		0	0	0	0	0	0
Storage Cap Reductn		0		0	0		0	0	0	0	0	0
Reduced v/c Ratio		0.01		0.43	0.07		0.04	0.17	0.07	0.06	0.54	

Intersection Summary

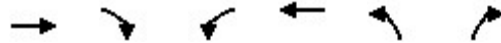
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	76 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	5.6
Intersection LOS:	A
Intersection Capacity Utilization	59.0%
ICU Level of Service	B
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 228: Walmart



Lanes, Volumes, Timings
3: N Rd. (CT-140)

07/07/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↗
Traffic Volume (vph)	1351	0	0	952	0	97
Future Volume (vph)	1351	0	0	952	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	5085	0	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	5085	0	0	3539	0	1611
Link Speed (mph)	35			35	30	
Link Distance (ft)	323			381	386	
Travel Time (s)	6.3			7.4	8.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1468	0	0	1035	0	105
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1468	0	0	1035	0	105
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)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

7: Eversource

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	0	140	10	10	20	44	907	0	1	593	44
Future Volume (vph)	110	0	140	10	10	20	44	907	0	1	593	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.932						0.990	
Flt Protected	0.950				0.988		0.950			0.950		
Satd. Flow (prot)	1770	1583	0	0	1715	0	1770	1863	0	1770	1844	0
Flt Permitted	0.893				0.834		0.315			0.950		
Satd. Flow (perm)	1663	1583	0	0	1448	0	587	1863	0	1770	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		375			22							9
Link Speed (mph)		30			30			45				45
Link Distance (ft)		335			295			682				908
Travel Time (s)		7.6			6.7			10.3				13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	0	152	11	11	22	48	986	0	1	645	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	152	0	0	44	0	48	986	0	1	693	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				20
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		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	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2				6	

Lanes, Volumes, Timings

7: Eversource

07/07/2020

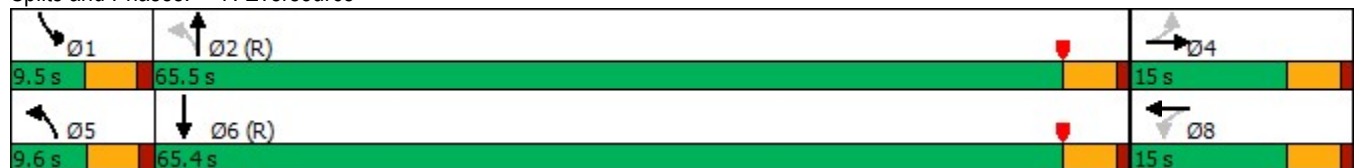


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	9.5		9.5	9.5		9.5	22.5		9.5	22.5	
Total Split (s)	15.0	15.0		15.0	15.0		9.6	65.5		9.5	65.4	
Total Split (%)	16.7%	16.7%		16.7%	16.7%		10.7%	72.8%		10.6%	72.7%	
Maximum Green (s)	10.5	10.5		10.5	10.5		5.1	61.0		5.0	60.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
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	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	9.8	9.8			9.8		70.3	69.3		5.2	65.5	
Actuated g/C Ratio	0.11	0.11			0.11		0.78	0.77		0.06	0.73	
v/c Ratio	0.67	0.30			0.25		0.09	0.69		0.01	0.52	
Control Delay	56.9	1.5			25.9		2.5	7.4		41.0	7.6	
Queue Delay	0.0	0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay	56.9	1.5			25.9		2.5	7.5		41.0	7.6	
LOS	E	A			C		A	A		D	A	
Approach Delay		26.0			25.9			7.2			7.6	
Approach LOS		C			C			A			A	
90th %ile Green (s)	10.5	10.5		10.5	10.5		5.1	61.0		5.0	60.9	
90th %ile Term Code	Max	Max		Hold	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	10.5	10.5		10.5	10.5		5.1	70.5		0.0	60.9	
70th %ile Term Code	Max	Max		Hold	Hold		Max	Coord		Skip	Coord	
50th %ile Green (s)	10.5	10.5		10.5	10.5		5.1	70.5		0.0	60.9	
50th %ile Term Code	Max	Max		Hold	Hold		Max	Coord		Skip	Coord	
30th %ile Green (s)	10.1	10.1		10.1	10.1		0.0	70.9		0.0	70.9	
30th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
10th %ile Green (s)	7.3	7.3		7.3	7.3		0.0	73.7		0.0	73.7	
10th %ile Term Code	Gap	Gap		Hold	Hold		Skip	Coord		Skip	Coord	
Stops (vph)	101	0			24		7	346		2	232	
Fuel Used(gal)	2	0			0		0	10		0	8	
CO Emissions (g/hr)	148	29			30		21	676		3	533	
NOx Emissions (g/hr)	29	6			6		4	132		1	104	
VOC Emissions (g/hr)	34	7			7		5	157		1	124	
Dilemma Vehicles (#)	0	0			0		0	61		0	81	
Queue Length 50th (ft)	66	0			11		3	72		1	145	
Queue Length 95th (ft)	#136	0			43		m9	434		m0	m159	
Internal Link Dist (ft)		255			215			602			828	
Turn Bay Length (ft)							150			150		
Base Capacity (vph)	194	515			188		527	1434		102	1343	
Starvation Cap Reductn	0	0			0		0	42		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	0.62	0.30			0.23		0.09	0.71		0.01	0.52	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	24 (27%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	10.3
Intersection LOS:	B
Intersection Capacity Utilization	68.0%
ICU Level of Service	C
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: 7: Eversource



Lanes, Volumes, Timings

13: Site 1

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	40	47	764	570	12
Future Volume (vph)	10	40	47	764	570	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.892				0.997	
Flt Protected	0.990		0.950			
Satd. Flow (prot)	1645	0	1770	1863	1857	0
Flt Permitted	0.990		0.950			
Satd. Flow (perm)	1645	0	1770	1863	1857	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	203			517	266	
Travel Time (s)	4.6			7.8	4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	43	51	830	620	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	51	830	633	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			23	23	
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	50.2%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
17: Site 2

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	14	22	945	852	5
Future Volume (vph)	3	14	22	945	852	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887				0.999	
Flt Protected	0.992		0.950			
Satd. Flow (prot)	1639	0	1770	1863	1861	0
Flt Permitted	0.992		0.950			
Satd. Flow (perm)	1639	0	1770	1863	1861	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	236			390	828	
Travel Time (s)	5.4			5.9	12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	15	24	1027	926	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	24	1027	931	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			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	59.7%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings

21: Thompson Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	0	27	121	0	165	27	1404	35	125	1428	40
Future Volume (vph)	40	0	27	121	0	165	27	1404	35	125	1428	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	1		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.996			0.996	
Flt Protected	0.950			0.950		0.950		0.950		0.950		
Satd. Flow (prot)	1770	0	1583	0	1517	1495	1770	3332	0	1770	3395	0
Flt Permitted	0.625			0.950		0.140		0.950				
Satd. Flow (perm)	1164	0	1583	0	1517	1495	261	3332	0	1770	3395	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			119		4			7	
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		283			1258			264			430	
Travel Time (s)		6.4			34.3			4.0			6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	19%	2%	8%	2%	8%	4%	2%	6%	2%
Adj. Flow (vph)	43	0	29	132	0	179	29	1526	38	136	1552	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	0	29	0	132	179	29	1564	0	136	1595	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	Right	Right	Left	Left	Right
Median Width(ft)		12			30			12			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2	1	1	2		1	0	
Detector Template	Left		Right		Thru		Left					
Leading Detector (ft)	20		20	34	100	34	20	100		34	0	
Trailing Detector (ft)	0		0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0		0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20		20	34	6	34	20	6		34	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	8.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type	D.Pm		Perm	Prot	NA	custom	Perm	NA		Prot	NA	
Protected Phases				4	8	5		6		5	1 2 5	

Lanes, Volumes, Timings
 21: Thompson Rd

07/07/2020

Lane Group	Ø1	Ø2
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	2

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4			4	6					
Detector Phase	4		4	4	8	4	6	6		5		
Switch Phase												
Minimum Initial (s)	7.0		7.0	7.0	5.0	5.0	15.0	15.0		5.0		
Minimum Split (s)	12.6		12.6	12.6	22.5	10.2	21.2	21.2		10.2		
Total Split (s)	22.5		22.5	22.5	22.5	13.4	54.1	54.1		13.4		
Total Split (%)	25.0%		25.0%	25.0%	25.0%	14.9%	60.1%	60.1%		14.9%		
Maximum Green (s)	16.9		16.9	16.9	18.0	8.2	47.9	47.9		8.2		
Yellow Time (s)	3.0		3.0	3.0	3.5	3.0	4.8	4.8		3.0		
All-Red Time (s)	2.6		2.6	2.6	1.0	2.2	1.4	1.4		2.2		
Lost Time Adjust (s)	0.0		0.0		0.0	0.0	0.0	0.0		0.0		
Total Lost Time (s)	5.6		5.6		4.5	5.2	6.2	6.2		5.2		
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5		1.5	1.5	3.0	1.5	2.5	2.5		1.5		
Recall Mode	None		None	None	None	None	C-Min	C-Min		None		
Walk Time (s)					7.0							
Flash Dont Walk (s)					11.0							
Pedestrian Calls (#/hr)					0							
Act Effct Green (s)	16.9		16.9		18.0	30.6	48.0	48.0		8.1	60.9	
Actuated g/C Ratio	0.19		0.19		0.20	0.34	0.53	0.53		0.09	0.68	
v/c Ratio	0.20		0.07		0.44	0.31	0.21	0.88		0.86	0.69	
Control Delay	33.6		0.3		36.8	9.7	13.6	18.5		69.3	7.6	
Queue Delay	0.0		0.0		0.0	0.0	0.0	0.4		0.0	0.1	
Total Delay	33.6		0.3		36.8	9.7	13.6	18.9		69.3	7.7	
LOS	C		A		D	A	B	B		E	A	
Approach Delay		20.2			21.2			18.8			12.5	
Approach LOS		C			C			B			B	
90th %ile Green (s)	16.9		16.9	16.9	18.0	8.2	47.9	47.9		8.2		
90th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
70th %ile Green (s)	16.9		16.9	16.9	18.0	8.2	47.9	47.9		8.2		
70th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
50th %ile Green (s)	16.9		16.9	16.9	18.0	8.2	47.9	47.9		8.2		
50th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
30th %ile Green (s)	16.9		16.9	16.9	18.0	8.2	47.9	47.9		8.2		
30th %ile Term Code	Hold		Hold	Hold	Max	Max	Coord	Coord		Max		
10th %ile Green (s)	16.9		16.9	16.9	18.0	7.5	48.6	48.6		7.5		
10th %ile Term Code	Hold		Hold	Hold	Max	Gap	Coord	Coord		Gap		
Stops (vph)	34		0		104	46	13	1019		109	332	
Fuel Used(gal)	1		0		3	2	0	25		3	11	
CO Emissions (g/hr)	38		4		182	159	26	1748		242	734	
NOx Emissions (g/hr)	7		1		35	31	5	340		47	143	
VOC Emissions (g/hr)	9		1		42	37	6	405		56	170	
Dilemma Vehicles (#)	0		0		0	0	0	102		0	162	
Queue Length 50th (ft)	21		0		66	23	7	341		84	104	
Queue Length 95th (ft)	51		0		122	70	m8	m213		m94	m120	
Internal Link Dist (ft)		203			1178			184			350	
Turn Bay Length (ft)						100						
Base Capacity (vph)	218		445		303	586	138	1780		161	2299	

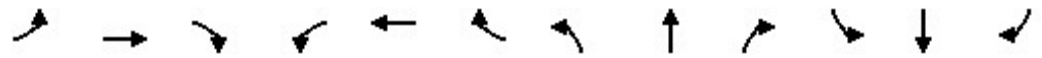
Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020

Lane Group	Ø1	Ø2
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	15.0
Minimum Split (s)	11.6	21.2
Total Split (s)	20.6	46.9
Total Split (%)	23%	52%
Maximum Green (s)	14.0	40.7
Yellow Time (s)	3.0	4.8
All-Red Time (s)	3.6	1.4
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	1.5	2.5
Recall Mode	None	C-Min
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)	14.0	40.7
90th %ile Term Code	Max	Coord
70th %ile Green (s)	14.0	40.7
70th %ile Term Code	Max	Coord
50th %ile Green (s)	14.0	40.7
50th %ile Term Code	Max	Coord
30th %ile Green (s)	12.4	42.3
30th %ile Term Code	Gap	Coord
10th %ile Green (s)	8.7	46.0
10th %ile Term Code	Gap	Coord
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		

Lanes, Volumes, Timings
21: Thompson Rd

07/07/2020

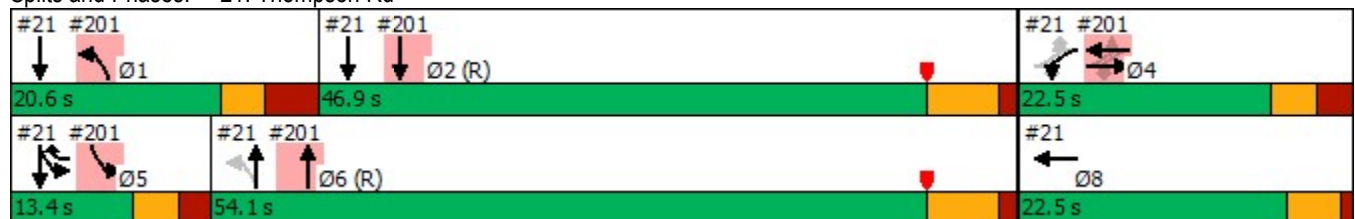


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0		0		0	0	0	0		0	57	
Spillback Cap Reductn	0		0		0	1	0	32		0	0	
Storage Cap Reductn	0		0		0	0	0	0		0	0	
Reduced v/c Ratio	0.20		0.07		0.44	0.31	0.21	0.89		0.84	0.71	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	16.1
Intersection LOS:	B
Intersection Capacity Utilization	81.0%
ICU Level of Service	D
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 21: Thompson Rd



Lane Group	Ø1	Ø2
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings

23: Site 4

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	25	30	1428	1530	46
Future Volume (vph)	38	25	30	1428	1530	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1855	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1855	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	274			934	476	
Travel Time (s)	6.2			14.2	7.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	27	33	1552	1663	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	27	33	1552	1713	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			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	93.3%
ICU Level of Service	F
Analysis Period (min)	15

Lanes, Volumes, Timings

27:

07/07/2020



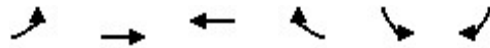
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↘		↕
Traffic Volume (vph)	0	82	1444	10	0	1689
Future Volume (vph)	0	82	1444	10	0	1689
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	1863	1583	0	1863
Flt Permitted						
Satd. Flow (perm)	0	1611	1863	1583	0	1863
Link Speed (mph)	30		45			45
Link Distance (ft)	314		334			1978
Travel Time (s)	7.1		5.1			30.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	89	1570	11	0	1836
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	89	1570	11	0	1836
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	92.2%
ICU Level of Service	F
Analysis Period (min)	15

Lanes, Volumes, Timings
29: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	44	214	116	5	15	124
Future Volume (vph)	44	214	116	5	15	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.879	
Flt Protected	0.950				0.995	
Satd. Flow (prot)	1770	1863	1853	0	1629	0
Flt Permitted	0.950				0.995	
Satd. Flow (perm)	1770	1863	1853	0	1629	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		479	988		197	
Travel Time (s)		9.3	19.2		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	233	126	5	16	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	233	131	0	151	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

32:

07/07/2020



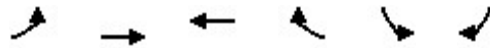
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗	↗		↗
Traffic Volume (vph)	0	87	1230	15	0	1501
Future Volume (vph)	0	87	1230	15	0	1501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	1863	1583	0	1863
Flt Permitted						
Satd. Flow (perm)	0	1611	1863	1583	0	1863
Link Speed (mph)	30		45			45
Link Distance (ft)	231		308			1040
Travel Time (s)	5.3		4.7			15.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	95	1337	16	0	1632
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	95	1337	16	0	1632
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		8			8
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		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	82.3%
ICU Level of Service	E
Analysis Period (min)	15

Lanes, Volumes, Timings
34: Phelps Rd (CT-191)

07/07/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	41	110	53	3	15	119
Future Volume (vph)	41	110	53	3	15	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993		0.880	
Flt Protected	0.950				0.995	
Satd. Flow (prot)	1770	1863	1850	0	1631	0
Flt Permitted	0.950				0.995	
Satd. Flow (perm)	1770	1863	1850	0	1631	0
Link Speed (mph)		40	30		30	
Link Distance (ft)		419	959		137	
Travel Time (s)		7.1	21.8		3.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	120	58	3	16	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	120	61	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

38:

07/07/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	11	4	1219	1528	5
Future Volume (vph)	13	11	4	1219	1528	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	100			100
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Link Speed (mph)	30			45	45	
Link Distance (ft)	783			1377	2677	
Travel Time (s)	17.8			20.9	40.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	12	4	1325	1661	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	12	4	1325	1661	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			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	90.4%
ICU Level of Service	E
Analysis Period (min)	15

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↕		↗	↕	
Traffic Volume (vph)	58	5	141	47	2	60	164	1396	49	62	1406	11
Future Volume (vph)	58	5	141	47	2	60	164	1396	49	62	1406	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	700		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.926			0.995				0.999
Flt Protected		0.956			0.979		0.950			0.950		
Satd. Flow (prot)	0	1736	1509	0	1722	0	1530	3362	0	1805	3404	0
Flt Permitted		0.669			0.835		0.950			0.950		
Satd. Flow (perm)	0	1215	1509	0	1469	0	1530	3362	0	1804	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182		60			6				1
Link Speed (mph)		30			25			45				45
Link Distance (ft)		731			393			430				1397
Travel Time (s)		16.6			10.7			6.5				21.2
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	7%	0%	0%	0%	18%	7%	0%	0%	6%	0%
Adj. Flow (vph)	63	5	153	51	2	65	178	1517	53	67	1528	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	153	0	118	0	178	1570	0	67	1540	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	Right	Right
Median Width(ft)		0			0			24			30	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	2	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	29	29	20	29		34	0		29	306	
Trailing Detector (ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Position(ft)	0	-5	-5	0	-5		0	0		-5	150	
Detector 1 Size(ft)	20	34	34	20	34		34	6		34	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)												300
Detector 2 Size(ft)												6
Detector 2 Type												Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)												0.0

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4								
Detector Phase	4	4	4	4	4		1			5	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	12.6	12.6	12.6	12.6	12.6		11.6	21.2		10.2	21.2	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		20.6	54.1		13.4	46.9	
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%		22.9%	60.1%		14.9%	52.1%	
Maximum Green (s)	16.9	16.9	16.9	16.9	16.9		14.0	47.9		8.2	40.7	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	4.8		3.0	4.8	
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6		3.6	1.4		2.2	1.4	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6	5.6		5.6		6.6	6.2		5.2	6.2	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		16.9	16.9		16.9		12.6	48.0		8.1	42.1	
Actuated g/C Ratio		0.19	0.19		0.19		0.14	0.53		0.09	0.47	
v/c Ratio		0.30	0.35		0.36		0.83	0.87		0.42	0.97	
Control Delay		35.7	5.7		20.6		69.6	11.0		46.3	38.3	
Queue Delay		0.0	0.0		0.0		0.0	1.0		0.0	0.0	
Total Delay		35.7	5.7		20.6		69.6	12.0		46.3	38.3	
LOS		D	A		C		E	B		D	D	
Approach Delay		14.9			20.6			17.9			38.7	
Approach LOS		B			C			B			D	
90th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		14.0	47.9		8.2	40.7	
90th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		14.0	47.9		8.2	40.7	
70th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Max	Coord		Max	Coord	
50th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		14.0	47.9		8.2	40.7	
50th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Max	Coord		Max	Coord	
30th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		12.4	47.9		8.2	42.3	
30th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Gap	Coord		Max	Coord	
10th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		8.7	48.6		7.5	46.0	
10th %ile Term Code	Hold	Hold	Hold	Hold	Hold		Gap	Coord		Gap	Coord	
Stops (vph)		54	13		51		157	393		60	1128	
Fuel Used(gal)		1	1		1		5	12		2	38	
CO Emissions (g/hr)		78	73		71		331	849		132	2652	
NOx Emissions (g/hr)		15	14		14		64	165		26	516	
VOC Emissions (g/hr)		18	17		16		77	197		31	615	
Dilemma Vehicles (#)		0	0		0		0	107		0	98	
Queue Length 50th (ft)		34	0		28		110	85		40	~416	
Queue Length 95th (ft)		73	35		77		m132	131		m52	m#592	
Internal Link Dist (ft)		651			313			350			1317	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

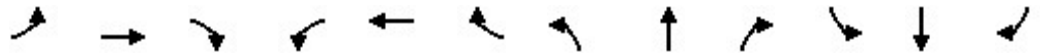
07/07/2020

Lane Group	Ø8
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	25%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
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)	18.0
90th %ile Term Code	Max
70th %ile Green (s)	18.0
70th %ile Term Code	Max
50th %ile Green (s)	18.0
50th %ile Term Code	Max
30th %ile Green (s)	18.0
30th %ile Term Code	Max
10th %ile Green (s)	18.0
10th %ile Term Code	Max
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

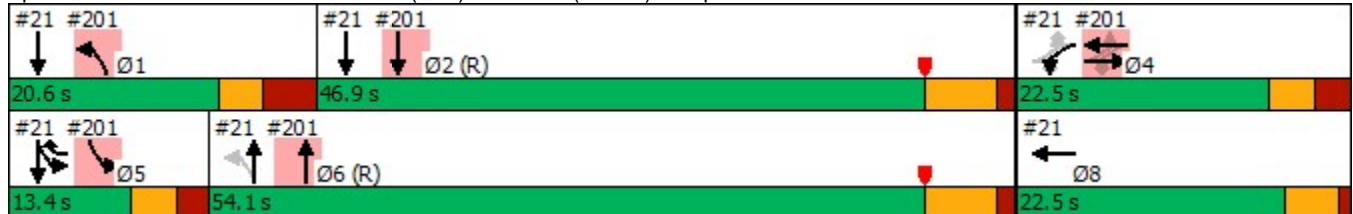


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			100							700		
Base Capacity (vph)		228	431		324		238	1797		164	1591	
Starvation Cap Reductn		0	0		0		0	76		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.30	0.35		0.36		0.75	0.91		0.41	0.97	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	26.8
Intersection LOS:	C
Intersection Capacity Utilization	76.7%
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: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza



Lane Group	Ø8
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	110	62	1183	65	92	1409
Future Volume (vph)	110	62	1183	65	92	1409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	8	12
Storage Length (ft)	0	0		250	75	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.952			0.850		
Flt Protected	0.969				0.950	
Satd. Flow (prot)	1680	0	1743	1615	1564	1776
Flt Permitted	0.969				0.074	
Satd. Flow (perm)	1680	0	1743	1615	122	1776
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	24			71		
Link Speed (mph)	30		45			45
Link Distance (ft)	419		1115			308
Travel Time (s)	9.5		16.9			4.7
Confl. Peds. (#/hr)					11	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	5%	9%	0%	0%	7%
Adj. Flow (vph)	120	67	1286	71	100	1532
Shared Lane Traffic (%)						
Lane Group Flow (vph)	187	0	1286	71	100	1532
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			8
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	1.20	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		0	0	0	0
Detector Template						
Leading Detector (ft)	25		0	0	0	0
Trailing Detector (ft)	-5		0	0	0	0
Detector 1 Position(ft)	-5		0	0	0	0
Detector 1 Size(ft)	30		6	20	20	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Turn Type	Prot		NA	pm+ov	D.P+P	NA
Protected Phases	4		2	4	1	12
Permitted Phases				2	2	
Detector Phase	4					

Lanes, Volumes, Timings
205: Phelps Rd (CT-191)

07/07/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	5.0		15.0	5.0	5.0	
Minimum Split (s)	9.4		22.8	9.4	9.0	
Total Split (s)	11.0		62.0	11.0	17.0	
Total Split (%)	12.2%		68.9%	12.2%	18.9%	
Maximum Green (s)	6.6		54.2	6.6	13.0	
Yellow Time (s)	3.0		4.8	3.0	3.0	
All-Red Time (s)	1.4		3.0	1.4	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.4		7.8	4.4	4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5		3.0	1.5	3.0	
Recall Mode	None		C-Max	None	Max	
Act Effct Green (s)	6.6		54.2	68.6	71.0	75.0
Actuated g/C Ratio	0.07		0.60	0.76	0.79	0.83
v/c Ratio	1.29		1.23	0.06	0.33	1.04
Control Delay	204.5		128.4	1.2	9.8	29.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	204.5		128.4	1.2	9.8	29.5
LOS	F		F	A	A	C
Approach Delay	204.5		121.7			28.3
Approach LOS	F		F			C
90th %ile Green (s)	6.6		54.2	6.6	13.0	
90th %ile Term Code	Max		Coord	Max	MaxR	
70th %ile Green (s)	6.6		54.2	6.6	13.0	
70th %ile Term Code	Max		Coord	Max	MaxR	
50th %ile Green (s)	6.6		54.2	6.6	13.0	
50th %ile Term Code	Max		Coord	Max	MaxR	
30th %ile Green (s)	6.6		54.2	6.6	13.0	
30th %ile Term Code	Max		Coord	Max	MaxR	
10th %ile Green (s)	6.6		54.2	6.6	13.0	
10th %ile Term Code	Max		Coord	Max	MaxR	
Stops (vph)	111		753	6	39	455
Fuel Used(gal)	8		53	1	1	17
CO Emissions (g/hr)	583		3713	56	60	1185
NOx Emissions (g/hr)	113		722	11	12	230
VOC Emissions (g/hr)	135		861	13	14	275
Dilemma Vehicles (#)	0		13	0	0	98
Queue Length 50th (ft)	~124		~948	2	8	~942
Queue Length 95th (ft)	#257		#1138	m9	m19	m429
Internal Link Dist (ft)	339		1035			228
Turn Bay Length (ft)				250	75	
Base Capacity (vph)	145		1049	1247	304	1480
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	1.29		1.23	0.06	0.33	1.04

Lanes, Volumes, Timings

205: Phelps Rd (CT-191)

07/07/2020

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 74 (82%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.29

Intersection Signal Delay: 78.6 Intersection LOS: E

Intersection Capacity Utilization 91.0% 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: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings
209: I-91 Access/Egress/Newberry Rd

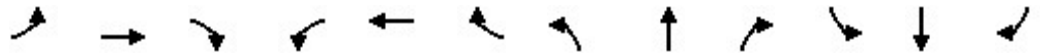
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	570	367	1055	75	283	116	867	570	81	136	346	527
Future Volume (vph)	570	367	1055	75	283	116	867	570	81	136	346	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		290	0		200	400		0	205		130
Storage Lanes	1		2	0		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.88	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850		0.963			0.981				0.850
Flt Protected	0.950	0.989			0.992		0.950			0.950		
Satd. Flow (prot)	1603	1731	2733	0	3146	0	3273	3289	0	1703	3374	1583
Flt Permitted	0.950	0.989			0.992		0.950			0.950		
Satd. Flow (perm)	1603	1731	2733	0	3146	0	3273	3289	0	1700	3374	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			372		39			17				177
Link Speed (mph)		45			35			45				45
Link Distance (ft)		734			813			1397				571
Travel Time (s)		11.1			15.8			21.2				8.7
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	0%	10%	15%	7%	7%	10%	6%	7%	2%
Adj. Flow (vph)	620	399	1147	82	308	126	942	620	88	148	376	573
Shared Lane Traffic (%)	19%											
Lane Group Flow (vph)	502	517	1147	0	516	0	942	708	0	148	376	573
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)		33			12			32				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	2		1	2	0
Detector Template				Left								
Leading Detector (ft)	29	34	29	20	48		34	326		39	326	0
Trailing Detector (ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Position(ft)	-5	0	-10	0	0		0	150		5	150	0
Detector 1 Size(ft)	34	34	39	20	48		34	6		34	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	8.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								320			320	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

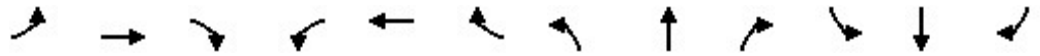
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	4	4	1	8	8		1	6		5	2	4
Permitted Phases			4								2	2
Detector Phase	4	4	4	8	8		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0	5.0	9.0	9.0		5.0	15.0		5.0	11.0	9.0
Minimum Split (s)	15.5	15.5	10.9	15.7	15.7		10.9	21.0		10.0	21.0	15.5
Total Split (s)	27.0	27.0	23.0	17.0	17.0		23.0	32.0		14.0	23.0	27.0
Total Split (%)	30.0%	30.0%	25.6%	18.9%	18.9%		25.6%	35.6%		15.6%	25.6%	30.0%
Maximum Green (s)	20.5	20.5	17.1	10.3	10.3		17.1	26.0		9.0	17.0	20.5
Yellow Time (s)	3.3	3.3	3.0	4.1	4.1		3.0	4.8		3.0	4.8	3.3
All-Red Time (s)	3.2	3.2	2.9	2.6	2.6		2.9	1.2		2.0	1.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	5.9		6.7		5.9	6.0		5.0	6.0	6.5
Lead/Lag			Lead				Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	2.0	2.0	2.0		2.0	2.5		2.0	2.5	3.0
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	21.6	21.6	39.3		10.3		17.1	25.0		9.0	15.9	43.5
Actuated g/C Ratio	0.24	0.24	0.44		0.11		0.19	0.28		0.10	0.18	0.48
v/c Ratio	1.31	1.25	0.82		1.31		1.52	0.77		0.88	0.63	0.67
Control Delay	187.3	162.1	13.5		188.6		269.3	22.1		69.3	43.5	13.4
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.1
Total Delay	187.3	162.1	13.5		188.6		269.3	22.1		69.3	43.5	13.5
LOS	F	F	B		F		F	C		E	D	B
Approach Delay		89.2			188.6			163.2			31.3	
Approach LOS		F			F			F			C	
90th %ile Green (s)	20.5	20.5	17.1	10.3	10.3		17.1	26.0		9.0	17.0	20.5
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
70th %ile Green (s)	20.5	20.5	17.1	10.3	10.3		17.1	26.0		9.0	17.0	20.5
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
50th %ile Green (s)	20.5	20.5	17.1	10.3	10.3		17.1	26.0		9.0	17.0	20.5
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
30th %ile Green (s)	20.5	20.5	17.1	10.3	10.3		17.1	26.0		9.0	17.0	20.5
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	Max
10th %ile Green (s)	25.9	25.9	17.1	10.3	10.3		17.1	20.8		8.8	11.6	25.9
10th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Gap	Coord	Max
Stops (vph)	344	363	600		343		620	468		113	310	287
Fuel Used(gal)	24	22	15		24		63	15		4	8	7
CO Emissions (g/hr)	1684	1572	1075		1650		4411	1024		268	573	487
NOx Emissions (g/hr)	328	306	209		321		858	199		52	112	95
VOC Emissions (g/hr)	390	364	249		382		1022	237		62	133	113
Dilemma Vehicles (#)	0	20	0		20		0	57		0	26	0
Queue Length 50th (ft)	~402	~402	105		~191		~381	131		78	112	119
Queue Length 95th (ft)	#603	#606	157		#294		m#469	m173		m#127	m144	m182
Internal Link Dist (ft)		654			733			1317			491	
Turn Bay Length (ft)	350		290				400			205		130
Base Capacity (vph)	384	415	1402		394		621	962		170	637	853
Starvation Cap Reductn	0	0	0		0		0	0		0	0	12

Lanes, Volumes, Timings
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	1.31	1.25	0.82		1.31		1.52	0.74		0.87	0.59	0.68

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 10 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.52
 Intersection Signal Delay: 109.5 Intersection LOS: F
 Intersection Capacity Utilization 94.4% 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: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1035	213	146	445	94	312	517	188	147	279	195
Future Volume (vph)	200	1035	213	146	445	94	312	517	188	147	279	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	12	11	12	12
Storage Length (ft)	0		0	260		475	300		200	200		0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850		0.974				0.850		0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1558	3172	1516	1504	3246	0	3083	1640	1442	1517	1517	0
Flt Permitted	0.271			0.154			0.950			0.950		
Satd. Flow (perm)	444	3172	1516	244	3246	0	3083	1640	1423	1515	1517	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		381			922			908			517	
Travel Time (s)		7.4			14.0			13.8			7.8	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	10%	3%	16%	4%	8%	6%	12%	12%	15%	8%	31%
Adj. Flow (vph)	217	1125	232	159	484	102	339	562	204	160	303	212
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	1125	232	159	586	0	339	562	204	160	515	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)		11			11			20			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.09	1.04	1.00	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		12	15		12
Number of Detectors	1	1	0	1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	29	256	0	30	315		29	29	29	29	29	
Trailing Detector (ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	250	0	-5	310		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	34	6	20	35	5		34	34	34	34	34	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases	2		2	6					8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	

Lanes, Volumes, Timings
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.0	15.0	4.0	6.0	15.0		4.0	9.0	6.0	4.0	5.0	
Minimum Split (s)	11.8	20.5	8.0	12.6	20.5		8.0	15.8	12.6	8.0	11.8	
Total Split (s)	16.2	34.4	12.0	12.6	30.8		12.0	32.0	12.6	11.0	31.0	
Total Split (%)	18.0%	38.2%	13.3%	14.0%	34.2%		13.3%	35.6%	14.0%	12.2%	34.4%	
Maximum Green (s)	10.4	28.9	8.0	6.0	25.3		8.0	25.2	6.0	7.0	24.2	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5		3.0	4.4	3.0	3.0	4.4	
All-Red Time (s)	2.8	1.0	1.0	3.6	1.0		1.0	2.4	3.6	1.0	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.8	5.5	4.0	6.6	5.5		4.0	6.8	6.6	4.0	6.8	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	2.5	1.5	1.5	2.5	
Recall Mode	None	C-Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	38.4	28.9	42.4	30.8	25.9		8.0	25.2	31.4	7.0	24.2	
Actuated g/C Ratio	0.43	0.32	0.47	0.34	0.29		0.09	0.28	0.35	0.08	0.27	
v/c Ratio	0.70	1.11	0.32	0.95	0.63		1.24	1.22	0.41	1.37	1.27	
Control Delay	23.4	85.3	14.0	82.3	31.7		164.7	145.2	19.6	245.3	168.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	23.4	85.3	14.0	82.3	31.7		164.7	145.2	19.6	245.3	168.6	
LOS	C	F	B	F	C		F	F	B	F	F	
Approach Delay		66.3			42.5			128.0			186.8	
Approach LOS		E			D			F			F	
90th %ile Green (s)	10.4	28.9	8.0	6.0	25.3		8.0	25.2	6.0	7.0	24.2	
90th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	10.4	28.9	8.0	6.0	25.3		8.0	25.2	6.0	7.0	24.2	
70th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	10.4	28.9	8.0	6.0	25.3		8.0	25.2	6.0	7.0	24.2	
50th %ile Term Code	Max	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	10.3	28.9	8.0	6.0	25.4		8.0	25.2	6.0	7.0	24.2	
30th %ile Term Code	Gap	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
10th %ile Green (s)	7.6	28.9	8.0	6.0	28.1		8.0	25.2	6.0	7.0	24.2	
10th %ile Term Code	Gap	Coord	Max	Max	Coord		Max	Max	Max	Max	Max	
Stops (vph)	106	832	119	86	455		250	402	119	110	374	
Fuel Used(gal)	2	27	2	4	12		15	23	3	9	23	
CO Emissions (g/hr)	161	1893	146	307	864		1077	1631	233	643	1573	
NOx Emissions (g/hr)	31	368	28	60	168		210	317	45	125	306	
VOC Emissions (g/hr)	37	439	34	71	200		250	378	54	149	365	
Dilemma Vehicles (#)	0	55	0	0	30		0	29	0	0	20	
Queue Length 50th (ft)	57	~376	74	54	153		~124	~394	63	~121	~372	
Queue Length 95th (ft)	m91	#510	m116	#174	210		#212	#595	m122	#244	#564	
Internal Link Dist (ft)		301			842			828			437	
Turn Bay Length (ft)				260			300		200	200		
Base Capacity (vph)	321	1018	714	167	933		274	459	497	117	407	
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	0.68	1.11	0.32	0.95	0.63		1.24	1.22	0.41	1.37	1.27	

Lanes, Volumes, Timings
 210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 98.4 Intersection LOS: F

Intersection Capacity Utilization 91.3% 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.

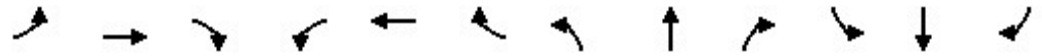
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 210: N Rd. (CT-140)/N Rd. (CT140)

 Ø1 12.6 s	 Ø2 (R) 34.4 s	 Ø3 12 s	 Ø4 31 s
 Ø5 16.2 s	 Ø6 (R) 30.8 s	 Ø7 11 s	 Ø8 32 s

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

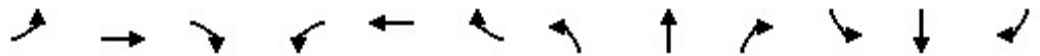
07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗		↔			↕			↖	
Traffic Volume (vph)	0	0	3	150	0	18	0	1205	210	9	1530	3
Future Volume (vph)	0	0	3	150	0	18	0	1205	210	9	1530	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Fr _t			0.865		0.985			0.978				
Fl _t Protected					0.957							
Satd. Flow (prot)	0	0	1096	0	1754	0	0	3305	0	0	3341	0
Fl _t Permitted					0.957						0.942	
Satd. Flow (perm)	0	0	1096	0	1754	0	0	3305	0	0	3147	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			50		33			57				
Link Speed (mph)		30			30			50				45
Link Distance (ft)		417			1615			1146				576
Travel Time (s)		9.5			36.7			15.6				8.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	50%	1%	0%	11%	14%	8%	0%	6%	8%	50%
Adj. Flow (vph)	0	0	3	163	0	20	0	1310	228	10	1663	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	3	0	183	0	0	1538	0	0	1676	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			26			26	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors			0	1	1			0		1	0	
Detector Template				Left						Left		
Leading Detector (ft)			0	20	25			0		20	0	
Trailing Detector (ft)			0	0	0			0		0	0	
Detector 1 Position(ft)			0	0	0			0		0	0	
Detector 1 Size(ft)			20	20	25			0		20	0	
Detector 1 Type			Extend	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)			0.0	0.0	0.0			0.0		0.0	0.0	
Turn Type			Perm	Perm	NA			NA		Perm	NA	
Protected Phases					4			2				2
Permitted Phases			4	4						2		
Detector Phase			4	4	4							
Switch Phase												
Minimum Initial (s)			9.0	9.0	9.0			15.0		15.0	15.0	
Minimum Split (s)			13.0	13.0	13.0			20.7		20.7	20.7	
Total Split (s)			19.0	19.0	19.0			71.0		71.0	71.0	
Total Split (%)			21.1%	21.1%	21.1%			78.9%		78.9%	78.9%	

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)			15.0	15.0	15.0			65.3		65.3	65.3	
Yellow Time (s)			3.0	3.0	3.0			4.7		4.7	4.7	
All-Red Time (s)			1.0	1.0	1.0			1.0		1.0	1.0	
Lost Time Adjust (s)			0.0		0.0			0.0			0.0	
Total Lost Time (s)			4.0		4.0			5.7			5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)			3.0	3.0	3.0			3.0		3.0	3.0	
Recall Mode			None	None	None			C-Max		C-Max	C-Max	
Act Effct Green (s)			12.6		12.6			67.7			67.7	
Actuated g/C Ratio			0.14		0.14			0.75			0.75	
v/c Ratio			0.02		0.67			0.61			0.71	
Control Delay			0.0		42.1			6.5			7.0	
Queue Delay			0.0		0.0			0.0			0.0	
Total Delay			0.0		42.1			6.5			7.0	
LOS			A		D			A			A	
Approach Delay					42.1			6.5			7.0	
Approach LOS					D			A			A	
90th %ile Green (s)			15.0	15.0	15.0			65.3		65.3	65.3	
90th %ile Term Code			Max	Max	Max			Coord		Coord	Coord	
70th %ile Green (s)			15.0	15.0	15.0			65.3		65.3	65.3	
70th %ile Term Code			Max	Max	Max			Coord		Coord	Coord	
50th %ile Green (s)			13.1	13.1	13.1			67.2		67.2	67.2	
50th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
30th %ile Green (s)			10.8	10.8	10.8			69.5		69.5	69.5	
30th %ile Term Code			Gap	Gap	Gap			Coord		Coord	Coord	
10th %ile Green (s)			9.0	9.0	9.0			71.3		71.3	71.3	
10th %ile Term Code			Min	Min	Min			Coord		Coord	Coord	
Stops (vph)			0		129			582			639	
Fuel Used(gal)			0		4			21			30	
CO Emissions (g/hr)			1		298			1474			2075	
NOx Emissions (g/hr)			0		58			287			404	
VOC Emissions (g/hr)			0		69			342			481	
Dilemma Vehicles (#)			0		0			79			74	
Queue Length 50th (ft)			0		81			168			225	
Queue Length 95th (ft)			0		147			244			m204	
Internal Link Dist (ft)		337			1535			1066			496	
Turn Bay Length (ft)												
Base Capacity (vph)			224		319			2501			2368	
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			0.01		0.57			0.61			0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 44 (49%), Referenced to phase 2:NBSB, Start of Yellow

Lanes, Volumes, Timings
211: Crow Park Rd / Scantic Rd

07/07/2020

Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 211: Crow Park Rd / Scantic Rd



Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	12	4	76	19	145	4	1294	22	224	1422	43
Future Volume (vph)	15	12	4	76	19	145	4	1294	22	224	1422	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	12	12	12	12	12	12
Storage Length (ft)	0		80	0		30	120		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97		0.99							
Frt			0.850			0.850		0.997			0.996	
Flt Protected		0.973			0.962		0.950			0.950		
Satd. Flow (prot)	0	1780	1313	0	1828	1400	1703	1734	0	1687	1801	0
Flt Permitted		0.676			0.750		0.092			0.084		
Satd. Flow (perm)	0	1232	1276	0	1416	1400	165	1734	0	149	1801	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						143		1				2
Link Speed (mph)		25			35			45				45
Link Distance (ft)		551			479			2227				334
Travel Time (s)		15.0			9.3			33.7				5.1
Confl. Peds. (#/hr)	1		1	1								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	0%	23%	0%	0%	0%	6%	9%	25%	7%	5%	7%
Adj. Flow (vph)	16	13	4	83	21	158	4	1407	24	243	1546	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	4	0	104	158	4	1431	0	243	1593	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	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	3		1		3
Detector Template	Left			Left								
Leading Detector (ft)	20	20	15	20	25	20	33	326		33		326
Trailing Detector (ft)	0	0	0	0	0	0	-5	0		-5		0
Detector 1 Position(ft)	0	0	0	0	0	0	-5	0		-5		0
Detector 1 Size(ft)	20	20	15	20	25	20	38	6		38		6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	2.0	8.0	0.0	8.0	8.0	0.0	0.0		0.0		0.0
Detector 2 Position(ft)								144				94
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

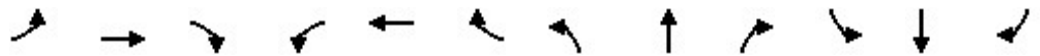


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	
Detector 3 Position(ft)								320			320	
Detector 3 Size(ft)								6			6	
Detector 3 Type								Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4		4	4		4	2			6		
Detector Phase	4	4	4	4	4	4	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	15.0		5.0	15.0	
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5	9.5	8.0	22.8		9.0	22.8	
Total Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	8.0	49.0		9.0	50.0	
Total Split (%)	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	8.9%	54.4%		10.0%	55.6%	
Maximum Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.0	41.2		5.0	42.2	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	2.0	4.8		3.0	4.8	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.0	3.0		1.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	3.0	7.8		4.0	7.8	
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	2.5		1.5	2.5	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		5.5	5.5		5.5	5.5	55.8	46.8		71.9	66.7	
Actuated g/C Ratio		0.06	0.06		0.06	0.06	0.62	0.52		0.80	0.74	
v/c Ratio		0.39	0.05		1.21	0.72	0.02	1.59		0.59	1.19	
Control Delay		55.8	41.5		203.4	29.5	1.2	281.0		25.5	100.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		55.8	41.5		203.4	29.5	1.2	281.0		25.5	100.4	
LOS		E	D		F	C	A	F		C	F	
Approach Delay		54.1			98.5			280.2			90.5	
Approach LOS		D			F			F			F	
90th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.4	41.2		7.0	44.8	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Coord		Max	Coord	
70th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	0.0	51.3		16.9	72.2	
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
50th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	0.0	51.0		17.2	72.2	
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
30th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	0.0	49.2		19.0	72.2	
30th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
10th %ile Green (s)	5.5	5.5	5.5	5.5	5.5	5.5	0.0	41.4		26.8	72.2	
10th %ile Term Code	Max	Max	Max	Max	Max	Max	Skip	Coord		Gap	Coord	
Stops (vph)		28	7		71	28	1	776		199	446	
Fuel Used(gal)		1	0		5	2	0	113		4	39	
CO Emissions (g/hr)		38	6		338	111	7	7894		288	2705	

Lane Group	Ø3
Detector 2 Extend (s)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	24%
Maximum Green (s)	18.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	9.0
Pedestrian Calls (#/hr)	10
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)	16.0
90th %ile Term Code	Ped
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	

Lanes, Volumes, Timings
213: Tromley Rd

07/07/2020

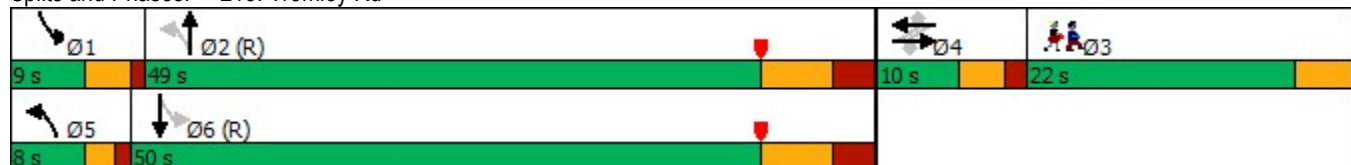


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		7	1		66	22	1	1536		56	526	
VOC Emissions (g/hr)		9	1		78	26	2	1829		67	627	
Dilemma Vehicles (#)		0	0		4	0	0	28		0	5	
Queue Length 50th (ft)		16	2		~73	8	0	~1115		68	~1071	
Queue Length 95th (ft)		#46	13		#174	#97	m0	m#950		m55	m#966	
Internal Link Dist (ft)		471			399			2147			254	
Turn Bay Length (ft)			80			30	120			200		
Base Capacity (vph)		75	77		86	219	189	902		415	1335	
Starvation Cap Reductn		0	0		0	0	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		0.39	0.05		1.21	0.72	0.02	1.59		0.59	1.19	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 38 (42%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.59
 Intersection Signal Delay: 167.1 Intersection LOS: F
 Intersection Capacity Utilization 107.3% ICU Level of Service G
 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: 213: Tromley Rd



Lane Group	Ø3
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
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	

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↔			↕	↗
Traffic Volume (vph)	13	0	22	2	2	12	5	1203	24	22	1509	23
Future Volume (vph)	13	0	22	2	2	12	5	1203	24	22	1509	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	8	12	12	12	8	12	12	8	12	8
Storage Length (ft)	0		30	0		0	50		0	0		50
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.897			0.997				0.850
Flt Protected		0.950			0.994		0.950				0.999	
Satd. Flow (prot)	0	1641	1386	0	1499	0	1384	1773	0	0	1748	1386
Flt Permitted					0.955		0.053				0.964	
Satd. Flow (perm)	0	1727	1386	0	1440	0	77	1773	0	0	1686	1386
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			48		13			4				16
Link Speed (mph)		25			35			45				45
Link Distance (ft)		801			1499			2677				1892
Travel Time (s)		21.8			29.2			40.6				28.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	0%	1%	0%	0%	17%	13%	7%	0%	50%	8%	1%
Adj. Flow (vph)	14	0	24	2	2	13	5	1308	26	24	1640	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	24	0	17	0	5	1334	0	0	1664	25
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)		10			0			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.20	1.00	1.00	1.00	1.20	1.00	1.00	1.20	1.00	1.20
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		0	0		0	0	1
Detector Template	Left		Right	Left								Right
Leading Detector (ft)	20	20	20	20	29		0	0		0	0	20
Trailing Detector (ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	-5		0	0		0	0	0
Detector 1 Size(ft)	20	20	20	20	34		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2				2
Permitted Phases	4		4	4			2			2		2
Detector Phase	4	4	4	4	4							2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		15.0	15.0		15.0	15.0	15.0

Lanes, Volumes, Timings
214: DD/Abbe Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.3	9.3	9.3	9.3	9.3		22.0	22.0		22.0	22.0	22.0
Total Split (s)	9.3	9.3	9.3	9.3	9.3		80.7	80.7		80.7	80.7	80.7
Total Split (%)	10.3%	10.3%	10.3%	10.3%	10.3%		89.7%	89.7%		89.7%	89.7%	89.7%
Maximum Green (s)	5.0	5.0	5.0	5.0	5.0		73.7	73.7		73.7	73.7	73.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.8	4.8		4.8	4.8	4.8
All-Red Time (s)	1.3	1.3	1.3	1.3	1.3		2.2	2.2		2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		4.3	4.3		4.3		7.0	7.0			7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		5.0	5.0		5.0		80.2	80.2			80.2	80.2
Actuated g/C Ratio		0.06	0.06		0.06		0.89	0.89			0.89	0.89
v/c Ratio		0.15	0.20		0.18		0.07	0.84			1.11	0.02
Control Delay		44.2	8.4		28.3		3.6	15.1			62.7	1.2
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		44.2	8.4		28.3		3.6	15.1			62.7	1.2
LOS		D	A		C		A	B			E	A
Approach Delay		21.5			28.3			15.1			61.8	
Approach LOS		C			C			B			E	
90th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		73.7	73.7		73.7	73.7	73.7
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
70th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		73.7	73.7		73.7	73.7	73.7
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
50th %ile Green (s)	5.0	5.0	5.0	5.0	5.0		73.7	73.7		73.7	73.7	73.7
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	Coord
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		83.0	83.0		83.0	83.0	83.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Coord	Coord		Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		83.0	83.0		83.0	83.0	83.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Coord	Coord		Coord	Coord	Coord
Stops (vph)		15	3		10		1	632			666	3
Fuel Used(gal)		0	0		0		0	33			47	0
CO Emissions (g/hr)		18	14		24		7	2304			3259	23
NOx Emissions (g/hr)		4	3		5		1	448			634	4
VOC Emissions (g/hr)		4	3		6		2	534			755	5
Dilemma Vehicles (#)		0	0		1		0	43			49	0
Queue Length 50th (ft)		8	0		2		0	327			~1167	1
Queue Length 95th (ft)		27	11		23		m1	#630			m#986	m1
Internal Link Dist (ft)		721			1419			2597			1812	
Turn Bay Length (ft)			30				50					50
Base Capacity (vph)		95	122		92		69	1580			1502	1237
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		0.15	0.20		0.18		0.07	0.84			1.11	0.02

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings

214: DD/Abbe Rd

07/07/2020

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 40.8

Intersection LOS: D

Intersection Capacity Utilization 110.6%

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: 214: DD/Abbe Rd



Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗		↖	↗	
Traffic Volume (vph)	110	6	168	5	4	14	169	1334	13	26	1515	14
Future Volume (vph)	110	6	168	5	4	14	169	1334	13	26	1515	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		300	0		0	150		0	320		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.916			0.999			0.999	
Flt Protected		0.955			0.990		0.950			0.950		
Satd. Flow (prot)	0	1814	1599	0	1723	0	1719	1759	0	1805	1775	0
Flt Permitted		0.720			0.790		0.062			0.065		
Satd. Flow (perm)	0	1368	1599	0	1375	0	112	1759	0	124	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122		15			1			1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1143			286			1978			934	
Travel Time (s)		26.0			6.5			30.0			14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	5%	8%	0%	0%	7%	0%
Adj. Flow (vph)	120	7	183	5	4	15	184	1450	14	28	1647	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	183	0	24	0	184	1464	0	28	1662	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	0		1	0	
Detector Template	Left		Right	Left								
Leading Detector (ft)	20	45	20	20	45		15	0		15	0	
Trailing Detector (ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Position(ft)	0	-5	0	0	-5		-5	0		-5	0	
Detector 1 Size(ft)	20	50	20	20	50		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4		4	4			6			2		
Detector Phase	4	4	4	4	4		1			5		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.1	10.1	10.1	10.1	10.1		9.0	22.3		9.0	22.3	

Lanes, Volumes, Timings
215: S Water St

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	12.0	12.0	12.0	12.0	12.0		9.0	69.0		9.0	69.0	
Total Split (%)	13.3%	13.3%	13.3%	13.3%	13.3%		10.0%	76.7%		10.0%	76.7%	
Maximum Green (s)	6.9	6.9	6.9	6.9	6.9		5.0	61.7		5.0	61.7	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8		1.0	2.5		1.0	2.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.1	5.1		5.1		4.0	7.3		4.0	7.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		6.9	6.9		6.9		72.4	67.1		70.0	61.7	
Actuated g/C Ratio		0.08	0.08		0.08		0.80	0.75		0.78	0.69	
v/c Ratio		1.22	0.78		0.20		1.03	1.12		0.15	1.37	
Control Delay		197.8	39.1		27.9		61.9	67.2		3.9	192.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		197.8	39.1		27.9		61.9	67.2		3.9	192.9	
LOS		F	D		C		E	E		A	F	
Approach Delay		104.1			27.9			66.6			189.7	
Approach LOS		F			C			E			F	
90th %ile Green (s)	6.9	6.9	6.9	6.9	6.9		5.0	61.7		5.0	61.7	
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	6.9	6.9	6.9	6.9	6.9		5.0	61.7		5.0	61.7	
70th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	6.9	6.9	6.9	6.9	6.9		5.0	70.7		0.0	61.7	
50th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
30th %ile Green (s)	6.9	6.9	6.9	6.9	6.9		5.0	70.7		0.0	61.7	
30th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
10th %ile Green (s)	6.9	6.9	6.9	6.9	6.9		5.0	70.7		0.0	61.7	
10th %ile Term Code	Max	Max	Max	Max	Max		Max	Coord		Skip	Coord	
Stops (vph)		87	56		15		167	521		9	1062	
Fuel Used(gal)		6	3		0		6	42		0	83	
CO Emissions (g/hr)		436	220		18		446	2950		20	5768	
NOx Emissions (g/hr)		85	43		3		87	574		4	1122	
VOC Emissions (g/hr)		101	51		4		103	684		5	1337	
Dilemma Vehicles (#)		0	0		0		0	9		0	120	
Queue Length 50th (ft)		~89	34		5		~65	~961		4	~1233	
Queue Length 95th (ft)		#200	#140		29		m45	m85		m5	#1502	
Internal Link Dist (ft)		1063			206			1898			854	
Turn Bay Length (ft)			300				150			320		
Base Capacity (vph)		104	235		119		179	1312		189	1217	
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		1.22	0.78		0.20		1.03	1.12		0.15	1.37	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings

215: S Water St

07/07/2020

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 126.2

Intersection LOS: F

Intersection Capacity Utilization 116.7%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

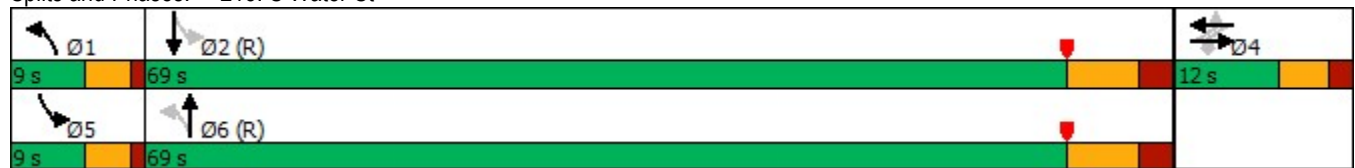
Queue shown is maximum after two cycles.

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: 215: S Water St



Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	8	3	3	67	0	25	5	1160	68	41	1484	12
Future Volume (vph)	8	3	3	67	0	25	5	1160	68	41	1484	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	8	8	12	12	8	12	12
Storage Length (ft)	0		0	0		50	50		0	50		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99	0.97						
Frt		0.973				0.850		0.992			0.999	
Flt Protected		0.971			0.950		0.950			0.950		
Satd. Flow (prot)	0	1785	0	0	1612	1400	1564	1744	0	1448	1775	0
Flt Permitted		0.774			0.800		0.054			0.108		
Satd. Flow (perm)	0	1416	0	0	1345	1359	89	1744	0	165	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				41		14			2	
Link Speed (mph)		30			35			45			45	
Link Distance (ft)		411			816			1892			693	
Travel Time (s)		9.3			15.9			28.7			10.5	
Confl. Peds. (#/hr)	1		1	1		1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	12%	0%	0%	0%	8%	9%	8%	7%	0%
Adj. Flow (vph)	9	3	3	73	0	27	5	1261	74	45	1613	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	73	27	5	1335	0	45	1626	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			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.00	1.00	1.20	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	0	0		0	0	
Detector Template	Left			Left		Right						
Leading Detector (ft)	20	12		20	36	20	0	0		0	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	12		20	36	20	20	36		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						

Lanes, Volumes, Timings
216: Stoughton Rd

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0	9.0	21.4	21.4		21.4	21.4	
Total Split (s)	9.0	9.0		9.0	9.0	9.0	81.0	81.0		81.0	81.0	
Total Split (%)	10.0%	10.0%		10.0%	10.0%	10.0%	90.0%	90.0%		90.0%	90.0%	
Maximum Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0	6.4	6.4		6.4	6.4	
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		5.0			5.0	5.0	74.6	74.6		74.6	74.6	
Actuated g/C Ratio		0.06			0.06	0.06	0.83	0.83		0.83	0.83	
v/c Ratio		0.19			0.99	0.24	0.07	0.92		0.33	1.11	
Control Delay		41.1			147.8	13.3	2.6	11.2		5.0	65.7	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		41.1			147.8	13.3	2.6	11.2		5.0	65.7	
LOS		D			F	B	A	B		A	E	
Approach Delay		41.1			111.5			11.2			64.1	
Approach LOS		D			F			B			E	
90th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
70th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
50th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
50th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
30th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
30th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
10th %ile Green (s)	5.0	5.0		5.0	5.0	5.0	74.6	74.6		74.6	74.6	
10th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
Stops (vph)		14			50	6	1	268		2	801	
Fuel Used(gal)		0			3	0	0	21		0	40	
CO Emissions (g/hr)		17			195	18	5	1483		29	2766	
NOx Emissions (g/hr)		3			38	4	1	289		6	538	
VOC Emissions (g/hr)		4			45	4	1	344		7	641	
Dilemma Vehicles (#)		0			3	0	0	81		0	23	
Queue Length 50th (ft)		7			42	0	0	141		1	~1084	
Queue Length 95th (ft)		27			#130	18	m1	#974		m1	#1348	
Internal Link Dist (ft)		331			736			1812			613	
Turn Bay Length (ft)						50	50			50		
Base Capacity (vph)		81			74	114	73	1447		136	1471	
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		0.19			0.99	0.24	0.07	0.92		0.33	1.11	

Lanes, Volumes, Timings
 216: Stoughton Rd

07/07/2020

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	22 (24%), Referenced to phase 2:NBSB, Start of Yellow
Natural Cycle:	140
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.11
Intersection Signal Delay:	42.8
Intersection LOS:	D
Intersection Capacity Utilization	95.0%
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: 216: Stoughton Rd



Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖	↖
Traffic Volume (vph)	0	554	124	413	488	0	0	0	0	240	0	235
Future Volume (vph)	0	554	124	413	488	0	0	0	0	240	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		50
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975										0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	1816	0	1770	1863	0	0	0	0	0	1770	1583
Flt Permitted				0.102							0.950	
Satd. Flow (perm)	0	1816	0	190	1863	0	0	0	0	0	1770	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16										141
Link Speed (mph)		30			35			30				30
Link Distance (ft)		684			478			428				360
Travel Time (s)		15.5			9.3			9.7				8.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	602	135	449	530	0	0	0	0	261	0	255
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	737	0	449	530	0	0	0	0	0	261	255
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			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0					1	1	1
Detector Template										Left		
Leading Detector (ft)		0		36	0					20	15	15
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		36	6					20	15	15
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	6.0	6.0
Turn Type		NA		D,P+P	NA					Split	NA	Prot
Protected Phases		2		3	3 2					4	4	4
Permitted Phases				2								
Detector Phase				3						4	4	4
Switch Phase												
Minimum Initial (s)		20.0		5.0						5.0	5.0	5.0
Minimum Split (s)		25.5		9.9						10.3	10.3	10.3
Total Split (s)		44.7		25.0						20.3	20.3	20.3

Lanes, Volumes, Timings
219: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)		49.7%		27.8%						22.6%	22.6%	22.6%
Maximum Green (s)		39.2		20.1						15.0	15.0	15.0
Yellow Time (s)		4.5		3.9						3.0	3.0	3.0
All-Red Time (s)		1.0		1.0						2.3	2.3	2.3
Lost Time Adjust (s)		0.0		0.0							0.0	0.0
Total Lost Time (s)		5.5		4.9							5.3	5.3
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		2.0						3.0	3.0	3.0
Recall Mode		C-Max		None						None	None	None
Act Effct Green (s)		39.8		60.1	65.0						14.8	14.8
Actuated g/C Ratio		0.44		0.67	0.72						0.16	0.16
v/c Ratio		0.91		0.95	0.39						0.90	0.67
Control Delay		40.3		63.5	9.3						70.6	25.7
Queue Delay		0.0		0.0	2.6						0.0	0.0
Total Delay		40.3		63.5	11.9						70.6	25.7
LOS		D		E	B						E	C
Approach Delay		40.3			35.5						48.4	
Approach LOS		D			D						D	
90th %ile Green (s)		39.2		20.1						15.0	15.0	15.0
90th %ile Term Code		Coord		Max						Max	Max	Max
70th %ile Green (s)		39.2		20.1						15.0	15.0	15.0
70th %ile Term Code		Coord		Max						Max	Max	Max
50th %ile Green (s)		39.2		20.1						15.0	15.0	15.0
50th %ile Term Code		Coord		Max						Max	Max	Max
30th %ile Green (s)		39.2		20.1						15.0	15.0	15.0
30th %ile Term Code		Coord		Max						Max	Max	Max
10th %ile Green (s)		42.4		17.9						14.0	14.0	14.0
10th %ile Term Code		Coord		Gap						Gap	Gap	Gap
Stops (vph)		557		592	331						210	104
Fuel Used(gal)		12		11	5						5	2
CO Emissions (g/hr)		857		784	356						369	172
NOx Emissions (g/hr)		167		153	69						72	34
VOC Emissions (g/hr)		199		182	83						86	40
Dilemma Vehicles (#)		0		0	51						0	0
Queue Length 50th (ft)		376		208	200						147	59
Queue Length 95th (ft)		#615		#400	287						#285	142
Internal Link Dist (ft)		604			398			348			280	
Turn Bay Length (ft)												50
Base Capacity (vph)		813		480	1345						295	381
Starvation Cap Reductn		0		0	671						0	0
Spillback Cap Reductn		0		0	0						0	0
Storage Cap Reductn		0		0	0						0	0
Reduced v/c Ratio		0.91		0.94	0.79						0.88	0.67

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Lanes, Volumes, Timings

219: Bridge St (CT-140)

07/07/2020

Offset: 86 (96%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 40.1

Intersection LOS: D

Intersection Capacity Utilization 86.0%

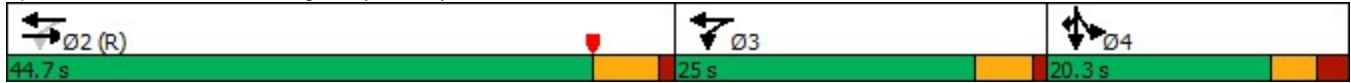
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

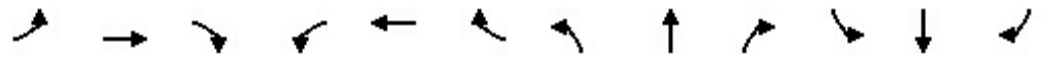
Queue shown is maximum after two cycles.

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕↕			
Traffic Volume (vph)	178	616	0	0	685	267	216	0	735	0	0	0
Future Volume (vph)	178	616	0	0	685	267	216	0	735	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		300	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.958				0.850			
Flt Protected		0.989						0.950				
Satd. Flow (prot)	0	3500	0	0	3391	0	0	1770	2787	0	0	0
Flt Permitted		0.538						0.950				
Satd. Flow (perm)	0	1904	0	0	3391	0	0	1770	2787	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					78				281			
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		478			323			585			321	
Travel Time (s)		9.3			6.3			13.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	670	0	0	745	290	235	0	799	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	863	0	0	1035	0	0	235	799	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)		0			6			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			0		1	1	1			
Detector Template	Left	Thru					Left					
Leading Detector (ft)	20	100			0		20	6	21			
Trailing Detector (ft)	0	0			0		0	0	-3			
Detector 1 Position(ft)	0	0			0		0	0	-3			
Detector 1 Size(ft)	20	6			6		20	6	24			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	9.0			
Detector 2 Position(ft)		94										
Detector 2 Size(ft)		6										
Detector 2 Type		Cl+Ex										
Detector 2 Channel												
Detector 2 Extend (s)		0.0										
Turn Type	custom	NA			NA		Split	NA	custom			
Protected Phases	3	2 3			2 5		4	4	4 5			
Permitted Phases	2											

Lane Group	Ø2	Ø5
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	5
Permitted Phases		

Lanes, Volumes, Timings
220: Bridge St (CT-140)

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3					4	4	5			
Switch Phase												
Minimum Initial (s)	5.0						7.0	7.0				
Minimum Split (s)	10.4						12.1	12.1				
Total Split (s)	24.1						22.0	22.0				
Total Split (%)	26.8%						24.4%	24.4%				
Maximum Green (s)	18.7						16.9	16.9				
Yellow Time (s)	4.1						3.0	3.0				
All-Red Time (s)	1.3						2.1	2.1				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.1				
Lead/Lag	Lag						Lead	Lead				
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5						3.0	3.0				
Recall Mode	Max						None	None				
Act Effct Green (s)		43.6			38.9			15.4	28.3			
Actuated g/C Ratio		0.48			0.43			0.17	0.31			
v/c Ratio		0.70			0.69			0.78	0.75			
Control Delay		8.9			11.3			53.8	21.8			
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		8.9			11.4			53.8	21.8			
LOS		A			B			D	C			
Approach Delay		8.9			11.4			29.1				
Approach LOS		A			B			C				
90th %ile Green (s)	18.7						16.9	16.9				
90th %ile Term Code	MaxR						Max	Max				
70th %ile Green (s)	18.7						16.9	16.9				
70th %ile Term Code	MaxR						Max	Max				
50th %ile Green (s)	18.7						16.9	16.9				
50th %ile Term Code	MaxR						Max	Max				
30th %ile Green (s)	18.7						14.9	14.9				
30th %ile Term Code	MaxR						Gap	Gap				
10th %ile Green (s)	18.7						11.3	11.3				
10th %ile Term Code	MaxR						Gap	Gap				
Stops (vph)		373			711			197	428			
Fuel Used(gal)		7			10			4	9			
CO Emissions (g/hr)		489			682			310	628			
NOx Emissions (g/hr)		95			133			60	122			
VOC Emissions (g/hr)		113			158			72	145			
Dilemma Vehicles (#)		133			15			0	0			
Queue Length 50th (ft)		12			182			126	150			
Queue Length 95th (ft)		m108			m98			#226	204			
Internal Link Dist (ft)		398			243			505			241	
Turn Bay Length (ft)									300			
Base Capacity (vph)		1234			1510			332	1182			
Starvation Cap Reductn		0			0			0	0			
Spillback Cap Reductn		0			18			0	0			
Storage Cap Reductn		0			0			0	0			
Reduced v/c Ratio		0.70			0.69			0.71	0.68			

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Lane Group	Ø2	Ø5
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	5.0
Minimum Split (s)	21.5	10.7
Total Split (s)	26.9	17.0
Total Split (%)	30%	19%
Maximum Green (s)	20.4	11.3
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	1.2
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	1.5
Recall Mode	C-Max	None
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)	20.4	11.3
90th %ile Term Code	Coord	Max
70th %ile Green (s)	22.6	9.1
70th %ile Term Code	Coord	Gap
50th %ile Green (s)	26.1	5.6
50th %ile Term Code	Coord	Gap
30th %ile Green (s)	28.7	5.0
30th %ile Term Code	Coord	Min
10th %ile Green (s)	32.3	5.0
10th %ile Term Code	Coord	Min
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		
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		

Lanes, Volumes, Timings
 220: Bridge St (CT-140)

07/07/2020

Intersection Summary

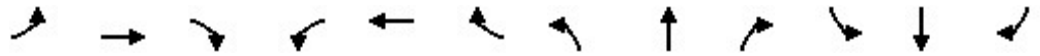
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	66 (73%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	16.9
Intersection LOS:	B
Intersection Capacity Utilization	76.7%
ICU Level 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: 220: Bridge St (CT-140)



Lanes, Volumes, Timings
 222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Volume (vph)	12	4	17	52	8	56	16	1178	15	30	1468	15
Future Volume (vph)	12	4	17	52	8	56	16	1178	15	30	1468	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	200		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.931				0.850		0.998			0.999	
Flt Protected		0.982			0.959			0.999			0.999	
Satd. Flow (prot)	0	1258	0	0	1665	1482	0	3305	0	0	3279	0
Flt Permitted		0.858			0.730			0.913			0.892	
Satd. Flow (perm)	0	1099	0	0	1267	1482	0	3020	0	0	2928	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				61		4			3	
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		484			1094			527			557	
Travel Time (s)		13.2			29.8			8.0			8.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	8%	0%	10%	6%	9%	8%	9%	2%	3%	10%	11%
Adj. Flow (vph)	13	4	18	57	9	61	17	1280	16	33	1596	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	66	61	0	1313	0	0	1645	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	0		1	0	
Detector Template	Left			Left		Right	Left			Left		
Leading Detector (ft)	20	15		20	20	20	20	0		20	0	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	15		20	20	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4		4	2			2		
Detector Phase	4	4		4	4	4						
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	15.0	15.0		15.0	15.0	
Minimum Split (s)	11.7	11.7		11.7	11.7	11.7	21.8	21.8		21.8	21.8	

Lanes, Volumes, Timings
222: Southern Auto Auction

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	16.5	16.5		16.5	16.5	16.5	73.5	73.5		73.5	73.5	
Total Split (%)	18.3%	18.3%		18.3%	18.3%	18.3%	81.7%	81.7%		81.7%	81.7%	
Maximum Green (s)	11.8	11.8		11.8	11.8	11.8	66.7	66.7		66.7	66.7	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.8	4.8		4.8	4.8	
All-Red Time (s)	1.7	1.7		1.7	1.7	1.7	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		4.7			4.7	4.7		6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		9.2			9.2	9.2		73.0			73.0	
Actuated g/C Ratio		0.10			0.10	0.10		0.81			0.81	
v/c Ratio		0.27			0.51	0.30		0.54			0.69	
Control Delay		28.2			51.9	13.9		5.6			4.3	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		28.2			51.9	13.9		5.6			4.3	
LOS		C			D	B		A			A	
Approach Delay		28.2			33.7			5.6			4.3	
Approach LOS		C			C			A			A	
90th %ile Green (s)	11.8	11.8		11.8	11.8	11.8	66.7	66.7		66.7	66.7	
90th %ile Term Code	Max	Max		Max	Max	Max	Coord	Coord		Coord	Coord	
70th %ile Green (s)	10.9	10.9		10.9	10.9	10.9	67.6	67.6		67.6	67.6	
70th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Coord	Coord		Coord	Coord	
50th %ile Green (s)	9.0	9.0		9.0	9.0	9.0	69.5	69.5		69.5	69.5	
50th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Coord	Coord		Coord	Coord	
30th %ile Green (s)	7.2	7.2		7.2	7.2	7.2	71.3	71.3		71.3	71.3	
30th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Coord	Coord		Coord	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	83.2	83.2		83.2	83.2	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Coord	Coord		Coord	Coord	
Stops (vph)		20			56	15		500			476	
Fuel Used(gal)		0			1	1		17			24	
CO Emissions (g/hr)		27			100	52		1199			1655	
NOx Emissions (g/hr)		5			19	10		233			322	
VOC Emissions (g/hr)		6			23	12		278			384	
Dilemma Vehicles (#)		0			0	0		46			79	
Queue Length 50th (ft)		9			36	0		125			135	
Queue Length 95th (ft)		37			76	35		m243			m129	
Internal Link Dist (ft)		404			1014			447			477	
Turn Bay Length (ft)												
Base Capacity (vph)		159			166	247		2451			2376	
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		0.22			0.40	0.25		0.54			0.69	

Intersection Summary

Area Type: Other
Cycle Length: 90

Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗			↕	↗
Traffic Volume (vph)	102	0	108	10	0	10	24	839	0	20	679	44
Future Volume (vph)	102	0	108	10	0	10	24	839	0	20	679	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		400
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00					
Frt			0.850		0.932							0.850
Flt Protected		0.950			0.976		0.950				0.999	
Satd. Flow (prot)	0	1399	1615	0	1694	0	1203	1759	0	0	1745	1272
Flt Permitted		0.743			0.866		0.283				0.964	
Satd. Flow (perm)	0	1094	1615	0	1503	0	358	1759	0	0	1683	1272
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117		85							61
Link Speed (mph)		25			30			45				45
Link Distance (ft)		532			223			1555				682
Travel Time (s)		14.5			5.1			23.6				10.3
Confl. Peds. (#/hr)							1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	29%	2%	0%	2%	2%	2%	50%	8%	2%	2%	9%	27%
Adj. Flow (vph)	111	0	117	11	0	11	26	912	0	22	738	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	117	0	22	0	26	912	0	0	760	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left			Left		Right
Leading Detector (ft)	20	100	20	20	100		20	293		20	283	20
Trailing Detector (ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Position(ft)	0	0	0	0	0		0	200		0	200	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			287				277
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lanes, Volumes, Timings
225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Prot	Perm	NA		D.P+P	NA		Perm	NA	Perm
Protected Phases		4	4		4		1	1 2			2	
Permitted Phases	4			4			2			2		2
Detector Phase	4	4	4	4	4		1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5		4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0		9.0			21.0	21.0	21.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.0			61.0	61.0	61.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	22.2%		10.0%			67.8%	67.8%	67.8%
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		5.0			55.0	55.0	55.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0			1.2	1.2	1.2
Lost Time Adjust (s)		0.0	0.0		0.0		0.0				0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0		4.0				6.0	6.0
Lead/Lag							Lead			Lag	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
Recall Mode	None	None	None	None	None		None			C-Min	C-Min	C-Min
Act Effct Green (s)		13.1	13.1		13.1		67.3	68.9			63.3	63.3
Actuated g/C Ratio		0.15	0.15		0.15		0.75	0.77			0.70	0.70
v/c Ratio		0.70	0.35		0.08		0.08	0.68			0.64	0.05
Control Delay		58.8	9.6		0.5		2.0	5.6			7.9	0.2
Queue Delay		0.0	0.0		0.0		0.0	0.1			0.0	0.0
Total Delay		58.8	9.6		0.5		2.0	5.8			7.9	0.2
LOS		E	A		A		A	A			A	A
Approach Delay		33.6			0.5			5.7			7.4	
Approach LOS		C			A			A			A	
90th %ile Green (s)	16.0	16.0	16.0	16.0	16.0		5.0			55.0	55.0	55.0
90th %ile Term Code	Max	Max	Max	Max	Max		Max			Coord	Coord	Coord
70th %ile Green (s)	16.0	16.0	16.0	16.0	16.0		5.0			55.0	55.0	55.0
70th %ile Term Code	Max	Max	Max	Max	Max		Max			Coord	Coord	Coord
50th %ile Green (s)	14.3	14.3	14.3	14.3	14.3		0.0			65.7	65.7	65.7
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
30th %ile Green (s)	11.6	11.6	11.6	11.6	11.6		0.0			68.4	68.4	68.4
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
10th %ile Green (s)	7.6	7.6	7.6	7.6	7.6		0.0			72.4	72.4	72.4
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip			Coord	Coord	Coord
Stops (vph)		96	19		0		4	282			345	0
Fuel Used(gal)		2	1		0		0	13			9	0
CO Emissions (g/hr)		143	54		3		21	905			595	14
NOx Emissions (g/hr)		28	11		1		4	176			116	3
VOC Emissions (g/hr)		33	13		1		5	210			138	3
Dilemma Vehicles (#)		0	0		0		0	34			33	0
Queue Length 50th (ft)		60	0		0		1	32			114	1
Queue Length 95th (ft)		#118	45		0		m3	388			75	m0
Internal Link Dist (ft)		452			143			1475			602	
Turn Bay Length (ft)							300					400
Base Capacity (vph)		194	383		337		318	1346			1183	913
Starvation Cap Reductn		0	0		0		0	0			0	0

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0		2		0	42			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.57	0.31		0.07		0.08	0.70			0.64	0.05

Intersection Summary





















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 26 (29%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 9.5 Intersection LOS: A
 Intersection Capacity Utilization 72.1% ICU Level of Service C
 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: 225: MMCT Casino



Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	74	30	1	8	110	816	12	1	753	44
Future Volume (vph)	59	0	74	30	1	8	110	816	12	1	753	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		50	360		0	0		370
Storage Lanes	0		1	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98									
Frt			0.850			0.850		0.998				0.850
Flt Protected		0.950			0.954		0.950					
Satd. Flow (prot)	0	1543	1615	0	1596	1615	1583	1757	0	0	1793	1482
Flt Permitted		0.735			0.686		0.265				0.999	
Satd. Flow (perm)	0	1194	1579	0	1147	1615	442	1757	0	0	1791	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			80			112		3				61
Link Speed (mph)		25			25			45				45
Link Distance (ft)		626			337			828				1555
Travel Time (s)		17.1			9.2			12.5				23.6
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	0%	0%	14%	0%	0%	14%	8%	3%	0%	6%	9%
Adj. Flow (vph)	64	0	80	33	1	9	120	887	13	1	818	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	80	0	34	9	120	900	0	0	819	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		5			0			12				0
Link Offset(ft)		0			0			0				6
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	2		1	2	2
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	29	29	20	14	14	24	366		20	366	366
Trailing Detector (ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Position(ft)	0	-5	-5	0	-10	-10	-10	180		0	180	180
Detector 1 Size(ft)	20	34	34	20	24	24	34	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)								360			360	360
Detector 2 Size(ft)								6			6	6
Detector 2 Type								Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
226: Big Y/Ethos

07/07/2020

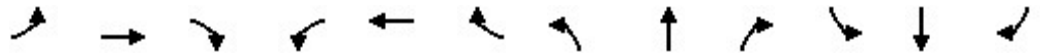


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0			0.0	0.0
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	D.P+P	NA		Perm	NA	Perm
Protected Phases		4	1		4		1	1 2			2	
Permitted Phases	4		4	4		4	2			2		2
Detector Phase	4	4	4	4	4	4	1	2		2	2	2
Switch Phase												
Minimum Initial (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5			15.0	15.0	15.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0			23.4	23.4	23.4
Total Split (s)	15.0	15.0	9.0	15.0	15.0	15.0	9.0			66.0	66.0	66.0
Total Split (%)	16.7%	16.7%	10.0%	16.7%	16.7%	16.7%	10.0%			73.3%	73.3%	73.3%
Maximum Green (s)	11.0	11.0	5.0	11.0	11.0	11.0	5.0			57.8	57.8	57.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			4.8	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0			3.4	3.4	3.4
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0				0.0	0.0
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0				8.2	8.2
Lead/Lag			Lead				Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			2.5	2.5	2.5
Recall Mode	None	None	None	None	None	None	None			C-Min	C-Min	C-Min
Act Effct Green (s)		8.4	12.5		8.4	8.4	71.3	76.1			62.1	62.1
Actuated g/C Ratio		0.09	0.14		0.09	0.09	0.79	0.85			0.69	0.69
v/c Ratio		0.58	0.28		0.32	0.04	0.29	0.61			0.66	0.05
Control Delay		58.8	9.7		45.0	0.2	4.8	8.5			5.0	0.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Delay		58.8	9.7		45.0	0.2	4.8	8.5			5.0	0.2
LOS		E	A		D	A	A	A			A	A
Approach Delay		31.5			35.7			8.1			4.7	
Approach LOS		C			D			A			A	
90th %ile Green (s)	11.0	11.0	5.0	11.0	11.0	11.0	5.0			57.8	57.8	57.8
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max			Coord	Coord	Coord
70th %ile Green (s)	10.8	10.8	5.2	10.8	10.8	10.8	5.2			57.8	57.8	57.8
70th %ile Term Code	Gap	Gap	Max	Gap	Gap	Gap	Max			Coord	Coord	Coord
50th %ile Green (s)	8.8	8.8	5.4	8.8	8.8	8.8	5.4			59.6	59.6	59.6
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
30th %ile Green (s)	6.8	6.8	4.9	6.8	6.8	6.8	4.9			62.1	62.1	62.1
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap			Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	4.5	0.0	0.0	0.0	4.5			73.3	73.3	73.3
10th %ile Term Code	Skip	Skip	Min	Skip	Skip	Skip	Min			Coord	Coord	Coord
Stops (vph)		56	16		30	0	31	497			152	1
Fuel Used(gal)		1	1		0	0	1	12			10	0
CO Emissions (g/hr)		86	42		34	2	76	843			717	32
NOx Emissions (g/hr)		17	8		7	0	15	164			140	6
VOC Emissions (g/hr)		20	10		8	0	18	195			166	7
Dilemma Vehicles (#)		0	0		0	0	0	49			25	0
Queue Length 50th (ft)		35	0		18	0	8	229			147	1
Queue Length 95th (ft)		75	35		47	0	43	292			65	m1
Internal Link Dist (ft)		546			257			748			1475	
Turn Bay Length (ft)						50	360					370
Base Capacity (vph)		145	332		140	295	415	1486			1236	1041

Lanes, Volumes, Timings

226: Big Y/Ethos

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0	0	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		0.44	0.24		0.24	0.03	0.29	0.61			0.66	0.05

Intersection Summary























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 48 (53%), Referenced to phase 2:NBSB, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 8.9
 Intersection LOS: A
 Intersection Capacity Utilization 106.8%
 ICU Level of Service G
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 226: Big Y/Ethos



Lanes, Volumes, Timings
228: Walmart

07/07/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	11	77	224	31	124	123	796	338	108	704	54
Future Volume (vph)	47	11	77	224	31	124	123	796	338	108	704	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	110		140	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98										
Frt		0.869			0.880				0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1745	1613	0	1736	1633	0	1805	3312	1524	1770	1764	0
Flt Permitted	0.889			0.526			0.160			0.281		
Satd. Flow (perm)	1633	1613	0	961	1633	0	304	3312	1524	523	1764	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		84			135				367		7	
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		349			546			571			400	
Travel Time (s)		9.5			14.9			8.7			6.1	
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	4%	0%	3%	0%	9%	6%	2%	7%	0%
Adj. Flow (vph)	51	12	84	243	34	135	134	865	367	117	765	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	96	0	243	169	0	134	865	367	117	824	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	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2	1	1	2	
Detector Template									Right		Thru	
Leading Detector (ft)	30	30		33	46		48	356	20	38	100	
Trailing Detector (ft)	-5	-5		-5	0		0	165	0	0	0	
Detector 1 Position(ft)	-5	-5		-5	0		0	165	0	0	0	
Detector 1 Size(ft)	35	35		38	46		48	6	20	38	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								350			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lanes, Volumes, Timings
228: Walmart

07/07/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)								0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1		6
Switch Phase												
Minimum Initial (s)	3.6	5.0		3.6	5.0		3.6	13.1	13.1	4.1		13.1
Minimum Split (s)	8.1	9.7		8.1	9.7		8.1	24.3	24.3	8.1		21.3
Total Split (s)	8.2	10.2		15.6	17.6		9.4	54.8	54.8	9.4		54.8
Total Split (%)	9.1%	11.3%		17.3%	19.6%		10.4%	60.9%	60.9%	10.4%		60.9%
Maximum Green (s)	5.1	5.5		12.5	12.9		6.3	48.5	48.5	6.3		48.5
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.5	4.5	3.0		4.5
All-Red Time (s)	0.1	1.7		0.1	1.7		0.1	1.8	1.8	0.1		1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.1	4.7		3.1	4.7		3.1	6.3	6.3	3.1		6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.5	2.5	2.0		2.5
Recall Mode	None	None		None	None		None	C-Min	C-Min	None		C-Min
Act Effct Green (s)	10.7	5.3		20.3	13.7		60.5	51.3	51.3	60.3		51.2
Actuated g/C Ratio	0.12	0.06		0.23	0.15		0.67	0.57	0.57	0.67		0.57
v/c Ratio	0.25	0.55		0.75	0.47		0.44	0.46	0.36	0.27		0.82
Control Delay	30.0	25.1		46.5	14.8		6.7	6.1	0.5	6.8		20.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	30.0	25.1		46.5	14.8		6.7	6.1	0.5	6.8		20.3
LOS	C	C		D	B		A	A	A	A		C
Approach Delay		26.8			33.5			4.7				18.6
Approach LOS		C			C			A				B
90th %ile Green (s)	5.1	5.5		12.5	12.9		6.3	48.5	48.5	6.3		48.5
90th %ile Term Code	Max	Max		Max	Hold		Max	Coord	Coord	Max		Coord
70th %ile Green (s)	5.1	5.5		12.5	12.9		6.3	48.5	48.5	6.3		48.5
70th %ile Term Code	Max	Max		Max	Hold		Max	Coord	Coord	Max		Coord
50th %ile Green (s)	5.4	5.3		12.8	12.7		6.5	48.2	48.2	6.5		48.2
50th %ile Term Code	Max	Gap		Max	Hold		Max	Coord	Coord	Max		Coord
30th %ile Green (s)	0.0	5.0		13.3	21.4		6.1	48.6	48.6	5.9		48.4
30th %ile Term Code	Skip	Min		Gap	Hold		Gap	Coord	Coord	Gap		Coord
10th %ile Green (s)	0.0	0.0		10.3	8.7		4.8	62.5	62.5	4.7		62.4
10th %ile Term Code	Skip	Skip		Gap	Hold		Gap	Coord	Coord	Gap		Coord
Stops (vph)	41	27		192	43		39	241	15	32		420
Fuel Used(gal)	1	1		4	1		1	7	1	1		12
CO Emissions (g/hr)	41	57		273	94		78	485	103	77		856
NOx Emissions (g/hr)	8	11		53	18		15	94	20	15		167
VOC Emissions (g/hr)	9	13		63	22		18	112	24	18		198
Dilemma Vehicles (#)	0	0		0	0		0	46	0	0		49
Queue Length 50th (ft)	22	7		120	17		7	32	0	15		154
Queue Length 95th (ft)	51	#55		#208	76		m8	m25	m0	m40		#628
Internal Link Dist (ft)		269			466			491				320
Turn Bay Length (ft)							110		140	250		
Base Capacity (vph)	202	177		331	377		310	1888	1026	440		1007

Lanes, Volumes, Timings

228: Walmart

07/07/2020

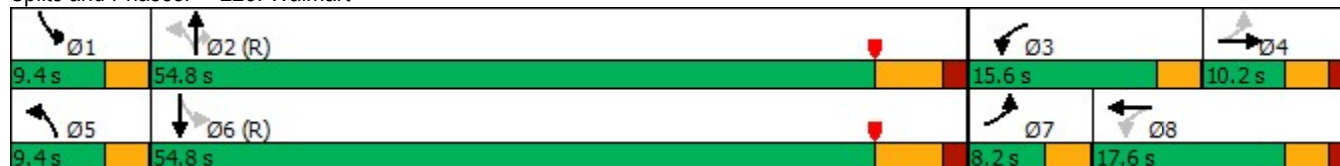


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.54		0.73	0.45		0.43	0.46	0.36	0.27	0.82	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 45 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 14.5 Intersection LOS: B
 Intersection Capacity Utilization 80.7% 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: 228: Walmart



Appendix 4 – Future Transit Demand Calculations

In order to estimate demand for program and non-program demand response services, a modified version of the methodology presented in the Transit Cooperative Research Program (TCRP) Report 3 was used. The first methodology shown below uses the following inputs and formulas to calculate demand reported on a community-wide basis for program (or limited) demand response services and the second computes the demand for non-program demand on a community-wide basis for those services open to the general public. The output of this demand methodology results in an annual ridership demand estimate.

Program and Non-Program Demand Methodologies

Program Demand Inputs⁴:

- Age 15 and above (a_1)
- Total Mobility Limited⁵(b_t)
- Mobility Limited 18 to 64 (b_1)
- Age 15 to 64 (a_2)

Age 65 and above (a_3) Program Participation Formulas⁶:

- from Developmental Services: Adult: $P_1 = 2.15 \times (a_1 \div 1000)$
- from Developmental Services: Case Management: $P_2 = 29.8 \times (b_1 \div 1000)$
- from Group Home (below 2,000 mobility limited in town): $P_3 = 10.96 \times (b_t \div 1000)$
- from Mental Health Services (below 2,000 mobility limited in town):
 $P_4 = 27.6 \times (b_t \div 1000)$
- from Mental Health Services: Case Management: $P_5 = 8.4 \times (a_2 \div 1000)$
- from Senior Nutrition: $P_6 = 30.1 \times (a_3 \div 1000)$

Program Annual Trip Rates (using Low Observed Rate)⁷:

- Developmental Services: Adult: **138.6**
- Developmental Services: Case Management: **20**
- Group Home (above 2,000 mobility limited in county): **196.2**
- Mental Health Services (above 2,000 mobility limited in county): **30**
- Mental Health Services: Case Management: **2.4**
- from Senior Nutrition: **117.6**

Program Demand Equation:

$$D = (P_1 \times 138.6) + (P_2 \times 20) + (P_3 \times 196.2) + (P_4 \times 30) + (P_5 \times 2.4) + (P_6 \times 117.6)$$

Program Annual Trip Rates (using Low Observed Rate)⁸:

- Developmental Services: Adult: **138.6**
- Developmental Services: Case Management: **20**
- Group Home (above 2,000 mobility limited in county): **196.2**
- Mental Health Services (above 2,000 mobility limited in county): **30**
- Mental Health Services: Case Management: **2.4**

⁴ All numbers from American Community Survey 2015-2018 5 Year Estimates

⁵ Mobility limited considered having an independent living difficulty

⁶ Formulas are from TCRP 3

⁷ Trip rates are from TCRP 3 p 85

⁸ Trip rates are from TCRP 3 p 85

- from Senior Nutrition: **117.6**

Program Demand Equation:

$$D = (P_1 \times 138.6) + (P_2 \times 20) + (P_3 \times 196.2) + (P_4 \times 30) + (P_5 \times 2.4) + (P_6 \times 117.6)$$

For demand response services open to the general public, two methods⁹ can be applied to determine non-program demand in either a rural or small urban setting. One method is to compare the system analyzed to peer systems within the state. In using this method, the parameters/ground rules for each comparison would need to be determined in advance, and this method could only be used to project demand in counties where some level of service already exists. Another method, which can be applied to all areas of the state regardless of current levels of service, uses an equation based on an analysis of the 2009 Rural National Transit Database and workshops conducted by that organization¹⁰. This equation weights three demographic groups who are most likely to use public transit. The second (demographic based) method will be used to compute non-program demand response estimated ridership because of its universal applicability.

Non-Program Demand Inputs¹¹:

- Persons Age 60+ (*a*)
- Mobility Limited 18 to 64 (*b*)
- Persons Residing in Households With No Vehicle Available (*c*)

Formulas:

- Population Age 60+: $2.20 \times a$
- Mobility Limited Population 18-64¹²: $5.21 \times b$
- Persons Residing in Households With No Vehicle Available: $1.52 \times c$

Non-Program Demand Equation:

$$D = (2.20 \times a) + (5.21 \times b) + (1.52 \times c)$$

The result is a future program demand of 13,317 rides and an annual non-program (general public) demand of 9,951 rides for a total of **22,908**.

Commuter Demand Methodologies

In order to calculate the need for commuter routes, the “On the Map” function on the US Census Website¹³ was used to calculate demand for commuter trips. Once this number was determined, it was plugged into the equation below.¹⁴ A metric of estimated commuters riding public transit could then be established, and a flex commuter route was conceptualized, if necessary. Because East Windsor is both an employment center and residential community, both inflow and outflow commuting was used. In order to determine the threshold for establishing a new commuter route, the current demand for trips to and from Hartford is used as a threshold. This would indicate the threshold needed to establish a commuter route at 208 daily estimated trips.

⁹ TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation(Non-Program Demand Formula)

¹⁰ <http://www.ntdprogram.gov/ntdprogram/data.htm> (RY2009 Database)

¹¹ All numbers from American Community Survey 2015-2019 5 Year Estimates

¹² Mobility limited considered having an independent living difficulty

¹³ <http://onthemap.ces.census.gov/>

¹⁴ TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation (Commuters to Urban Centers), p 28.

Commuter Route Inputs:

- Workers Commuting to/from East Windsor to Urban Place (*a*)
- Distance in Miles to/from East Windsor to Urban Place (*b*)¹⁵
- Number of Commuters (*c*)

Equation to Estimate Commuter Transit Trips Per Day:

$$D = [0.024 + (0.0000056 \times a) - (0.00029 \times b)] \times c \times 2$$

The above will multiplied by the projected increase in employment by 2025 (percentage), to get an idea of future demand¹⁶.

¹⁵ Distance used is from the geographic center of East Windsor to a town or city center

¹⁶ Hartford and Windsor Locks employment gains can be found here at the State of Connecticut's Labor Market Information Website <https://www.l.ctdol.state.ct.us/lmi/projections.asp> (7% in the North Central WDA); Springfield can be found at the State of Massachusetts Labor Market Information Website (3.38% in the Central MA WDA). Both estimates project out 10 years in the future, but have different baseline years for the beginning of their projections.



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