

Epping Road (NH Route 27)

PREPARED FOR



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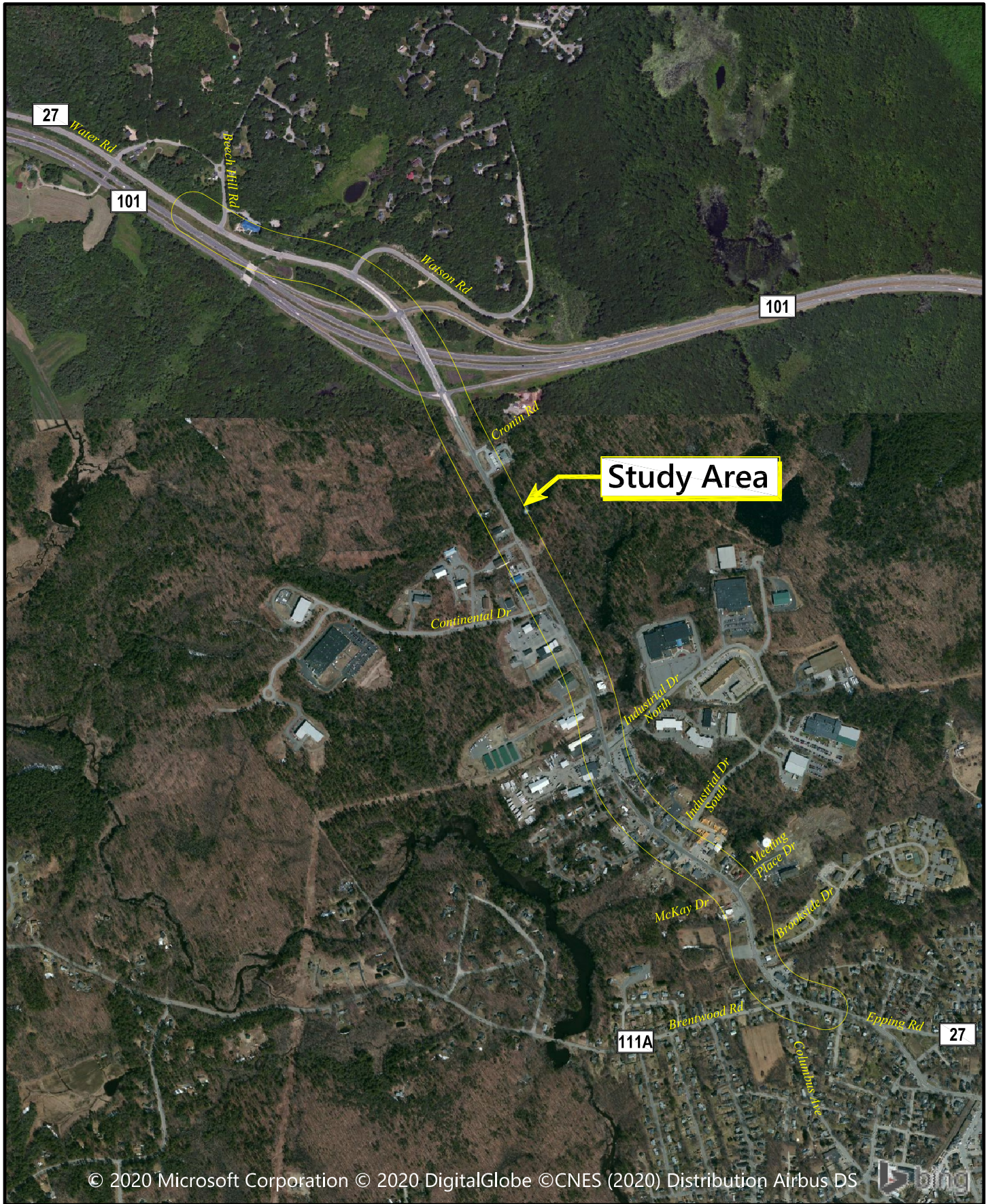
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Introduction

Vanasse Hangen Brustlin, Inc. (VHB) has prepared this planning study for the Epping Road (NH Route 27) corridor between Beech Hill Road to the north and Brentwood Road (NH Route 111A) to the south. At the March 2015 Town Meeting, Town of Exeter voters established a 587-acre tax increment financing (TIF) district along Epping Road (NH Route 27) that extends for approximately 2 miles between Beech Hill Road and Brookside Drive. The Epping Road TIF District was formed to stimulate economic development along the underdeveloped and undeveloped portions of the corridor by providing specific funding for infrastructure improvements (e.g., roadways, water, and sewer). The implementation of the infrastructure improvements is envisioned to encourage additional development, which would then generate tax dollars to directly pay off the cost of those improvements. During the March 2020 Town Meeting, Warrant Article 24 was approved to adopt the provisions of the *Epping Road Tax Increment District Financing Plan Amendment* (dated January 7, 2020), which allocates the use of tax increments for retirement of bonds to support an Epping Road (NH Route 27) corridor study and provide funding for needed improvements along the corridor due to anticipated development.

This Corridor Study and associated findings were developed in consultation with the Town Engineer and Town Planner. As requested by Town officials, the extents of the Corridor Study have been expanded southerly to also include the Brentwood Road (NH Route 111A) and Columbus Avenue intersection. As part of this study, VHB has conducted traffic engineering and transportation efforts with the primary focus on identifying multimodal operational and safety deficiencies along the Epping Road (NH Route 27) corridor. In addition, VHB has developed preliminary engineering and design recommendations to address congestion and safety concerns related to existing and potential future deficiencies along the corridor. The study area is depicted on **Figure 1**.



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Study Area Location Map

Figure 1



0 600 1200 Feet

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Existing Conditions

For the purposes of this planning study, the Epping Road (NH Route 27) corridor extends from the north at Beech Hill Road to the south at Brentwood Road (NH Route 111A) and Columbus Avenue. The northerly section of the Epping Road (NH Route 27) corridor between Beech Hill Road and Cronin Road (just south of the NH Route 101 interchange) is legislatively categorized as a Class II – Secondary Highway that is under New Hampshire Department of Transportation (NHDOT) jurisdiction. Therefore, any improvements pursued along the state-maintained section of the Epping Road (NH Route 27) corridor would require the review and approval of NHDOT. From Cronin Road southerly, the Epping Road (NH Route 27) corridor is legislatively categorized as a Class IV – Compact Road that is under Town of Exeter jurisdiction. This section of Epping Road (NH Route 27) is designated as an Urban Compact area and any modifications can be funded through local funds or through a state or federal funding program (e.g., Local Public Agency [LPA] process).

Existing conditions were developed by conducting field reconnaissance, collecting traffic counts along the Epping Road (NH Route 7) corridor, researching previous traffic counts conducted along the corridor, developing 2020 base (existing) traffic volumes, and evaluating Exeter Police Department crash records.

2.1 Multimodal Facilities

2.1.1 Vehicular Corridor

Within the study area, Epping Road (NH Route 27) is a two-way roadway that is generally aligned in an east-west layout north of the NH Route 101 interchange and in a north-south layout from the NH Route 101 interchange to the south. Epping Road (NH Route 27) generally

provides one travel lane in each direction. At the NH Route 101 interchange, the Epping Road (NH Route 27) northbound approach provides an exclusive left-turn lane for access onto the NH Route 101 westbound on-ramp and the Epping Road (NH Route 27) southbound approach includes an exclusive left-turn lane for access onto the NH Route 101 eastbound on-ramp. At the only signalized intersection along the corridor (i.e., at Continental Drive), the Epping Road (NH Route 27) northbound approach includes an exclusive left-turn lane and the southbound approach provides an exclusive right-turn lane. A Two-Way Left-Turn lane (aka, center turn lane) is provided along Epping Road (NH Route 27) between Perkins Power Equipment (93 Epping Road) and Herb & Rob's Auto Clinic (78 Epping Road).

The posted speed limit along Epping Road (NH Route 27) varies. North of Beech Hill Road (Water Road [NH Route 27]), the speed limit is posted at 40 miles per hour (mph) for northbound travel and at 45 mph for southbound travel. At the NH Route 101 interchange, the speed limit is posted at 40 mph along Epping Road (NH Route 27) for both northbound and southbound travel. From Cronin Road to Brentwood Road (NH Route 111A), Epping Road (NH Route 27) is posted at 30 mph for northbound and southbound travel.

2.1.2 Non-Motorized Facilities

Although there are no defined bike lanes designated within the Epping Road (NH Route 27) corridor, sidewalks are provided sporadically throughout the corridor study area. At the northern end of the corridor, a sidewalk is provided along the east side of Epping Road (NH Route 27) from Beech Hill Road to a point across from 170 Epping Road (approximately 290 feet south of the Mobil gas station driveway). A sidewalk is provided along the west side of the corridor from Exeter Community Thrift Shop (96 Epping Road) to Herb & Rob's Auto Clinic (78 Epping Road). At the southern end of the corridor, a sidewalk is provided along the east side of Epping Road (NH Route 27) from Meeting Place Drive past Brentwood Road (NH Route 111A). In addition, a sidewalk is provided south of the study area along the west side of Epping Road (NH Route 27) beginning at Brentwood Road (NH Route 111A).

2.1.3 Public Transportation

Cooperative Alliance for Seacoast Transportation (COAST) provides public bus service (Bus Route 7) in the Town of Exeter. This bus route provides connections between Exeter, Newmarket, and Stratham. As of July 2, 2018, Bus Route 7 requires advance reservation (aka, on demand service). The nearest bus stop to the Epping Road (NH Route 27) corridor study area is located at the intersection of Main Street (NH Route 27) and Ash Street. This bus stop is approximately 0.45 miles south of south of the terminus of the Epping Road (NH Route 27) corridor segment evaluated as part of this planning study (i.e., from the Brentwood Road [NH Route 111A] intersection).

The Downeaster is a regional passenger rail service that runs between Brunswick, Maine and North Station in Boston, Massachusetts. The Amtrak operated train provides a station in Exeter located at 60 Lincoln Street. The Exeter Station is located approximately 0.5 miles south of the Epping Road (NH Route 27) and Brentwood Road (NH Route 111A) intersection.

2.2 2020 Base Traffic Volumes

Due to the current coronavirus disease 2019 (COVID-19) pandemic that the world is currently experiencing, traffic volumes are uncharacteristically lower than normal travel conditions on New Hampshire roadways. Since the Town desired to accelerate the completion of this Corridor Study, this document, conceptual plans, and associated data collection efforts were commenced in March 2020. Therefore, historical traffic data from various sources and engineering judgement played a substantial role in establishing 2020 base (existing) traffic volumes for the corridor and study area intersections. The following provides a description of the data sources, methodologies, and procedures used to establish the 2020 base traffic volume networks for the Epping Road (NH Route 27) Corridor Study.

2.2.1 Data Sources

The study area for the project extends from Beech Hill Road at the north end of the Epping Road (NH Route 27) corridor to the intersection of Brentwood Road (NH Route 111A)/ Columbus Avenue at the south end. The following summarizes selected roadway segments and study area intersections where weekday traffic data were collected in March 2020 (during the pandemic), as well as other historical data sources. The March 2020 traffic counts are provided in the Appendix.

2.2.1.1 Automatic Traffic Recorder (ATR) Counts

- › NH Route 101 westbound off-ramp: October 2 and 5, 2015
- › NH Route 101 westbound on-ramp: October 2, 5-9, and 12-13, 2015
- › NH Route 101 eastbound off-ramp: October 2, 5-9, and 12-13, 2015
- › NH Route 101 eastbound on-ramp: October 2, 5-9, and 12-13, 2015
- › Epping Road (NH Route 27), south of NH Route 101 interchange: June 19-21, 2018
- › Epping Road (NH Route 27), north of Continental Drive: March 25-26, 2020, April 4-5, 2018, and July 13-17, 2015
- › Continental Drive, west of Epping Road (NH Route 27): April 4-5, 2018
- › Epping Road (NH Route 27), north of Brentwood Road (NH Route 111A): June 4-6, 2019, June 19-20, 2016, and August 19-23, 2013
- › Brentwood Road (NH Route 111A), west of Epping Road (NH Route 27): June 3-15, 2011
- › Columbus Avenue, south Epping Road (NH Route 27): July 14-18, 2014

2.2.1.2 Turning Movement Counts (TMCs)

- › Epping Road (NH Route 27) at NH Route 101 interchange: March 17, 2020 from 7 AM-7 PM
- › Epping Road (NH Route 27) at Continental Drive: March 17, 2020 from 7-9 AM and 4-6 PM, and April 4, 2019 from 7-9 AM and 4-6 PM

- › Epping Road (NH Route 27) at Industrial Drive north: March 17, 2020 from 7-9 AM and 4-6 PM
- › Epping Road (NH Route 27) at Industrial Drive south: March 17, 2020 from 7-9 AM and 4-6 PM
- › Epping Road (NH Route 27) at Meeting Place Drive and McKay Drive: March 17, 2020 from 7-9 AM and 4-6 PM
- › Epping Road (NH Route 27) at Brookside Drive: March 17, 2020 from 7-9 AM and 4-6 PM
- › Epping Road (NH Route 27) at Brentwood Road (NH Route 111A) and Columbus Avenue: March 25, 2020 from 7 AM to 7 PM

2.2.1.3 GRIDSMART

In addition to the TMCs referenced above, historical intersection turning movement data for the weekday morning and evening peak hours were obtained for the Epping Road (NH Route 27) and Continental Drive intersection from the GRIDSMART system at this location. Traffic data from October 2019, February 2020, and March 2020 were downloaded and reviewed to assist with identifying traffic trends, patterns, variations associated with the pandemic.

2.2.1.4 Additional Sources

Additional traffic data sources collected as part of other projects were provided by the Town of Exeter. The following traffic counts were used to support the development of the 2020 base traffic volumes:

- › Epping Road (NH Route 27) at Exeter Decorating Center driveway (164 Epping Road):
 - TMCs performed on April 11, 2017 from 7-9 AM and 3-6 PM
- › Epping Road (NH Route 27) at Continental Drive:
 - TMCs performed on November 3, 2015, on June 21, 2017, on April 4, 2018, and on November 29, 2018 from 7-9 AM and 4-6 PM
- › Epping Road (NH Route 27) at Industrial Drive south:
 - ATR count along Epping Road (NH Route 27) south of Industrial Drive south on June 23-24, 2005
- › Epping Road (NH Route 27) at Meeting Place Drive and McKay Drive:
 - TMCs performed on January 13, 2015 from 7 AM-5 PM
- › Epping Road (NH Route 27) at Brentwood Road (NH Route 111A) and Columbus Avenue:
 - TMCs performed on June 18 and 23, 2005 and on August 21, 2018 from 7-9 AM and 4-6 PM
 - ATR count along Columbus Avenue south of Epping Road (NH Route 27) and Brentwood Road (NH Route 111A) in June 2005, July 2005, and August 2018

2.2.2 Traffic Volume Network Development

The following steps were taken in the development of the 2020 base year traffic volume networks for the Epping Road (NH Route 27) Corridor Study.

2.2.2.1 Variation

Step 1: The intersection of Epping Road (NH Route 27) with Continental Drive has the most substantial data base available with traffic volumes from both pre- and pandemic conditions. Therefore, this intersection was used to assess traditional seasonal variation on the corridor.

- › April 2018, October 2019 (GRIDSMART), and March 2020 (COVID-19 stay at home influences) traffic data were compared to assess seasonal variation along the corridor. The NHDOT permanent count station on NH Route 125 in Lee is the nearest station to the study area and would typically be used to assess seasonal fluctuations along the Epping Road (NH Route 27) corridor. The Lee data suggest that summer months (June–August) would represent peak conditions with October requiring a 6% increase, April requiring a 16% increase, and March requiring a 25% increase to reflect peak. The raw data, however, show little traffic fluctuation at the Epping Road (NH Route 27) and Continental Drive intersection between the three months, suggesting that the corridor does not experience the same seasonal variation as may occur on other regional roadways.
- › Overall inspection and comparison of the various traffic data sources throughout the study area suggest that October likely represents above average annual conditions (and potentially near peak conditions) and would represent a reasonable base for the existing conditions.
- › Traffic data from October 2019 at the Epping Road (NH Route 27) intersection with Continental Drive were used to calibrate the remainder of the corridor to establish the 2020 existing conditions.

2.2.2.2 Network Peak Hours

Step 2: System peak hours were selected for the Epping Road (NH Route 27) corridor based on the raw data collected in March 2020. System peak hours were established as 7:15–8:15 AM for the weekday morning and 4:00–5:00 PM for the weekday evening.

2.2.2.3 Intersections North of Continental Drive

Step 3: To the north, the October 2015 NH Route 101 eastbound and westbound ramp volumes were factored for growth using a 1% average annual growth rate. The volumes were directionally distributed to the network using the northbound/southbound splits observed from the March 2020 TMCs. Through volumes along Epping Road (NH Route 27) were balanced with those from the Continental Drive intersection.

2.2.2.4 Intersections South of Continental Drive

- Step 4:** The raw data from the March 2020 TMCs were reviewed in combination with online aerial imagery to assess where traffic volumes likely balanced between intersections or where other driveways or intersections within the study area would likely create gaps in the balance of volumes. Deltas between study area intersections were documented on the network worksheets and used for balancing purposes.
- Step 5:** Traffic volumes from the various sources were compared to assess pre-pandemic volumes with those volumes collected on March 17, 2020 and on March 25 and 26, 2020 (where volumes continued to fall from the previous week). Volumes were assessed to be approximately 70% of normal levels; therefore, turns to and from the various side streets were increased by approximately 30%.
- Step 6:** Traffic data from the ATR count collected north of Continental Drive in July 2015 were compared with data from the ATR collected north of Brentwood Road (NH Route 111A) in August 2013 and June 2016 to assess the level of difference in the overall traffic along this southern segment of the Epping Road (NH Route 27) corridor. This difference was used to set the targeted volume on the southern end of the corridor where less historical data are available and where the only source of data for the Brentwood Road (NH Route 111A) intersection is from the end of March 2020 (when pandemic influences were notable).
- Step 7:** Traffic volumes were balanced from the Continental Drive intersection to the Brentwood Road (NH Route 27) intersection by adjusting for intersection turns and noting balancing gaps (to account for non-study area intersections and driveways). At the completion of this stage, the traffic volumes were cross checked and found to reasonably match the target volumes along Epping Road (NH Route 27) for the southern segment (Step 6 above).
- Step 8:** Turning volumes for the Brentwood Road (NH Route 111A) intersection were estimated using the March 2020 TMC directional flows and further refined using the historical ATR data from June 2011 on Brentwood Road (NH Route 111A) and from July 2014 on Columbus Avenue.
- › The ATR and TMC data for the Brentwood Road (NH Route 111A) intersection were provided by the Town subsequent to the completion of the 2020 base traffic volume networks for the Corridor Study.
 - › The additional data were later reviewed and compared to the estimated volumes for the existing weekday morning and evening peak hour conditions. This cross check revealed that the intersection volumes estimated for the study closely approximate the actual data and were deemed to be reasonable for conceptual design purposes.

The 2020 Base condition traffic volumes for the weekday morning and weekday evening peak hours are shown graphically on **Figures 2 and 3**, respectively.

2.3 Crash Data

To identify motor vehicle crash trends at the intersections along the Epping Road (NH Route 27) corridor, a review was conducted of the most current Exeter Police Department crash data between 2014 and 2019. The intent of evaluating the historical incident data was to understand the reported collision frequency and patterns occurring along the corridor. A summary of the vehicular crash data is provided in **Table 1**.

In addition, crash data were obtained from the Exeter Police Department for roadway collisions throughout the Town. This information identifies the total number of reported incidents that occurred within the community between January 1, 2014 and March 9, 2020.

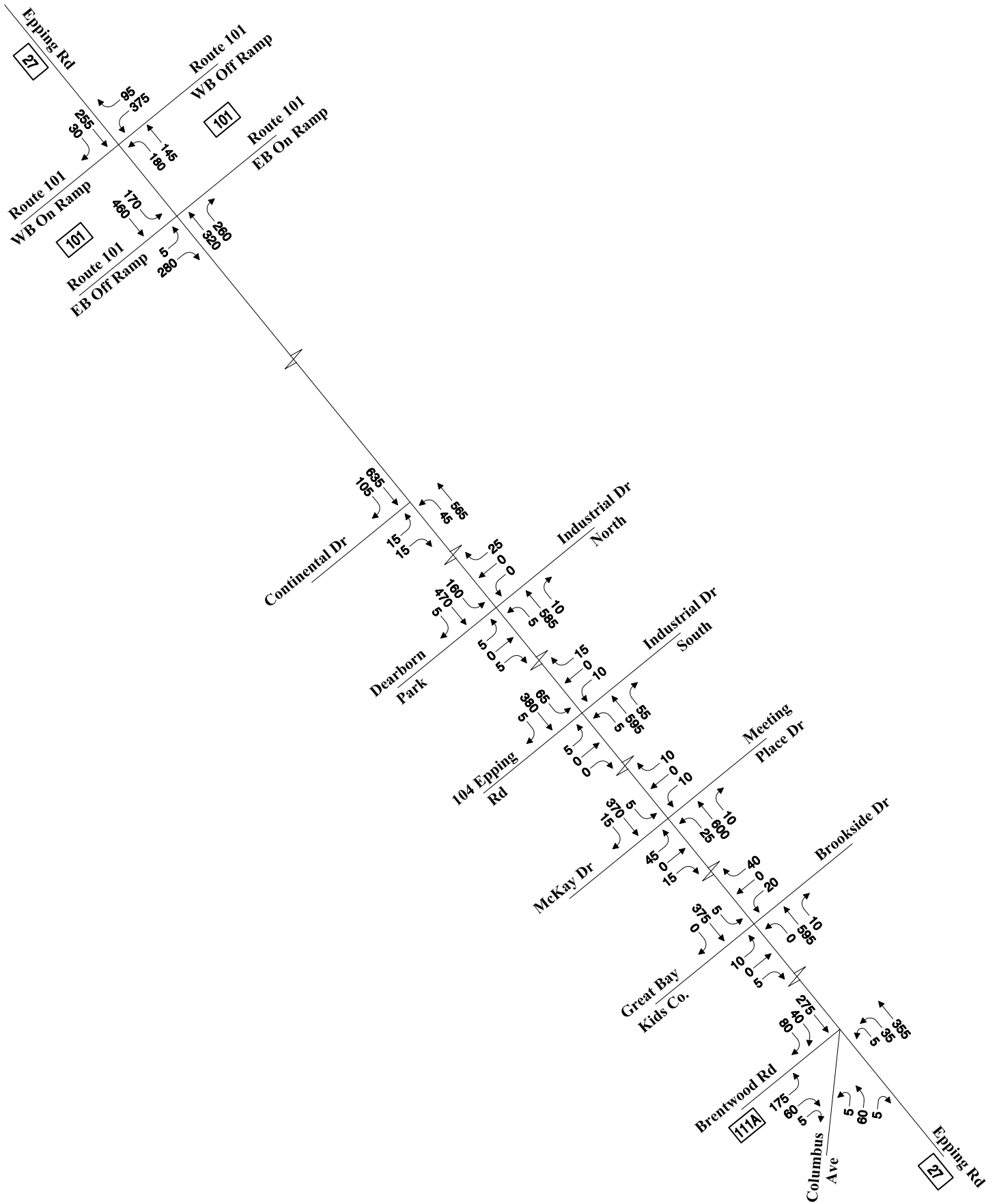
2.3.1 Epping Road (NH Route 27) and Beech Hill Road

The Epping Road (NH Route 27) unsignalized intersection with Beech Hill Road has experienced 13 reported collisions over a 6-year period (2014-2019), with an annual average of less than 3 incidents. The crash data produced the following results:

- › 92% resulted in property damage only crashes,
- › 92% involved rear-end collisions,
- › 23% during inclement weather,
- › 38% during the weekday commuting peak periods, and
- › 38% during the winter season.

Based on field observations, Epping Road (NH Route 27) vehicles approaching the intersection appeared to be traveling at higher speeds. In addition, sight lines may be limited from Beech Hill Road looking to the south (left) due to overgrown vegetation and Beech Hill Road is located along the inside of a horizontal curve. Although there is a Side Road Intersection sign (W2-2) posted north of the Beech Hill Road intersection facing southbound motorists, the Exeter Police Department records revealed that 11 of the 12 reported rear-end collisions occurred along the Epping Road (NH Route 17) southbound approach. This crash pattern may indicate faster vehicle travel speeds along this segment of the corridor in conflict with downstream left-turning vehicles destined for Beech Hill Road.

Between January 1, 2014 and March 9, 2020, the Epping Road (NH Route 27) and Beech Hill Road intersection is listed as experiencing the 10th highest number of reported crashes within the Town of Exeter. This intersection is under state jurisdiction and any improvements would require the review and approval of NHDOT.

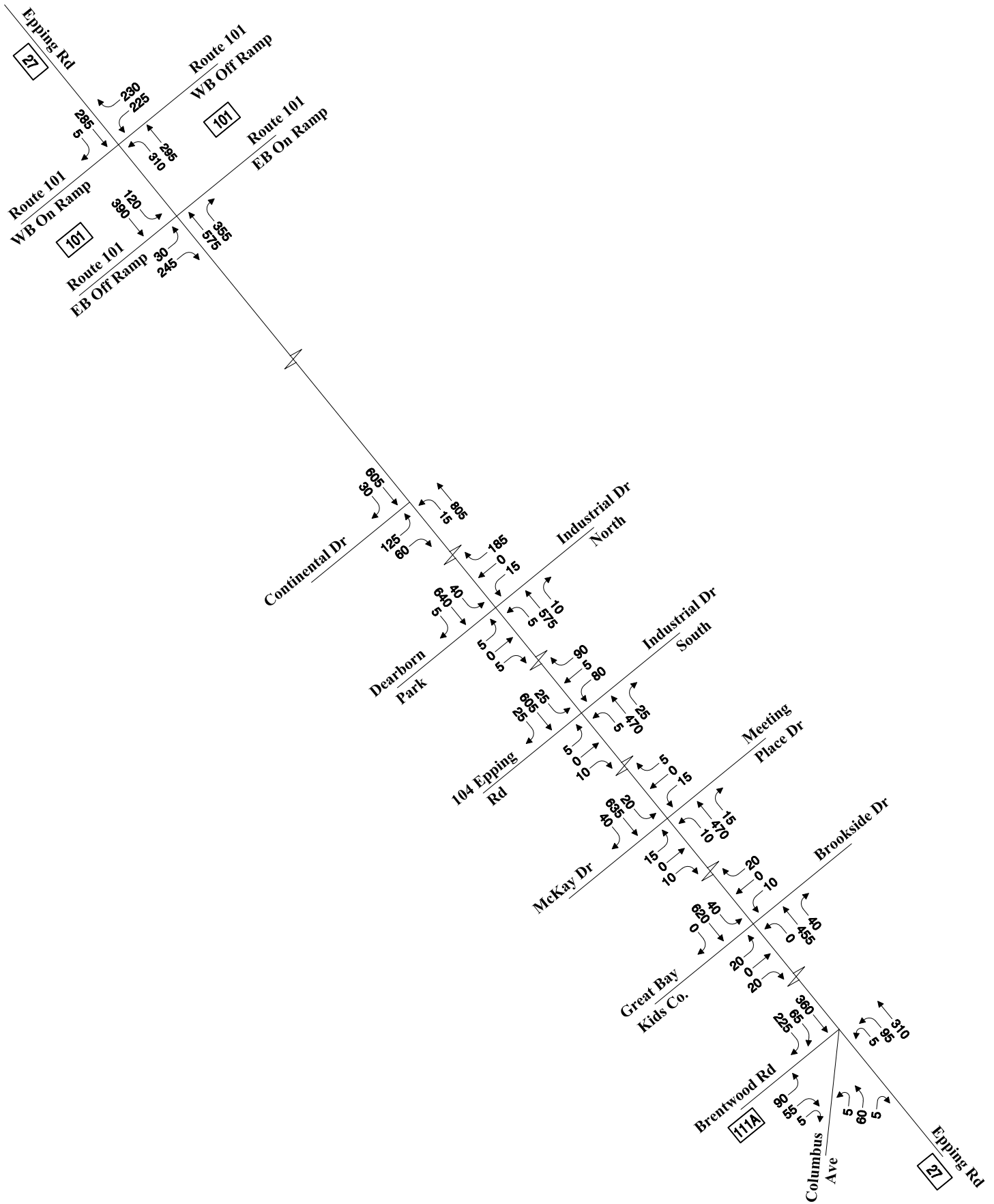


↑
Not to Scale



2020 Base Weekday Morning Peak Hour Traffic Volumes

Figure 2



↑
Not to Scale



2020 Base Weekday Evening Peak Hour Traffic Volumes

Figure 3

Table 1 – Crash Data Summary: Epping Road (NH Route 27) Corridor

Condition	Beech Hill Road	Watson Road	NH 101 WB Ramps
Year			
2014	2	0	6
2015	0	0	7
2016	4	1	1
2017	0	1	4
2018	2	1	1
2019	5	3	8
Total	13	6	27
Accident Type			
Property Damage Only	12	3	17
Injury	1	3	10
Fatality	0	0	0
Total	13	6	27
Accident Manner			
Angle	0	5	20
Head On	0	0	1
Rear End	12	1	6
Other/Unknown	1	0	0
Total	13	6	27
Weather Condition			
Clear	10	6	24
Rain	1	0	1
Snow	2	0	2
Total	13	6	27
Time of Day			
Weekday AM	2	0	5
Weekday PM	3	2	7
Non-Commuter Peak	8	4	15
Total	13	6	27
Season			
Winter (Dec-Feb)	3	1	6
Spring (Mar-May)	5	0	6
Summer (June-Aug)	1	3	6
Autumn (Sept-Nov)	4	2	9
Total	13	6	27

Table 1 (continued) – Crash Data Summary: Epping Road (NH Route 27) Corridor

Condition	NH 101 EB Ramps	Continental Drive	Industrial Drive (north)
Year			
2014	0	3	2
2015	2	1	1
2016	1	1	1
2017	1	0	2
2018	1	1	1
2019	2	1	1
Total	7	7	8
Accident Type			
Property Damage Only	4	5	7
Injury	3	2	1
Fatality	0	0	0
Total	7	7	8
Accident Manner			
Angle	4	1	3
Head On	0	0	0
Rear End	3	6	4
Other/Unknown	0	0	1
Total	7	7	8
Weather Condition			
Clear	6	7	7
Rain	0	0	0
Snow	1	0	1
Total	7	7	8
Time of Day			
Weekday AM	0	0	1
Weekday PM	3	3	2
Non-Commuter Peak	4	4	5
Total	7	7	8
Season			
Winter (Dec-Feb)	3	1	4
Spring (Mar-May)	4	2	0
Summer (June-Aug)	0	0	0
Autumn (Sept-Nov)	0	4	4
Total	7	7	8

Table 1 (continued) – Crash Data Summary: Epping Road (NH Route 27) Corridor

Condition	Industrial Drive (south)	Brentwood Road (NH 111A)
Year		
2014	0	6
2015	1	1
2016	1	4
2017	1	8
2018	3	2
2019	0	3
Total	6	24
Accident Type		
Property Damage Only	5	20
Injury	1	4
Fatality	0	0
Total	6	24
Accident Manner		
Angle	2	19
Head On	0	2
Rear End	4	2
Other/Unknown	0	1
Total	6	24
Weather Condition		
Clear	5	23
Rain	1	0
Snow	0	1
Total	6	24
Time of Day		
Weekday AM	1	5
Weekday PM	1	5
Non-Commuter Peak	4	14
Total	6	24
Season		
Winter (Dec-Feb)	1	6
Spring (Mar-May)	4	5
Summer (June-Aug)	1	4
Autumn (Sept-Nov)	0	9
Total	6	24

2.3.2 Epping Road (NH Route 27) and Watson Road

The Watson Road and Epping Road (NH Route 27) unsignalized intersection has experienced 6 reported collisions over a 6-year period (2014-2019), with an average of 1 incident per year. The low number of reported crashes do not indicate safety concerns at this intersection.

Based on field observations, Epping Road (NH Route 27) vehicles approaching the intersection appeared to be traveling at higher speeds approaching and departing from the NH 101 interchange approximately 520 feet to the south. Combined with the heavy traffic volumes at the interchange, these factors may have contributed to the number of incidents reported at the intersection as motorists may take less than desirable gaps in the mainline traffic stream to complete their maneuver resulting in angle-type collisions (5 of the 6 reported incidents). This intersection is under state jurisdiction and any improvements would require the review and approval of NHDOT.

2.3.3 Epping Road (NH Route 27) and NH 101 Interchange

Between January 1, 2014 and March 9, 2020, the Epping Road (NH Route 27) and NH Route 101 interchange is listed as experiencing the highest number of reported crashes within the Town of Exeter. This interchange is under state jurisdiction and any improvements would require the review and approval of NHDOT.

2.3.3.1 Epping Road (NH Route 27) and NH Route 101 Westbound Ramps

The NH Route 101 westbound ramps unsignalized intersection with Epping Road (NH Route 27) has experienced 27 reported collisions over a 6-year period (2014-2019), with an average of less than 5 incidents per year. The crash data produced the following results:

- › 30% occurred in 2019,
- › 37% resulted in personal injury,
- › 74% involved angle-type collisions,
- › 44% during the weekday commuting peak period, and
- › 33% during the autumn season.

Based on field observations, the Epping Road (NH Route 27) median south of the NH Route 101 westbound off-ramp may be of concern for motorists turning left from the off-ramp. Motorists may turn sharply into the vertical obstruction as there appear to be tire and scraped marks on the median and the signs (All Yellow Object Marker [OM1-3] and Keep Right [R4-7]) have been knocked down. The heavy volume of traffic at the interchange may contribute to motorists from the NH Route 101 off-ramp to accept less than desirable gaps in the mainline traffic stream to make their maneuver (20 of the 27 incidents). These factors may have contributed to the number of incidents reported at the intersection.

2.3.3.2 Epping Road (NH Route 27) and NH Route 101 Eastbound Ramps

The NH Route 101 eastbound ramps unsignalized intersection with Epping Road (NH Route 27) has experienced 7 reported collisions over a 5-year period (2014-2019), with an

average of just over 1 incident per year. The low number of reported crashes do not indicate safety concerns at this intersection.

Similar to the NH Route 101 westbound ramps intersection, the heavy traffic volumes along Epping Road (NH Route 27) at the NH Route 101 eastbound ramps may contribute to motorists taking less than desirable gaps in the mainline traffic stream to complete their maneuver resulting in angle-type collisions (4 of the 7 incidents).

2.3.4 Epping Road (NH Route 27) and Continental Drive

The Continental Drive intersection with Epping Road (NH Route 27) has experienced 7 reported collisions over a 6-year period (2014-2019), with an average of just over 1 incident per year. The low number of reported crashes do not indicate safety concerns at this intersection.

This intersection was recently placed under traffic signal control with a GRIDSMART system. The GRIDSMART camera collects and processes information that allows traffic engineers to receive real-time visual monitoring data and adjust traffic signal parameters in an effort to reduce congestion and improve efficiency. In addition, geometric improvements were made to provide an Epping Road (NH Route 27) northbound exclusive left-turn lane, an Epping Road (NH Route 27) southbound exclusive right-turn lane, and separate turning lanes on the Continental Drive eastbound approach.

2.3.5 Epping Road (NH Route 27) and Industrial Drive (north)

The northern Industrial Drive unsignalized intersection with Epping Road (NH Route 27) has experienced 8 reported collisions over a 6-year period (2014-2019), with an annual average of more than 1 incident. Between January 1, 2014 and March 9, 2020, the Epping Road (NH Route 27) and Industrial Drive (north) intersection is listed as experiencing the 9th highest number of reported crashes within the Town of Exeter. Field observations revealed numerous conflict points near Industrial Drive that may contribute to the number of reported collisions:

- › A 70 +/- foot wide driveway providing access for 140 Epping Road (Dearbon Park) on the west side of Epping Road (NHRoute 27) is slightly offset less than 20 feet to the south of Industrial Park.
- › A secondary access for Dearborn Park is provided less than 20 feet to the north of the Industrial Drive intersection.
- › An entrance only driveway for Daniel B. Stockbridge Funeral Home is located on the east side of Epping Road (NH Route 27) less than 20 feet north of Industrial Drive.
- › A commercial plaza for 137 Epping Road (Front Row Italian Pizzeria & Sports Bar, Karate International, Charlotte's Web Fine Yarns, Just Doo It Hair Salon, and Rockingham Visiting Nurse Association & Hospice) is located on the southeast quadrant of the intersection with a full access driveway provided approximately 110 feet to the south along Epping Road (NH Route 27).

2.3.6 Epping Road (NH Route 27) and Industrial Drive (south)

The southern Industrial Drive unsignalized intersection with Epping Road (NH Route 27) has experienced 6 reported collisions over a 6-year period (2014-2019), with an average of 1 incident per year. Of note, 50% of the reported collisions occurred in 2018, 67% involved rear-end crashes, and 67% occurred in the spring season.

Although the low number of reported crashes do not indicate safety concerns at this intersection, field observations revealed the following that may have contributed to the number of reported incidents:

- › An exit only driveway for Service Credit Union is located on Industrial Drive approximately 50 feet east of Epping Road (NH Route 27).
- › A driveway for First Student school bus service (97 Epping Road) is located on the east side of Epping Road (NH Route 27) approximately 115 feet south Industrial Drive.
- › A plaza located at 104 Epping Road creates the fourth leg to the unsignalized intersection with an approximate 130 foot driveway opening (the entire frontage) with no defined curbing.
- › A driveway for Epping Road Veterinary Hospital (120 Epping Road) is located on the west side of Epping Road (NH Route 27) approximately 100 feet north of the 104 Epping Road plaza.

2.3.7 Epping Road (NH Route 27), Brentwood Road (NH Route 111A), and Columbus Avenue

Brentwood Road (NH Route 111A) and Columbus Avenue intersect Epping Road (NH Route 27) from the southwest and southeast, respectively, to form this unsignalized intersection. The overall intersection consists of three minor intersections:

- › To the northwest, vehicles from Brentwood Road (NH Route 111A) and Columbus Avenue destined for Epping Road (NH Route 27) to the west intersect Epping Road (NH Route 27) and operate under stop sign control, with Epping Road (NH Route 27) eastbound right turns channelized.
- › To the northeast, vehicles from Brentwood Road (NH Route 111A) and Columbus Avenue destined for Epping Road (NH Route 27) to the east intersect Epping Road (NH Route 27) and operate under stop sign control, with Epping Road (NH Route 27) westbound left turns permitted for continued access to Brentwood Road (NH Route 111A) and Columbus Avenue.
- › To the south, right turns from Epping Road (NH Route 27) eastbound and the Columbus Avenue north-westbound approaches are under stop sign control, with the left turns from Epping Road (NH Route 27) westbound and the Brentwood Road (NH Route 111A) north-eastbound approaches operating under free flow conditions.

The Epping Road (NH Route 27), Brentwood Road (NH Route 111A), and Columbus Avenue unsignalized intersections have experienced 24 reported collisions over a 6-year period (2014-2019), with an annual average of 4 incidents. The crash data produced the following results:

- › 33% occurred in 2018 and 25% occurred in 2015,
- › 83% resulted in property damage only crashes,
- › 79% involved angle-type collisions,
- › 42% during the weekday commuting peak periods, and
- › 38% during the autumn season.

Between January 1, 2014 and March 9, 2020, these intersections are listed as experiencing the 5th highest number of reported crashes within the Town of Exeter. The several conflict points within a short distance may have contributed to the number of reported incidents. As part of a Transportation Alternatives Program (TAP) grant, the Town of Exeter is addressing pedestrian safety by eliminating the northwest intersection, restricting Columbus Avenue to allow right-turns in/right-turns out only, striping a crosswalk across the Epping Road (NH Route 27) and Brentwood Road (NH Route 111A) intersection (northeast), and constructing a median island along Brentwood Road (NH Route 111A) to restrict left turns at Columbus Avenue and serve as a pedestrian refuge area for the crosswalk. These improvements are intended to improve safety but not increase vehicular capacity.

2.4 Capacity and Queue Analyses

2.4.1 Capacity Analysis Methodology

Capacity analyses were performed for the study area intersections with the 2020 Base traffic volumes for the weekday morning and weekday evening peak hours based on the concepts and procedures in the Highway Capacity Manual (HCM)¹ using the *Trafficware Synchro Software* computer program. This software program is a NHDOT approved traffic analysis tool for determining intersection capacity operations.

The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operational conditions based on the calculated average delay per vehicle. The relationship between LOS and delay is summarized in **Table 2**.

¹ Transportation Research Board. Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis. 2016.

Table 2 – Level of Service Criteria

LOS	Unsignalized Intersection Criteria Average Total Delay (Seconds per Vehicle)	Signalized Intersection Criteria Average Total Delay (Seconds per Vehicle)
A	< 10.0	< 10.0
B	10.1 to 15.0	10.1 to 20.0
C	15.1 to 25.0	20.1 to 35.0
D	25.1 to 35.0	35.1 to 55.0
E	35.1 to 50.0	55.1 to 80.0
F	> 50.0	> 80.0

Source: *Highway Capacity Manual, 6th edition: A Guide for Multimodal Analysis, 2016.*

2.4.2 Queue Length Analysis Methodology

The study area intersections were also evaluated with respect to vehicle queuing. The quantitative measures of vehicle queue length are defined as the 50th and the 95th percentile queues. The 50th percentile queue represents the average queue length during the peak hour and the 95th percentile queue represents the calculated maximum back of queue that has a probability of 5% or less of being exceeded during the peak hour. Vehicle queues were modeled using the *Trafficware SimTraffic Software* computer program. This program is a NHDOT approved traffic analysis tool for determining intersection capacity operations that measures the full impact of queuing and blocking.

2.4.3 Intersection Operational Results – Existing Conditions

The capacity and queue length analysis results are summarized in **Table 3** for the 2020 Base traffic-volume conditions. The computer-generated analysis reports are provided in the Appendix.

2.4.3.1 Epping Road (NH Route 27) and NH Route 101 Westbound Ramps

The NH Route 101 westbound off-ramp at the unsignalized intersection with Epping Road (NH Route 27) operates with long delays (LOS F) and long vehicle queues (95th percentile queues > 1,000 feet) during the weekday morning and weekday evening peak hours. These long delays could contribute to motorists becoming aggressive to enter the mainline traffic stream by accepting less than desirable gaps.

2.4.3.2 Epping Road (NH Route 27) and NH Route 101 Eastbound Ramps

The NH Route 101 eastbound off-ramp left turns at the unsignalized intersection with Epping Road (NH Route 27) operates with long delays (LOS E/F) during the weekday morning and weekday evening peak hours. Although the delays and vehicle queues are not as excessive on the NH Route 101 westbound off-ramp, safety concerns could result with these operational deficiencies.

Table 3 – Capacity Analysis Summary: 2020 Base Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2020 Base				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d
Epping Road (NH 27) and NH 101 Westbound Ramps					
<i>Weekday AM:</i>					
NH 101 WB Off-Ramp Approach	1.71	>300	F	582	1,065
Epping Rd (NH 27) NB Left	0.16	8.4	A	30	64
<i>Weekday PM:</i>					
NH 101 WB Off-Ramp Approach	2.56	>300	F	927	1,266
Epping Rd (NH 27) NB Left	0.27	9.0	A	38	79
Epping Road (NH 27) and NH 101 Eastbound Ramps					
<i>Weekday AM:</i>					
NH 101 EB Off-Ramp Left	0.05	38.2	E	15	106
NH 101 EB Off-Ramp Right	0.55	19.1	C	39	154
Epping Rd (NH 27) SB Left	0.19	9.7	A	44	80
<i>Weekday PM:</i>					
NH 101 EB Off-Ramp Left	0.35	64.2	F	116	558
NH 101 EB Off-Ramp Right	0.43	15.2	C	25	121
Epping Rd (NH 27) SB Left	0.19	11.5	B	61	141
Epping Road (NH 27) and Continental Drive					
<i>Weekday AM:</i>					
Continental Dr EB Left	0.08	17.1	B	9	31
Continental Dr EB Right	0.04	12.4	B	10	32
Epping Rd (NH 27) NB Left	0.21	16.8	B	31	62
Epping Rd (NH 27) NB Through	0.47	3.0	A	76	156
Epping Rd (NH 27) SB Through	0.74	10.1	B	120	198
Epping Rd (NH 27) SB Right	0.12	4.0	A	15	49
Overall Intersection	--	7.0	A	--	--
<i>Weekday PM:</i>					
Continental Dr EB Left	0.35	15.7	B	89	251
Continental Dr EB Right	0.14	12.1	B	43	118
Epping Rd (NH 27) NB Left	0.12	19.7	B	12	39
Epping Rd (NH 27) NB Through	0.77	7.4	A	144	260
Epping Rd (NH 27) SB Through	0.76	11.7	B	260	943
Epping Rd (NH 27) SB Right	0.03	2.7	A	1	10
Overall Intersection	--	9.8	A	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 3 (continued) – Capacity Analysis Summary: 2020 Base Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2020 Base				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d
Epping Road (NH 27) and Industrial Drive (north)					
<i>Weekday AM:</i>					
Dearborn Park EB Approach	0.08	35.7	E	9	31
Industrial Dr WB Approach	0.06	12.9	B	16	41
Epping Rd (NH 27) NB Left	0.01	8.4	A	3	21
Epping Rd (NH 27) SB Left	0.18	9.7	A	74	153
<i>Weekday PM:</i>					
Dearborn Park EB Approach	0.11	47.7	E	18	74
Industrial Dr WB Approach	0.56	25.1	D	118	384
Epping Rd (NH 27) NB Left	0.01	9.0	A	2	19
Epping Rd (NH 27) SB Left	0.05	9.0	A	74	303
Epping Road (NH 27) and Industrial Drive (south)					
<i>Weekday AM:</i>					
104 Epping Rd Plaza EB Approach	0.04	35.6	E	5	21
Industrial Dr WB Approach	0.12	23.2	C	20	45
Epping Rd (NH 27) NB Left	0.01	8.2	A	2	16
Epping Rd (NH 27) SB Left	0.08	9.4	A	43	107
<i>Weekday PM:</i>					
104 Epping Rd Plaza EB Approach	0.08	24.3	C	11	30
Industrial Dr WB Approach	0.90	84.8	F	127	423
Epping Rd (NH 27) NB Left	0.01	9.0	A	2	21
Epping Rd (NH 27) SB Left	0.03	8.6	A	123	643
Epping Road (NH 27), Meeting Place Drive, and McKay Drive					
<i>Weekday AM:</i>					
McKay Dr EB Left/Through	0.29	34.3	D	18	41
McKay Dr EB Right	0.02	10.8	B	3	10
Meeting Place Dr WB Approach	0.09	20.8	C	16	42
Epping Rd (NH 27) NB Left	0.02	8.2	A	7	25
Epping Rd (NH 27) SB Left	0.01	8.9	A	3	15
<i>Weekday PM:</i>					
McKay Dr EB Left/Through	0.12	35.8	E	36	193
McKay Dr EB Right	0.02	13.5	B	12	58
Meeting Place Dr WB Approach	0.13	30.6	D	44	209
Epping Rd (NH 27) NB Left	0.01	9.2	A	3	18
Epping Rd (NH 27) SB Left	0.02	8.5	A	5	20

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 3 (continued) – Capacity Analysis Summary: 2020 Base Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2020 Base				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d
Epping Road (NH 27) and Brookside Drive					
<i>Weekday AM:</i>					
Great Bay Kids EB Left	0.06	27.2	D	4	17
Great Bay Kids EB Through/Right	0.01	10.6	B	1	6
Brookside Dr WB Approach	0.21	20.0	C	34	63
Epping Rd (NH 27) SB Left	0.01	8.9	A	4	25
<i>Weekday PM:</i>					
Great Bay Kids EB Left	0.17	38.8	E	14	40
Great Bay Kids EB Through/Right	0.05	13.3	B	22	65
Brookside Dr WB Approach	0.13	21.7	C	59	264
Epping Rd (NH 27) SB Left	0.04	8.6	A	77	336
Epping Road (NH 27) and Brentwood Road (NH 111A) – northwest intersection					
<i>Weekday AM:</i>					
Brentwood Rd (NH 111A) Approach	0.67	32.0	D	27	50
<i>Weekday PM:</i>					
Brentwood Rd (NH 111A) Approach	0.52	28.1	D	27	44
Epping Road (NH 27) and Brentwood Road (NH 111A) – northeast intersection					
<i>Weekday AM:</i>					
Brentwood Rd (NH 111A) Approach	0.10	10.4	B	30	51
Epping Rd (NH 27) NB Left	0.03	8.0	A	18	65
<i>Weekday PM:</i>					
Brentwood Rd (NH 111A) Approach	0.10	11.1	B	26	52
Epping Rd (NH 27) NB Left	0.09	8.4	A	86	270
Brentwood Road (NH 111A) and Columbus Avenue ^e					
<i>Weekday AM:</i>					
Brentwood Rd (NH 111A) EB Approach	0.33	9.9	A	79	154
WB: From Epping Rd (NH 27) NB Left	0.06	8.1	A	21	43
Columbus Ave NB Approach	0.10	8.4	A	34	61
SB: From Epping Rd (NH 27) SB Right	0.16	8.2	A	38	62
<i>Weekday PM:</i>					
Brentwood Rd (NH 111A) EB Approach	0.23	9.6	A	91	316
WB: From Epping Rd (NH 27) NB Left	0.15	9.0	A	32	57
Columbus Ave NB Approach	0.11	8.6	A	66	231
SB: From Epping Rd (NH 27) SB Right	0.37	9.8	A	56	79

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue lengths in feet.^e Since the HCM methodologies do not evaluate 4-legged intersections with 3 approaches under Stop-sign control, this intersection was evaluated as an All-Way Stop-Controlled intersection with the westbound approach allowed to enter the blocked intersection.

2.4.3.1 Epping Road (NH Route 27) and Continental Drive

The Epping Road (NH Route 27) and Continental Drive signalized intersection operates with lane groups at LOS B or better during the weekday commuting peak hours. These operational results indicate that the existing traffic control and geometrics provide adequate capacity to accommodate the existing traffic demand.

2.4.3.2 Epping Road (NH Route 27) and Industrial Drive (north)

The critical movements at the Epping Road (NH Route 27) and Industrial Drive northern unsignalized intersection operate at desirable levels (LOS C or better) during the weekday morning and weekday evening peak hours. Although these operational results indicate efficient progression through the intersection, the adjacent curb cuts (as previously described) can contribute to numerous vehicle conflicts within a short area.

2.4.3.3 Epping Road (NH Route 27) and Industrial Drive (south)

During the weekday morning peak hour, long delays (LOS E) are experienced for motorists attempting to exit from the 104 Epping Road plaza driveway at the Epping Road (NH Route 27) and Industrial Drive southern intersection. During the weekday evening peak hour, vehicles attempting to exit from the Industrial Drive westbound approach experience long delays (LOS F).

2.4.3.4 Epping Road (NH Route 27), Meeting Place Drive, and McKay Drive

Although the McKay Drive eastbound shared left-turn/through lane at the unsignalized intersection with Epping Road (NH Route 27) and Meeting Place Drive operates with long delays (LOS E) during the weekday evening peak hour, sufficient capacity is shown to be available for all the critical movements as reflected by the low volume-to-capacity (v/c) ratios (i.e., significantly <1.00).

2.4.3.5 Epping Road (NH Route 27) and Brookside Drive

The Great Bay Kids' Co. driveway eastbound approach to the Epping Road (NH Route 27) and Brookside Drive unsignalized intersection operates with long delays (LOS E) during the weekday evening peak hour. Similar to the Epping Road (NH Route 27) intersection with McKay Drive and Meeting Place Drive, ample capacity is shown to be available at the Brookside Drive and Great Bay Kids' Co. driveway intersection as shown with the low v/c ratios (i.e., significantly <1.00).

2.4.3.6 Epping Road (NH Route 27), Brentwood Road (NH Route 111A) and Columbus Avenue

The critical movements at the Epping Road (NH Route 27) unsignalized intersection with Brentwood Road (NH Route 111A) and Columbus Avenue operate at LOS D or better during the weekday commuting peak hours. Although the intersection operations show efficient progression through the area, the close proximity of the intersections creates several conflicts with limited queuing area and decision making opportunities within a short area.

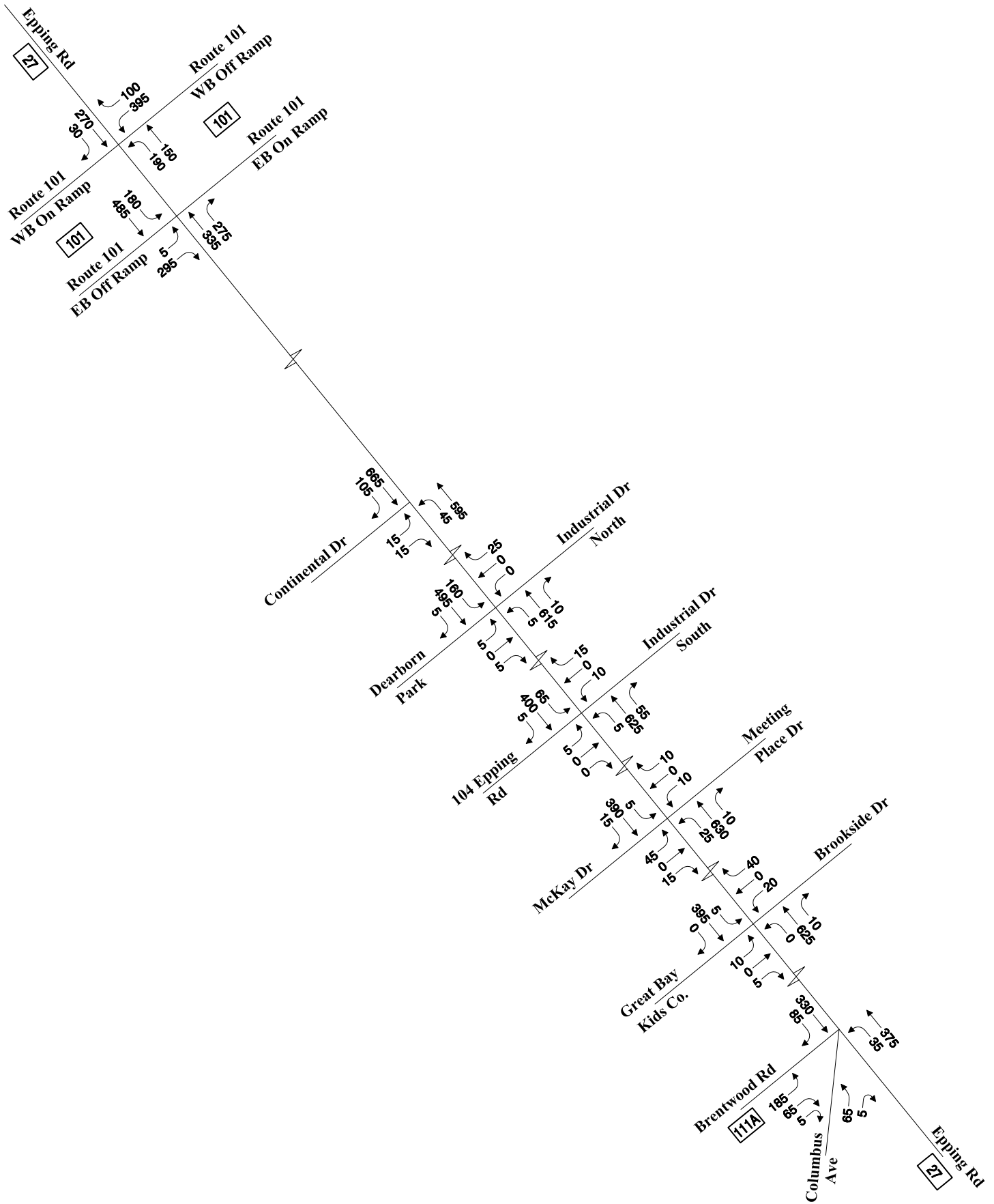
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Future No-Build Conditions

To determine future traffic demands along the Epping Road (NH Route 27) corridor, existing traffic volumes were projected to the year 2030. For planning purposes, a 10-year design horizon was selected to consider the effects of traffic volumes and potential improvement measures as land use patterns tend to develop over long periods of time. Once the projected deficiencies are identified, improvements can then be developed and prioritized. To estimate future traffic volumes, such factors as historical growth trends and future corridor land uses were considered.

To develop future baseline traffic volume conditions, NHDOT historical traffic volumes were reviewed along Epping Road (NH Route 27) south of the NH Route 101 interchange and north of Brentwood Road (NH Route 111A), as well as along Brentwood Road (NH Route 111A) west of Columbus Avenue. These data revealed a negative growth rate between 2015 and 2019. Coordination efforts with Rockingham Planning Commission officials revealed that an annual growth rate of 0.16% would be appropriate for this area. To provide a conservative scenario for planning purposes, a 0.5% compounded annual growth rate was used to account for general population growth and traffic generated by smaller developments in the area.

The 2030 No-Build peak hour traffic volumes were accordingly developed by applying a 0.5% compounded annual traffic growth rate (or 5.1% over 10 years) to the 2020 Base volumes. The 2030 No-Build traffic volumes are shown graphically for the study area intersections on **Figures 4 and 5** for the weekday morning and weekday evening peak hours, respectively.

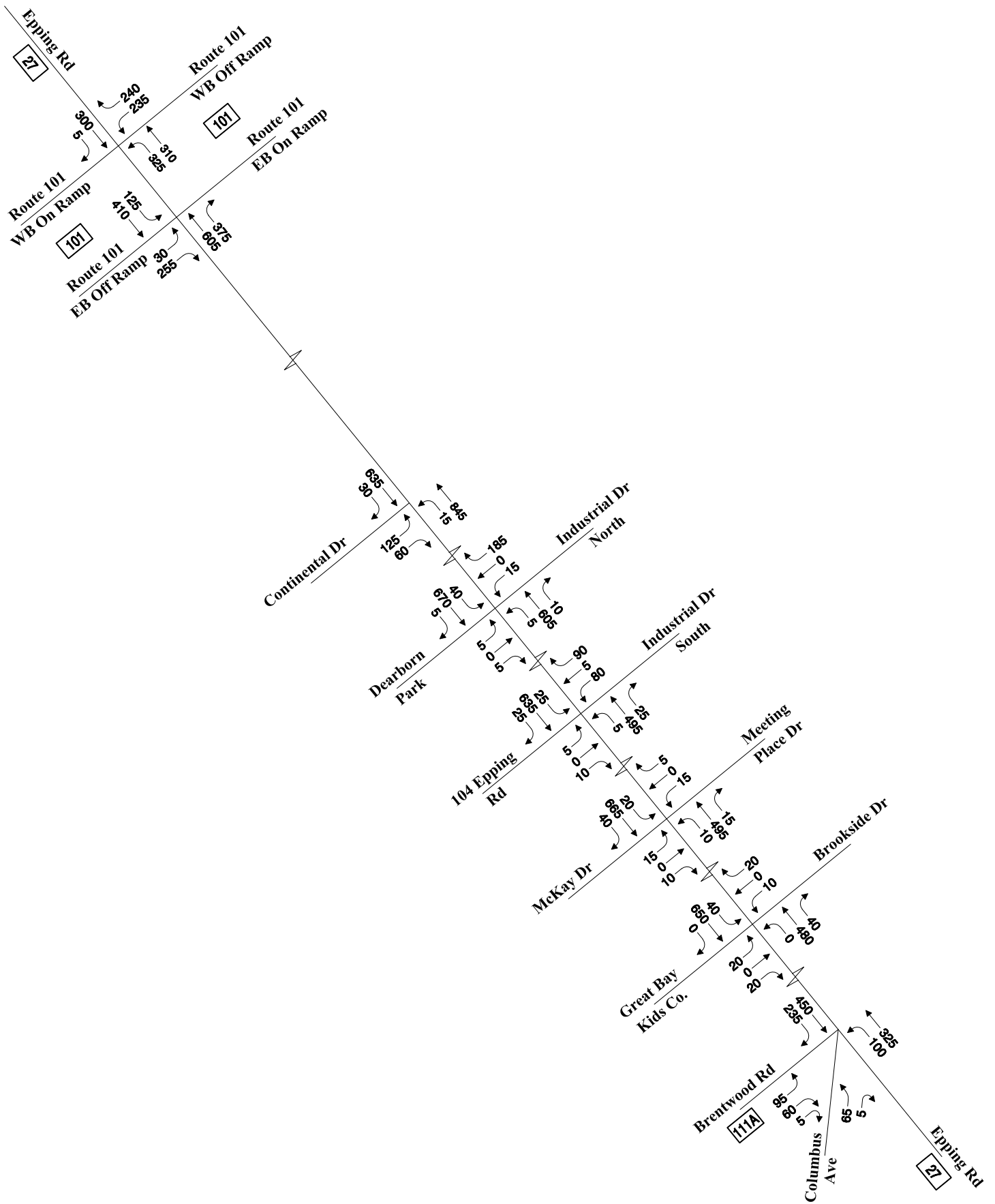


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Not to Scale



2030 No-Build Weekday Morning Peak Hour Traffic Volumes

Figure 4



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Not to Scale



2030 No-Build Weekday Evening Peak Hour Traffic Volumes

Figure 5

4

Future Full Build-Out Conditions

For the purposes of this corridor planning study, developments were estimated to be constructed and occupied within the 10-year design horizon. Two components of the full build-out program included development of vacant parcels along the Epping Road (NH Route 27) corridor and the construction of known projects planned to be constructed within the study area.

4.1 Epping Road (NH Route 27) Current Land Uses

The Zoning Districts of the properties abutting within the study area vary along the Epping Road (NH Route 27) corridor. The following provides a list of the currently zoned land uses within the study area based on zoning information provided by the Town of Exeter. Graphic detail on maps of these Zoning Districts is provided in the Appendix.

- › **Single Family/Low Density Residential 1 (R-1):** to the north and east of Redberry Road.
- › **Neighborhood Professional (NP):** within the inside of the Redberry Road and Beech Hill Road loop.
- › **Epping Road Highway Commercial (C-3):** along the east side of Epping Road (NH Route 27) from north of the NH 101 interchange to Beech Hill Road, and along both sides of Epping Road (NH Route 27) from the NH Route 101 interchange to Industrial Drive (north).
- › **Rural Residential (RU):** along the west side of Epping Road (NH Route 27) from north of the NH 101 interchange to across from Beech Hill Road.
- › **Industrial (I):** to the east of the southern portion of the C-3 Zoning District.

- › **Corporate Technology – 1 Park (CT-1):** to the west of the southern portion of the C-3 Zoning District.
- › **Highway Commercial (C-2):** from Industrial Drive (north) to north of Brentwood Road (NH Route 111A).
- › **Multi-Family Residential (R-4):** along the east side of Epping Road (NH Route 27) south and east of the C-2 Zoning District, and off the west side of Epping Road (NH Route 27) south of the Mobile Home Subdivision (MS) Zoning District.
- › **Mobile Home/Manufactured Housing Subdivision (MS):** south of the southern portion of the C-3 Zoning District and west of the C-2 Zoning District.
- › **Single Family Residential 2 (R-2):** along both sides of Epping Road (NH Route 27) south of the R-4 Zoning Districts and the C-2 Zoning District.

4.2 Epping Road (NH Route 27) Potential Development

With vacant lots along the Epping Road (NH Route 27) corridor, there is the possibility that these parcels may be developed in the future. To determine the type and size of these potential build programs, each undeveloped parcel was reviewed and compared to the Town of Exeter's zoning requirements for the ratio of developed square footage to the lot size in determining the highest intense traffic use that could potentially be constructed. In addition, wetland areas were generally noted using available geographic information system (GIS) information to further understand the available space that may be developed. Based on collaboration efforts with local officials, certain vacant parcels that are not serviced by sewer and water were excluded due to the associated extensive cost.

The site specific traffic volumes were projected for each vacant parcel based on trip-generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*.² After knowing the Zoning District of each vacant parcel (type of use) and the buildable area (size of building) for development, traffic engineering judgment was then applied in selecting the appropriate ITE Land Use Code.

Table 4 summarizes potential development of vacant parcels along the Epping Road (NH Route 27) corridor. These assumptions were made for planning purposes and could vary when parcels are developed or redeveloped in the future. As development occurs in the future, more detailed and updated wetland data should be provided to determine developable lot area. When each lot along the corridor is developed or redeveloped, site plans shall conform with all current and applicable Town of Exeter, State of New Hampshire, and other governmental standards, regulations, policies, ordinances, and statutes.

² Institute of Transportation Engineers. *Trip Generation Manual*, 10th ed. Washington, DC, 2017.

Table 4 – Potential Future Uses on Vacant Land

Map ID	Parcel Number	Potential Future Use	Potential Buildable Area
Epping Road Highway Commercial (C-3)			
37	040-009-0000	Office	19,965 sf
54	047-001-0003	Office	121,005 sf
55	047-002-0004	Office	222,870 sf
65	047-009-0000	Office	773,575 sf
Corporate Technology – 1 Park (CT-1)			
56	046-007-0002	Office	315,450 sf
63	046-004-0000	Office	238,175 sf
64	056-003-0001	Office	278,460 sf
Industrial (I)			
84	046-004-0000	General Light Industrial	33,085 sf
87	046-003-0000	General Light Industrial	75,110 sf

In addition to these vacant parcels identified above, the following projects were identified by the Town Engineer and Town Planner for future development:

- › **Ray Farm Exeter** (Map ID 41): A 116 unit, 55+ active adult residential community located on the east side of Epping Road (NH Route 27) with access provided across from the driveway for Exeter Decorating Center. At the time of this Corridor Study, 16 of the approved 116 dwelling units have been occupied. The site trips for the remaining 100 units were developed based on the methodology presented in the July 2017 *Traffic Impact Assessment* prepared by Stephen G. Pernaw & Company, Inc. for this development (ITE Land Use Code 252 [Senior Adult Housing – Attached]).
- › **Gateway at Exeter** (Map ID 36 and 38): As proposed, the Gateway at Exeter development would be located along the west side of Epping Road (NH Route 27) south of the NH Route 101 interchange and consist of 11,225 square feet of retail space, 17,295 square feet of office space, a 20,040 square foot daycare facility, and 224 residential dwelling units. These site trips were obtained from the November 2019 *Traffic Impact Assessment* prepared by Stephen G. Pernaw & Company, Inc. for the Gateway at Exeter development. As part of the May 21, 2019 Zoning Board of Adjustment approvals for the development, the 45-acre rear portion of Map ID 38 (Map 47, Lot 7) would not be developed (Map 47, Lot 7-1).
- › **Unitil Corporation** (Map ID 62): A 60,000 square foot Unitil facility is under construction off Continental Drive at 27 Gourmet Place. Based on coordination efforts with the Town Planner, site trips for this development were generated for the Unitil facility using ITE *Trip Generation Manual* data for Land Use Code 110 (General Light Industrial).
- › **5-Lot Subdivision** (Map ID 178): A 5-lot subdivision will be constructed with 3 lots to have access off Spruce Street and 2 lots off Brentwood Road (NH Route 111A). Due to the small

size of the subdivision and the associated minimal volume of site trips, the traffic volumes for the subdivision development were considered to be included within the overestimated annual growth rate used within this Corridor Study.

- › **Primrose Daycare School** (Map ID 145): As previously approved, 9,000 square feet of retail space, 12,600 square feet of office space, 91 apartment units, and an 828 square foot Aroma Joe's restaurant would be constructed off McKay Drive. The retail space, office space, and 10 apartment units were to be constructed in one mixed-use building on the north side of McKay Drive across from the Aroma Joe's restaurant, with the remaining 81 apartment units to be constructed at the terminus of McKay Drive.

At the time of this Corridor Study, the previously approved mixed-use building was being considered to be replaced with a 13,000 square foot Primrose Daycare School. This potential project change would need to proceed through the Town of Exeter's permitting process. For the purposes of this planning study, the additional site trips associated with the project change were developed based on a comparison of the previously proposed trips for the mixed-use building (June 5, 2015 *Traffic Impact Assessment – Addendum One* prepared by Stephen G. Pernaw & Company, Inc.) with projected site trips using ITE Land Use Code 565 (Day Care Center) for the proposed Primrose Daycare School.

The directional distribution of the trips associated with potential development of the vacant parcels was approximated based on United States Census commuting data for the Town of Exeter and existing traffic flow patterns along Epping Road (NH Route 27). A summary of the United States Census Bureau data is provided in the Appendix. In addition, the potential trips for the vacant parcels along the corridor are provided in the Appendix.

The potential future trips associated with the vacant parcels and the known developments along the corridor were added to the 2030 No-Build traffic volumes to develop the 2030 Full Build-Out peak hour traffic volumes. The 2030 Full Build-Out traffic volumes are shown graphically on **Figures 6 and 7** for the weekday morning and weekday evening peak hours, respectively.

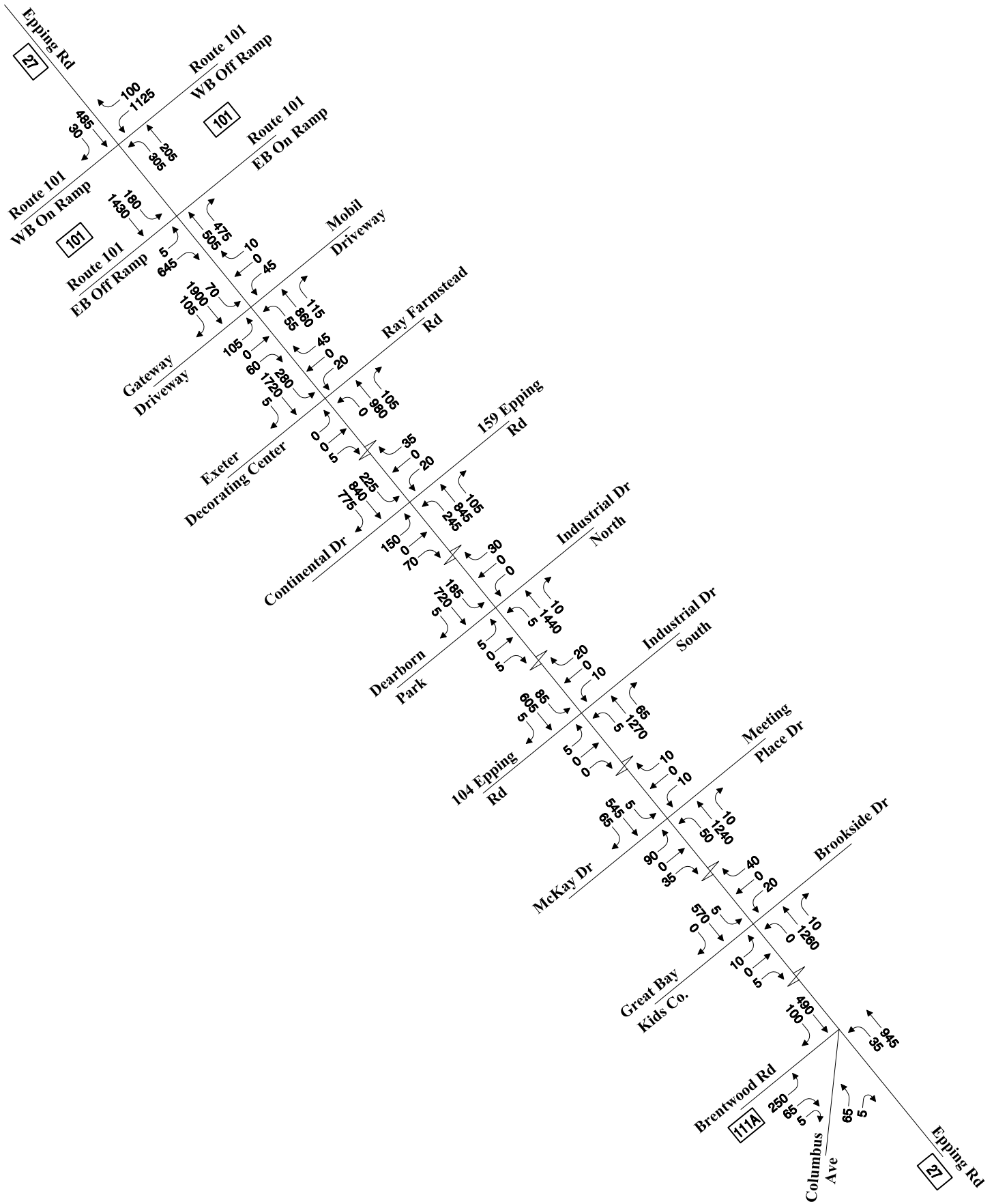
4.3 Potential Improvements

Improvement measures required to alleviate roadway system operational and safety deficiencies were considered.

4.3.1 Traffic Signals Alternative

Preliminary discussions were held with the Town Engineer and Town Planner in which conceptual sketches depicted a five-lane corridor with additional turn lanes and traffic signals at key intersections. The following intersections were originally identified as potential locations for signalization, but a Manual on Uniform Traffic Control Devices (MUTCD)³ traffic signal warrant analysis would need to be needed to determine whether the installation of these traffic signals is justified:

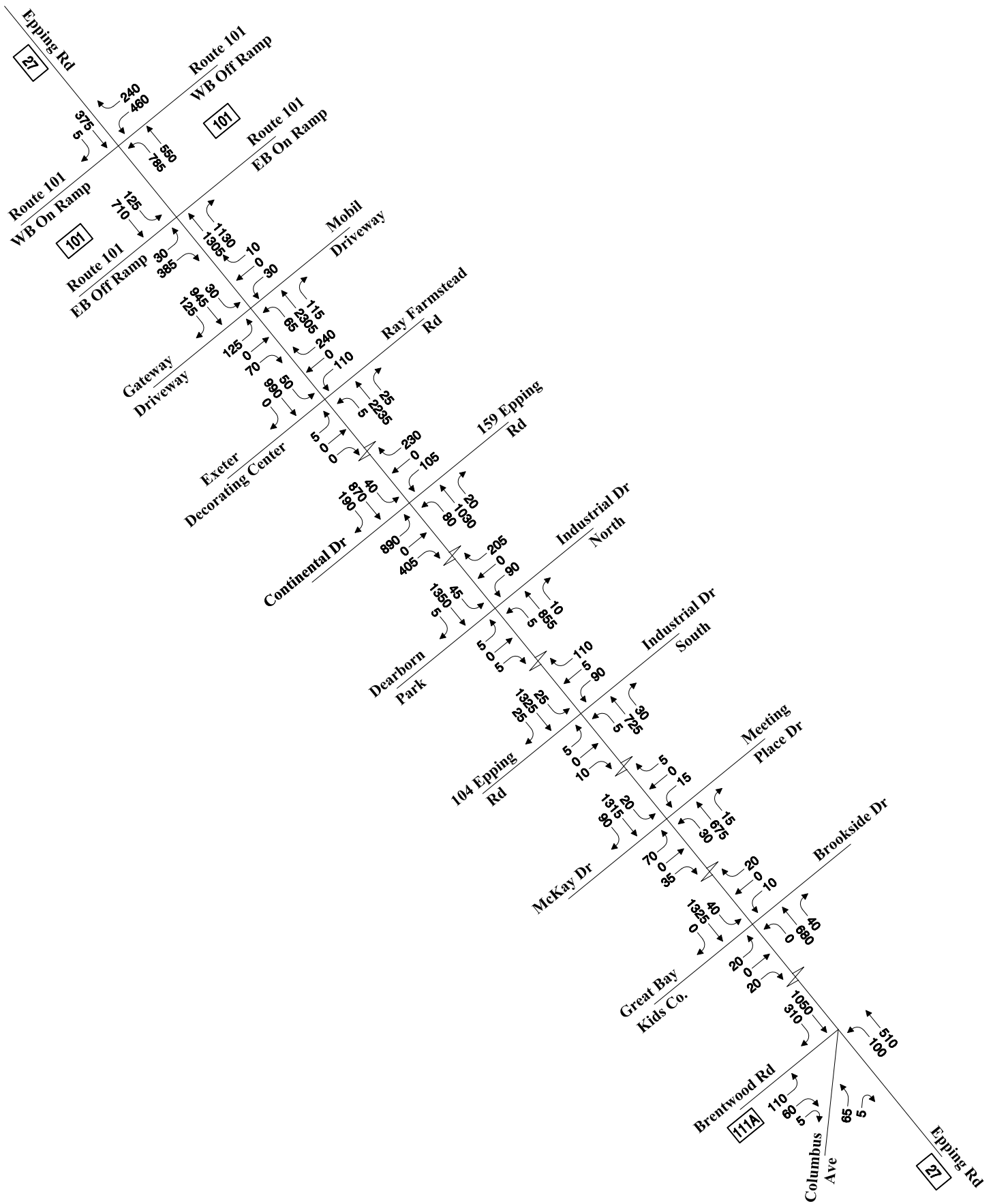
³Manual on Uniform Traffic Control Devices; Federal Highway Administration; Washington, DC; December 2000.



↑
Not to Scale



2030 Full Build-Out Weekday Morning Peak Hour Traffic Volumes **Figure 6**



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Not to Scale



2030 Full Build-Out Weekday Evening Peak Hour Traffic Volumes **Figure 7**

- › Epping Road (NH Route 27) and NH Route 101 westbound ramps
- › Epping Road (NH Route 27) and NH Route 101 eastbound ramps
- › Epping Road (NH Route 27), Gateway at Exeter main driveway, and Mobil gasoline station driveway
- › Epping Road (NH Route 27), Ray Farmstead Road, and Exeter Decorating Center driveway
- › Epping Road (NH Route 27), Industrial Drive (north), and Dearborn Road
- › Epping Road (NH Route 27), Industrial Drive (south), and 104 Epping Road
- › Epping Road (NH Route 27), Meeting Place Drive, and McKay Drive
- › Epping Road (NH Route 27), Brookside Drive, and Great Bay Kids' Co. driveway
- › Epping Road (NH Route 27) and Brentwood Road (NH Route 111A)

A conceptual sketch of these improvements is provided in the Appendix. The amount of land and business acquisition required to accommodate this roadway layout, however, was determined to be undesirable. Therefore, further evaluations were conducted to develop improvement alternatives with reduced impacts. A full-build improvement alternative using roundabouts was therefore developed that is described in the proceeding section.

4.3.2 Roundabouts Alternative

The following provides a description of improvements that would improve the operations and safety along the Epping Road (NH Route 27) corridor. As future development occurs along the corridor and as transportation improvements are implemented, the roadway and traffic-volume conditions in which these recommendations are based may change. Therefore, the following improvement measures are subject to revision as the Epping Road (NH Route 27) corridor evolves. These potential improvements are graphically depicted on the accompanying conceptual plans. These improvements and preliminary cost estimates are tabulated in a matrix provided in the Appendix.

4.3.2.1 Epping Road (NH Route 27) and NH Route 101 Interchange

To accommodate the future potential development of vacant parcels along the Epping Road (NH Route 27) corridor at the NH Route 101 interchange, consideration should be given to placing the Epping Road (NH Route 27) intersections with the NH Route 101 westbound ramps and with the NH Route 101 eastbound ramps under traffic signal control. The traffic signals would be placed within a coordinated system with a potential traffic signal at the Epping Road (NH Route 27) and Gateway at Exeter intersection (depending on the finalized build program). In accordance with MUTCD guidelines, a traffic signal is warranted at the NH Route 101 westbound ramps based on 2030 traffic volume conditions with the known developments constructed (i.e., mid-term) and at the NH Route 101 eastbound ramps based on 2030 traffic volume conditions without any further developments (i.e., No-Build).⁴ The traffic signal warrant

⁴ Traffic counts provided by Stephen G. Pernaw & Company, Inc. as part of August 20, 2020 Supplemental Analyses Memorandum for Gateway at Exeter Development.

analysis worksheets are provided in the Appendix. As per MUTCD guidance (Section 4C.01.09-10), the NH Route 101 eastbound off-ramp right turns were included within the evaluation due to the conflict entering the Epping Road (NH Route 27) southbound traffic stream and the potential geometric need to provide a double right-turn lane in accommodating the high volume of these right-turning vehicles. In addition, the following geometric measures are envisioned to be required.

4.3.2.1.1. Epping Road (NH Route 27) and the NH Route 101 Westbound Ramps

- › The Epping Road (NH Route 27) northbound approach: two exclusive left-turn lanes and one through lane. The NH Route 101 on-ramp would provide two departing lanes that would merge prior to entering the NH Route 101 traffic stream.
- › The Epping Road (NH Route 27) southbound approach: a through lane and a shared through/right-turn lane.
- › The NH Route 101 westbound off-ramp: two exclusive left-turn lanes and an exclusive right-turn lane.

4.3.2.1.2. Epping Road (NH Route 27) Overpass between the NH Route 101 Ramps

- › Epping Road (NH Route 27) northbound: two travel lanes from the NH Route 101 eastbound ramps with the inside travel lane extending to the rightmost left-turn lane (i.e., the middle lane) onto the NH Route 101 westbound on-ramp.
- › Epping Road (NH Route 27) southbound: two travel lanes from the NH Route 101 westbound ramps that opens to three lanes at the NH Route 101 eastbound ramps.

4.3.2.1.3. Epping Road (NH Route 27) and the NH Route 101 Eastbound Ramps

- › The Epping Road (NH Route 27) northbound approach: two through lanes and an exclusive right-turn lane that proceeds under free flow control onto the NH Route 101 eastbound on-ramp into a channelized receiving lane.
- › The Epping Road (NH Route 27) southbound approach: an exclusive left-turn lane and two through lanes. The Epping Road (NH Route 27) southbound left turns and the Epping Road (NH Route 27) northbound right turns would continue onto the NH Route 101 eastbound on-ramp in separate departing lanes that would merge prior to entering the NH Route 101 traffic stream.
- › The NH Route 101 eastbound off-ramp: an exclusive left-turn lane and two exclusive right-turn lanes.

4.3.2.2 Epping Road (NH Route 27) between NH Route 101 and Gateway at Exeter

The following measures were evaluated along the Epping Road (NH Route 27) corridor between the NH Route 101 eastbound ramps and the driveway associated with the currently proposed Gateway at Exeter development. As previously described, Gateway at Exeter would be located along the west side of Epping Road (NH Route 27) across from the Mobil gasoline station and convenience store driveway.

4.3.2.2.1. Epping Road (NH Route 27) Segment

- › Construct a median along the Epping Road (NH Route 27) corridor segment between the NH Route 101 eastbound ramps and the Gateway at Exeter driveway.
- › Epping Road (NH Route 27) northbound: three travel lanes from the Gateway at Exeter driveway NH Route 101 eastbound ramps with the outside travel lane extending to the exclusive right-turn lane onto the NH Route 101 westbound on-ramp.
- › Epping Road (NH Route 27) southbound: three travel lanes from the NH Route 101 eastbound ramps to the Gateway at Exeter driveway intersection.

4.3.2.2.2. Epping Road (NH Route 27) and Cronin Road

- › The median to be placed along Epping Road (NH Route 27) would result in Cronin Road having right-turn in/right-turn out access. Cronin Road motorists destined to the south along Epping Road (NH Route 27) would likely make a U-turn at the NH Route 101 westbound ramps signalized intersection. Epping Road (NH Route 27) southbound vehicles destined for Cronin Road would likely make a U-turn at the Gateway at Exeter signalized intersection (dependent upon the finalized build program).
- › The Epping Road (NH Route 27) northbound approach: two through lanes and one shared through/right-turn lane.
- › The Epping Road (NH Route 27) southbound approach: three through lanes that would not conflict with Cronin Road.

4.3.2.2.3. Epping Road (NH Route 27) and Gateway at Exeter Driveway

- › Place the intersection under traffic signal control that would be contained within a coordinated signal system with the Epping Road (NH Route 27) intersections with the NH Route 101 eastbound and westbound ramps. An analysis would need to be conducted to demonstrate that a traffic signal is warranted at this intersection dependent upon the finalized build program.
- › The Epping Road (NH Route 27) northbound approach: an exclusive left-turn lane, two through lanes, and a shared through/right-turn lane. This outside travel lane becomes a de facto right-turn lane for continued access onto the NH Route 101 eastbound on-ramp.
- › The Epping Road (NH Route 27) southbound approach: an exclusive left-turn lane, two through lanes, and a shared through/right-turn lane.
- › The Gateway at Exeter driveway eastbound approach: a shared left-turn/through lane and an exclusive right-turn lane.
- › The Mobil gasoline station driveway westbound approach: a single general-purpose travel lane.

4.3.2.3 Epping Road (NH Route 27) between Gateway at Exeter and Continental Drive

The following provides a description of the Epping Road (NH Route 27) corridor between the Gateway at Exeter driveway and Continental Drive. For planning purposes, a fourth leg to the

Epping Road (NH Route 27) and Continental Drive signalized intersection was considered along the east side of the corridor across from Continental Drive at the approximate location of 159 Epping Road. In addition, potential cross easements may be desired between Exeter Decorating Center and Continental Drive as well as between Ray Farmstead Road and 159 Epping Road.

4.3.2.3.1. Epping Road (NH Route 27) Segment

- › Construct a median along the Epping Road (NH Route 27) corridor segment between the Gateway at Exeter driveway and Continental Drive with a break in the raised median for Epping Road (NH Route 27) northbound and southbound left turns onto the Exeter Decorating Center driveway and Ray Farmstead Road, respectively.
- › Epping Road (NH Route 27) northbound: two travel lanes from Continental Drive that would open to three travel lanes north of the Ray Farmstead Road intersection.
- › Epping Road (NH Route 27) southbound: three travel lanes from the Gateway at Exeter driveway would taper down to two through lanes at the Ray Farmstead Road intersection.

4.3.2.3.2. Epping Road (NH Route 27) and Ray Farmstead Road

- › Modify the intersection to restrict left turns from Ray Farmstead Road and Exeter Decorating Center. These movements would be redistributed through the potential cross easements to 159 Epping Road and Continental Drive, respectively.
 - Alternatively, Ray Farmstead Road vehicles destined to the south would likely make a U-turn at the Gateway at Exeter signalized intersection.
 - Similarly, Exeter Decorating Center vehicles destined to the north would likely make a U-turn at the Continental Drive signalized intersection.
 - To accommodate these U-turn movements, vehicles turning right from the Gateway at Exeter driveway would not run as an overlap with the Epping Road (NH Route 27) northbound left turns and the right turns from the 149 Epping Road driveway would not run as an overlap with the Epping Road (NH Route 27) southbound left turns.
- › The Epping Road (NH Route 27) northbound approach: an exclusive left-turn lane, a through lane, and a shared through/right-turn lane.
- › The Epping Road (NH Route 27) southbound approach: an exclusive left-turn lane, a through lane, and a shared through/right-turn lane.
- › The Exeter Decorating Center driveway eastbound approach: a right-turn lane.
- › The Ray Farmstead Road westbound approach: a right-turn lane that would proceed onto Epping Road (NH Route 27) northbound within a dedicated receiving lane.

4.3.2.3.3. Epping Road (NH Route 27) and Continental Drive

- › The Epping Road (NH Route 27) northbound approach: an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane.

- › The Epping Road (NH Route 27) southbound approach: an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane.
- › The Continental Drive eastbound approach: an exclusive left-turn lane, a shared left-turn/through lane, and two exclusive right-turn lanes.
- › The 149 Epping Road westbound approach: a shared left-turn/through lane and an exclusive right-turn lane.

4.3.2.4 Epping Road (NH Route 27) between Continental Drive and Industrial Drive (south)

The following provides a description of the Epping Road (NH Route 27) corridor between Continental Drive and Industrial Drive (south). As part of these planning exercises, the driveways for Dearborn Park (140 Epping Road) were consolidated to create a standard four legged intersection with Epping Road (NH Route 27) and Industrial Drive (north).

4.3.2.4.1. Epping Road (NH Route 27) Segment

- › Construct a median along the Epping Road (NH Route 27) corridor segment between Continental Drive and Industrial Drive (south).
- › Epping Road (NH Route 27) northbound: two travel lanes from Industrial Drive (south) that opens to two through lanes and auxiliary lanes at Continental Drive.
- › Epping Road (NH Route 27) southbound: two travel lanes between Continental Drive and Industrial Drive (south).

4.3.2.4.2. Epping Road (NH Route 27) and Industrial Drive (north)

- › Construct a two-lane roundabout.
- › The Epping Road (NH Route 27) northbound approach: two general-purpose travel lanes.
- › The Epping Road (NH Route 27) southbound approach: two general-purpose travel lanes.
- › The Dearborn Road eastbound approach: a single general-purpose travel lane.
- › The Industrial Drive (north) westbound approach: a single general-purpose travel lane.

4.3.2.4.3. Epping Road (NH Route 27) and Industrial Drive (south)

- › Construct a two-lane roundabout.
- › The Epping Road (NH Route 27) northbound approach: two general-purpose travel lanes.
- › The Epping Road (NH Route 27) southbound approach: two general-purpose travel lanes.
- › The 104 Epping Road eastbound approach: a single general-purpose travel lane.
- › The Industrial Drive (south) westbound approach: a single general-purpose travel lane.

4.3.2.5 Epping Road (NH Route 27) between Industrial Drive (south) and Brentwood Road (NH Route 111A)

The following provides a description of the Epping Road (NH Route 27) corridor between Industrial Drive (south) and Brentwood Road (NH Route 111A). For planning purposes, the Columbus Avenue connection to Brentwood Road (NH Route 111A) was removed and a cul-de-sac would be constructed.

4.3.2.5.1. Epping Road (NH Route 27) Segment

- › Construct a median along the Epping Road (NH Route 27) corridor segment between Industrial Drive (south) and Brentwood Road (NH Route 111A). Motorists choosing to reverse directions can do so at the potential roundabouts at Industrial Drive (south) and at Brentwood Road (NH Route 111A).
- › Epping Road (NH Route 27) northbound: two travel lanes from Brentwood Road (NH Route 111A) to Industrial Drive (south).
- › Epping Road (NH Route 27) southbound: two travel lanes from Brentwood Road (NH Route 111A) to Industrial Drive (south).

4.3.2.5.2. Epping Road (NH Route 27) and Meeting Place Drive/McKay Drive:

- › The median to be placed along Epping Road (NH Route 27) would result in Meeting Place Drive and McKay Drive having right-turn in/right-turn out access.
- › The Epping Road (NH Route 27) northbound approach: a through lane and a shared through/right-turn lane.
- › The Epping Road (NH Route 27) southbound approach: a through lane and a shared through/right-turn lane.
- › The McKay Drive eastbound approach: a right-turn lane.
- › The Meeting Place Drive westbound approach: a right-turn lane.

4.3.2.5.3. Epping Road (NH Route 27) and Brookside Drive

- › The median to be placed along Epping Road (NH Route 27) would result in Brookside Drive and the Great Bay Kids' Co. driveway having right-turn in/right-turn out access.
- › The Epping Road (NH Route 27) northbound approach: a through lane and a shared through/right-turn lane.
- › The Epping Road (NH Route 27) southbound approach: a through lane and a shared through/right-turn lane.
- › The Great Bay Kids' Co. driveway eastbound approach: a right-turn lane.
- › The Brookside Drive westbound approach: a right-turn lane.

4.3.2.5.4. Epping Road (NH Route 27) and Brentwood Road (NH Route 111A)

- › Construct a two-lane roundabout with an Epping Road (NH Route 27) southbound slip right-turn lane onto Brentwood Drive (NH Route 111A).
- › The Epping Road (NH Route 27) northbound approach: two general-purpose travel lanes.
- › The Epping Road (NH Route 27) southbound approach: two general-purpose travel lanes and a slip right-turn lane onto Brentwood Road (NH Route 111A).
- › The Brentwood Road (NH Route 111A) eastbound approach: a left-turn lane and a right-turn lane.

4.3.2.6 Epping Road (NH Route 27) Locations North of NH Route 101

In addition to the roadway infrastructure improvements described above, safety improvements have been identified for consideration at the following locations along the Epping Road (NH Route 27) corridor northwest of the NH Route 101 interchange. Vehicles along this segment are perceived to travel faster than the posted speed limits (40 mph for northbound travel and 45 mph for southbound travel). These higher travel speeds may be attributed to the proximity of the NH Route 101 interchange and the lack of curb cuts and side streets along this portion of the Epping Road (NH Route 27) corridor. Since these intersections are under NHDOT jurisdiction, any improvements would require state review and approval.

4.3.2.6.1. Epping Road (NH Route 27) and Beech Hill Road

- › To improve sight lines, the overgrown vegetation should be trimmed on the northeast corner of the intersection for stopped vehicles on Beech Hill Road to look left and see approaching vehicles (i.e., departing from the NH Route 101 interchange area).
- › Once traffic volumes normalize, consideration should be given to conducting a speed study along Epping Road (NH Route 27) approaching Beech Hill Road to determine if vehicular speeds are a safety concern in the area.
 - The speed study should measure actual vehicle speeds over a minimum of a 24-hour period to also record vehicles during non-peak hours when platooning may not be present.
 - The measured average and 85th percentile speeds would then be compared with the posted speed limit.
 - If the measured travel speeds indicate a safety concern, then traffic calming measures could be considered (e.g., narrow the mainline travel way, install a dynamic speed activated warning sign [radar driver feedback sign], establish an advisory speed area, etc.).

4.3.2.6.2. Epping Road (NH Route 27) and Watson Road

- › Similar to the Beech Hill Road intersection, a speed study should be conducted along Epping Road (NH Route 27) approaching Watson Road to determine if vehicular speeds are a safety concern in the area. If the measured travel speeds indicate a safety concern, then

traffic calming measures could be considered (e.g., narrow the mainline travel way, install a dynamic speed activated warning sign [radar driver feedback sign], establish an advisory speed area, etc.).

4.3.3 Multimodal Facilities

4.3.3.1 Pedestrian Facilities

Appropriately designed sidewalk corridors promote access and include, but are not limited to, wide pathways, clearly defined zones (e.g., pedestrian, furniture, and frontage), insignificant obstacles and protruding objects, moderate grades and cross slopes, and well-lit areas. Other pedestrian facilities include walkways, curb ramps (provide access between the sidewalk and the roadway), and shared-use paths (off-road connections used by cyclists and pedestrians for recreation and commuting). At intersections, pedestrian facilities should be designed to safely accommodate users inclusive of age and capabilities. Pedestrian accessibility should be designed in accordance with Americans with Disabilities Act (ADA) minimum design standards and Americans with Disabilities Act Accessibility Guidelines (ADAAG) minimum criteria.

As depicted on the accompanying conceptual plan, the existing sidewalk along the east side of the corridor from north of the NH Route 101 interchange to the Mobil gas station would be extended southerly to Ray Farmstead Road. In addition, the existing sidewalk would be maintained along the east side of Epping Road (NH Route 27) from Meeting Place Drive to south of Brentwood Road (NH Route 111A). Along the west side of the corridor, a sidewalk would be provided from the Gateway at Exeter driveway to Brentwood Road (NH Route 111A).

4.3.3.2 Bicycle Facilities

Cycling and walking share common needs and are faced with similar problems; however, these are distinct modes of transportation that require individual thought and consideration. Although these non-motorized modes of transportation travel at slower speeds than vehicles, cyclists can travel at faster speeds than pedestrians and pedestrians can change directions and stop quicker. In addition, cyclists can travel on the roadway, but pedestrians require separate transportation facilities.

As shown on the accompanying conceptual plan, wide shoulders would be provided along the corridor to separate vehicle travel from pedestrian sidewalks. Should the Town pursue bicycle travel along the Epping Road (NH Route 27) corridor, attention should be given to ensuring that the transportation design fits with the physical setting and improves multi-modal safety and mobility by considering the needs of all users of the transportation system (e.g., bicycle lanes, wide curb lanes [shoulders], bicycle routes [shared roadways], and paved shoulders). Therefore, the 5-foot shoulders provided on the conceptual plan could be widened to provide a bike lane in accordance with American Association of Highway and Transportation Officials (AASHTO) and NHDOT applicable standards.

4.3.3.3 Transit Amenities

Since the closest existing transit stops in relation to this segment of the Epping Road (NH Route 27) corridor are approximately 0.5 miles south of Brentwood Road

(NH Route 111A), consideration could be given to expanding the COAST Bus Route 7 path. Safe and convenient access to and from transit service helps travelers decide whether to ride transit. Therefore, it is essential that sidewalks and other pedestrian pathways have adequate width and surface condition, are separate from vehicular traffic, and have appropriate lighting and signage. In addition, a key factor for cyclists using transit service is where to safely park their bicycle prior to riding on the transit service or how to bring transport their bicycle with them on the transit service.

The need for future passenger amenities is important to consider when selecting a location for the placement of a bus stop. Factors to consider for the placement of a bus stop include passenger protection from vehicular traffic, access for people with disabilities, all weather surface, proximity to crosswalks and curb ramps, width of sidewalks, adequate curb space for stopping, other nearby stops, the vicinity to activity centers, on-street vehicle parking spaces and truck delivery zones, street lighting, and impact on nearby intersection operations.

Large developments (e.g., industrial parks, apartment/housing subdivisions, retail centers) may require or substantiate a specific need for increased transit. Locating bus stops near these higher land uses can enhance ridership. As future development occurs along the corridor, Town officials may consider meeting with COAST officials to discuss ridership information, success of the current bus system, and future considerations (e.g., expanded routes, additional stops, reduced operations, construction of bus pullout areas, etc.).

4.3.4 Access Management

Access management strategies are used to improve transportation safety and efficiency while balancing access needs. These techniques are designed to increase roadway capacity, reduce collisions, and manage congestion. Numerous driveways along a corridor increase potential conflicts, where fewer curb cuts spaced further apart allow for traffic to merge in a more orderly manner and reduce the rate of vehicular collisions. Consideration could be provided to combining driveways for adjacent parcels with provisions to include requirements for the necessary easements and maintenance agreements. Interconnected sites can allow vehicular traffic to enter and exit abutting uses without being required to repeatedly access the major roadway system.

As documented in the Town's Zoning Ordinance (Article 6.8 Epping Road Strip Management Ordinance, C-3 District), the intent of this regulation is to "lessen congestion upon arterial streets and provide for the safe and orderly flow of traffic within a developing commercial area."⁵ Accordingly, abutting properties are encouraged to combine points of access to reduce the number of curb cuts along Epping Road (NH Route 27). Based on the Epping Road Corridor Overlay District section of the Town of Exeter's Site and Subdivision Regulations (Section 10.3 Access), access points along the corridor should be limited by providing a single point of access for properties with frontage less than 1,200 feet and shared access for lots with minimal frontage.⁶

⁵ www.exeternh.gov/sites/default/files/fileattachments/building/page/13081/final_2019_zo_as_amended_3-12-19.pdf

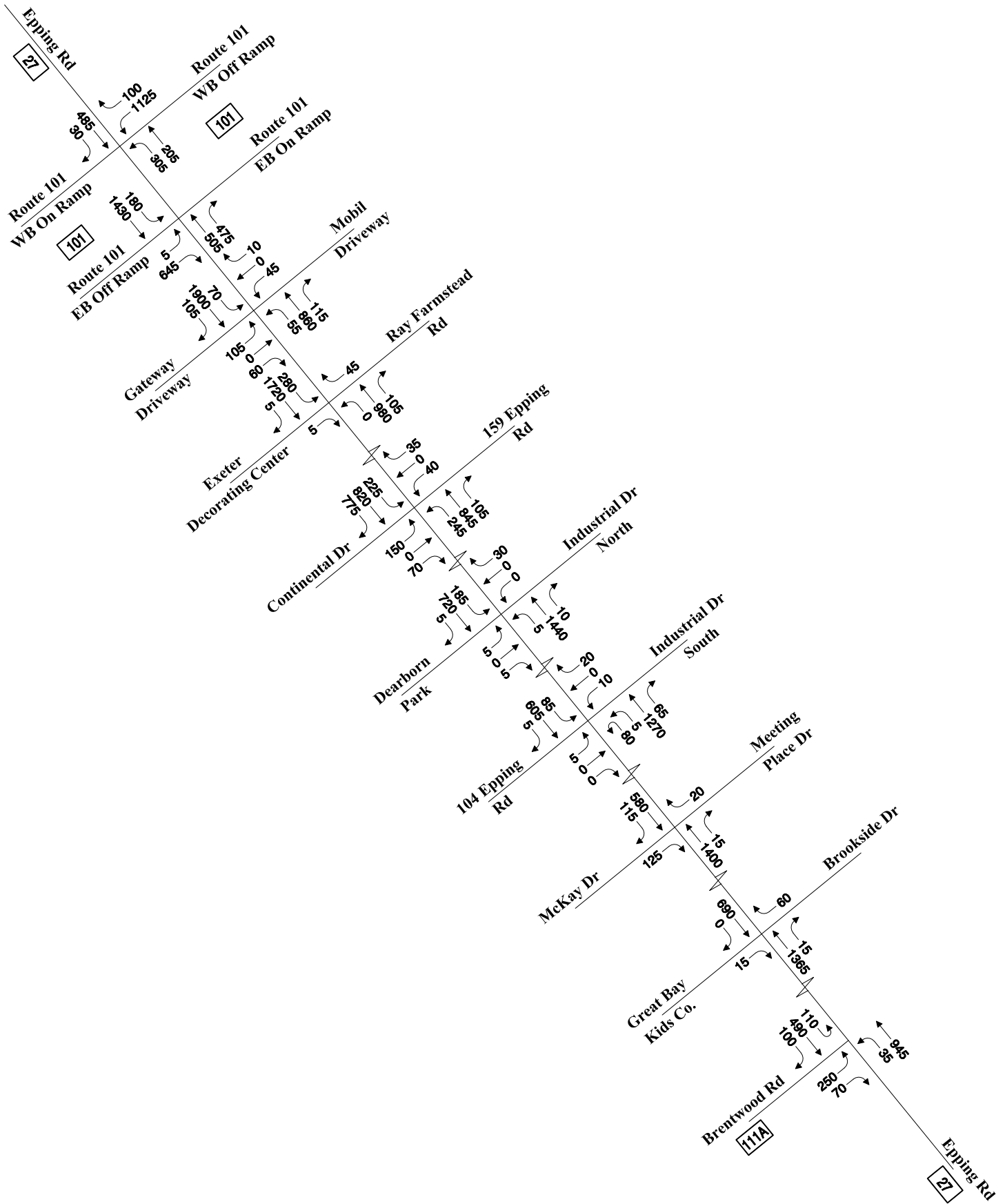
⁶ www.exeternh.gov/sites/default/files/fileattachments/planning_board/page/14051/2019_site_subdivision_regs_amended_10-24-19.pdf

The 2030 Build traffic volumes with the previously described potential improvements are shown graphically on **Figures 8 and 9** for the weekday morning and weekday evening peak hours, respectively.

4.4 Capacity and Queue Analyses

Analyses were performed for the study area intersections to examine operations under future traffic-volume conditions without the potential development of vacant parcels along the Epping Road (NH Route 27) corridor (2030 No-Build) and with potential development of these parcels (2030 Build). The 2030 Build conditions assume implementation of the roadway infrastructure measures previously described along the corridor and at the study area intersections. A summary of the 2030 traffic-volume conditions is reflected in **Table 5**. The capacity analysis worksheets are provided in the Appendix.

As shown in **Table 5**, the transportation infrastructure improvements and access management strategies are projected to accommodate existing and estimated future traffic volumes along the corridor. These measures are intended to improve efficiency and safety within the transportation system. Since the improvements are based on an aggressive annual growth rate and build program associated with the vacant parcels, the traffic-volume conditions in which these potential measures have been identified may change. Therefore, the Epping Road (NH Route 27) corridor should be reevaluated in the future as vacant parcels are developed and as current land uses are redeveloped. At that time, a comparison of future traffic volumes could be made with those generated within this study.

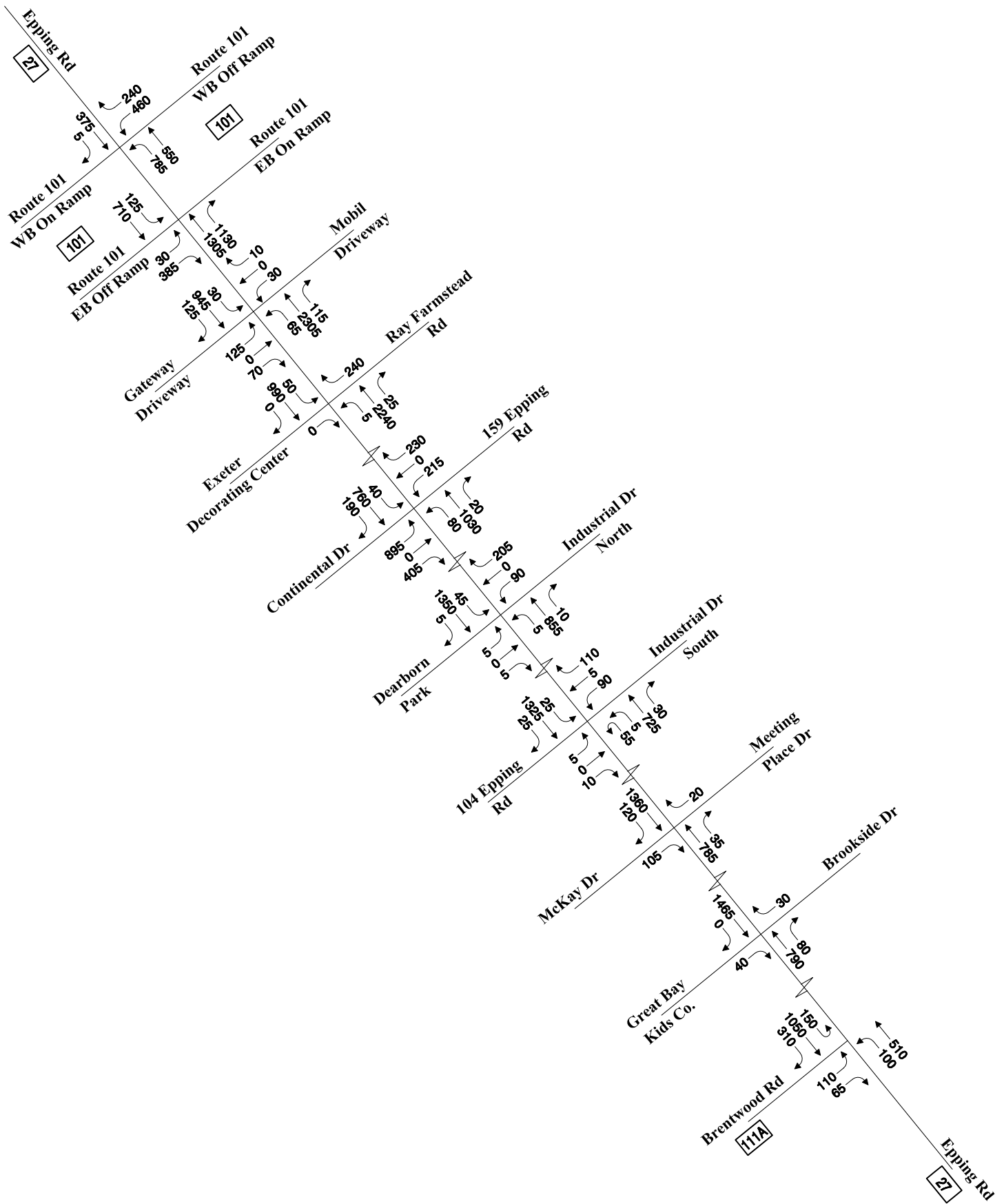


↑
Not to Scale



2030 Full Build-Out
Weekday Morning
Peak Hour Traffic Volumes
with Access Management

Figure 8



↑
Not to Scale



2030 Full Build-Out
Weekday Evening
Peak Hour Traffic Volumes
with Access Management

Figure 9

Table 5 – Capacity Analysis Summary: 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and NH 101 Westbound Ramps										
<i>Weekday AM:</i>										
NH 101 WB Off-Ramp Approach	2.04	>300	F	767	1,222	--	--	--	--	--
NH 101 WB Off-Ramp Left	--	--	--	--	--	0.86	27.6	C	305	437
NH 101 WB Off-Ramp Right	--	--	--	--	--	0.17	16.0	B	94	220
Epping Rd (NH 27) NB Left	0.17	8.5	A	32	66	0.71	36.6	D	111	164
Epping Rd (NH 27) NB Through	--	--	--	--	--	0.25	5.3	A	28	83
Epping Rd (NH 27) SB Through/Right	--	--	--	--	--	0.53	29.9	C	156	237
Overall Intersection	--	--	--	--	--	--	26.9	C	--	--
<i>Weekday PM:</i>										
NH 101 WB Off-Ramp Approach	3.20	>300	F	1,008	1,067	--	--	--	--	--
NH 101 WB Off-Ramp Left	--	--	--	--	--	0.72	37.2	D	174	269
NH 101 WB Off-Ramp Right	--	--	--	--	--	0.82	49.7	D	128	206
Epping Rd (NH 27) NB Left	0.30	9.1	A	44	84	0.84	23.5	C	224	306
Epping Rd (NH 27) NB Through	--	--	--	--	--	0.46	0.8	A	161	293
Epping Rd (NH 27) SB Through/Right	--	--	--	--	--	0.32	21.8	C	113	183
Overall Intersection	--	--	--	--	--	--	23.3	C	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and NH 101 Eastbound Ramps										
<i>Weekday AM:</i>										
NH 101 EB Off-Ramp Left	0.06	45.7	E	55	256	0.01	22.8	C	3	17
NH 101 EB Off-Ramp Right	0.60	22.5	C	64	206	0.87	39.3	D	93	233
Epping Rd (NH 27) NB Through	--	--	--	--	--	0.36	13.2	B	94	175
Epping Rd (NH 27) NB Right	--	--	--	--	--	0.00	0.0	A	13	86
Epping Rd (NH 27) SB Left	0.22	10.0	B	44	80	0.75	33.6	C	108	179
Epping Rd (NH 27) SB Through	--	--	--	--	--	0.70	1.1	A	241	396
Overall Intersection	--	--	--	--	--	--	14.4	B	--	--
<i>Weekday PM:</i>										
NH 101 EB Off-Ramp Left	0.45	88.6	F	28	77	0.09	29.9	C	22	54
NH 101 EB Off-Ramp Right	0.48	16.6	C	10	67	0.77	39.4	D	0	11
Epping Rd (NH 27) NB Through	--	--	--	--	--	0.72	1.2	A	129	239
Epping Rd (NH 27) NB Right	--	--	--	--	--	0.00	0.0	A	42	226
Epping Rd (NH 27) SB Left	0.22	12.2	B	53	101	0.67	36.4	D	74	138
Epping Rd (NH 27) SB Through	--	--	--	--	--	0.30	0.3	A	94	192
Overall Intersection	--	--	--	--	--	--	8.7	A	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Gateway at Exeter Driveway										
<i>Weekday AM:</i>										
Gateway EB Left/Through	--	--	--	--	--	0.39	35.3	D	70	126
Gateway EB Right	--	--	--	--	--	0.29	33.8	C	49	96
Mobil WB Approach	--	--	--	--	--	0.33	39.3	D	34	66
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.56	44.9	D	37	83
Epping Rd (NH 27) NB Through/Right	--	--	--	--	--	0.37	9.3	A	110	220
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.59	40.8	D	54	104
Epping Rd (NH 27) SB Through/Right	--	--	--	--	--	0.70	2.3	A	228	375
Overall Intersection	--	--	--	--	--	--	7.6	A	--	--
<i>Weekday PM:</i>										
Gateway EB Left/Through	--	--	--	--	--	0.46	36.6	D	78	133
Gateway EB Right	--	--	--	--	--	0.32	34.4	C	51	101
Mobil WB Approach	--	--	--	--	--	0.25	38.3	D	27	61
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.55	43.8	D	54	120
Epping Rd (NH 27) NB Through/Right	--	--	--	--	--	0.79	16.5	B	256	408
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.33	40.4	D	26	60
Epping Rd (NH 27) SB Through/Right	--	--	--	--	--	0.34	0.7	A	101	167
Overall Intersection	--	--	--	--	--	--	12.7	B	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Ray Farmstead Road										
<i>Weekday AM:</i>										
Decorating Cntr EB Right	--	--	--	--	--	0.02	19.3	C	6	26
Ray Farmstead Rd WB Right	--	--	--	--	--	0.00	0.0	A	0	0
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.00	0.0	A	0	0
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.54	18.4	C	110	203
<i>Weekday PM:</i>										
Decorating Cntr EB Right	--	--	--	--	--	0.00	0.0	A	0	0
Ray Farmstead Rd WB Right	--	--	--	--	--	0.00	0.0	A	0	0
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.01	10.8	B	2	15
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.31	34.4	D	44	105

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Continental Drive										
<i>Weekday AM:</i>										
Continental Dr EB Left/Through	0.09	18.2	B	10	32	0.00	0.0	A	68	123
Continental Dr EB Right	0.04	13.3	B	9	29	0.00	0.0	A	24	58
159 Epping Rd WB Left/Through	--	--	--	--	--	0.27	27.4	C	19	52
159 Epping Rd WB Right	--	--	--	--	--	0.27	27.5	C	1	9
Epping Rd (NH 27) NB Left	0.22	18.0	B	28	61	0.73	28.9	C	192	307
Epping Rd (NH 27) NB Through	0.50	3.1	A	84	172	0.50	9.9	A	215	307
Epping Rd (NH 27) NB Right	--	--	--	--	--	0.12	5.0	A	83	190
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.70	27.5	C	137	229
Epping Rd (NH 27) SB Through	0.76	10.4	B	117	192	0.48	10.3	B	203	368
Epping Rd (NH 27) SB Right	0.12	3.8	A	15	49	0.97	36.0	D	212	359
Overall Intersection	--	7.2	A	--	--	--	19.6	B	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Continental Drive (continued)										
<i>Weekday PM:</i>										
Continental Dr EB Left/Through	0.37	16.8	B	59	109	0.78	21.1	C	562	823
Continental Dr EB Right	0.15	12.9	B	28	62	0.00	0.0	A	276	385
159 Epping Rd WB Left/Through	--	--	--	--	--	0.80	41.2	D	134	220
159 Epping Rd WB Right	--	--	--	--	--	0.00	0.0	A	186	227
Epping Rd (NH 27) NB Left	0.13	20.7	C	14	40	0.53	31.1	C	133	329
Epping Rd (NH 27) NB Through	0.80	7.8	A	158	252	0.83	21.9	C	326	469
Epping Rd (NH 27) NB Right	--	--	--	--	--	0.03	6.6	A	29	119
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.33	30.5	C	30	62
Epping Rd (NH 27) SB Through	0.78	11.9	B	126	212	0.62	17.8	B	162	274
Epping Rd (NH 27) SB Right	0.03	2.6	A	2	14	0.18	2.9	A	38	121
Overall Intersection	--	10.2	B	--	--	--	21.1	C	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Industrial Drive (north)										
<i>Weekday AM:</i>										
Dearborn Park EB Approach	0.10	42.0	E	7	28	0.02	6.5	A	1	1
Industrial Dr WB Approach	0.06	13.4	B	16	40	0.11	12.5	B	3	8
Epping Rd (NH 27) NB Left	0.01	8.6	A	4	27	--	--	--	--	--
Epping Rd (NH 27) NB Approach	--	--	--	--	--	0.73	15.1	C	130	324
Epping Rd (NH 27) SB Left	0.20	10.0	A	78	162	--	--	--	--	--
Epping Rd (NH 27) SB Approach						0.38	6.2	A	22	55
Overall Intersection	--	--	--	--	--	--	11.7	B	--	--
<i>Weekday PM:</i>										
Dearborn Park EB Approach	0.15	60.3	F	9	31	0.04	11.7	B	1	3
Industrial Dr WB Approach	0.62	30.2	D	62	113	0.55	16.1	C	33	82
Epping Rd (NH 27) NB Left	0.01	9.2	A	5	40	--	--	--	--	--
Epping Rd (NH 27) NB Approach	--	--	--	--	--	0.38	6.4	A	21	53
Epping Rd (NH 27) SB Left	0.05	9.2	A	34	121	--	--	--	--	--
Epping Rd (NH 27) SB Approach	--	--	--	--	--	0.64	11.2	B	53	132
Overall Intersection	--	--	--	--	--	--	10.1	B	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Industrial Drive (south)										
<i>Weekday AM:</i>										
104 Epping Rd Plaza EB Approach	0.05	40.8	E	4	20	0.01	5.7	A	0	1
Industrial Dr WB Approach	0.14	25.9	D	20	46	0.09	11.2	B	3	7
Epping Rd (NH 27) NB Left	0.01	8.3	A	3	24	--	--	--	--	--
Epping Rd (NH 27) NB Approach	--	--	--	--	--	0.64	11.2	B	54	135
Epping Rd (NH 27) SB Left	0.08	9.6	A	50	122	--	--	--	--	--
Epping Rd (NH 27) SB Approach	--	--	--	--	--	0.32	5.9	A	16	40
Overall Intersection	--	--	--	--	--	--	9.5	A	--	--
<i>Weekday PM:</i>										
104 Epping Rd Plaza EB Approach	0.10	27.7	D	10	32	0.06	10.1	B	2	4
Industrial Dr WB Approach	1.05	132.6	F	71	138	0.36	10.5	B	16	39
Epping Rd (NH 27) NB Left	0.01	9.2	A	6	40	--	--	--	--	--
Epping Rd (NH 27) NB Approach	--	--	--	--	--	0.35	6.0	A	19	47
Epping Rd (NH 27) SB Left	0.03	8.7	A	22	90	--	--	--	--	--
Epping Rd (NH 27) SB Approach	--	--	--	--	--	0.66	12.4	B	68	169
Overall Intersection	--	--	--	--	--	--	10.1	B	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27), Meeting Place Drive, and McKay Drive										
<i>Weekday AM:</i>										
McKay Dr EB Left/Through	0.34	40.9	E	20	46	--	--	--	--	--
McKay Dr EB Right	0.03	11.0	B	3	9	0.23	12.6	B	24	51
Meeting Place Dr WB Approach	0.10	23.1	C	16	42	0.07	16.5	C	16	42
Epping Rd (NH 27) NB Left	0.02	8.3	A	6	23	--	--	--	--	--
Epping Rd (NH 27) SB Left	0.01	9.1	A	2	13	--	--	--	--	--
<i>Weekday PM:</i>										
McKay Dr EB Left/Through	0.14	41.2	E	7	22	--	--	--	--	--
McKay Dr EB Right	0.03	14.1	B	3	9	0.37	22.8	C	23	49
Meeting Place Dr WB Approach	0.16	35.3	E	17	46	0.01	11.6	B	5	24
Epping Rd (NH 27) NB Left	0.01	9.4	A	5	21	--	--	--	--	--
Epping Rd (NH 27) SB Left	0.02	8.7	A	5	21	--	--	--	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Brookside Drive										
<i>Weekday AM:</i>										
Great Bay Kids EB Left	0.07	30.7	D	8	29	--	--	--	--	--
Great Bay Kids EB Through/Right	0.01	10.9	B	4	22	--	--	--	--	--
Great Bay Kids EB Right	--	--	--	--	--	0.03	11.0	B	12	35
Brookside Dr WB Approach	0.24	23.2	C	32	57	0.20	18.2	C	33	61
Epping Rd (NH 27) SB Left	0.01	9.1	A	4	28	--	--	--	--	--
<i>Weekday PM:</i>										
Great Bay Kids EB Left	0.20	45.8	E	17	42	--	--	--	--	--
Great Bay Kids EB Through/Right	0.05	13.9	B	16	42	--	--	--	--	--
Great Bay Kids EB Right	--	--	--	--	--	0.14	18.0	C	26	56
Brookside Dr WB Approach	0.15	24.4	C	22	52	0.06	12.4	B	23	50
Epping Rd (NH 27) SB Left	0.04	8.8	A	36	116	--	--	--	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Brentwood Road (NH 111A)										
<i>Weekday AM:</i>										
Brentwood Rd (NH 111A) Left	0.96	80.8	F	58	78	0.42	9.3	A	22	56
Brentwood Rd (NH 111A) Right	0.12	11.4	B	36	72	0.10	5.6	A	0	9
Epping Rd (NH 27) NB Left	0.04	8.4	A	23	77	--	--	--	--	--
Epping Rd (NH 27) NB Approach	--	--	--	--	--	0.59	12.2	B	79	195
Epping Rd (NH 27) SB Through	--	--	--	--	--	0.23	4.6	A	11	28
Epping Rd (NH 27) SB Right	--	--	--	--	--	0.08	3.4	A	0	8
Overall Intersection	--	--	--	--	--	--	8.8	A	--	--
<i>Weekday PM:</i>										
Brentwood Rd (NH 111A) Left	1.06	141.4	F	57	75	0.46	17.8	C	20	50
Brentwood Rd (NH 111A) Right	0.15	13.8	B	43	80	0.19	13.1	B	6	16
Epping Rd (NH 27) NB Left	0.13	9.9	A	96	221	--	--	--	--	--
Epping Rd (NH 27) NB Approach	--	--	--	--	--	0.30	6.0	A	15	37
Epping Rd (NH 27) SB Through	--	--	--	--	--	0.61	10.3	B	50	123
Epping Rd (NH 27) SB Right	--	--	--	--	--	0.28	5.4	A	14	35
Overall Intersection	--	--	--	--	--	--	8.6	A	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 5 (continued) – Capacity Analysis Summary 2030 Future Full Build-Out Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Full Build-Out				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Brentwood Road (NH 111A) and Columbus Avenue										
<i>Weekday AM:</i>										
Columbus Avenue NB Right	0.10	10.3	B	60	166	--	--	--	--	--
<i>Weekday PM:</i>										
Columbus Avenue NB Right	0.09	9.6	A	158	362	--	--	--	--	--

^a V/C = volume-to-capacity ratio.

^b Delay in seconds.

^c LOS = Level of Service.

^d Queue length in feet.

5

Interim Conditions

5.1 Future Mid-Term Build Traffic Volumes

Due to the extensive roadway widening required to support future development along the Epping Road (NH Route 27) corridor, an interim evaluation has been conducted that omits the development of the vacant parcels and cross easements between abutting properties. Based on coordination efforts with the Exeter Town Engineer and Exeter Town Planner, this Mid-Term scenario included the following known developments:

- › Full build-out of Ray Farm Exeter
- › Gateway at Exeter
- › Unutil Corporation
- › Primrose Daycare School

The potential future trips associated with the known developments were added to the 2030 No-Build traffic volumes to develop the 2030 Mid-Term Build peak hour traffic volumes. The 2030 Mid-Term Build traffic volumes are shown graphically on **Figures 10 and 11** for the weekday morning and weekday evening peak hours, respectively.

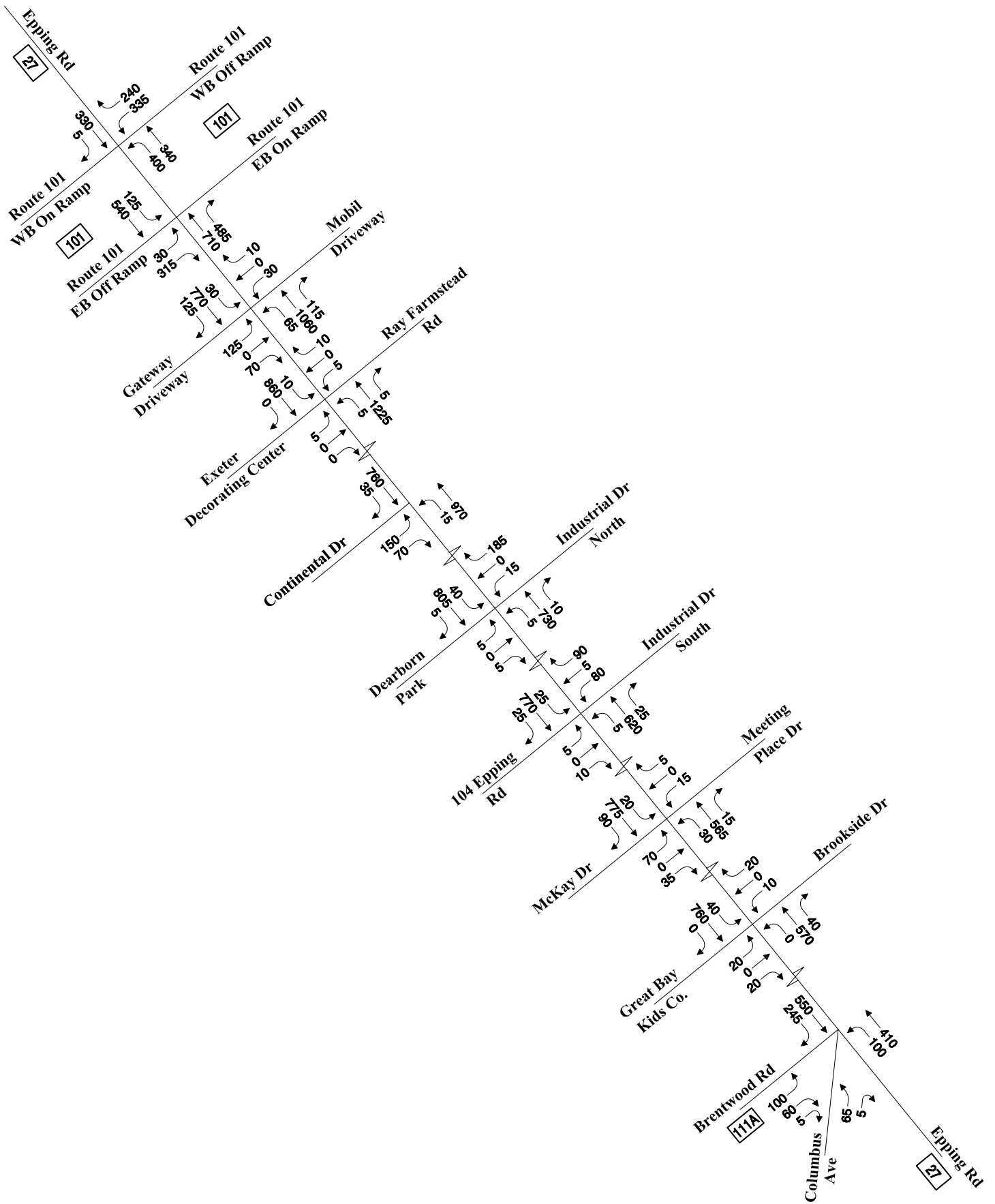


↑
Not to Scale



2030 Mid-Term Build
Weekday Morning
Peak Hour Traffic Volumes

Figure 10



↑
Not to Scale



2030 Mid-Term Build
Weekday Evening
Peak Hour Traffic Volumes

Figure 11

5.2 Potential Mid-Term Improvements

The following provides a description of improvements that would be expected to improve the operations and safety along the Epping Road (NH Route 27) corridor under this Mid-Term Build scenario. These measures are subject to revision since the roadway and traffic-volume conditions in which these recommendations are based may change. These improvements are graphically depicted on the accompanying conceptual plans. These improvements and preliminary cost estimates are tabulated in a matrix provided in the Appendix.

5.2.1 Epping Road (NH Route 27) Segment between Cronin Road and Continental Drive

- › Construct a Two-Way Left-Turn Lane (TWLTL) (aka, center turn lane) along the Epping Road (NH Route 27) corridor segment from north of Cronin Road to Continental Drive. Center turn lanes can remove left-turning vehicles from the mainline through traffic and allow the turning vehicles to be stored in the striped median area until an acceptable gap is available in the opposing mainline traffic stream.
 - Vehicles exiting from a driveway or side street have the ability to make a two-stage left-turn maneuver in which the TWLTL could be used as an interim stopping point within a protected lane if there are no gaps in the mainline traffic stream.
 - Center turn lanes reduce the potential for minor roadway-related turning and rear-end collisions, as well as provide a separation between opposing mainline traffic by keeping vehicles from encroaching into opposing traffic lanes.^{7,8,9}

5.2.2 Epping Road (NH Route 27) and Gateway at Exeter Driveway

- › Site access and roadway geometry for the Gateway at Exeter will be dependent upon the finalized build program. For the Full Build-Out scenario, the project was evaluated as having one driveway to be located across from the Mobil gas station and placed under traffic signal control. As part of the Mid-Term alternative, two unsignalized curb cuts were evaluated with the northern driveway providing full access and located across from the Mobil gas station and the southern driveway allowing only right turns to exit the site.
- › The potential TWLTL along Epping Road (NH Route 27) allows northbound vehicles (destined for the Gateway at Exeter development) and southbound vehicles (destined for the Mobil gas station) to use the striped median for opposing left-turn maneuvers.
- › As would be the responsibility of the Gateway at Exeter applicant:
 - The Epping Road (NH Route 27) southbound approach would be widened at the north driveway to provide an exclusive right-turn lane.

⁷ National Cooperative Highway Research Program Report 500 Guidance for Implementation of the AASHTO Strategic Highway Safety Plan, *Volume 4: A Guide for Addressing Head-On Collisions*.

⁸ *Urban Street Geometric Design Handbook*; Institute of Transportation Engineers; 2008; Publ. No.TB-018.

⁹ *Access Management Manual*; Committee on Access Management; Transportation Research Board; Washington, D.C.; 2003.

- The Gateway at Exeter north driveway eastbound approach would provide a shared left-turn/through lane and an exclusive right-turn lane.

5.2.3 Epping Road (NH Route 27) Segment between Continental Drive and Brookside Drive

- › Construct a TWLTL (aka, center turn lane) along the Epping Road (NH Route 27) corridor segment from south of Continental Drive to south of Brookside Drive.

5.3 Capacity and Queue Analyses

Analyses were performed for the study area intersections to examine operations under future traffic-volume conditions with only the development of known projects along the Epping Road (NH Route 27) corridor (2030 Mid-Term Build). The 2030 Mid-Term Build conditions assume implementation of the roadway infrastructure measures previously described within this section along the corridor and at the study area intersections. A summary of the 2030 No-Build and 2030 Mid-Term Build traffic-volume conditions is reflected in **Table 6**. The capacity analysis worksheets are provided in the Appendix.

As shown in **Table 6**, the transportation infrastructure improvements are shown to be significantly less than those required to accommodate the development of vacant parcels along the corridor. Based on collaboration efforts with the Exeter Town Engineer and Exeter Town Planner, some of the unsignalized intersections along the corridor operate with long delays during the weekday commuter peak hours and may continue to do so prior to the implementation of more significant measures (as previously identified for the full build-out of the vacant parcels). These assumptions were made for planning purposes and could vary as parcels are developed or redeveloped in the future. Therefore, each land development project should provide a separate traffic evaluation to assess traffic impacts and associated mitigation.

5.4 Potential Near-Term Improvements

For short-term planning purposes, improvements were identified that could be constructed and implemented in the near-term that would be expected to improve safety, access management, and some operations along the northern section of the Epping Road (NH Route 27) corridor between Cronin Road and Continental Drive. These Near-Term measures are subject to revision as the design program is determined (e.g., survey, wetlands, grades, drainage, etc.).

These improvements are graphically depicted on the accompanying conceptual plans and consist of construct a TWLTL along the Epping Road (NH Route 27) corridor segment from north of Cronin Road to Continental Drive. This Near-Term design phase would represent the foundation in which the Mid-Term and Full Build-Out improvements could be developed. Since no planned developments were identified within the Near-Term phase (e.g., full build-out of Ray Farm Exeter, Gateway at Exeter, Unitil Corporation, and Primrose Daycare School), access and necessary mitigation measures required to offset those projects' impacts would need to be evaluated separately. These improvements and preliminary cost estimates are tabulated in a matrix provided in the Appendix.

Table 6 – Capacity Analysis Summary: 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Gateway at Exeter Driveway										
<i>Weekday AM:</i>										
Gateway EB Left/Through	--	--	--	--	--	0.41	37.0	D	63	117
Gateway EB Right	--	--	--	--	--	0.27	34.4	C	28	64
Mobil WB Approach	--	--	--	--	--	0.37	40.8	D	34	73
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.52	44.2	D	41	97
Epping Rd (NH 27) NB Through/Right	--	--	--	--	--	0.38	8.8	A	103	173
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.55	39.7	D	53	107
Epping Rd (NH 27) SB Through/Right	--	--	--	--	--	0.41	0.3	A	127	248
Overall Intersection	--	--	--	--	--	--	10.3	B	--	--
<i>Weekday PM:</i>										
Gateway EB Left/Through	--	--	--	--	--	0.50	37.7	D	74	137
Gateway EB Right	--	--	--	--	--	0.31	34.1	C	31	66
Mobil WB Approach	--	--	--	--	--	0.31	39.7	D	25	60
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.55	43.8	D	139	246
Epping Rd (NH 27) NB Through/Right	--	--	--	--	--	0.56	10.6	B	516	758
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.33	40.3	D	32	85
Epping Rd (NH 27) SB Through/Right	--	--	--	--	--	0.42	0.9	A	129	227
Overall Intersection	--	--	--	--	--	--	10.8	B	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Ray Farmstead Road										
<i>Weekday AM:</i>										
Decorating Cntr EB Approach	--	--	--	--	--	0.02	17	C	3	19
Ray Farmstead Rd WB Left/Through	--	--	--	--	--	0.10	80.5	F	4	21
Ray Farmstead Rd WB Right	--	--	--	--	--	0.03	15.9	C	10	34
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.00	0.0	A	0	0
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.01	9.8	A	2	13
<i>Weekday PM:</i>										
Decorating Cntr EB Approach	--	--	--	--	--	0.24	205.7	F	19	56
Ray Farmstead Rd WB Left/Through	--	--	--	--	--	0.23	195.5	F	10	54
Ray Farmstead Rd WB Right	--	--	--	--	--	0.06	26.2	D	25	84
Epping Rd (NH 27) NB Left	--	--	--	--	--	0.01	10.0	B	4	30
Epping Rd (NH 27) SB Left	--	--	--	--	--	0.02	12.3	B	7	25

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Continental Drive										
<i>Weekday AM:</i>										
Continental Dr EB Left	0.09	18.2	B	10	32	0.16	20.3	C	14	41
Continental Dr EB Right	0.04	13.3	B	9	29	0.02	15.6	B	4	20
Epping Rd (NH 27) NB Left	0.22	18.0	B	28	61	0.34	20.2	C	36	71
Epping Rd (NH 27) NB Through	0.50	3.1	A	84	172	0.56	2.8	A	77	169
Epping Rd (NH 27) SB Through	0.76	10.4	B	117	192	0.79	9.4	A	145	251
Epping Rd (NH 27) SB Right	0.12	3.8	A	15	49	0.14	3.4	A	19	69
Overall Intersection	--	7.2	A	--	--	--	6.7	A	--	--
<i>Weekday AM:</i>										
Continental Dr EB Left	0.37	16.8	B	59	109	0.49	20.9	C	95	170
Continental Dr EB Right	0.15	12.9	B	28	62	0.19	16.0	B	45	106
Epping Rd (NH 27) NB Left	0.13	20.7	C	14	40	0.14	24.0	C	26	134
Epping Rd (NH 27) NB Through	0.80	7.8	A	158	252	0.86	8.9	A	299	522
Epping Rd (NH 27) SB Through	0.78	11.9	B	126	212	0.83	12.5	B	169	321
Epping Rd (NH 27) SB Right	0.03	2.6	A	2	14	0.03	2.4	A	4	40
Overall Intersection	--	10.2	B	--	--	--	11.4	B	--	--

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Industrial Drive (north)										
<i>Weekday AM:</i>										
Dearborn Park EB Approach	0.10	42.0	E	7	28	0.16	65.7	F	9	31
Industrial Dr WB Approach	0.06	13.4	B	16	40	0.07	15.1	C	18	43
Epping Rd (NH 27) NB Left	0.01	8.6	A	4	27	0.01	9.0	A	1	11
Epping Rd (NH 27) SB Left	0.20	10.0	A	78	162	0.25	10.9	B	44	80
<i>Weekday PM:</i>										
Dearborn Park EB Approach	0.15	60.3	F	9	31	0.26	115.7	F	7	28
Industrial Dr WB Approach	0.62	30.2	D	62	113	0.80	54.6	F	81	166
Epping Rd (NH 27) NB Left	0.01	9.2	A	5	40	0.01	9.8	A	2	14
Epping Rd (NH 27) SB Left	0.05	9.2	A	34	121	0.06	9.7	A	15	40

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Industrial Drive (south)										
<i>Weekday AM:</i>										
104 Epping Rd Plaza EB Approach	0.05	40.8	E	4	20	0.08	60.8	F	5	20
Industrial Dr WB Approach	0.14	25.9	D	20	46	0.20	37.0	E	21	49
Epping Rd (NH 27) NB Left	0.01	8.3	A	3	24	0.01	8.6	A	1	12
Epping Rd (NH 27) SB Left	0.08	9.6	A	50	122	0.09	10.2	B	27	58
<i>Weekday PM:</i>										
104 Epping Rd Plaza EB Approach	0.10	27.7	D	10	32	0.15	43.1	E	11	31
Industrial Dr WB Approach	1.05	132.6	F	71	138	1.61	371.1	F	116	263
Epping Rd (NH 27) NB Left	0.01	9.2	A	6	40	0.01	9.7	A	3	16
Epping Rd (NH 27) SB Left	0.03	8.7	A	22	90	0.01	9.2	A	12	36

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27), Meeting Place Drive, and McKay Drive										
<i>Weekday AM:</i>										
McKay Dr EB Left/Through	0.34	40.9	E	20	46	1.00	168.3	F	67	168
McKay Dr EB Right	0.03	11.0	B	3	9	0.07	12.2	B	22	71
Meeting Place Dr WB Approach	0.10	23.1	C	16	42	0.15	33.1	D	17	48
Epping Rd (NH 27) NB Left	0.02	8.3	A	6	23	0.06	8.8	A	17	42
Epping Rd (NH 27) SB Left	0.01	9.1	A	2	13	0.01	9.4	A	2	13
<i>Weekday PM:</i>										
McKay Dr EB Left/Through	0.14	41.2	E	7	22	1.08	230.0	F	66	165
McKay Dr EB Right	0.03	14.1	B	3	9	0.12	17.3	C	21	77
Meeting Place Dr WB Approach	0.16	35.3	E	17	46	0.28	66.5	F	18	51
Epping Rd (NH 27) NB Left	0.01	9.4	A	5	21	0.05	10.3	B	15	40
Epping Rd (NH 27) SB Left	0.02	8.7	A	5	21	0.02	8.9	A	8	27

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Brookside Drive										
<i>Weekday AM:</i>										
Great Bay Kids EB Left	0.07	30.7	D	8	29	0.05	21.6	C	7	28
Great Bay Kids EB Through/Right	0.01	10.9	B	4	22	0.01	11.4	B	4	21
Brookside Dr WB Approach	0.24	23.2	C	32	57	0.21	19.3	C	35	67
Epping Rd (NH 27) SB Left	0.01	9.1	A	4	28	0.01	9.4	A	2	16
<i>Weekday PM:</i>										
Great Bay Kids EB Left	0.20	45.8	E	17	42	0.12	26.1	D	18	45
Great Bay Kids EB Through/Right	0.05	13.9	B	16	42	0.06	15.6	C	17	46
Brookside Dr WB Approach	0.15	24.4	C	22	52	0.11	18.5	C	21	50
Epping Rd (NH 27) SB Left	0.04	8.8	A	36	116	0.05	9.1	A	51	172

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Table 6 (continued) – Capacity Analysis Summary 2030 Future Mid-Term Conditions

Intersection/Peak Hour/ Critical Movement or Lane Group	2030 No-Build					2030 Mid-Term Build				
	v/c ^a	Delay ^b	LOS ^c	50 th % Queue ^d	95 th % Queue ^d	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Epping Road (NH 27) and Brentwood Road (NH 111A)										
<i>Weekday AM:</i>										
Brentwood Rd (NH 111A) Left	0.96	80.8	F	58	78	0.60	3.8	D	23	82
Brentwood Rd (NH 111A) Right	0.12	11.4	B	36	72	0.14	12.4	B	59	81
Epping Rd (NH 27) NB Left	0.04	8.4	A	23	77	0.04	8.4	A	43	77
<i>Weekday PM:</i>										
Brentwood Rd (NH 111A) Left	1.06	141.4	F	57	75	0.43	29.0	D	43	65
Brentwood Rd (NH 111A) Right	0.15	13.8	B	43	80	0.18	15.6	C	44	76
Epping Rd (NH 27) NB Left	0.13	9.9	A	96	221	0.12	9.2	A	70	172
Brentwood Road (NH 111A) and Columbus Avenue										
<i>Weekday AM:</i>										
Columbus Avenue NB Right	0.10	10.3	B	60	166	0.10	10.4	B	51	133
<i>Weekday PM:</i>										
Columbus Avenue NB Right	0.09	9.6	A	158	362	0.09	9.6	A	43	121

^a V/C = volume-to-capacity ratio.^b Delay in seconds.^c LOS = Level of Service.^d Queue length in feet.

Appendices

Traffic Count Data

Analysis Worksheets: Existing Conditions

Analysis Worksheets: No-Build Conditions

Exeter Zoning Data and Vacant Parcel Data

Traffic Signal Warrant Analyses

Analysis Worksheets: Full Build-Out Conditions

Conceptual Plan: Full Build-Out Conditions

Analysis Worksheets: Mid-Term Conditions

Conceptual Plan: Mid-Term Conditions

Conceptual Plan: Near-Term Conditions

Matrix of Potential Improvements

Traffic Count Data

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857VOL1

Start Time	3/25/2020 Wed	SB		Hour Totals		NB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	68			5	100				
12:15		7	75			6	81				
12:30		2	98			5	91				
12:45		3	78	13	319	6	74	22	346	35	665
01:00		0	74			0	79				
01:15		2	72			1	85				
01:30		3	75			2	53				
01:45		3	81	8	302	1	68	4	285	12	587
02:00		2	60			4	99				
02:15		2	68			1	151				
02:30		1	74			3	91				
02:45		3	58	8	260	1	79	9	420	17	680
03:00		2	68			5	78				
03:15		4	51			2	114				
03:30		3	66			4	173				
03:45		4	74	13	259	5	116	16	481	29	740
04:00		5	61			5	140				
04:15		4	57			4	117				
04:30		9	60			7	154				
04:45		18	48	36	226	15	109	31	520	67	746
05:00		11	57			13	126				
05:15		32	69			23	85				
05:30		71	62			29	75				
05:45		105	50	219	238	23	53	88	339	307	577
06:00		72	44			36	71				
06:15		67	31			71	50				
06:30		92	30			42	48				
06:45		109	34	340	139	38	26	187	195	527	334
07:00		69	29			36	28				
07:15		87	23			59	23				
07:30		81	23			72	35				
07:45		117	23	354	98	53	19	220	105	574	203
08:00		77	17			53	19				
08:15		82	20			40	18				
08:30		61	15			59	13				
08:45		62	6	282	58	49	7	201	57	483	115
09:00		69	8			55	8				
09:15		49	19			58	13				
09:30		57	21			63	4				
09:45		56	14	231	62	76	8	252	33	483	95
10:00		70	6			44	12				
10:15		52	7			66	36				
10:30		56	7			59	10				
10:45		56	4	234	24	72	11	241	69	475	93
11:00		59	9			75	6				
11:15		66	2			55	4				
11:30		60	3			80	5				
11:45		47	5	232	19	72	2	282	17	514	36
Total		1970	2004			1553	2867			3523	4871
Percent		49.6%	50.4%			35.1%	64.9%			42.0%	58.0%

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857SPD1

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/25/20	0	0	0	2	7	2	1	0	1	0	0	0	0	0	13
01:00	0	0	0	2	4	1	1	0	0	0	0	0	0	0	8
02:00	0	0	0	0	3	4	1	0	0	0	0	0	0	0	8
03:00	0	0	0	1	6	4	2	0	0	0	0	0	0	0	13
04:00	0	0	0	2	15	13	6	0	0	0	0	0	0	0	36
05:00	0	1	0	29	95	72	17	5	0	0	0	0	0	0	219
06:00	2	0	0	17	108	151	56	5	1	0	0	0	0	0	340
07:00	1	6	4	18	101	164	55	3	2	0	0	0	0	0	354
08:00	2	4	1	18	77	97	72	9	2	0	0	0	0	0	282
09:00	3	5	9	13	77	79	40	5	0	0	0	0	0	0	231
10:00	1	3	3	21	61	94	41	9	1	0	0	0	0	0	234
11:00	1	1	3	18	62	96	48	3	0	0	0	0	0	0	232
12 PM	2	3	5	27	108	118	44	10	2	0	0	0	0	0	319
13:00	1	1	2	25	113	123	31	6	0	0	0	0	0	0	302
14:00	0	3	1	24	103	99	27	3	0	0	0	0	0	0	260
15:00	1	0	1	30	117	83	24	3	0	0	0	0	0	0	259
16:00	3	1	6	20	84	91	19	2	0	0	0	0	0	0	226
17:00	2	0	1	6	94	94	37	4	0	0	0	0	0	0	238
18:00	0	0	0	15	49	48	27	0	0	0	0	0	0	0	139
19:00	0	0	0	12	39	32	12	3	0	0	0	0	0	0	98
20:00	0	0	0	9	24	18	6	1	0	0	0	0	0	0	58
21:00	0	0	0	6	25	20	10	1	0	0	0	0	0	0	62
22:00	0	0	0	3	15	3	3	0	0	0	0	0	0	0	24
23:00	0	0	0	1	10	5	2	1	0	0	0	0	0	0	19
Total	19	28	36	319	1397	1511	582	73	9	0	0	0	0	0	3974

Daily

- 15th Percentile : 30 MPH
- 50th Percentile : 35 MPH
- 85th Percentile : 40 MPH
- 95th Percentile : 43 MPH

Mean Speed(Average) : 36 MPH

10 MPH Pace Speed : 31-40 MPH

- Number in Pace : 2908
- Percent in Pace : 73.2%
- Number of Vehicles > 35 MPH : 2175
- Percent of Vehicles > 35 MPH : 54.7%

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857SPD1

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/26/20	0	0	0	0	3	2	1	0	0	0	0	0	0	0	6
01:00	0	0	0	1	4	2	1	0	0	0	0	0	0	0	8
02:00	0	0	1	1	1	2	0	0	1	0	0	0	0	0	6
03:00	0	0	1	3	9	5	2	0	0	0	0	0	0	0	20
04:00	0	0	1	2	10	13	3	1	0	0	0	0	0	0	30
05:00	0	2	1	32	97	75	16	2	0	0	0	0	0	0	225
06:00	1	1	1	15	90	161	65	7	2	0	0	0	0	0	343
07:00	2	7	3	18	71	156	60	13	0	0	0	0	0	0	330
08:00	1	2	0	11	73	124	70	7	1	0	0	0	0	0	289
09:00	0	3	0	7	60	108	39	5	0	0	0	0	0	0	222
10:00	3	1	4	21	78	75	34	6	0	0	0	0	0	0	222
11:00	3	1	1	18	88	75	28	2	0	0	0	0	0	0	216
12 PM	0	1	7	19	104	126	30	3	0	0	0	0	0	0	290
13:00	0	4	10	26	124	134	36	10	1	0	0	0	0	0	345
14:00	2	0	2	24	110	99	32	2	0	0	0	0	0	0	271
15:00	0	2	2	32	132	88	19	1	1	0	0	0	0	0	277
16:00	6	10	0	16	100	105	29	1	0	0	0	0	0	0	267
17:00	0	1	6	11	59	113	34	5	0	0	0	0	0	0	229
18:00	0	0	0	9	56	57	34	4	1	0	0	0	0	0	161
19:00	0	0	0	13	34	41	14	2	0	0	0	0	0	0	104
20:00	0	0	0	8	26	23	9	0	0	0	0	0	0	0	66
21:00	0	0	0	6	25	24	4	2	0	0	0	0	0	0	61
22:00	0	0	0	2	8	7	2	1	0	0	0	0	0	0	20
23:00	0	0	0	0	9	3	2	1	0	0	0	0	0	0	15
Total	18	35	40	295	1371	1618	564	75	7	0	0	0	0	0	4023

Daily
 15th Percentile : 30 MPH
 50th Percentile : 35 MPH
 85th Percentile : 40 MPH
 95th Percentile : 43 MPH

 Mean Speed(Average) : 36 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 2989
 Percent in Pace : 74.3%
 Number of Vehicles > 35 MPH : 2264
 Percent of Vehicles > 35 MPH : 56.3%

Grand Total	37	63	76	614	2768	3129	1146	148	16	0	0	0	0	0	7997
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Overall
 15th Percentile : 30 MPH
 50th Percentile : 35 MPH
 85th Percentile : 40 MPH
 95th Percentile : 43 MPH

 Mean Speed(Average) : 36 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 5897
 Percent in Pace : 73.7%
 Number of Vehicles > 35 MPH : 4439
 Percent of Vehicles > 35 MPH : 55.5%

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857SPD1

NB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/25/20	0	0	0	1	10	7	4	0	0	0	0	0	0	0	22
01:00	0	0	0	0	1	1	1	1	0	0	0	0	0	0	4
02:00	0	0	0	4	1	4	0	0	0	0	0	0	0	0	9
03:00	0	0	0	3	3	7	3	0	0	0	0	0	0	0	16
04:00	1	0	0	2	9	12	4	3	0	0	0	0	0	0	31
05:00	4	0	1	4	30	37	12	0	0	0	0	0	0	0	88
06:00	0	2	1	8	51	79	40	6	0	0	0	0	0	0	187
07:00	0	0	2	10	53	82	66	7	0	0	0	0	0	0	220
08:00	2	0	0	10	39	84	55	10	1	0	0	0	0	0	201
09:00	1	4	3	11	67	99	54	9	1	2	0	0	1	0	252
10:00	2	3	4	14	80	87	46	4	1	0	0	0	0	0	241
11:00	3	3	4	17	70	123	49	9	1	0	0	0	0	0	282
12 PM	1	3	3	18	62	160	89	9	1	0	0	0	0	0	346
13:00	1	1	2	8	61	128	72	12	0	0	0	0	0	0	285
14:00	2	4	0	24	89	204	84	9	3	1	0	0	0	0	420
15:00	0	1	5	15	165	207	78	10	0	0	0	0	0	0	481
16:00	0	3	4	27	173	213	81	16	2	1	0	0	0	0	520
17:00	1	1	0	7	105	143	73	9	0	0	0	0	0	0	339
18:00	1	2	1	8	31	103	46	3	0	0	0	0	0	0	195
19:00	0	1	0	6	35	40	21	2	0	0	0	0	0	0	105
20:00	0	0	0	0	16	30	10	1	0	0	0	0	0	0	57
21:00	0	0	0	1	15	11	5	1	0	0	0	0	0	0	33
22:00	0	0	1	3	23	27	13	1	1	0	0	0	0	0	69
23:00	0	0	0	0	3	11	2	0	1	0	0	0	0	0	17
Total	19	31	31	201	1192	1899	908	122	12	4	0	0	1	0	4420

Daily

- 15th Percentile : 31 MPH
- 50th Percentile : 36 MPH
- 85th Percentile : 42 MPH
- 95th Percentile : 44 MPH

Mean Speed(Average) : 37 MPH

10 MPH Pace Speed : 31-40 MPH

- Number in Pace : 3091
- Percent in Pace : 69.9%
- Number of Vehicles > 35 MPH : 2946
- Percent of Vehicles > 35 MPH : 66.7%

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857SPD1

NB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/26/20	0	0	0	3	12	4	0	2	0	0	0	0	0	0	21
01:00	0	0	0	3	2	2	1	0	0	0	0	0	0	0	8
02:00	0	0	0	0	5	2	1	0	0	0	0	0	0	0	8
03:00	0	0	0	1	11	1	2	1	0	0	0	0	0	0	16
04:00	1	0	0	3	12	16	2	1	0	0	0	0	0	0	35
05:00	0	1	3	13	32	22	9	0	0	0	0	0	0	0	80
06:00	0	0	0	5	54	74	52	6	0	0	1	0	1	0	193
07:00	2	0	3	18	61	95	61	9	1	0	0	0	0	0	250
08:00	1	2	4	13	63	100	53	2	1	0	0	0	0	0	239
09:00	1	1	0	8	60	90	64	9	0	0	0	0	0	0	233
10:00	0	6	0	21	76	90	56	5	0	0	0	1	0	0	255
11:00	0	1	0	14	83	129	51	5	0	0	0	0	0	0	283
12 PM	0	1	2	20	104	133	56	9	0	1	0	0	0	0	326
13:00	0	1	0	12	65	136	63	8	2	0	0	0	0	0	287
14:00	3	1	0	34	114	169	71	8	1	0	0	0	1	0	402
15:00	0	5	12	46	158	241	59	3	0	0	0	0	1	0	525
16:00	1	5	10	36	162	214	77	13	1	0	0	0	2	0	521
17:00	0	6	0	13	104	172	96	12	2	0	0	0	0	0	405
18:00	0	1	0	5	30	78	52	10	3	0	0	0	0	0	179
19:00	0	0	0	6	36	43	20	9	1	0	0	0	0	0	115
20:00	0	0	0	1	25	28	7	2	0	0	0	0	0	0	63
21:00	0	0	0	4	11	12	9	2	0	0	0	0	0	0	38
22:00	0	0	0	1	17	21	12	1	1	0	0	0	0	0	53
23:00	0	0	0	1	8	12	8	1	0	1	0	0	0	0	31
Total	9	31	34	281	1305	1884	882	118	13	2	1	1	5	0	4566

Daily
 15th Percentile : 31 MPH
 50th Percentile : 36 MPH
 85th Percentile : 41 MPH
 95th Percentile : 44 MPH

 Mean Speed(Average) : 37 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 3189
 Percent in Pace : 69.8%
 Number of Vehicles > 35 MPH : 2906
 Percent of Vehicles > 35 MPH : 63.6%

Grand Total	28	62	65	482	2497	3783	1790	240	25	6	1	1	6	0	8986
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Overall
 15th Percentile : 31 MPH
 50th Percentile : 36 MPH
 85th Percentile : 42 MPH
 95th Percentile : 44 MPH

 Mean Speed(Average) : 37 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 6280
 Percent in Pace : 69.9%
 Number of Vehicles > 35 MPH : 5852
 Percent of Vehicles > 35 MPH : 65.1%

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857SPD1

SB, NB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/25/20	0	0	0	3	17	9	5	0	1	0	0	0	0	0	35
01:00	0	0	0	2	5	2	2	1	0	0	0	0	0	0	12
02:00	0	0	0	4	4	8	1	0	0	0	0	0	0	0	17
03:00	0	0	0	4	9	11	5	0	0	0	0	0	0	0	29
04:00	1	0	0	4	24	25	10	3	0	0	0	0	0	0	67
05:00	4	1	1	33	125	109	29	5	0	0	0	0	0	0	307
06:00	2	2	1	25	159	230	96	11	1	0	0	0	0	0	527
07:00	1	6	6	28	154	246	121	10	2	0	0	0	0	0	574
08:00	4	4	1	28	116	181	127	19	3	0	0	0	0	0	483
09:00	4	9	12	24	144	178	94	14	1	2	0	0	1	0	483
10:00	3	6	7	35	141	181	87	13	2	0	0	0	0	0	475
11:00	4	7	7	35	132	219	97	12	1	0	0	0	0	0	514
12 PM	3	6	8	45	170	278	133	19	3	0	0	0	0	0	665
13:00	2	2	4	33	174	251	103	18	0	0	0	0	0	0	587
14:00	2	7	1	48	192	303	111	12	3	1	0	0	0	0	680
15:00	1	1	6	45	282	290	102	13	0	0	0	0	0	0	740
16:00	3	4	10	47	257	304	100	18	2	1	0	0	0	0	746
17:00	3	1	1	13	199	237	110	13	0	0	0	0	0	0	577
18:00	1	2	1	23	80	151	73	3	0	0	0	0	0	0	334
19:00	0	1	0	18	74	72	33	5	0	0	0	0	0	0	203
20:00	0	0	0	9	40	48	16	2	0	0	0	0	0	0	115
21:00	0	0	0	7	40	31	15	2	0	0	0	0	0	0	95
22:00	0	0	1	6	38	30	16	1	1	0	0	0	0	0	93
23:00	0	0	0	1	13	16	4	1	1	0	0	0	0	0	36
Total	38	59	67	520	2589	3410	1490	195	21	4	0	0	1	0	8394

Daily

15th Percentile : 31 MPH
50th Percentile : 36 MPH
85th Percentile : 41 MPH
95th Percentile : 44 MPH

Mean Speed(Average) : 37 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 5999
Percent in Pace : 71.5%
Number of Vehicles > 35 MPH : 5121
Percent of Vehicles > 35 MPH : 61.0%

Accurate Counts
978-664-2565

Location : NH Route 27
Location : North of Continental Drive
City/State: Exeter, NH

1857SPD1

SB, NB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
03/26/20	0	0	0	3	15	6	1	2	0	0	0	0	0	0	27
01:00	0	0	0	4	6	4	2	0	0	0	0	0	0	0	16
02:00	0	0	1	1	6	4	1	0	1	0	0	0	0	0	14
03:00	0	0	1	4	20	6	4	1	0	0	0	0	0	0	36
04:00	1	0	1	5	22	29	5	2	0	0	0	0	0	0	65
05:00	0	3	4	45	129	97	25	2	0	0	0	0	0	0	305
06:00	1	1	1	20	144	235	117	13	2	0	1	0	1	0	536
07:00	4	7	6	36	132	251	121	22	1	0	0	0	0	0	580
08:00	2	4	4	24	136	224	123	9	2	0	0	0	0	0	528
09:00	1	4	0	15	120	198	103	14	0	0	0	0	0	0	455
10:00	3	7	4	42	154	165	90	11	0	0	0	1	0	0	477
11:00	3	2	1	32	171	204	79	7	0	0	0	0	0	0	499
12 PM	0	2	9	39	208	259	86	12	0	1	0	0	0	0	616
13:00	0	5	10	38	189	270	99	18	3	0	0	0	0	0	632
14:00	5	1	2	58	224	268	103	10	1	0	0	0	1	0	673
15:00	0	7	14	78	290	329	78	4	1	0	0	0	1	0	802
16:00	7	15	10	52	262	319	106	14	1	0	0	0	2	0	788
17:00	0	7	6	24	163	285	130	17	2	0	0	0	0	0	634
18:00	0	1	0	14	86	135	86	14	4	0	0	0	0	0	340
19:00	0	0	0	19	70	84	34	11	1	0	0	0	0	0	219
20:00	0	0	0	9	51	51	16	2	0	0	0	0	0	0	129
21:00	0	0	0	10	36	36	13	4	0	0	0	0	0	0	99
22:00	0	0	0	3	25	28	14	2	1	0	0	0	0	0	73
23:00	0	0	0	1	17	15	10	2	0	1	0	0	0	0	46
Total	27	66	74	576	2676	3502	1446	193	20	2	1	1	5	0	8589

Daily
 15th Percentile : 31 MPH
 50th Percentile : 36 MPH
 85th Percentile : 41 MPH
 95th Percentile : 44 MPH

 Mean Speed(Average) : 37 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 6178
 Percent in Pace : 71.9%
 Number of Vehicles > 35 MPH : 5170
 Percent of Vehicles > 35 MPH : 60.2%

Grand Total	65	125	141	1096	5265	6912	2936	388	41	6	1	1	6	0	16983
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Overall
 15th Percentile : 31 MPH
 50th Percentile : 36 MPH
 85th Percentile : 41 MPH
 95th Percentile : 44 MPH

 Mean Speed(Average) : 37 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 12177
 Percent in Pace : 71.7%
 Number of Vehicles > 35 MPH : 10291
 Percent of Vehicles > 35 MPH : 60.6%

Accurate Counts

978-664-2565

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

File Name : 18570001
 Site Code : 18570001
 Start Date : 3/17/2020
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Route 101 WB Ramps From East			Route 27 From South			Route 101 WB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	31	2	25	0	7	39	4	0	0	0	0	108
07:15 AM	0	54	6	37	0	10	36	11	0	0	0	0	154
07:30 AM	0	48	6	41	0	6	33	13	0	0	0	0	147
07:45 AM	0	60	4	55	0	17	28	15	0	0	0	0	179
Total	0	193	18	158	0	40	136	43	0	0	0	0	588
08:00 AM	0	46	2	43	0	10	26	17	0	0	0	0	144
08:15 AM	0	48	2	45	1	10	22	20	0	0	0	0	148
08:30 AM	0	38	4	24	0	13	28	15	0	0	0	0	122
08:45 AM	0	33	2	30	0	19	14	13	0	0	0	0	111
Total	0	165	10	142	1	52	90	65	0	0	0	0	525
09:00 AM	0	41	3	27	0	12	22	14	0	0	0	0	119
09:15 AM	0	25	1	27	0	12	14	18	0	0	0	0	97
09:30 AM	0	24	1	23	0	17	18	12	0	0	0	0	95
09:45 AM	0	21	1	24	0	9	21	17	0	0	0	0	93
Total	0	111	6	101	0	50	75	61	0	0	0	0	404
10:00 AM	0	25	2	18	0	12	18	26	0	0	0	0	101
10:15 AM	0	32	0	22	0	15	22	14	0	0	0	0	105
10:30 AM	0	34	3	19	0	17	19	19	0	0	0	0	111
10:45 AM	0	38	1	14	0	13	24	17	0	0	0	0	107
Total	0	129	6	73	0	57	83	76	0	0	0	0	424
11:00 AM	0	28	3	19	0	16	28	21	0	0	0	0	115
11:15 AM	0	37	1	23	0	14	15	24	0	0	0	0	114
11:30 AM	0	38	2	22	0	16	24	23	0	0	0	0	125
11:45 AM	0	42	2	33	0	24	26	22	0	0	0	0	149
Total	0	145	8	97	0	70	93	90	0	0	0	0	503
12:00 PM	0	32	1	28	0	20	32	31	0	0	0	0	144
12:15 PM	0	39	2	43	0	15	29	27	0	0	0	0	155
12:30 PM	0	38	4	40	1	18	23	30	0	0	0	0	154
12:45 PM	0	41	1	24	1	21	27	18	0	0	0	0	133
Total	0	150	8	135	2	74	111	106	0	0	0	0	586
01:00 PM	0	39	3	29	1	16	25	26	0	0	0	0	139
01:15 PM	0	25	1	28	0	22	27	20	0	0	0	0	123
01:30 PM	0	41	2	34	0	14	34	14	0	0	0	0	139
01:45 PM	0	43	2	34	2	16	28	18	0	0	0	0	143
Total	0	148	8	125	3	68	114	78	0	0	0	0	544
02:00 PM	0	38	2	23	0	13	34	20	0	0	0	0	130

Accurate Counts

978-664-2565

File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 2

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Route 101 WB Ramps From East			Route 27 From South			Route 101 WB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:15 PM	0	36	1	26	0	19	54	32	0	0	0	0	168
02:30 PM	0	42	0	29	1	20	40	38	0	0	0	0	170
02:45 PM	0	24	4	35	0	24	30	27	0	0	0	0	144
Total	0	140	7	113	1	76	158	117	0	0	0	0	612
03:00 PM	0	31	3	33	0	21	38	25	0	0	0	0	151
03:15 PM	0	31	3	38	2	17	47	36	0	0	0	0	174
03:30 PM	0	32	0	21	0	29	81	48	0	0	0	0	211
03:45 PM	0	21	1	37	1	26	34	38	0	0	0	0	158
Total	0	115	7	129	3	93	200	147	0	0	0	0	694
04:00 PM	0	42	1	27	0	18	61	43	0	0	0	0	192
04:15 PM	0	32	1	30	1	32	51	28	0	0	0	0	175
04:30 PM	0	41	0	25	0	35	77	42	0	0	0	0	220
04:45 PM	0	17	1	30	0	29	43	46	0	0	0	0	166
Total	0	132	3	112	1	114	232	159	0	0	0	0	753
05:00 PM	0	31	3	13	2	31	59	47	0	0	0	0	186
05:15 PM	0	20	1	29	1	28	44	41	0	0	0	0	164
05:30 PM	0	36	0	20	0	30	46	30	0	0	0	0	162
05:45 PM	0	29	2	14	0	12	29	24	0	0	0	0	110
Total	0	116	6	76	3	101	178	142	0	0	0	0	622
06:00 PM	0	24	0	23	0	20	25	22	0	0	0	0	114
06:15 PM	0	29	0	20	0	12	19	16	0	0	0	0	96
06:30 PM	0	18	1	15	0	14	6	15	0	0	0	0	69
06:45 PM	0	24	2	16	0	14	18	3	0	0	0	0	77
Total	0	95	3	74	0	60	68	56	0	0	0	0	356
Grand Total	0	1639	90	1335	14	855	1538	1140	0	0	0	0	6611
Apprch %	0	94.8	5.2	60.6	0.6	38.8	57.4	42.6	0	0	0	0	
Total %	0	24.8	1.4	20.2	0.2	12.9	23.3	17.2	0	0	0	0	
Cars	0	1538	88	1272	11	765	1497	1123	0	0	0	0	6294
% Cars	0	93.8	97.8	95.3	78.6	89.5	97.3	98.5	0	0	0	0	95.2
Trucks	0	101	2	63	3	90	41	17	0	0	0	0	317
% Trucks	0	6.2	2.2	4.7	21.4	10.5	2.7	1.5	0	0	0	0	4.8

Accurate Counts

978-664-2565

File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 3

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

Start Time	Route 27 From North				Route 101 WB Ramps From East				Route 27 From South				Route 101 WB Ramps From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	54	6	60	37	0	10	47	36	11	0	47	0	0	0	0	154
07:30 AM	0	48	6	54	41	0	6	47	33	13	0	46	0	0	0	0	147
07:45 AM	0	60	4	64	55	0	17	72	28	15	0	43	0	0	0	0	179
08:00 AM	0	46	2	48	43	0	10	53	26	17	0	43	0	0	0	0	144
Total Volume	0	208	18	226	176	0	43	219	123	56	0	179	0	0	0	0	624
% App. Total	0	92	8		80.4	0	19.6		68.7	31.3	0		0	0	0		
PHF	.000	.867	.750	.883	.800	.000	.632	.760	.854	.824	.000	.952	.000	.000	.000	.000	.872
Cars	0	196	18	214	174	0	33	207	117	53	0	170	0	0	0	0	591
% Cars	0	94.2	100	94.7	98.9	0	76.7	94.5	95.1	94.6	0	95.0	0	0	0	0	94.7
Trucks	0	12	0	12	2	0	10	12	6	3	0	9	0	0	0	0	33
% Trucks	0	5.8	0	5.3	1.1	0	23.3	5.5	4.9	5.4	0	5.0	0	0	0	0	5.3

Accurate Counts

978-664-2565

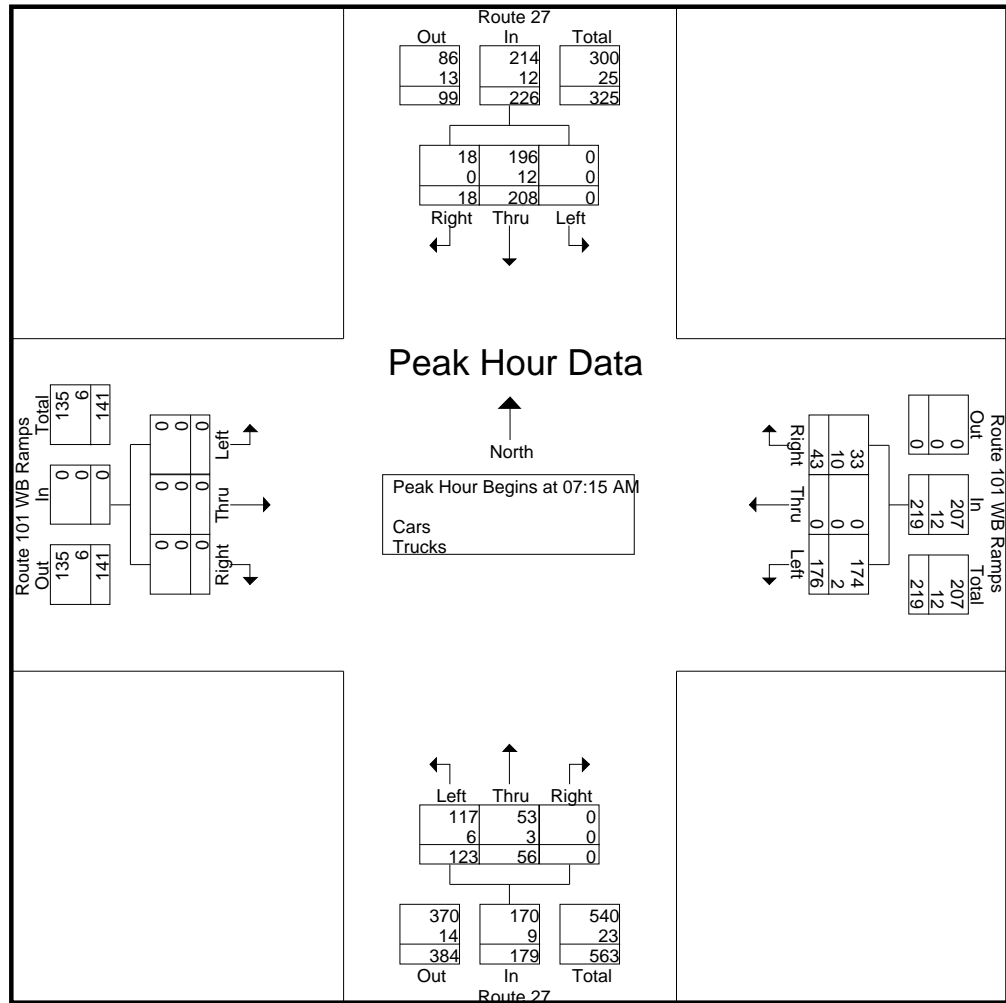
File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 4

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain



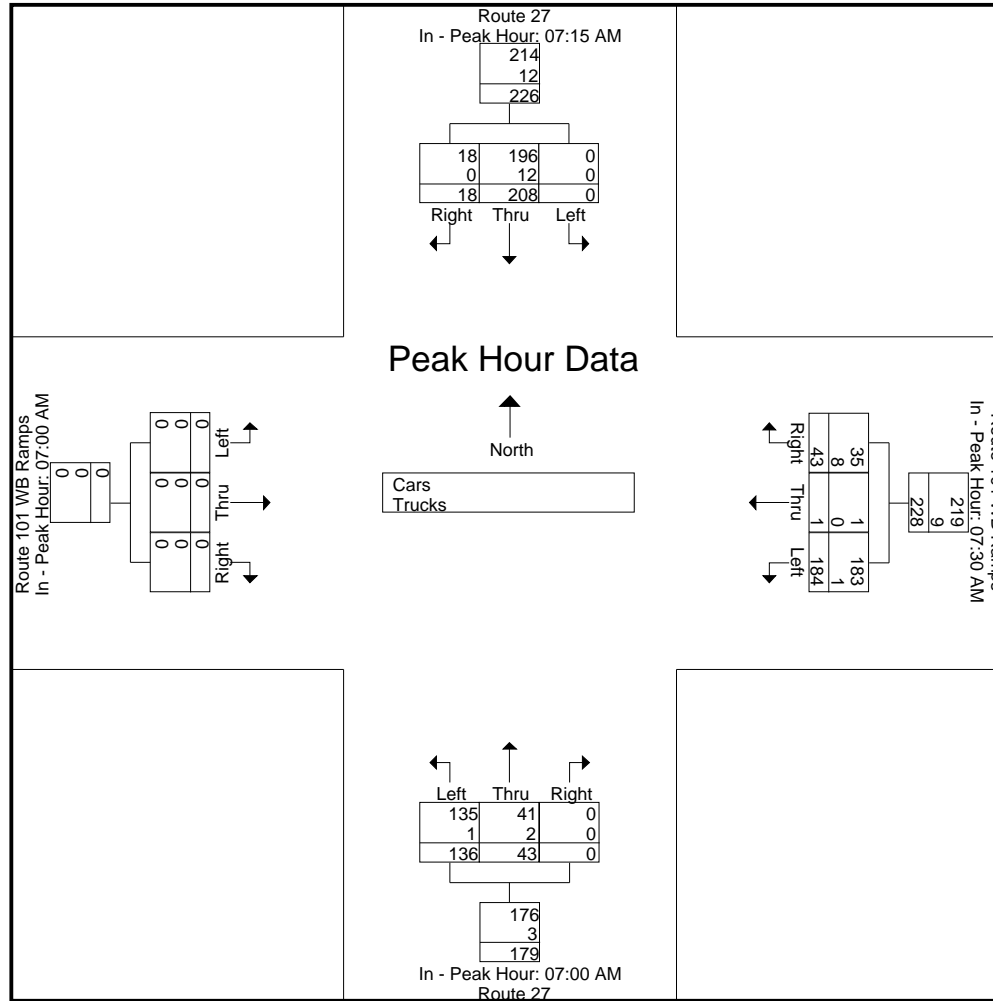
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:00 AM				07:00 AM			
+0 mins.	0	54	6	60	41	0	6	47	39	4	0	43	0	0	0	0
+15 mins.	0	48	6	54	55	0	17	72	36	11	0	47	0	0	0	0
+30 mins.	0	60	4	64	43	0	10	53	33	13	0	46	0	0	0	0
+45 mins.	0	46	2	48	45	1	10	56	28	15	0	43	0	0	0	0
Total Volume	0	208	18	226	184	1	43	228	136	43	0	179	0	0	0	0
% App. Total	0	92	8	226	80.7	0.4	18.9	228	76	24	0	179	0	0	0	0
PHF	.000	.867	.750	.883	.836	.250	.632	.792	.872	.717	.000	.952	.000	.000	.000	.000
Cars	0	196	18	214	183	1	35	219	135	41	0	176	0	0	0	0
% Cars	0	94.2	100	94.7	99.5	100	81.4	96.1	99.3	95.3	0	98.3	0	0	0	0
Trucks	0	12	0	12	1	0	8	9	1	2	0	3	0	0	0	0

Accurate Counts

978-664-2565



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:45 AM

11:45 AM	0	42	2	44	33	0	24	57	26	22	0	48	0	0	0	0	149
12:00 PM	0	32	1	33	28	0	20	48	32	31	0	63	0	0	0	0	144
12:15 PM	0	39	2	41	43	0	15	58	29	27	0	56	0	0	0	0	155
12:30 PM	0	38	4	42	44	1	18	59	23	30	0	53	0	0	0	0	154
Total Volume	0	151	9	160	144	1	77	222	110	110	0	220	0	0	0	0	602
% App. Total	0	94.4	5.6		64.9	0.5	34.7		50	50	0		0	0	0		
PHF	.000	.899	.563	.909	.837	.250	.802	.941	.859	.887	.000	.873	.000	.000	.000	.000	.971
Cars	0	143	9	152	135	1	67	203	104	110	0	214	0	0	0	0	569
% Cars	0	94.7	100	95.0	93.8	100	87.0	91.4	94.5	100	0	97.3	0	0	0	0	94.5
Trucks	0	8	0	8	9	0	10	19	6	0	0	6	0	0	0	0	33
% Trucks	0	5.3	0	5.0	6.3	0	13.0	8.6	5.5	0	0	2.7	0	0	0	0	5.5

Accurate Counts

978-664-2565

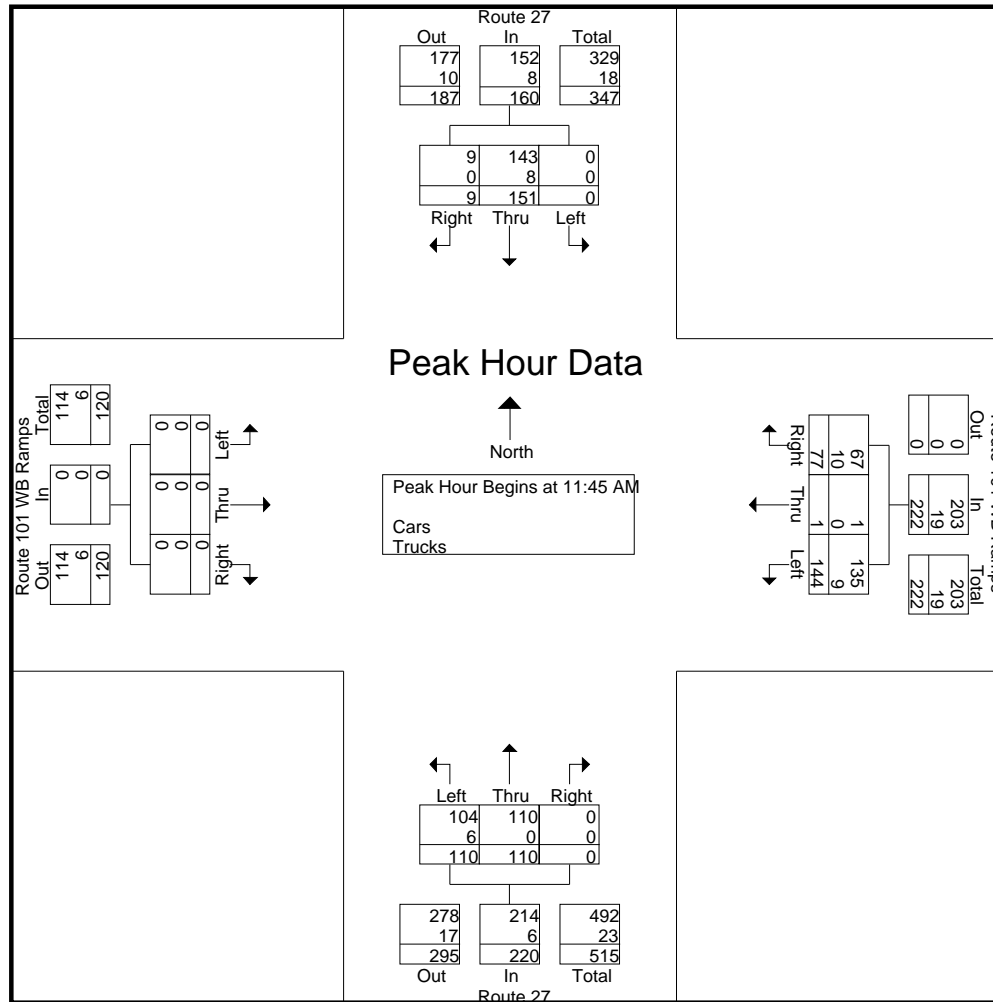
File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 6

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain



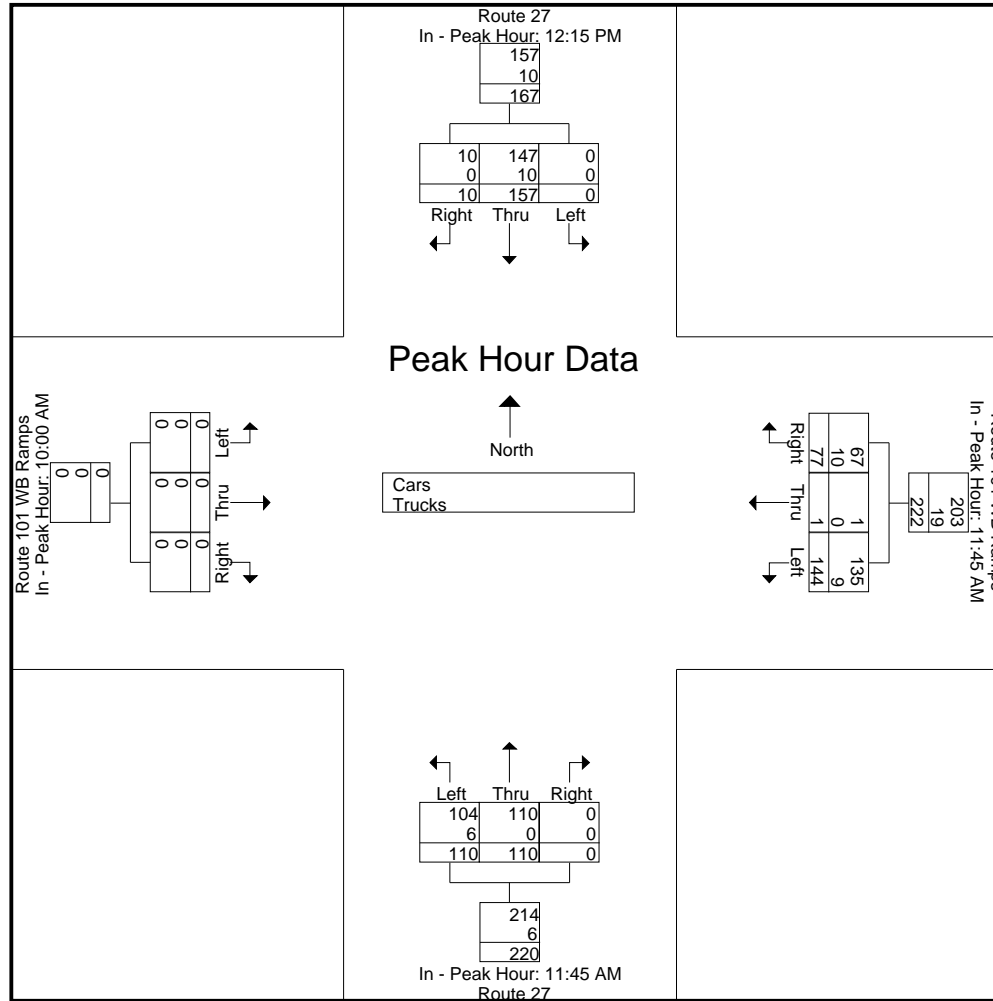
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15 PM				11:45 AM				11:45 AM				10:00 AM			
+0 mins.	0	39	2	41	33	0	24	57	26	22	0	48	0	0	0	0
+15 mins.	0	38	4	42	28	0	20	48	32	31	0	63	0	0	0	0
+30 mins.	0	41	1	42	43	0	15	58	29	27	0	56	0	0	0	0
+45 mins.	0	39	3	42	40	1	18	59	23	30	0	53	0	0	0	0
Total Volume	0	157	10	167	144	1	77	222	110	110	0	220	0	0	0	0
% App. Total	0	94	6	167	64.9	0.5	34.7	222	50	50	0	220	0	0	0	0
PHF	.000	.957	.625	.994	.837	.250	.802	.941	.859	.887	.000	.873	.000	.000	.000	.000
Cars	0	147	10	157	135	1	67	203	104	110	0	214	0	0	0	0
% Cars	0	93.6	100	94	93.8	100	87	91.4	94.5	100	0	97.3	0	0	0	0
Trucks	0	10	0	10	9	0	10	19	6	0	0	6	0	0	0	0

Accurate Counts

978-664-2565



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	42	1	43	27	0	18	45	61	43	0	104	0	0	0	0	192
04:15 PM	0	32	1	33	30	1	32	63	51	28	0	79	0	0	0	0	175
04:30 PM	0	41	0	41	25	0	35	60	77	42	0	119	0	0	0	0	220
04:45 PM	0	17	1	18	30	0	29	59	43	46	0	89	0	0	0	0	166
Total Volume	0	132	3	135	112	1	114	227	232	159	0	391	0	0	0	0	753
% App. Total	0	97.8	2.2		49.3	0.4	50.2		59.3	40.7	0		0	0	0		
PHF	.000	.786	.750	.785	.933	.250	.814	.901	.753	.864	.000	.821	.000	.000	.000	.000	.856
Cars	0	129	3	132	108	0	112	220	229	158	0	387	0	0	0	0	739
% Cars	0	97.7	100	97.8	96.4	0	98.2	96.9	98.7	99.4	0	99.0	0	0	0	0	98.1
Trucks	0	3	0	3	4	1	2	7	3	1	0	4	0	0	0	0	14
% Trucks	0	2.3	0	2.2	3.6	100	1.8	3.1	1.3	0.6	0	1.0	0	0	0	0	1.9

Accurate Counts

978-664-2565

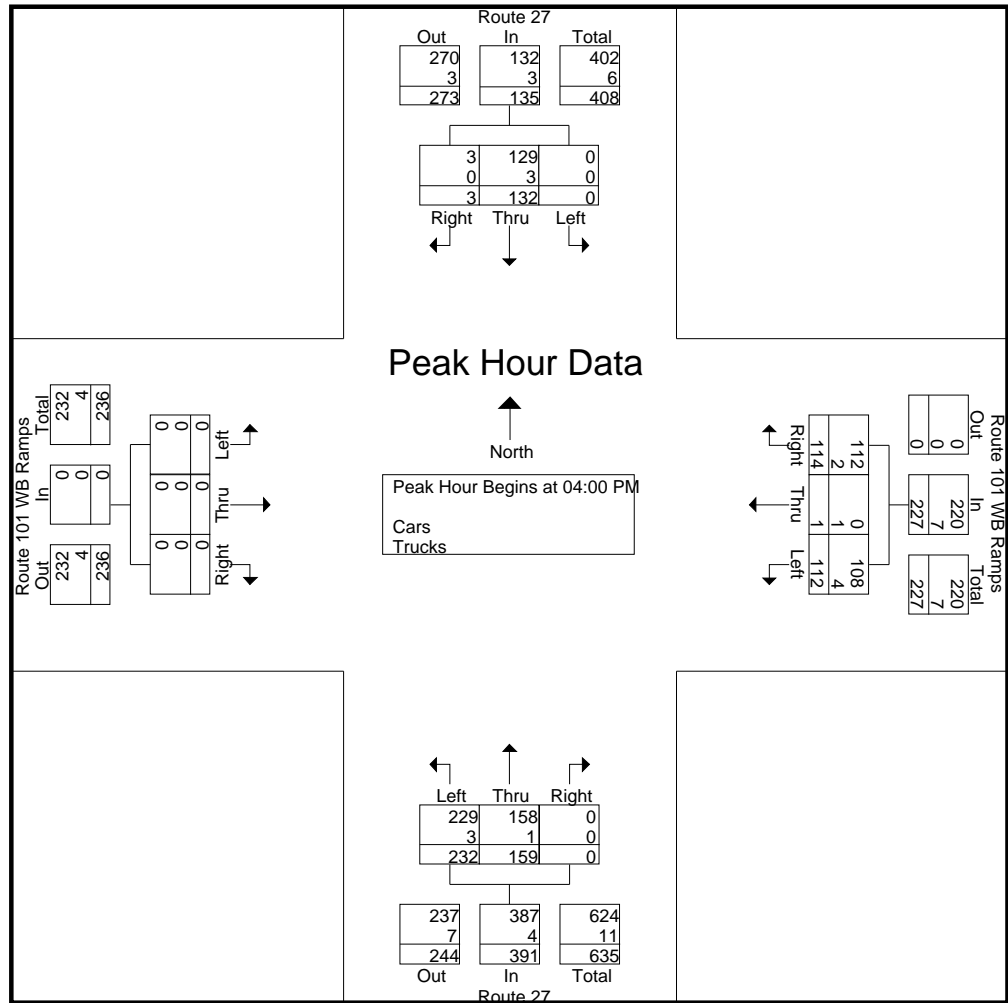
File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 8

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

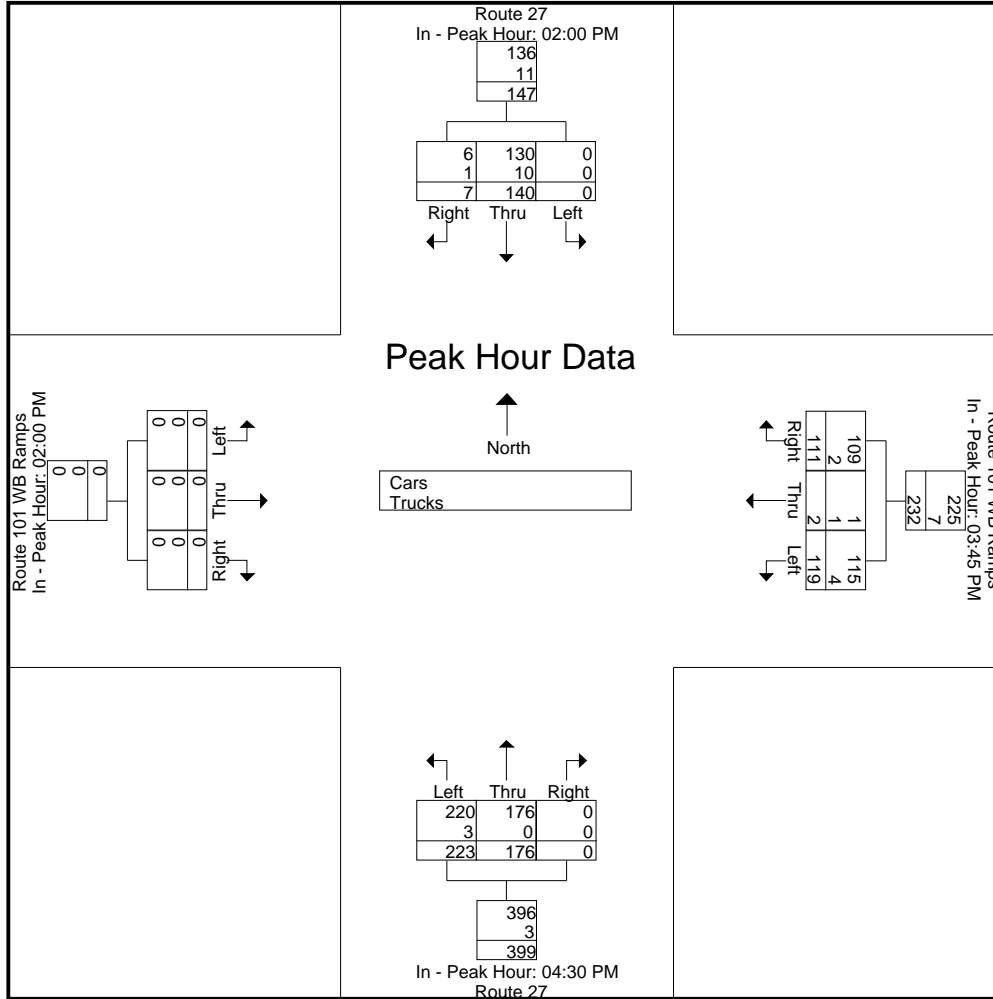


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:00 PM				03:45 PM				04:30 PM				02:00 PM			
+0 mins.	0	38	2	40	37	1	26	64	77	42	0	119	0	0	0	0
+15 mins.	0	36	1	37	27	0	18	45	43	46	0	89	0	0	0	0
+30 mins.	0	42	0	42	30	1	32	63	59	47	0	106	0	0	0	0
+45 mins.	0	24	4	28	25	0	35	60	44	41	0	85	0	0	0	0
Total Volume	0	140	7	147	119	2	111	232	223	176	0	399	0	0	0	0
% App. Total	0	95.2	4.8		51.3	0.9	47.8		55.9	44.1	0		0	0	0	
PHF	.000	.833	.438	.875	.804	.500	.793	.906	.724	.936	.000	.838	.000	.000	.000	.000
Cars	0	130	6	136	115	1	109	225	220	176	0	396	0	0	0	0
% Cars	0	92.9	85.7	92.5	96.6	50	98.2	97	98.7	100	0	99.2	0	0	0	0
Trucks	0	10	1	11	4	1	2	7	3	0	0	3	0	0	0	0

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

File Name : 18570001
 Site Code : 18570001
 Start Date : 3/17/2020
 Page No : 18

Groups Printed- Trucks

Start Time	Route 27 From North			Route 101 WB Ramps From East			Route 27 From South			Route 101 WB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	2	0	2	0	3	0	0	0	0	0	0	7
07:15 AM	0	3	0	1	0	2	1	1	0	0	0	0	8
07:30 AM	0	3	0	1	0	1	0	1	0	0	0	0	6
07:45 AM	0	5	0	0	0	2	0	0	0	0	0	0	7
Total	0	13	0	4	0	8	1	2	0	0	0	0	28
08:00 AM	0	1	0	0	0	5	5	1	0	0	0	0	12
08:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	0	0	3	0	0	0	0	0	0	4
08:45 AM	0	5	0	2	0	5	0	2	0	0	0	0	14
Total	0	8	0	2	0	13	5	3	0	0	0	0	31
09:00 AM	0	4	0	1	0	3	0	1	0	0	0	0	9
09:15 AM	0	2	0	1	0	4	0	0	0	0	0	0	7
09:30 AM	0	6	0	0	0	2	2	1	0	0	0	0	11
09:45 AM	0	2	0	1	0	0	1	0	0	0	0	0	4
Total	0	14	0	3	0	9	3	2	0	0	0	0	31
10:00 AM	0	1	0	2	0	4	2	0	0	0	0	0	9
10:15 AM	0	2	0	2	0	5	1	1	0	0	0	0	11
10:30 AM	0	4	0	0	0	5	1	0	0	0	0	0	10
10:45 AM	0	1	0	0	0	1	1	1	0	0	0	0	4
Total	0	8	0	4	0	15	5	2	0	0	0	0	34
11:00 AM	0	4	0	4	0	2	2	1	0	0	0	0	13
11:15 AM	0	4	0	1	0	4	0	0	0	0	0	0	9
11:30 AM	0	1	1	2	0	0	3	1	0	0	0	0	8
11:45 AM	0	5	0	2	0	3	2	0	0	0	0	0	12
Total	0	14	1	9	0	9	7	2	0	0	0	0	42
12:00 PM	0	1	0	2	0	3	2	0	0	0	0	0	8
12:15 PM	0	1	0	5	0	1	0	0	0	0	0	0	7
12:30 PM	0	1	0	0	0	3	2	0	0	0	0	0	6
12:45 PM	0	3	0	1	0	4	0	0	0	0	0	0	8
Total	0	6	0	8	0	11	4	0	0	0	0	0	29
01:00 PM	0	5	0	2	0	1	0	0	0	0	0	0	8
01:15 PM	0	3	0	2	0	5	0	0	0	0	0	0	10
01:30 PM	0	4	0	4	0	4	1	1	0	0	0	0	14
01:45 PM	0	7	0	2	1	1	0	0	0	0	0	0	11
Total	0	19	0	10	1	11	1	1	0	0	0	0	43
02:00 PM	0	2	1	1	0	2	3	0	0	0	0	0	9
02:15 PM	0	1	0	2	0	2	1	1	0	0	0	0	7
02:30 PM	0	6	0	1	0	2	0	0	0	0	0	0	9

Accurate Counts

978-664-2565

File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 19

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Route 101 WB Ramps From East			Route 27 From South			Route 101 WB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:45 PM	0	1	0	5	0	3	1	0	0	0	0	0	10
Total	0	10	1	9	0	9	5	1	0	0	0	0	35
03:00 PM	0	2	0	3	0	0	0	1	0	0	0	0	6
03:15 PM	0	0	0	2	0	0	2	2	0	0	0	0	6
03:30 PM	0	2	0	0	0	2	2	0	0	0	0	0	6
03:45 PM	0	1	0	2	0	0	0	0	0	0	0	0	3
Total	0	5	0	7	0	2	4	3	0	0	0	0	21
04:00 PM	0	0	0	1	0	1	1	1	0	0	0	0	4
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
04:30 PM	0	2	0	1	0	1	2	0	0	0	0	0	6
04:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	2
Total	0	3	0	4	1	2	3	1	0	0	0	0	14
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	1	0	0	1	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	1	0	1	1	1	2	0	0	0	0	0	6
06:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
06:15 PM	0	0	0	1	0	0	1	0	0	0	0	0	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	1	0	0	0	0	0	3
Grand Total	0	101	2	63	3	90	41	17	0	0	0	0	317
Apprch %	0	98.1	1.9	40.4	1.9	57.7	70.7	29.3	0	0	0	0	
Total %	0	31.9	0.6	19.9	0.9	28.4	12.9	5.4	0	0	0	0	

Start Time	Route 27 From North				Route 101 WB Ramps From East				Route 27 From South				Route 101 WB Ramps From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:45 AM																	
08:45 AM	0	5	0	5	2	0	5	7	0	2	0	2	0	0	0	0	14
09:00 AM	0	4	0	4	1	0	3	4	0	1	0	1	0	0	0	0	9
09:15 AM	0	2	0	2	1	0	4	5	0	0	0	0	0	0	0	0	7
09:30 AM	0	6	0	6	0	0	2	2	2	1	0	3	0	0	0	0	11
Total Volume	0	17	0	17	4	0	14	18	2	4	0	6	0	0	0	0	41
% App. Total	0	100	0		22.2	0	77.8		33.3	66.7	0		0	0	0		
PHF	.000	.708	.000	.708	.500	.000	.700	.643	.250	.500	.000	.500	.000	.000	.000	.000	.732

Accurate Counts

978-664-2565

File Name : 18570001

Site Code : 18570001

Start Date : 3/17/2020

Page No : 27

N/S Street : Route 27
 E/W Street : Route 101 WB Ramps
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Route 101 WB Ramps From East				Route 27 From South				Route 101 WB Ramps From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
03:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Grand Total	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5	5
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0				
Total %	0	60	0		0	0	0		0	40	0		0	0	0		0	100	

Start Time	Route 27 From North				Route 101 WB Ramps From East				Route 27 From South				Route 101 WB Ramps From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570002

Site Code : 18570002

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Route 101 EB Ramps From East			Route 27 From South			Route 101 EB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	16	42	0	0	0	0	0	42	26	2	0	41	169
07:15 AM	25	63	0	0	0	0	0	45	33	0	0	58	224
07:30 AM	24	62	0	0	0	0	0	47	45	0	1	49	228
07:45 AM	25	91	0	0	0	0	0	40	37	1	0	62	256
Total	90	258	0	0	0	0	0	174	141	3	1	210	877
08:00 AM	24	66	0	0	0	0	0	42	34	1	0	41	208
08:15 AM	21	72	0	0	0	0	0	40	35	2	0	39	209
08:30 AM	18	46	0	0	0	0	0	45	25	1	0	40	175
08:45 AM	18	46	0	0	0	0	0	24	32	4	0	36	160
Total	81	230	0	0	0	0	0	151	126	8	0	156	752
09:00 AM	20	48	0	0	0	0	0	32	30	4	0	25	159
09:15 AM	12	41	0	0	0	0	0	32	33	1	0	23	142
09:30 AM	12	36	0	0	0	0	0	27	29	3	0	30	137
09:45 AM	10	34	0	0	0	0	0	34	23	3	0	24	128
Total	54	159	0	0	0	0	0	125	115	11	0	102	566
10:00 AM	9	33	0	0	0	0	0	41	31	3	1	22	140
10:15 AM	12	46	0	0	0	0	0	36	22	2	0	21	139
10:30 AM	14	40	0	0	0	0	0	36	33	3	0	26	152
10:45 AM	14	37	0	0	0	0	0	41	30	0	0	20	142
Total	49	156	0	0	0	0	0	154	116	8	1	89	573
11:00 AM	12	39	0	0	0	0	0	50	24	0	0	20	145
11:15 AM	19	39	0	0	0	0	0	41	34	1	0	33	167
11:30 AM	19	41	0	0	0	0	0	43	35	4	0	28	170
11:45 AM	17	55	0	0	0	0	0	45	43	2	0	32	194
Total	67	174	0	0	0	0	0	179	136	7	0	113	676
12:00 PM	13	47	0	0	0	0	0	62	49	3	0	33	207
12:15 PM	18	68	0	0	0	0	0	52	36	2	0	26	202
12:30 PM	16	65	0	0	0	0	0	50	34	2	0	27	194
12:45 PM	20	46	0	0	0	0	0	43	36	1	0	39	185
Total	67	226	0	0	0	0	0	207	155	8	0	125	788
01:00 PM	15	49	0	0	0	0	0	45	32	6	0	20	167
01:15 PM	11	41	0	0	0	0	0	45	26	1	1	21	146
01:30 PM	13	58	0	0	0	0	0	48	37	1	0	39	196
01:45 PM	19	61	0	0	0	0	0	40	32	2	0	36	190
Total	58	209	0	0	0	0	0	178	127	10	1	116	699
02:00 PM	23	42	0	0	0	0	0	52	44	2	0	31	194

Accurate Counts

978-664-2565

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain

File Name : 18570002
 Site Code : 18570002
 Start Date : 3/17/2020
 Page No : 2

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Route 101 EB Ramps From East			Route 27 From South			Route 101 EB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:15 PM	15	46	0	0	0	0	0	87	49	0	0	33	230
02:30 PM	23	46	0	0	0	0	0	73	42	3	0	27	214
02:45 PM	16	44	0	0	0	0	0	52	35	3	0	31	181
Total	77	178	0	0	0	0	0	264	170	8	0	122	819
03:00 PM	16	49	0	0	0	0	0	61	37	1	0	36	200
03:15 PM	14	51	0	0	0	0	0	84	32	2	0	24	207
03:30 PM	20	43	0	0	0	0	0	129	66	2	0	29	289
03:45 PM	11	47	0	0	0	0	0	68	46	1	1	25	199
Total	61	190	0	0	0	0	0	342	181	6	1	114	895
04:00 PM	15	50	0	0	0	0	0	103	51	2	0	25	246
04:15 PM	19	45	0	0	0	0	0	80	47	1	1	33	226
04:30 PM	24	45	0	0	0	0	0	116	70	2	0	37	294
04:45 PM	10	39	0	0	0	0	0	82	45	8	0	28	212
Total	68	179	0	0	0	0	0	381	213	13	1	123	978
05:00 PM	15	32	0	0	0	0	0	97	63	7	0	30	244
05:15 PM	15	39	0	0	0	0	0	79	32	3	0	26	194
05:30 PM	19	38	0	0	0	0	0	74	35	3	1	39	209
05:45 PM	11	33	0	0	0	0	0	51	32	1	0	26	154
Total	60	142	0	0	0	0	0	301	162	14	1	121	801
06:00 PM	13	35	0	0	0	0	0	44	17	3	0	30	142
06:15 PM	13	37	0	0	0	0	0	31	22	5	0	20	128
06:30 PM	10	24	0	0	0	0	0	19	18	2	0	17	90
06:45 PM	13	27	0	0	0	0	0	20	15	1	0	14	90
Total	49	123	0	0	0	0	0	114	72	11	0	81	450
Grand Total	781	2224	0	0	0	0	0	2570	1714	107	6	1472	8874
Apprch %	26	74	0	0	0	0	0	60	40	6.8	0.4	92.9	
Total %	8.8	25.1	0	0	0	0	0	29	19.3	1.2	0.1	16.6	
Cars	699	2135	0	0	0	0	0	2507	1635	105	6	1411	8498
% Cars	89.5	96	0	0	0	0	0	97.5	95.4	98.1	100	95.9	95.8
Trucks	82	89	0	0	0	0	0	63	79	2	0	61	376
% Trucks	10.5	4	0	0	0	0	0	2.5	4.6	1.9	0	4.1	4.2

Accurate Counts

978-664-2565

File Name : 18570002

Site Code : 18570002

Start Date : 3/17/2020

Page No : 3

N/S Street : Route 27

E/W Street : Route 101 EB Ramps

City/State : Exeter, NH

Weather : Rain

Start Time	Route 27 From North				Route 101 EB Ramps From East				Route 27 From South				Route 101 EB Ramps From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	25	63	0	88	0	0	0	0	0	45	33	78	0	0	58	58	224
07:30 AM	24	62	0	86	0	0	0	0	0	47	45	92	0	1	49	50	228
07:45 AM	25	91	0	116	0	0	0	0	0	40	37	77	1	0	62	63	256
08:00 AM	24	66	0	90	0	0	0	0	0	42	34	76	1	0	41	42	208
Total Volume	98	282	0	380	0	0	0	0	0	174	149	323	2	1	210	213	916
% App. Total	25.8	74.2	0		0	0	0		0	53.9	46.1		0.9	0.5	98.6		
PHF	.980	.775	.000	.819	.000	.000	.000	.000	.000	.926	.828	.878	.500	.250	.847	.845	.895
Cars	88	278	0	366	0	0	0	0	0	164	141	305	1	1	206	208	879
% Cars	89.8	98.6	0	96.3	0	0	0	0	0	94.3	94.6	94.4	50.0	100	98.1	97.7	96.0
Trucks	10	4	0	14	0	0	0	0	0	10	8	18	1	0	4	5	37
% Trucks	10.2	1.4	0	3.7	0	0	0	0	0	5.7	5.4	5.6	50.0	0	1.9	2.3	4.0

Accurate Counts

978-664-2565

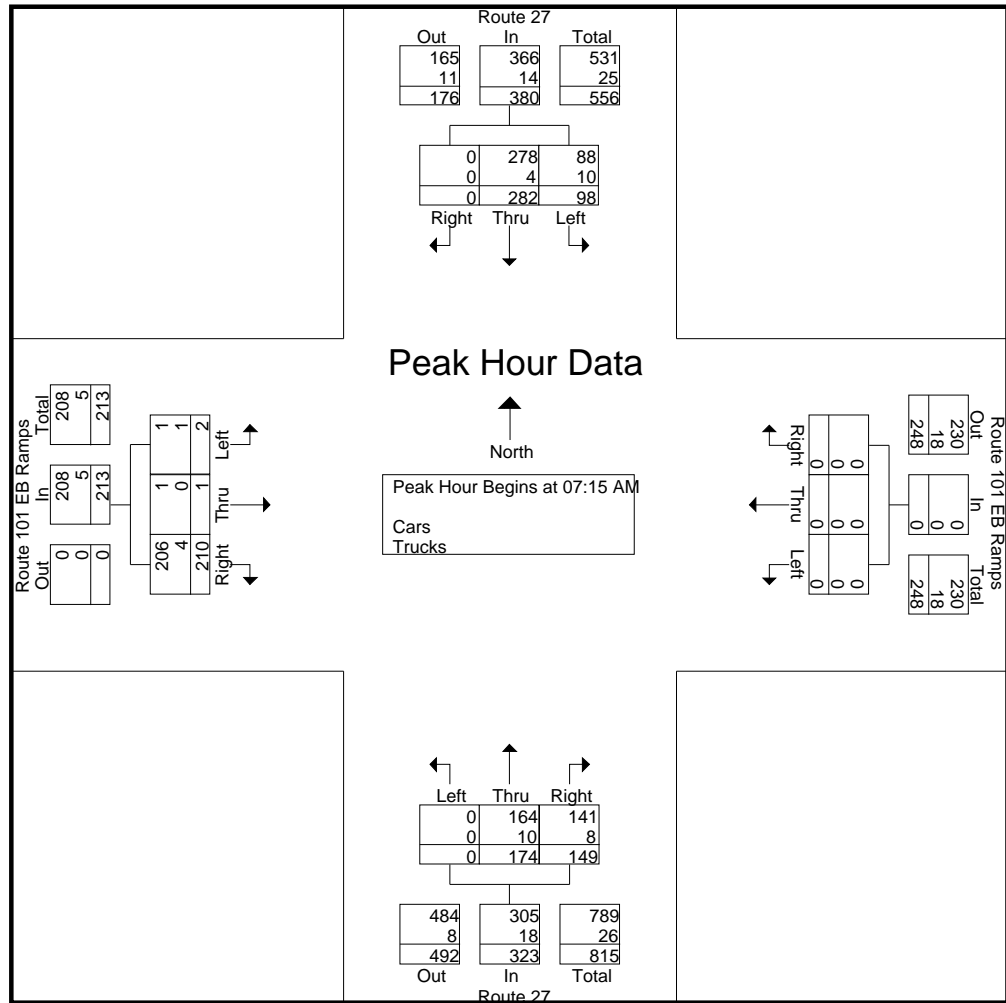
File Name : 18570002

Site Code : 18570002

Start Date : 3/17/2020

Page No : 4

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain



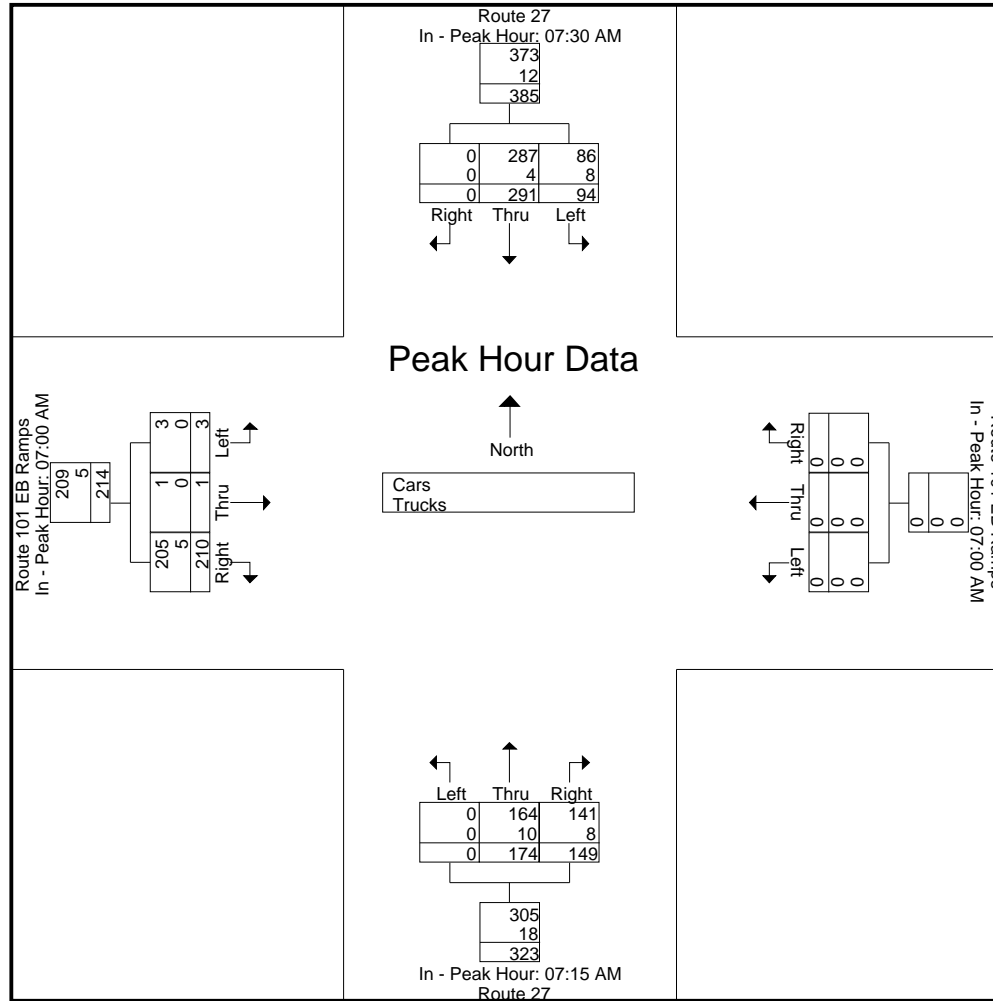
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	24	62	0	86	0	0	0	0	0	45	33	78	2	0	41	43
+15 mins.	25	91	0	116	0	0	0	0	0	47	45	92	0	0	58	58
+30 mins.	24	66	0	90	0	0	0	0	0	40	37	77	0	1	49	50
+45 mins.	21	72	0	93	0	0	0	0	0	42	34	76	1	0	62	63
Total Volume	94	291	0	385	0	0	0	0	0	174	149	323	3	1	210	214
% App. Total	24.4	75.6	0		0	0	0		0	53.9	46.1		1.4	0.5	98.1	
PHF	.940	.799	.000	.830	.000	.000	.000	.000	.000	.926	.828	.878	.375	.250	.847	.849
Cars	86	287	0	373	0	0	0	0	0	164	141	305	3	1	205	209
% Cars	91.5	98.6	0	96.9	0	0	0	0	0	94.3	94.6	94.4	100	100	97.6	97.7
Trucks	8	4	0	12	0	0	0	0	0	10	8	18	0	0	5	5

Accurate Counts

978-664-2565



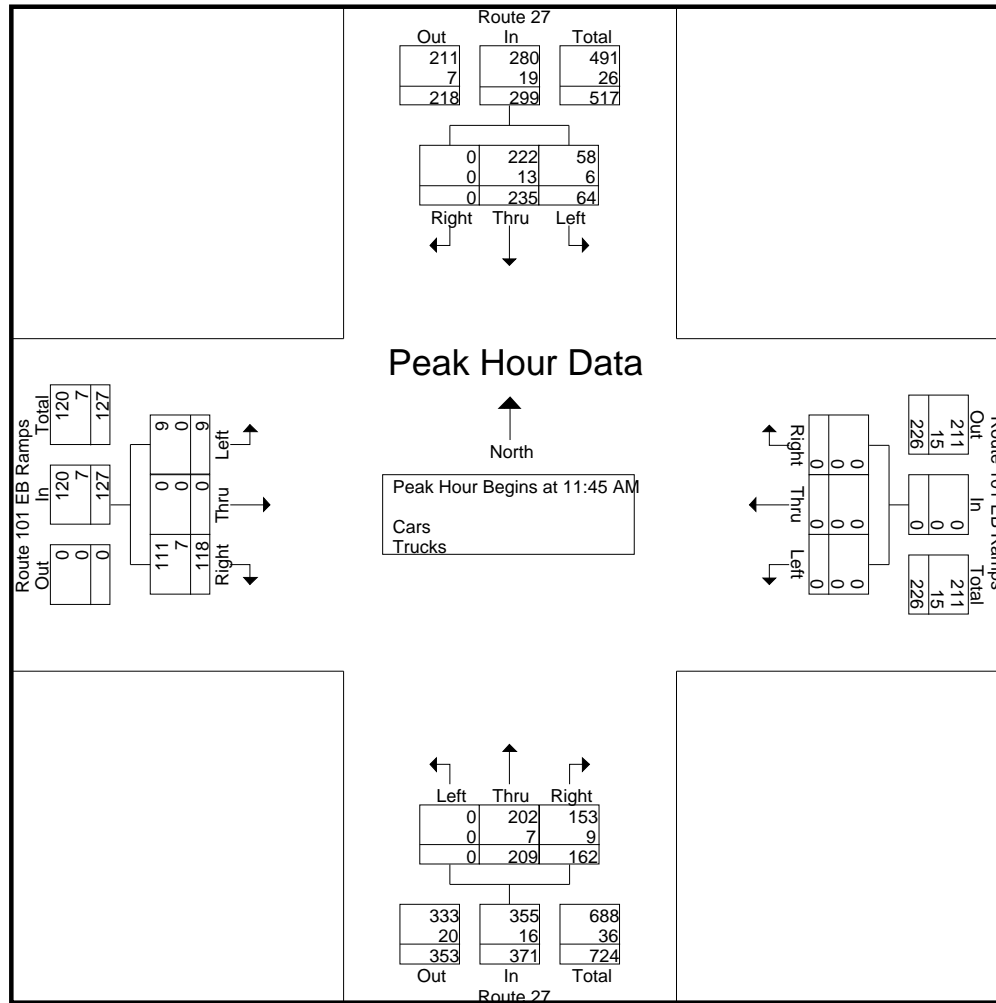
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 11:45 AM

11:45 AM	17	55	0	72	0	0	0	0	0	45	43	88	2	0	32	34	194
12:00 PM	13	47	0	60	0	0	0	0	0	62	49	111	3	0	33	36	207
12:15 PM	18	68	0	86	0	0	0	0	0	52	36	88	2	0	26	28	202
12:30 PM	16	65	0	81	0	0	0	0	0	50	34	84	2	0	27	29	194
Total Volume	64	235	0	299	0	0	0	0	0	209	162	371	9	0	118	127	797
% App. Total	21.4	78.6	0		0	0	0	0	0	56.3	43.7		7.1	0	92.9		
PHF	.889	.864	.000	.869	.000	.000	.000	.000	.000	.843	.827	.836	.750	.000	.894	.882	.963
Cars	58	222	0	280	0	0	0	0	0	202	153	355	9	0	111	120	755
% Cars	90.6	94.5	0	93.6	0	0	0	0	0	96.7	94.4	95.7	100	0	94.1	94.5	94.7
Trucks	6	13	0	19	0	0	0	0	0	7	9	16	0	0	7	7	42
% Trucks	9.4	5.5	0	6.4	0	0	0	0	0	3.3	5.6	4.3	0	0	5.9	5.5	5.3

Accurate Counts
978-664-2565

File Name : 18570002
Site Code : 18570002
Start Date : 3/17/2020
Page No : 6

N/S Street : Route 27
E/W Street : Route 101 EB Ramps
City/State : Exeter, NH
Weather : Rain

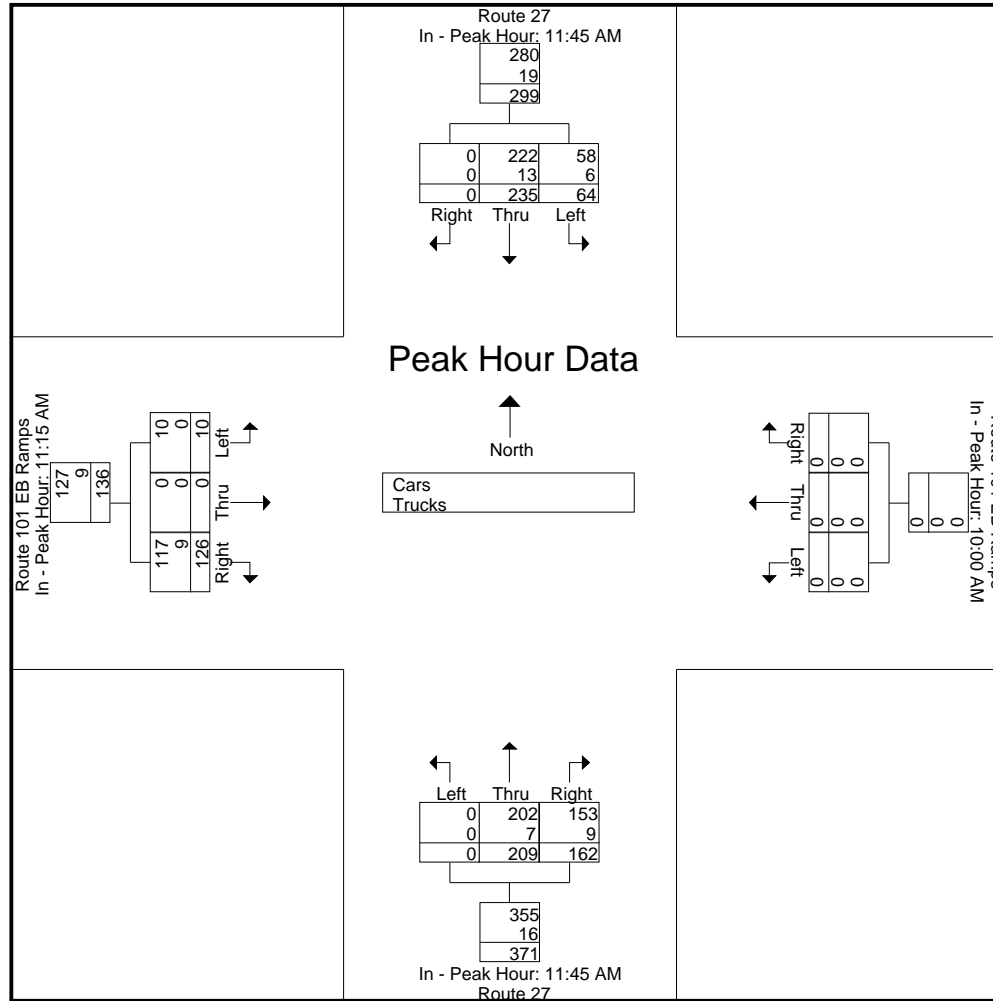


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:45 AM				10:00 AM				11:45 AM				11:15 AM			
+0 mins.	17	55	0	72	0	0	0	0	0	45	43	88	1	0	33	34
+15 mins.	13	47	0	60	0	0	0	0	0	62	49	111	4	0	28	32
+30 mins.	18	68	0	86	0	0	0	0	0	52	36	88	2	0	32	34
+45 mins.	16	65	0	81	0	0	0	0	0	50	34	84	3	0	33	36
Total Volume	64	235	0	299	0	0	0	0	0	209	162	371	10	0	126	136
% App. Total	21.4	78.6	0		0	0	0		0	56.3	43.7		7.4	0	92.6	
PHF	.889	.864	.000	.869	.000	.000	.000	.000	.000	.843	.827	.836	.625	.000	.955	.944
Cars	58	222	0	280	0	0	0	0	0	202	153	355	10	0	117	127
% Cars	90.6	94.5	0	93.6	0	0	0	0	0	96.7	94.4	95.7	100	0	92.9	93.4
Trucks	6	13	0	19	0	0	0	0	0	7	9	16	0	0	9	9

Accurate Counts

978-664-2565



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	15	50	0	65	0	0	0	0	0	103	51	154	2	0	25	27	246
04:15 PM	19	45	0	64	0	0	0	0	0	80	47	127	1	1	33	35	226
04:30 PM	24	45	0	69	0	0	0	0	0	116	70	186	2	0	37	39	294
04:45 PM	10	39	0	49	0	0	0	0	0	82	45	127	8	0	28	36	212
Total Volume	68	179	0	247	0	0	0	0	0	381	213	594	13	1	123	137	978
% App. Total	27.5	72.5	0		0	0	0	0	0	64.1	35.9		9.5	0.7	89.8		
PHF	.708	.895	.000	.895	.000	.000	.000	.000	.000	.821	.761	.798	.406	.250	.831	.878	.832
Cars	67	174	0	241	0	0	0	0	0	377	208	585	13	1	117	131	957
% Cars	98.5	97.2	0	97.6	0	0	0	0	0	99.0	97.7	98.5	100	100	95.1	95.6	97.9
Trucks	1	5	0	6	0	0	0	0	0	4	5	9	0	0	6	6	21
% Trucks	1.5	2.8	0	2.4	0	0	0	0	0	1.0	2.3	1.5	0	0	4.9	4.4	2.1

Accurate Counts

978-664-2565

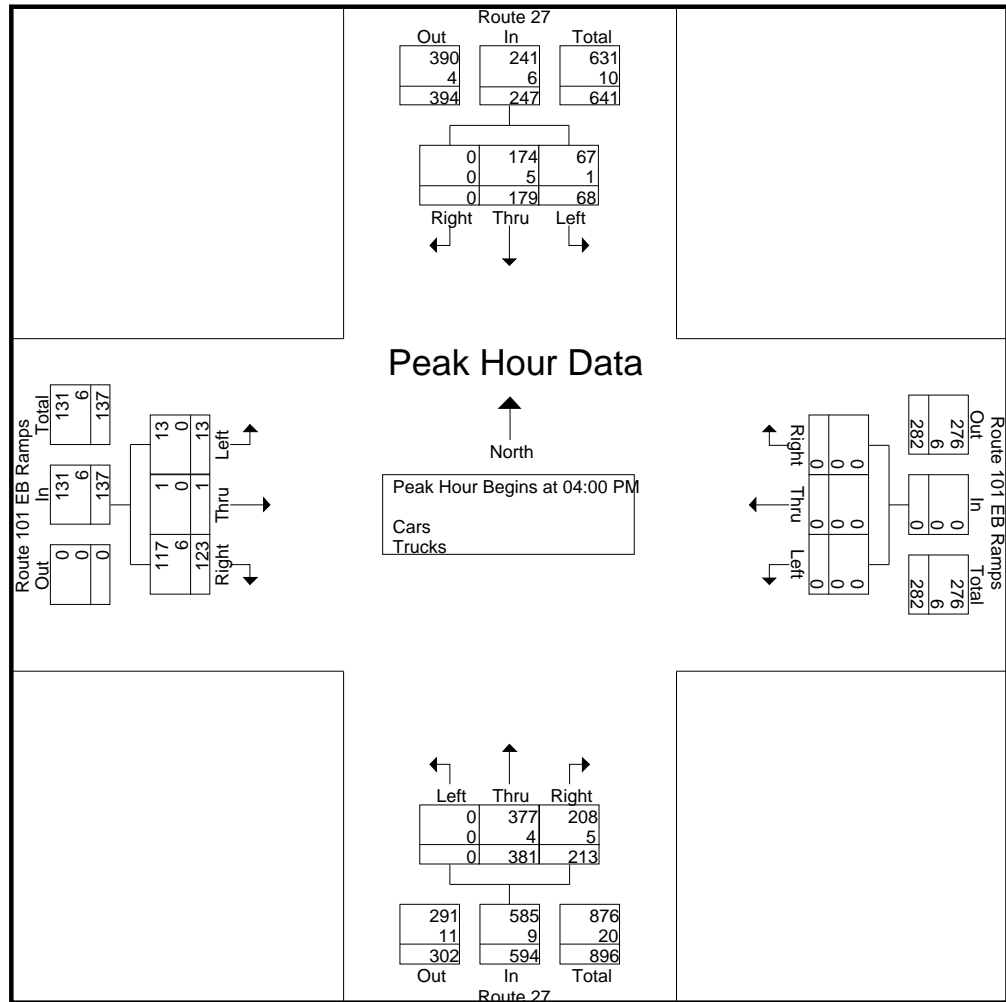
File Name : 18570002

Site Code : 18570002

Start Date : 3/17/2020

Page No : 8

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain

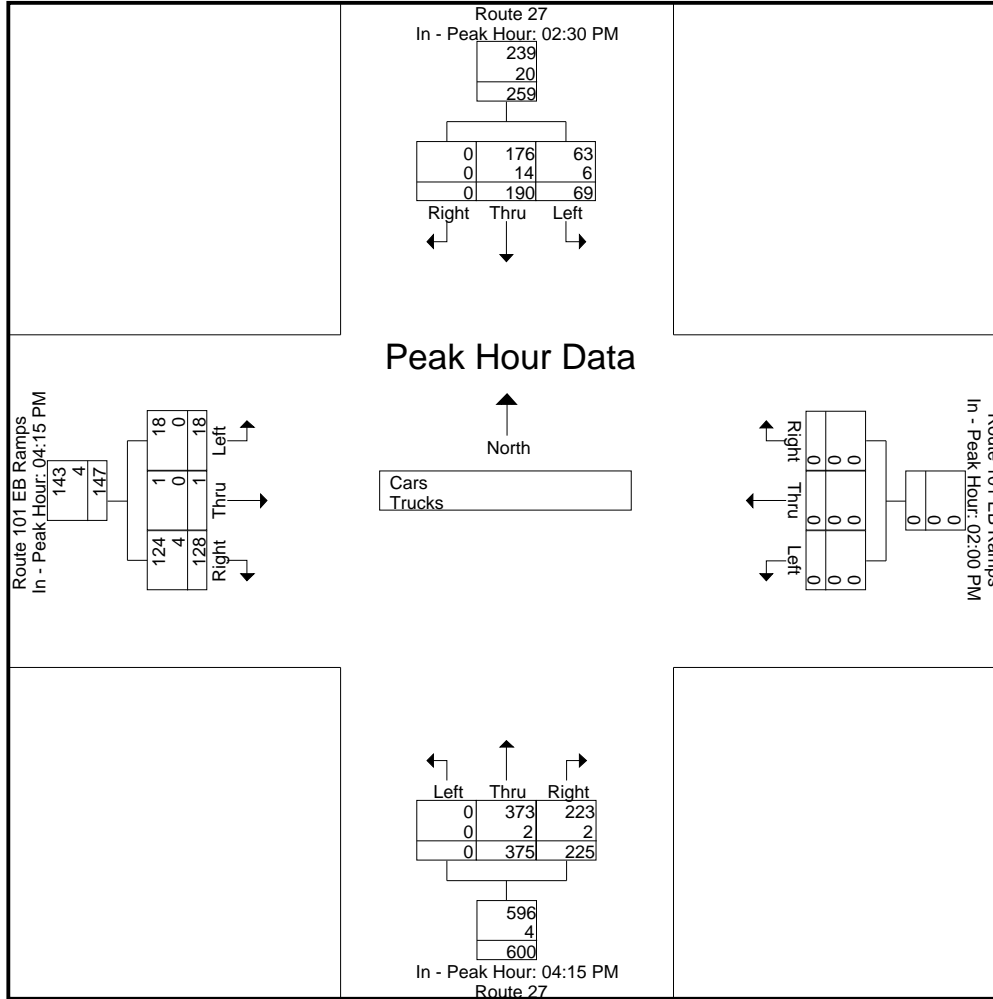


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:30 PM				02:00 PM				04:15 PM				04:15 PM			
+0 mins.	23	46	0	69	0	0	0	0	0	80	47	127	1	1	33	35
+15 mins.	16	44	0	60	0	0	0	0	0	116	70	186	2	0	37	39
+30 mins.	16	49	0	65	0	0	0	0	0	82	45	127	8	0	28	36
+45 mins.	14	51	0	65	0	0	0	0	0	97	63	160	7	0	30	37
Total Volume	69	190	0	259	0	0	0	0	0	375	225	600	18	1	128	147
% App. Total	26.6	73.4	0		0	0	0	0	0	62.5	37.5		12.2	0.7	87.1	
PHF	.750	.931	.000	.938	.000	.000	.000	.000	.000	.808	.804	.806	.563	.250	.865	.942
Cars	63	176	0	239	0	0	0	0	0	373	223	596	18	1	124	143
% Cars	91.3	92.6	0	92.3	0	0	0	0	0	99.5	99.1	99.3	100	100	96.9	97.3
Trucks	6	14	0	20	0	0	0	0	0	2	2	4	0	0	4	4

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain

File Name : 18570002
 Site Code : 18570002
 Start Date : 3/17/2020
 Page No : 18

Groups Printed- Trucks

Start Time	Route 27 From North			Route 101 EB Ramps From East			Route 27 From South			Route 101 EB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	1	3	0	0	0	0	0	1	2	0	0	2	9
07:15 AM	3	1	0	0	0	0	0	3	1	0	0	1	9
07:30 AM	3	1	0	0	0	0	0	2	3	0	0	2	11
07:45 AM	3	2	0	0	0	0	0	0	2	0	0	0	7
Total	10	7	0	0	0	0	0	6	8	0	0	5	36
08:00 AM	1	0	0	0	0	0	0	5	2	1	0	1	10
08:15 AM	1	1	0	0	0	0	0	1	1	0	0	0	4
08:30 AM	1	0	0	0	0	0	0	1	1	0	0	1	4
08:45 AM	4	3	0	0	0	0	0	2	1	0	0	2	12
Total	7	4	0	0	0	0	0	9	5	1	0	4	30
09:00 AM	4	1	0	0	0	0	0	1	3	0	0	1	10
09:15 AM	3	1	0	0	0	0	0	0	2	0	0	1	7
09:30 AM	5	1	0	0	0	0	0	2	1	1	0	2	12
09:45 AM	1	1	0	0	0	0	0	1	3	0	0	0	6
Total	13	4	0	0	0	0	0	4	9	1	0	4	35
10:00 AM	2	2	0	0	0	0	0	2	3	0	0	2	11
10:15 AM	4	2	0	0	0	0	0	2	1	0	0	1	10
10:30 AM	2	2	0	0	0	0	0	1	3	0	0	2	10
10:45 AM	2	0	0	0	0	0	0	2	1	0	0	3	8
Total	10	6	0	0	0	0	0	7	8	0	0	8	39
11:00 AM	1	8	0	0	0	0	0	2	1	0	0	0	12
11:15 AM	4	1	0	0	0	0	0	0	2	0	0	5	12
11:30 AM	1	2	0	0	0	0	0	4	3	0	0	1	11
11:45 AM	3	5	0	0	0	0	0	2	1	0	0	2	13
Total	9	16	0	0	0	0	0	8	7	0	0	8	48
12:00 PM	1	3	0	0	0	0	0	2	3	0	0	1	10
12:15 PM	1	5	0	0	0	0	0	1	2	0	0	3	12
12:30 PM	1	0	0	0	0	0	0	2	3	0	0	1	7
12:45 PM	3	1	0	0	0	0	0	0	1	0	0	0	5
Total	6	9	0	0	0	0	0	5	9	0	0	5	34
01:00 PM	3	5	0	0	0	0	0	0	0	0	0	2	10
01:15 PM	3	2	0	0	0	0	0	0	2	0	0	1	8
01:30 PM	5	3	0	0	0	0	0	2	3	0	0	0	13
01:45 PM	5	4	0	0	0	0	0	2	2	0	0	1	14
Total	16	14	0	0	0	0	0	4	7	0	0	4	45
02:00 PM	2	1	0	0	0	0	0	3	2	0	0	0	8
02:15 PM	0	2	0	0	0	0	0	2	1	0	0	2	7
02:30 PM	4	2	0	0	0	0	0	0	3	0	0	2	11

Accurate Counts

978-664-2565

File Name : 18570002

Site Code : 18570002

Start Date : 3/17/2020

Page No : 19

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Route 101 EB Ramps From East			Route 27 From South			Route 101 EB Ramps From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:45 PM	2	5	0	0	0	0	0	1	5	0	0	3	16
Total	8	10	0	0	0	0	0	6	11	0	0	7	42
03:00 PM	0	5	0	0	0	0	0	1	2	0	0	3	11
03:15 PM	0	2	0	0	0	0	0	4	2	0	0	1	9
03:30 PM	2	1	0	0	0	0	0	2	0	0	0	3	8
03:45 PM	0	2	0	0	0	0	0	0	3	0	0	1	6
Total	2	10	0	0	0	0	0	7	7	0	0	8	34
04:00 PM	0	1	0	0	0	0	0	2	3	0	0	2	8
04:15 PM	0	0	0	0	0	0	0	1	0	0	0	3	4
04:30 PM	1	2	0	0	0	0	0	1	0	0	0	1	5
04:45 PM	0	2	0	0	0	0	0	0	2	0	0	0	4
Total	1	5	0	0	0	0	0	4	5	0	0	6	21
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	0	0	0	0	1	1	0	0	1	4
05:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	2
Total	0	2	0	0	0	0	0	2	3	0	0	1	8
06:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
06:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	1	0	0	0	1	4
Grand Total	82	89	0	0	0	0	0	63	79	2	0	61	376
Apprch %	48	52	0	0	0	0	0	44.4	55.6	3.2	0	96.8	
Total %	21.8	23.7	0	0	0	0	0	16.8	21	0.5	0	16.2	

Start Time	Route 27 From North				Route 101 EB Ramps From East				Route 27 From South				Route 101 EB Ramps From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:45 AM																	
08:45 AM	4	3	0	7	0	0	0	0	0	2	1	3	0	0	2	2	12
09:00 AM	4	1	0	5	0	0	0	0	0	1	3	4	0	0	1	1	10
09:15 AM	3	1	0	4	0	0	0	0	0	0	2	2	0	0	1	1	7
09:30 AM	5	1	0	6	0	0	0	0	0	2	1	3	1	0	2	3	12
Total Volume	16	6	0	22	0	0	0	0	0	5	7	12	1	0	6	7	41
% App. Total	72.7	27.3	0		0	0	0		0	41.7	58.3		14.3	0	85.7		
PHF	.800	.500	.000	.786	.000	.000	.000	.000	.000	.625	.583	.750	.250	.000	.750	.583	.854

Accurate Counts

978-664-2565

File Name : 18570002

Site Code : 18570002

Start Date : 3/17/2020

Page No : 27

N/S Street : Route 27
 E/W Street : Route 101 EB Ramps
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Route 101 EB Ramps From East				Route 27 From South				Route 101 EB Ramps From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
03:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
Grand Total	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	6	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0				
Total %	0	50	0		0	0	0		0	50	0		0	0	0		0	100	

Start Time	Route 27 From North				Route 101 EB Ramps From East				Route 27 From South				Route 101 EB Ramps From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Caras - Trucks

Start Time	Route 27 From North		Route 27 From South		Continental Dr From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00 AM	62	19	7	63	0	1	152
07:15 AM	96	13	7	78	2	1	197
07:30 AM	83	21	7	84	5	2	202
07:45 AM	129	16	12	71	5	5	238
Total	370	69	33	296	12	9	789
08:00 AM	85	13	8	63	6	3	178
08:15 AM	93	11	9	58	9	3	183
08:30 AM	75	9	7	68	6	2	167
08:45 AM	70	14	6	51	3	9	153
Total	323	47	30	240	24	17	681
Grand Total	693	116	63	536	36	26	1470
Apprch %	85.7	14.3	10.5	89.5	58.1	41.9	
Total %	47.1	7.9	4.3	36.5	2.4	1.8	
Caras	672	113	57	512	28	24	1406
% Caras	97	97.4	90.5	95.5	77.8	92.3	95.6
Trucks	21	3	6	24	8	2	64
% Trucks	3	2.6	9.5	4.5	22.2	7.7	4.4

Start Time	Route 27 From North			Route 27 From South			Continental Dr From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	96	13	109	7	78	85	2	1	3	197
07:30 AM	83	21	104	7	84	91	5	2	7	202
07:45 AM	129	16	145	12	71	83	5	5	10	238
08:00 AM	85	13	98	8	63	71	6	3	9	178
Total Volume	393	63	456	34	296	330	18	11	29	815
% App. Total	86.2	13.8		10.3	89.7		62.1	37.9		
PHF	.762	.750	.786	.708	.881	.907	.750	.550	.725	.856
Caras	384	61	445	32	281	313	11	9	20	778
% Caras	97.7	96.8	97.6	94.1	94.9	94.8	61.1	81.8	69.0	95.5
Trucks	9	2	11	2	15	17	7	2	9	37
% Trucks	2.3	3.2	2.4	5.9	5.1	5.2	38.9	18.2	31.0	4.5

Accurate Counts

978-664-2565

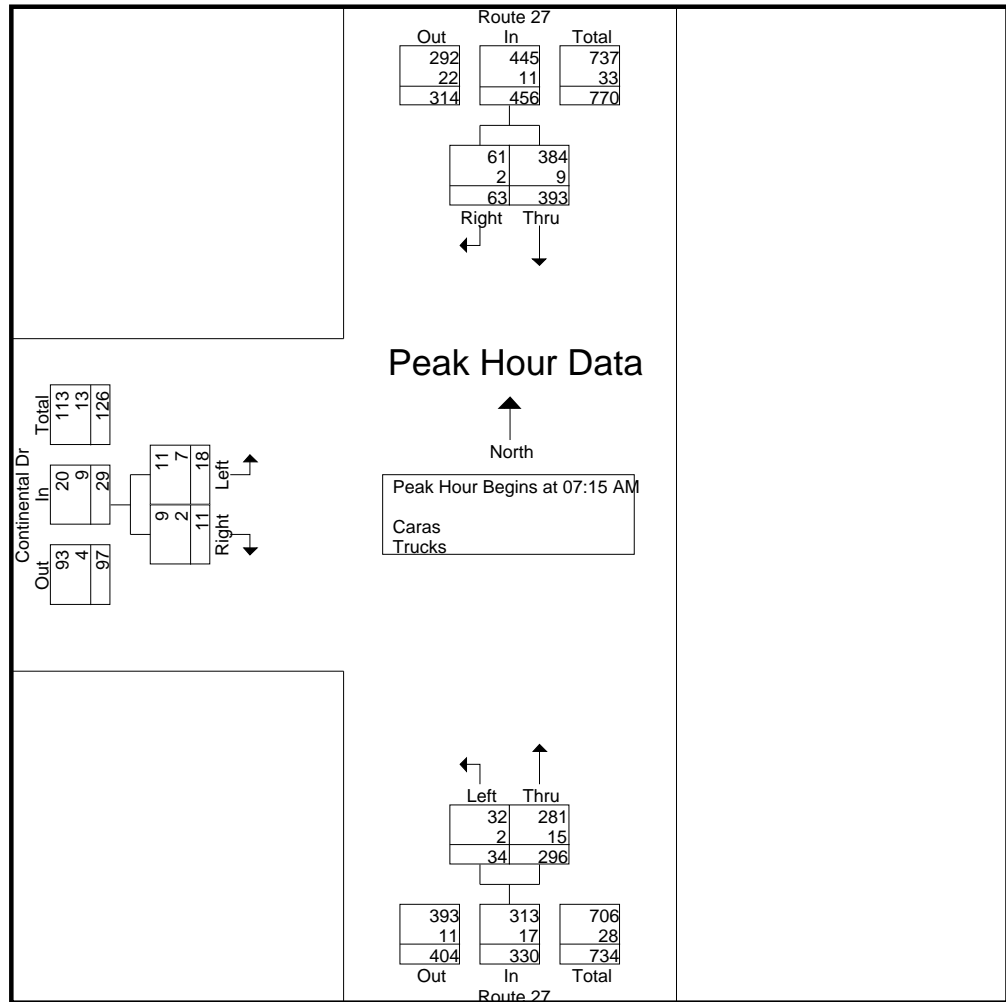
File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

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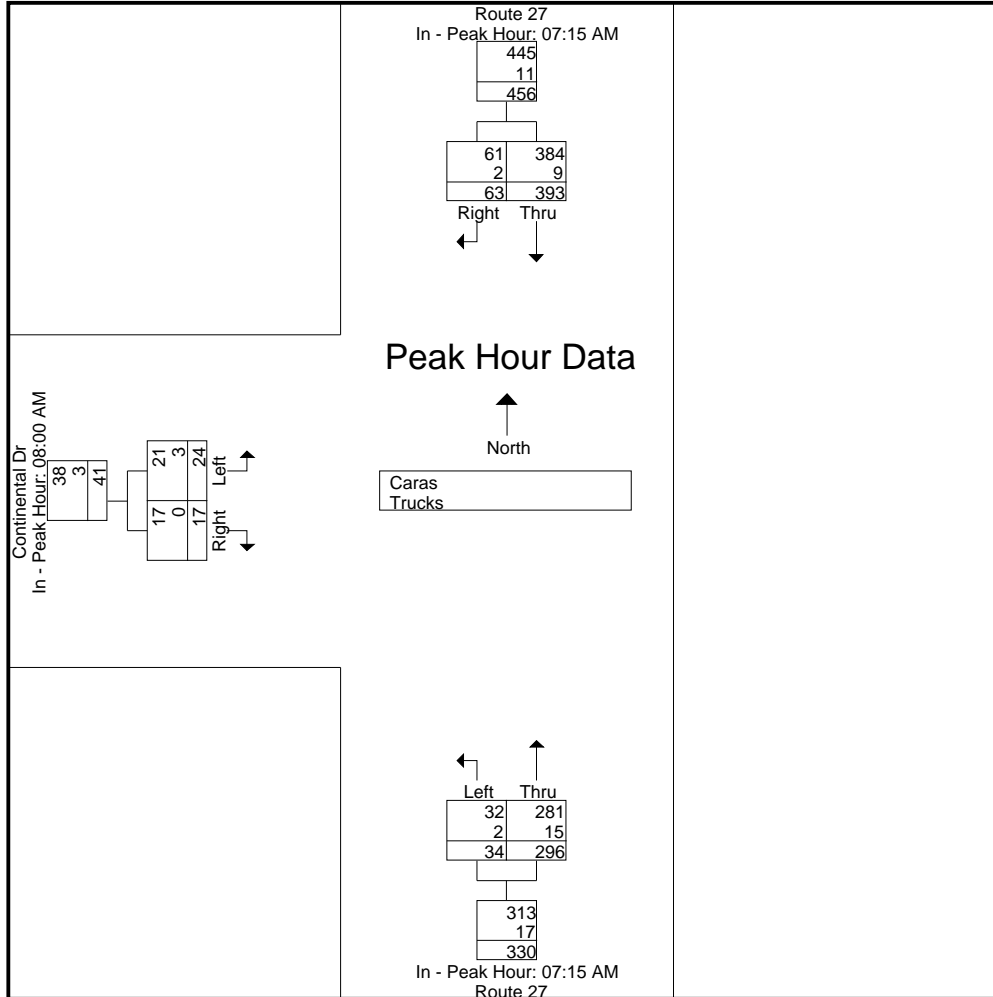
N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			08:00 AM		
+0 mins.	96	13	109	7	78	85	6	3	9
+15 mins.	83	21	104	7	84	91	9	3	12
+30 mins.	129	16	145	12	71	83	6	2	8
+45 mins.	85	13	98	8	63	71	3	9	12
Total Volume	393	63	456	34	296	330	24	17	41
% App. Total	86.2	13.8		10.3	89.7		58.5	41.5	
PHF	.762	.750	.786	.708	.881	.907	.667	.472	.854
Caras	384	61	445	32	281	313	21	17	38
% Caras	97.7	96.8	97.6	94.1	94.9	94.8	87.5	100	92.7
Trucks	9	2	11	2	15	17	3	0	3



Accurate Counts

978-664-2565

File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North		Route 27 From South		Continental Dr From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00 AM	3	1	2	2	0	0	8
07:15 AM	2	0	1	6	2	1	12
07:30 AM	1	2	0	3	2	0	8
07:45 AM	4	0	0	1	1	1	7
Total	10	3	3	12	5	2	35
08:00 AM	2	0	1	5	2	0	10
08:15 AM	3	0	0	0	1	0	4
08:30 AM	1	0	1	4	0	0	6
08:45 AM	5	0	1	3	0	0	9
Total	11	0	3	12	3	0	29
Grand Total	21	3	6	24	8	2	64
Apprch %	87.5	12.5	20	80	80	20	
Total %	32.8	4.7	9.4	37.5	12.5	3.1	

Start Time	Route 27 From North			Route 27 From South			Continental Dr From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	0	2	1	6	7	2	1	3	12
07:30 AM	1	2	3	0	3	3	2	0	2	8
07:45 AM	4	0	4	0	1	1	1	1	2	7
08:00 AM	2	0	2	1	5	6	2	0	2	10
Total Volume	9	2	11	2	15	17	7	2	9	37
% App. Total	81.8	18.2		11.8	88.2		77.8	22.2		
PHF	.563	.250	.688	.500	.625	.607	.875	.500	.750	.771

Accurate Counts

978-664-2565

File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Caras - Trucks

Start Time	Route 27 From North		Route 27 From South			Continental Dr From West			Int. Total
	Thru	Right	Left	Thru	Left	Right			
04:00 PM	71	2	3	130	14	12	232		
04:15 PM	77	2	2	101	22	6	210		
04:30 PM	79	2	3	151	29	9	273		
04:45 PM	67	2	1	109	13	11	203		
Total	294	8	9	491	78	38	918		
05:00 PM	58	2	1	139	31	7	238		
05:15 PM	58	2	1	91	18	4	174		
05:30 PM	68	0	1	97	14	8	188		
05:45 PM	63	3	1	64	8	7	146		
Total	247	7	4	391	71	26	746		
Grand Total	541	15	13	882	149	64	1664		
Apprch %	97.3	2.7	1.5	98.5	70	30			
Total %	32.5	0.9	0.8	53	9	3.8			
Caras	524	13	13	868	147	64	1629		
% Caras	96.9	86.7	100	98.4	98.7	100	97.9		
Trucks	17	2	0	14	2	0	35		
% Trucks	3.1	13.3	0	1.6	1.3	0	2.1		

Start Time	Route 27 From North			Route 27 From South			Continental Dr From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	77	2	79	2	101	103	22	6	28	210
04:30 PM	79	2	81	3	151	154	29	9	38	273
04:45 PM	67	2	69	1	109	110	13	11	24	203
05:00 PM	58	2	60	1	139	140	31	7	38	238
Total Volume	281	8	289	7	500	507	95	33	128	924
% App. Total	97.2	2.8		1.4	98.6		74.2	25.8		
PHF	.889	1.00	.892	.583	.828	.823	.766	.750	.842	.846
Caras	268	7	275	7	495	502	94	33	127	904
% Caras	95.4	87.5	95.2	100	99.0	99.0	98.9	100	99.2	97.8
Trucks	13	1	14	0	5	5	1	0	1	20
% Trucks	4.6	12.5	4.8	0	1.0	1.0	1.1	0	0.8	2.2

Accurate Counts

978-664-2565

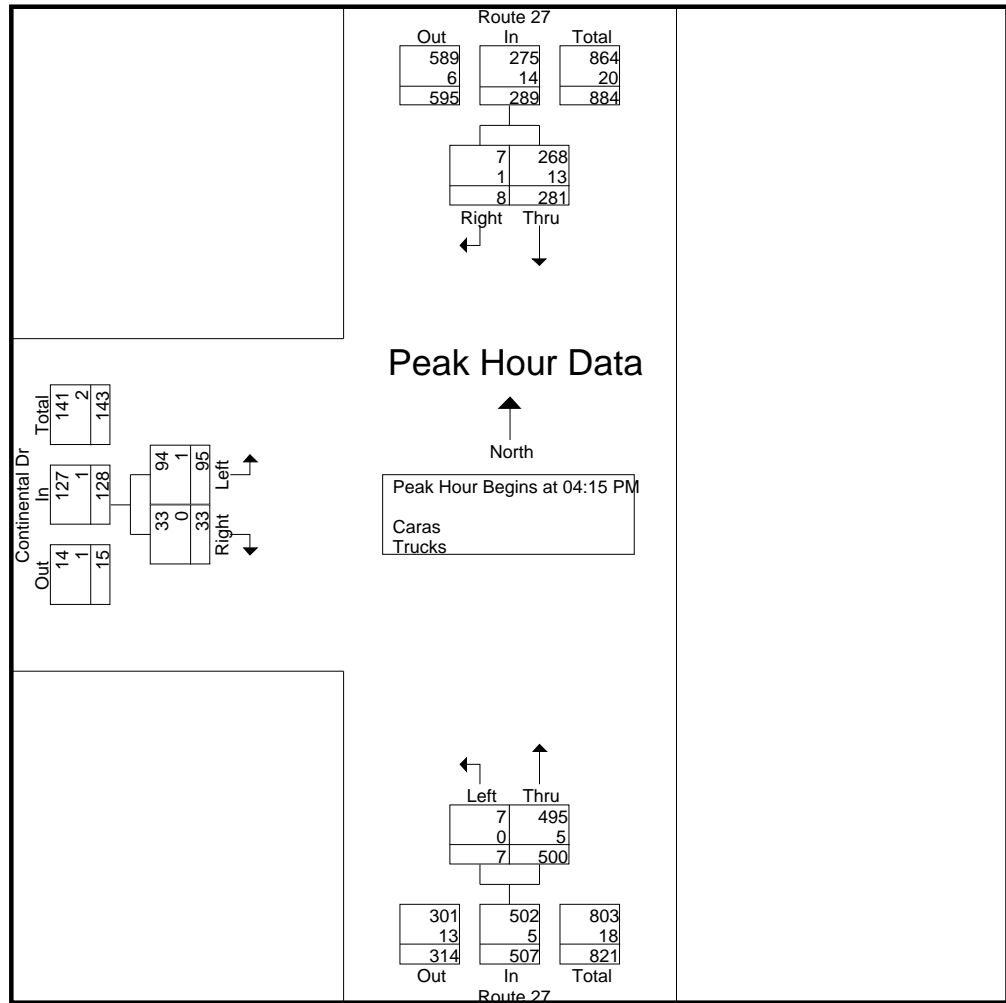
File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

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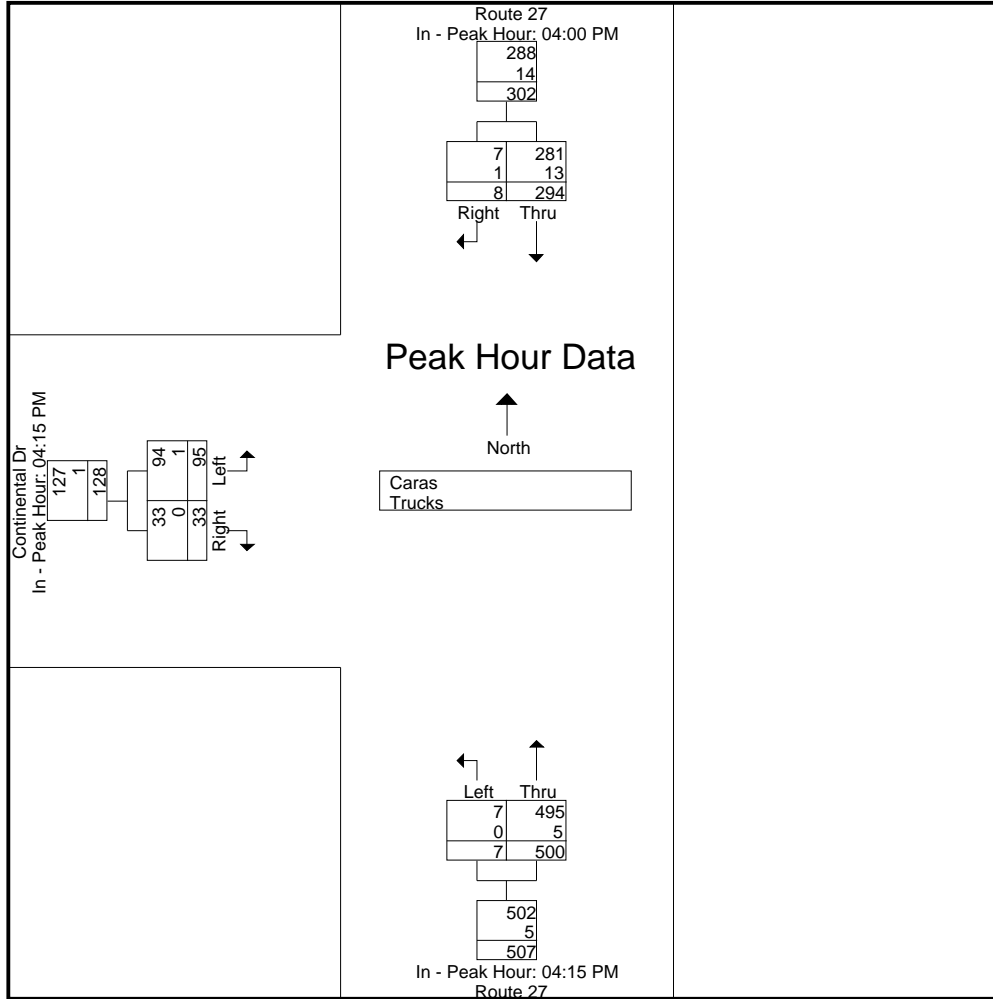
N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:15 PM		
+0 mins.	71	2	73	2	101	103	22	6	28
+15 mins.	77	2	79	3	151	154	29	9	38
+30 mins.	79	2	81	1	109	110	13	11	24
+45 mins.	67	2	69	1	139	140	31	7	38
Total Volume	294	8	302	7	500	507	95	33	128
% App. Total	97.4	2.6		1.4	98.6		74.2	25.8	
PHF	.930	1.000	.932	.583	.828	.823	.766	.750	.842
Caras	281	7	288	7	495	502	94	33	127
% Caras	95.6	87.5	95.4	100	99	99	98.9	100	99.2
Trucks	13	1	14	0	5	5	1	0	1



Accurate Counts

978-664-2565

File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North		Route 27 From South		Continental Dr From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
04:00 PM	2	0	0	6	0	0	8
04:15 PM	3	1	0	2	0	0	6
04:30 PM	5	0	0	1	0	0	6
04:45 PM	3	0	0	1	1	0	5
Total	13	1	0	10	1	0	25
05:00 PM	2	0	0	1	0	0	3
05:15 PM	2	1	0	1	0	0	4
05:30 PM	0	0	0	1	1	0	2
05:45 PM	0	0	0	1	0	0	1
Total	4	1	0	4	1	0	10
Grand Total	17	2	0	14	2	0	35
Apprch %	89.5	10.5	0	100	100	0	
Total %	48.6	5.7	0	40	5.7	0	

Start Time	Route 27 From North			Route 27 From South			Continental Dr From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	2	0	2	0	6	6	0	0	0	8
04:15 PM	3	1	4	0	2	2	0	0	0	6
04:30 PM	5	0	5	0	1	1	0	0	0	6
04:45 PM	3	0	3	0	1	1	1	0	1	5
Total Volume	13	1	14	0	10	10	1	0	1	25
% App. Total	92.9	7.1		0	100		100	0		
PHF	.650	.250	.700	.000	.417	.417	.250	.000	.250	.781

Accurate Counts

978-664-2565

File Name : 18570003

Site Code : 18570003

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27
 E/W Street : Continental Drive
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North			Route 27 From South			Continental Dr From West			Exclu. Total	Inclu. Total	Int. Total
	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	0	0	0	0	0	0	0	0	0	1	1
05:15 PM	0	0	0	0	1	0	0	0	0	0	1	1
05:30 PM	1	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	1	0	0	0	0	0	3	3
Grand Total	2	0	0	0	1	0	0	0	0	0	3	3
Apprch %	100	0		0	100		0	0				
Total %	66.7	0		0	33.3		0	0			100	

Start Time	Route 27 From North			Route 27 From South			Continental Dr From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	0	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	1	1	0	0	0	1
05:30 PM	1	0	1	0	0	0	0	0	0	1
Total Volume	2	0	2	0	1	1	0	0	0	3
% App. Total	100	0		0	100		0	0		
PHF	.500	.000	.500	.000	.250	.250	.000	.000	.000	.750

Accurate Counts

978-664-2565

File Name : 18570004

Site Code : 18570004

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Industrial Drive North
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North		Industrial Drive North From East		Route 27 From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	11	41	0	2	68	3	125
07:15 AM	20	71	0	5	79	0	175
07:30 AM	22	38	0	4	85	1	150
07:45 AM	46	82	0	5	80	2	215
Total	99	232	0	16	312	6	665
08:00 AM	36	55	0	7	63	4	165
08:15 AM	32	56	1	5	63	4	161
08:30 AM	12	59	0	4	68	0	143
08:45 AM	17	61	0	3	57	1	139
Total	97	231	1	19	251	9	608
Grand Total	196	463	1	35	563	15	1273
Apprch %	29.7	70.3	2.8	97.2	97.4	2.6	
Total %	15.4	36.4	0.1	2.7	44.2	1.2	
Cars	193	450	1	30	543	14	1231
% Cars	98.5	97.2	100	85.7	96.4	93.3	96.7
Trucks	3	13	0	5	20	1	42
% Trucks	1.5	2.8	0	14.3	3.6	6.7	3.3

Start Time	Route 27 From North			Industrial Drive North From East			Route 27 From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	20	71	91	0	5	5	79	0	79	175
07:30 AM	22	38	60	0	4	4	85	1	86	150
07:45 AM	46	82	128	0	5	5	80	2	82	215
08:00 AM	36	55	91	0	7	7	63	4	67	165
Total Volume	124	246	370	0	21	21	307	7	314	705
% App. Total	33.5	66.5		0	100		97.8	2.2		
PHF	.674	.750	.723	.000	.750	.750	.903	.438	.913	.820
Cars	124	238	362	0	18	18	296	6	302	682
% Cars	100	96.7	97.8	0	85.7	85.7	96.4	85.7	96.2	96.7
Trucks	0	8	8	0	3	3	11	1	12	23
% Trucks	0	3.3	2.2	0	14.3	14.3	3.6	14.3	3.8	3.3

Accurate Counts

978-664-2565

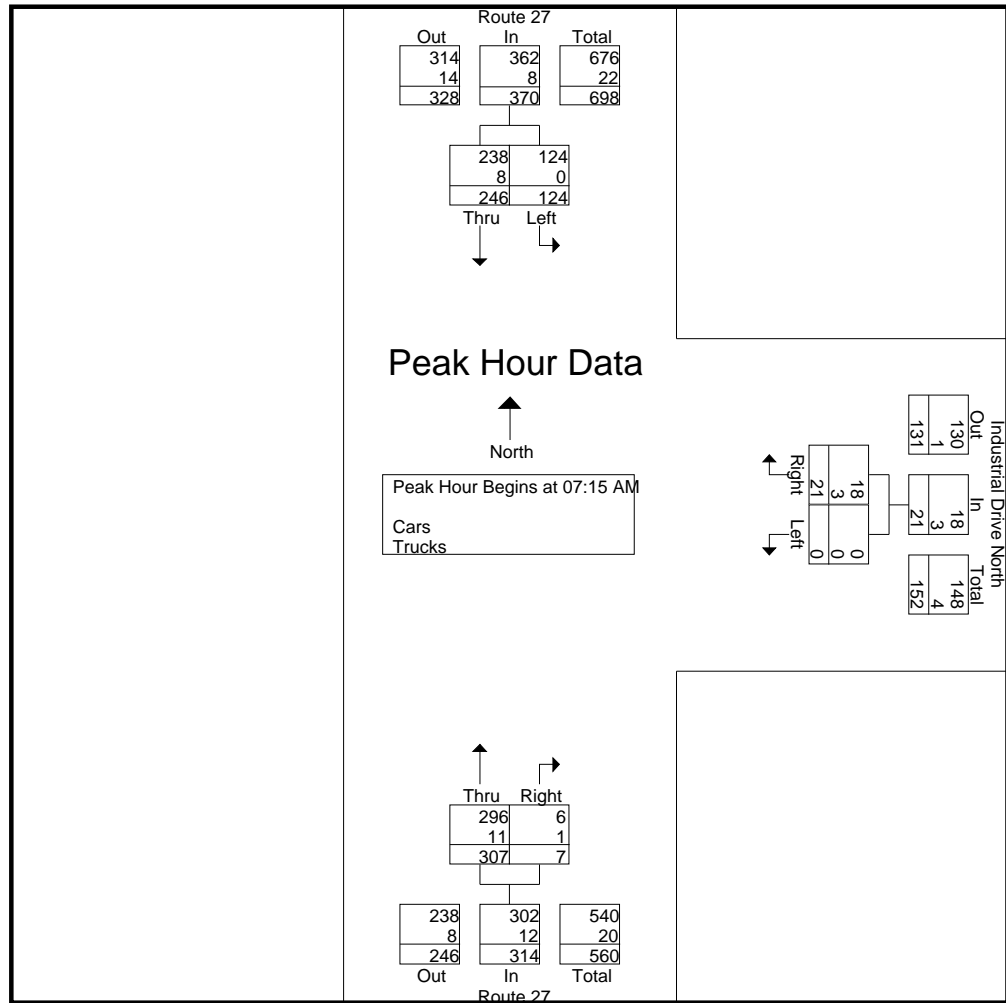
File Name : 18570004

Site Code : 18570004

Start Date : 3/17/2020

Page No : 2

N/S Street : Route 27
 E/W Street : Industrial Drive North
 City/State : Exeter, NH
 Weather : Rain

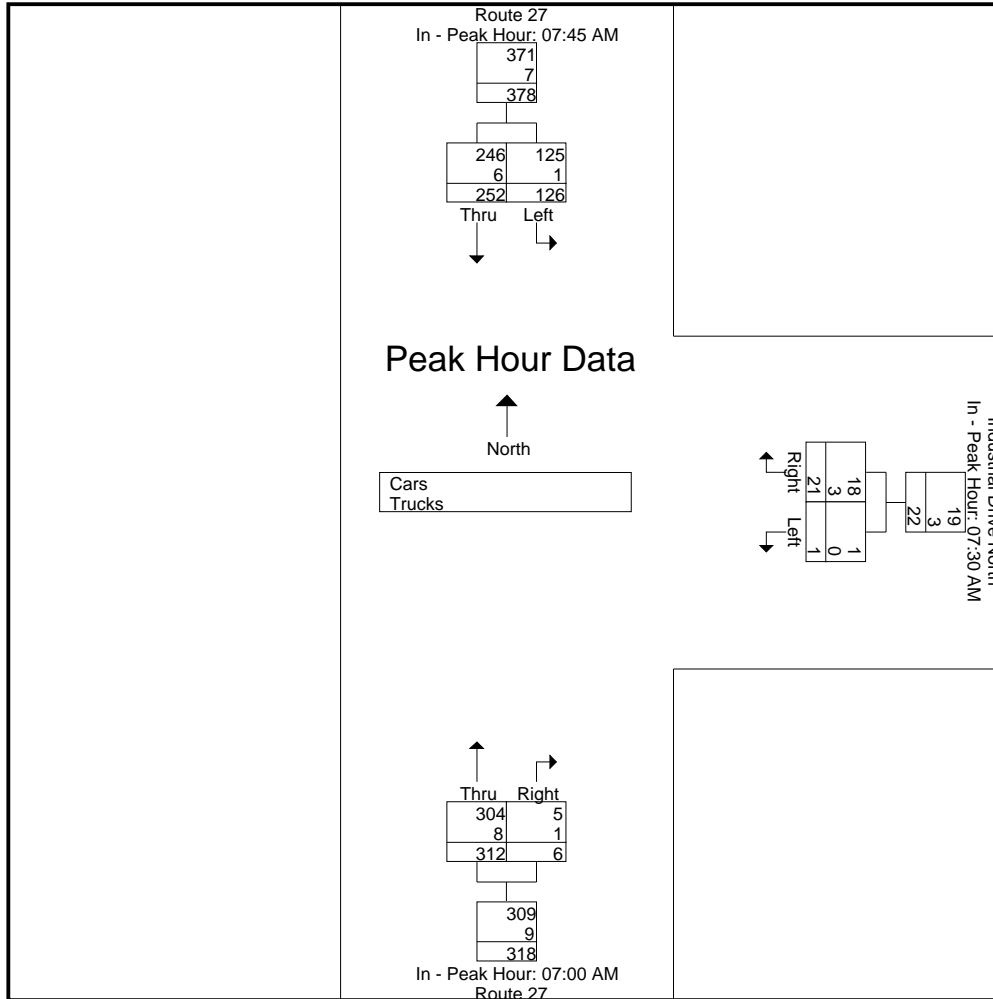


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM			07:30 AM			07:00 AM		
+0 mins.	46	82	128	0	4	4	68	3	71
+15 mins.	36	55	91	0	5	5	79	0	79
+30 mins.	32	56	88	0	7	7	85	1	86
+45 mins.	12	59	71	1	5	6	80	2	82
Total Volume	126	252	378	1	21	22	312	6	318
% App. Total	33.3	66.7		4.5	95.5		98.1	1.9	
PHF	.685	.768	.738	.250	.750	.786	.918	.500	.924
Cars	125	246	371	1	18	19	304	5	309
% Cars	99.2	97.6	98.1	100	85.7	86.4	97.4	83.3	97.2
Trucks	1	6	7	0	3	3	8	1	9

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570004

Site Code : 18570004

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Industrial Drive North
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North		Industrial Drive North From East		Route 27 From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	1	2	0	1	2	0	6
07:15 AM	0	3	0	0	5	0	8
07:30 AM	0	0	0	1	0	1	2
07:45 AM	0	3	0	0	1	0	4
Total	1	8	0	2	8	1	20
08:00 AM	0	2	0	2	5	0	9
08:15 AM	1	1	0	0	1	0	3
08:30 AM	0	0	0	1	3	0	4
08:45 AM	1	2	0	0	3	0	6
Total	2	5	0	3	12	0	22
Grand Total	3	13	0	5	20	1	42
Apprch %	18.8	81.2	0	100	95.2	4.8	
Total %	7.1	31	0	11.9	47.6	2.4	

Start Time	Route 27 From North			Industrial Drive North From East			Route 27 From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	3	3	0	0	0	5	0	5	8
07:30 AM	0	0	0	0	1	1	0	1	1	2
07:45 AM	0	3	3	0	0	0	1	0	1	4
08:00 AM	0	2	2	0	2	2	5	0	5	9
Total Volume	0	8	8	0	3	3	11	1	12	23
% App. Total	0	100		0	100		91.7	8.3		
PHF	.000	.667	.667	.000	.375	.375	.550	.250	.600	.639

Accurate Counts

978-664-2565

File Name : 18570004

Site Code : 18570004

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Industrial Drive North
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North		Industrial Drive North From East		Route 27 From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	2	83	2	17	96	2	202
04:15 PM	6	76	4	29	60	1	176
04:30 PM	5	79	2	64	85	3	238
04:45 PM	4	77	2	31	72	2	188
Total	17	315	10	141	313	8	804
05:00 PM	1	65	1	39	90	3	199
05:15 PM	2	66	2	13	73	1	157
05:30 PM	1	78	1	14	77	1	172
05:45 PM	3	66	0	8	53	2	132
Total	7	275	4	74	293	7	660
Grand Total	24	590	14	215	606	15	1464
Apprch %	3.9	96.1	6.1	93.9	97.6	2.4	
Total %	1.6	40.3	1	14.7	41.4	1	
Cars	22	579	14	213	599	15	1442
% Cars	91.7	98.1	100	99.1	98.8	100	98.5
Trucks	2	11	0	2	7	0	22
% Trucks	8.3	1.9	0	0.9	1.2	0	1.5

Start Time	Route 27 From North			Industrial Drive North From East			Route 27 From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	2	83	85	2	17	19	96	2	98	202
04:15 PM	6	76	82	4	29	33	60	1	61	176
04:30 PM	5	79	84	2	64	66	85	3	88	238
04:45 PM	4	77	81	2	31	33	72	2	74	188
Total Volume	17	315	332	10	141	151	313	8	321	804
% App. Total	5.1	94.9		6.6	93.4		97.5	2.5		
PHF	.708	.949	.976	.625	.551	.572	.815	.667	.819	.845
Cars	16	306	322	10	140	150	307	8	315	787
% Cars	94.1	97.1	97.0	100	99.3	99.3	98.1	100	98.1	97.9
Trucks	1	9	10	0	1	1	6	0	6	17
% Trucks	5.9	2.9	3.0	0	0.7	0.7	1.9	0	1.9	2.1

Accurate Counts

978-664-2565

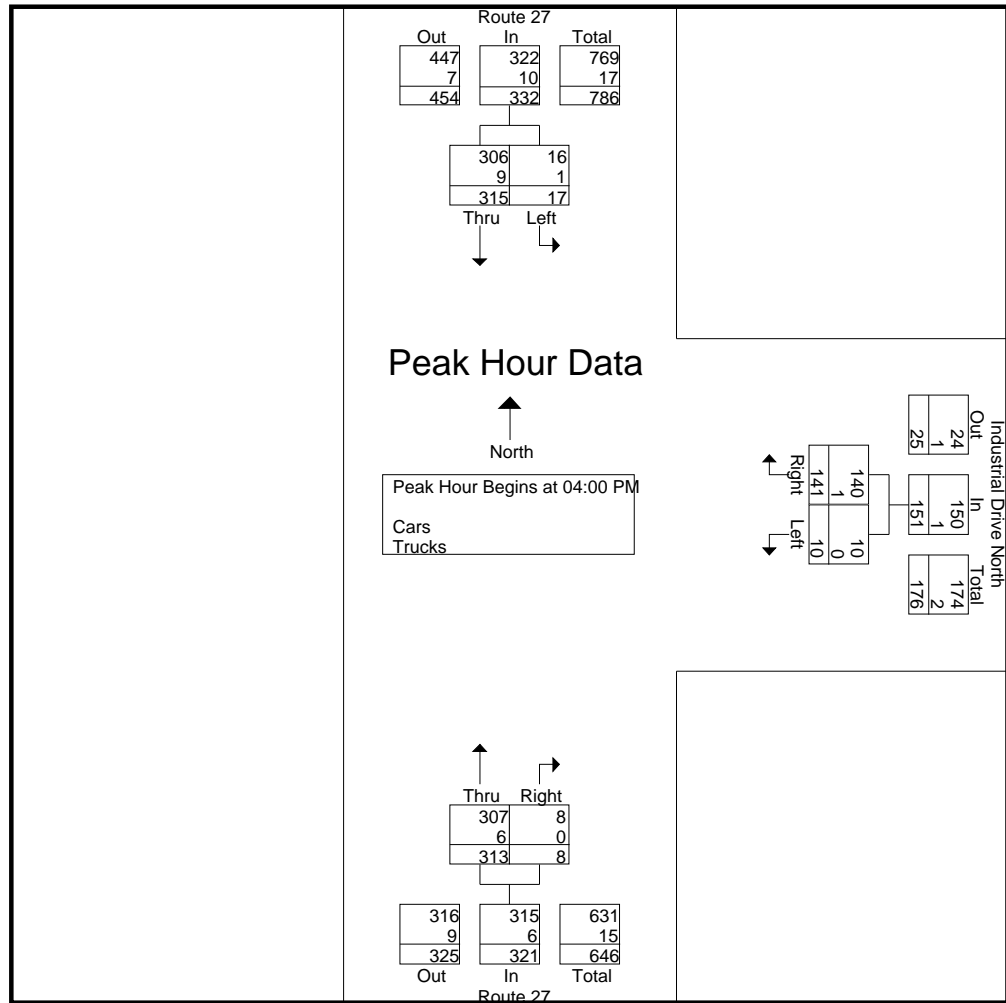
File Name : 18570004

Site Code : 18570004

Start Date : 3/17/2020

Page No : 2

N/S Street : Route 27
 E/W Street : Industrial Drive North
 City/State : Exeter, NH
 Weather : Rain

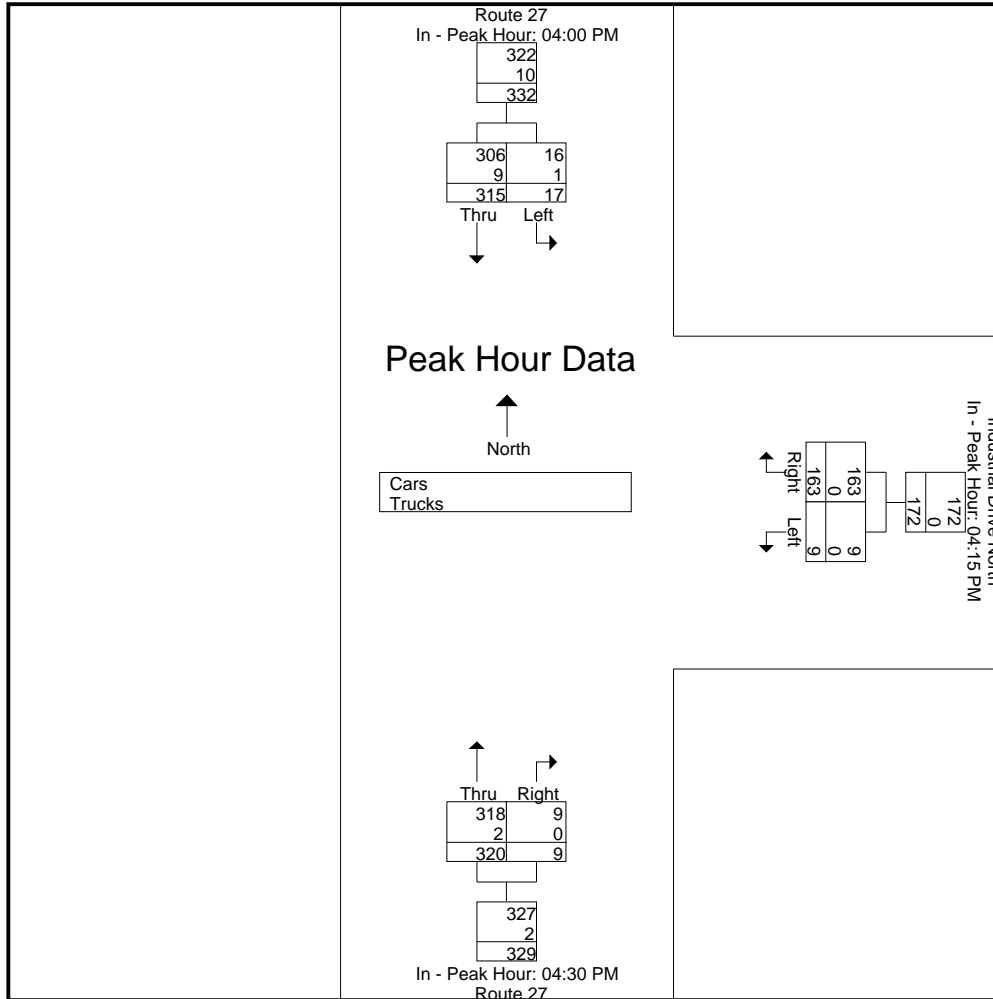


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:30 PM		
+0 mins.	2	83	85	4	29	33	85	3	88
+15 mins.	6	76	82	2	64	66	72	2	74
+30 mins.	5	79	84	2	31	33	90	3	93
+45 mins.	4	77	81	1	39	40	73	1	74
Total Volume	17	315	332	9	163	172	320	9	329
% App. Total	5.1	94.9		5.2	94.8		97.3	2.7	
PHF	.708	.949	.976	.563	.637	.652	.889	.750	.884
Cars	16	306	322	9	163	172	318	9	327
% Cars	94.1	97.1	97	100	100	100	99.4	100	99.4
Trucks	1	9	10	0	0	0	2	0	2

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570004

Site Code : 18570004

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Industrial Drive North
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North		Industrial Drive North From East		Route 27 From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	4	0	1	3	0	8
04:15 PM	0	2	0	0	2	0	4
04:30 PM	0	2	0	0	1	0	3
04:45 PM	1	1	0	0	0	0	2
Total	1	9	0	1	6	0	17
05:00 PM	1	0	0	0	1	0	2
05:15 PM	0	2	0	1	0	0	3
05:30 PM	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0
Total	1	2	0	1	1	0	5
Grand Total	2	11	0	2	7	0	22
Apprch %	15.4	84.6	0	100	100	0	
Total %	9.1	50	0	9.1	31.8	0	

Start Time	Route 27 From North			Industrial Drive North From East			Route 27 From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	4	4	0	1	1	3	0	3	8
04:15 PM	0	2	2	0	0	0	2	0	2	4
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	1	1	2	0	0	0	0	0	0	2
Total Volume	1	9	10	0	1	1	6	0	6	17
% App. Total	10	90		0	100		100	0		
PHF	.250	.563	.625	.000	.250	.250	.500	.000	.500	.531

Accurate Counts

978-664-2565

File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Industrial Dr South From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	7	33	0	0	0	0	0	70	10	0	0	0	120
07:15 AM	14	53	1	3	0	1	0	80	9	1	0	0	162
07:30 AM	8	28	0	2	0	3	0	90	8	0	0	0	139
07:45 AM	14	57	0	0	0	4	1	87	12	0	0	0	175
Total	43	171	1	5	0	8	1	327	39	1	0	0	596
08:00 AM	15	38	0	3	0	4	2	63	11	0	0	0	136
08:15 AM	15	34	0	3	0	0	2	64	17	1	0	3	139
08:30 AM	18	47	1	2	0	3	0	67	10	0	0	0	148
08:45 AM	5	48	1	1	0	5	1	61	9	0	0	1	132
Total	53	167	2	9	0	12	5	255	47	1	0	4	555
Grand Total	96	338	3	14	0	20	6	582	86	2	0	4	1151
Apprch %	22	77.3	0.7	41.2	0	58.8	0.9	86.4	12.8	33.3	0	66.7	
Total %	8.3	29.4	0.3	1.2	0	1.7	0.5	50.6	7.5	0.2	0	0.3	
Cars	94	325	2	14	0	19	6	568	84	2	0	4	1118
% Cars	97.9	96.2	66.7	100	0	95	100	97.6	97.7	100	0	100	97.1
Trucks	2	13	1	0	0	1	0	14	2	0	0	0	33
% Trucks	2.1	3.8	33.3	0	0	5	0	2.4	2.3	0	0	0	2.9

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	14	53	1	68	3	0	1	4	0	80	9	89	1	0	0	1	162
07:30 AM	8	28	0	36	2	0	3	5	0	90	8	98	0	0	0	0	139
07:45 AM	14	57	0	71	0	0	4	4	1	87	12	100	0	0	0	0	175
08:00 AM	15	38	0	53	3	0	4	7	2	63	11	76	0	0	0	0	136
Total Volume	51	176	1	228	8	0	12	20	3	320	40	363	1	0	0	1	612
% App. Total	22.4	77.2	0.4		40	0	60		0.8	88.2	11		100	0	0		
PHF	.850	.772	.250	.803	.667	.000	.750	.714	.375	.889	.833	.908	.250	.000	.000	.250	.874
Cars	50	168	0	218	8	0	11	19	3	313	38	354	1	0	0	1	592
% Cars	98.0	95.5	0	95.6	100	0	91.7	95.0	100	97.8	95.0	97.5	100	0	0	100	96.7
Trucks	1	8	1	10	0	0	1	1	0	7	2	9	0	0	0	0	20
% Trucks	2.0	4.5	100	4.4	0	0	8.3	5.0	0	2.2	5.0	2.5	0	0	0	0	3.3

Accurate Counts

978-664-2565

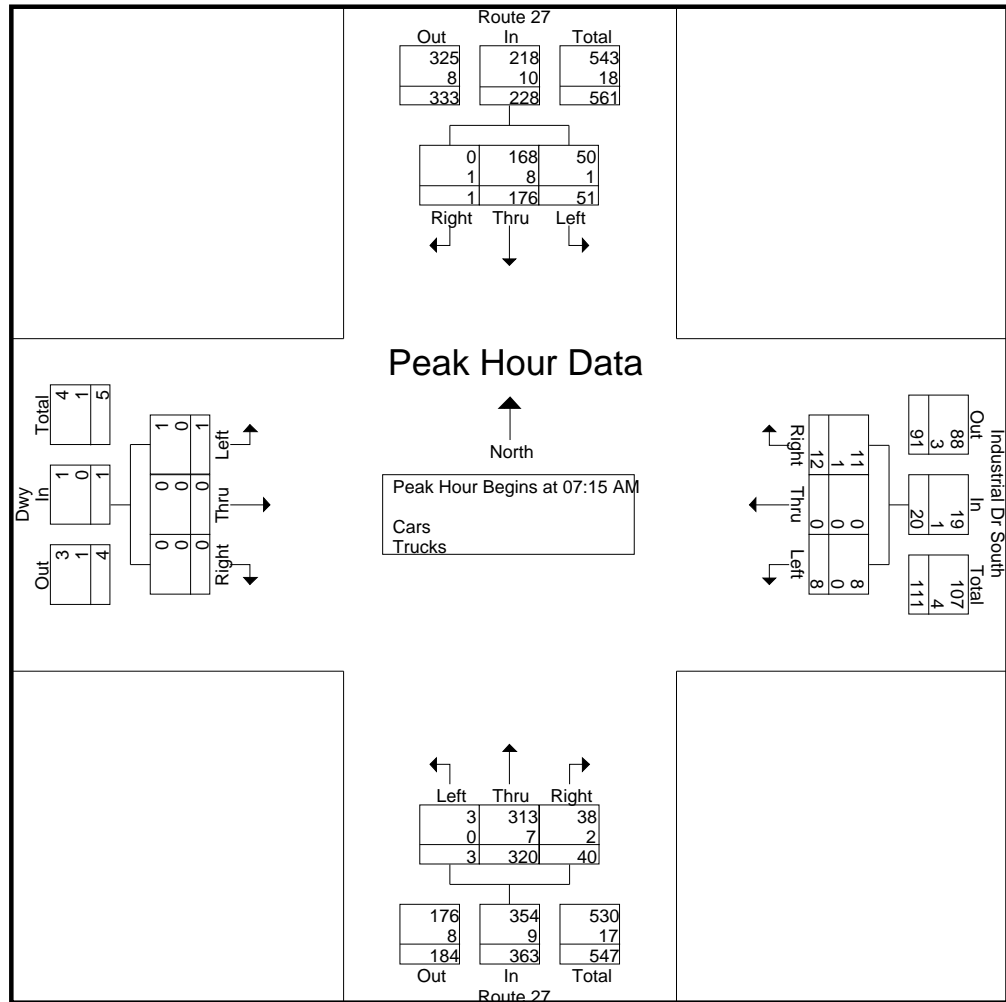
File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 2

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

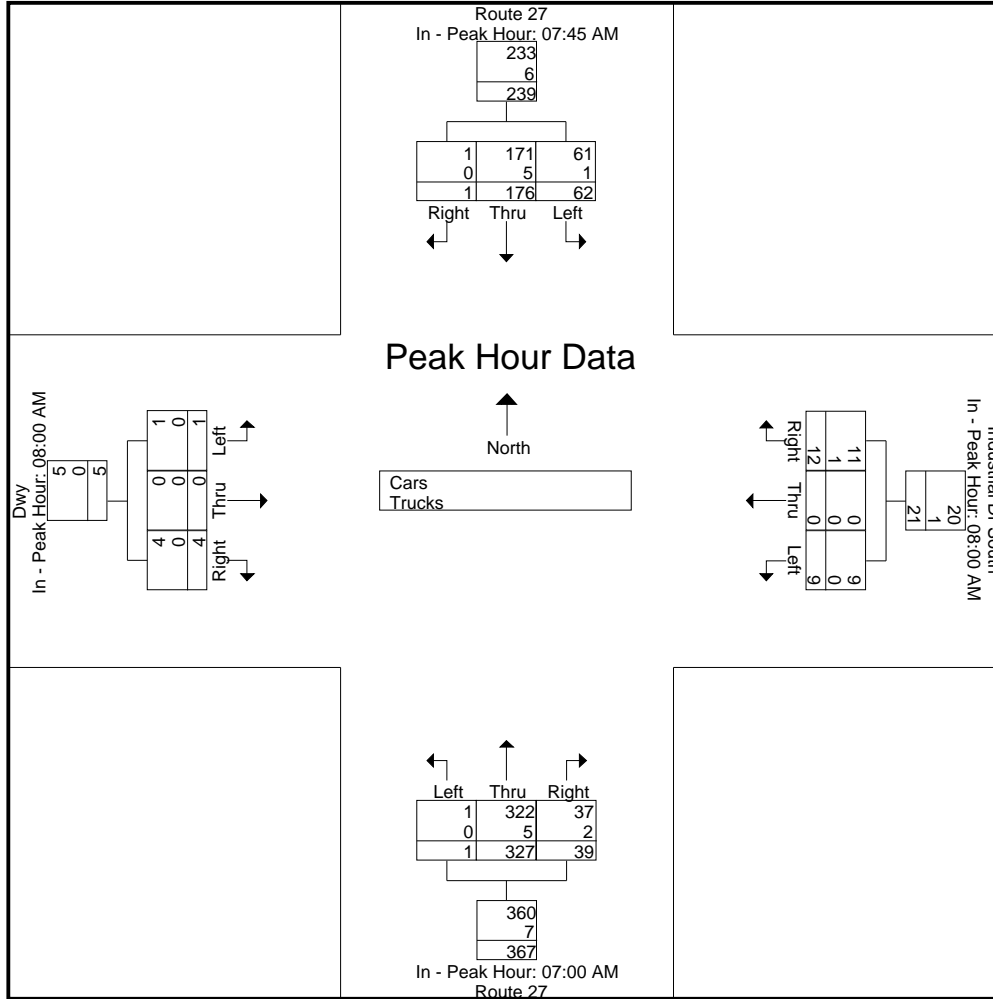


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:00 AM				08:00 AM			
+0 mins.	14	57	0	71	3	0	4	7	0	70	10	80	0	0	0	0
+15 mins.	15	38	0	53	3	0	0	3	0	80	9	89	1	0	3	4
+30 mins.	15	34	0	49	2	0	3	5	0	90	8	98	0	0	0	0
+45 mins.	18	47	1	66	1	0	5	6	1	87	12	100	0	0	1	1
Total Volume	62	176	1	239	9	0	12	21	1	327	39	367	1	0	4	5
% App. Total	25.9	73.6	0.4		42.9	0	57.1		0.3	89.1	10.6		20	0	80	
PHF	.861	.772	.250	.842	.750	.000	.600	.750	.250	.908	.813	.918	.250	.000	.333	.313
Cars	61	171	1	233	9	0	11	20	1	322	37	360	1	0	4	5
% Cars	98.4	97.2	100	97.5	100	0	91.7	95.2	100	98.5	94.9	98.1	100	0	100	100
Trucks	1	5	0	6	0	0	1	1	0	5	2	7	0	0	0	0

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Industrial Dr South From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	4	1	0	0	0	0	3	0	0	0	0	8
07:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
07:45 AM	1	2	0	0	0	0	0	1	1	0	0	0	5
Total	1	8	1	0	0	0	0	5	2	0	0	0	17
08:00 AM	0	2	0	0	0	1	0	2	0	0	0	0	5
08:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
08:45 AM	1	2	0	0	0	0	0	3	0	0	0	0	6
Total	1	5	0	0	0	1	0	9	0	0	0	0	16
Grand Total	2	13	1	0	0	1	0	14	2	0	0	0	33
Apprch %	12.5	81.2	6.2	0	0	100	0	87.5	12.5	0	0	0	
Total %	6.1	39.4	3	0	0	3	0	42.4	6.1	0	0	0	

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	4	1	5	0	0	0	0	0	3	0	3	0	0	0	0	8
07:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
07:45 AM	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
08:00 AM	0	2	0	2	0	0	1	1	0	2	0	2	0	0	0	0	5
Total Volume	1	8	1	10	0	0	1	1	0	7	2	9	0	0	0	0	20
% App. Total	10	80	10		0	0	100		0	77.8	22.2		0	0	0		
PHF	.250	.500	.250	.500	.000	.000	.250	.250	.000	.583	.500	.750	.000	.000	.000	.000	.625

Accurate Counts

978-664-2565

File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %																	0	0	

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Industrial Dr South From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	7	78	1	8	0	18	0	75	4	1	0	1	193
04:15 PM	2	82	3	12	0	14	1	48	6	2	0	3	173
04:30 PM	5	76	0	26	1	22	0	60	2	0	0	0	192
04:45 PM	6	72	0	14	0	16	1	57	8	0	0	2	176
Total	20	308	4	60	1	70	2	240	20	3	0	6	734
05:00 PM	1	71	0	18	0	19	1	67	2	0	0	1	180
05:15 PM	2	66	0	7	0	12	0	62	2	0	0	0	151
05:30 PM	3	79	0	7	0	13	0	58	2	0	0	1	163
05:45 PM	3	69	0	4	0	11	0	44	2	0	0	0	133
Total	9	285	0	36	0	55	1	231	8	0	0	2	627
Grand Total	29	593	4	96	1	125	3	471	28	3	0	8	1361
Apprch %	4.6	94.7	0.6	43.2	0.5	56.3	0.6	93.8	5.6	27.3	0	72.7	
Total %	2.1	43.6	0.3	7.1	0.1	9.2	0.2	34.6	2.1	0.2	0	0.6	
Cars	29	587	4	96	1	123	3	466	28	3	0	8	1348
% Cars	100	99	100	100	100	98.4	100	98.9	100	100	0	100	99
Trucks	0	6	0	0	0	2	0	5	0	0	0	0	13
% Trucks	0	1	0	0	0	1.6	0	1.1	0	0	0	0	1

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	7	78	1	86	8	0	18	26	0	75	4	79	1	0	1	2	193
04:15 PM	2	82	3	87	12	0	14	26	1	48	6	55	2	0	3	5	173
04:30 PM	5	76	0	81	26	1	22	49	0	60	2	62	0	0	0	0	192
04:45 PM	6	72	0	78	14	0	16	30	1	57	8	66	0	0	2	2	176
Total Volume	20	308	4	332	60	1	70	131	2	240	20	262	3	0	6	9	734
% App. Total	6	92.8	1.2		45.8	0.8	53.4		0.8	91.6	7.6		33.3	0	66.7		
PHF	.714	.939	.333	.954	.577	.250	.795	.668	.500	.800	.625	.829	.375	.000	.500	.450	.951
Cars	20	302	4	326	60	1	68	129	2	236	20	258	3	0	6	9	722
% Cars	100	98.1	100	98.2	100	100	97.1	98.5	100	98.3	100	98.5	100	0	100	100	98.4
Trucks	0	6	0	6	0	0	2	2	0	4	0	4	0	0	0	0	12
% Trucks	0	1.9	0	1.8	0	0	2.9	1.5	0	1.7	0	1.5	0	0	0	0	1.6

Accurate Counts

978-664-2565

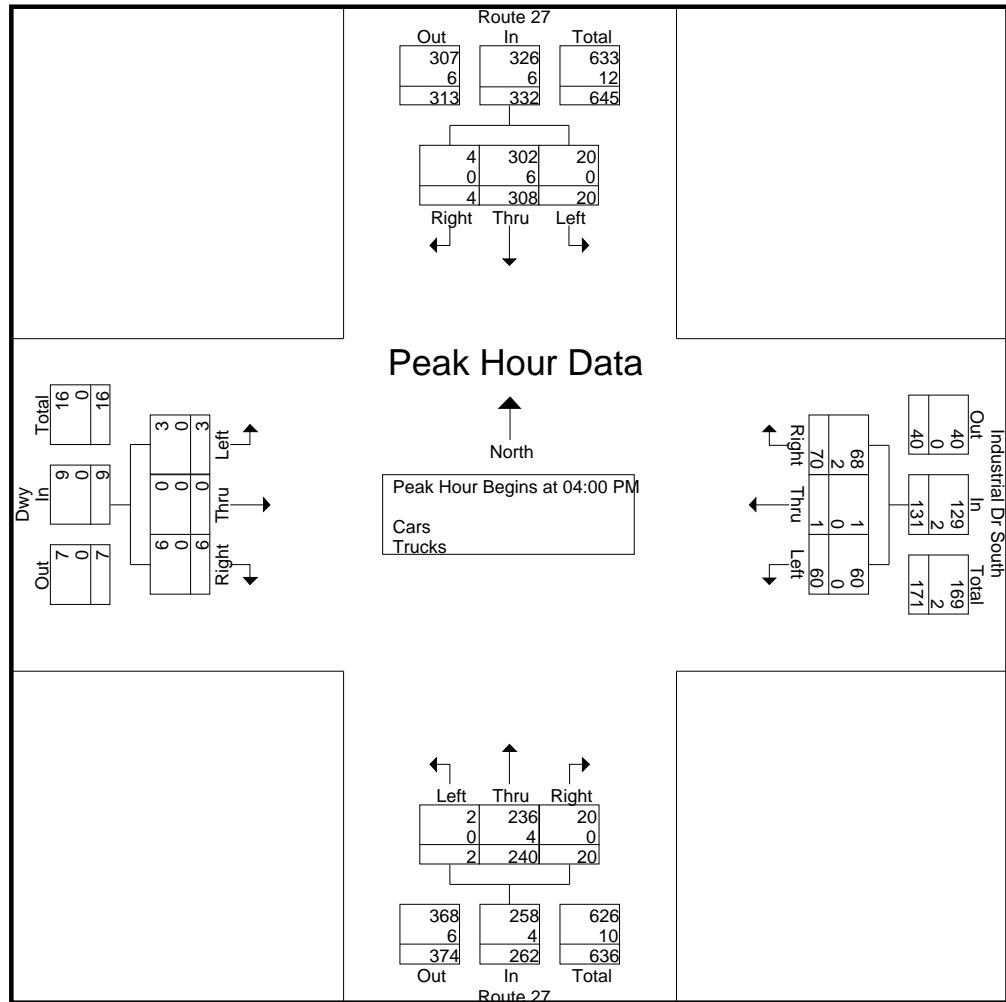
File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 2

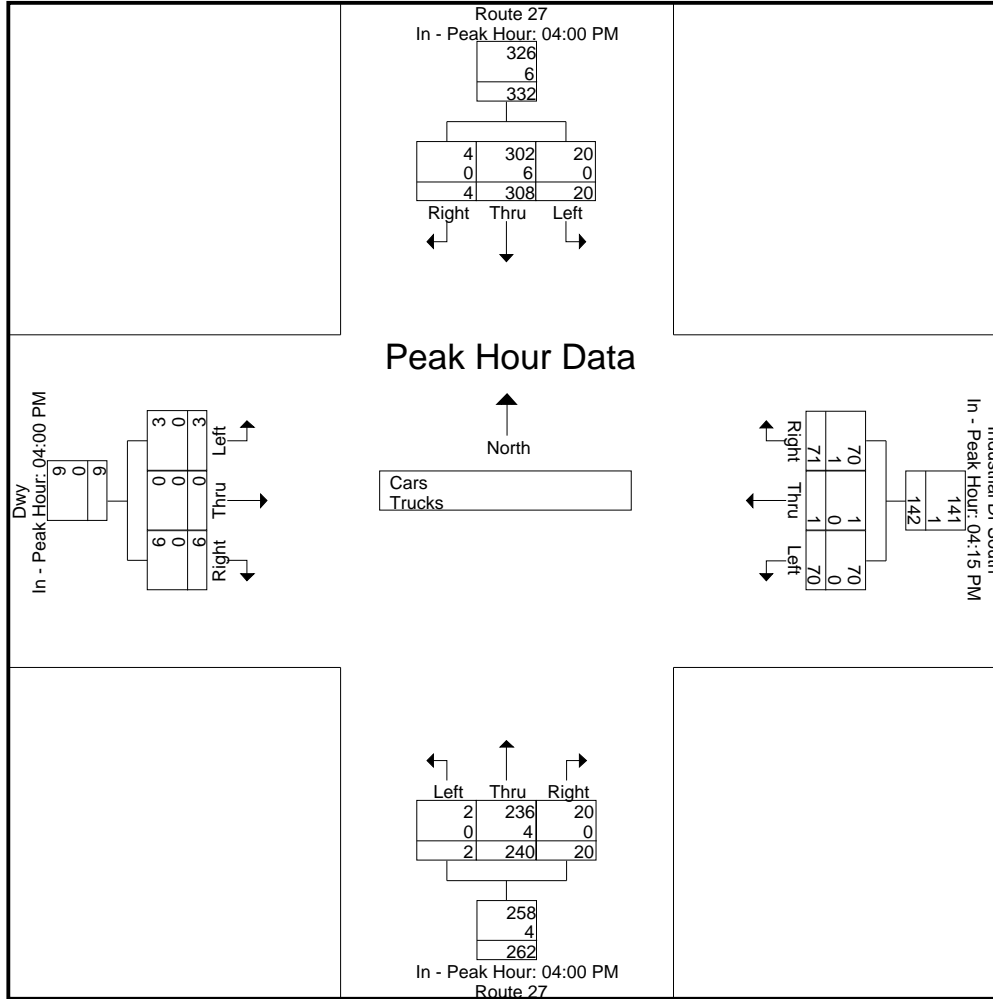
N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	7	78	1	86	12	0	14	26	0	75	4	79	1	0	1	2
+15 mins.	2	82	3	87	26	1	22	49	1	48	6	55	2	0	3	5
+30 mins.	5	76	0	81	14	0	16	30	0	60	2	62	0	0	0	0
+45 mins.	6	72	0	78	18	0	19	37	1	57	8	66	0	0	2	2
Total Volume	20	308	4	332	70	1	71	142	2	240	20	262	3	0	6	9
% App. Total	6	92.8	1.2		49.3	0.7	50		0.8	91.6	7.6		33.3	0	66.7	
PHF	.714	.939	.333	.954	.673	.250	.807	.724	.500	.800	.625	.829	.375	.000	.500	.450
Cars	20	302	4	326	70	1	70	141	2	236	20	258	3	0	6	9
% Cars	100	98.1	100	98.2	100	100	98.6	99.3	100	98.3	100	98.5	100	0	100	100
Trucks	0	6	0	6	0	0	1	1	0	4	0	4	0	0	0	0



Accurate Counts

978-664-2565

File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Industrial Dr South From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	3	0	0	0	1	0	2	0	0	0	0	6
04:15 PM	0	0	0	0	0	1	0	2	0	0	0	0	3
04:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	6	0	0	0	2	0	4	0	0	0	0	12
05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0	1
Grand Total	0	6	0	0	0	2	0	5	0	0	0	0	13
Apprch %	0	100	0	0	0	100	0	100	0	0	0	0	
Total %	0	46.2	0	0	0	15.4	0	38.5	0	0	0	0	

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	3	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
04:15 PM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
04:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	6	0	6	0	0	2	2	0	4	0	4	0	0	0	0	12
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.500	.500	.000	.500	.000	.500	.000	.000	.000	.000	.500

Accurate Counts

978-664-2565

File Name : 18570005

Site Code : 18570005

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27
 E/W Street : Industrial Dr South / Dwy
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %																	0	0	

Start Time	Route 27 From North				Industrial Dr South From East				Route 27 From South				Dwy From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Meeting Place Dr From East			Route 27 From South			Mckay Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	28	3	1	0	3	2	70	0	6	0	3	116
07:15 AM	1	52	2	1	0	2	5	77	0	9	0	2	151
07:30 AM	0	27	3	2	0	2	8	91	2	10	1	2	148
07:45 AM	1	49	5	3	0	0	3	88	3	8	0	5	165
Total	2	156	13	7	0	7	18	326	5	33	1	12	580
08:00 AM	0	39	3	1	0	3	5	65	1	6	0	4	127
08:15 AM	1	38	3	0	0	1	0	79	0	7	0	2	131
08:30 AM	0	45	2	2	0	3	3	70	1	4	0	4	134
08:45 AM	0	50	2	1	0	2	5	60	0	9	0	3	132
Total	1	172	10	4	0	9	13	274	2	26	0	13	524
Grand Total	3	328	23	11	0	16	31	600	7	59	1	25	1104
Apprch %	0.8	92.7	6.5	40.7	0	59.3	4.9	94	1.1	69.4	1.2	29.4	
Total %	0.3	29.7	2.1	1	0	1.4	2.8	54.3	0.6	5.3	0.1	2.3	
Cars	3	316	23	11	0	16	31	585	7	59	1	25	1077
% Cars	100	96.3	100	100	0	100	100	97.5	100	100	100	100	97.6
Trucks	0	12	0	0	0	0	0	15	0	0	0	0	27
% Trucks	0	3.7	0	0	0	0	0	2.5	0	0	0	0	2.4

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	52	2	55	1	0	2	3	5	77	0	82	9	0	2	11	151
07:30 AM	0	27	3	30	2	0	2	4	8	91	2	101	10	1	2	13	148
07:45 AM	1	49	5	55	3	0	0	3	3	88	3	94	8	0	5	13	165
08:00 AM	0	39	3	42	1	0	3	4	5	65	1	71	6	0	4	10	127
Total Volume	2	167	13	182	7	0	7	14	21	321	6	348	33	1	13	47	591
% App. Total	1.1	91.8	7.1		50	0	50		6	92.2	1.7		70.2	2.1	27.7		
PHF	.500	.803	.650	.827	.583	.000	.583	.875	.656	.882	.500	.861	.825	.250	.650	.904	.895
Cars	2	160	13	175	7	0	7	14	21	313	6	340	33	1	13	47	576
% Cars	100	95.8	100	96.2	100	0	100	100	100	97.5	100	97.7	100	100	100	100	97.5
Trucks	0	7	0	7	0	0	0	0	0	8	0	8	0	0	0	0	15
% Trucks	0	4.2	0	3.8	0	0	0	0	0	2.5	0	2.3	0	0	0	0	2.5

Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

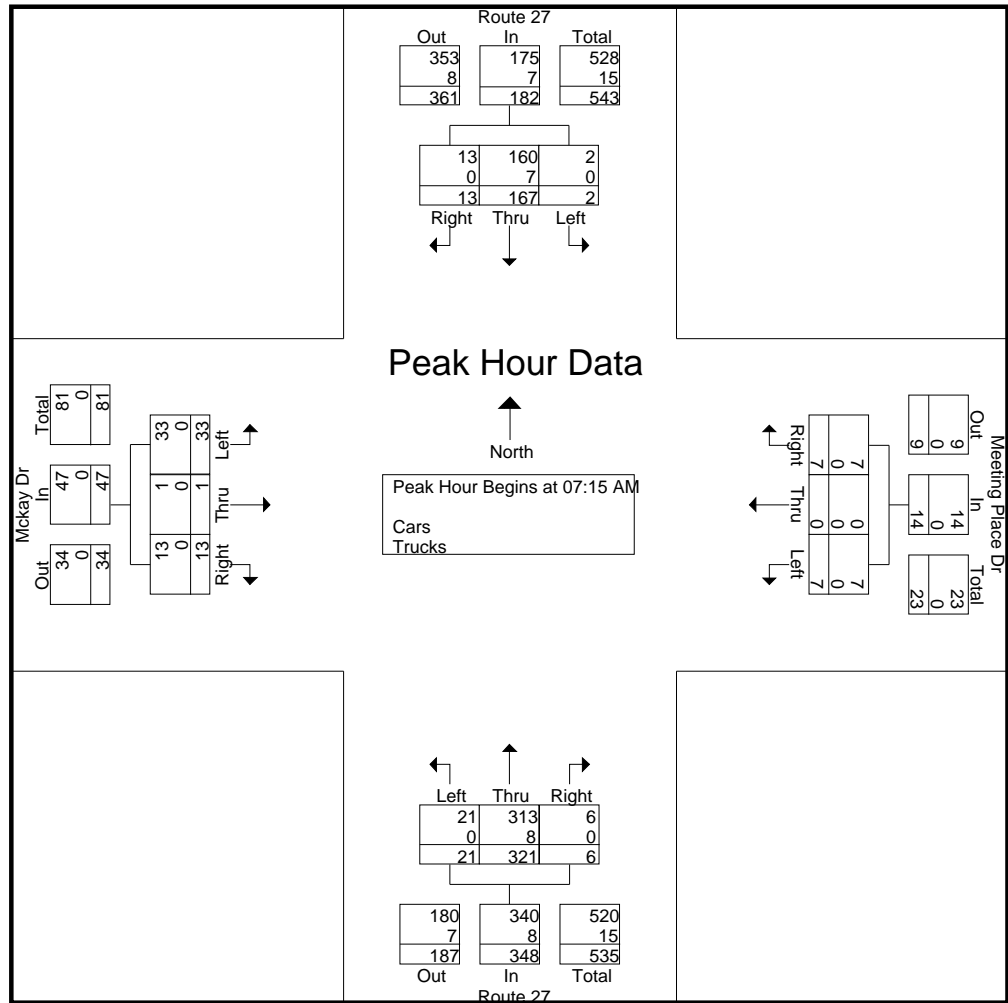
Page No : 2

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

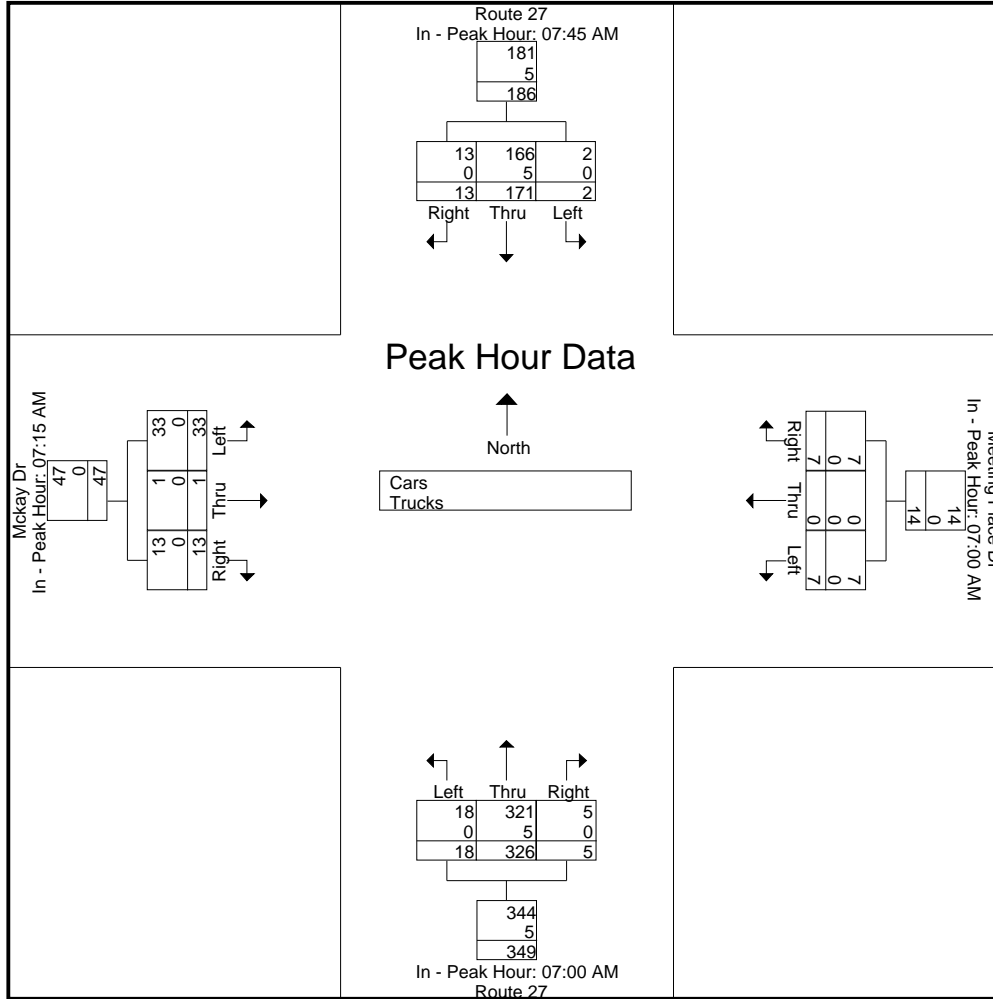


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	1	49	5	55	1	0	3	4	2	70	0	72	9	0	2	11
+15 mins.	0	39	3	42	1	0	2	3	5	77	0	82	10	1	2	13
+30 mins.	1	38	3	42	2	0	2	4	8	91	2	101	8	0	5	13
+45 mins.	0	45	2	47	3	0	0	3	3	88	3	94	6	0	4	10
Total Volume	2	171	13	186	7	0	7	14	18	326	5	349	33	1	13	47
% App. Total	1.1	91.9	7		50	0	50		5.2	93.4	1.4		70.2	2.1	27.7	
PHF	.500	.872	.650	.845	.583	.000	.583	.875	.563	.896	.417	.864	.825	.250	.650	.904
Cars	2	166	13	181	7	0	7	14	18	321	5	344	33	1	13	47
% Cars	100	97.1	100	97.3	100	0	100	100	100	98.5	100	98.6	100	100	100	100
Trucks	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Meeting Place Dr From East			Route 27 From South			Mckay Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	3	0	0	0	0	0	2	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
07:45 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
Total	0	7	0	0	0	0	0	5	0	0	0	0	12
08:00 AM	0	2	0	0	0	0	0	3	0	0	0	0	5
08:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
08:45 AM	0	2	0	0	0	0	0	3	0	0	0	0	5
Total	0	5	0	0	0	0	0	10	0	0	0	0	15
Grand Total	0	12	0	0	0	0	0	15	0	0	0	0	27
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	44.4	0	0	0	0	0	55.6	0	0	0	0	

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:00 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
Total Volume	0	7	0	7	0	0	0	0	0	8	0	8	0	0	0	0	15
% App. Total	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
PHF	.000	.583	.000	.583	.000	.000	.000	.000	.000	.667	.000	.667	.000	.000	.000	.000	.750

Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %																	100	0	

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Meeting Place Dr From East			Route 27 From South			Mckay Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	86	3	1	0	0	2	76	2	2	0	3	175
04:15 PM	5	83	3	3	0	2	2	51	3	3	0	2	157
04:30 PM	5	97	5	5	0	2	1	59	3	3	0	0	180
04:45 PM	4	83	2	1	0	1	3	62	4	4	0	2	166
Total	14	349	13	10	0	5	8	248	12	12	0	7	678
05:00 PM	3	84	5	1	0	2	3	64	4	2	0	2	170
05:15 PM	3	70	2	4	0	2	1	61	4	1	1	2	151
05:30 PM	2	84	2	2	0	4	3	53	1	3	0	3	157
05:45 PM	0	69	3	3	0	3	4	39	1	2	0	1	125
Total	8	307	12	10	0	11	11	217	10	8	1	8	603
Grand Total	22	656	25	20	0	16	19	465	22	20	1	15	1281
Apprch %	3.1	93.3	3.6	55.6	0	44.4	3.8	91.9	4.3	55.6	2.8	41.7	
Total %	1.7	51.2	2	1.6	0	1.2	1.5	36.3	1.7	1.6	0.1	1.2	
Cars	22	649	25	20	0	16	19	459	22	20	1	15	1268
% Cars	100	98.9	100	100	0	100	100	98.7	100	100	100	100	99
Trucks	0	7	0	0	0	0	0	6	0	0	0	0	13
% Trucks	0	1.1	0	0	0	0	0	1.3	0	0	0	0	1

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	86	3	89	1	0	0	1	2	76	2	80	2	0	3	5	175
04:15 PM	5	83	3	91	3	0	2	5	2	51	3	56	3	0	2	5	157
04:30 PM	5	97	5	107	5	0	2	7	1	59	3	63	3	0	0	3	180
04:45 PM	4	83	2	89	1	0	1	2	3	62	4	69	4	0	2	6	166
Total Volume	14	349	13	376	10	0	5	15	8	248	12	268	12	0	7	19	678
% App. Total	3.7	92.8	3.5		66.7	0	33.3		3	92.5	4.5		63.2	0	36.8		
PHF	.700	.899	.650	.879	.500	.000	.625	.536	.667	.816	.750	.838	.750	.000	.583	.792	.942
Cars	14	342	13	369	10	0	5	15	8	244	12	264	12	0	7	19	667
% Cars	100	98.0	100	98.1	100	0	100	100	100	98.4	100	98.5	100	0	100	100	98.4
Trucks	0	7	0	7	0	0	0	0	0	4	0	4	0	0	0	0	11
% Trucks	0	2.0	0	1.9	0	0	0	0	0	1.6	0	1.5	0	0	0	0	1.6

Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

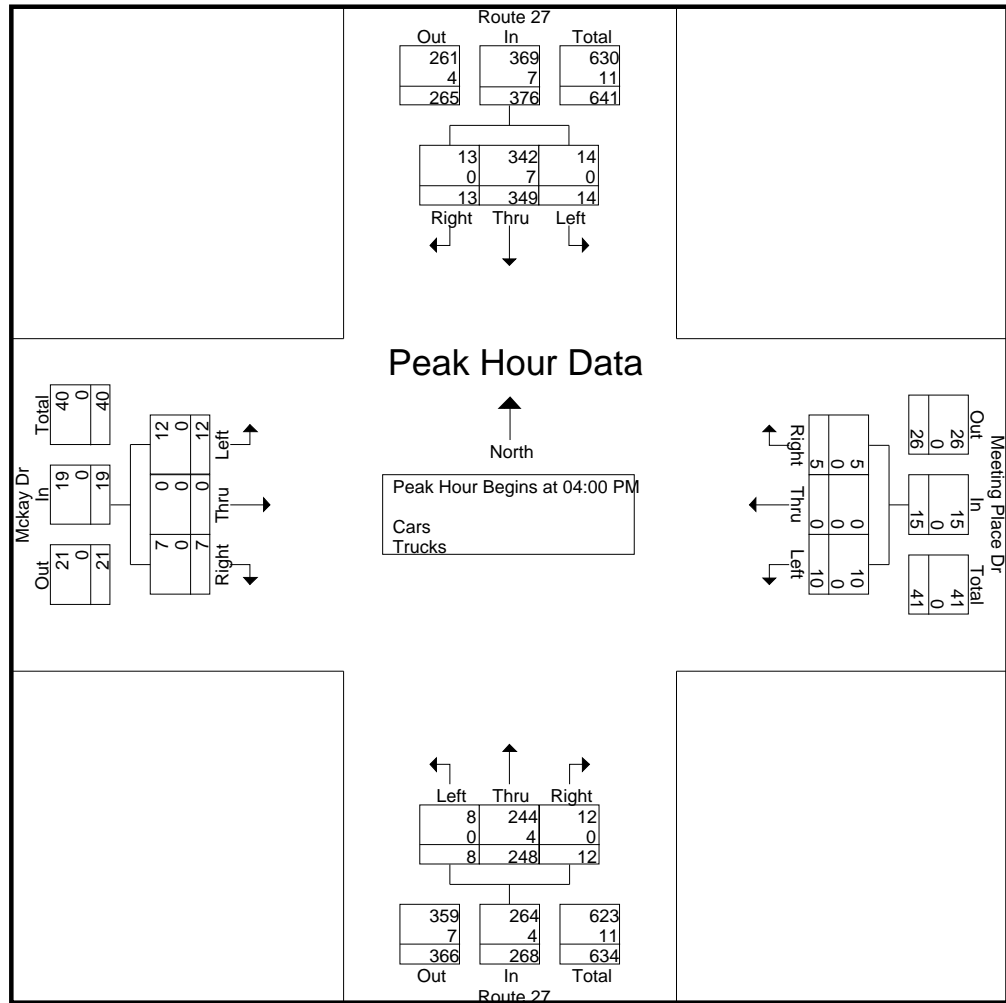
Page No : 2

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

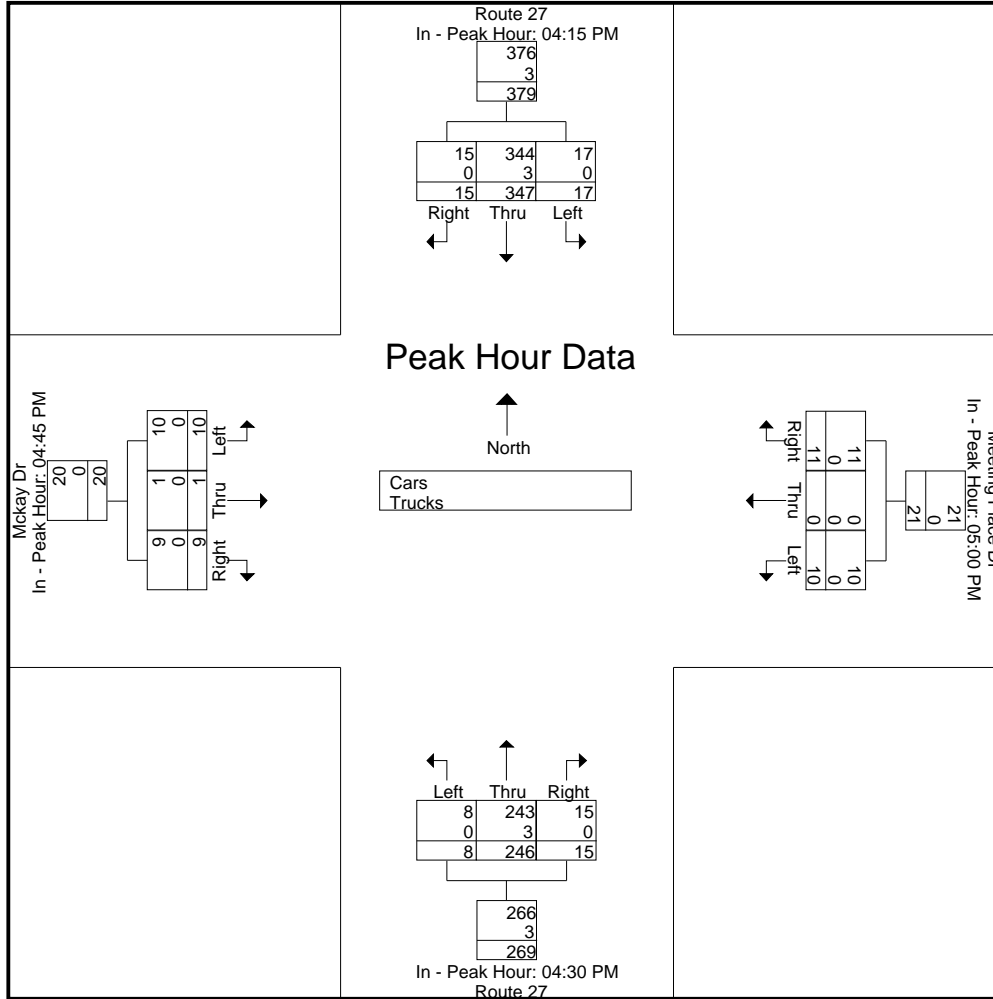


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM				05:00 PM				04:30 PM				04:45 PM			
+0 mins.	5	83	3	91	1	0	2	3	1	59	3	63	4	0	2	6
+15 mins.	5	97	5	107	4	0	2	6	3	62	4	69	2	0	2	4
+30 mins.	4	83	2	89	2	0	4	6	3	64	4	71	1	1	2	4
+45 mins.	3	84	5	92	3	0	3	6	1	61	4	66	3	0	3	6
Total Volume	17	347	15	379	10	0	11	21	8	246	15	269	10	1	9	20
% App. Total	4.5	91.6	4		47.6	0	52.4		3	91.4	5.6		50	5	45	
PHF	.850	.894	.750	.886	.625	.000	.688	.875	.667	.961	.938	.947	.625	.250	.750	.833
Cars	17	344	15	376	10	0	11	21	8	243	15	266	10	1	9	20
% Cars	100	99.1	100	99.2	100	0	100	100	100	98.8	100	98.9	100	100	100	100
Trucks	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Meeting Place Dr From East			Route 27 From South			Mckay Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	4	0	0	0	0	0	1	0	0	0	0	5
04:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
04:30 PM	0	2	0	0	0	0	0	1	0	0	0	0	3
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	7	0	0	0	0	0	4	0	0	0	0	11
05:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	2	0	0	0	0	2
Grand Total	0	7	0	0	0	0	0	6	0	0	0	0	13
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	53.8	0	0	0	0	0	46.2	0	0	0	0	

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
04:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	7	0	7	0	0	0	0	0	4	0	4	0	0	0	0	11
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.438	.000	.438	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.550

Accurate Counts

978-664-2565

File Name : 18570006

Site Code : 18570006

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27

E/W Street : Meeting Place Dr/ Mckay Dr

City/State : Exeter, NH

Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2
04:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	3	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
Grand Total	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	4	0	4
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %																	100	0	

Start Time	Route 27 From North				Meeting Place Dr From East				Route 27 From South				Mckay Dr From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27

E/W Street : Brookside Drive / Driveway

City/State : Exeter, NH

Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Brookside Dr From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	1	33	0	2	0	4	0	69	0	0	0	0	109
07:15 AM	1	52	0	6	0	8	0	80	1	0	0	0	148
07:30 AM	1	28	0	5	0	13	0	91	2	2	0	0	142
07:45 AM	2	49	0	1	0	8	0	87	3	2	0	1	153
Total	5	162	0	14	0	33	0	327	6	4	0	1	552
08:00 AM	1	40	0	4	0	3	0	66	0	2	0	3	119
08:15 AM	2	39	0	3	0	3	0	81	3	0	1	0	132
08:30 AM	1	49	0	3	0	3	0	73	1	1	0	2	133
08:45 AM	0	53	0	4	0	3	0	61	0	0	0	0	121
Total	4	181	0	14	0	12	0	281	4	3	1	5	505
Grand Total	9	343	0	28	0	45	0	608	10	7	1	6	1057
Apprch %	2.6	97.4	0	38.4	0	61.6	0	98.4	1.6	50	7.1	42.9	
Total %	0.9	32.5	0	2.6	0	4.3	0	57.5	0.9	0.7	0.1	0.6	
Cars	9	331	0	28	0	45	0	595	10	7	1	6	1032
% Cars	100	96.5	0	100	0	100	0	97.9	100	100	100	100	97.6
Trucks	0	12	0	0	0	0	0	13	0	0	0	0	25
% Trucks	0	3.5	0	0	0	0	0	2.1	0	0	0	0	2.4

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	52	0	53	6	0	8	14	0	80	1	81	0	0	0	0	148
07:30 AM	1	28	0	29	5	0	13	18	0	91	2	93	2	0	0	2	142
07:45 AM	2	49	0	51	1	0	8	9	0	87	3	90	2	0	1	3	153
08:00 AM	1	40	0	41	4	0	3	7	0	66	0	66	2	0	3	5	119
Total Volume	5	169	0	174	16	0	32	48	0	324	6	330	6	0	4	10	562
% App. Total	2.9	97.1	0		33.3	0	66.7		0	98.2	1.8		60	0	40		
PHF	.625	.813	.000	.821	.667	.000	.615	.667	.000	.890	.500	.887	.750	.000	.333	.500	.918
Cars	5	162	0	167	16	0	32	48	0	318	6	324	6	0	4	10	549
% Cars	100	95.9	0	96.0	100	0	100	100	0	98.1	100	98.2	100	0	100	100	97.7
Trucks	0	7	0	7	0	0	0	0	0	6	0	6	0	0	0	0	13
% Trucks	0	4.1	0	4.0	0	0	0	0	0	1.9	0	1.8	0	0	0	0	2.3

Accurate Counts

978-664-2565

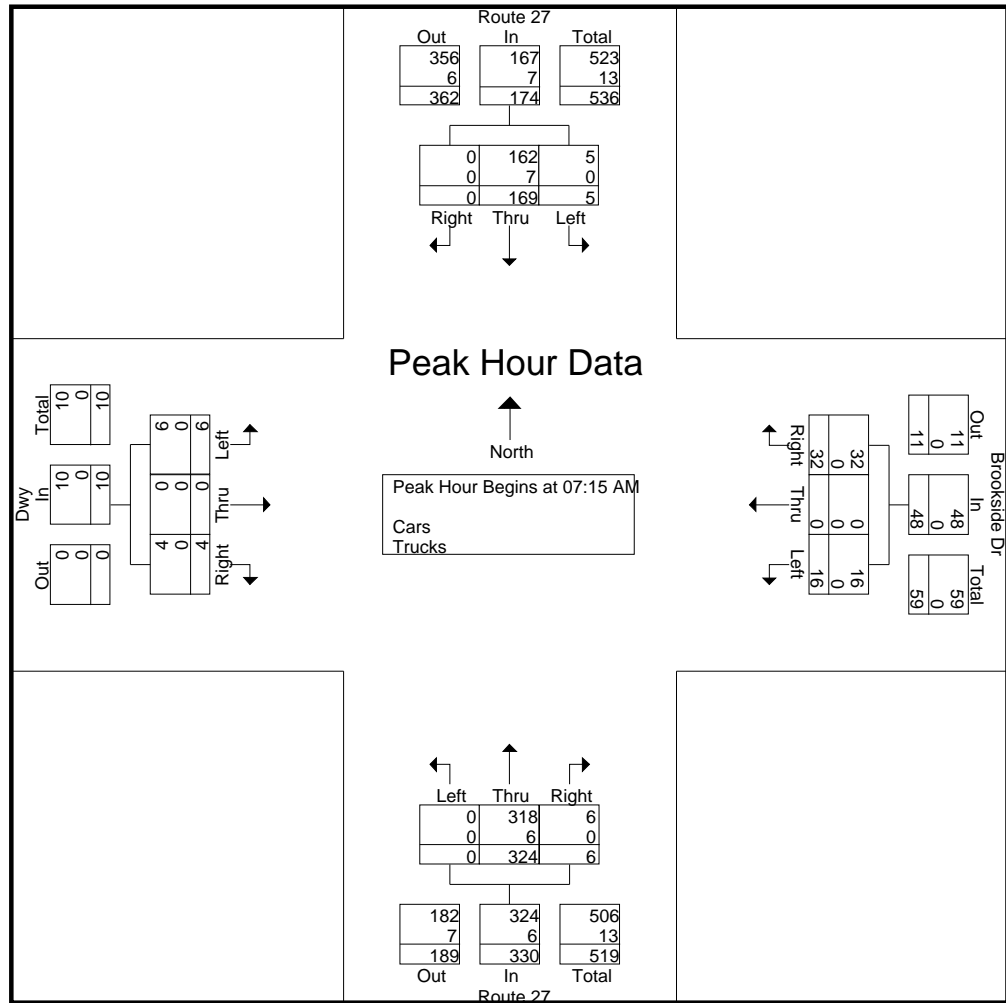
File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 2

N/S Street : Route 27
 E/W Street : Brookside Drive / Driveway
 City/State : Exeter, NH
 Weather : Rain

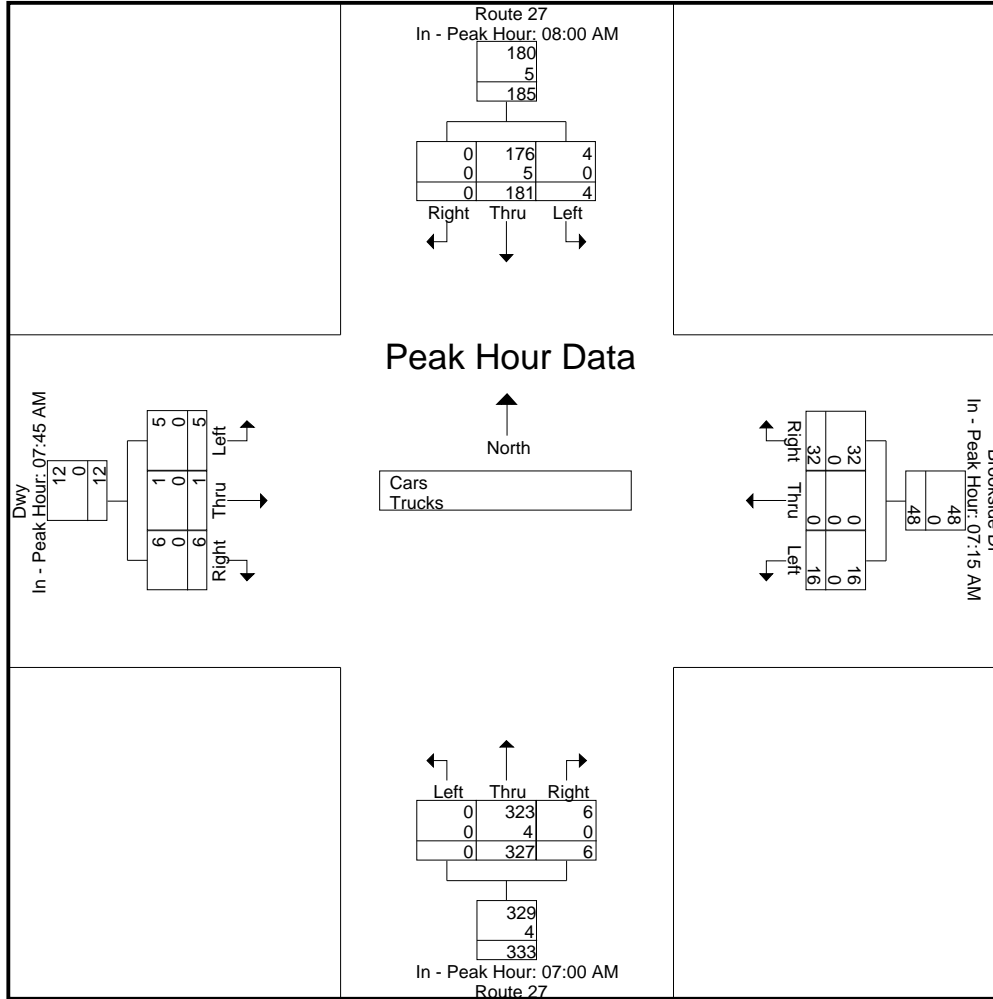


Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:15 AM				07:00 AM				07:45 AM			
+0 mins.	1	40	0	41	6	0	8	14	0	69	0	69	2	0	1	3
+15 mins.	2	39	0	41	5	0	13	18	0	80	1	81	2	0	3	5
+30 mins.	1	49	0	50	1	0	8	9	0	91	2	93	0	1	0	1
+45 mins.	0	53	0	53	4	0	3	7	0	87	3	90	1	0	2	3
Total Volume	4	181	0	185	16	0	32	48	0	327	6	333	5	1	6	12
% App. Total	2.2	97.8	0		33.3	0	66.7		0	98.2	1.8		41.7	8.3	50	
PHF	.500	.854	.000	.873	.667	.000	.615	.667	.000	.898	.500	.895	.625	.250	.500	.600
Cars	4	176	0	180	16	0	32	48	0	323	6	329	5	1	6	12
% Cars	100	97.2	0	97.3	100	0	100	100	0	98.8	100	98.8	100	100	100	100
Trucks	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Brookside Drive / Driveway
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Brookside Dr From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	3	0	0	0	0	0	2	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
Total	0	7	0	0	0	0	0	4	0	0	0	0	11
08:00 AM	0	2	0	0	0	0	0	2	0	0	0	0	4
08:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
08:45 AM	0	2	0	0	0	0	0	3	0	0	0	0	5
Total	0	5	0	0	0	0	0	9	0	0	0	0	14
Grand Total	0	12	0	0	0	0	0	13	0	0	0	0	25
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	48	0	0	0	0	0	52	0	0	0	0	

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
08:45 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
Total Volume	0	5	0	5	0	0	0	0	0	9	0	9	0	0	0	0	14
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.000	.000	.700

Accurate Counts

978-664-2565

File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27
 E/W Street : Brookside Drive / Driveway
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
Grand Total	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	4	0	4
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %																	100	0	

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 1

N/S Street : Route 27

E/W Street : Brookside Drive / Driveway

City/State : Exeter, NH

Weather : Rain

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Brookside Dr From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	5	86	0	3	0	4	0	72	10	4	0	0	184
04:15 PM	5	82	0	3	0	4	0	50	10	2	0	1	157
04:30 PM	5	97	0	2	0	3	0	60	4	0	0	6	177
04:45 PM	3	82	0	0	0	4	0	62	7	6	0	7	171
Total	18	347	0	8	0	15	0	244	31	12	0	14	689
05:00 PM	1	83	0	2	0	8	0	64	7	2	0	3	170
05:15 PM	7	69	0	2	0	3	0	61	4	1	0	0	147
05:30 PM	5	82	0	0	0	1	0	56	2	0	0	0	146
05:45 PM	3	69	0	4	0	2	0	43	3	0	0	0	124
Total	16	303	0	8	0	14	0	224	16	3	0	3	587
Grand Total	34	650	0	16	0	29	0	468	47	15	0	17	1276
Apprch %	5	95	0	35.6	0	64.4	0	90.9	9.1	46.9	0	53.1	
Total %	2.7	50.9	0	1.3	0	2.3	0	36.7	3.7	1.2	0	1.3	
Cars	34	644	0	16	0	29	0	463	47	15	0	17	1265
% Cars	100	99.1	0	100	0	100	0	98.9	100	100	0	100	99.1
Trucks	0	6	0	0	0	0	0	5	0	0	0	0	11
% Trucks	0	0.9	0	0	0	0	0	1.1	0	0	0	0	0.9

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	86	0	91	3	0	4	7	0	72	10	82	4	0	0	4	184
04:15 PM	5	82	0	87	3	0	4	7	0	50	10	60	2	0	1	3	157
04:30 PM	5	97	0	102	2	0	3	5	0	60	4	64	0	0	6	6	177
04:45 PM	3	82	0	85	0	0	4	4	0	62	7	69	6	0	7	13	171
Total Volume	18	347	0	365	8	0	15	23	0	244	31	275	12	0	14	26	689
% App. Total	4.9	95.1	0		34.8	0	65.2		0	88.7	11.3		46.2	0	53.8		
PHF	.900	.894	.000	.895	.667	.000	.938	.821	.000	.847	.775	.838	.500	.000	.500	.500	.936
Cars	18	341	0	359	8	0	15	23	0	240	31	271	12	0	14	26	679
% Cars	100	98.3	0	98.4	100	0	100	100	0	98.4	100	98.5	100	0	100	100	98.5
Trucks	0	6	0	6	0	0	0	0	0	4	0	4	0	0	0	0	10
% Trucks	0	1.7	0	1.6	0	0	0	0	0	1.6	0	1.5	0	0	0	0	1.5

Accurate Counts

978-664-2565

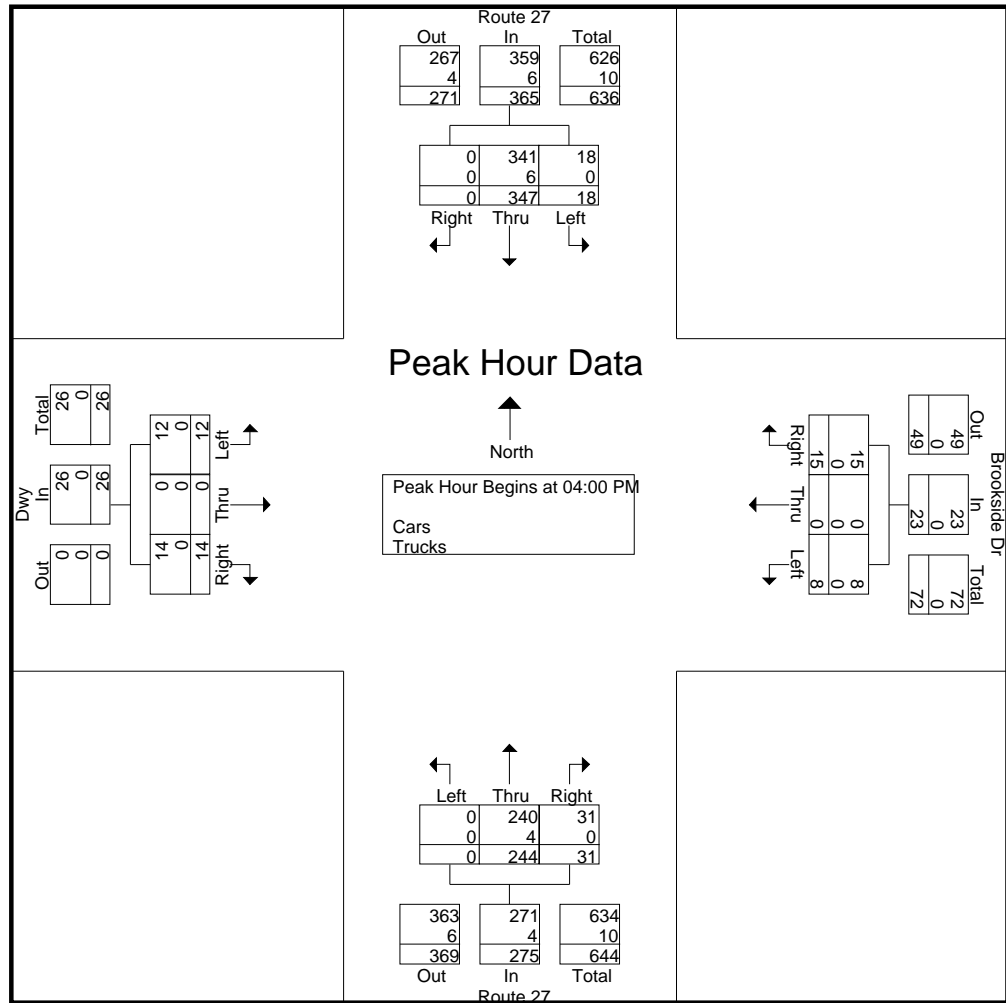
File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 2

N/S Street : Route 27
 E/W Street : Brookside Drive / Driveway
 City/State : Exeter, NH
 Weather : Rain

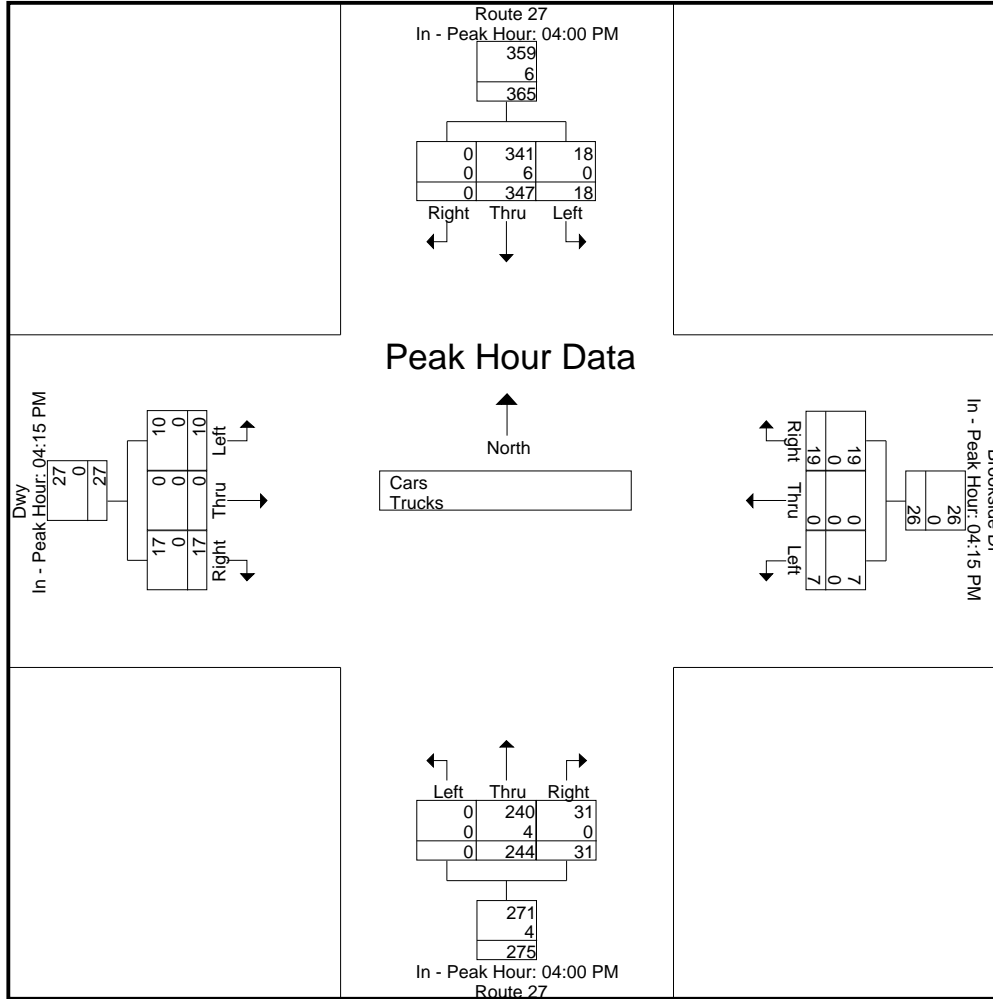


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:15 PM			
+0 mins.	5	86	0	91	3	0	4	7	0	72	10	82	2	0	1	3
+15 mins.	5	82	0	87	2	0	3	5	0	50	10	60	0	0	6	6
+30 mins.	5	97	0	102	0	0	4	4	0	60	4	64	6	0	7	13
+45 mins.	3	82	0	85	2	0	8	10	0	62	7	69	2	0	3	5
Total Volume	18	347	0	365	7	0	19	26	0	244	31	275	10	0	17	27
% App. Total	4.9	95.1	0		26.9	0	73.1		0	88.7	11.3		37	0	63	
PHF	.900	.894	.000	.895	.583	.000	.594	.650	.000	.847	.775	.838	.417	.000	.607	.519
Cars	18	341	0	359	7	0	19	26	0	240	31	271	10	0	17	27
% Cars	100	98.3	0	98.4	100	0	100	100	0	98.4	100	98.5	100	0	100	100
Trucks	0	6	0	6	0	0	0	0	0	4	0	4	0	0	0	0

Accurate Counts
978-664-2565



Accurate Counts

978-664-2565

File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 7

N/S Street : Route 27
 E/W Street : Brookside Drive / Driveway
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Trucks

Start Time	Route 27 From North			Brookside Dr From East			Route 27 From South			Dwy From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	3	0	0	0	0	0	2	0	0	0	0	5
04:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	6	0	0	0	0	0	4	0	0	0	0	10
05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0	1
Grand Total	0	6	0	0	0	0	0	5	0	0	0	0	11
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	54.5	0	0	0	0	0	45.5	0	0	0	0	

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
04:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	6	0	6	0	0	0	0	0	4	0	4	0	0	0	0	10
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

Accurate Counts

978-664-2565

File Name : 18570007

Site Code : 18570007

Start Date : 3/17/2020

Page No : 10

N/S Street : Route 27
 E/W Street : Brookside Drive / Driveway
 City/State : Exeter, NH
 Weather : Rain

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
04:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
04:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	0	5
05:00 PM	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	5	0	5
Grand Total	0	0	0	1	0	0	0	9	0	0	0	0	0	0	0	0	10	0	10
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %																	100	0	

Start Time	Route 27 From North				Brookside Dr From East				Route 27 From South				Dwy From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

Page No : 1

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Route 27 From South			Columbus Ave From Southwest			Brentwood Rd From West			Int. Total
	Thru	Bear Right	Right	Hard Left	Left	Thru	Hard Left	Bear Left	Hard Right	Left	Right	Hard Right	
07:00 AM	21	2	10	0	4	20	0	4	1	19	7	0	88
07:15 AM	23	4	8	0	9	35	0	6	0	19	11	0	115
07:30 AM	38	3	7	0	3	47	1	7	0	11	10	1	128
07:45 AM	29	6	7	1	9	28	0	8	1	26	17	0	132
Total	111	15	32	1	25	130	1	25	2	75	45	1	463
08:00 AM	25	5	13	0	5	33	0	6	1	7	8	0	103
08:15 AM	16	6	3	0	6	27	0	7	1	10	8	1	85
08:30 AM	27	9	7	1	8	28	0	7	1	13	9	0	110
08:45 AM	20	8	8	0	6	16	0	5	1	13	8	0	85
Total	88	28	31	1	25	104	0	25	4	43	33	1	383
09:00 AM	35	4	13	0	7	32	0	7	2	10	10	0	120
09:15 AM	24	5	7	1	10	19	0	6	0	14	6	1	93
09:30 AM	24	9	11	0	9	30	0	9	0	7	7	0	106
09:45 AM	32	5	13	0	9	39	2	3	0	11	12	0	126
Total	115	23	44	1	35	120	2	25	2	42	35	1	445
10:00 AM	30	7	7	0	4	29	0	6	1	6	13	0	103
10:15 AM	25	5	10	0	7	29	0	7	0	7	7	1	98
10:30 AM	28	5	6	0	5	38	1	10	0	11	10	0	114
10:45 AM	41	5	11	0	7	31	2	6	0	13	12	0	128
Total	124	22	34	0	23	127	3	29	1	37	42	1	443
11:00 AM	30	5	10	0	8	37	0	6	2	7	13	0	118
11:15 AM	47	5	11	0	13	38	3	11	0	7	8	5	148
11:30 AM	44	6	13	0	11	39	1	6	0	17	9	1	147
11:45 AM	38	7	10	0	13	47	0	5	1	12	8	0	141
Total	159	23	44	0	45	161	4	28	3	43	38	6	554
12:00 PM	39	8	14	2	15	39	0	8	1	18	14	1	159
12:15 PM	39	8	12	1	15	41	0	9	0	14	16	0	155
12:30 PM	47	12	16	0	11	51	1	7	1	16	11	0	173
12:45 PM	31	11	14	2	11	46	0	6	0	11	17	1	150
Total	156	39	56	5	52	177	1	30	2	59	58	2	637
01:00 PM	38	5	9	0	11	27	0	9	0	20	14	0	133
01:15 PM	31	12	14	0	14	40	0	9	1	17	14	1	153
01:30 PM	33	8	11	0	9	44	0	7	0	12	11	1	136
01:45 PM	35	4	12	0	13	43	0	6	1	5	9	1	129
Total	137	29	46	0	47	154	0	31	2	54	48	3	551
02:00 PM	42	6	14	1	13	38	0	9	1	10	14	0	148

Accurate Counts

978-664-2565

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

File Name : 18570008
 Site Code : 18570008
 Start Date : 3/25/2020
 Page No : 2

Groups Printed- Cars - Trucks

Start Time	Route 27 From North			Route 27 From South			Columbus Ave From Southwest			Brentwood Rd From West			Int. Total
	Thru	Bear Right	Right	Hard Left	Left	Thru	Hard Left	Bear Left	Hard Right	Left	Right	Hard Right	
02:15 PM	38	10	18	1	23	56	0	12	1	10	17	0	186
02:30 PM	31	9	18	0	13	30	0	11	0	12	10	1	135
02:45 PM	29	7	11	0	14	49	0	8	1	12	12	0	143
Total	140	32	61	2	63	173	0	40	3	44	53	1	612
03:00 PM	39	8	19	0	13	38	0	8	0	9	8	1	143
03:15 PM	35	10	12	2	23	41	0	5	1	14	9	0	152
03:30 PM	41	11	26	1	15	42	0	10	0	11	10	2	169
03:45 PM	38	8	20	0	11	53	0	9	1	15	13	1	169
Total	153	37	77	3	62	174	0	32	2	49	40	4	633
04:00 PM	50	12	16	0	12	46	0	6	1	20	10	0	173
04:15 PM	31	5	21	0	14	33	1	16	1	10	10	1	143
04:30 PM	53	8	28	2	11	38	0	13	0	9	8	1	171
04:45 PM	18	12	19	0	13	34	1	8	1	7	15	1	129
Total	152	37	84	2	50	151	2	43	3	46	43	3	616
05:00 PM	49	14	23	0	12	39	0	3	0	15	9	1	165
05:15 PM	39	6	21	1	13	28	0	7	0	14	7	0	136
05:30 PM	49	18	16	1	15	36	0	6	0	8	5	1	155
05:45 PM	32	7	13	1	10	31	0	4	0	10	12	1	121
Total	169	45	73	3	50	134	0	20	0	47	33	3	577
06:00 PM	35	11	6	1	10	30	0	3	0	10	15	2	123
06:15 PM	17	7	11	0	18	33	1	8	0	11	4	0	110
06:30 PM	24	3	7	0	11	30	0	2	0	8	8	2	95
06:45 PM	16	2	9	0	9	17	0	3	0	4	6	1	67
Total	92	23	33	1	48	110	1	16	0	33	33	5	395
Grand Total	1596	353	615	19	525	1715	14	344	24	572	501	31	6309
Apprch %	62.2	13.8	24	0.8	23.2	75.9	3.7	90.1	6.3	51.8	45.4	2.8	
Total %	25.3	5.6	9.7	0.3	8.3	27.2	0.2	5.5	0.4	9.1	7.9	0.5	
Cars	1559	353	605	19	522	1680	14	344	22	572	493	31	6214
% Cars	97.7	100	98.4	100	99.4	98	100	100	91.7	100	98.4	100	98.5
Trucks	37	0	10	0	3	35	0	0	2	0	8	0	95
% Trucks	2.3	0	1.6	0	0.6	2	0	0	8.3	0	1.6	0	1.5

Accurate Counts

978-664-2565

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

File Name : 18570008
 Site Code : 18570008
 Start Date : 3/25/2020
 Page No : 3

Start Time	Route 27 From North				Route 27 From South				Columbus Ave From Southwest				Brentwood Rd From West				Int. Total
	Thru	Bear Right	Right	App. Total	Hard Left	Left	Thru	App. Total	Hard Left	Bear Left	Hard Right	App. Total	Left	Right	Hard Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	23	4	8	35	0	9	35	44	0	6	0	6	19	11	0	30	115
07:30 AM	38	3	7	48	0	3	47	50	1	7	0	8	11	10	1	22	128
07:45 AM	29	6	7	42	1	9	28	38	0	8	1	9	26	17	0	43	132
08:00 AM	25	5	13	43	0	5	33	38	0	6	1	7	7	8	0	15	103
Total Volume	115	18	35	168	1	26	143	170	1	27	2	30	63	46	1	110	478
% App. Total	68.5	10.7	20.8		0.6	15.3	84.1		3.3	90	6.7		57.3	41.8	0.9		
PHF	.757	.750	.673	.875	.250	.722	.761	.850	.250	.844	.500	.833	.606	.676	.250	.640	.905
Cars	114	18	35	167	1	26	138	165	1	27	2	30	63	44	1	108	470
% Cars	99.1	100	100	99.4	100	100	96.5	97.1	100	100	100	100	100	95.7	100	98.2	98.3
Trucks	1	0	0	1	0	0	5	5	0	0	0	0	0	2	0	2	8
% Trucks	0.9	0	0	0.6	0	0	3.5	2.9	0	0	0	0	0	4.3	0	1.8	1.7

Accurate Counts

978-664-2565

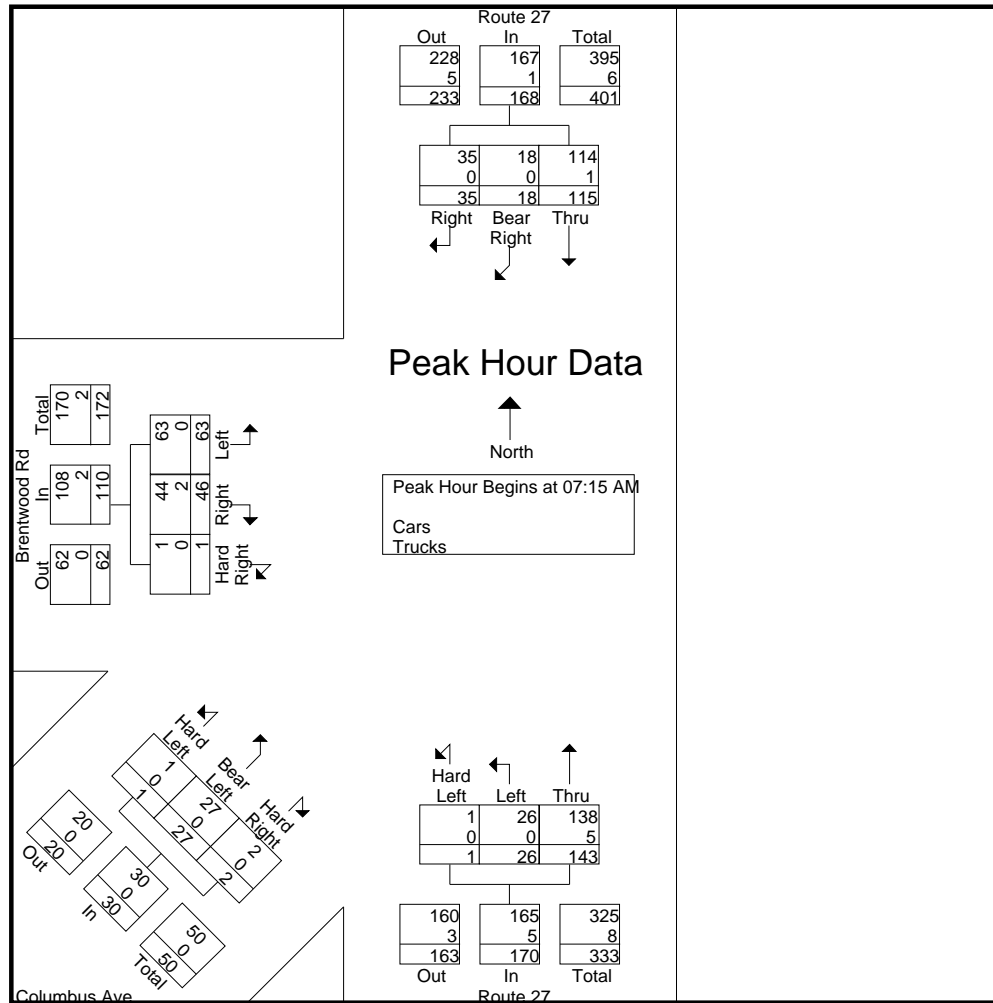
File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

Page No : 4

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy



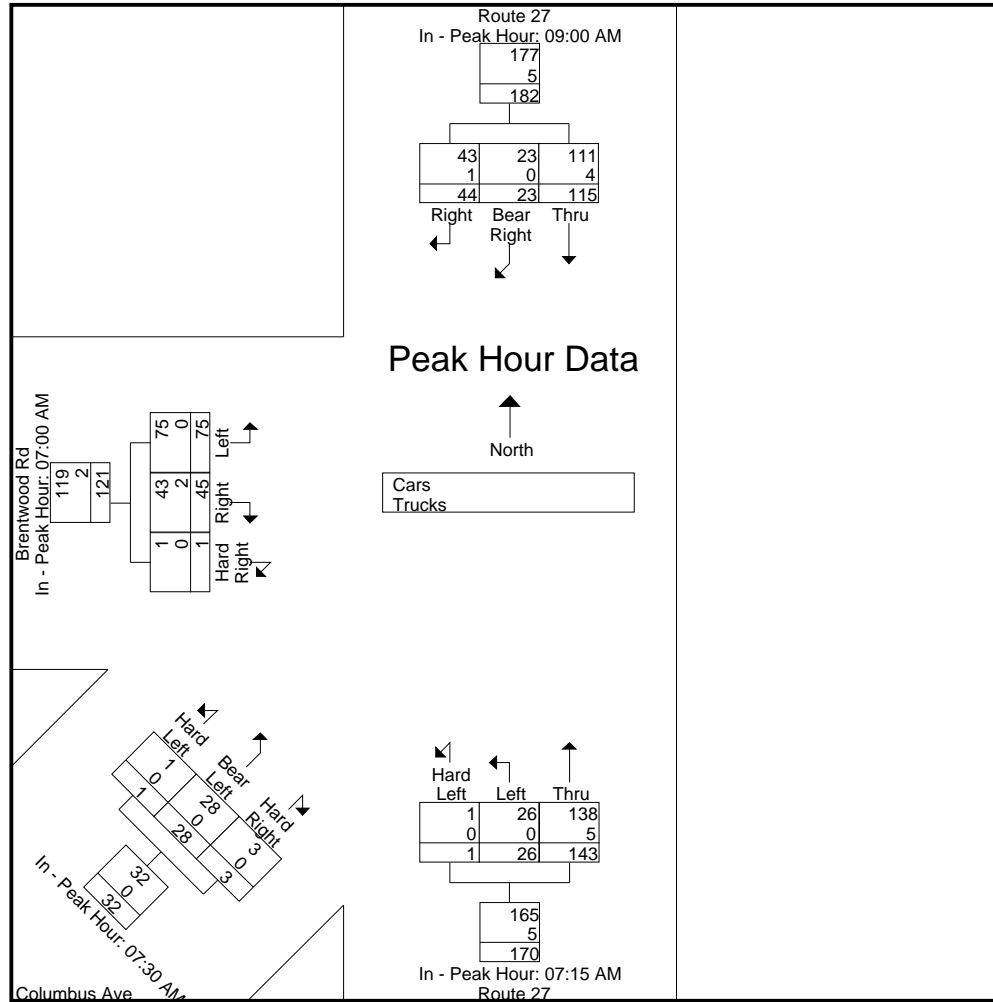
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	09:00 AM				07:15 AM				07:30 AM				07:00 AM			
+0 mins.	35	4	13	52	0	9	35	44	1	7	0	8	19	7	0	26
+15 mins.	24	5	7	36	0	3	47	50	0	8	1	9	19	11	0	30
+30 mins.	24	9	11	44	1	9	28	38	0	6	1	7	11	10	1	22
+45 mins.	32	5	13	50	0	5	33	38	0	7	1	8	26	17	0	43
Total Volume	115	23	44	182	1	26	143	170	1	28	3	32	75	45	1	121
% App. Total	63.2	12.6	24.2		0.6	15.3	84.1		3.1	87.5	9.4		62	37.2	0.8	
PHF	.821	.639	.846	.875	.250	.722	.761	.850	.250	.875	.750	.889	.721	.662	.250	.703
Cars	111	23	43	177	1	26	138	165	1	28	3	32	75	43	1	119
% Cars	96.5	100	97.7	97.3	100	100	96.5	97.1	100	100	100	100	100	95.6	100	98.3
Trucks	4	0	1	5	0	0	5	5	0	0	0	0	0	2	0	2

Accurate Counts

978-664-2565



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	39	8	14	61	2	15	39	56	0	8	1	9	18	14	1	33	159
12:15 PM	39	8	12	59	1	15	41	57	0	9	0	9	14	16	0	30	155
12:30 PM	47	12	16	75	0	11	51	62	1	7	1	9	16	11	0	27	173
12:45 PM	31	11	14	56	2	11	46	59	0	6	0	6	11	17	1	29	150
Total Volume	156	39	56	251	5	52	177	234	1	30	2	33	59	58	2	119	637
% App. Total	62.2	15.5	22.3		2.1	22.2	75.6		3	90.9	6.1		49.6	48.7	1.7		
PHF	.830	.813	.875	.837	.625	.867	.868	.944	.250	.833	.500	.917	.819	.853	.500	.902	.921
Cars	153	39	54	246	5	51	173	229	1	30	1	32	59	56	2	117	624
% Cars	98.1	100	96.4	98.0	100	98.1	97.7	97.9	100	100	50.0	97.0	100	96.6	100	98.3	98.0
Trucks	3	0	2	5	0	1	4	5	0	0	1	1	0	2	0	2	13
% Trucks	1.9	0	3.6	2.0	0	1.9	2.3	2.1	0	0	50.0	3.0	0	3.4	0	1.7	2.0

Accurate Counts

978-664-2565

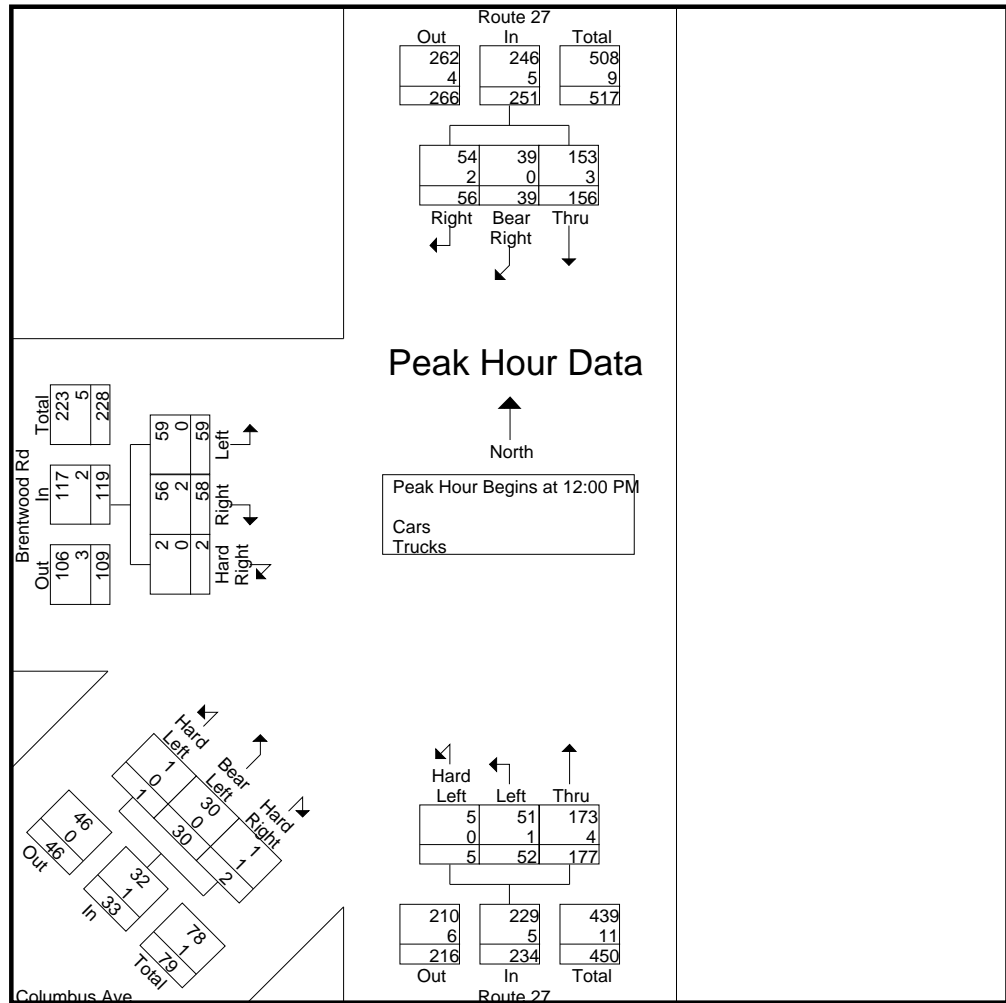
File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

Page No : 6

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:00 PM				11:45 AM				10:30 AM				12:30 PM			
+0 mins.	39	8	14	61	0	13	47	60	1	10	0	11	16	11	0	27
+15 mins.	39	8	12	59	2	15	39	56	2	6	0	8	11	17	1	29
+30 mins.	47	12	16	75	1	15	41	57	0	6	2	8	20	14	0	34
+45 mins.	31	11	14	56	0	11	51	62	3	11	0	14	17	14	1	32
Total Volume	156	39	56	251	3	54	178	235	6	33	2	41	64	56	2	122
% App. Total	62.2	15.5	22.3		1.3	23	75.7		14.6	80.5	4.9		52.5	45.9	1.6	
PHF	.830	.813	.875	.837	.375	.900	.873	.948	.500	.750	.250	.732	.800	.824	.500	.897
Cars	153	39	54	246	3	53	176	232	6	33	2	41	64	55	2	121
% Cars	98.1	100	96.4	98	100	98.1	98.9	98.7	100	100	100	100	100	98.2	100	99.2
Trucks	3	0	2	5	0	1	2	3	0	0	0	0	0	1	0	1

Accurate Counts

978-664-2565

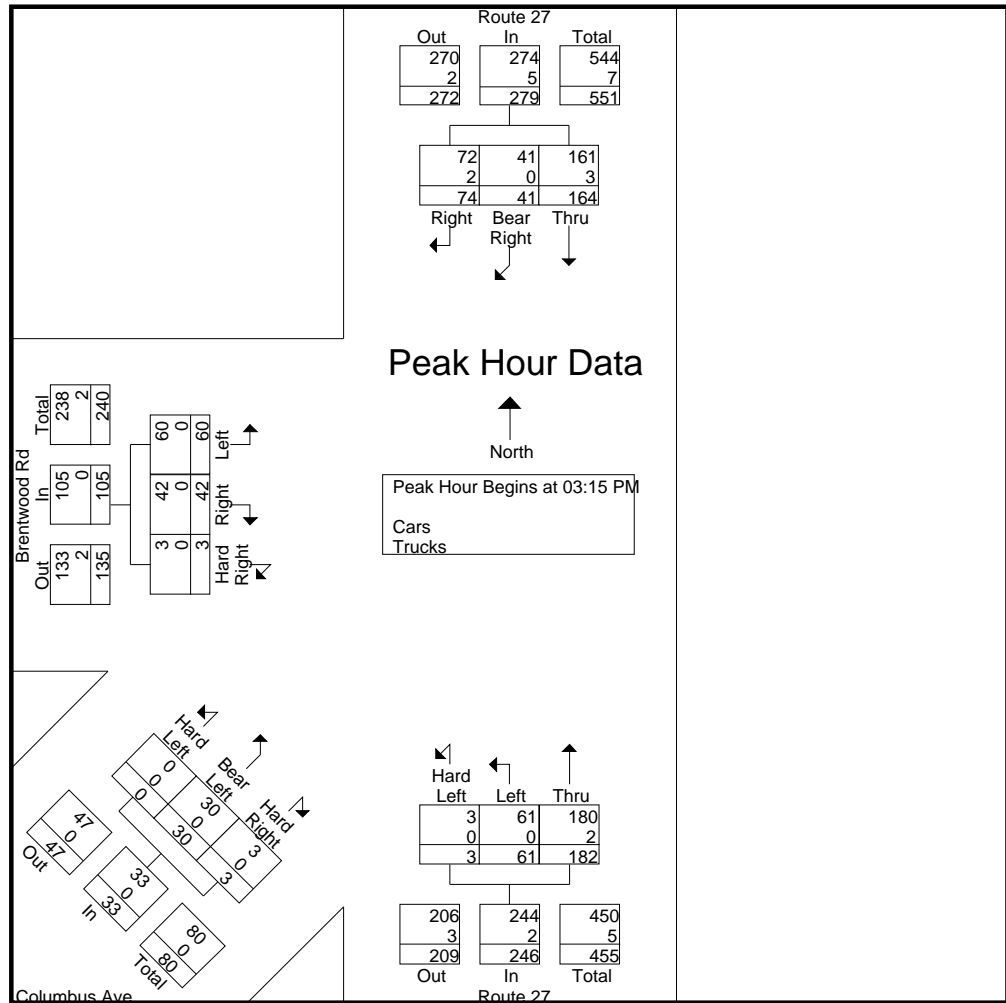
File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

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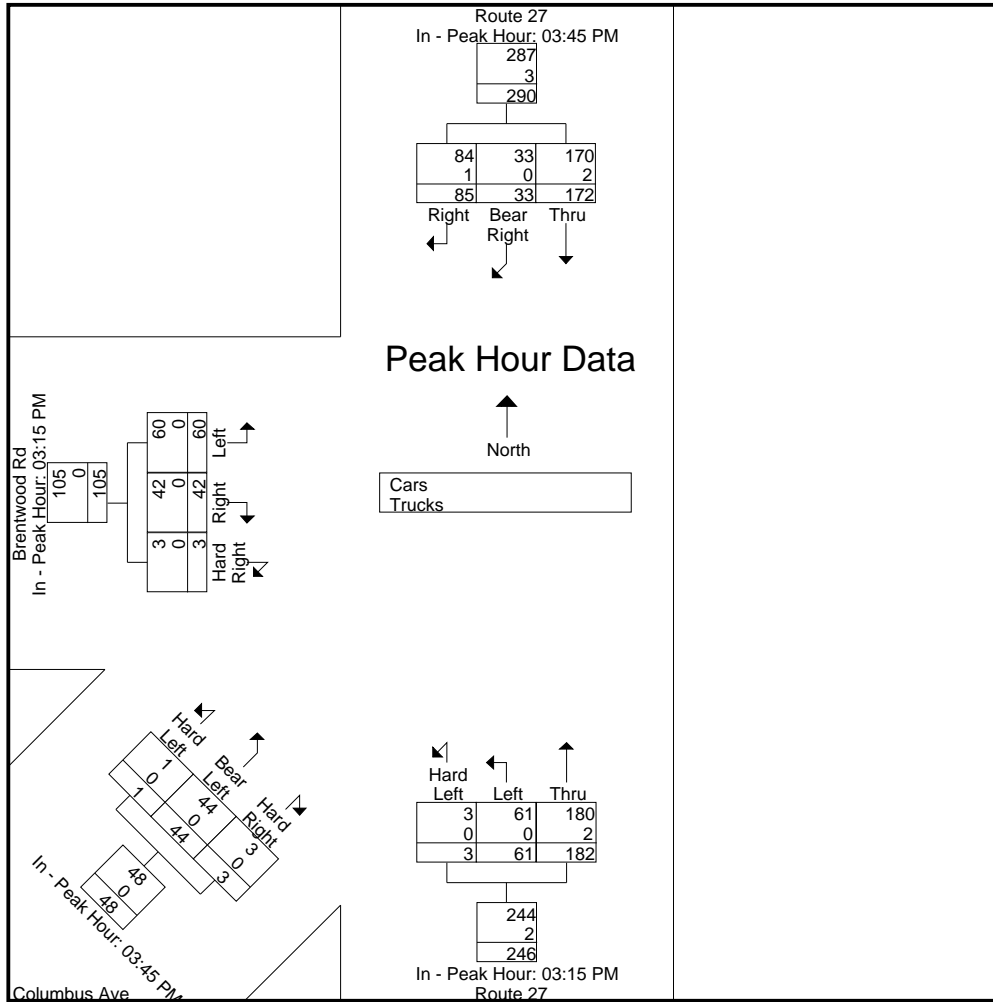
N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:45 PM				03:15 PM				03:45 PM				03:15 PM			
+0 mins.	38	8	20	66	2	23	41	66	0	9	1	10	14	9	0	23
+15 mins.	50	12	16	78	1	15	42	58	0	6	1	7	11	10	2	23
+30 mins.	31	5	21	57	0	11	53	64	1	16	1	18	15	13	1	29
+45 mins.	53	8	28	89	0	12	46	58	0	13	0	13	20	10	0	30
Total Volume	172	33	85	290	3	61	182	246	1	44	3	48	60	42	3	105
% App. Total	59.3	11.4	29.3		1.2	24.8	74		2.1	91.7	6.2		57.1	40	2.9	
PHF	.811	.688	.759	.815	.375	.663	.858	.932	.250	.688	.750	.667	.750	.808	.375	.875
Cars	170	33	84	287	3	61	180	244	1	44	3	48	60	42	3	105
% Cars	98.8	100	98.8	99	100	100	98.9	99.2	100	100	100	100	100	100	100	100
Trucks	2	0	1	3	0	0	2	2	0	0	0	0	0	0	0	0



Accurate Counts

978-664-2565

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

File Name : 18570008
 Site Code : 18570008
 Start Date : 3/25/2020
 Page No : 18

Groups Printed- Trucks

Start Time	Route 27 From North			Route 27 From South			Columbus Ave From Southwest			Brentwood Rd From West			Int. Total
	Thru	Bear Right	Right	Hard Left	Left	Thru	Hard Left	Bear Left	Hard Right	Left	Right	Hard Right	
07:00 AM	1	0	2	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	2
07:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	1	0	0	0	0	2	0	3
Total	2	0	2	0	0	4	0	0	0	0	2	0	10
08:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
08:15 AM	1	0	0	0	0	0	0	0	0	0	1	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	3	0	0	0	0	1	0	0	0	0	1	0	5
09:00 AM	2	0	0	0	0	2	0	0	0	0	0	0	4
09:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
09:30 AM	1	0	0	0	0	1	0	0	0	0	0	0	2
09:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	2
Total	4	0	1	0	0	4	0	0	0	0	0	0	9
10:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	2
10:15 AM	0	0	1	0	0	1	0	0	0	0	1	0	3
10:30 AM	1	0	0	0	0	2	0	0	0	0	0	0	3
10:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	1	0	3	0	0	4	0	0	0	0	1	0	9
11:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	2	0	0	0	0	1	0	0	0	0	0	0	3
11:30 AM	1	0	0	0	0	2	0	0	0	0	0	0	3
11:45 AM	1	0	0	0	1	1	0	0	1	0	0	0	4
Total	5	0	0	0	1	4	0	0	1	0	0	0	11
12:00 PM	2	0	0	0	0	0	0	0	0	0	1	0	3
12:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	2
12:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	2
12:45 PM	0	0	1	0	1	3	0	0	0	0	1	0	6
Total	3	0	2	0	1	4	0	0	1	0	2	0	13
01:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	2
01:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	0	0	0	1	1	0	0	0	0	0	0	4
02:00 PM	2	0	0	0	0	1	0	0	0	0	0	0	3
02:15 PM	2	0	0	0	0	2	0	0	0	0	0	0	4
02:30 PM	2	0	0	0	0	0	0	0	0	0	1	0	3

Accurate Counts

978-664-2565

File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

Page No : 19

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

Groups Printed- Trucks

Start Time	Route 27 From North			Route 27 From South				Columbus Ave From Southwest			Brentwood Rd From West			Int. Total
	Thru	Bear Right	Right	Hard Left	Left	Thru	Hard Left	Bear Left	Hard Right	Left	Right	Hard Right		
02:45 PM	2	0	0	0	0	5	0	0	0	0	0	0	7	
Total	8	0	0	0	0	8	0	0	0	0	1	0	17	
03:00 PM	4	0	0	0	0	0	0	0	0	0	0	0	4	
03:15 PM	1	0	1	0	0	1	0	0	0	0	0	0	3	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	1	0	1	0	0	1	0	0	0	0	0	0	3	
Total	6	0	2	0	0	2	0	0	0	0	0	0	10	
04:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	
Total	2	0	0	0	0	0	0	0	0	0	1	0	3	
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	
05:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	2	0	0	0	0	0	0	2	
06:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	2	
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	0	1	0	0	0	0	0	0	2	
Grand Total	37	0	10	0	3	35	0	0	2	0	8	0	95	
Apprch %	78.7	0	21.3	0	7.9	92.1	0	0	100	0	100	0		
Total %	38.9	0	10.5	0	3.2	36.8	0	0	2.1	0	8.4	0		

Start Time	Route 27 From North				Route 27 From South				Columbus Ave From Southwest				Brentwood Rd From West				Int. Total
	Thru	Bear Right	Right	App. Total	Hard Left	Left	Thru	App. Total	Hard Left	Bear Left	Hard Right	App. Total	Left	Right	Hard Right	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
07:30 AM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	2	3
Total Volume	2	0	2	4	0	0	4	4	0	0	0	0	0	2	0	2	10
% App. Total	50	0	50		0	0	100		0	0	0		0	100	0		
PHF	.500	.000	.250	.333	.000	.000	.500	.500	.000	.000	.000	.000	.000	.250	.000	.250	.833

Accurate Counts

978-664-2565

File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

Page No : 26

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Route 27 From South				Columbus Ave From Southwest				Brentwood Rd From West				Exclu. Total	Inclu. Total	Int. Total	
	Thru	Bear Right	Right	Peds	Hard Left	Left	Thru	Peds	Hard Left	Bear Left	Hard Right	Peds	Left	Right	Hard Right	Peds				
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2
Total	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	2	0	2	0	0	0	0	0	0	0	0	2	0	1	0	0	2	5	7	7
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	0	0	0	0	0	0	0	2	0	1	0	0	2	5	7	7
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1
09:30 AM	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	3	1	4	4
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	4	1	5	5
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	4	2	6	6
11:15 AM	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	4	2	6	6
11:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	4	4
Total	1	0	2	0	0	0	0	0	0	0	0	12	0	2	0	0	12	5	17	17
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	3	3
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2	2
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2	2
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	4	4
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2	2
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	3	1	4	4

Accurate Counts

978-664-2565

File Name : 18570008

Site Code : 18570008

Start Date : 3/25/2020

Page No : 27

N/S Street : Epping Road
 E/W Street : Brentwood Rd / Columbus Ave
 City/State : Exeter, NH
 Weather : Cloudy

Groups Printed- Bikes Peds

Start Time	Route 27 From North				Route 27 From South				Columbus Ave From Southwest				Brentwood Rd From West				Exclu. Total	Inclu. Total	Int. Total	
	Thru	Bear Right	Right	Peds	Hard Left	Left	Thru	Peds	Hard Left	Bear Left	Hard Right	Peds	Left	Right	Hard Right	Peds				
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	0	0	9
Total	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	0	0	11
04:00 PM	0	0	0	0	0	1	0	0	0	0	0	3	0	2	0	0	3	3	0	6
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	3
04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	5
Total	0	0	1	0	0	1	0	0	0	0	0	11	0	2	0	0	11	4	0	15
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	3
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	1	0	0	0	0	0	8	0	0	0	0	8	1	0	9
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	5	1	0	6
06:15 PM	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	1	0	3
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	2
Total	1	0	0	0	0	0	0	0	0	0	0	10	0	1	0	0	10	2	0	12
Grand Total	4	0	6	0	0	2	0	2	0	0	0	70	0	7	0	0	72	19	0	91
Apprch %	40	0	60		0	100	0		0	0	0		0	100	0					
Total %	21.1	0	31.6		0	10.5	0		0	0	0		0	36.8	0		79.1	20.9		

Start Time	Route 27 From North				Route 27 From South				Columbus Ave From Southwest				Brentwood Rd From West				Int. Total	
	Thru	Bear Right	Right	App. Total	Hard Left	Left	Thru	App. Total	Hard Left	Bear Left	Hard Right	App. Total	Left	Right	Hard Right	App. Total		
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:45 AM																		
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	2	0	2	4	0	0	0	0	0	0	0	0	0	1	0	1	1	5
Total Volume	2	0	2	4	0	0	0	0	0	0	0	0	0	1	0	1	1	5
% App. Total	50	0	50		0	0	0		0	0	0		0	100	0			
PHF	.250	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250	.250

Analysis Worksheets: Existing Conditions

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	918	81	8
Average Queue (ft)	582	30	0
95th Queue (ft)	1065	64	5
Link Distance (ft)	992		
Upstream Blk Time (%)	13		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		600	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	NB	SB
Directions Served	LT	R	TR	L
Maximum Queue (ft)	170	192	44	100
Average Queue (ft)	15	39	5	44
95th Queue (ft)	106	154	27	80
Link Distance (ft)	987		544	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		600
Storage Blk Time (%)		7		
Queuing Penalty (veh)		0		

Intersection: 3: Epping Road / NH 27 & Continental Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	41	38	70	169	241	70
Average Queue (ft)	9	10	31	76	120	15
95th Queue (ft)	31	32	62	156	198	49
Link Distance (ft)	375			379	1494	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		175	225			275
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	35	44	47	201
Average Queue (ft)	9	16	3	74
95th Queue (ft)	31	41	21	153
Link Distance (ft)	130	597	1063	468
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	25	46	34	146
Average Queue (ft)	5	20	2	43
95th Queue (ft)	21	45	16	107
Link Distance (ft)	26	662	585	1063
Upstream Blk Time (%)	2			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	EB	WB	NB	SB	SB
Directions Served	LT	R	LTR	L	L	TR
Maximum Queue (ft)	60	11	44	30	23	3
Average Queue (ft)	18	3	16	7	3	0
95th Queue (ft)	41	10	42	25	15	2
Link Distance (ft)	437		559			585
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		75		150	175	
Storage Blk Time (%)	0					
Queuing Penalty (veh)	0					

Intersection: 7: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	EB	WB	SB
Directions Served	L	TR	LTR	LTR
Maximum Queue (ft)	23	7	75	54
Average Queue (ft)	4	1	34	4
95th Queue (ft)	17	6	63	25
Link Distance (ft)		79	586	507
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	30			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 8: Brentwood Road / NH 111A & Epping Road / NH 27

Movement	SB	NE
Directions Served	TR	LR
Maximum Queue (ft)	23	82
Average Queue (ft)	1	27
95th Queue (ft)	11	50
Link Distance (ft)	438	19
Upstream Blk Time (%)		38
Queuing Penalty (veh)		89
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Epping Road / NH 27 & Brentwood Road / NH 111A

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	64	98
Average Queue (ft)	30	18
95th Queue (ft)	51	65
Link Distance (ft)	26	402
Upstream Blk Time (%)	6	
Queuing Penalty (veh)	4	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Columbus Avenue & Brentwood Road / NH 111A

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	188	49	74	70
Average Queue (ft)	79	21	34	38
95th Queue (ft)	154	43	61	62
Link Distance (ft)	512	26	338	19
Upstream Blk Time (%)		3		8
Queuing Penalty (veh)		1		10
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Epping Road / NH 27 & Beech Hill Road (E)

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: Epping Road / NH 27 & Watson Road

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 20: Epping Road / NH 27 & Cronin Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	34	77
Average Queue (ft)	16	6
95th Queue (ft)	40	38
Link Distance (ft)	75	544
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Epping Road / NH 27 & Kings Way Ave

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	35	58	2
Average Queue (ft)	9	4	0
95th Queue (ft)	31	30	2
Link Distance (ft)	594	468	414
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 104

1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection

Int Delay, s/veh	159.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕		↕	↑			↕	
Traffic Vol, veh/h	0	0	0	375	0	95	180	145	0	0	255	30
Future Vol, veh/h	0	0	0	375	0	95	180	145	0	0	255	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	600	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	2	-	-	1	-	-	2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	408	0	103	196	158	0	0	277	33

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	844	860	158
Stage 1	550	550	-
Stage 2	294	310	-
Critical Hdwy	6.82	6.92	6.42
Critical Hdwy Stg 1	5.82	5.92	-
Critical Hdwy Stg 2	5.82	5.92	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	~ 304	267	880
Stage 1	544	485	-
Stage 2	732	637	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	~ 256	0	880
Mov Cap-2 Maneuver	~ 256	0	-
Stage 1	459	0	-
Stage 2	732	0	-

Approach	WB	NB	SB
HCM Control Delay, s	\$ 362.7	4.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1250	-	299	-
HCM Lane V/C Ratio	0.157	-	1.709	-
HCM Control Delay (s)	8.4	-	\$ 362.7	-
HCM Lane LOS	A	-	F	-
HCM 95th %tile Q(veh)	0.6	-	32.4	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp 2020 Base
 HCM 6th TWSC Weekday AM

Intersection

Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔					↔		↔	↔	
Traffic Vol, veh/h	5	0	280	0	0	0	0	320	260	170	460	0
Future Vol, veh/h	5	0	280	0	0	0	0	320	260	170	460	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	-	-	-	600	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	3	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	304	0	0	0	0	348	283	185	500	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1360	1501	500	-	0	0	631	0	0
Stage 1	870	870	-	-	-	-	-	-	-
Stage 2	490	631	-	-	-	-	-	-	-
Critical Hdwy	6.82	6.92	6.42	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.82	5.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	141	103	555	0	-	-	951	-	0
Stage 1	372	335	-	0	-	-	-	-	0
Stage 2	583	442	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	114	0	555	-	-	-	951	-	-
Mov Cap-2 Maneuver	114	0	-	-	-	-	-	-	-
Stage 1	372	0	-	-	-	-	-	-	-
Stage 2	469	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.4	0	2.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	114	555	951	-
HCM Lane V/C Ratio	-	-	0.048	0.548	0.194	-
HCM Control Delay (s)	-	-	38.2	19.1	9.7	-
HCM Lane LOS	-	-	E	C	A	-
HCM 95th %tile Q(veh)	-	-	0.1	3.3	0.7	-

3: Epping Road / NH 27 & Continental Drive
 Timing Report, Sorted By Phase

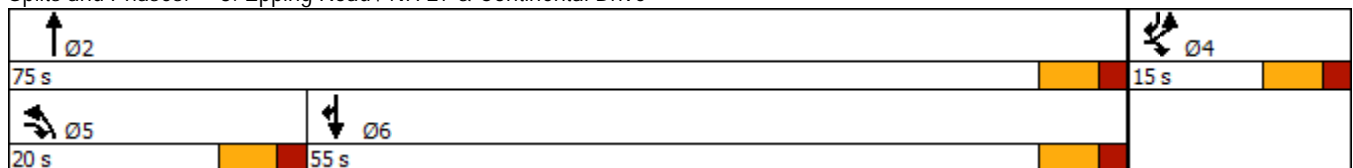
2020 Base
 Weekday AM

	↑	↖	↗	↓
Phase Number	2	4	5	6
Movement	NBT	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	Min	None	None	Min
Maximum Split (s)	75	15	20	55
Maximum Split (%)	83.3%	16.7%	22.2%	61.1%
Minimum Split (s)	16	14	14	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	8	8	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	75	0	20
End Time (s)	75	0	20	75
Yield/Force Off (s)	69	84	14	69
Yield/Force Off 170(s)	69	84	14	69
Local Start Time (s)	70	55	70	0
Local Yield (s)	49	64	84	49
Local Yield 170(s)	49	64	84	49

Intersection Summary













Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Epping Road / NH 27 & Continental Drive



3: Epping Road / NH 27 & Continental Drive HCM 6th Signalized Intersection Summary

2020 Base
Weekday AM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	15	45	565	635	105
Future Volume (veh/h)	15	15	45	565	635	105
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1949	1949	1864	1864	1949	1949
Adj Flow Rate, veh/h	16	16	49	614	690	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	198	391	231	1312	932	966
Arrive On Green	0.11	0.11	0.13	0.70	0.48	0.48
Sat Flow, veh/h	1856	1651	1776	1864	1949	1651
Grp Volume(v), veh/h	16	16	49	614	690	114
Grp Sat Flow(s),veh/h/ln	1856	1651	1776	1864	1949	1651
Q Serve(g_s), s	0.3	0.3	1.0	6.1	12.1	1.3
Cycle Q Clear(g_c), s	0.3	0.3	1.0	6.1	12.1	1.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	198	391	231	1312	932	966
V/C Ratio(X)	0.08	0.04	0.21	0.47	0.74	0.12
Avail Cap(c_a), veh/h	484	646	674	3141	2358	2174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	12.4	16.4	2.8	8.9	3.9
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.4	0.6	3.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.1	12.4	16.8	3.0	10.1	4.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	32			663	804	
Approach Delay, s/veh	14.8			4.0	9.2	
Approach LOS	B			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.7		8.5	9.5	24.2
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		69.0		9.0	14.0	49.0
Max Q Clear Time (g_c+I1), s		8.1		2.3	3.0	14.1
Green Ext Time (p_c), s		3.0		0.0	0.1	4.1
Intersection Summary						
HCM 6th Ctrl Delay			7.0			
HCM 6th LOS			A			

4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	0	0	25	5	585	10	160	470	5
Future Vol, veh/h	5	0	5	0	0	25	5	585	10	160	470	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	0	0	27	5	636	11	174	511	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1527	1519	514	1516	1516	642	516	0	0	647	0	0
Stage 1	862	862	-	652	652	-	-	-	-	-	-	-
Stage 2	665	657	-	864	864	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	6.92	6.32	6.12	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	96	119	560	106	130	483	1050	-	-	939	-	-
Stage 1	350	372	-	474	481	-	-	-	-	-	-	-
Stage 2	449	462	-	366	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	72	87	560	83	96	483	1050	-	-	939	-	-
Mov Cap-2 Maneuver	72	87	-	83	96	-	-	-	-	-	-	-
Stage 1	348	275	-	471	478	-	-	-	-	-	-	-
Stage 2	421	459	-	268	288	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	35.7		12.9		0.1		2.4	
HCM LOS	E		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1050	-	-	128	483	939	-	-
HCM Lane V/C Ratio	0.005	-	-	0.085	0.056	0.185	-	-
HCM Control Delay (s)	8.4	0	-	35.7	12.9	9.7	0	-
HCM Lane LOS	A	A	-	E	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.7	-	-

5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	0	10	0	15	5	595	55	65	380	5
Future Vol, veh/h	5	0	0	10	0	15	5	595	55	65	380	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	11	0	16	5	647	60	71	413	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1253	1275	416	1245	1247	677	418	0	0	707	0	0
Stage 1	558	558	-	687	687	-	-	-	-	-	-	-
Stage 2	695	717	-	558	560	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	139	155	629	141	162	444	1141	-	-	891	-	-
Stage 1	498	496	-	421	431	-	-	-	-	-	-	-
Stage 2	416	417	-	498	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	123	138	629	129	144	444	1141	-	-	891	-	-
Mov Cap-2 Maneuver	123	138	-	129	144	-	-	-	-	-	-	-
Stage 1	495	444	-	418	428	-	-	-	-	-	-	-
Stage 2	398	414	-	446	444	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.6	23.2	0.1	1.4
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	123	225	891	-
HCM Lane V/C Ratio	0.005	-	-	0.044	0.121	0.079	-
HCM Control Delay (s)	8.2	0	-	35.6	23.2	9.4	0
HCM Lane LOS	A	A	-	E	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.3	-

6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	45	0	15	10	0	10	25	600	10	5	370	15
Future Vol, veh/h	45	0	15	10	0	10	25	600	10	5	370	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	75	-	-	-	150	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	0	16	11	0	11	27	652	11	5	402	16

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1137	1137	410	1140	1140	658	418	0	0	663	0	0
Stage 1	420	420	-	712	712	-	-	-	-	-	-	-
Stage 2	717	717	-	428	428	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	179	202	642	178	201	464	1141	-	-	926	-	-
Stage 1	611	589	-	423	436	-	-	-	-	-	-	-
Stage 2	421	434	-	605	585	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	171	196	642	170	195	464	1141	-	-	926	-	-
Mov Cap-2 Maneuver	171	196	-	170	195	-	-	-	-	-	-	-
Stage 1	596	586	-	413	426	-	-	-	-	-	-	-
Stage 2	401	424	-	586	582	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	28.4		20.8		0.3			0.1		
HCM LOS	D		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	171	642	249	926	-	-
HCM Lane V/C Ratio	0.024	-	-	0.286	0.025	0.087	0.006	-	-
HCM Control Delay (s)	8.2	-	-	34.3	10.8	20.8	8.9	-	-
HCM Lane LOS	A	-	-	D	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.1	0.1	0.3	0	-	-

7: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection

Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	5	20	0	40	0	595	10	5	375	0
Future Vol, veh/h	10	0	5	20	0	40	0	595	10	5	375	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	30	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	5	22	0	43	0	647	11	5	408	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1092	1076	408	1074	1071	653	408	0	0	658	0	0
Stage 1	418	418	-	653	653	-	-	-	-	-	-	-
Stage 2	674	658	-	421	418	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	192	219	643	186	208	459	1151	-	-	930	-	-
Stage 1	612	591	-	440	447	-	-	-	-	-	-	-
Stage 2	444	461	-	596	577	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	173	217	643	183	207	459	1151	-	-	930	-	-
Mov Cap-2 Maneuver	173	217	-	183	207	-	-	-	-	-	-	-
Stage 1	612	587	-	440	447	-	-	-	-	-	-	-
Stage 2	402	461	-	587	573	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.7	20	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1151	-	-	173	643	305	930	-	-
HCM Lane V/C Ratio	-	-	-	0.063	0.008	0.214	0.006	-	-
HCM Control Delay (s)	0	-	-	27.2	10.6	20	8.9	0	-
HCM Lane LOS	A	-	-	D	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.8	0	-	-

Intersection

Int Delay, s/veh 7.6

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		4	4		4	
Traffic Vol, veh/h	0	355	275	120	235	0
Future Vol, veh/h	0	355	275	120	235	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	386	299	130	255	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	429	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1130	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1130	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	0	0	32
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	379	1130	-	-	-
HCM Lane V/C Ratio	0.674	-	-	-	-
HCM Control Delay (s)	32	0	-	-	-
HCM Lane LOS	D	A	-	-	-
HCM 95th %tile Q(veh)	4.7	0	-	-	-

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations	W			W	W	
Traffic Vol, veh/h	0	65	40	355	275	0
Future Vol, veh/h	0	65	40	355	275	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	71	43	386	299	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	771	299	299	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	368	741	1262	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	352	741	1262	-	-	-
Mov Cap-2 Maneuver	352	-	-	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	628	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	10.4	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1262	-	741	-	-
HCM Lane V/C Ratio	0.034	-	0.095	-	-
HCM Control Delay (s)	8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection

Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	175	60	5	5	35	0	5	60	5	0	40	80
Future Vol, veh/h	175	60	5	5	35	0	5	60	5	0	40	80
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	190	65	5	5	38	0	5	65	5	0	43	87
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.9			8.1			8.4			8.2		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	73%	12%	0%
Vol Thru, %	86%	25%	88%	33%
Vol Right, %	7%	2%	0%	67%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	240	40	120
LT Vol	5	175	5	0
Through Vol	60	60	35	40
RT Vol	5	5	0	80
Lane Flow Rate	76	261	43	130
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.333	0.057	0.158
Departure Headway (Hd)	4.785	4.591	4.738	4.357
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	749	783	754	823
Service Time	2.818	2.62	2.776	2.386
HCM Lane V/C Ratio	0.101	0.333	0.057	0.158
HCM Control Delay	8.4	9.9	8.1	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1.5	0.2	0.6

11: Epping Road / NH 27 & Beech Hill Road (E)
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-2	-	3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1622	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1622	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	10	570	10	10	730
Future Vol, veh/h	10	10	570	10	10	730
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	620	11	11	793

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1441	626	0	0	631
Stage 1	626	-	-	-	-
Stage 2	815	-	-	-	-
Critical Hdwy	6.62	6.32	-	-	4.12
Critical Hdwy Stg 1	5.62	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	135	476	-	-	951
Stage 1	515	-	-	-	-
Stage 2	416	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	132	476	-	-	951
Mov Cap-2 Maneuver	132	-	-	-	-
Stage 1	515	-	-	-	-
Stage 2	407	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	207	951
HCM Lane V/C Ratio	-	-	0.105	0.011
HCM Control Delay (s)	-	-	24.4	8.8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection

Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	605	625	25
Future Vol, veh/h	5	5	5	605	625	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	2	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	658	679	27

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1361	693	706	0	0
Stage 1	693	-	-	-	-
Stage 2	668	-	-	-	-
Critical Hdwy	6.82	6.42	4.12	-	-
Critical Hdwy Stg 1	5.82	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	140	427	892	-	-
Stage 1	459	-	-	-	-
Stage 2	473	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	139	427	892	-	-
Mov Cap-2 Maneuver	139	-	-	-	-
Stage 1	455	-	-	-	-
Stage 2	473	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	892	-	210	-	-
HCM Lane V/C Ratio	0.006	-	0.052	-	-
HCM Control Delay (s)	9.1	0	23.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

22: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27
 HCM 6th TWSC

2020 Base
 Weekday AM

Intersection

Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	5	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	8.12	7.52	6.72	6.72	6.12	6.02
Critical Hdwy Stg 1	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	893	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0		0		0		0
HCM LOS					A		A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	1038	94	42
Average Queue (ft)	927	38	20
95th Queue (ft)	1266	79	128
Link Distance (ft)	992		
Upstream Blk Time (%)	78		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		600	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	NB	SB	SB
Directions Served	LT	R	TR	L	T
Maximum Queue (ft)	215	127	38	170	80
Average Queue (ft)	116	24	8	61	73
95th Queue (ft)	558	121	29	141	450
Link Distance (ft)	987		544		798
Upstream Blk Time (%)	8				9
Queuing Penalty (veh)	0				44
Storage Bay Dist (ft)		150		600	
Storage Blk Time (%)	2	9			9
Queuing Penalty (veh)	4	3			11

Intersection: 3: Epping Road / NH 27 & Continental Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	170	102	47	258	366	20
Average Queue (ft)	89	43	12	144	260	1
95th Queue (ft)	251	118	39	260	943	10
Link Distance (ft)	375			379	1494	
Upstream Blk Time (%)	9				10	
Queuing Penalty (veh)	0				62	
Storage Bay Dist (ft)		175	225			275
Storage Blk Time (%)	10	10		1	10	
Queuing Penalty (veh)	6	12		0	3	

Intersection: 4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	55	208	39	205
Average Queue (ft)	18	118	2	74
95th Queue (ft)	74	384	19	303
Link Distance (ft)	178	597	1064	468
Upstream Blk Time (%)	2	10		10
Queuing Penalty (veh)	0	0		64
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	194	30	218
Average Queue (ft)	11	127	2	123
95th Queue (ft)	30	423	21	643
Link Distance (ft)	26	662	585	1064
Upstream Blk Time (%)	13	10		10
Queuing Penalty (veh)	0	0		66
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	EB	WB	NB	SB	SB
Directions Served	LT	R	LTR	L	L	TR
Maximum Queue (ft)	72	22	101	27	25	60
Average Queue (ft)	36	12	44	3	5	59
95th Queue (ft)	193	58	209	18	20	348
Link Distance (ft)	437		559			585
Upstream Blk Time (%)	3		1			10
Queuing Penalty (veh)	0		0			70
Storage Bay Dist (ft)		75		150	175	
Storage Blk Time (%)		10				10
Queuing Penalty (veh)		2				2

Intersection: 7: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	38	57	107	2	181
Average Queue (ft)	14	22	59	0	77
95th Queue (ft)	40	65	264	2	336
Link Distance (ft)		101	586	437	535
Upstream Blk Time (%)		10	2		10
Queuing Penalty (veh)		0	0		66
Storage Bay Dist (ft)	30				
Storage Blk Time (%)	6	12			
Queuing Penalty (veh)	1	2			

Intersection: 8: Brentwood Road / NH 111A & Epping Road / NH 27

Movement	SB	NE
Directions Served	TR	LR
Maximum Queue (ft)	98	56
Average Queue (ft)	50	27
95th Queue (ft)	264	44
Link Distance (ft)	437	19
Upstream Blk Time (%)	10	36
Queuing Penalty (veh)	65	54
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Epping Road / NH 27 & Brentwood Road / NH 111A

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	60	192	18
Average Queue (ft)	26	86	1
95th Queue (ft)	52	270	10
Link Distance (ft)	26	402	38
Upstream Blk Time (%)	6	10	0
Queuing Penalty (veh)	3	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Columbus Avenue & Brentwood Road / NH 111A

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	147	64	101	82
Average Queue (ft)	91	32	66	56
95th Queue (ft)	316	57	231	79
Link Distance (ft)	512	26	338	19
Upstream Blk Time (%)	10	17	10	28
Queuing Penalty (veh)	0	17	0	81
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Epping Road / NH 27 & Kings Way Ave

Movement	EB	NB	SB	B21
Directions Served	LR	LT	TR	T
Maximum Queue (ft)	50	118	49	38
Average Queue (ft)	14	6	49	38
95th Queue (ft)	59	55	290	226
Link Distance (ft)	594	468	414	379
Upstream Blk Time (%)			10	10
Queuing Penalty (veh)			66	66
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Epping Road / NH 27 & Cronin Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	49	2	154
Average Queue (ft)	19	0	73
95th Queue (ft)	51	2	380
Link Distance (ft)	75	1494	544
Upstream Blk Time (%)	8		10
Queuing Penalty (veh)	0		60
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Epping Road / NH 27 & Watson Road

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: Epping Road / NH 27 & Beech Hill Road (E)

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 24: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 833

1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 HCM 6th TWSC

2020 Base
 Weekday PM

Intersection

Int Delay, s/veh	256.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕		↕	↑			↕	
Traffic Vol, veh/h	0	0	0	225	0	230	310	295	0	0	285	5
Future Vol, veh/h	0	0	0	225	0	230	310	295	0	0	285	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	600	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	2	-	-	1	-	-	2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	245	0	250	337	321	0	0	310	5

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1308	1310	321
Stage 1	995	995	-
Stage 2	313	315	-
Critical Hdwy	6.82	6.92	6.42
Critical Hdwy Stg 1	5.82	5.92	-
Critical Hdwy Stg 2	5.82	5.92	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	~ 152	137	707
Stage 1	320	289	-
Stage 2	716	633	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	~ 111	0	707
Mov Cap-2 Maneuver	~ 111	0	-
Stage 1	~ 233	0	-
Stage 2	716	0	-

Approach	WB	NB	SB
HCM Control Delay, s	\$ 756.1	4.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1245	- 193	-	-
HCM Lane V/C Ratio	0.271	- 2.563	-	-
HCM Control Delay (s)	9	\$ 756.1	-	-
HCM Lane LOS	A	- F	-	-
HCM 95th %tile Q(veh)	1.1	- 42.1	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp 2020 Base
 HCM 6th TWSC Weekday PM

Intersection

Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔					↔		↔	↔	
Traffic Vol, veh/h	30	0	245	0	0	0	0	575	355	120	390	0
Future Vol, veh/h	30	0	245	0	0	0	0	575	355	120	390	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	-	-	-	600	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	3	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	0	266	0	0	0	0	625	386	130	424	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1502	1695	424	-	0	0	1011	0	0
Stage 1	684	684	-	-	-	-	-	-	-
Stage 2	818	1011	-	-	-	-	-	-	-
Critical Hdwy	6.82	6.92	6.42	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.82	5.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	113	77	615	0	-	-	686	-	0
Stage 1	464	416	-	0	-	-	-	-	0
Stage 2	396	283	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	92	0	615	-	-	-	686	-	-
Mov Cap-2 Maneuver	92	0	-	-	-	-	-	-	-
Stage 1	464	0	-	-	-	-	-	-	-
Stage 2	321	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0	2.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	92	615	686	-
HCM Lane V/C Ratio	-	-	0.354	0.433	0.19	-
HCM Control Delay (s)	-	-	64.2	15.2	11.5	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.4	2.2	0.7	-

3: Epping Road / NH 27 & Continental Drive
 Timing Report, Sorted By Phase

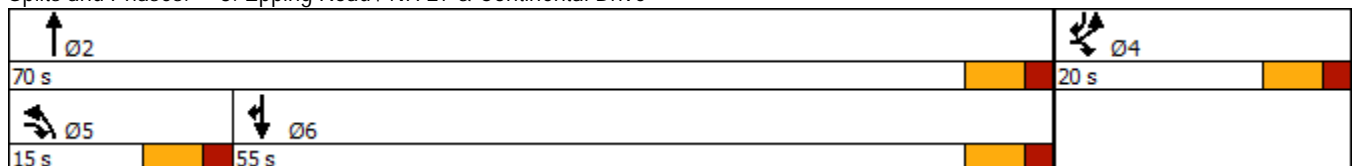
2020 Base
 Weekday PM

	↑	↖	↗	↓
Phase Number	2	4	5	6
Movement	NBT	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	Min	None	None	Min
Maximum Split (s)	70	20	15	55
Maximum Split (%)	77.8%	22.2%	16.7%	61.1%
Minimum Split (s)	16	14	14	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	8	8	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	70	0	15
End Time (s)	70	0	15	70
Yield/Force Off (s)	64	84	9	64
Yield/Force Off 170(s)	64	84	9	64
Local Start Time (s)	75	55	75	0
Local Yield (s)	49	69	84	49
Local Yield 170(s)	49	69	84	49

Intersection Summary













Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Epping Road / NH 27 & Continental Drive



3: Epping Road / NH 27 & Continental Drive HCM 6th Signalized Intersection Summary

2020 Base
Weekday PM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	125	60	15	805	605	30
Future Volume (veh/h)	125	60	15	805	605	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1949	1949	1864	1864	1949	1949
Adj Flow Rate, veh/h	136	65	16	875	658	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	387	471	136	1143	871	1083
Arrive On Green	0.21	0.21	0.08	0.61	0.45	0.45
Sat Flow, veh/h	1856	1651	1776	1864	1949	1651
Grp Volume(v), veh/h	136	65	16	875	658	33
Grp Sat Flow(s),veh/h/ln	1856	1651	1776	1864	1949	1651
Q Serve(g_s), s	2.8	1.3	0.4	15.3	12.6	0.3
Cycle Q Clear(g_c), s	2.8	1.3	0.4	15.3	12.6	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	387	471	136	1143	871	1083
V/C Ratio(X)	0.35	0.14	0.12	0.77	0.76	0.03
Avail Cap(c_a), veh/h	662	716	436	2744	2216	2222
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	11.9	19.3	6.3	10.3	2.7
Incr Delay (d2), s/veh	0.5	0.1	0.4	1.1	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.4	0.2	3.5	4.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.7	12.1	19.7	7.4	11.7	2.7
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	201			891	691	
Approach Delay, s/veh	14.5			7.6	11.3	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		31.5		13.3	7.4	24.1
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		64.0		14.0	9.0	49.0
Max Q Clear Time (g_c+I1), s		17.3		4.8	2.4	14.6
Green Ext Time (p_c), s		5.2		0.5	0.0	3.4
Intersection Summary						
HCM 6th Ctrl Delay			9.8			
HCM 6th LOS			A			

4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)
 HCM 6th TWSC

2020 Base
 Weekday PM

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	0	5	15	0	185	5	575	10	40	640	5
Future Vol, veh/h	5	0	5	15	0	185	5	575	10	40	640	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	16	0	201	5	625	11	43	696	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1526	1431	699	1428	1428	631	701	0	0	636	0	0
Stage 1	785	785	-	641	641	-	-	-	-	-	-	-
Stage 2	741	646	-	787	787	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	6.92	6.32	6.12	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	96	134	440	122	146	489	896	-	-	947	-	-
Stage 1	386	404	-	480	486	-	-	-	-	-	-	-
Stage 2	408	467	-	402	421	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	53	123	440	113	134	489	896	-	-	947	-	-
Mov Cap-2 Maneuver	53	123	-	113	134	-	-	-	-	-	-	-
Stage 1	383	374	-	476	482	-	-	-	-	-	-	-
Stage 2	238	463	-	368	390	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	47.7		25.1		0.1		0.5	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	896	-	-	95	391	947	-	-
HCM Lane V/C Ratio	0.006	-	-	0.114	0.556	0.046	-	-
HCM Control Delay (s)	9	0	-	47.7	25.1	9	0	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	3.3	0.1	-	-

5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)
 HCM 6th TWSC

2020 Base
 Weekday PM

Intersection

Int Delay, s/veh	11.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	0	10	80	5	90	5	470	25	25	605	25
Future Vol, veh/h	5	0	10	80	5	90	5	470	25	25	605	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	11	87	5	98	5	511	27	27	658	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1312	1274	672	1266	1274	525	685	0	0	538	0	0
Stage 1	726	726	-	535	535	-	-	-	-	-	-	-
Stage 2	586	548	-	731	739	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	126	156	447	136	156	544	908	-	-	1030	-	-
Stage 1	399	413	-	514	509	-	-	-	-	-	-	-
Stage 2	480	501	-	397	407	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	97	148	447	128	148	544	908	-	-	1030	-	-
Mov Cap-2 Maneuver	97	148	-	128	148	-	-	-	-	-	-	-
Stage 1	396	395	-	510	505	-	-	-	-	-	-	-
Stage 2	386	497	-	371	389	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	24.3		84.8		0.1		0.3	
HCM LOS	C		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	908	-	-	203	212	1030	-
HCM Lane V/C Ratio	0.006	-	-	0.08	0.897	0.026	-
HCM Control Delay (s)	9	0	-	24.3	84.8	8.6	0
HCM Lane LOS	A	A	-	C	F	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	7.2	0.1	-

6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive
 HCM 6th TWSC

2020 Base
 Weekday PM

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔		↔	↔		↔	↔	
Traffic Vol, veh/h	15	0	10	15	0	5	10	470	15	20	635	40
Future Vol, veh/h	15	0	10	15	0	5	10	470	15	20	635	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	75	-	-	-	150	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	11	16	0	5	11	511	16	22	690	43

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1300	1305	712	1302	1318	519	733	0	0	527	0	0
Stage 1	756	756	-	541	541	-	-	-	-	-	-	-
Stage 2	544	549	-	761	777	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	138	160	432	138	157	557	872	-	-	1040	-	-
Stage 1	400	416	-	525	521	-	-	-	-	-	-	-
Stage 2	523	516	-	398	407	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	133	155	432	131	152	557	872	-	-	1040	-	-
Mov Cap-2 Maneuver	133	155	-	131	152	-	-	-	-	-	-	-
Stage 1	395	407	-	518	514	-	-	-	-	-	-	-
Stage 2	511	509	-	380	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.9	30.6	0.2	0.2
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	872	-	-	133	432	162	1040	-	-
HCM Lane V/C Ratio	0.012	-	-	0.123	0.025	0.134	0.021	-	-
HCM Control Delay (s)	9.2	-	-	35.8	13.5	30.6	8.5	-	-
HCM Lane LOS	A	-	-	E	B	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	0.5	0.1	-	-

7: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive
 HCM 6th TWSC

2020 Base
 Weekday PM

Intersection

Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	20	10	0	20	0	455	40	40	620	0
Future Vol, veh/h	20	0	20	10	0	20	0	455	40	40	620	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	30	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	22	11	0	22	0	495	43	43	674	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1288	1298	674	1288	1277	517	674	0	0	538	0	0
Stage 1	760	760	-	517	517	-	-	-	-	-	-	-
Stage 2	528	538	-	771	760	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	141	162	455	131	155	550	917	-	-	1030	-	-
Stage 1	398	414	-	526	519	-	-	-	-	-	-	-
Stage 2	534	522	-	376	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	128	151	455	118	145	550	917	-	-	1030	-	-
Mov Cap-2 Maneuver	128	151	-	118	145	-	-	-	-	-	-	-
Stage 1	398	386	-	526	519	-	-	-	-	-	-	-
Stage 2	513	522	-	334	370	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	26.1		21.7		0			0.5		
HCM LOS	D		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	917	-	-	128	455	248	1030	-	-
HCM Lane V/C Ratio	-	-	-	0.17	0.048	0.131	0.042	-	-
HCM Control Delay (s)	0	-	-	38.8	13.3	21.7	8.6	0	-
HCM Lane LOS	A	-	-	E	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0.4	0.1	-	-

Intersection

Int Delay, s/veh 3.8

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	310	360	290	150	0
Future Vol, veh/h	0	310	360	290	150	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	337	391	315	163	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	706	0	886
Stage 1	-	-	549
Stage 2	-	-	337
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	892	-	315
Stage 1	-	-	579
Stage 2	-	-	723
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	892	-	315
Mov Cap-2 Maneuver	-	-	315
Stage 1	-	-	579
Stage 2	-	-	723

Approach	NB	SB	NE
HCM Control Delay, s	0	0	28.1
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	315	892	-	-	-
HCM Lane V/C Ratio	0.518	-	-	-	-
HCM Control Delay (s)	28.1	0	-	-	-
HCM Lane LOS	D	A	-	-	-
HCM 95th %tile Q(veh)	2.8	0	-	-	-

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	0	60	100	310	360	0
Future Vol, veh/h	0	60	100	310	360	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	109	337	391	0

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	946	391	391	0	-	0
Stage 1	391	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	290	658	1168	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	257	658	1168	-	-	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	575	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	11.1	2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1168	-	658	-	-
HCM Lane V/C Ratio	0.093	-	0.099	-	-
HCM Control Delay (s)	8.4	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	-	-

Intersection

Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	90	55	5	5	95	0	5	60	5	0	65	225
Future Vol, veh/h	90	55	5	5	95	0	5	60	5	0	65	225
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	60	5	5	103	0	5	65	5	0	71	245
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.6			9			8.6			9.8		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	60%	5%	0%
Vol Thru, %	86%	37%	95%	22%
Vol Right, %	7%	3%	0%	78%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	150	100	290
LT Vol	5	90	5	0
Through Vol	60	55	95	65
RT Vol	5	5	0	225
Lane Flow Rate	76	163	109	315
Geometry Grp	1	1	1	1
Degree of Util (X)	0.105	0.228	0.152	0.372
Departure Headway (Hd)	4.949	5.042	5.029	4.251
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	720	708	708	842
Service Time	3.01	3.107	3.098	2.294
HCM Lane V/C Ratio	0.106	0.23	0.154	0.374
HCM Control Delay	8.6	9.6	9	9.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.9	0.5	1.7

Intersection

Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	815	640	25
Future Vol, veh/h	5	5	5	815	640	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	2	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	886	696	27

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1606	710	723	0	-	0
Stage 1	710	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Critical Hdwy	6.82	6.42	4.12	-	-	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	97	417	879	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	96	417	879	-	-	-
Mov Cap-2 Maneuver	96	-	-	-	-	-
Stage 1	445	-	-	-	-	-
Stage 2	361	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.8	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	879	-	156	-	-
HCM Lane V/C Ratio	0.006	-	0.07	-	-
HCM Control Delay (s)	9.1	0	29.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection

Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	S	S
Traffic Vol, veh/h	10	10	920	10	10	625
Future Vol, veh/h	10	10	920	10	10	625
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	1000	11	11	679

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1707	1006	0	0	1011
Stage 1	1006	-	-	-	-
Stage 2	701	-	-	-	-
Critical Hdwy	6.62	6.32	-	-	4.12
Critical Hdwy Stg 1	5.62	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	91	285	-	-	686
Stage 1	334	-	-	-	-
Stage 2	473	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	89	285	-	-	686
Mov Cap-2 Maneuver	89	-	-	-	-
Stage 1	334	-	-	-	-
Stage 2	461	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.4	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	136	686
HCM Lane V/C Ratio	-	-	0.16	0.016
HCM Control Delay (s)	-	-	36.4	10.3
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	0.6	0

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	1	0	0	1	1
Stage 1	-	-	-	1	-
Stage 2	-	-	-	0	-
Critical Hdwy	4.12	-	-	5.82	5.92
Critical Hdwy Stg 1	-	-	-	4.82	-
Critical Hdwy Stg 2	-	-	-	4.82	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	1022	1084
Stage 1	-	-	-	1022	-
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	1022	-
Stage 1	-	-	-	1022	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
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HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-2	-	3	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	6.02
Critical Hdwy Stg 2	-	-	-	-	6.02
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

24: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27
 HCM 6th TWSC

2020 Base
 Weekday PM

Intersection

Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	5	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	8.12	7.52	6.72	6.72	6.12	6.02
Critical Hdwy Stg 1	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	893	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0		0		0		0
HCM LOS					A		A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Analysis Worksheets: No-Build Conditions

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	978	79	2
Average Queue (ft)	767	32	0
95th Queue (ft)	1222	66	3
Link Distance (ft)	992		
Upstream Blk Time (%)	33		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		600	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	NB	SB
Directions Served	LT	R	TR	L
Maximum Queue (ft)	343	198	13	98
Average Queue (ft)	55	64	1	44
95th Queue (ft)	256	206	6	80
Link Distance (ft)	987		544	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		600
Storage Blk Time (%)		19		
Queuing Penalty (veh)		1		

Intersection: 3: Epping Road / NH 27 & Continental Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	39	34	75	193	223	66
Average Queue (ft)	10	9	28	84	117	15
95th Queue (ft)	32	29	61	172	192	49
Link Distance (ft)	375			379	1494	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		175	225			275
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	

Intersection: 4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	46	60	201
Average Queue (ft)	7	16	4	78
95th Queue (ft)	28	40	27	162
Link Distance (ft)	172	597	1063	468
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	50	45	150
Average Queue (ft)	4	20	3	50
95th Queue (ft)	20	46	24	122
Link Distance (ft)	26	662	585	1063
Upstream Blk Time (%)	2			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	L	L
Maximum Queue (ft)	66	11	48	25	23
Average Queue (ft)	20	3	16	6	2
95th Queue (ft)	46	9	42	23	13
Link Distance (ft)	437		559		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		75		150	175
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Intersection: 7: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	EB	WB	SB
Directions Served	L	TR	LTR	LTR
Maximum Queue (ft)	30	35	70	57
Average Queue (ft)	8	4	32	4
95th Queue (ft)	29	22	57	28
Link Distance (ft)		99	586	535
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	30			
Storage Blk Time (%)	3	0		
Queuing Penalty (veh)	0	0		

Intersection: 8: Brentwood Road / NH 111A & Epping Road / NH 27

Movement	NB	SB	NE	NE
Directions Served	LT	TR	L	R
Maximum Queue (ft)	111	10	87	71
Average Queue (ft)	23	0	58	36
95th Queue (ft)	77	7	78	72
Link Distance (ft)	388	468	16	16
Upstream Blk Time (%)			68	7
Queuing Penalty (veh)			110	11
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Columbus Avenue & Brentwood Road / NH 111A

Movement	EB	NB
Directions Served	TR	LR
Maximum Queue (ft)	208	218
Average Queue (ft)	61	60
95th Queue (ft)	164	166
Link Distance (ft)	502	325
Upstream Blk Time (%)		2
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Epping Road / NH 27 & Beech Hill Road (E)

Movement

Directions Served
 Maximum Queue (ft)
 Average Queue (ft)
 95th Queue (ft)
 Link Distance (ft)
 Upstream Blk Time (%)
 Queuing Penalty (veh)
 Storage Bay Dist (ft)
 Storage Blk Time (%)
 Queuing Penalty (veh)

Intersection: 19: Epping Road / NH 27 & Watson Road

Movement

Directions Served
 Maximum Queue (ft)
 Average Queue (ft)
 95th Queue (ft)
 Link Distance (ft)
 Upstream Blk Time (%)
 Queuing Penalty (veh)
 Storage Bay Dist (ft)
 Storage Blk Time (%)
 Queuing Penalty (veh)

Intersection: 20: Epping Road / NH 27 & Cronin Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	50	79
Average Queue (ft)	15	7
95th Queue (ft)	42	39
Link Distance (ft)	75	544
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Epping Road / NH 27 & Kings Way Ave

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	37	95	2
Average Queue (ft)	8	6	0
95th Queue (ft)	30	45	2
Link Distance (ft)	594	468	414
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 122

HCM 6th TWSC
 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

2030 No-Build
 Weekday AM

Intersection

Int Delay, s/veh	225.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕		↕	↑			↑	
Traffic Vol, veh/h	0	0	0	395	0	100	190	150	0	0	270	30
Future Vol, veh/h	0	0	0	395	0	100	190	150	0	0	270	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	600	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	2	-	-	1	-	-	2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	439	0	111	211	167	0	0	300	33

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	906	922	167
Stage 1	589	589	-
Stage 2	317	333	-
Critical Hdwy	6.82	6.92	6.42
Critical Hdwy Stg 1	5.82	5.92	-
Critical Hdwy Stg 2	5.82	5.92	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	~ 277	244	869
Stage 1	519	464	-
Stage 2	713	620	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	~ 229	0	869
Mov Cap-2 Maneuver	~ 229	0	-
Stage 1	~ 430	0	-
Stage 2	713	0	-

Approach	WB	NB	SB
HCM Control Delay, s	\$ 513.3	4.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1226	-	269	-
HCM Lane V/C Ratio	0.172	-	2.045	-
HCM Control Delay (s)	8.5	-	\$ 513.3	-
HCM Lane LOS	A	-	F	-
HCM 95th %tile Q(veh)	0.6	-	40.2	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔					↔		↔	↔	
Traffic Vol, veh/h	5	0	295	0	0	0	0	335	275	180	485	0
Future Vol, veh/h	5	0	295	0	0	0	0	335	275	180	485	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	-	-	-	600	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	3	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	328	0	0	0	0	372	306	200	539	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1464	1617	539	-	0	0	678	0	0
Stage 1	939	939	-	-	-	-	-	-	-
Stage 2	525	678	-	-	-	-	-	-	-
Critical Hdwy	6.82	6.92	6.42	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.82	5.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	120	86	526	0	-	-	914	-	0
Stage 1	343	309	-	0	-	-	-	-	0
Stage 2	560	419	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	94	0	526	-	-	-	914	-	-
Mov Cap-2 Maneuver	94	0	-	-	-	-	-	-	-
Stage 1	343	0	-	-	-	-	-	-	-
Stage 2	437	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.9	0	2.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	94	526	914	-
HCM Lane V/C Ratio	-	-	0.059	0.623	0.219	-
HCM Control Delay (s)	-	-	45.7	22.5	10	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	4.2	0.8	-

Timing Report, Sorted By Phase
 3: Epping Road / NH 27 & Continental Drive

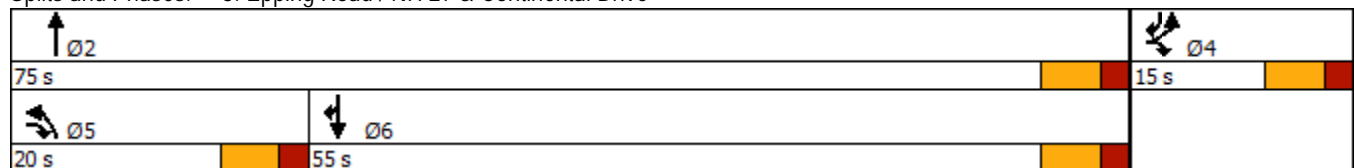
2030 No-Build
 Weekday AM

	↑	↘	↙	↓
Phase Number	2	4	5	6
Movement	NBT	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	Min	None	None	Min
Maximum Split (s)	75	15	20	55
Maximum Split (%)	83.3%	16.7%	22.2%	61.1%
Minimum Split (s)	16	14	14	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	8	8	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	75	0	20
End Time (s)	75	0	20	75
Yield/Force Off (s)	69	84	14	69
Yield/Force Off 170(s)	69	84	14	69
Local Start Time (s)	70	55	70	0
Local Yield (s)	49	64	84	49
Local Yield 170(s)	49	64	84	49

Intersection Summary













Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Epping Road / NH 27 & Continental Drive



HCM 6th Signalized Intersection Summary
 3: Epping Road / NH 27 & Continental Drive

2030 No-Build
 Weekday AM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	15	45	595	665	105
Future Volume (veh/h)	15	15	45	595	665	105
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1949	1949	1864	1864	1949	1949
Adj Flow Rate, veh/h	17	17	50	661	739	117
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	198	386	227	1332	969	997
Arrive On Green	0.11	0.11	0.13	0.71	0.50	0.50
Sat Flow, veh/h	1856	1651	1776	1864	1949	1651
Grp Volume(v), veh/h	17	17	50	661	739	117
Grp Sat Flow(s),veh/h/ln	1856	1651	1776	1864	1949	1651
Q Serve(g_s), s	0.4	0.4	1.1	7.0	13.7	1.3
Cycle Q Clear(g_c), s	0.4	0.4	1.1	7.0	13.7	1.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	198	386	227	1332	969	997
V/C Ratio(X)	0.09	0.04	0.22	0.50	0.76	0.12
Avail Cap(c_a), veh/h	457	617	636	2964	2225	2062
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	13.2	17.5	2.8	9.1	3.8
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.3	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.4	0.8	4.3	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.2	13.3	18.0	3.1	10.4	3.8
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	34			711	856	
Approach Delay, s/veh	15.7			4.2	9.5	
Approach LOS	B			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.9		8.8	9.7	26.2
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		69.0		9.0	14.0	49.0
Max Q Clear Time (g_c+I1), s		9.0		2.4	3.1	15.7
Green Ext Time (p_c), s		3.3		0.0	0.1	4.5
Intersection Summary						
HCM 6th Ctrl Delay			7.2			
HCM 6th LOS			A			

HCM 6th TWSC
 4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

2030 No-Build
 Weekday AM

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	0	0	25	5	615	10	160	495	5
Future Vol, veh/h	5	0	5	0	0	25	5	615	10	160	495	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-2	-
Peak Hour Factor	92	92	92	90	92	90	92	90	90	90	90	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	5	0	0	28	5	683	11	178	550	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1622	1613	553	1610	1610	689	555	0	0	694	0	0
Stage 1	909	909	-	699	699	-	-	-	-	-	-	-
Stage 2	713	704	-	911	911	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	6.92	6.32	6.12	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	82	104	533	92	114	454	1015	-	-	901	-	-
Stage 1	329	354	-	447	459	-	-	-	-	-	-	-
Stage 2	423	440	-	346	371	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	60	74	533	70	81	454	1015	-	-	901	-	-
Mov Cap-2 Maneuver	60	74	-	70	81	-	-	-	-	-	-	-
Stage 1	326	253	-	443	455	-	-	-	-	-	-	-
Stage 2	394	436	-	245	265	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42	13.4	0.1	2.4
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1015	-	-	108	454	901	-
HCM Lane V/C Ratio	0.005	-	-	0.101	0.061	0.197	-
HCM Control Delay (s)	8.6	0	-	42	13.4	10	0
HCM Lane LOS	A	A	-	E	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.7	-

HCM 6th TWSC
 5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

2030 No-Build
 Weekday AM

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	0	0	10	0	15	5	625	55	65	400	5
Future Vol, veh/h	5	0	0	10	0	15	5	625	55	65	400	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	2	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	11	0	17	6	694	61	72	444	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1336	1358	447	1328	1331	725	450	0	0	755	0	0
Stage 1	591	591	-	737	737	-	-	-	-	-	-	-
Stage 2	745	767	-	591	594	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	121	138	604	123	143	417	1110	-	-	855	-	-
Stage 1	477	478	-	394	408	-	-	-	-	-	-	-
Stage 2	390	394	-	477	477	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	106	121	604	112	126	417	1110	-	-	855	-	-
Mov Cap-2 Maneuver	106	121	-	112	126	-	-	-	-	-	-	-
Stage 1	473	424	-	390	404	-	-	-	-	-	-	-
Stage 2	371	390	-	424	424	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	40.8		25.9		0.1		1.3	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1110	-	-	106	200	855	-	-
HCM Lane V/C Ratio	0.005	-	-	0.052	0.139	0.084	-	-
HCM Control Delay (s)	8.3	0	-	40.8	25.9	9.6	0	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.3	-	-

HCM 6th TWSC
 6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

2030 No-Build
 Weekday AM

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	45	0	15	10	0	10	25	630	10	5	390	15
Future Vol, veh/h	45	0	15	10	0	10	25	630	10	5	390	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	75	-	-	-	150	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	0	17	11	0	11	28	700	11	6	433	17

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1221	1221	442	1224	1224	706	450	0	0	711	0	0
Stage 1	454	454	-	762	762	-	-	-	-	-	-	-
Stage 2	767	767	-	462	462	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	157	180	615	156	179	436	1110	-	-	888	-	-
Stage 1	586	569	-	397	414	-	-	-	-	-	-	-
Stage 2	395	411	-	580	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	149	174	615	148	173	436	1110	-	-	888	-	-
Mov Cap-2 Maneuver	149	174	-	148	173	-	-	-	-	-	-	-
Stage 1	571	565	-	387	404	-	-	-	-	-	-	-
Stage 2	375	401	-	560	561	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.4	23.1	0.3	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1110	-	-	149	615	221	888	-	-
HCM Lane V/C Ratio	0.025	-	-	0.336	0.027	0.101	0.006	-	-
HCM Control Delay (s)	8.3	-	-	40.9	11	23.1	9.1	-	-
HCM Lane LOS	A	-	-	E	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.1	0.3	0	-	-

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	5	20	0	40	0	625	10	5	395	0
Future Vol, veh/h	10	0	5	20	0	40	0	625	10	5	395	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	30	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	6	22	0	44	0	694	11	6	439	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1173	1156	439	1154	1151	700	439	0	0	705	0	0
Stage 1	451	451	-	700	700	-	-	-	-	-	-	-
Stage 2	722	705	-	454	451	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	169	197	618	163	186	431	1121	-	-	893	-	-
Stage 1	588	571	-	413	425	-	-	-	-	-	-	-
Stage 2	418	439	-	571	557	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	151	195	618	160	184	431	1121	-	-	893	-	-
Mov Cap-2 Maneuver	151	195	-	160	184	-	-	-	-	-	-	-
Stage 1	588	566	-	413	425	-	-	-	-	-	-	-
Stage 2	375	439	-	561	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.1	22.2	0	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1121	-	-	151	618	275	893	-	-
HCM Lane V/C Ratio	-	-	-	0.074	0.009	0.242	0.006	-	-
HCM Control Delay (s)	0	-	-	30.7	10.9	22.2	9.1	0	-
HCM Lane LOS	A	-	-	D	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.9	0	-	-

Intersection

Int Delay, s/veh	18.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	35	375	330	85	250	70
Future Vol, veh/h	35	375	330	85	250	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	417	367	94	278	78

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	461	0	0	909	414
Stage 1	-	-	-	414	-
Stage 2	-	-	-	495	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1100	-	-	305	638
Stage 1	-	-	-	667	-
Stage 2	-	-	-	613	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1100	-	-	291	638
Mov Cap-2 Maneuver	-	-	-	291	-
Stage 1	-	-	-	636	-
Stage 2	-	-	-	613	-

Approach	NB	SB	NE
HCM Control Delay, s	0.7	0	65.6
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	SBR
Capacity (veh/h)	291	638	1100	-	-	-
HCM Lane V/C Ratio	0.955	0.122	0.035	-	-	-
HCM Control Delay (s)	80.8	11.4	8.4	0	-	-
HCM Lane LOS	F	B	A	A	-	-
HCM 95th %tile Q(veh)	9.4	0.4	0.1	-	-	-

Intersection

Int Delay, s/veh 1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	250	5	0	120	0	70
Future Vol, veh/h	250	5	0	120	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	278	6	0	133	0	78

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	414
Stage 1	-	-	281
Stage 2	-	-	133
Critical Hdwy	-	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	3.518
Pot Cap-1 Maneuver	-	0	595
Stage 1	-	0	767
Stage 2	-	0	893
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	595
Mov Cap-2 Maneuver	-	-	595
Stage 1	-	-	767
Stage 2	-	-	893

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	758	-	-	-
HCM Lane V/C Ratio	0.103	-	-	-
HCM Control Delay (s)	10.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-2	-	3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	6.02
Critical Hdwy Stg 2	-	-	-	-	6.02
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	5.82
Critical Hdwy Stg 1	-	-	-	-	4.82
Critical Hdwy Stg 2	-	-	-	-	4.82
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	S	S
Traffic Vol, veh/h	10	10	600	10	10	770
Future Vol, veh/h	10	10	600	10	10	770
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	667	11	11	856

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1551	673	0	0	678
Stage 1	673	-	-	-	-
Stage 2	878	-	-	-	-
Critical Hdwy	6.62	6.32	-	-	4.12
Critical Hdwy Stg 1	5.62	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	115	447	-	-	914
Stage 1	488	-	-	-	-
Stage 2	387	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	112	447	-	-	914
Mov Cap-2 Maneuver	112	-	-	-	-
Stage 1	488	-	-	-	-
Stage 2	378	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.9	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	179	914
HCM Lane V/C Ratio	-	-	0.124	0.012
HCM Control Delay (s)	-	-	27.9	9
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection

Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	635	655	25
Future Vol, veh/h	5	5	5	635	655	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	2	-1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	6	6	706	728	28

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1460	742	756	0	0
Stage 1	742	-	-	-	-
Stage 2	718	-	-	-	-
Critical Hdwy	6.82	6.42	4.12	-	-
Critical Hdwy Stg 1	5.82	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	121	399	855	-	-
Stage 1	434	-	-	-	-
Stage 2	446	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	120	399	855	-	-
Mov Cap-2 Maneuver	120	-	-	-	-
Stage 1	429	-	-	-	-
Stage 2	446	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.7	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	855	-	185	-	-
HCM Lane V/C Ratio	0.006	-	0.06	-	-
HCM Control Delay (s)	9.2	0	25.7	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 6th TWSC
 22: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

2030 No-Build
 Weekday AM

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	5	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	8.12	7.52	6.72	6.72	6.12	6.02
Critical Hdwy Stg 1	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	893	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			0		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	1045	107	8
Average Queue (ft)	1008	44	0
95th Queue (ft)	1067	84	5
Link Distance (ft)	992		
Upstream Blk Time (%)	95		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		600	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	NB	SB
Directions Served	LT	R	TR	L
Maximum Queue (ft)	104	113	27	120
Average Queue (ft)	28	10	2	53
95th Queue (ft)	77	67	14	101
Link Distance (ft)	987		544	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		600
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Intersection: 3: Epping Road / NH 27 & Continental Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	133	77	47	272	237	29
Average Queue (ft)	59	28	14	158	126	2
95th Queue (ft)	109	62	40	252	212	14
Link Distance (ft)	375			379	1494	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		175	225			275
Storage Blk Time (%)				1	0	
Queuing Penalty (veh)				0	0	

Intersection: 4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	33	149	86	188
Average Queue (ft)	9	62	5	34
95th Queue (ft)	31	113	40	121
Link Distance (ft)	155	597	1063	468
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	32	174	81	152
Average Queue (ft)	10	71	6	22
95th Queue (ft)	32	138	40	90
Link Distance (ft)	26	662	585	1063
Upstream Blk Time (%)	3			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	28	11	52	27	1	23	8
Average Queue (ft)	7	3	17	5	0	5	0
95th Queue (ft)	22	9	46	21	1	21	5
Link Distance (ft)	437		559		535		585
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		75		150		175	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 7: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	40	44	57	4	163
Average Queue (ft)	17	16	22	0	36
95th Queue (ft)	42	42	52	3	116
Link Distance (ft)		102	586	470	535
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	30				
Storage Blk Time (%)	7	3			
Queuing Penalty (veh)	1	1			

Intersection: 8: Brentwood Road / NH 111A & Epping Road / NH 27

Movement	NB	SB	NE	NE
Directions Served	LT	TR	L	R
Maximum Queue (ft)	292	45	81	74
Average Queue (ft)	96	6	57	43
95th Queue (ft)	221	26	75	80
Link Distance (ft)	379	470	13	13
Upstream Blk Time (%)	0		83	8
Queuing Penalty (veh)	0		94	9
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Columbus Avenue & Brentwood Road / NH 111A

Movement	EB	WB	NB
Directions Served	TR	T	LR
Maximum Queue (ft)	341	16	316
Average Queue (ft)	126	1	158
95th Queue (ft)	321	11	362
Link Distance (ft)	502	13	326
Upstream Blk Time (%)	2		19
Queuing Penalty (veh)	0		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Epping Road / NH 27 & Cronin Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	52	2	124
Average Queue (ft)	17	0	14
95th Queue (ft)	44	2	69
Link Distance (ft)	75	1494	544
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 21: Epping Road / NH 27 & Kings Way Ave

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	33	84
Average Queue (ft)	8	6
95th Queue (ft)	29	54
Link Distance (ft)	594	468
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Epping Road / NH 27 & Watson Road

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 24: Epping Road / NH 27 & Beech Hill Road (E)

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 25: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 105

1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 HCM 6th TWSC

2030 No-Build
 Weekday PM

Intersection

Int Delay, s/veh	353.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕		↕	↑			↕	
Traffic Vol, veh/h	0	0	0	235	0	240	325	310	0	0	300	5
Future Vol, veh/h	0	0	0	235	0	240	325	310	0	0	300	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	600	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	5	-	-	2	-	-	1	-	-	2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	261	0	267	361	344	0	0	333	6

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1402	1405	344
Stage 1	1066	1066	-
Stage 2	336	339	-
Critical Hdwy	6.82	6.92	6.42
Critical Hdwy Stg 1	5.82	5.92	-
Critical Hdwy Stg 2	5.82	5.92	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	~ 132	119	686
Stage 1	294	265	-
Stage 2	697	616	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	~ 93	0	686
Mov Cap-2 Maneuver	~ 93	0	-
Stage 1	~ 207	0	-
Stage 2	697	0	-

Approach	WB	NB	SB
HCM Control Delay, s	\$ 1047	4.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1220	- 165	-	-
HCM Lane V/C Ratio	0.296	- 3.199	-	-
HCM Control Delay (s)	9.2	-\$ 1047	-	-
HCM Lane LOS	A	- F	-	-
HCM 95th %tile Q(veh)	1.2	- 49.4	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp 2030 No-Build
 HCM 6th TWSC Weekday PM

Intersection

Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔					↔		↔	↔	
Traffic Vol, veh/h	30	0	255	0	0	0	0	605	375	125	410	0
Future Vol, veh/h	30	0	255	0	0	0	0	605	375	125	410	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	-	-	-	600	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	2	-	-	1	-	-	3	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	0	283	0	0	0	0	672	417	139	456	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1615	1823	456	-	0	0	1089	0	0
Stage 1	734	734	-	-	-	-	-	-	-
Stage 2	881	1089	-	-	-	-	-	-	-
Critical Hdwy	6.82	6.92	6.42	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.82	5.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	95	63	589	0	-	-	641	-	0
Stage 1	438	393	-	0	-	-	-	-	0
Stage 2	367	258	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	74	0	589	-	-	-	641	-	-
Mov Cap-2 Maneuver	74	0	-	-	-	-	-	-	-
Stage 1	438	0	-	-	-	-	-	-	-
Stage 2	287	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.2	0	2.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	74	589	641	-
HCM Lane V/C Ratio	-	-	0.45	0.481	0.217	-
HCM Control Delay (s)	-	-	88.6	16.6	12.2	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.8	2.6	0.8	-

3: Epping Road / NH 27 & Continental Drive Timing Report, Sorted By Phase

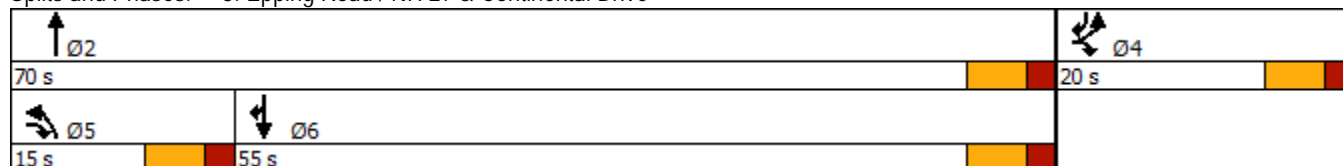
2030 No-Build
Weekday PM

	↑	↖	↗	↓
Phase Number	2	4	5	6
Movement	NBT	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	Min	None	None	Min
Maximum Split (s)	70	20	15	55
Maximum Split (%)	77.8%	22.2%	16.7%	61.1%
Minimum Split (s)	16	14	14	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	8	8	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	70	0	15
End Time (s)	70	0	15	70
Yield/Force Off (s)	64	84	9	64
Yield/Force Off 170(s)	64	84	9	64
Local Start Time (s)	75	55	75	0
Local Yield (s)	49	69	84	49
Local Yield 170(s)	49	69	84	49

Intersection Summary













Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 3: Epping Road / NH 27 & Continental Drive



3: Epping Road / NH 27 & Continental Drive
 HCM 6th Signalized Intersection Summary

2030 No-Build
 Weekday PM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	125	60	15	845	635	30
Future Volume (veh/h)	125	60	15	845	635	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1949	1949	1864	1864	1949	1949
Adj Flow Rate, veh/h	139	67	17	939	706	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	373	458	136	1173	911	1104
Arrive On Green	0.20	0.20	0.08	0.63	0.47	0.47
Sat Flow, veh/h	1856	1651	1776	1864	1949	1651
Grp Volume(v), veh/h	139	67	17	939	706	33
Grp Sat Flow(s),veh/h/ln	1856	1651	1776	1864	1949	1651
Q Serve(g_s), s	3.0	1.4	0.4	17.7	14.2	0.3
Cycle Q Clear(g_c), s	3.0	1.4	0.4	17.7	14.2	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	373	458	136	1173	911	1104
V/C Ratio(X)	0.37	0.15	0.13	0.80	0.78	0.03
Avail Cap(c_a), veh/h	631	688	415	2616	2113	2122
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	12.8	20.3	6.5	10.5	2.6
Incr Delay (d2), s/veh	0.6	0.1	0.4	1.3	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.2	4.2	4.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.8	12.9	20.7	7.8	11.9	2.6
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	206			956	739	
Approach Delay, s/veh	15.6			8.1	11.5	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.6		13.5	7.6	26.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		64.0		14.0	9.0	49.0
Max Q Clear Time (g_c+I1), s		19.7		5.0	2.4	16.2
Green Ext Time (p_c), s		5.9		0.5	0.0	3.8
Intersection Summary						
HCM 6th Ctrl Delay			10.2			
HCM 6th LOS			B			

4: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)
 HCM 6th TWSC

2030 No-Build
 Weekday PM

Intersection

Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	15	0	185	5	605	10	40	670	5
Future Vol, veh/h	5	0	5	15	0	185	5	605	10	40	670	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	6	17	0	206	6	672	11	44	744	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1628	1530	747	1528	1528	678	750	0	0	683	0	0
Stage 1	835	835	-	690	690	-	-	-	-	-	-	-
Stage 2	793	695	-	838	838	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	6.92	6.32	6.12	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	82	117	413	104	128	461	859	-	-	910	-	-
Stage 1	362	383	-	452	463	-	-	-	-	-	-	-
Stage 2	382	444	-	378	400	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	42	106	413	95	116	461	859	-	-	910	-	-
Mov Cap-2 Maneuver	42	106	-	95	116	-	-	-	-	-	-	-
Stage 1	358	351	-	447	458	-	-	-	-	-	-	-
Stage 2	209	439	-	342	367	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	60.3		30.2		0.1		0.5	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	859	-	-	76	358	910	-
HCM Lane V/C Ratio	0.006	-	-	0.146	0.621	0.049	-
HCM Control Delay (s)	9.2	0	-	60.3	30.2	9.2	0
HCM Lane LOS	A	A	-	F	D	A	A
HCM 95th %tile Q(veh)	0	-	-	0.5	4	0.2	-

5: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)
 HCM 6th TWSC

2030 No-Build
 Weekday PM

Intersection												
Int Delay, s/veh	17.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	0	10	80	5	90	5	495	25	25	635	25
Future Vol, veh/h	5	0	10	80	5	90	5	495	25	25	635	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	2	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	11	89	6	100	6	550	28	28	706	28

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1405	1366	720	1358	1366	564	734	0	0	578	0	0
Stage 1	776	776	-	576	576	-	-	-	-	-	-	-
Stage 2	629	590	-	782	790	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	136	419	117	136	517	871	-	-	996	-	-
Stage 1	374	390	-	487	486	-	-	-	-	-	-	-
Stage 2	454	479	-	371	384	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	81	128	419	109	128	517	871	-	-	996	-	-
Mov Cap-2 Maneuver	81	128	-	109	128	-	-	-	-	-	-	-
Stage 1	370	371	-	482	481	-	-	-	-	-	-	-
Stage 2	358	474	-	344	366	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.7	132.6	0.1	0.3
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	871	-	-	175	185	996	-
HCM Lane V/C Ratio	0.006	-	-	0.095	1.051	0.028	-
HCM Control Delay (s)	9.2	0	-	27.7	132.6	8.7	0
HCM Lane LOS	A	A	-	D	F	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	9.2	0.1	-

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	15	0	10	15	0	5	10	495	15	20	665	40
Future Vol, veh/h	15	0	10	15	0	5	10	495	15	20	665	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	75	-	-	-	150	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	11	17	0	6	11	550	17	22	739	44

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1389	1394	761	1392	1408	559	783	0	0	567	0	0
Stage 1	805	805	-	581	581	-	-	-	-	-	-	-
Stage 2	584	589	-	811	827	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	120	141	405	119	139	529	835	-	-	1005	-	-
Stage 1	376	395	-	499	500	-	-	-	-	-	-	-
Stage 2	498	495	-	373	386	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	116	136	405	113	134	529	835	-	-	1005	-	-
Mov Cap-2 Maneuver	116	136	-	113	134	-	-	-	-	-	-	-
Stage 1	371	386	-	493	494	-	-	-	-	-	-	-
Stage 2	486	489	-	355	378	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	30.4		35.3		0.2			0.2		
HCM LOS	D		E							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	835	-	-	116	405	141	1005	-	-
HCM Lane V/C Ratio	0.013	-	-	0.144	0.027	0.158	0.022	-	-
HCM Control Delay (s)	9.4	-	-	41.2	14.1	35.3	8.7	-	-
HCM Lane LOS	A	-	-	E	B	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0.5	0.1	-	-

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	20	10	0	20	0	480	40	40	650	0
Future Vol, veh/h	20	0	20	10	0	20	0	480	40	40	650	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	30	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	22	11	0	22	0	533	44	44	722	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1376	1387	722	1376	1365	555	722	0	0	577	0	0
Stage 1	810	810	-	555	555	-	-	-	-	-	-	-
Stage 2	566	577	-	821	810	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	122	143	427	113	137	523	880	-	-	996	-	-
Stage 1	374	393	-	500	498	-	-	-	-	-	-	-
Stage 2	509	502	-	352	376	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	110	132	427	101	127	523	880	-	-	996	-	-
Mov Cap-2 Maneuver	110	132	-	101	127	-	-	-	-	-	-	-
Stage 1	374	364	-	500	498	-	-	-	-	-	-	-
Stage 2	487	502	-	309	348	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	29.9		24.4		0			0.5		
HCM LOS	D		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	880	-	-	110	427	219	996	-	-
HCM Lane V/C Ratio	-	-	-	0.202	0.052	0.152	0.045	-	-
HCM Control Delay (s)	0	-	-	45.8	13.9	24.4	8.8	0	-
HCM Lane LOS	A	-	-	E	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.2	0.5	0.1	-	-

Intersection

Int Delay, s/veh	18.3					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	100	325	450	235	160	65
Future Vol, veh/h	100	325	450	235	160	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	361	500	261	178	72

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	761	0	-	0	1214 631
Stage 1	-	-	-	-	631 -
Stage 2	-	-	-	-	583 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	851	-	-	-	201 481
Stage 1	-	-	-	-	530 -
Stage 2	-	-	-	-	558 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	851	-	-	-	~ 168 481
Mov Cap-2 Maneuver	-	-	-	-	~ 168 -
Stage 1	-	-	-	-	444 -
Stage 2	-	-	-	-	558 -

Approach	NB	SB	NE
HCM Control Delay, s	2.3	0	104.5
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	SBR
Capacity (veh/h)	168	481	851	-	-	-
HCM Lane V/C Ratio	1.058	0.15	0.131	-	-	-
HCM Control Delay (s)	141.4	13.8	9.9	0	-	-
HCM Lane LOS	F	B	A	A	-	-
HCM 95th %tile Q(veh)	8.8	0.5	0.4	-	-	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	155	5	0	335	0	70
Future Vol, veh/h	155	5	0	335	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	172	6	0	372	0	78

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	547 175
Stage 1	-	-	-	-	175 -
Stage 2	-	-	-	-	372 -
Critical Hdwy	-	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	0	-	498 868
Stage 1	-	-	0	-	855 -
Stage 2	-	-	0	-	697 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	498 868
Mov Cap-2 Maneuver	-	-	-	-	498 -
Stage 1	-	-	-	-	855 -
Stage 2	-	-	-	-	697 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	868	-	-	-
HCM Lane V/C Ratio	0.09	-	-	-
HCM Control Delay (s)	9.6	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	S	S
Traffic Vol, veh/h	10	10	960	10	10	655
Future Vol, veh/h	10	10	960	10	10	655
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	1	-	1	-	-	-3
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	1067	11	11	728

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1823	1073	0	0	1078
Stage 1	1073	-	-	-	-
Stage 2	750	-	-	-	-
Critical Hdwy	6.62	6.32	-	-	4.12
Critical Hdwy Stg 1	5.62	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	77	260	-	-	647
Stage 1	309	-	-	-	-
Stage 2	448	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	75	260	-	-	647
Mov Cap-2 Maneuver	75	-	-	-	-
Stage 1	309	-	-	-	-
Stage 2	435	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43.2	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	116	647
HCM Lane V/C Ratio	-	-	0.192	0.017
HCM Control Delay (s)	-	-	43.2	10.7
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	5	5	5	855	670	25
Future Vol, veh/h	5	5	5	855	670	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	2	-	-	2	-1	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	6	6	950	744	28

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1720	758	772	0	-	0
Stage 1	758	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Critical Hdwy	6.82	6.42	4.12	-	-	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	81	390	843	-	-	-
Stage 1	425	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	390	843	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	419	-	-	-	-	-
Stage 2	333	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	34.5	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	843	-	133	-	-
HCM Lane V/C Ratio	0.007	-	0.084	-	-
HCM Control Delay (s)	9.3	0	34.5	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1622	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-2	-	3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	1	0	0	1	1
Stage 1	-	-	-	1	-
Stage 2	-	-	-	0	-
Critical Hdwy	4.12	-	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	6.02	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	1022	1084
Stage 1	-	-	-	1022	-
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	1022	-
Stage 1	-	-	-	1022	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
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HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

25: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27
 HCM 6th TWSC

2030 No-Build
 Weekday PM

Intersection

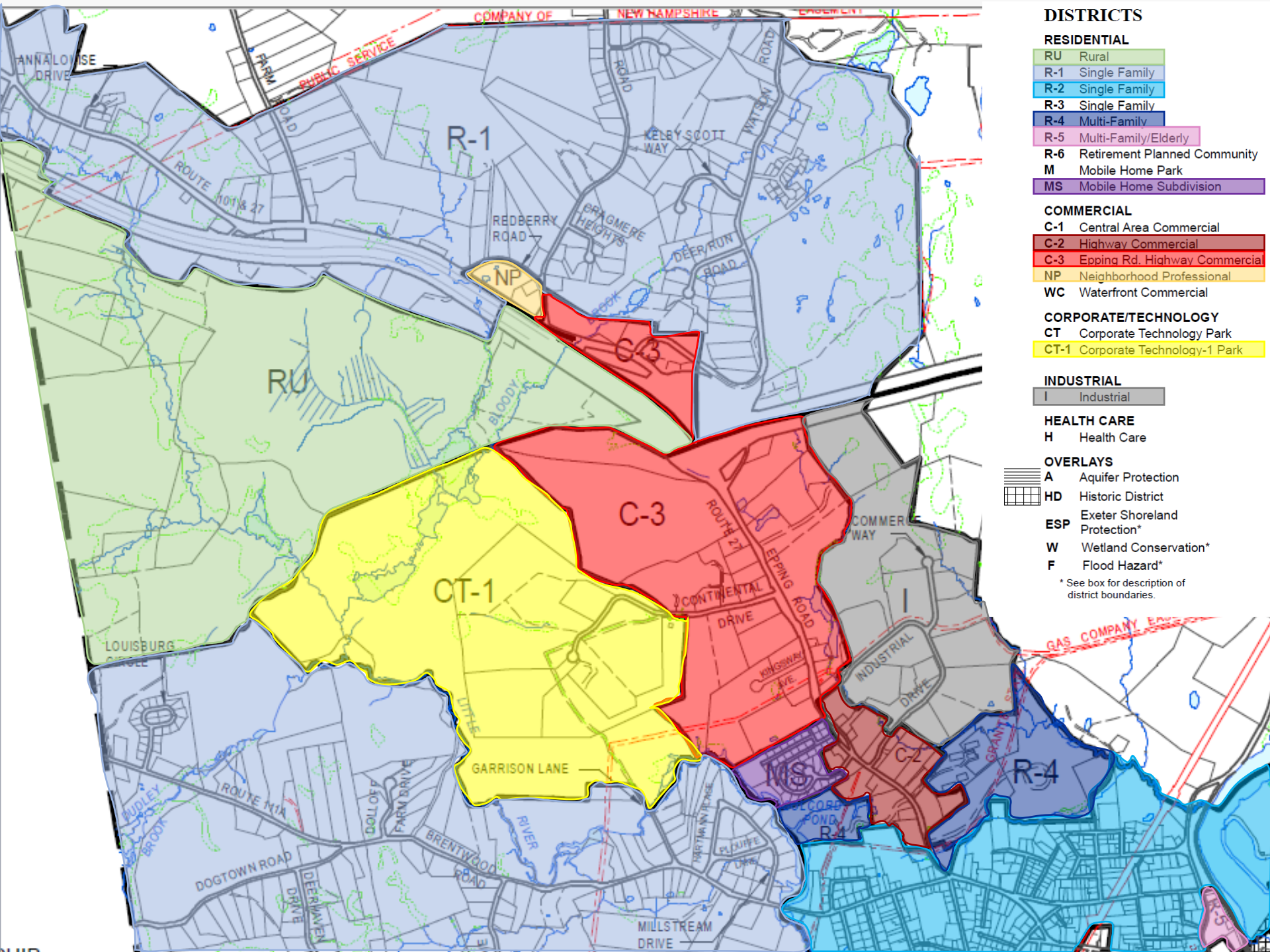
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	5	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	8.12	7.52	6.72	6.72	6.12	6.02
Critical Hdwy Stg 1	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	893	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0		0		0		0
HCM LOS					A		A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Exeter Zoning Data and Vacant Parcel Data



DISTRICTS

- RESIDENTIAL**
- RU Rural
 - R-1 Single Family
 - R-2 Single Family
 - R-3 Single Family
 - R-4 Multi-Family
 - R-5 Multi-Family/Elderly
 - R-6 Retirement Planned Community
 - M Mobile Home Park
 - MS Mobile Home Subdivision

- COMMERCIAL**
- C-1 Central Area Commercial
 - C-2 Highway Commercial
 - C-3 Epping Rd. Highway Commercial
 - NP Neighborhood Professional
 - WC Waterfront Commercial

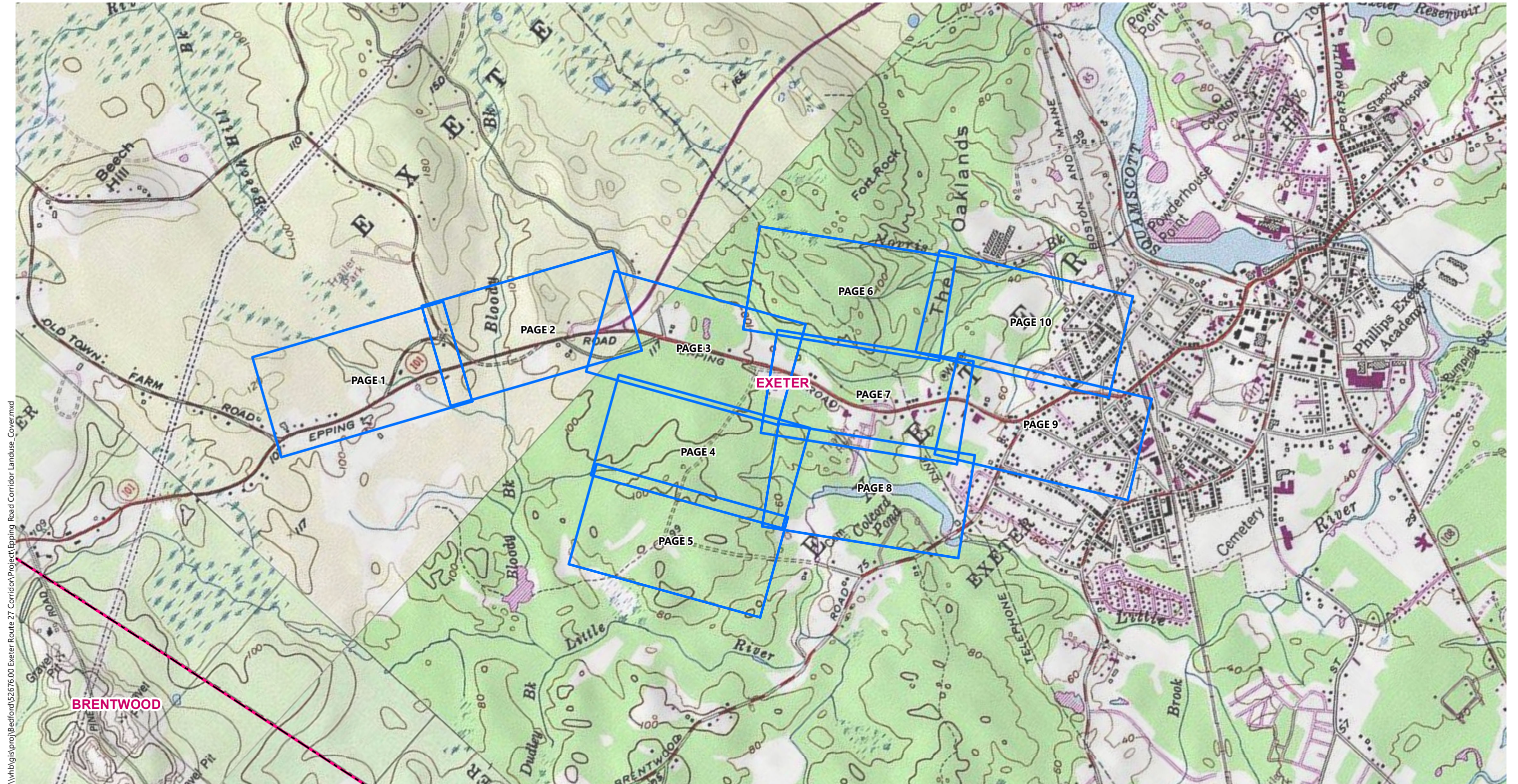
- CORPORATE/TECHNOLOGY**
- CT Corporate Technology Park
 - CT-1 Corporate Technology-1 Park

- INDUSTRIAL**
- I Industrial

- HEALTH CARE**
- H Health Care

- OVERLAYS**
- A Aquifer Protection
 - HD Historic District
 - ESP Exeter Shoreland Protection*
 - W Wetland Conservation*
 - F Flood Hazard*

* See box for description of district boundaries.



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- Page Index
- Town Boundary

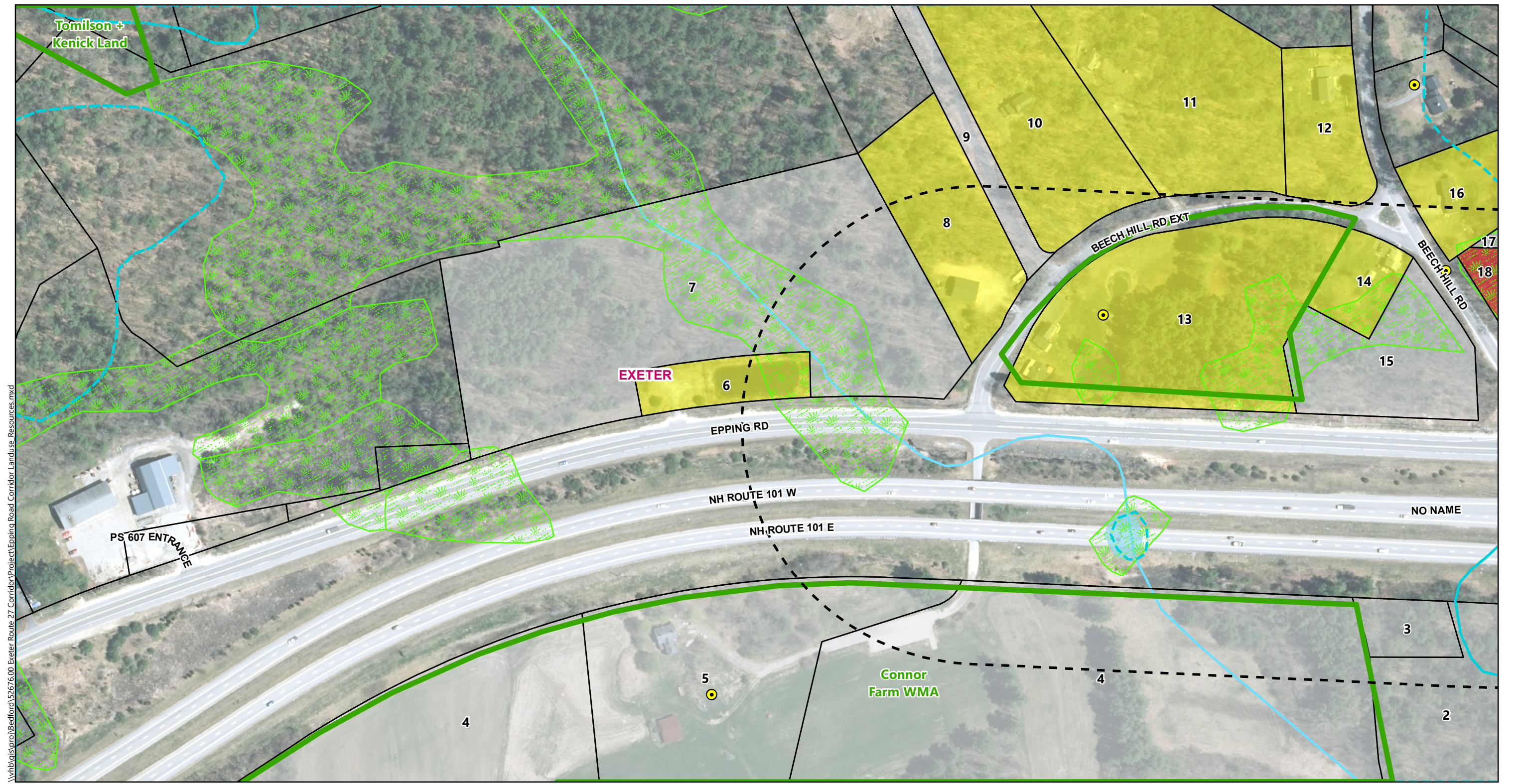
Epping Road Corridor

Exeter New Hampshire

Land Use

Page Index

Source: VHB, NH Granit, ArcGIS Online



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Landuse	Multi-Family
Commercial	Single Family Residential
Industrial	Utilities
Mobile Home Park	Vacant Land

- Historic Individual Property Point
- Public Water Supply Wells
- Water Well Inventory

- Water Pipe
- Wastewater System
- Stream/River

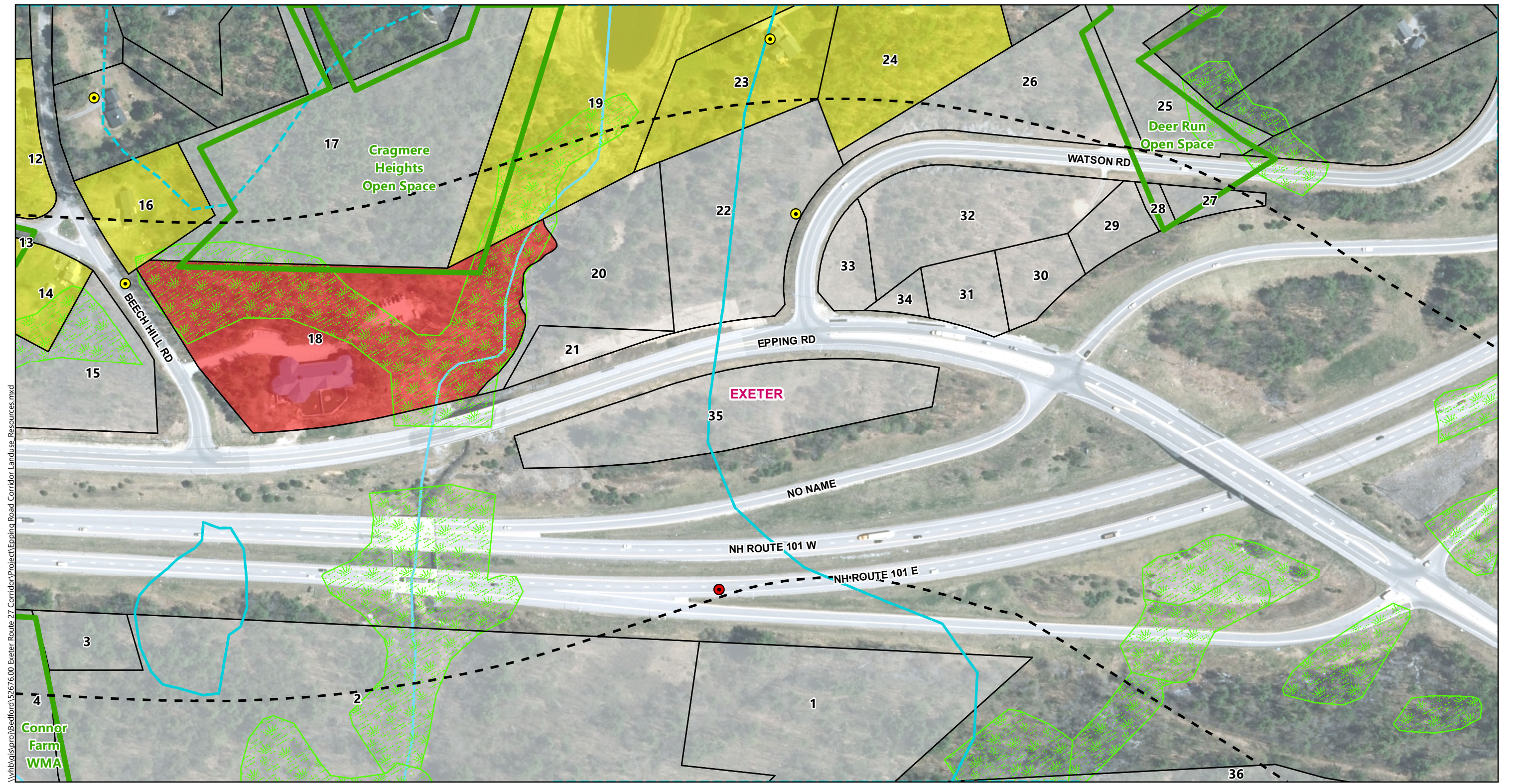
- Waterbody
- NWI Wetland
- 500-ft Buffer

- Aquifer Boundary
- FEMA 100-yr Floodplain
- FEMA Floodway
- Conserved Land

Epping Road Corridor

Exeter, New Hampshire

Land Use



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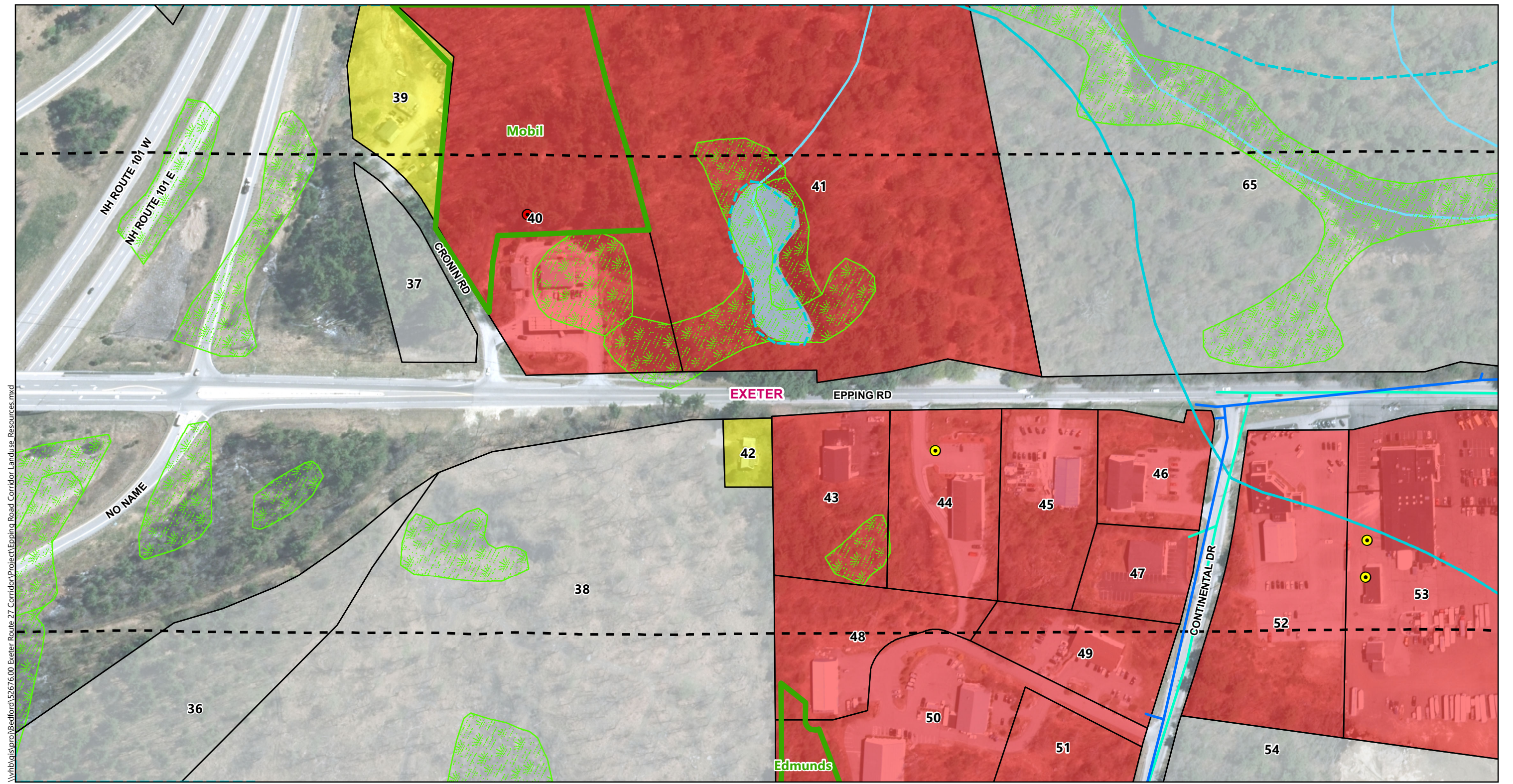
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Epping Road Corridor

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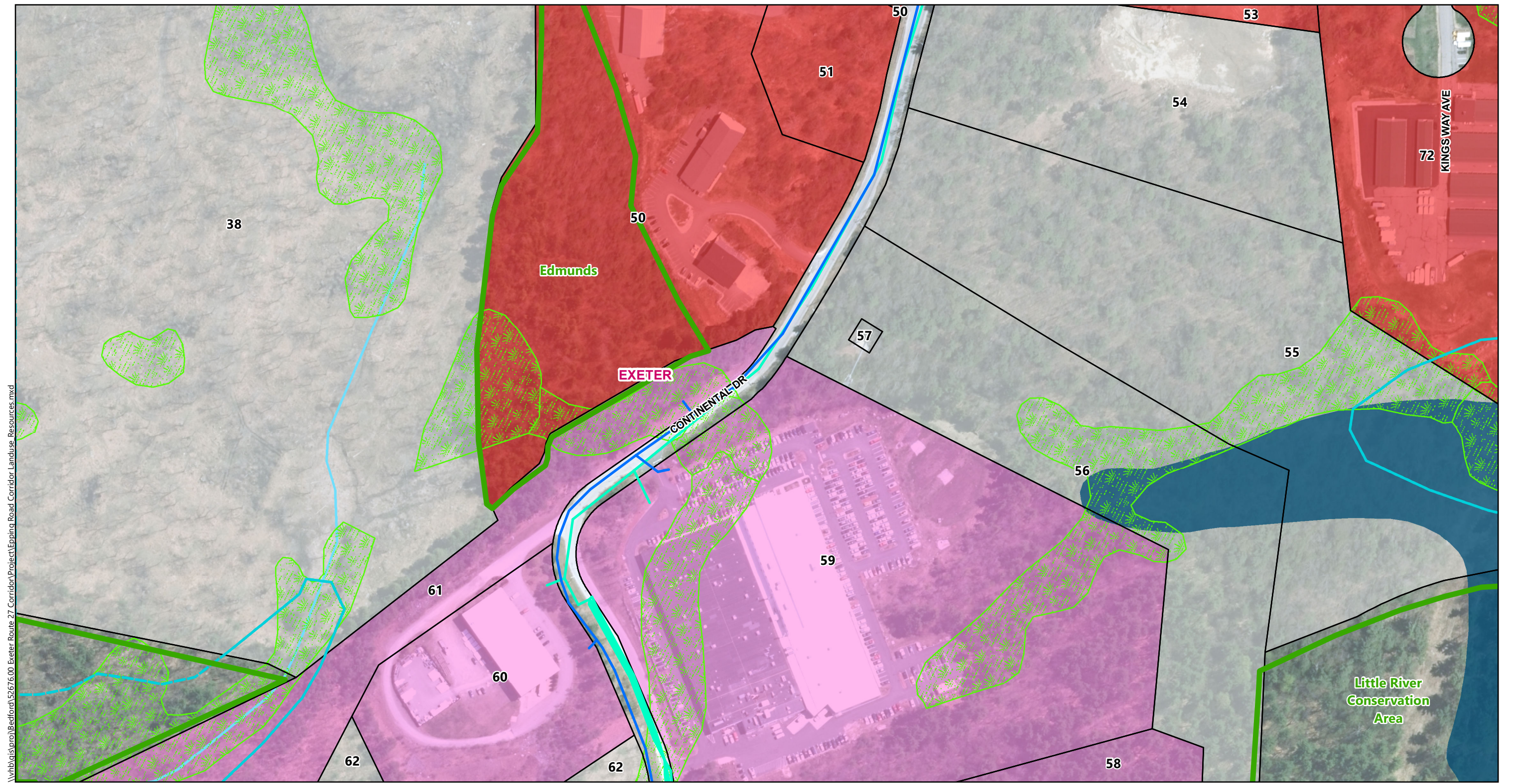
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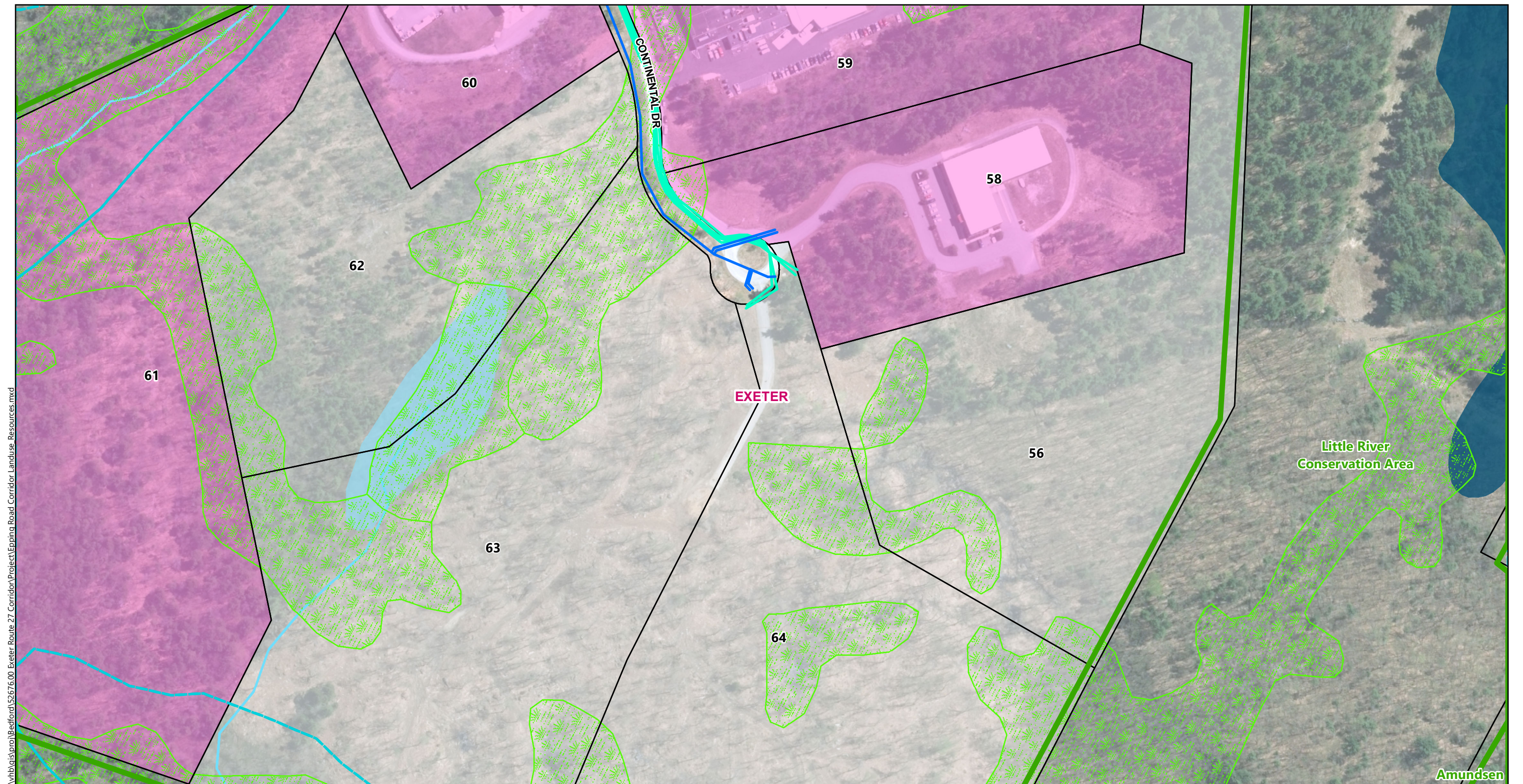
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Land Use



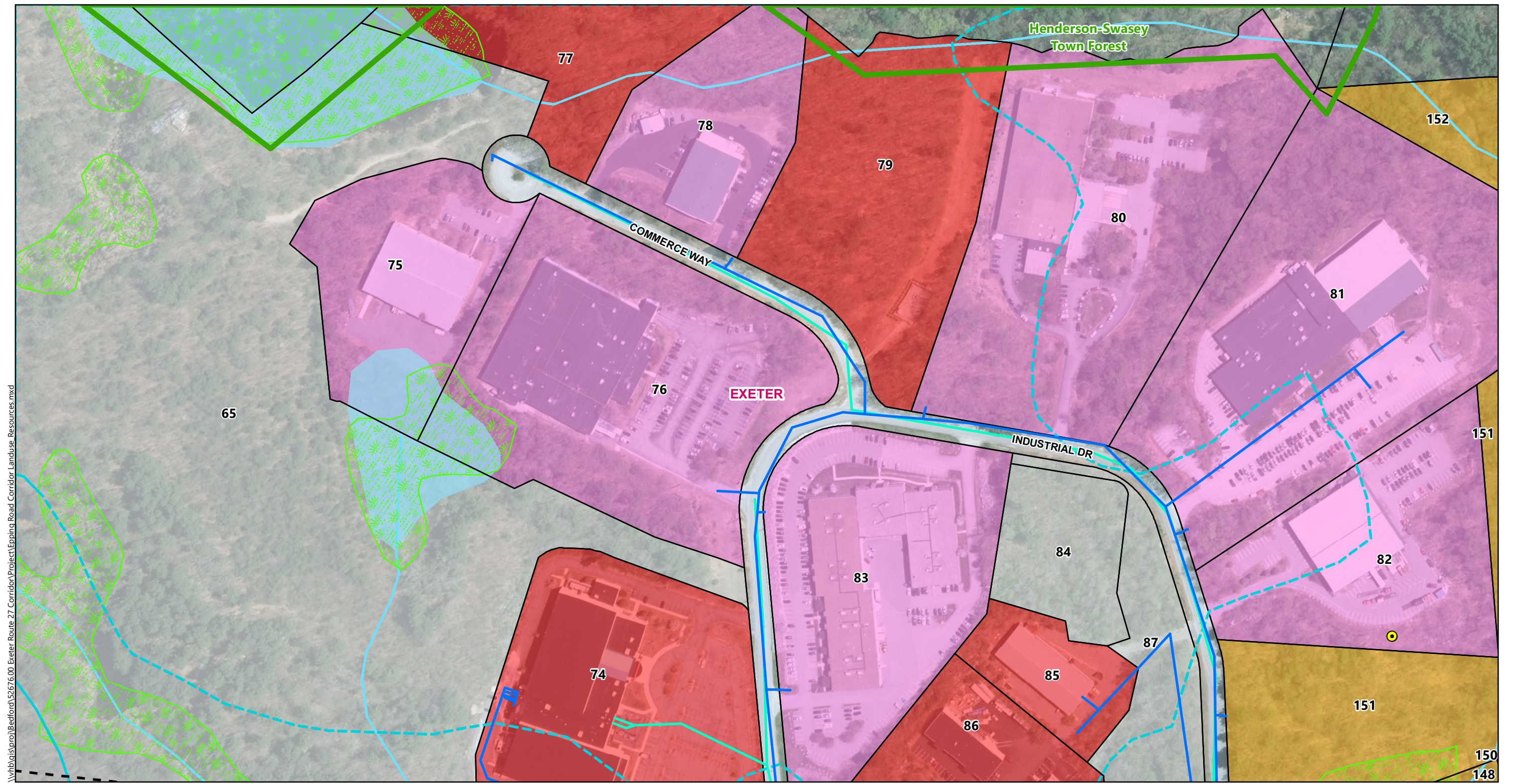
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|------------------|---------------------------|------------------------------------|-------------------|---------------|------------------------|
| Landuse | Multi-Family | Historic Individual Property Point | Water Pipe | Waterbody | Aquifer Boundary |
| Commercial | Single Family Residential | Public Water Supply Wells | Wastewater System | NWI Wetland | FEMA 100-yr Floodplain |
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Exeter, New Hampshire

Land Use

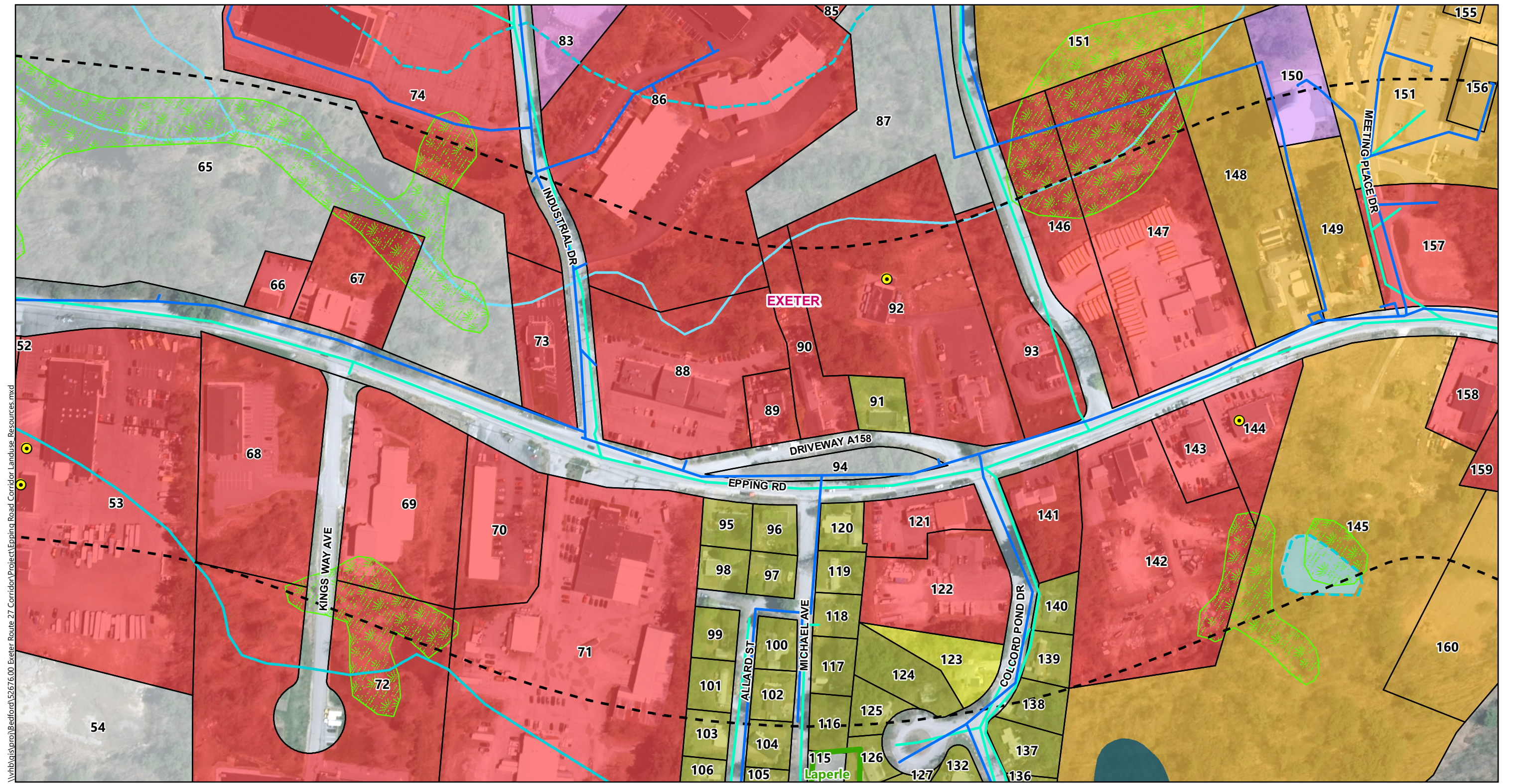


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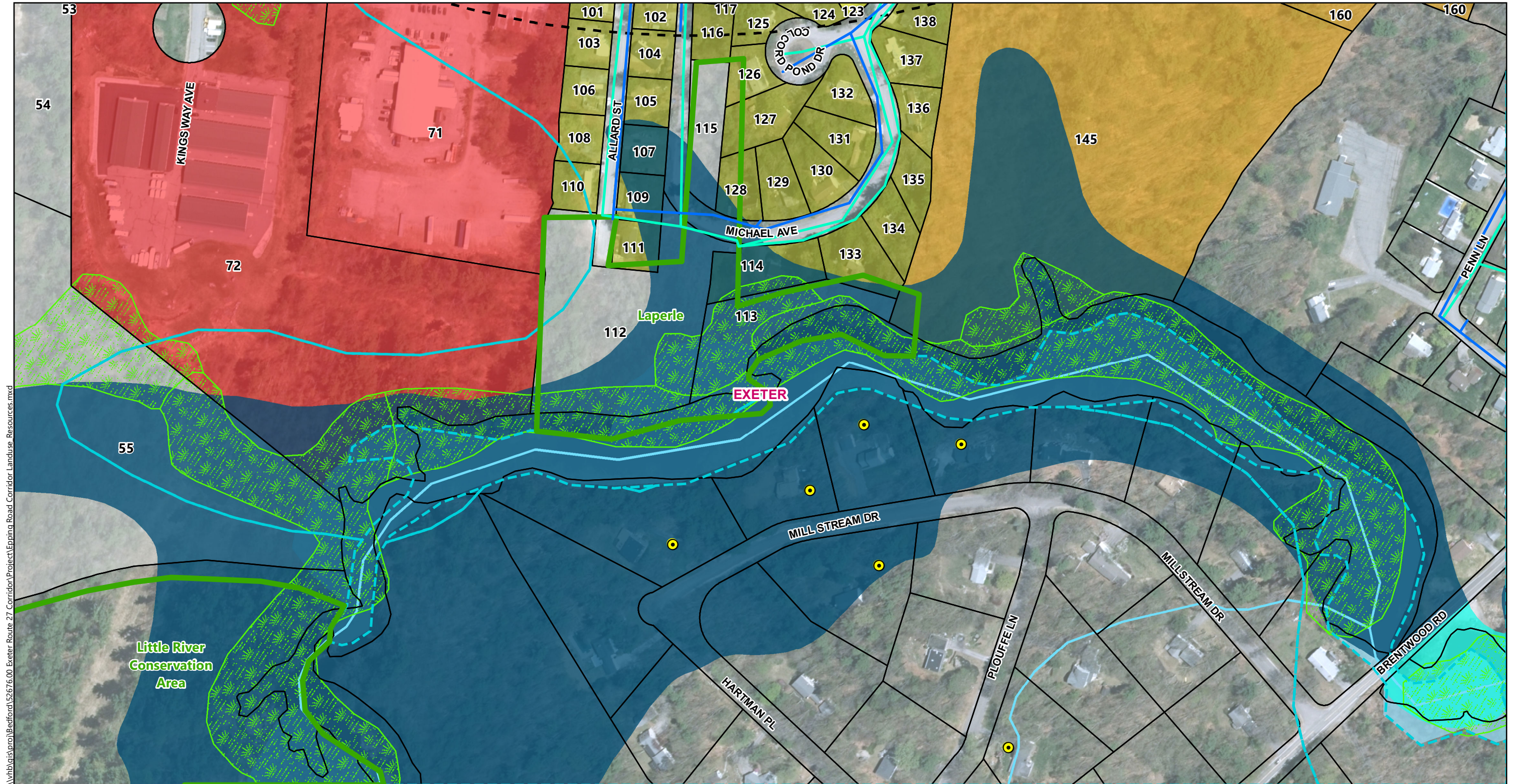
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Exeter, New Hampshire

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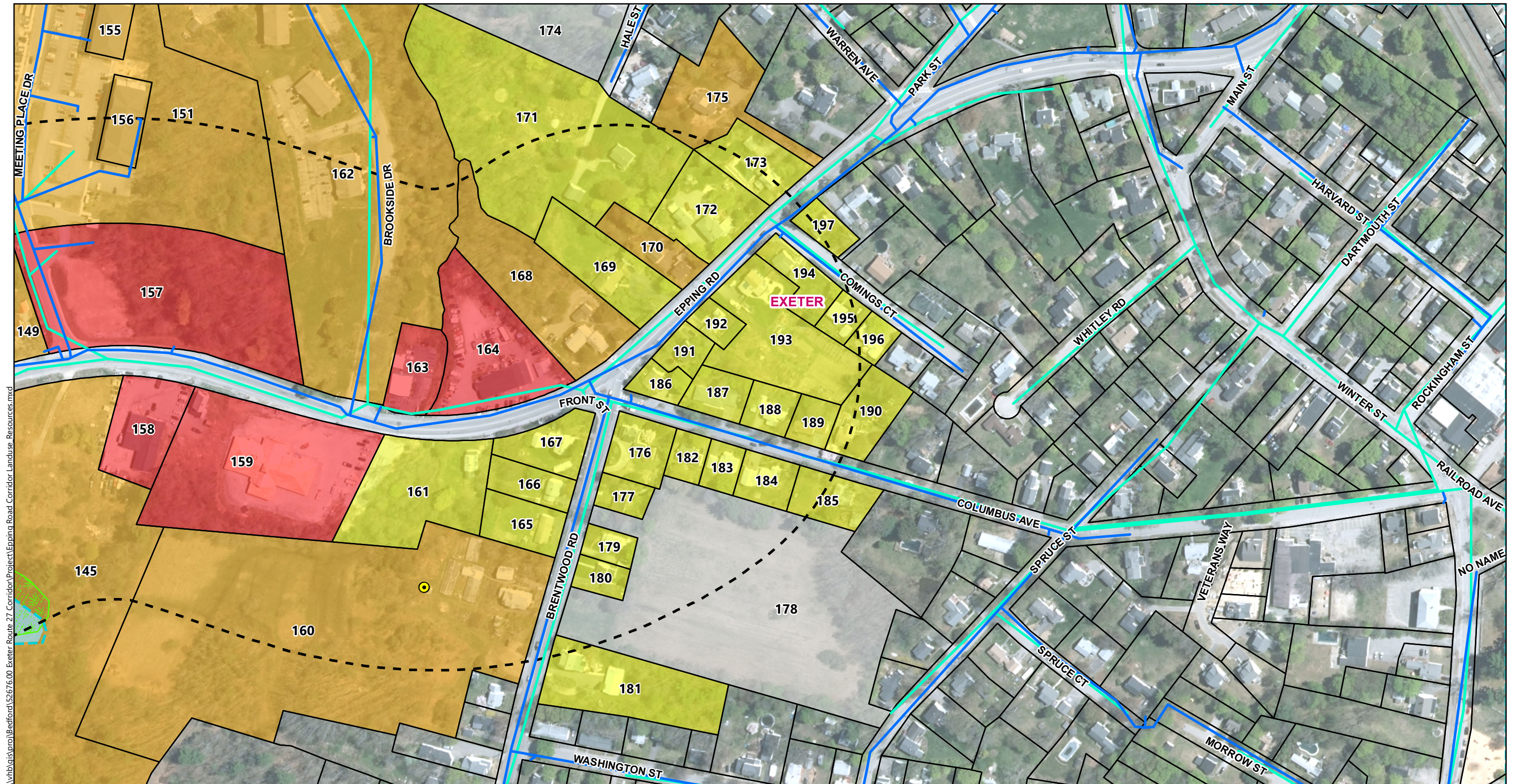
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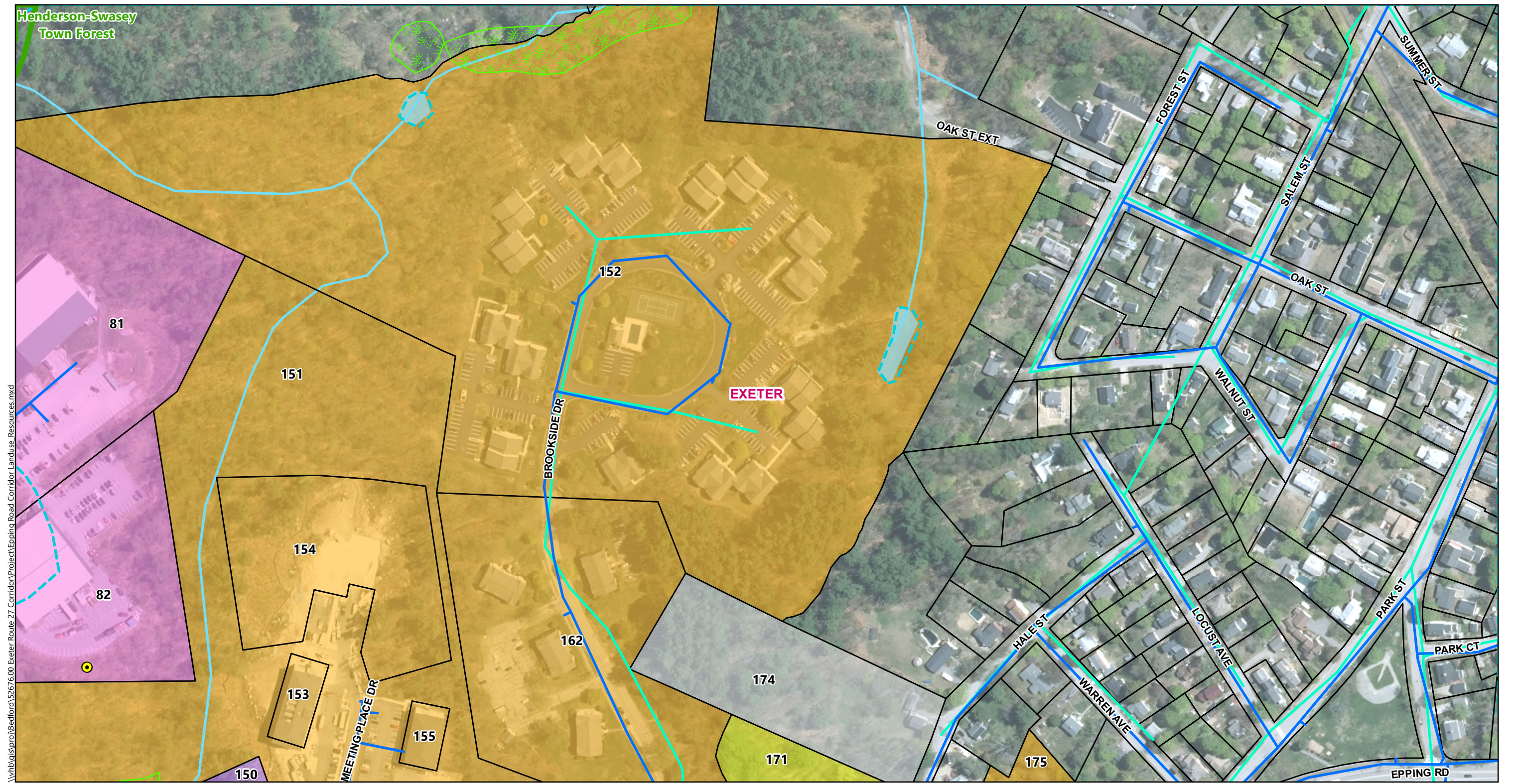
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Exeter, New Hampshire

Land Use

ZONING DISTRICT ID	ZONING DISTRICT	PARCEL NUMBER	LAND USE	MAP ID	ENVIRONMENTAL WETLANDS CONSTRAINTS	PARCEL ACRES (GIS CALC)	WETLAND ACRES	BUILDABLE AREA	BUILDING COVERAGE MAX	MAX BUILDING SIZE FOR LOT	BUILDABLE AREA (SF)
C-3, RU	Epping Rd. Highway Area, Rural	041-001-0000	Vacant Land	36	Yes	22.74	4.01	18.73	<i>Gateway at Exeter Development (By Others)</i>		
C-3	Epping Rd. Highway Area	040-009-0000	Vacant Land	37	No	1.15	0.00	1.15	40%	0.46	19,965
C-3	Epping Rd. Highway Area	047-007-0000	Vacant Land	38	Yes	62.59	5.72	56.87	<i>Gateway at Exeter Development (By Others)</i>		
C-3	Epping Rd. Highway Area	047-008-0000	Commercial	41	Yes	21.94	2.30	19.64	<i>Ray Farmstead Condos (By Others)</i>		
C-3	Epping Rd. Highway Area	047-001-0003	Vacant Land	54	No	6.94	0.00	6.94	40%	2.78	121,005
C-3	Epping Rd. Highway Area	047-001-0004	Vacant Land	55	Yes	15.65	2.86	12.79	40%	5.12	222,870
I, C-3	Industrial, Epping Rd. Highway Area	047-009-0000	Vacant Land	65	Yes	56.41	12.01	44.40	40%	17.76	773,575
C-2, R-4	Highway Commercial, Multi-Family	055-003-0000	Multi-Family	145	Yes	17.01	1.50	15.50	Primrose Daycare School (By Others)		
CT-1	Corporate Technology-1 Park	046-007-0002	Vacant Land	56	Yes	20.67	2.57	18.10	40%	7.24	315,450
CT-1	Corporate Technology-1 Park	046-003-0000	Vacant Land	62	Yes	10.76	3.76	7.00	Unitil (By Others)		
CT-1	Corporate Technology-1 Park	046-004-0000	Vacant Land	63	Yes	21.31	7.64	13.67	40%	5.47	238,175
CT-1	Corporate Technology-1 Park	056-003-0001	Vacant Land	64	Yes	20.65	4.67	15.98	40%	6.39	278,460
I	Industrial	055-068-0002	Vacant Land	84	No	1.90	0.00	1.90	40%	0.76	33,085
I	Industrial	055-068-0000	Vacant Land	87	No	4.31	0.00	4.31	40%	1.72	75,110

**AM Peak Hour (Adjacent Street) Trip Generation
ITE Trip Generation, 10th Edition Buildout For Vacant Parcels**

10th Gen ITE Code	Land Type	# of Units	Independent Variable	Unit Conversion	^Trip Rate per Unit	Total Single Use Trips	AM Directional Distribution		AM Trip Generation	
							In	Out	In	Out
Epping Road - South of NH 101 Eastbound Ramps - C-3 Epping Road Highway Commercial										
710	General Office Building (C-3) (Map ID #37+65)	793,575	square feet gross floor area	1,000	0.96	760	0.86	0.14	655	105
--	Gateway at Exeter (Mid-Rise Apartment, Shopping Center, General Office Bldg, Day Care Center) (Map ID # 36+38)	--	dwelling units and square feet gross floor area	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	160	165
565	Primrose Daycare School (Map ID #145)	13,000	square feet gross floor area	1,000	11	140	0.53	0.47	75	65
								TOTAL	890	335
Continental Drive - C-3 Epping Road Highway Commercial, CT-1 Corporate/Technology Park-1										
710	General Office Building (C-3) (Map ID #54+55)	343,880	square feet gross floor area	1,000	1.02	350	0.86	0.14	300	50
710	General Office Building (CT-1) (Map ID #56, 63, 64)	832,085	square feet gross floor area	1,000	0.97	805	0.86	0.14	690	115
110	General Light Industrial (Unitil) (Map ID #62)	60,000	square feet gross floor area	1,000	0.70	40	0.88	0.12	35	5
--	Ray Farmstead Condos (Map ID #41)	100	remaining sr adult housing units	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	10	15
								TOTAL	1,035	185
Industrial Drive - I - Industrial Zone										
110	General Light Industrial (Map ID #84+87)	108,200	square feet gross floor area	1,000	0.70	75	0.88	0.12	65	10
								TOTAL	65	10

**PM Peak Hour (Adjacent Street) Trip Generation
ITE Trip Generation, 10th Edition Buildout For Vacant Parcels**

10th Gen ITE Code	Land Type	# of Units	Independent Variable	Unit Conversion	^Trip Rate per Unit	Total Single Use Trips	PM Directional Distribution		PM Trip Generation	
							In	Out	In	Out
Epping Road - South of NH 101 Eastbound Ramps - C-3 Epping Road Highway Commercial										
710	General Office Building (C-3) (Map ID #37+65)	793,575	square feet gross floor area	1,000	1	795	0.16	0.84	125	670
--	Gateway at Exeter (Mid-Rise Apartment, Shopping Center, General Office Bldg, Day Care Center) (Map ID # 36+38)	--	dwelling units and square feet gross floor area	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	190	195
565	Primrose Daycare School (Map ID #145)	13,000	square feet gross floor area	1,000	11.12	145	0.47	0.53	70	80
							TOTAL		385	945
Continental Drive - C-3 Epping Road Highway Commercial, CT-1 Corporate/Technology Park-1										
710	General Office Building (C-3) (Map ID #54+55)	343,880	square feet gross floor area	1,000	1.07	370	0.16	0.84	60	310
710	General Office Building (CT-1) (Map ID #56, 63, 64)	832,085	square feet gross floor area	1,000	1.02	850	0.16	0.84	135	715
110	General Light Industrial (Unitil) (Map ID #62)	60,000	square feet gross floor area	1,000	0.63	40	0.13	0.87	5	35
--	Ray Farmstead Condos (Map ID #41)	100	remaining sr adult housing units	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	15	15
							TOTAL		215	1,075
Industrial Drive - I - Industrial Zone										
110	General Light Industrial (Map ID #84+87)	108,200	square feet gross floor area	1,000	0.63	70	0.13	0.87	10	60
							TOTAL		10	60

Daily Trip Generation
ITE Trip Generation, 10th Edition Buildout For Vacant Parcels

10th Gen ITE Code	Land Type	# of Units	Independent Variable	Unit Conversion	^Trip Rate per Unit	Total Single Use Trips	Daily Directional Distribution		Daily Trip Generation	
							In	Out	In	Out
Epping Road - South of NH 101 Eastbound Ramps - C-2 Highway Commercial, C-3 Epping Road Highway Commercial, and Mobile Home Subdivision										
710	General Office Building (C-3) (Map ID #37+65)	793,575	square feet gross floor area	1,000	9.79	7,770	0.50	0.50	3,885	3,885
--	Gateway at Exeter (Mid-Rise Apartment, Shopping Center, General Office Bldg, Day Care Center) (Map ID # 36+38)	--	dwelling units and square feet gross floor area	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	1,395	1,385
565	Primrose Daycare School (Map ID #145)	13,000	square feet gross floor area	1,000	47.62	620	0.5	0.5	310	310
							TOTAL		5,590	5,580
Continental Drive - C-3 Epping Road Highway Commercial, CT-1 Corporate/Technology Park-1										
710	General Office Building (C-3) (Map ID #54+55)	343,880	square feet gross floor area	1,000	10.22	3,510	0.50	0.50	1,755	1,755
710	General Office Building (CT-1) (Map ID #56, 63, 64)	832,085	square feet gross floor area	1,000	9.91	8,250	0.50	0.50	4,125	4,125
110	General Light Industrial (Unitil) (Map ID #62)	60,000	square feet gross floor area	1,000	9.74	580	0.50	0.50	290	290
--	Ray Farmstead Condos (Map ID #41)	100	remaining sr adult housing units	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	<i>see study</i>	200	200
							TOTAL		6,370	6,370
Industrial Drive - I - Industrial Zone										
110	General Light Industrial (Map ID #84+87)	108,200	square feet gross floor area	1,000	9.74	1,050	0.50	0.50	525	525
							TOTAL		525	525

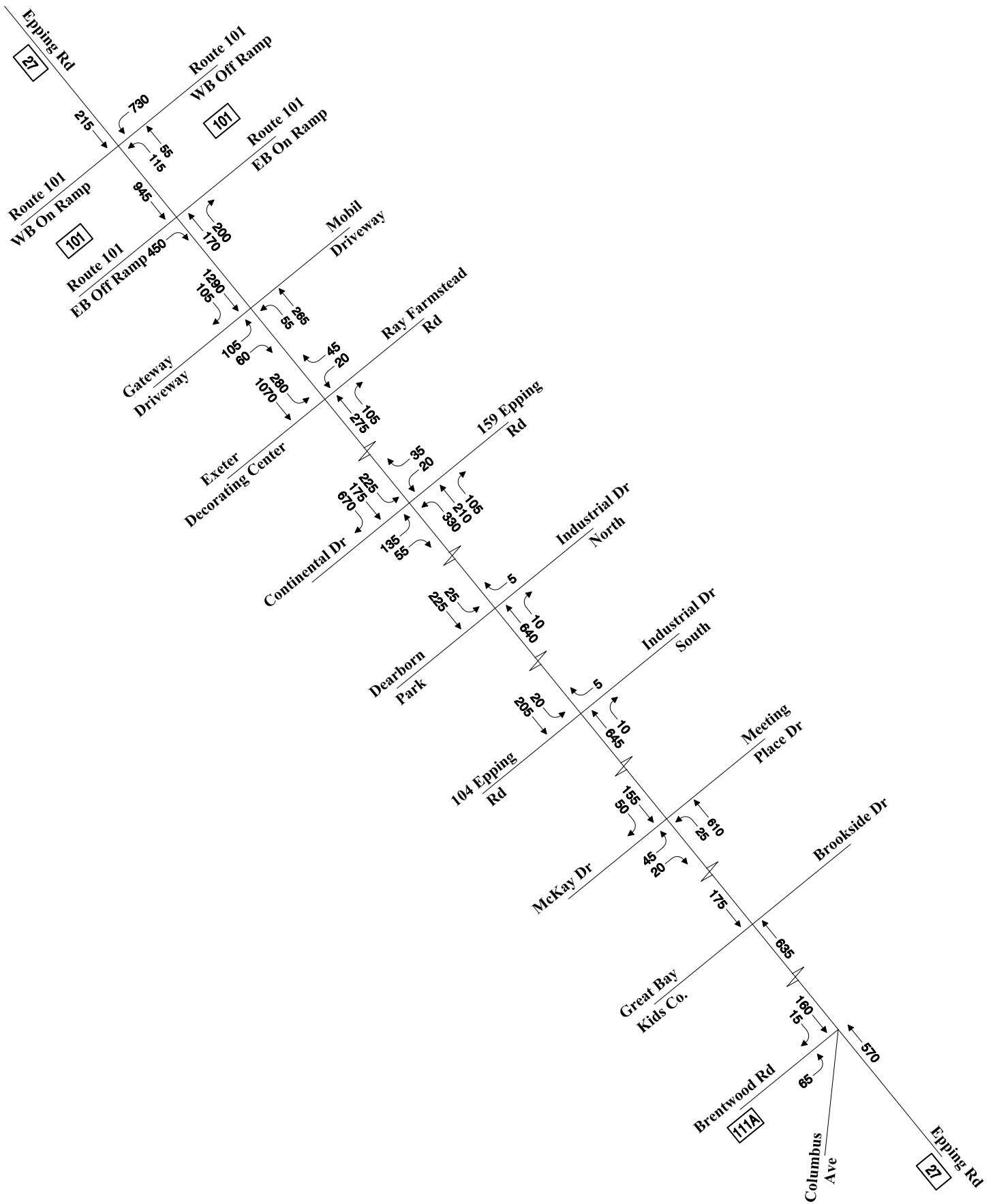
Table 4. Residence MCD/County to Workplace MCD/County Commuting Flows for the United States and Puerto Rico Sorted by Workplace Geography: 5-Year ACS, 2011-2015

Universe: Workers 16 years and over.

Commuting flows are sorted by place of work state, place of work county, and place of work minor civil division.

Residence		Place of Work		Commuting Flow	NH 27 Corridor Study	
State Name	Minor Civil Division Name	State Name	Minor Civil Division Name	Workers in Commuting Flow	% of Total	Route Most Likely Used
Maine	Kittery town	New Hampshire	Exeter town	83	0.01	NH 101 Westbound
Massachusetts	Danvers town	New Hampshire	Exeter town	66	0.01	NH 101 Westbound
Massachusetts	Haverhill city	New Hampshire	Exeter town	81	0.01	NH 101 Westbound
New Hampshire	Hudson town	New Hampshire	Exeter town	88	0.01	NH 101 Eastbound
New Hampshire	Manchester city	New Hampshire	Exeter town	173	0.02	NH 101 Eastbound
New Hampshire	Atkinson town	New Hampshire	Exeter town	72	0.01	NH 27 Northbound
New Hampshire	Brentwood town	New Hampshire	Exeter town	385	0.04	NH 111A Eastbound
New Hampshire	Danville town	New Hampshire	Exeter town	135	0.02	NH 27 Northbound
New Hampshire	Deerfield town	New Hampshire	Exeter town	111	0.02	NH 101 Eastbound
New Hampshire	Derry town	New Hampshire	Exeter town	156	0.02	NH 101 Eastbound
New Hampshire	East Kingston town	New Hampshire	Exeter town	120	0.02	NH 27 Northbound
New Hampshire	Epping town	New Hampshire	Exeter town	160	0.02	NH 101 Eastbound
New Hampshire	Exeter town	New Hampshire	Exeter town	2,510	0.24	NH 27 (Split)
New Hampshire	Fremont town	New Hampshire	Exeter town	165	0.02	NH 101 Eastbound
New Hampshire	Greenland town	New Hampshire	Exeter town	140	0.02	NH 101 Westbound
New Hampshire	Hampstead town	New Hampshire	Exeter town	120	0.02	NH 27 Northbound
New Hampshire	Hampton town	New Hampshire	Exeter town	547	0.06	NH 101 Westbound
New Hampshire	Hampton Falls town	New Hampshire	Exeter town	115	0.02	NH 101 Westbound
New Hampshire	Kensington town	New Hampshire	Exeter town	108	0.02	NH 27 Northbound
New Hampshire	Kingston town	New Hampshire	Exeter town	154	0.02	NH 27 Northbound
New Hampshire	Londonderry town	New Hampshire	Exeter town	108	0.02	NH 101 Eastbound
New Hampshire	Newfields town	New Hampshire	Exeter town	128	0.02	NH 101 Westbound
New Hampshire	Newmarket town	New Hampshire	Exeter town	474	0.05	NH 101 Westbound
New Hampshire	Newton town	New Hampshire	Exeter town	123	0.02	NH 27 Northbound
New Hampshire	North Hampton	New Hampshire	Exeter town	110	0.02	NH 101 Westbound
New Hampshire	Northwood town	New Hampshire	Exeter town	80	0.01	NH 27 Southbound
New Hampshire	Nottingham town	New Hampshire	Exeter town	216	0.03	NH 27 Northbound
New Hampshire	Plaistow town	New Hampshire	Exeter town	74	0.01	NH 27 Northbound
New Hampshire	Portsmouth city	New Hampshire	Exeter town	437	0.05	NH 101 Westbound
New Hampshire	Raymond town	New Hampshire	Exeter town	303	0.03	NH 101 Eastbound
New Hampshire	Rye town	New Hampshire	Exeter town	164	0.02	NH 101 Westbound
New Hampshire	Sandown town	New Hampshire	Exeter town	65	0.01	NH 27 Northbound
New Hampshire	Seabrook town	New Hampshire	Exeter town	71	0.01	NH 101 Westbound
New Hampshire	Stratham town	New Hampshire	Exeter town	400	0.04	NH 101 Westbound
New Hampshire	Windham town	New Hampshire	Exeter town	85	0.01	NH 101 Eastbound
New Hampshire	Barrington town	New Hampshire	Exeter town	197	0.02	NH 101 Eastbound
New Hampshire	Dover city	New Hampshire	Exeter town	218	0.03	NH 101 Westbound
New Hampshire	Durham town	New Hampshire	Exeter town	120	0.02	NH 101 Westbound
New Hampshire	Lee town	New Hampshire	Exeter town	60	0.01	NH 101 Eastbound
New Hampshire	Rochester city	New Hampshire	Exeter town	125	0.02	NH 101 Eastbound
New Hampshire	Somersworth city	New Hampshire	Exeter town	109	0.02	NH 101 Eastbound

NH 101 to/from East	0.39	36%
NH 101 to/from West	0.24	22%
NH 27 to/from South	0.18	17%
NH 27 Split	0.24	22%
NH 111A to/from West	0.04	3%
	1.09	100%

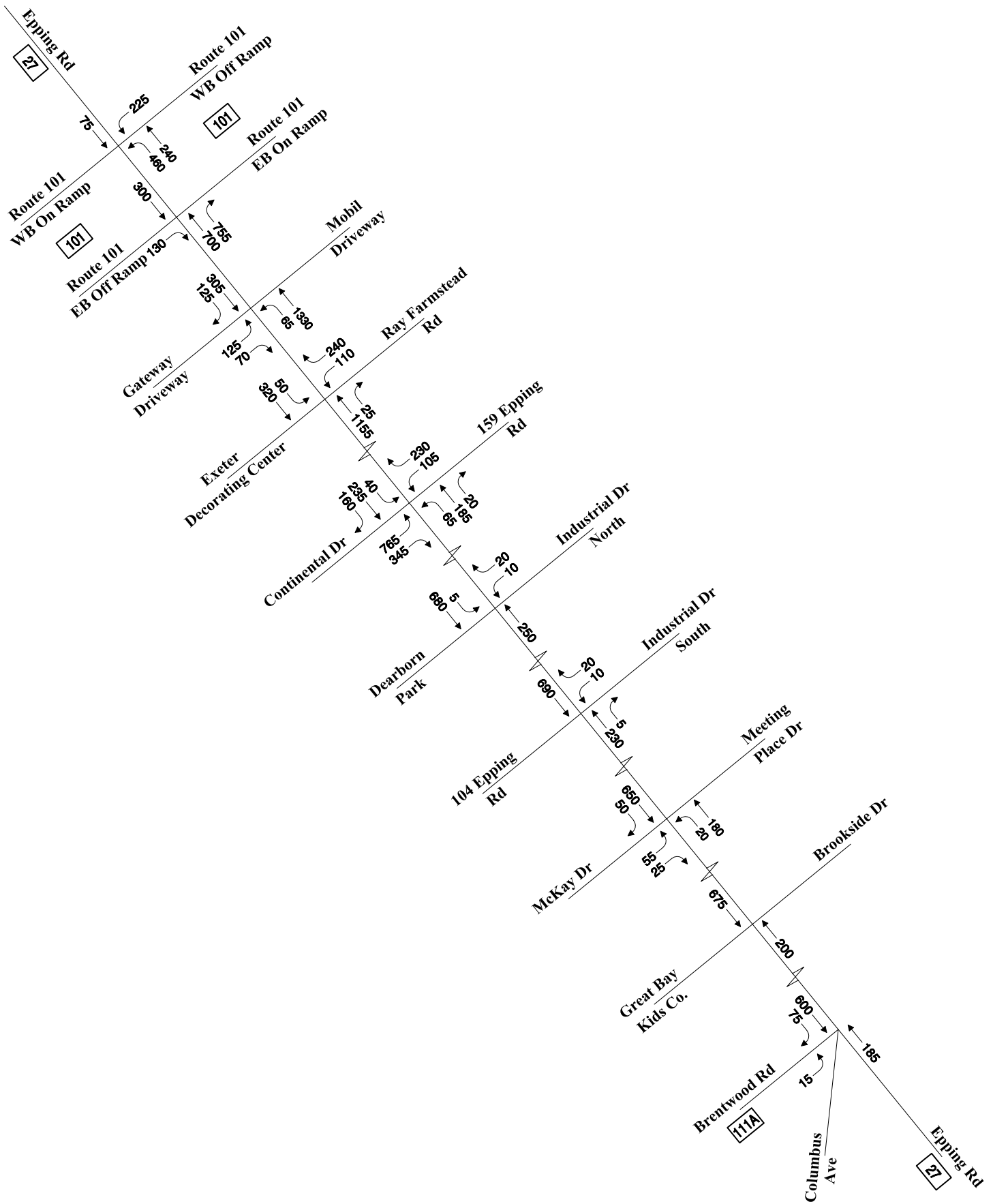


↑
Not to Scale



Vacant Parcel
Site-Generated Traffic Volumes
Weekday Morning

Figure A-1

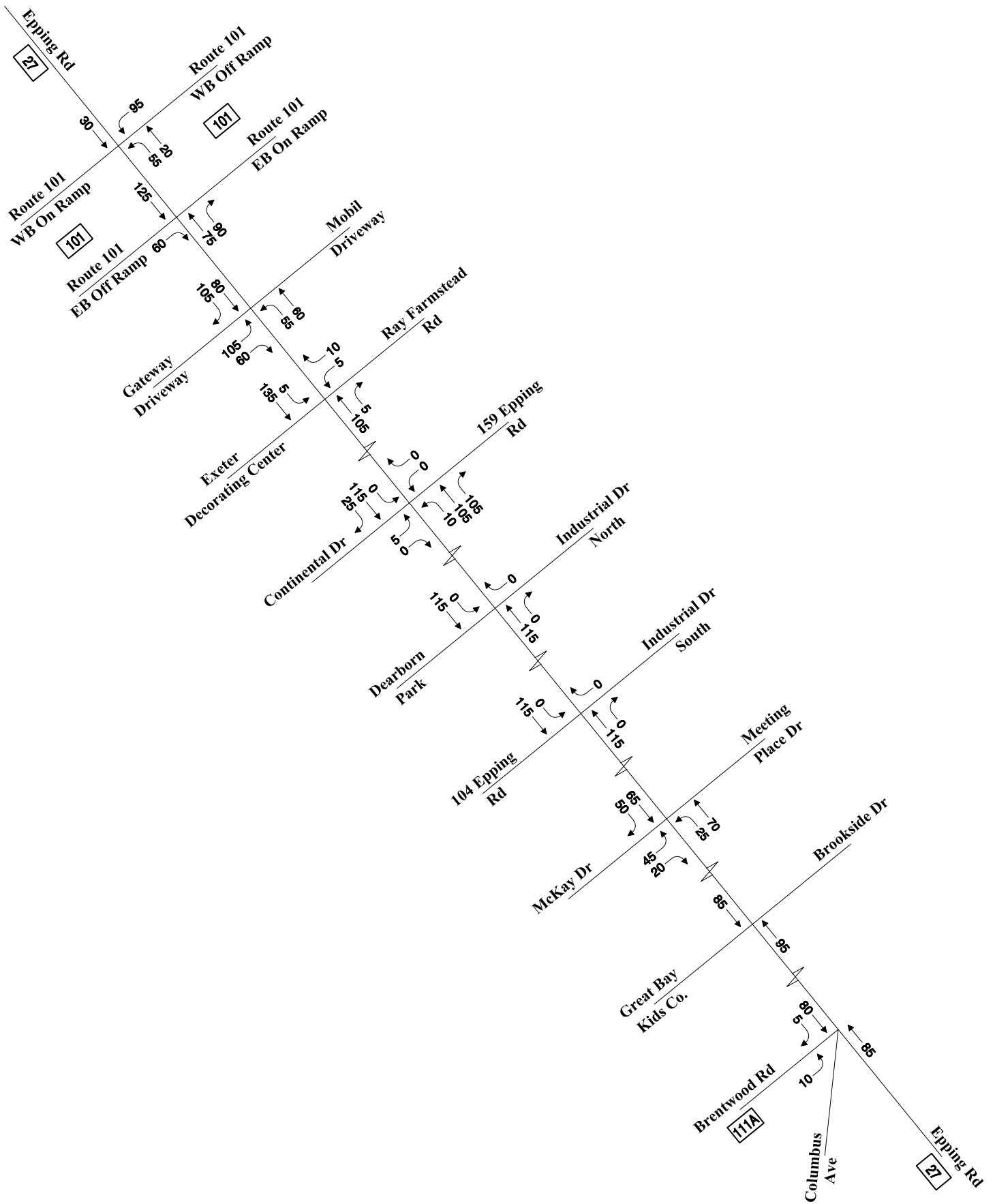


↑
Not to Scale



Vacant Parcel
Site-Generated Traffic Volumes
Weekday Evening

Figure A-2

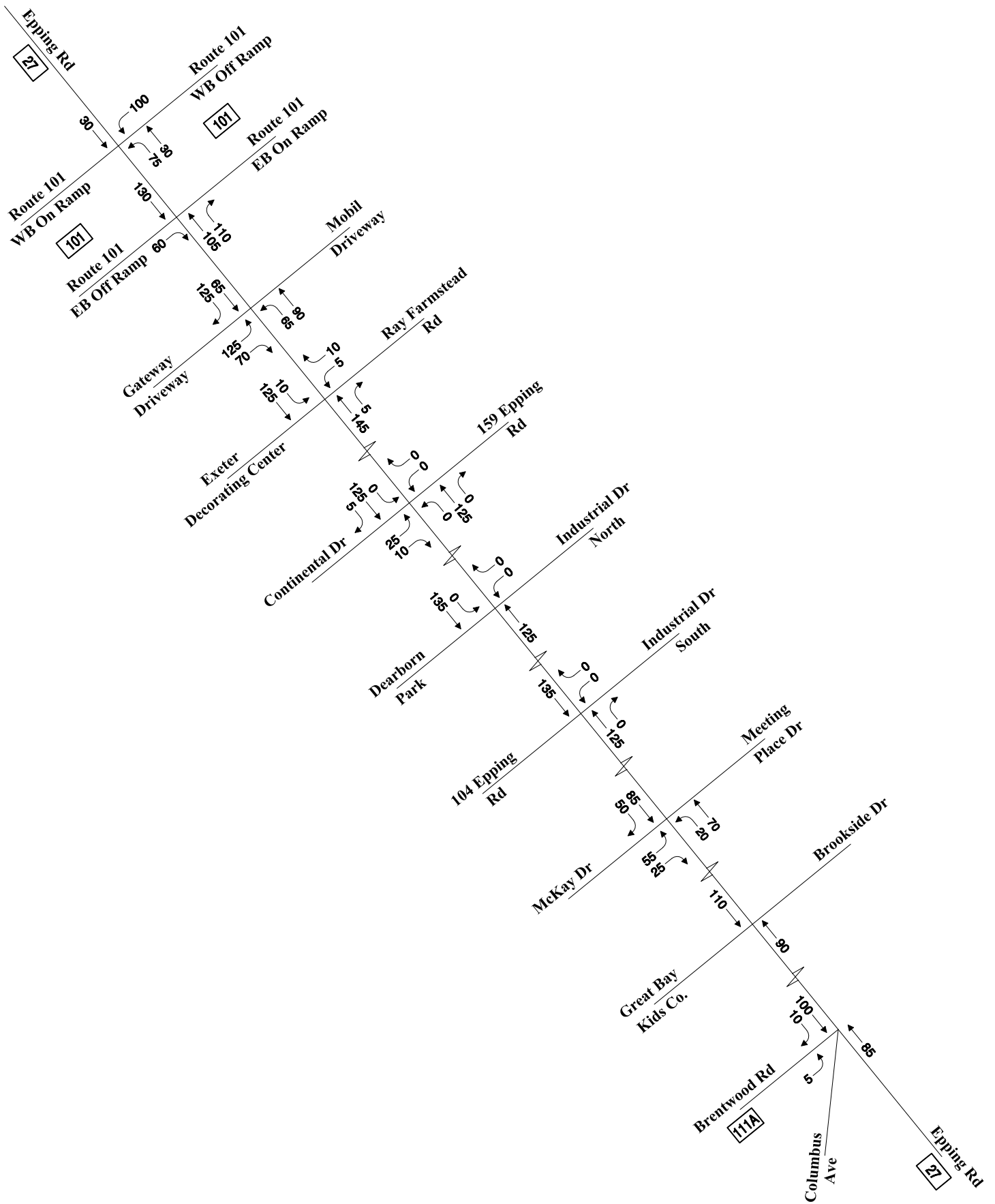


↑
Not to Scale



Known Developments
Site-Generated Traffic Volumes
Weekday Morning

Figure A-3



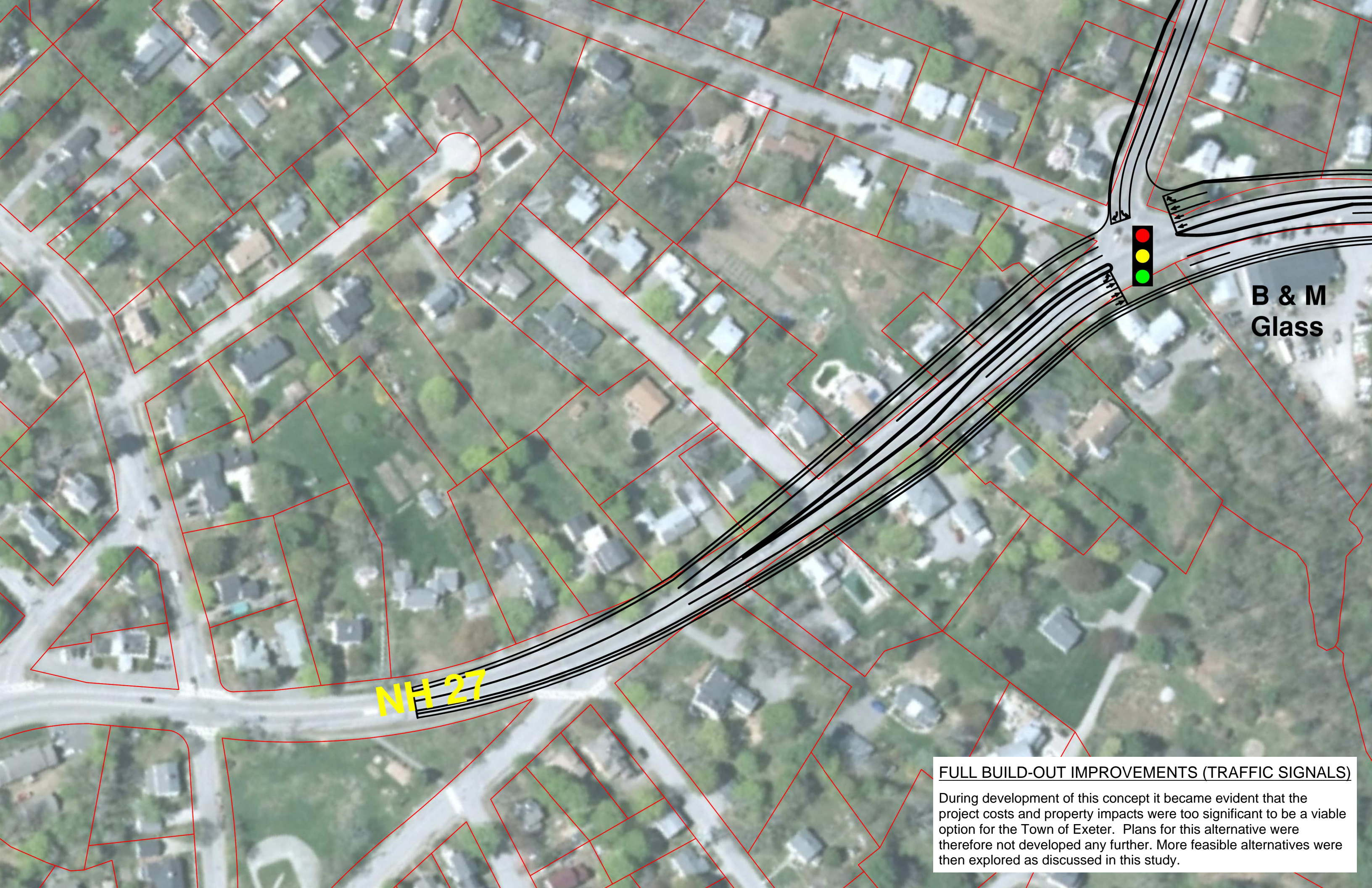
↑
Not to Scale



Known Developments
Site-Generated Traffic Volumes
Weekday Evening

Figure A-4

Conceptual Sketch: Traffic Signals Alternative



NH 27

**B & M
Glass**

FULL BUILD-OUT IMPROVEMENTS (TRAFFIC SIGNALS)

During development of this concept it became evident that the project costs and property impacts were too significant to be a viable option for the Town of Exeter. Plans for this alternative were therefore not developed any further. More feasible alternatives were then explored as discussed in this study.

NH 111A / BRENTWOOD

MCKAY ROAD

ROOKSIDE RIVE

Great Bay Kids

Aroma Joe's

First Stude

B & M Glass

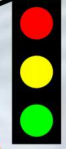


COLCORD PON

MICHAEL AV

Veterinary Hospital

Exeter Motor Works



Service Credit Union



Funeral Home

First Student

INDUS (SOUT)

**MEETING PLACE
DRIVE**

**INDUSTRIAL DRIVE
(SOUTH)**

**POTENTIAL
CONNECTOR
ROAD**



KING'S WAY AV

CONTINEN

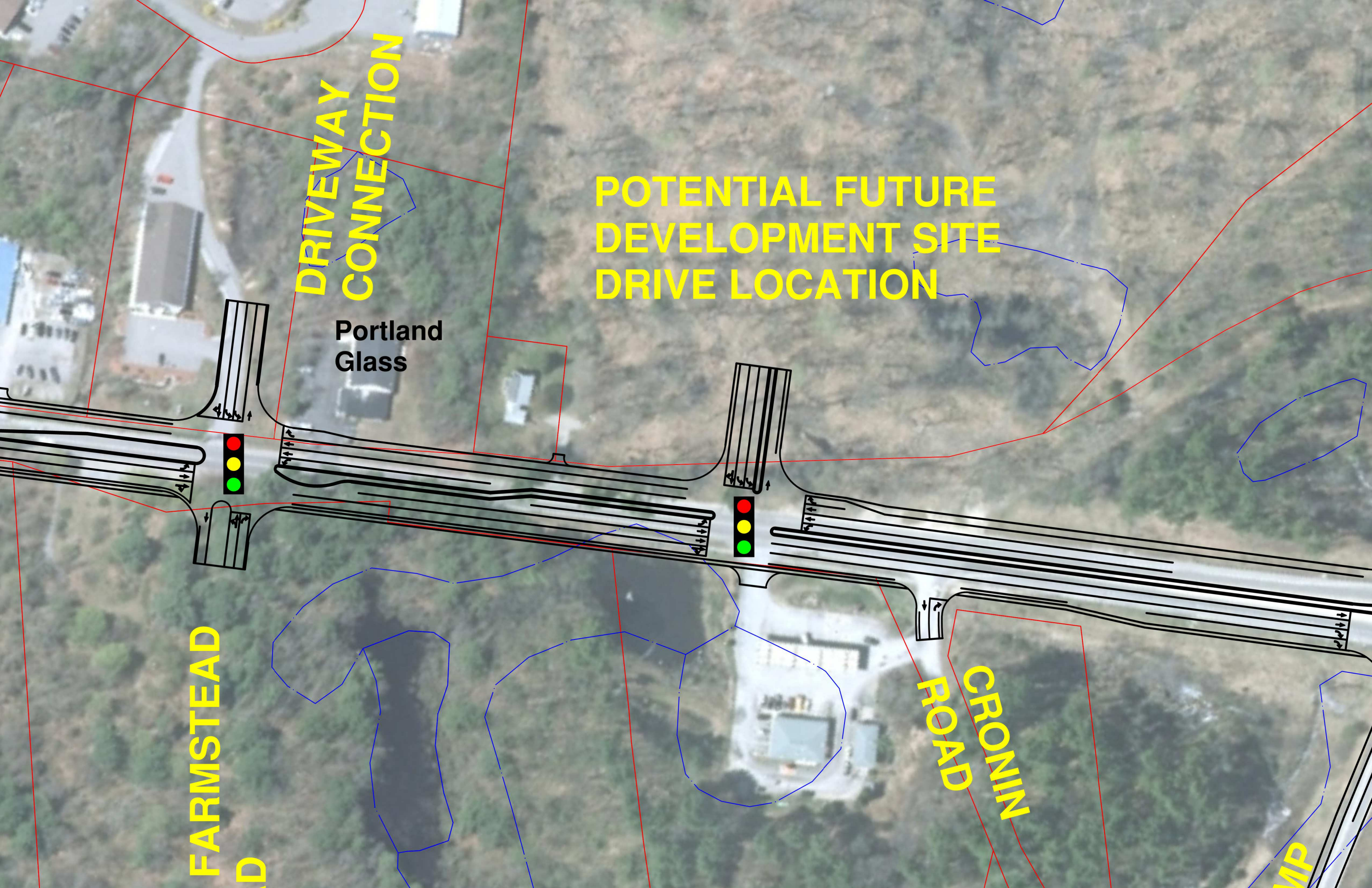
**Jaguar
Exeter**

**Tire
Warehouse**



**POTENTIAL
ACCESS**





**DRIVEWAY
CONNECTION**

**POTENTIAL FUTURE
DEVELOPMENT SITE
DRIVE LOCATION**

**Portland
Glass**

**FARMSTEAD
ROAD**

**CRONIN
ROAD**

CAMP



EB - ON RAMP

EB - OFF RAMP

WB - OFF RAMP

NH RO



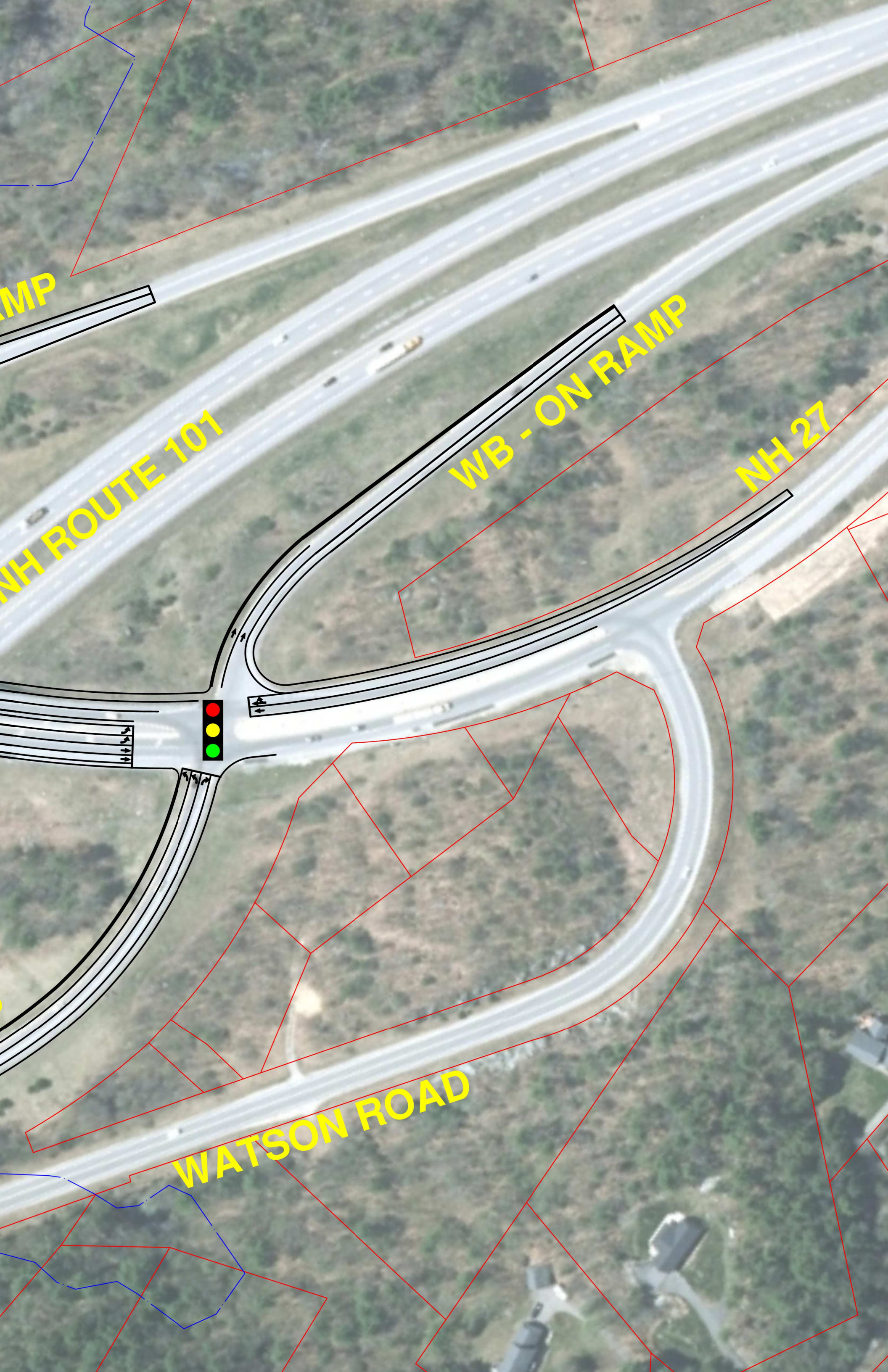
RAMP

NH ROUTE 101

WB - ON RAMP

NH 27

WATSON ROAD



Traffic Signal Warrant Analyses

Traffic Control Signal Warrant Analyses

(Based on MUTCD-2009 Edition)

Intersection: Epping Road (NH Route 27) and NH Route 101 Westbound Ramps		Count Date: 10/24/2019	Analysis Date: 09/17/20
Pop. <10,000? (Y/N): N	Speed (in mph): 40 mph	Analysis Year: 2030 Mid-Term Build	Analyst: JRP
Is Major?*	#Lanes*	Adjustment Factor: 1	Raw counts
(Y/N)	(one way)		
EB		Major Lanes: 2	Higher number of lanes for the major street approaches
WB	N	2	Minor Lanes: 2
NB	Y	2	Number of lanes for minor street approach to be analyzed
SB	Y	1	

* Note: If intersection is a "T" intersection, leave cells blank for the non-existent approach

Start Time	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
7:00 AM	0	0	0	354	2	244	247	287	0	0	517	39
8:00 AM	0	0	0	354	1	101	225	134	0	0	354	20
9:00 AM	0	0	0	260	0	79	190	139	0	0	289	15
10:00 AM	0	0	0	167	0	64	126	94	0	0	181	16
11:00 AM	0	0	0	169	0	83	133	120	0	0	312	7
12:00 PM	0	0	0	218	0	112	147	120	0	0	244	11
1:00 PM	0	0	0	186	2	101	156	112	0	0	212	12
2:00 PM	0	0	0	171	2	148	225	203	0	0	516	9
3:00 PM	0	0	0	330	3	223	380	247	0	0	360	16
4:00 PM	0	0	0	358	1	246	457	310	0	0	407	15
5:00 PM	0	0	0	337	1	253	324	265	0	0	384	21
6:00 PM	0	0	0	293	0	150	263	218	0	0	268	8

Time	∑ EB	∑ WB	∑ NB	∑ SB	∑ Major	∑ Minor	∑ Max Minor	W1 A	W1 B	W1 Combo	W2	W3
7:00 AM	0	600	534	556	1090	600	600	Y	Y	Y	Y	Y
8:00 AM	0	456	359	374	733	456	456	Y	N	Y	Y	N
9:00 AM	0	339	328	303	632	339	339	Y	N	N	N	N
10:00 AM	0	231	220	197	416	231	231	N	N	N	N	N
11:00 AM	0	252	253	320	573	252	252	N	N	N	N	N
12:00 PM	0	330	267	254	521	330	330	N	N	N	N	N
1:00 PM	0	289	268	224	492	289	289	N	N	N	N	N
2:00 PM	0	322	428	526	953	322	322	Y	Y	Y	Y	N
3:00 PM	0	556	626	376	1002	556	556	Y	Y	Y	Y	Y
4:00 PM	0	605	766	422	1188	605	605	Y	Y	Y	Y	Y
5:00 PM	0	591	590	405	995	591	591	Y	Y	Y	Y	Y
6:00 PM	0	444	481	276	757	444	444	Y	N	Y	Y	N
								8 of 8	5 of 8	7 of 8	7 of 4	4 of 1

Warrant Analyses
<p>Warrant 1: Condition A Minimum Vehicular Volume Warrant is Met</p> <p>Warrant 1: Condition B Interruption of Continuous Traffic Warrant is Not Met</p> <p>Warrant 1: Combination of Warrants 1A and 1B is Not Met</p> <p>Warrant 2: Four-Hour Warrant is Met</p> <p>Warrant 3: One-Hour Warrant is Met</p>

Traffic Control Signal Warrant Analyses

(Based on MUTCD-2009 Edition)

Intersection:		Epping Road (NH Route 27) and NH Route 101 Eastbound Ramps											
Pop. <10,000? (Y/N)	N	Count Date:	10/24/2019					Analysis Date:	09/17/20				
Speed (in mph):	40 mph	Analysis Year:	2030 No-Build - No NB Rights					Analyst:	JRP				
Is Major?*	#Lanes*	Adjustment Factor:	1 Raw counts										
	(Y/N) (one way)												
EB	N 2	Major Lanes:	2 Higher number of lanes for the major street approaches										
WB		Minor Lanes:	2 Number of lanes for minor street approach to be analyzed										
NB	Y 1												
SB	Y 2												

* Note: If intersection is a "T" intersection, leave cells blank for the non-existent approach

Start Time	EB LT	EB TH	EB RT	WB LT	WB TH	WB RT	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT
7:00 AM	4	0	340	0	0	0	0	450	0	220	528	0
8:00 AM	9	0	252	0	0	0	0	274	0	152	437	0
9:00 AM	7	0	167	0	0	0	0	248	0	117	306	0
10:00 AM	4	0	143	0	0	0	0	217	0	93	262	0
11:00 AM	13	0	124	0	0	0	0	246	0	137	350	0
12:00 PM	7	0	179	0	0	0	0	260	0	128	352	0
1:00 PM	11	1	158	0	0	0	0	259	0	87	312	0
2:00 PM	11	3	150	0	0	0	0	410	0	270	424	0
3:00 PM	14	0	213	0	0	0	0	510	0	165	394	0
4:00 PM	16	0	212	0	0	0	0	645	0	177	466	0
5:00 PM	24	1	246	0	0	0	0	484	0	166	423	0
6:00 PM	13	0	186	0	0	0	0	362	0	100	335	0

Time	∑ EB	∑ WB	∑ NB	∑ SB	∑ Major	∑ Minor	∑ Max Minor	W1 A	W1 B	W1 Combo	W2	W3
7:00 AM	344	0	450	747	1197	344	344	Y	Y	Y	Y	Y
8:00 AM	262	0	274	590	864	262	262	Y	N	Y	Y	N
9:00 AM	174	0	248	423	671	174	174	N	N	N	N	N
10:00 AM	147	0	217	354	571	147	147	N	N	N	N	N
11:00 AM	137	0	246	487	733	137	137	N	N	N	N	N
12:00 PM	186	0	260	480	740	186	186	N	N	Y	N	N
1:00 PM	169	0	259	399	658	169	169	N	N	N	N	N
2:00 PM	164	0	410	694	1104	164	164	N	Y	Y	Y	N
3:00 PM	227	0	510	559	1069	227	227	Y	Y	Y	Y	N
4:00 PM	228	0	645	642	1288	228	228	Y	Y	Y	Y	N
5:00 PM	271	0	484	589	1072	271	271	Y	Y	Y	Y	N
6:00 PM	199	0	362	435	797	199	199	N	N	Y	N	N
								5 of 8	5 of 8	8 of 8	6 of 4	1 of 1

Warrant Analyses
Warrant 1: Condition A Minimum Vehicular Volume Warrant is Not Met
Warrant 1: Condition B Interruption of Continuous Traffic Warrant is Not Met
Warrant 1: Combination of Warrants 1A and 1B is Met
Warrant 2: Four-Hour Warrant is Met
Warrant 3: One-Hour Warrant is Met

Analysis Worksheets: Full Build-Out Conditions

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	R	L	L	T	T	TR
Maximum Queue (ft)	426	471	175	174	187	114	236	224
Average Queue (ft)	250	305	94	97	111	28	156	120
95th Queue (ft)	387	437	220	154	164	83	237	197
Link Distance (ft)		989			768	768		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	700		150	600				
Storage Blk Time (%)		33	0					
Queuing Penalty (veh)		220	1					

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	R	T	T	R	L	T	T
Maximum Queue (ft)	30	257	232	206	179	165	189	414	480
Average Queue (ft)	3	93	40	94	80	13	108	194	241
95th Queue (ft)	17	233	162	175	155	86	179	337	396
Link Distance (ft)		967		749	749	749		768	768
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	200		200				600		
Storage Blk Time (%)		1	0						
Queuing Penalty (veh)		5	0						

Intersection: 3: Epping Road / NH 27 & Gateway/Mobil

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	151	116	67	113	161	166	254	122	277	353	416
Average Queue (ft)	70	49	34	37	55	62	110	54	93	156	228
95th Queue (ft)	126	96	66	83	126	139	220	104	201	289	375
Link Distance (ft)	232	232	46		620	620	620		749	749	749
Upstream Blk Time (%)			11								
Queuing Penalty (veh)			0								
Storage Bay Dist (ft)				125				125			
Storage Blk Time (%)				0	1			0	1		
Queuing Penalty (veh)				0	0			2	1		

Intersection: 4: Epping Road / NH 27 & Exeter Decorating/Ray Farmstead Rd

Movement	EB	NB	NB	SB	SB
Directions Served	R	T	TR	L	TR
Maximum Queue (ft)	36	28	61	236	3
Average Queue (ft)	6	1	8	110	0
95th Queue (ft)	26	11	35	203	3
Link Distance (ft)	124	585	585	620	620
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Epping Road / NH 27 & Continental Drive/159 Epping Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	R	LT	R	L	T	T	R	L	T
Maximum Queue (ft)	100	134	73	19	71	19	309	321	320	150	265	306
Average Queue (ft)	19	68	24	2	19	1	192	195	215	83	137	165
95th Queue (ft)	60	123	58	11	52	9	307	307	303	190	229	265
Link Distance (ft)		570			153			364	364			585
Upstream Blk Time (%)								0	0			
Queuing Penalty (veh)								1	0			
Storage Bay Dist (ft)	350		250	250		200	225			125	350	
Storage Blk Time (%)							19	7	29	0		
Queuing Penalty (veh)							79	17	31	0		

Intersection: 5: Epping Road / NH 27 & Continental Drive/159 Epping Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	444	324
Average Queue (ft)	203	212
95th Queue (ft)	368	359
Link Distance (ft)	585	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		275
Storage Blk Time (%)	0	6
Queuing Penalty (veh)	3	24

Intersection: 8: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	WB	NB	SB	SB
Directions Served	R	R	TR	T	TR
Maximum Queue (ft)	75	49	4	6	16
Average Queue (ft)	24	16	0	0	0
95th Queue (ft)	51	42	4	6	8
Link Distance (ft)	428	553	551	580	580
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	WB	NB
Directions Served	R	R	T
Maximum Queue (ft)	32	73	4
Average Queue (ft)	12	33	0
95th Queue (ft)	35	61	4
Link Distance (ft)	87	574	484
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 Timing Report, Sorted By Phase

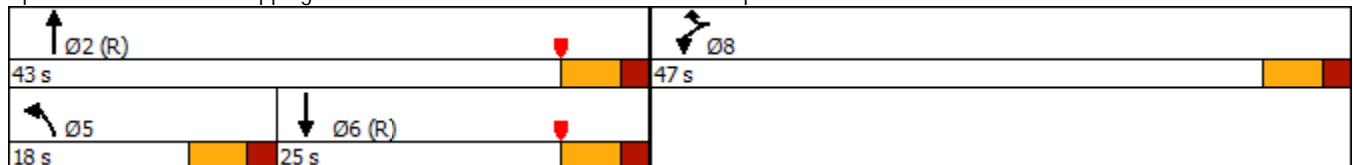
2030 Build - Access Management
 Weekday AM

	↑ 2	↙ 5	↓ 6	↘ 8
Phase Number	2	5	6	8
Movement	NBT	NBL	SBT	WBL
Lead/Lag		Lead	Lag	
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	43	18	25	47
Maximum Split (%)	47.8%	20.0%	27.8%	52.2%
Minimum Split (s)	16	11	16	11
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	5	10	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	53	53	71	6
End Time (s)	6	71	6	53
Yield/Force Off (s)	0	65	0	47
Yield/Force Off 170(s)	0	65	0	47
Local Start Time (s)	53	53	71	6
Local Yield (s)	0	65	0	47
Local Yield 170(s)	0	65	0	47

Intersection Summary


















Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 55
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Splits and Phases: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp



1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 HCM 6th Signalized Intersection Summary

2030 Build - Access Management
 Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1125	0	100	305	205	0	0	485	30
Future Volume (veh/h)	0	0	0	1125	0	100	305	205	0	0	485	30
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No			No	
Adj Sat Flow, veh/h/ln				1847	0	1847	1864	1864	0	0	1847	1847
Adj Flow Rate, veh/h				1250	0	111	339	228	0	0	539	33
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				1457	0	668	476	903	0	0	1013	62
Arrive On Green				0.43	0.00	0.43	0.23	0.81	0.00	0.00	0.30	0.30
Sat Flow, veh/h				3412	0	1565	3445	1864	0	0	3451	205
Grp Volume(v), veh/h				1250	0	111	339	228	0	0	281	291
Grp Sat Flow(s),veh/h/ln				1706	0	1565	1722	1864	0	0	1754	1810
Q Serve(g_s), s				29.8	0.0	3.9	8.2	2.6	0.0	0.0	12.0	12.0
Cycle Q Clear(g_c), s				29.8	0.0	3.9	8.2	2.6	0.0	0.0	12.0	12.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.11
Lane Grp Cap(c), veh/h				1457	0	668	476	903	0	0	529	546
V/C Ratio(X)				0.86	0.00	0.17	0.71	0.25	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h				1630	0	748	536	903	0	0	529	546
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.3	0.0	15.9	33.0	4.7	0.0	0.0	26.1	26.2
Incr Delay (d2), s/veh				4.4	0.0	0.1	3.6	0.6	0.0	0.0	3.8	3.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.7	0.0	1.3	3.3	1.0	0.0	0.0	5.3	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.7	0.0	16.0	36.6	5.3	0.0	0.0	29.9	29.9
LnGrp LOS				C	A	B	D	A	A	A	C	C
Approach Vol, veh/h					1361			567			572	
Approach Delay, s/veh					26.8			24.0			29.9	
Approach LOS					C			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		47.6			16.4	31.1		42.4				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		37.0			12.0	19.0		41.0				
Max Q Clear Time (g_c+I1), s		4.6			10.2	14.0		31.8				
Green Ext Time (p_c), s		0.8			0.3	1.0		4.6				
Intersection Summary												
HCM 6th Ctrl Delay				26.9								
HCM 6th LOS				C								

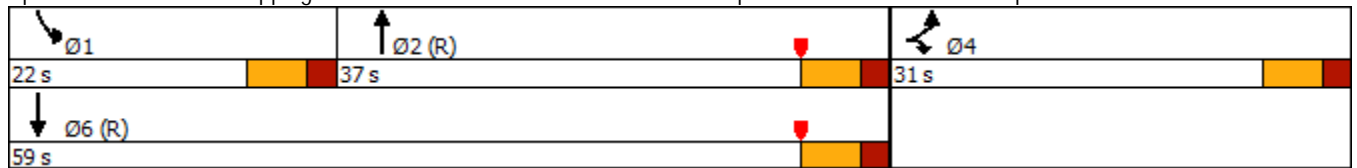
2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp Management
 Timing Report, Sorted By Phase Weekday AM

	↘	↑	↗	↓
Phase Number	1	2	4	6
Movement	SBL	NBT	EBL	SBT
Lead/Lag	Lead	Lag		
Lead-Lag Optimize				
Recall Mode	None	C-Min	None	C-Min
Maximum Split (s)	22	37	31	59
Maximum Split (%)	24.4%	41.1%	34.4%	65.6%
Minimum Split (s)	11	16	11	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	10	5	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	37	59	6	37
End Time (s)	59	6	37	6
Yield/Force Off (s)	53	0	31	0
Yield/Force Off 170(s)	53	0	31	0
Local Start Time (s)	37	59	6	37
Local Yield (s)	53	0	31	0
Local Yield 170(s)	53	0	31	0



















Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	

Splits and Phases: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp



2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 EB Off-Ramp/Access Management
 HCM 6th Signalized Intersection Summary Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	645	0	0	0	0	505	475	180	1430	0
Future Volume (veh/h)	5	0	645	0	0	0	0	505	475	180	1430	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1921	0	1921				0	1890	1890	1909	1909	0
Adj Flow Rate, veh/h	6	0	717				0	561	0	200	1589	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	529	0	829				0	1547		266	2256	0
Arrive On Green	0.29	0.00	0.29				0.00	0.57	0.00	0.29	1.00	0.00
Sat Flow, veh/h	1829	0	2865				0	3686	1602	1818	3723	0
Grp Volume(v), veh/h	6	0	717				0	561	0	200	1589	0
Grp Sat Flow(s),veh/h/ln	1829	0	1432				0	1796	1602	1818	1814	0
Q Serve(g_s), s	0.2	0.0	21.4				0.0	7.6	0.0	9.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	21.4				0.0	7.6	0.0	9.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	529	0	829				0	1547		266	2256	0
V/C Ratio(X)	0.01	0.00	0.87				0.00	0.36		0.75	0.70	0.00
Avail Cap(c_a), veh/h	549	0	859				0	1547		364	2256	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.00	0.57	0.57	0.00
Uniform Delay (d), s/veh	22.8	0.0	30.3				0.0	12.6	0.0	30.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.0				0.0	0.6	0.0	3.3	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	7.9				0.0	2.7	0.0	3.5	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	39.3				0.0	13.2	0.0	33.6	1.1	0.0
LnGrp LOS	C	A	D				A	B		C	A	A
Approach Vol, veh/h		723						561	A		1789	
Approach Delay, s/veh		39.2						13.2			4.7	
Approach LOS		D						B			A	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.2	42.8		30.0		60.0						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	16.0	31.0		25.0		53.0						
Max Q Clear Time (g_c+I1), s	11.0	9.6		23.4		2.0						
Green Ext Time (p_c), s	0.3	2.4		0.7		11.5						







Intersection Summary

HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

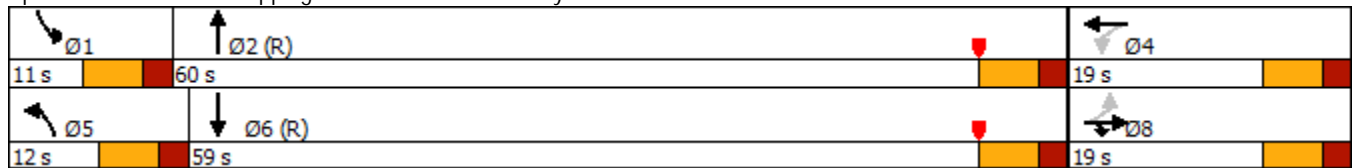
3: Epping Road / NH 27 & Gateway/Mobil
 Timing Report, Sorted By Phase

						
Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	WBTL	NBL	SBT	EBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	11	60	19	12	59	19
Maximum Split (%)	12.2%	66.7%	21.1%	13.3%	65.6%	21.1%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	25	36	6	25	37	6
End Time (s)	36	6	25	37	6	25
Yield/Force Off (s)	30	0	19	31	0	19
Yield/Force Off 170(s)	30	0	19	31	0	19
Local Start Time (s)	25	36	6	25	37	6
Local Yield (s)	30	0	19	31	0	19
Local Yield 170(s)	30	0	19	31	0	19

Intersection Summary

Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 60
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow




















Splits and Phases: 3: Epping Road / NH 27 & Gateway/Mobil



3: Epping Road / NH 27 & Gateway/Mobil
 HCM 6th Signalized Intersection Summary

2030 Build - Access Management

Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	0	60	45	0	10	55	860	115	70	1900	105
Future Volume (veh/h)	105	0	60	45	0	10	55	860	115	70	1900	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1683	1683	1683	1678	1678	1678	1678	1678	1678	1789	1789	1789
Adj Flow Rate, veh/h	117	0	67	50	0	11	61	956	128	78	2111	117
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	0	231	159	7	20	110	2562	342	133	3013	166
Arrive On Green	0.16	0.00	0.16	0.16	0.00	0.16	0.07	0.63	0.63	0.16	1.00	1.00
Sat Flow, veh/h	1354	0	1427	530	40	125	1598	4088	546	1704	4737	261
Grp Volume(v), veh/h	117	0	67	61	0	0	61	713	371	78	1448	780
Grp Sat Flow(s),veh/h/ln	1354	0	1427	695	0	0	1598	1527	1580	1704	1628	1742
Q Serve(g_s), s	0.0	0.0	3.7	3.7	0.0	0.0	3.3	10.2	10.3	3.8	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	3.7	10.6	0.0	0.0	3.3	10.2	10.3	3.8	0.0	0.0
Prop In Lane	1.00		1.00	0.82		0.18	1.00		0.35	1.00		0.15
Lane Grp Cap(c), veh/h	300	0	231	186	0	0	110	1914	990	133	2071	1108
V/C Ratio(X)	0.39	0.00	0.29	0.33	0.00	0.00	0.56	0.37	0.37	0.59	0.70	0.70
Avail Cap(c_a), veh/h	305	0	238	191	0	0	142	1914	990	133	2071	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.61	0.61	0.61
Uniform Delay (d), s/veh	34.5	0.0	33.1	38.2	0.0	0.0	40.6	8.2	8.2	36.7	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.7	1.0	0.0	0.0	4.4	0.6	1.1	4.1	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.3	1.3	0.0	0.0	1.4	3.0	3.3	1.6	0.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	33.8	39.3	0.0	0.0	44.9	8.7	9.3	40.8	1.2	2.3
LnGrp LOS	D	A	C	D	A	A	D	A	A	D	A	A
Approach Vol, veh/h		184			61			1145			2306	
Approach Delay, s/veh		34.8			39.3			10.8			2.9	
Approach LOS		C			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	60.4		18.6	10.2	61.2		18.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	54.0		13.0	6.0	53.0		13.0				
Max Q Clear Time (g_c+I1), s	5.8	12.3		12.6	5.3	2.0		8.9				
Green Ext Time (p_c), s	0.0	5.7		0.0	0.0	18.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

4: Epping Road / NH 27 & Exeter Decorating/Ray Farmstead 2030 Build - Access Management
 HCM 6th TWSC

Weekday AM







Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕↔		↗	↕↔	
Traffic Vol, veh/h	0	0	5	0	0	45	0	980	105	280	1720	5
Future Vol, veh/h	0	0	5	0	0	45	0	980	105	280	1720	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	200	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	6	0	0	50	0	1089	117	311	1911	6

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	959	-	-	-	1917	0	0	1206	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	-	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	-	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	257	0	0	0	305	-	-	574	-	-
Stage 1	0	0	-	0	0	0	-	-	-	-	-	-
Stage 2	0	0	-	0	0	0	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	257	-	-	-	305	-	-	574	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.3	0	0	2.6
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	305	-	-	257	-	574	-	-
HCM Lane V/C Ratio	-	-	-	0.022	-	0.542	-	-
HCM Control Delay (s)	0	-	-	19.3	0	18.4	-	-
HCM Lane LOS	A	-	-	C	A	C	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	3.2	-	-

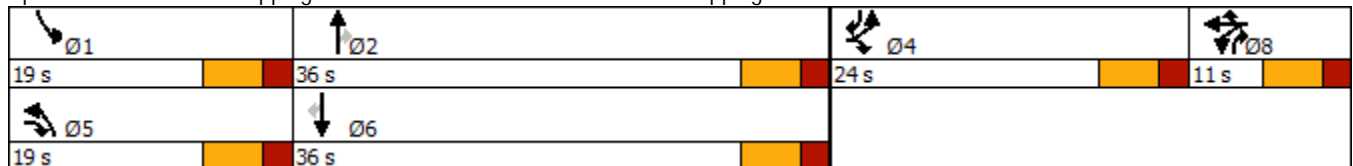
5: Epping Road / NH 27 & Continental Drive/159 Epping Rd 2030 Build - Access Management
 Timing Report, Sorted By Phase Weekday AM

						
Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	Min	None	None	Min	None
Maximum Split (s)	19	36	24	19	36	11
Maximum Split (%)	21.1%	40.0%	26.7%	21.1%	40.0%	12.2%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	19	55	0	19	79
End Time (s)	19	55	79	19	55	0
Yield/Force Off (s)	13	49	73	13	49	84
Yield/Force Off 170(s)	13	49	73	13	49	84
Local Start Time (s)	41	60	6	41	60	30
Local Yield (s)	54	0	24	54	0	35
Local Yield 170(s)	54	0	24	54	0	35























Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	55

Splits and Phases: 5: Epping Road / NH 27 & Continental Drive/159 Epping Rd



5: Epping Road / NH 27 & Continental Drive/159 Epping Rd 2030 Build - Access Management
 HCM 6th Signalized Intersection Summary Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	0	70	40	0	35	245	845	105	225	820	775
Future Volume (veh/h)	150	0	70	40	0	35	245	845	105	225	820	775
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	0	1949	1870	1870	1870	1864	1864	1864	1949	1949	1949
Adj Flow Rate, veh/h	167	0	78	44	0	39	272	939	117	250	911	861
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	0	0	165	0	147	370	1860	976	356	1882	892
Arrive On Green	0.03	0.00	0.03	0.09	0.00	0.09	0.21	0.53	0.53	0.19	0.51	0.51
Sat Flow, veh/h		0		1781	0	1585	1776	3542	1580	1856	3702	1651
Grp Volume(v), veh/h		0.0		44	0	39	272	939	117	250	911	861
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1776	1771	1580	1856	1851	1651
Q Serve(g_s), s				1.4	0.0	1.4	9.0	10.8	1.9	7.9	10.1	31.5
Cycle Q Clear(g_c), s				1.4	0.0	1.4	9.0	10.8	1.9	7.9	10.1	31.5
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				165	0	147	370	1860	976	356	1882	892
V/C Ratio(X)				0.27	0.00	0.27	0.73	0.50	0.12	0.70	0.48	0.97
Avail Cap(c_a), veh/h				198	0	176	423	1860	976	442	1882	892
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.6	0.0	26.6	23.3	9.7	5.0	23.8	10.1	13.9
Incr Delay (d2), s/veh				0.9	0.0	1.0	5.7	0.2	0.1	3.7	0.2	22.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.6	0.0	0.6	4.1	3.5	0.7	3.6	3.5	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.4	0.0	27.5	28.9	9.9	5.0	27.5	10.3	36.0
LnGrp LOS				C	A	C	C	A	A	C	B	D
Approach Vol, veh/h					83			1328			2022	
Approach Delay, s/veh					27.5			13.4			23.3	
Approach LOS					C			B			C	
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	16.1	37.1			17.1	36.0		9.8				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	13.0	30.0			13.0	30.0		5.0				
Max Q Clear Time (g_c+I1), s	9.9	12.8			11.0	33.5		3.4				
Green Ext Time (p_c), s	0.3	4.9			0.2	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

8: Epping Road / NH 27 & McKay Drive/Meeting Place Drive 2030 Build - Access Management
 HCM 6th TWSC

Weekday AM

Intersection

Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↔			↕↔	
Traffic Vol, veh/h	0	0	125	0	0	20	0	1400	15	0	580	115
Future Vol, veh/h	0	0	125	0	0	20	0	1400	15	0	580	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	139	0	0	22	0	1556	17	0	644	128

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	386	-	-	787	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	612	0	0	334	0	-
Stage 1	0	0	-	0	0	-	0	-
Stage 2	0	0	-	0	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	612	-	-	334	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.6		16.5		0		0	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	612 334	-	-
HCM Lane V/C Ratio	-	-	0.227 0.067	-	-
HCM Control Delay (s)	-	-	12.6 16.5	-	-
HCM Lane LOS	-	-	B C	-	-
HCM 95th %tile Q(veh)	-	-	0.9 0.2	-	-

9: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive - Access Management
 HCM 6th TWSC

Weekday AM

Intersection

Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↔			↕↔	
Traffic Vol, veh/h	0	0	15	0	0	60	0	1365	15	0	690	0
Future Vol, veh/h	0	0	15	0	0	60	0	1365	15	0	690	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	17	0	0	67	0	1517	17	0	767	0

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	384	-	-	767	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	7.04	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	614	0	0	338	0	0
Stage 1	0	0	-	0	0	-	0	0
Stage 2	0	0	-	0	0	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	614	-	-	338	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11		18.2		0		0	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	614	338	-	-
HCM Lane V/C Ratio	-	-	0.027	0.197	-	-
HCM Control Delay (s)	-	-	11	18.2	-	-
HCM Lane LOS	-	-	B	C	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.7	-	-

LANE SUMMARY

 Site: 101 [AM Industrial North Roundabout]

New Site
Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec			ft		ft	%	%
South: Epping Road (NH 27)													
Lane 1	782	3.0	1072	0.729	100	15.5	LOS C	12.7	324.0	Full	475	0.0	0.0
Lane 2 ^d	835	3.0	1145	0.729	100	14.7	LOS B	12.5	319.5	Full	475	0.0	0.0
Approach	1617	3.0		0.729		15.1	LOS C	12.7	324.0				
East: Industrial Drive (North)													
Lane 1 ^d	36	3.0	336	0.106	100	12.5	LOS B	0.3	8.2	Full	400	0.0	0.0
Approach	36	3.0		0.106		12.5	LOS B	0.3	8.2				
North: Epping Road (NH 27)													
Lane 1	493	3.0	1301	0.379	100	6.3	LOS A	2.1	54.9	Full	525	0.0	0.0
Lane 2 ^d	518	3.0	1369	0.379	100	6.1	LOS A	2.1	53.3	Full	525	0.0	0.0
Approach	1011	3.0		0.379		6.2	LOS A	2.1	54.9				
West: Dearborn Park													
Lane 1 ^d	12	3.0	571	0.021	100	6.5	LOS A	0.1	1.8	Full	1600	0.0	0.0
Approach	12	3.0		0.021		6.5	LOS A	0.1	1.8				
Intersection	2676	3.0		0.729		11.7	LOS B	12.7	324.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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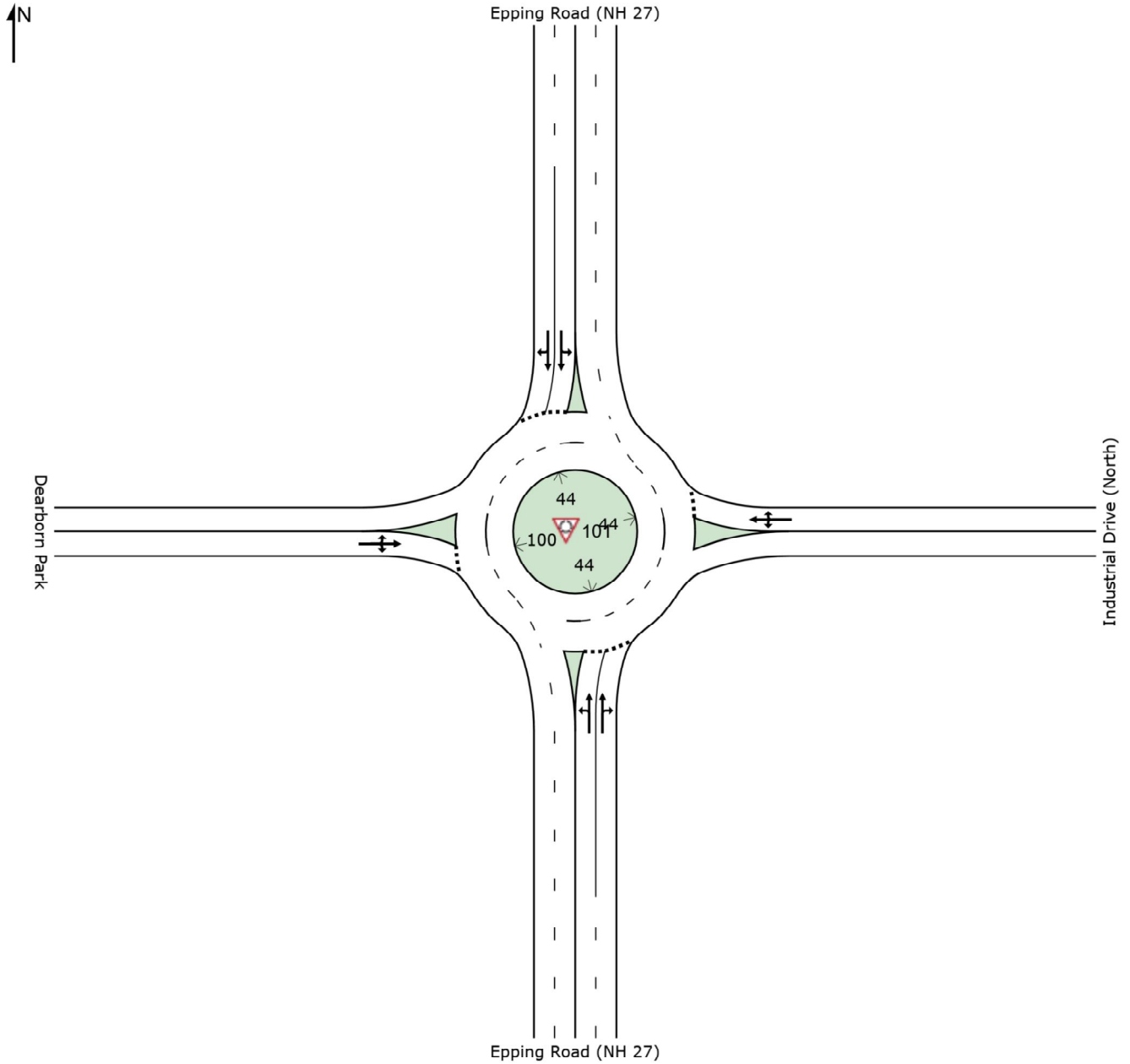
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SITE LAYOUT

Site: 101 [AM Industrial North Roundabout]

New Site
Roundabout



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QUEUE DISTANCE (AVER)

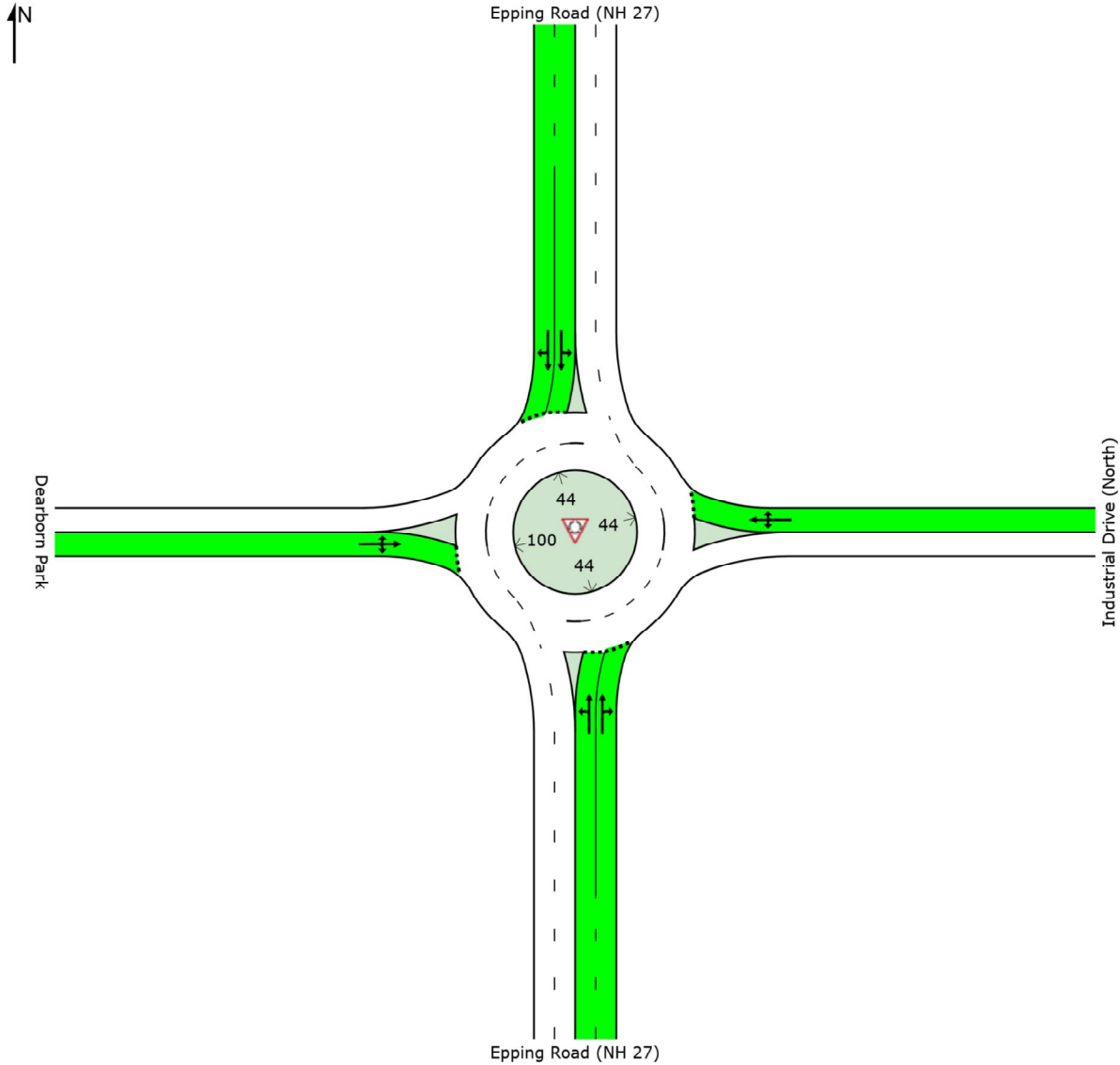
Average Back of Queue Distance per lane (feet)

 Site: 101 [AM Industrial North Roundabout]

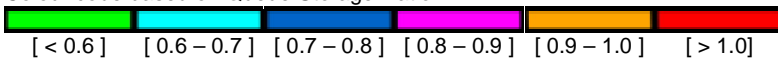
New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	130	3	22	1	130



Colour code based on Queue Storage Ratio



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LANE SUMMARY

 Site: 101 [AM Industrial South Roundabout]

New Site
Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec							
South: Epping Road (NH 27)													
Lane 1	763	3.0	1191	0.641	100	11.5	LOS B	5.3	134.5	Full	650	0.0	0.0
Lane 2 ^d	809	3.0	1262	0.641	100	11.0	LOS B	5.2	132.2	Full	650	0.0	0.0
Approach	1572	3.0		0.641		11.2	LOS B	5.3	134.5				
East: Industrial Drive (South)													
Lane 1 ^d	34	3.0	369	0.093	100	11.2	LOS B	0.3	7.4	Full	250	0.0	0.0
Approach	34	3.0		0.093		11.2	LOS B	0.3	7.4				
North: Epping Road (NH 27)													
Lane 1	375	3.0	1185	0.316	100	6.0	LOS A	1.6	39.9	Full	300	0.0	0.0
Lane 2 ^d	397	3.0	1256	0.316	100	5.8	LOS A	1.5	39.0	Full	300	0.0	0.0
Approach	772	3.0		0.316		5.9	LOS A	1.6	39.9				
West: 104 Epping Road													
Lane 1 ^d	8	3.0	646	0.012	100	5.7	LOS A	0.0	1.0	Full	35	0.0	0.0
Approach	8	3.0		0.012		5.7	LOS A	0.0	1.0				
Intersection	2387	3.0		0.641		9.5	LOS A	5.3	134.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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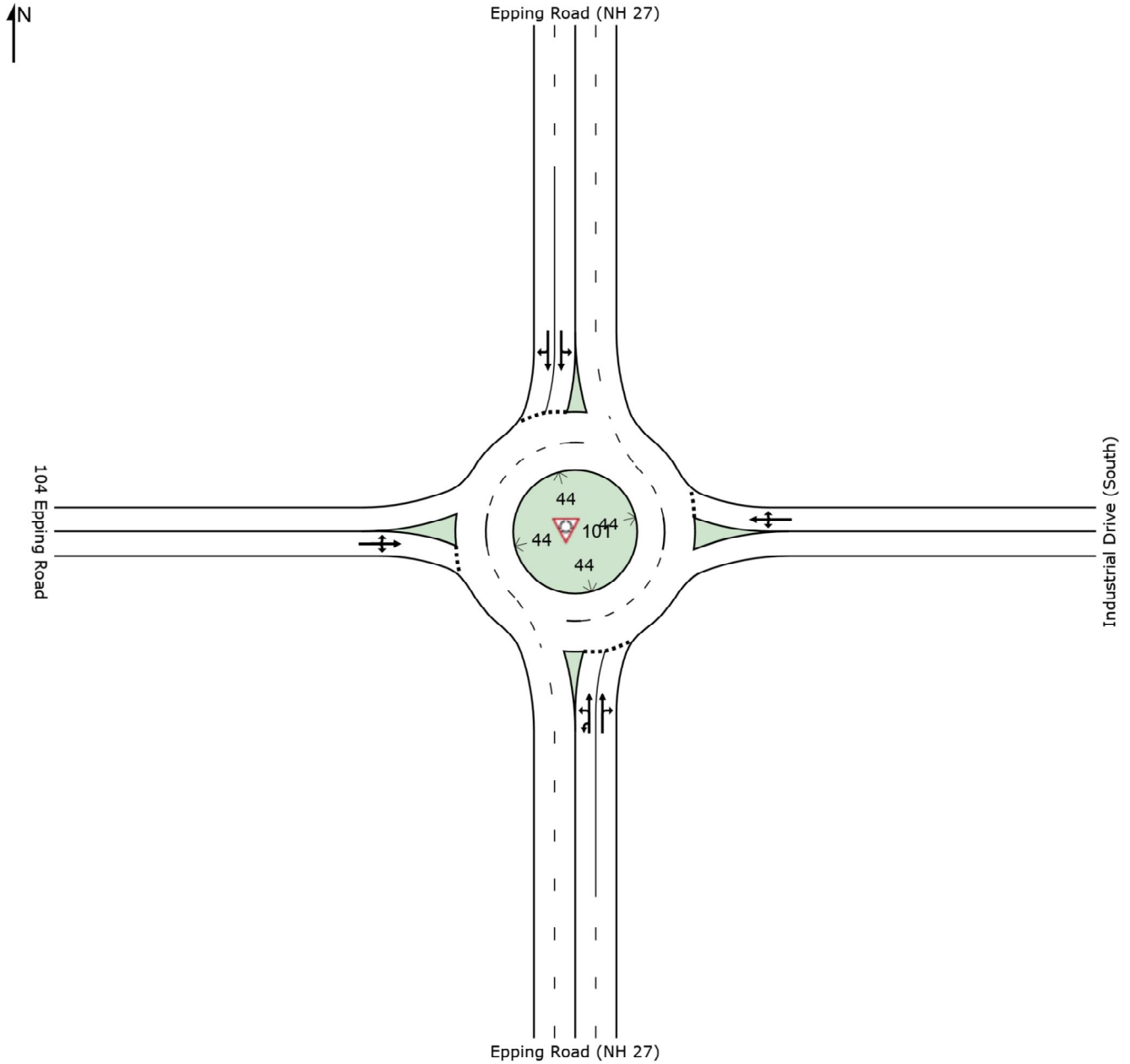
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SITE LAYOUT

 Site: 101 [AM Industrial South Roundabout]

New Site
Roundabout



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QUEUE DISTANCE (AVER)

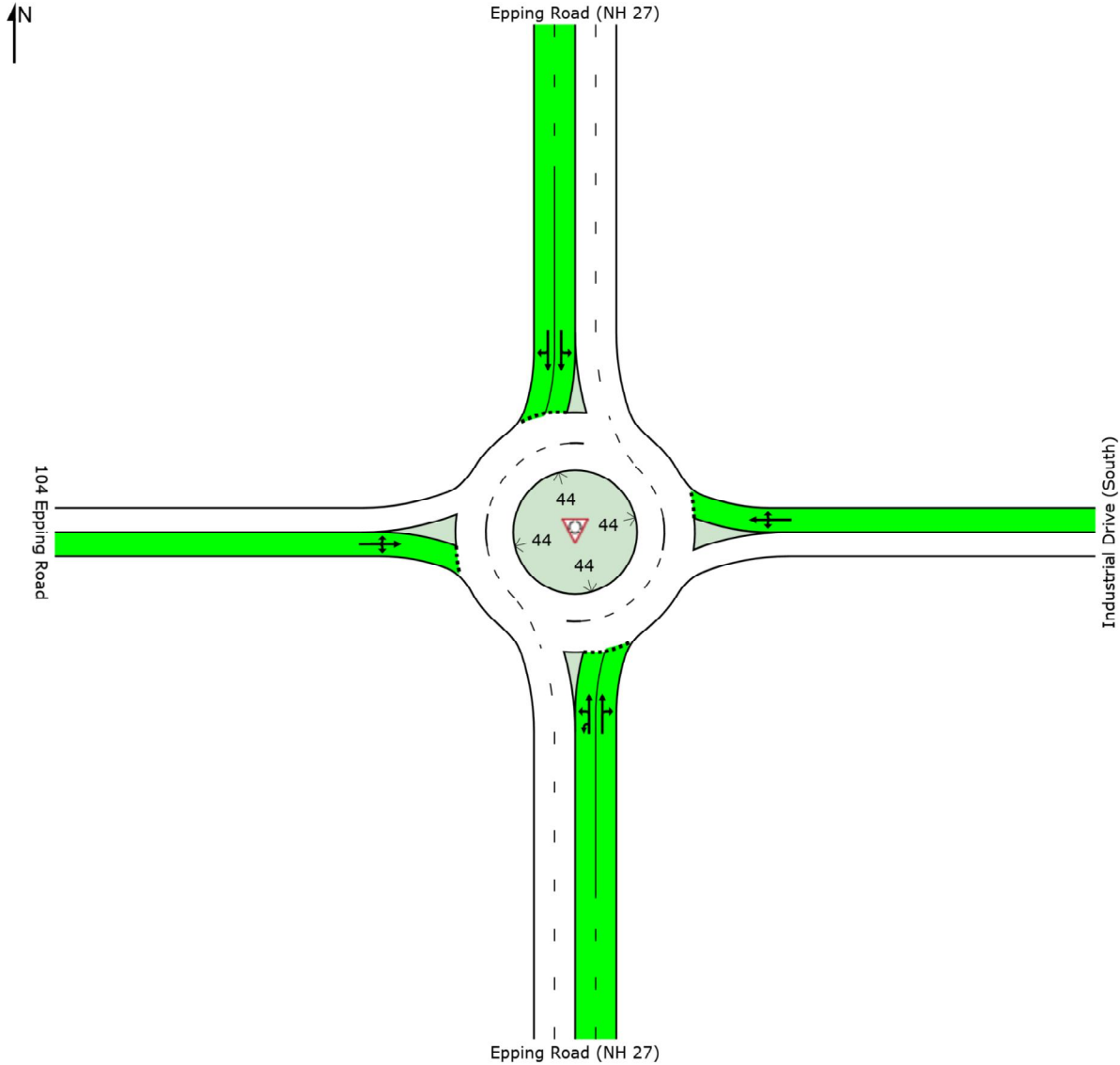
Average Back of Queue Distance per lane (feet)

 Site: 101 [AM Industrial South Roundabout]

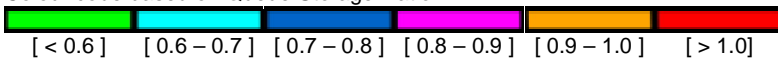
New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	54	3	16	0	54



Colour code based on Queue Storage Ratio



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LANE SUMMARY

 Site: 101 [Brentwood at Epping AM]

New Site
Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec			ft		ft	%	%
South: Epping Road (NH 27)													
Lane 1	526	3.0	894	0.588	100	12.6	LOS B	5.3	135.2	Full	475	0.0	0.0
Lane 2 ^d	569	3.0	967	0.588	100	11.8	LOS B	5.3	135.7	Full	475	0.0	0.0
Approach	1094	3.0		0.588		12.2	LOS B	5.3	135.7				
North: Epping Road (NH 27)													
Lane 1 ^d	388	3.0	1332	0.291	100	5.3	LOS A	1.4	35.7	Full	550	0.0	0.0
Lane 2	285	3.0	1263	0.225	77 ⁶	4.8	LOS A	1.0	26.2	Full	550	0.0	0.0
Lane 3	111	3.0	1626	0.068	100	0.0	LOS A	0.0	0.0	Short	50	0.0	NA
Approach	783	3.0		0.291		4.3	LOS A	1.4	35.7				
West: Brentwood Road (NH 111A)													
Lane 1 ^d	278	3.0	764	0.364	100	9.2	LOS A	1.6	41.7	Full	800	0.0	0.0
Lane 2	78	3.0	849	0.092	100	5.1	LOS A	0.3	8.2	Short	50	0.0	NA
Approach	356	3.0		0.364		8.3	LOS A	1.6	41.7				
Intersection	2233	3.0		0.588		8.8	LOS A	5.3	135.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

⁶ Lane under-utilisation due to downstream effects

^d Dominant lane on roundabout approach

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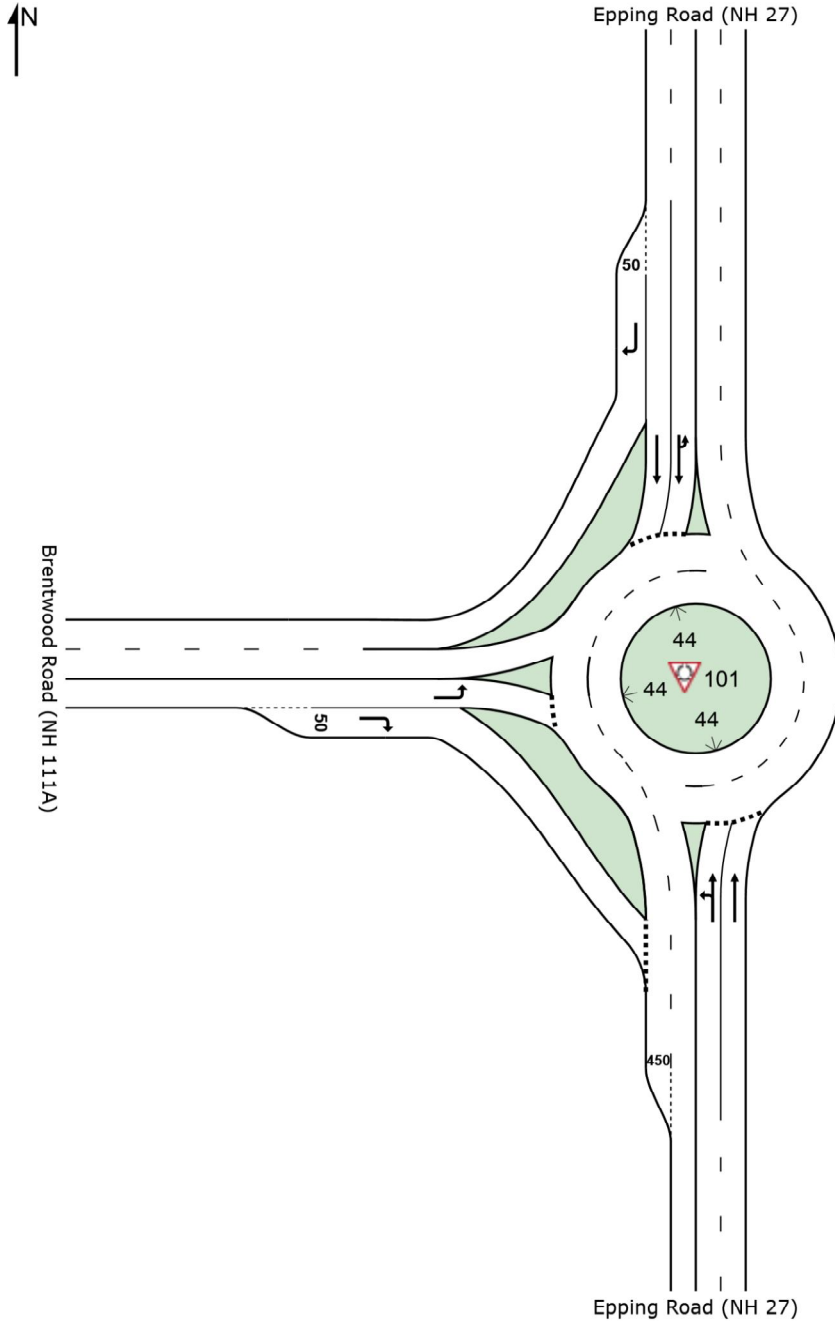
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SITE LAYOUT

 Site: 101 [Brentwood at Epping AM]

New Site
Roundabout



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QUEUE DISTANCE (AVER)

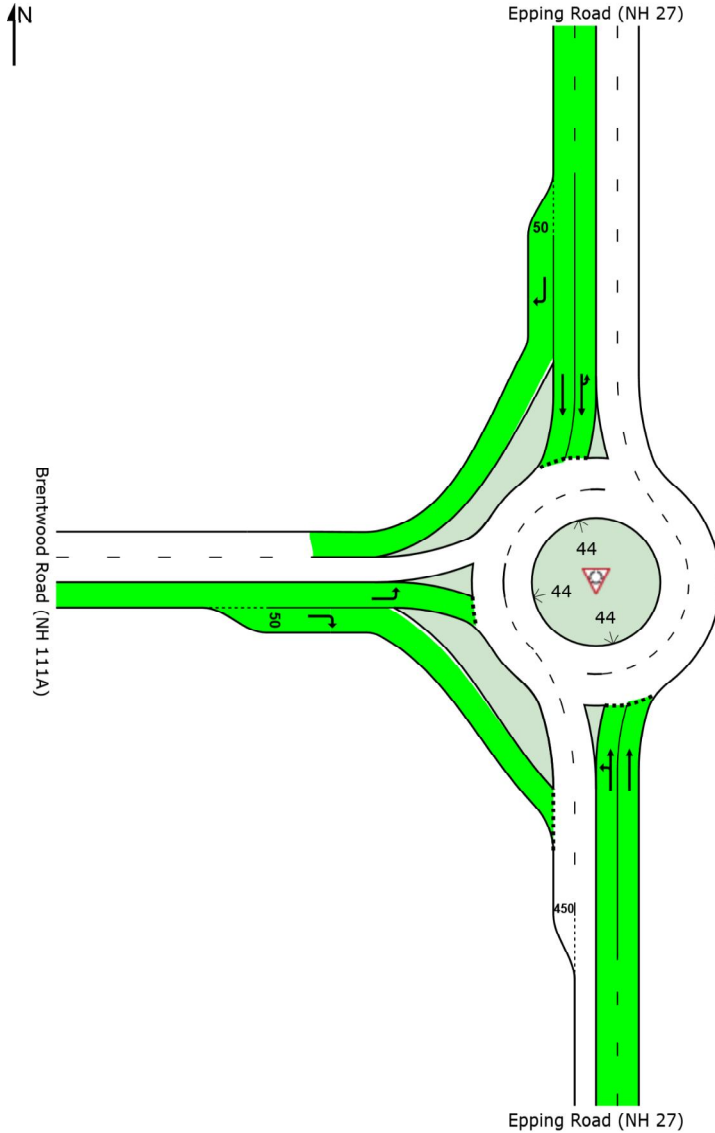
Average Back of Queue Distance per lane (feet)

 Site: 101 [Brentwood at Epping AM]

New Site
Roundabout

All Movement Classes

	South	North	West	Intersection
Queue Distance (Aver)	55	14	17	55



Colour code based on Queue Storage Ratio



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Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	R	L	L	T	T	TR
Maximum Queue (ft)	260	317	175	314	330	323	209	170
Average Queue (ft)	109	174	128	217	224	161	113	86
95th Queue (ft)	215	269	206	302	306	293	183	149
Link Distance (ft)		995			764	764		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	700		150	600				
Storage Blk Time (%)		10	4					
Queuing Penalty (veh)		49	16					

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	T	T	R	L	T	T
Maximum Queue (ft)	60	11	276	256	402	162	144	239
Average Queue (ft)	22	0	129	112	42	74	53	94
95th Queue (ft)	54	11	239	210	226	138	123	192
Link Distance (ft)		968	740	740	740		764	764
Upstream Blk Time (%)					0			
Queuing Penalty (veh)					0			
Storage Bay Dist (ft)	200					600		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 3: Epping Road / NH 27 & Gateway/Mobil

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	149	115	67	149	311	448	454	72	103	139	184
Average Queue (ft)	78	51	27	54	155	195	256	26	35	77	101
95th Queue (ft)	133	101	61	120	273	346	408	60	86	125	167
Link Distance (ft)	132	132	46		615	615	615		740	740	740
Upstream Blk Time (%)	1	0	7			0					
Queuing Penalty (veh)	0	0	0			0					
Storage Bay Dist (ft)				125				125			
Storage Blk Time (%)				0	8			0	0		
Queuing Penalty (veh)				2	5			0	0		

Intersection: 4: Epping Road / NH 27 & Exeter Decorating/Ray Farms

Movement	NB	NB	NB	SB
Directions Served	L	T	TR	L
Maximum Queue (ft)	27	54	110	136
Average Queue (ft)	2	3	9	44
95th Queue (ft)	15	36	62	105
Link Distance (ft)		582	582	615
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Epping Road / NH 27 & Continental Drive/159 Epping Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	B18	B18
Directions Served	L	L	R	R	L	R	L	T	T	R	T	T
Maximum Queue (ft)	375	700	300	150	199	214	315	427	441	149	103	149
Average Queue (ft)	336	562	276	44	134	186	133	300	326	29	11	22
95th Queue (ft)	438	823	385	102	220	227	329	449	469	119	79	115
Link Distance (ft)		653			175			363	363		417	417
Upstream Blk Time (%)		20			25	84		8	13			
Queuing Penalty (veh)		0			0	0		40	70			
Storage Bay Dist (ft)	350		250	250		200	225			125		
Storage Blk Time (%)	1	39	0		25	84	0	27	55	0		
Queuing Penalty (veh)	6	335	0		59	179	2	22	11	0		

Intersection: 5: Epping Road / NH 27 & Continental Drive/159 Epping Rd

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	72	299	307	169
Average Queue (ft)	30	148	162	38
95th Queue (ft)	62	261	274	121
Link Distance (ft)		582	582	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	350			275
Storage Blk Time (%)		0	1	
Queuing Penalty (veh)		0	3	

Intersection: 8: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	WB	NB	SB	SB
Directions Served	R	R	T	T	TR
Maximum Queue (ft)	67	32	3	91	3
Average Queue (ft)	23	5	0	3	0
95th Queue (ft)	49	24	3	53	3
Link Distance (ft)	420	547	553	577	577
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	WB	NB	SB	SB
Directions Served	R	R	T	T	TR
Maximum Queue (ft)	68	54	6	7	10
Average Queue (ft)	26	23	0	0	0
95th Queue (ft)	56	50	6	7	10
Link Distance (ft)	84	568	484	553	553
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 10: Bend

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	165	135
Average Queue (ft)	13	8
95th Queue (ft)	107	89
Link Distance (ft)	484	484
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 Timing Report, Sorted By Phase

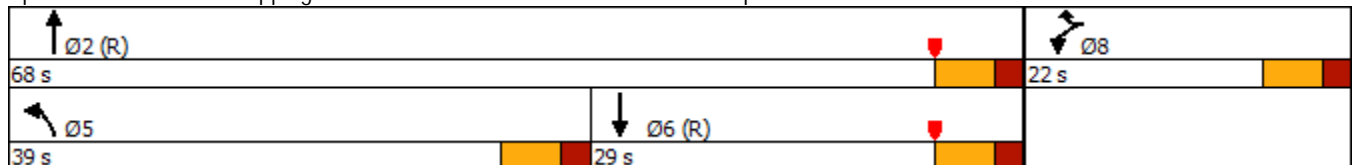
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 Weekday PM

	↑ 2	↙ 5	↓ 6	↘ 8
Phase Number	2	5	6	8
Movement	NBT	NBL	SBT	WBL
Lead/Lag		Lead	Lag	
Lead-Lag Optimize				
Recall Mode	C-Min	None	C-Min	None
Maximum Split (s)	68	39	29	22
Maximum Split (%)	75.6%	43.3%	32.2%	24.4%
Minimum Split (s)	16	11	16	11
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	5	10	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	No	Yes	No
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	28	28	67	6
End Time (s)	6	67	6	28
Yield/Force Off (s)	0	61	0	22
Yield/Force Off 170(s)	0	61	0	22
Local Start Time (s)	28	28	67	6
Local Yield (s)	0	61	0	22
Local Yield 170(s)	0	61	0	22

Intersection Summary



















Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 50
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Splits and Phases: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp



1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 HCM 6th Signalized Intersection Summary

2030 Build - Access Management
 Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	460	0	240	785	550	0	0	375	5
Future Volume (veh/h)	0	0	0	460	0	240	785	550	0	0	375	5
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No			No	
Adj Sat Flow, veh/h/ln				1921	0	1921	1864	1864	0	0	1847	1847
Adj Flow Rate, veh/h				511	0	267	872	611	0	0	417	6
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				710	0	326	1033	1326	0	0	1299	19
Arrive On Green				0.20	0.00	0.20	0.50	1.00	0.00	0.00	0.37	0.34
Sat Flow, veh/h				3549	0	1628	3445	1864	0	0	3634	51
Grp Volume(v), veh/h				511	0	267	872	611	0	0	206	217
Grp Sat Flow(s),veh/h/ln				1774	0	1628	1722	1864	0	0	1754	1838
Q Serve(g_s), s				12.1	0.0	14.1	19.7	0.0	0.0	0.0	7.6	7.6
Cycle Q Clear(g_c), s				12.1	0.0	14.1	19.7	0.0	0.0	0.0	7.6	7.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.03
Lane Grp Cap(c), veh/h				710	0	326	1033	1326	0	0	644	674
V/C Ratio(X)				0.72	0.00	0.82	0.84	0.46	0.00	0.00	0.32	0.32
Avail Cap(c_a), veh/h				710	0	326	1340	1326	0	0	644	674
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.70	0.70	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.6	0.0	34.5	20.7	0.0	0.0	0.0	20.4	20.5
Incr Delay (d2), s/veh				3.6	0.0	15.2	2.9	0.8	0.0	0.0	1.3	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.3	0.0	6.7	5.8	0.3	0.0	0.0	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				37.2	0.0	49.7	23.5	0.8	0.0	0.0	21.8	21.7
LnGrp LOS				D	A	D	C	A	A	A	C	C
Approach Vol, veh/h					778			1483			423	
Approach Delay, s/veh					41.5			14.2			21.7	
Approach LOS					D			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		68.0			31.0	37.0		22.0				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		62.0			33.0	23.0		16.0				
Max Q Clear Time (g_c+I1), s		2.0			21.7	9.6		16.1				
Green Ext Time (p_c), s		2.6			3.3	1.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				23.3								
HCM 6th LOS				C								

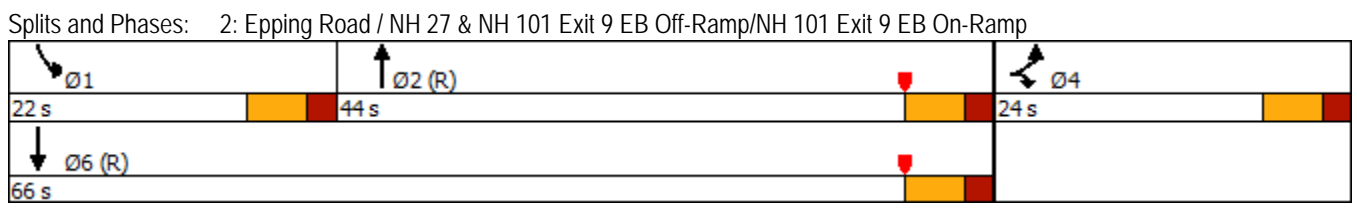
2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp Management
 Timing Report, Sorted By Phase Weekday PM

	↘	↑	↗	↓
Phase Number	1	2	4	6
Movement	SBL	NBT	EBL	SBT
Lead/Lag	Lead	Lag		
Lead-Lag Optimize				
Recall Mode	None	C-Min	None	C-Min
Maximum Split (s)	22	44	24	66
Maximum Split (%)	24.4%	48.9%	26.7%	73.3%
Minimum Split (s)	11	16	11	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	10	5	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	30	52	6	30
End Time (s)	52	6	30	6
Yield/Force Off (s)	46	0	24	0
Yield/Force Off 170(s)	46	0	24	0
Local Start Time (s)	30	52	6	30
Local Yield (s)	46	0	24	0
Local Yield 170(s)	46	0	24	0



















Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60

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



2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 EB Off-Ramp Management
 HCM 6th Signalized Intersection Summary Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	0	385	0	0	0	0	1305	1130	125	710	0
Future Volume (veh/h)	30	0	385	0	0	0	0	1305	1130	125	710	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1921	0	1921				0	1890	1890	1909	1909	0
Adj Flow Rate, veh/h	33	0	428				0	1450	0	139	789	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	355	0	556				0	2007		207	2601	0
Arrive On Green	0.19	0.00	0.19				0.00	1.00	0.00	0.23	1.00	0.00
Sat Flow, veh/h	1829	0	2865				0	3686	1602	1818	3723	0
Grp Volume(v), veh/h	33	0	428				0	1450	0	139	789	0
Grp Sat Flow(s),veh/h/ln	1829	0	1432				0	1796	1602	1818	1814	0
Q Serve(g_s), s	1.3	0.0	12.7				0.0	0.0	0.0	6.3	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	12.7				0.0	0.0	0.0	6.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	556				0	2007		207	2601	0
V/C Ratio(X)	0.09	0.00	0.77				0.00	0.72		0.67	0.30	0.00
Avail Cap(c_a), veh/h	406	0	637				0	2007		364	2601	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.51	0.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.4				0.0	0.0	0.0	33.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	5.0				0.0	1.2	0.0	3.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	4.6				0.0	0.3	0.0	2.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	0.0	39.4				0.0	1.2	0.0	36.4	0.3	0.0
LnGrp LOS	C	A	D				A	A		D	A	A
Approach Vol, veh/h		461						1450	A		928	
Approach Delay, s/veh		38.7						1.2			5.7	
Approach LOS		D						A			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.2	54.3		21.5				68.5				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	16.0	38.0		18.0				60.0				
Max Q Clear Time (g_c+I1), s	8.3	2.0		14.7				2.0				
Green Ext Time (p_c), s	0.2	9.0		0.7				3.8				







Intersection Summary

HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

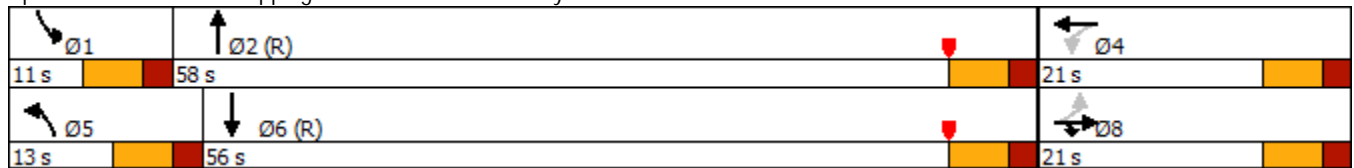
3: Epping Road / NH 27 & Gateway/Mobil
 Timing Report, Sorted By Phase

						
Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	WBTL	NBL	SBT	EBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	C-Min	None	None	C-Min	None
Maximum Split (s)	11	58	21	13	56	21
Maximum Split (%)	12.2%	64.4%	23.3%	14.4%	62.2%	23.3%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	27	38	6	27	40	6
End Time (s)	38	6	27	40	6	27
Yield/Force Off (s)	32	0	21	34	0	21
Yield/Force Off 170(s)	32	0	21	34	0	21
Local Start Time (s)	27	38	6	27	40	6
Local Yield (s)	32	0	21	34	0	21
Local Yield 170(s)	32	0	21	34	0	21

Intersection Summary

Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 60
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Splits and Phases: 3: Epping Road / NH 27 & Gateway/Mobil



3: Epping Road / NH 27 & Gateway/Mobil
 HCM 6th Signalized Intersection Summary

2030 Build - Access Management
 Weekday PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	0	70	30	0	10	65	2305	115	30	945	125
Future Volume (veh/h)	125	0	70	30	0	10	65	2305	115	30	945	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1864	1864	1864	1864	1864	1864	1988	1988	1988
Adj Flow Rate, veh/h	139	0	78	33	0	11	72	2561	128	33	1050	139
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	0	247	137	10	26	131	3265	161	101	3089	408
Arrive On Green	0.16	0.00	0.16	0.16	0.00	0.16	0.07	0.66	0.66	0.11	1.00	1.00
Sat Flow, veh/h	1424	0	1585	432	63	165	1776	4968	245	1893	4850	641
Grp Volume(v), veh/h	139	0	78	44	0	0	72	1740	949	33	783	406
Grp Sat Flow(s),veh/h/ln	1424	0	1585	661	0	0	1776	1697	1820	1893	1809	1873
Q Serve(g_s), s	0.0	0.0	3.9	1.9	0.0	0.0	3.5	32.5	33.6	1.5	0.0	0.0
Cycle Q Clear(g_c), s	8.2	0.0	3.9	10.0	0.0	0.0	3.5	32.5	33.6	1.5	0.0	0.0
Prop In Lane	1.00		1.00	0.75		0.25	1.00		0.13	1.00		0.34
Lane Grp Cap(c), veh/h	302	0	247	173	0	0	131	2230	1196	101	2304	1193
V/C Ratio(X)	0.46	0.00	0.32	0.25	0.00	0.00	0.55	0.78	0.79	0.33	0.34	0.34
Avail Cap(c_a), veh/h	348	0	299	218	0	0	178	2230	1196	147	2304	1193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	35.5	0.0	33.7	37.6	0.0	0.0	40.2	10.9	11.1	38.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.7	0.8	0.0	0.0	3.6	2.8	5.5	1.7	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	1.5	1.0	0.0	0.0	1.6	10.6	12.7	0.7	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	34.4	38.3	0.0	0.0	43.8	13.6	16.5	40.4	0.4	0.7
LnGrp LOS	D	A	C	D	A	A	D	B	B	D	A	A
Approach Vol, veh/h		217			44			2761			1222	
Approach Delay, s/veh		35.8			38.3			15.4			1.6	
Approach LOS		D			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	63.1		18.1	10.6	61.3		18.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	52.0		15.0	7.0	50.0		15.0				
Max Q Clear Time (g_c+I1), s	3.5	35.6		12.0	5.5	2.0		10.2				
Green Ext Time (p_c), s	0.0	12.5		0.0	0.0	6.2		0.3				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Intersection







Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕↔		↗	↕↔	
Traffic Vol, veh/h	0	0	0	0	0	240	5	2240	25	50	990	0
Future Vol, veh/h	0	0	0	0	0	240	5	2240	25	50	990	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	200	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	267	6	2489	28	56	1100	0

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	550	-	-	-	1100	0	0	2517	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	-	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	-	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	479	0	0	0	630	-	-	177	-	-
Stage 1	0	0	-	0	0	0	-	-	-	-	-	-
Stage 2	0	0	-	0	0	0	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	479	-	-	-	630	-	-	177	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	0		0			0			1.7		
HCM LOS	A		A								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	630	-	-	-	-	177	-	-
HCM Lane V/C Ratio	0.009	-	-	-	-	0.314	-	-
HCM Control Delay (s)	10.8	-	-	0	0	34.4	-	-
HCM Lane LOS	B	-	-	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	1.3	-	-

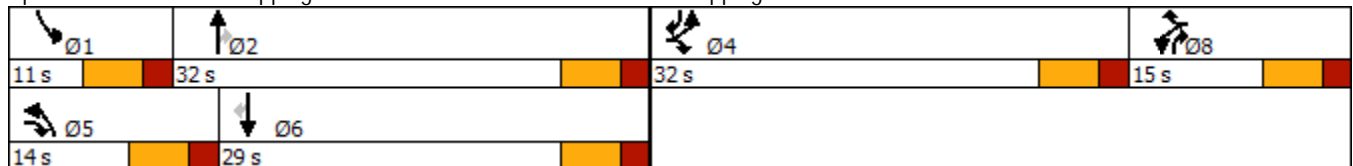
5: Epping Road / NH 27 & Continental Drive/159 Epping Rd 2030 Build - Access Management
 Timing Report, Sorted By Phase Weekday PM

						
Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBL	NBL	SBT	WBL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize						
Recall Mode	None	Min	None	None	Min	None
Maximum Split (s)	11	32	32	14	29	15
Maximum Split (%)	12.2%	35.6%	35.6%	15.6%	32.2%	16.7%
Minimum Split (s)	11	16	11	11	16	11
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	10	5	5	10	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	43	0	14	75
End Time (s)	11	43	75	14	43	0
Yield/Force Off (s)	5	37	69	8	37	84
Yield/Force Off 170(s)	5	37	69	8	37	84
Local Start Time (s)	53	64	6	53	67	38
Local Yield (s)	58	0	32	61	0	47
Local Yield 170(s)	58	0	32	61	0	47

Intersection Summary























Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	90

Splits and Phases: 5: Epping Road / NH 27 & Continental Drive/159 Epping Rd



5: Epping Road / NH 27 & Continental Drive/159 Epping Rd 2030 Build - Access Management
 HCM 6th Signalized Intersection Summary

Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	895	0	405	215	0	230	80	1030	20	40	760	190
Future Volume (veh/h)	895	0	405	215	0	230	80	1030	20	40	760	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	0	1949	1870	0	1870	1864	1864	1864	1949	1949	1949
Adj Flow Rate, veh/h	994	0	450	239	0	256	89	1144	22	44	844	211
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2	2	0	2	2	2	2	2	2	2
Cap, veh/h	1281	0	0	297	0	0	167	1382	880	134	1364	1196
Arrive On Green	0.36	0.00	0.03	0.17	0.00	0.03	0.09	0.39	0.39	0.07	0.37	0.37
Sat Flow, veh/h	3600	994		1781	239		1776	3542	1580	1856	3702	1651
Grp Volume(v), veh/h	994	21.1		239	41.2		89	1144	22	44	844	211
Grp Sat Flow(s),veh/h/ln	1800	C		1781	D		1776	1771	1580	1856	1851	1651
Q Serve(g_s), s	16.2			8.5			3.2	19.2	0.4	1.5	12.3	2.7
Cycle Q Clear(g_c), s	16.2			8.5			3.2	19.2	0.4	1.5	12.3	2.7
Prop In Lane	1.00			1.00			1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1281			297			167	1382	880	134	1364	1196
V/C Ratio(X)	0.78			0.80			0.53	0.83	0.03	0.33	0.62	0.18
Avail Cap(c_a), veh/h	1529			297			269	1504	934	197	1404	1214
HCM Platoon Ratio	1.00			1.00			1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			1.00			1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9			26.4			28.5	18.1	6.6	29.1	17.0	2.9
Incr Delay (d2), s/veh	2.2			14.8			2.6	3.7	0.0	1.4	0.8	0.1
Initial Q Delay(d3),s/veh	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7			4.7			1.4	7.7	0.2	0.7	4.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1			41.2			31.1	21.9	6.6	30.5	17.8	2.9
LnGrp LOS	C			D			C	C	A	C	B	A
Approach Vol, veh/h								1255			1099	
Approach Delay, s/veh								22.2			15.5	
Approach LOS								C			B	
Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	8.8	29.7	15.0		10.2	28.3	27.5					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	5.0	26.0	9.0		8.0	23.0	26.0					
Max Q Clear Time (g_c+I1), s	3.5	21.2	10.5		5.2	14.3	18.2					
Green Ext Time (p_c), s	0.0	2.5	0.0		0.1	3.4	3.3					
Intersection Summary												
HCM 6th Ctrl Delay			21.1									
HCM 6th LOS			C									

8: Epping Road / NH 27 & McKay Drive/Meeting Place Drive 2030 Build - Access Management
 HCM 6th TWSC

Weekday PM

Intersection

Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↔			↕↔	
Traffic Vol, veh/h	0	0	105	0	0	5	0	785	35	0	1360	120
Future Vol, veh/h	0	0	105	0	0	5	0	785	35	0	1360	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	117	0	0	6	0	872	39	0	1511	133

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	-	-	822	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	6.94	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.32	-
Pot Cap-1 Maneuver	0	0	317	0
Stage 1	0	0	-	0
Stage 2	0	0	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	317	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.8	11.6	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	317	551	-
HCM Lane V/C Ratio	-	-	0.368	0.01	-
HCM Control Delay (s)	-	-	22.8	11.6	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.6	0	-

9: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookline Drive - Access Management
 HCM 6th TWSC

Weekday PM

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↔			↕↔	
Traffic Vol, veh/h	0	0	40	0	0	30	0	790	80	0	1465	0
Future Vol, veh/h	0	0	40	0	0	30	0	790	80	0	1465	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	44	0	0	33	0	878	89	0	1628	0

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	814	-	-	484	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	7.04	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	321	0	0	522	0	0
Stage 1	0	0	-	0	0	-	0	0
Stage 2	0	0	-	0	0	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	321	-	-	522	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18	12.4	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	321	522	-	-
HCM Lane V/C Ratio	-	-	0.138	0.064	-	-
HCM Control Delay (s)	-	-	18	12.4	-	-
HCM Lane LOS	-	-	C	B	-	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-	-

LANE SUMMARY

 Site: 101 [PM Industrial North Roundabout]

New Site
Roundabout

Lane Use and Performance													
	Demand Flows			Deg.	Lane	Average	Level of	95% Back of Queue		Lane	Lane	Cap.	Prob.
	Total	HV	Cap.	Satn	Util.	Delay	Service	Veh	Dist	Config	Length	Adj.	Block.
	veh/h	%	veh/h	v/c	%	sec			ft		ft	%	%
South: Epping Road (NH 27)													
Lane 1	470	3.0	1242	0.378	100	6.5	LOS A	2.1	53.2	Full	475	0.0	0.0
Lane 2 ^d	497	3.0	1312	0.378	100	6.3	LOS A	2.0	51.8	Full	475	0.0	0.0
Approach	967	3.0		0.378		6.4	LOS A	2.1	53.2				
East: Industrial Drive (North)													
Lane 1 ^d	329	3.0	594	0.553	100	16.1	LOS C	3.2	81.4	Full	400	0.0	0.0
Approach	329	3.0		0.553		16.1	LOS C	3.2	81.4				
North: Epping Road (NH 27)													
Lane 1	755	3.0	1185	0.637	100	11.4	LOS B	5.1	131.8	Full	525	0.0	0.0
Lane 2 ^d	800	3.0	1256	0.637	100	10.9	LOS B	5.1	129.6	Full	525	0.0	0.0
Approach	1556	3.0		0.637		11.2	LOS B	5.1	131.8				
West: Dearborn Park													
Lane 1 ^d	12	3.0	325	0.038	100	11.7	LOS B	0.1	2.9	Full	800	0.0	0.0
Approach	12	3.0		0.038		11.7	LOS B	0.1	2.9				
Intersection	2863	3.0		0.637		10.1	LOS B	5.1	131.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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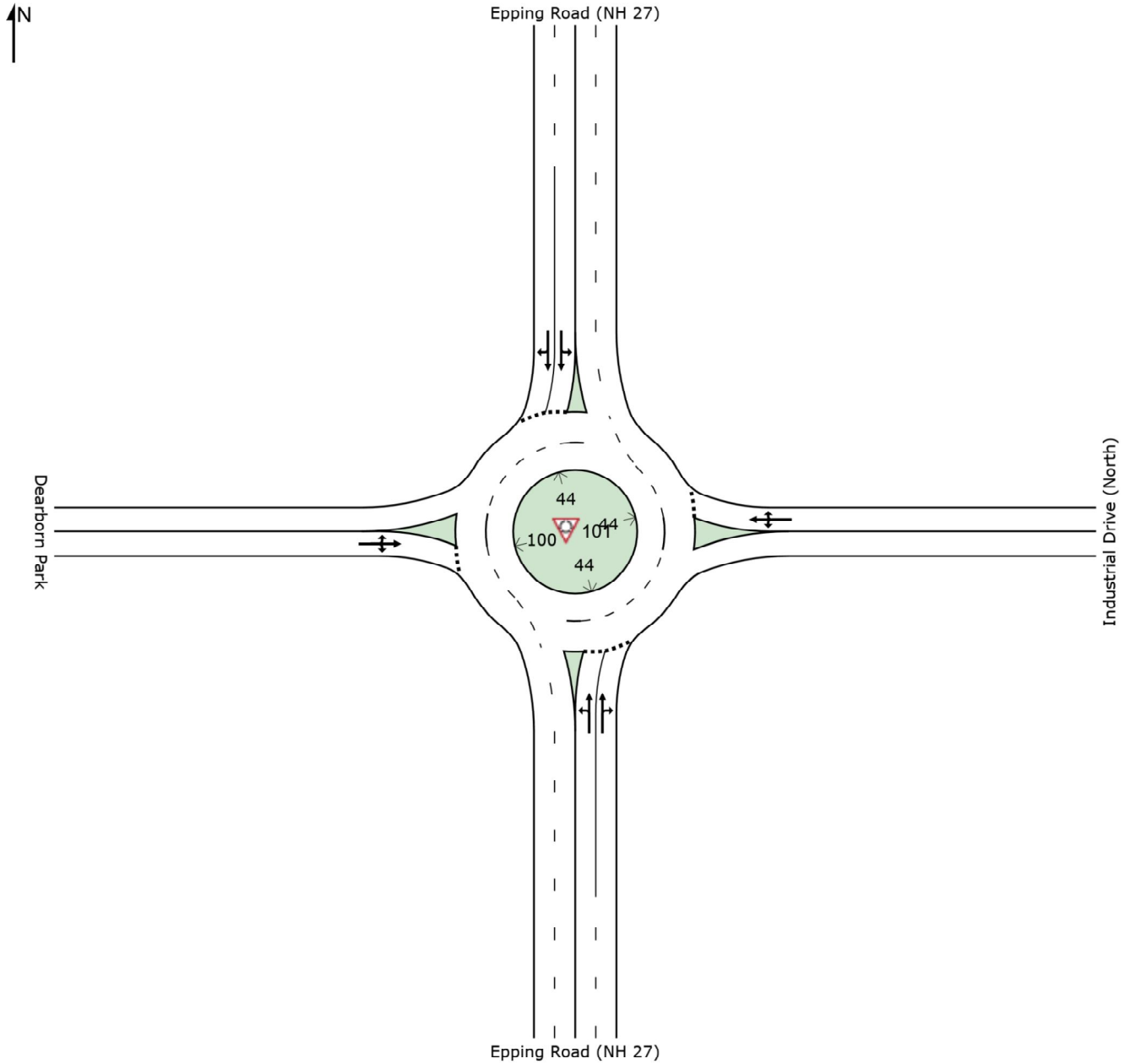
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SITE LAYOUT

 Site: 101 [PM Industrial North Roundabout]

New Site
Roundabout



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QUEUE DISTANCE (AVER)

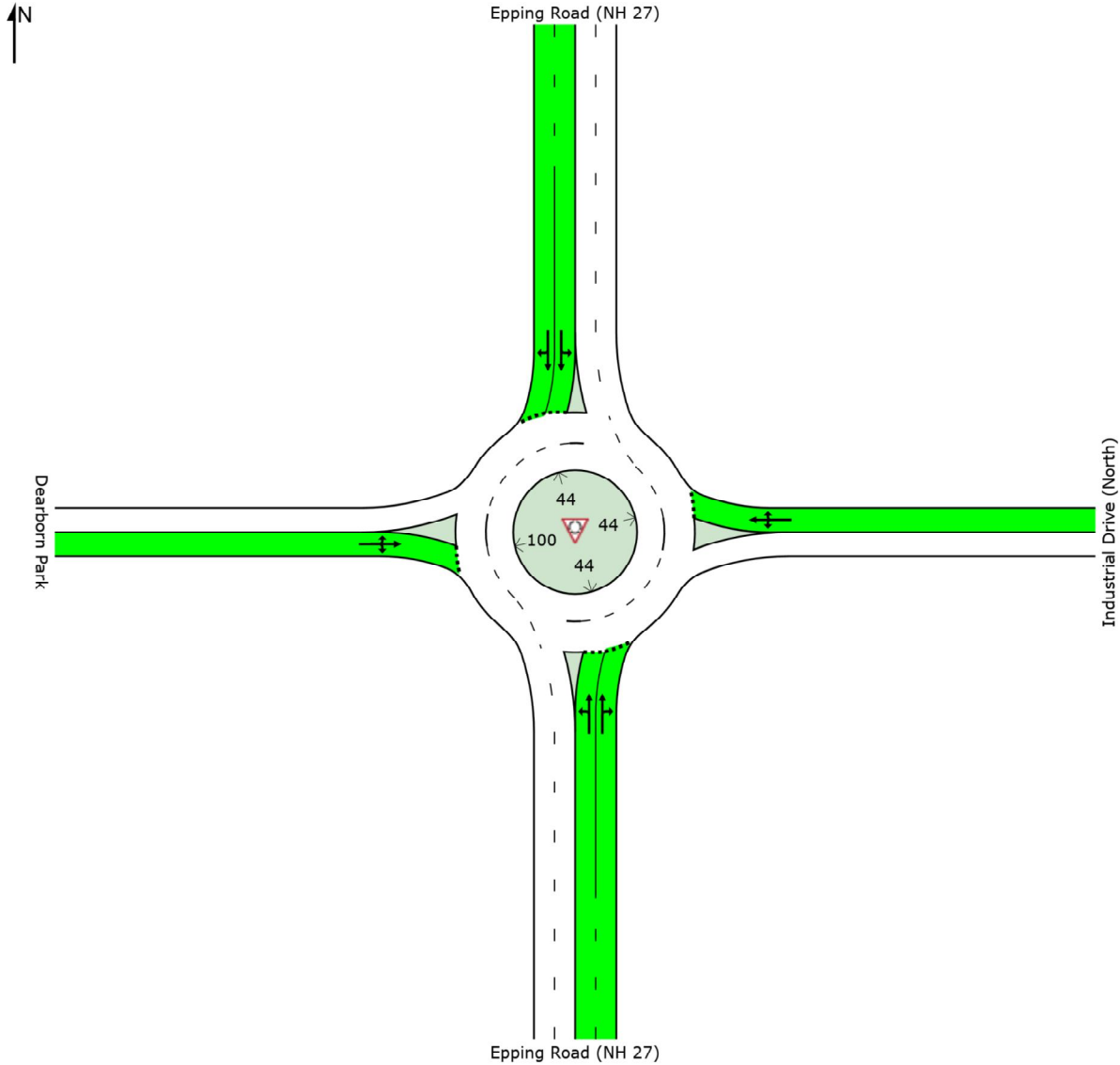
Average Back of Queue Distance per lane (feet)

 Site: 101 [PM Industrial North Roundabout]

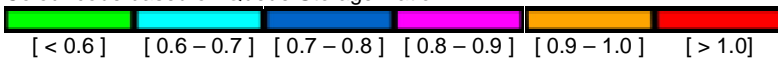
New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	21	33	53	1	53



Colour code based on Queue Storage Ratio



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LANE SUMMARY

 Site: 101 [PM Industrial South Roundabout]

New Site
Roundabout

Lane Use and Performance													
	Demand Flows			Deg.	Lane	Average	Level of	95% Back of Queue		Lane	Lane	Cap.	Prob.
	Total	HV	Cap.	Satn	Util.	Delay	Service	Veh	Dist	Config	Length	Adj.	Block.
	veh/h	%	veh/h	v/c	%	sec			ft		ft	%	%
South: Epping Road (NH 27)													
Lane 1	441	3.0	1269	0.347	100	6.1	LOS A	1.8	47.3	Full	650	0.0	0.0
Lane 2 ^d	465	3.0	1338	0.347	100	5.9	LOS A	1.8	46.1	Full	650	0.0	0.0
Approach	906	3.0		0.347		6.0	LOS A	1.8	47.3				
East: Industrial Drive (South)													
Lane 1 ^d	228	3.0	639	0.356	100	10.5	LOS B	1.5	39.0	Full	250	0.0	0.0
Approach	228	3.0		0.356		10.5	LOS B	1.5	39.0				
North: Epping Road (NH 27)													
Lane 1	740	3.0	1113	0.665	100	12.7	LOS B	6.6	169.1	Full	300	0.0	0.0
Lane 2 ^d	788	3.0	1186	0.665	100	12.2	LOS B	5.8	148.8	Full	300	0.0	0.0
Approach	1528	3.0		0.665		12.4	LOS B	6.6	169.1				
West: 104 Epping Road													
Lane 1 ^d	18	3.0	322	0.055	100	12.1	LOS B	0.2	4.2	Full	35	0.0	0.0
Approach	18	3.0		0.055		12.1	LOS B	0.2	4.2				
Intersection	2679	3.0		0.665		10.1	LOS B	6.6	169.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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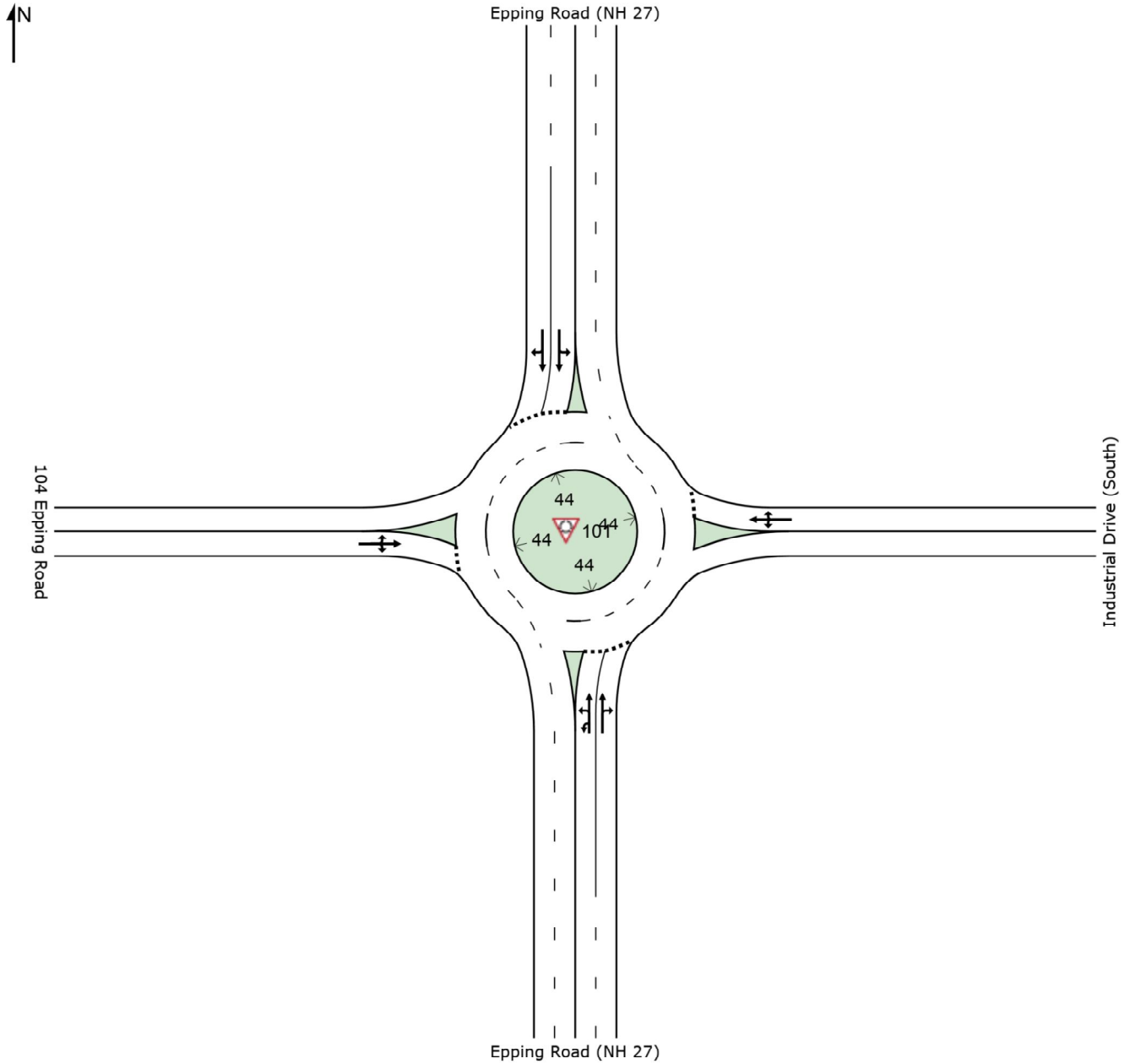
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SITE LAYOUT

 Site: 101 [PM Industrial South Roundabout]

New Site
Roundabout



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QUEUE DISTANCE (AVER)

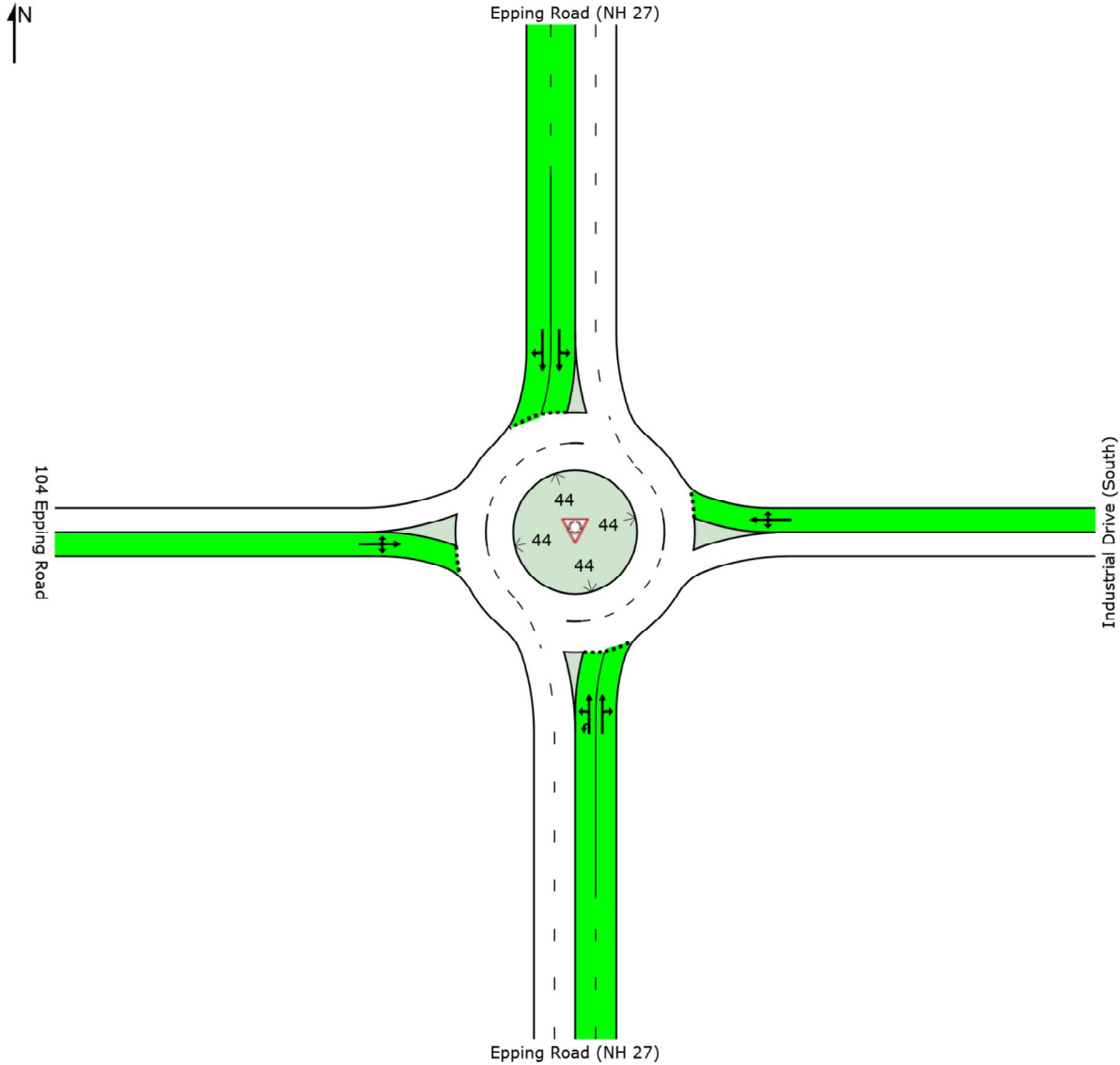
Average Back of Queue Distance per lane (feet)

 Site: 101 [PM Industrial South Roundabout]

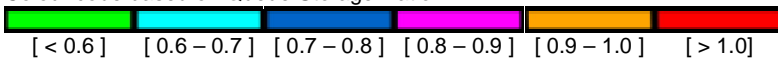
New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	19	16	68	2	68



Colour code based on Queue Storage Ratio



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LANE SUMMARY

 Site: 101 [Brentwood at Epping PM]

New Site
Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h										
South: Epping Road (NH 27)													
Lane 1	327	3.0	992	0.329	100	7.0	LOS A	1.5	38.7	Full	475	0.0	0.0
Lane 2 ^d	351	3.0	1066	0.329	100	6.7	LOS A	1.5	38.0	Full	475	0.0	0.0
Approach	678	3.0		0.329		6.9	LOS A	1.5	38.7				
North: Epping Road (NH 27)													
Lane 1 ^d	771	3.0	1251	0.616	100	10.5	LOS B	4.7	119.5	Full	550	0.0	0.0
Lane 2	563	3.0	1180	0.477	77 ⁶	8.2	LOS A	2.9	74.5	Full	550	0.0	0.0
Lane 3	344	3.0	1626	0.212	100	0.0	LOS A	0.0	0.0	Short	50	0.0	NA
Approach	1678	3.0		0.616		7.6	LOS A	4.7	119.5				
West: Brentwood Road (NH 111A)													
Lane 1 ^d	122	3.0	429	0.285	100	13.1	LOS B	1.0	25.7	Full	800	0.0	0.0
Lane 2	72	3.0	496	0.145	100	9.2	LOS A	0.5	12.2	Short	50	0.0	NA
Approach	194	3.0		0.285		11.7	LOS B	1.0	25.7				
Intersection	2550	3.0		0.616		7.7	LOS A	4.7	119.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

⁶ Lane under-utilisation due to downstream effects

^d Dominant lane on roundabout approach

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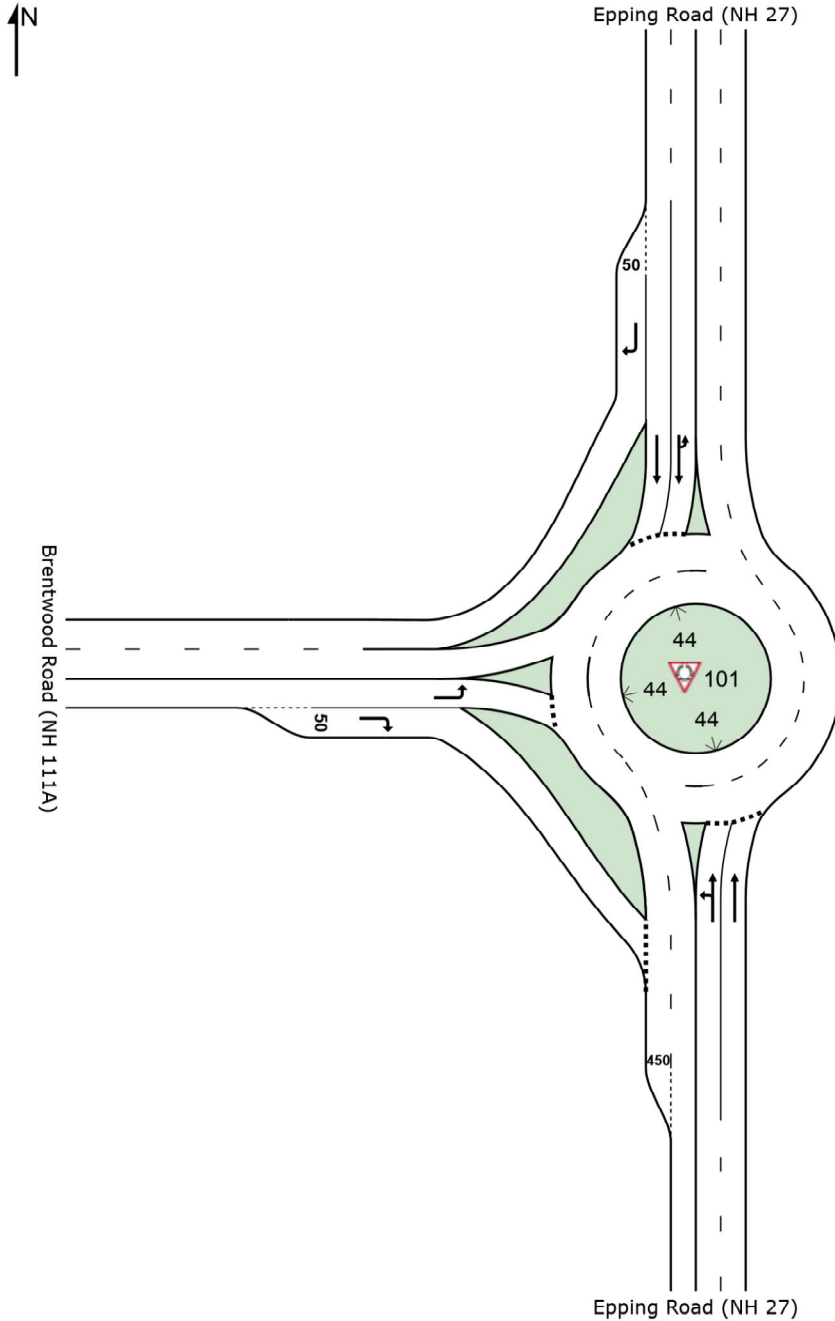
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Project: \\vhb\gbl\proj\Bedford\52676.00 Exeter Route 27 Corridor\tech\Traffic\SIDRA Roundabout\Brentwood NH 111A Roundabout\Brentwood (NH111A) Roundabout Analysis.sip7

SITE LAYOUT

 Site: 101 [Brentwood at Epping PM]

New Site
Roundabout



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Project: \\vhb\gbl\proj\Bedford\52676.00 Exeter Route 27 Corridor\tech\Traffic\SIDRA Roundabout\Brentwood NH 111A Roundabout\Brentwood (NH111A) Roundabout Analysis.sip7

QUEUE DISTANCE (AVER)

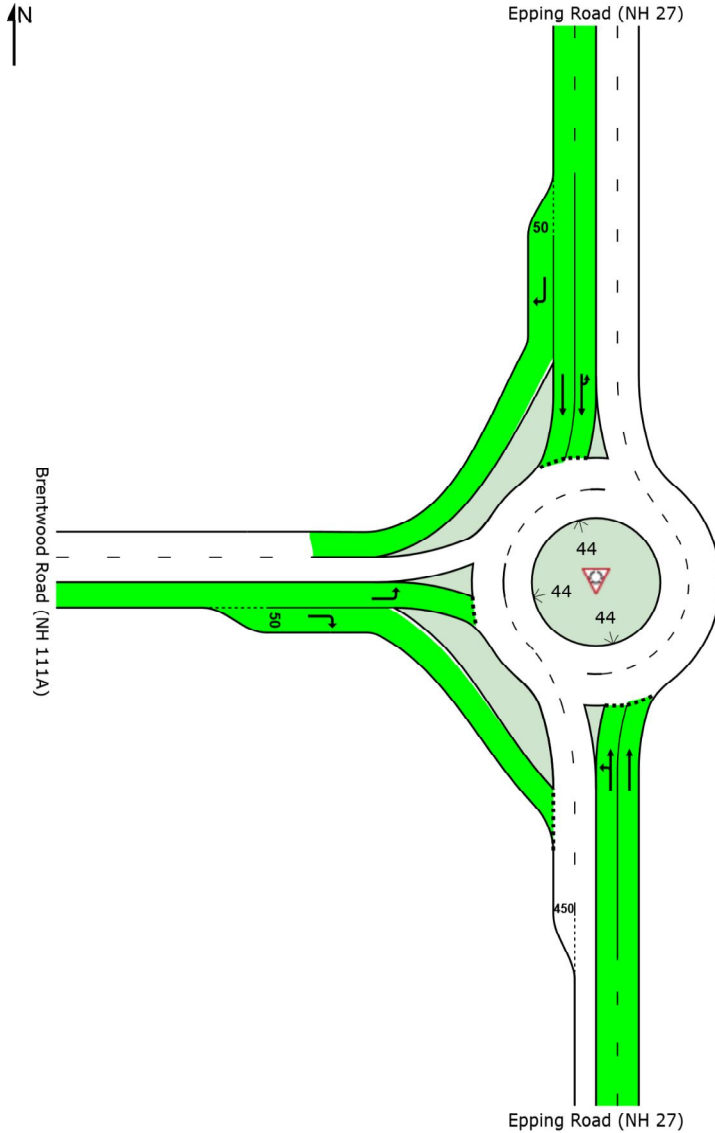
Average Back of Queue Distance per lane (feet)

 Site: 101 [Brentwood at Epping PM]

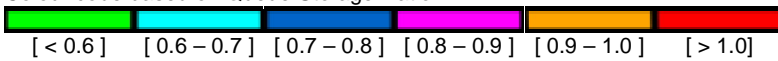
New Site
Roundabout

All Movement Classes

	South	North	West	Intersection
Queue Distance (Aver)	16	48	10	48



Colour code based on Queue Storage Ratio

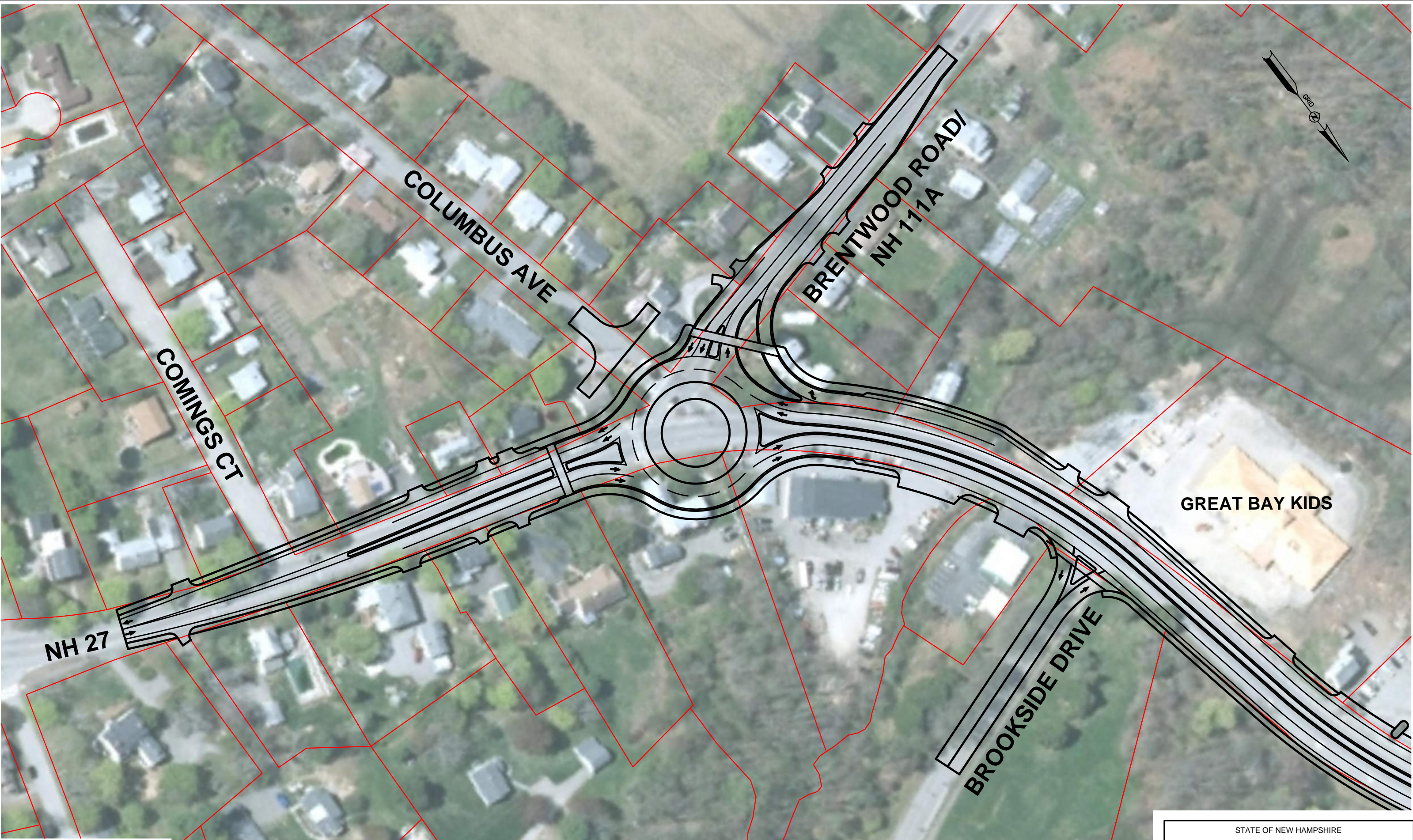


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Organisation: VANASSE HANGEN BRUSTLIN INC. | Processed: Monday, June 15, 2020 11:54:01 AM

Project: \\vhb\gbl\proj\Bedford\52676.00 Exeter Route 27 Corridor\tech\Traffic\SIDRA Roundabout\Brentwood NH 111A Roundabout\Brentwood

Conceptual Plan: Full Build-Out Conditions



NH 27

COMINGS CT

COLUMBUS AVE

BRENTWOOD ROAD/
NH 111A

BROOKSIDE DRIVE

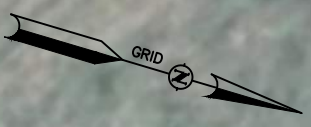
GREAT BAY KIDS

PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020




DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Sep-20	52676.00	52676_11X17_ROUND - CDPY		1	7

STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN					
FULL BUILD-OUT IMPROVEMENTS					
DATE PLOTTED: 29-Sep-20					
VHB PROJECT NO.: 52676.00					
DRAWING: 52676_11X17_ROUND - CDPY					
STATE PROJECT NO.:					
SHEET NO.: 1					
TOTAL SHEETS: 7					



McKAY DRIVE

**COLCORD
POND DRIVE**

**JAY'S CUTOFF
ROAD**

**SERVICE
CREDIT
UNION**

**GREAT BAY
KIDS**

NH 27

FIRST STUDENT

INDUSTRIAL DRIVE (SOUTH)

MEETING PL DRIVE

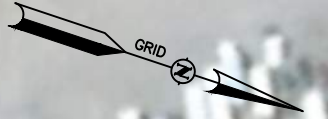
PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Sep-20	52676.00	52676_11X17_ROUND - CDPY		2	7

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN

**FULL BUILD-OUT
IMPROVEMENTS**



MICHAEL AVE

KINGS WAY AVE

EXETER MOTOR WORKS

NH 27

JAY'S CUTOFF ROAD

INDUSTRIAL DRIVE (NORTH)

FUNERAL HOME

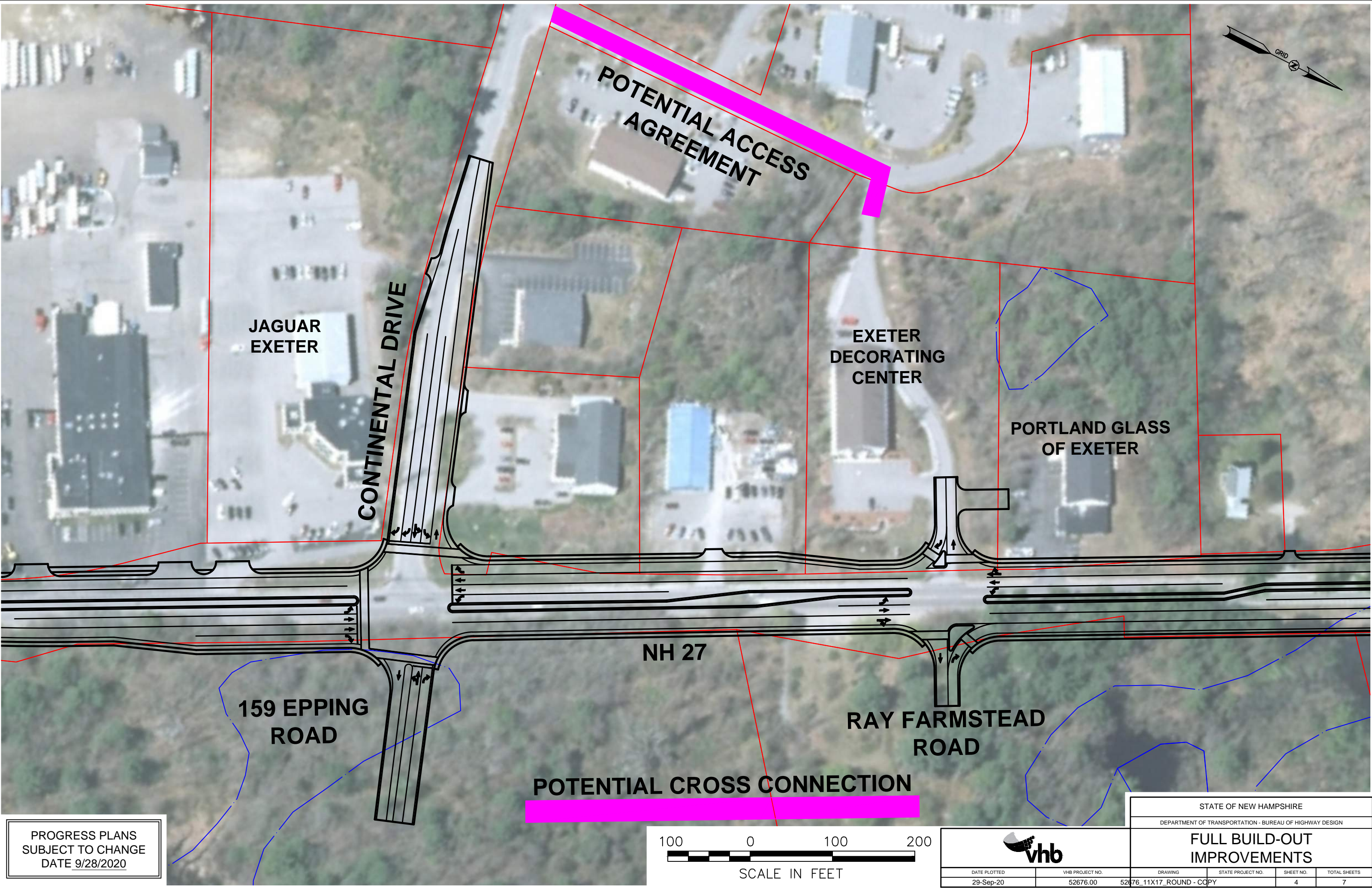
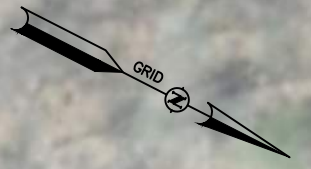
PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Sep-20	52676.00	52676_11X17_ROUND - COPY		3	7

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN

FULL BUILD-OUT IMPROVEMENTS



JAGUAR
EXETER

CONTINENTAL DRIVE

POTENTIAL ACCESS
AGREEMENT

EXETER
DECORATING
CENTER

PORTLAND GLASS
OF EXETER

NH 27

159 EPPING
ROAD

RAY FARMSTEAD
ROAD

POTENTIAL CROSS CONNECTION

PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



DATE PLOTTED	VHB PROJECT NO.
29-Sep-20	52676.00
DRAWING	STATE PROJECT NO.
52676_11X17_ROUND - CDPY	

STATE OF NEW HAMPSHIRE	
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN	
FULL BUILD-OUT IMPROVEMENTS	
SHEET NO.	TOTAL SHEETS
4	7

POTENTIAL FUTURE DEVELOPMENT DRIVE

APPROXIMATE URBAN COMPACT LIMIT
TOWN OF EXETER NHDOT

NH 27

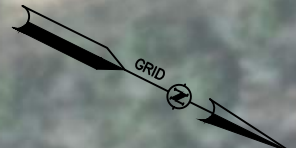
NH 101
EB OFF RAMP

CRONIN ROAD

MOBIL

NH 101
EB ON RAMP

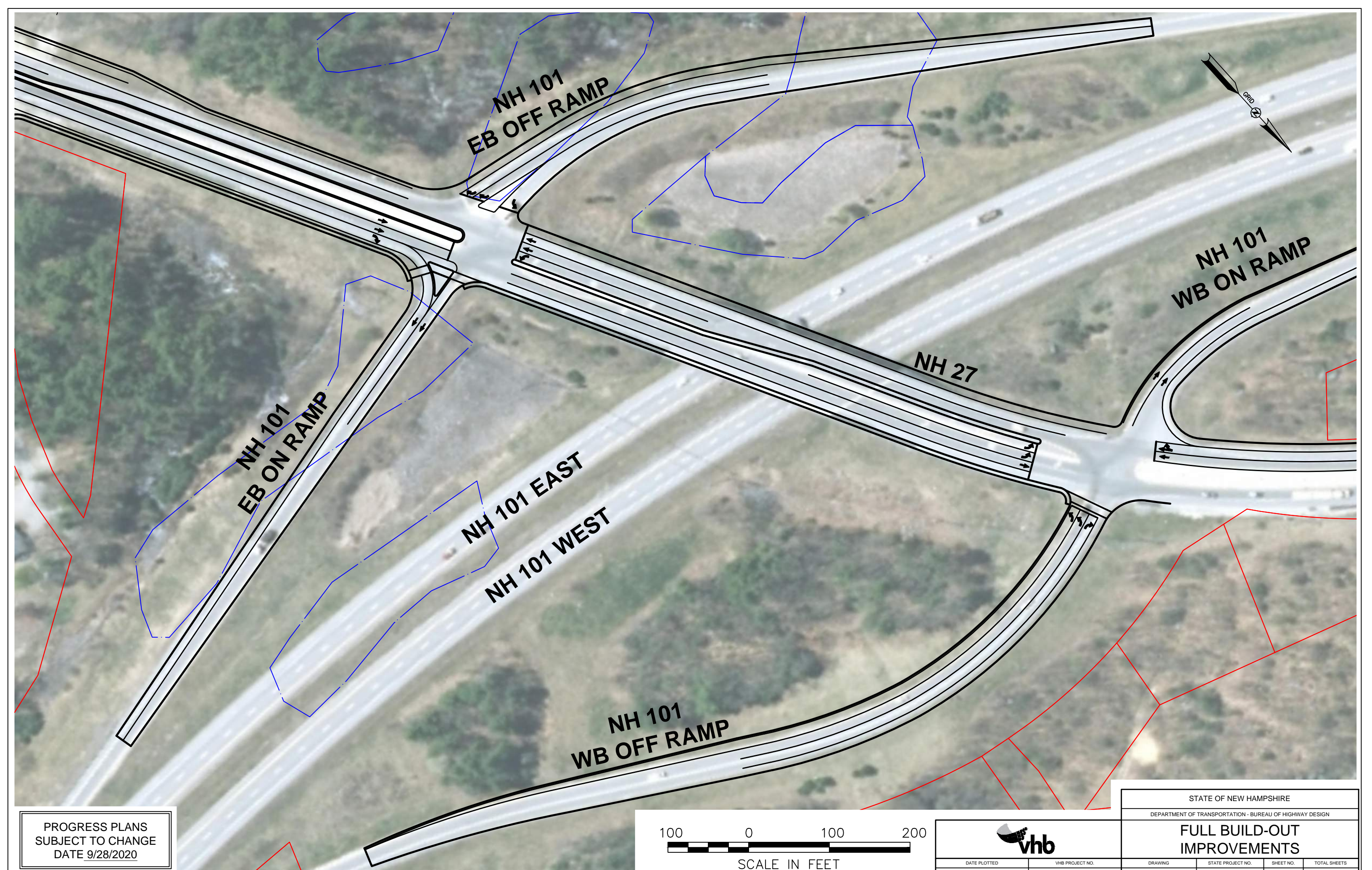
NH 101 EAST
NH 101 WEST



PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN					
FULL BUILD-OUT IMPROVEMENTS					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Sep-20	52676.00	52676_11X17_ROUND - CDPY		5	7



PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020




DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Sep-20	52676.00	52676_11X17_ROUND - COPY		6	7

STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN					
FULL BUILD-OUT IMPROVEMENTS					
DATE PLOTTED: 29-Sep-20					
VHB PROJECT NO.: 52676.00					
DRAWING: 52676_11X17_ROUND - COPY					
STATE PROJECT NO.:					
SHEET NO.: 6					
TOTAL SHEETS: 7					

NH 101 EAST

NH 101 WEST

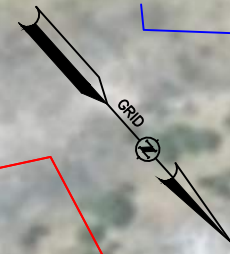
NH 101
WB ON RAMP

NH 27

NH 27

NH 101
WB OFF RAMP

WATSON ROAD



PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN					
FULL BUILD-OUT IMPROVEMENTS					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Sep-20	52676.00	52676_11X17_ROUND - COPY		7	7

Analysis Worksheets: Mid-Term Conditions

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	429	225	291	132	259
Average Queue (ft)	242	85	139	49	156
95th Queue (ft)	391	216	241	107	251
Link Distance (ft)	990			780	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		200	600		
Storage Blk Time (%)	14	0			
Queuing Penalty (veh)	14	0			

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	EB	NB	NB	SB	SB
Directions Served	L	R	R	T	R	L	T
Maximum Queue (ft)	125	808	250	264	173	212	80
Average Queue (ft)	19	514	193	76	60	104	9
95th Queue (ft)	90	1051	312	187	131	188	48
Link Distance (ft)		982		752			780
Upstream Blk Time (%)		12					
Queuing Penalty (veh)		0					
Storage Bay Dist (ft)	100		200		200	600	
Storage Blk Time (%)		85	63	1	0		
Queuing Penalty (veh)		156	116	2	0		

Intersection: 3: Epping Road / NH 27 & Gateway north/Mobil south

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	565	537	90	60	9	68	2	23
Average Queue (ft)	433	240	57	23	0	29	0	2
95th Queue (ft)	720	679	105	50	4	56	2	13
Link Distance (ft)	568	568	72		244		752	
Upstream Blk Time (%)	42	32	36					
Queuing Penalty (veh)	0	0	0					
Storage Bay Dist (ft)				150		150		150
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 4: Epping Road / NH 27 & Gateway south

Movement	EB
Directions Served	R
Maximum Queue (ft)	62
Average Queue (ft)	22
95th Queue (ft)	50
Link Distance (ft)	570
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Epping Road / NH 27 & Exeter Decorating/Ray Farmstead Rd

Movement	EB	WB	WB	SB
Directions Served	LTR	LT	R	L
Maximum Queue (ft)	32	32	41	26
Average Queue (ft)	5	5	9	3
95th Queue (ft)	23	24	34	18
Link Distance (ft)	88	145	145	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Epping Road / NH 27 & Continental Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	47	32	95	203	303	132
Average Queue (ft)	13	3	36	83	139	25
95th Queue (ft)	37	18	72	174	240	90
Link Distance (ft)	375			1377	594	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		175	225			275
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	

Intersection: 7: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	42	45	17	3	94	17
Average Queue (ft)	10	15	1	0	42	0
95th Queue (ft)	34	40	11	2	78	0
Link Distance (ft)	165	590		1060		1377
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)					0	
Queuing Penalty (veh)					1	

Intersection: 8: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	24	48	24	13	60
Average Queue (ft)	4	19	2	1	25
95th Queue (ft)	19	46	13	6	54
Link Distance (ft)	19	655		585	
Upstream Blk Time (%)	2				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)			100		100
Storage Blk Time (%)					0
Queuing Penalty (veh)					0

Intersection: 9: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	146	87	49	54	2	20	6
Average Queue (ft)	53	21	18	15	0	2	0
95th Queue (ft)	117	65	45	42	2	12	4
Link Distance (ft)	439		558		540		585
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		75		150		175	
Storage Blk Time (%)	7	0					
Queuing Penalty (veh)	3	0					

Intersection: 10: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	EB	WB	SB
Directions Served	L	TR	LTR	L
Maximum Queue (ft)	30	30	87	28
Average Queue (ft)	8	5	34	3
95th Queue (ft)	29	24	67	19
Link Distance (ft)		92	579	540
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	30			
Storage Blk Time (%)	4	1		
Queuing Penalty (veh)	0	0		

Intersection: 11: Brentwood Road / NH 111A & Epping Road / NH 27

Movement	NB	SB	NE	NE
Directions Served	LT	TR	L	R
Maximum Queue (ft)	159	100	86	80
Average Queue (ft)	31	43	59	44
95th Queue (ft)	105	91	79	79
Link Distance (ft)	388	469	19	19
Upstream Blk Time (%)			70	9
Queuing Penalty (veh)			116	14
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 12: Columbus Avenue & Brentwood Road / NH 111A

Movement	EB	WB	NB
Directions Served	TR	T	LR
Maximum Queue (ft)	269	81	197
Average Queue (ft)	86	49	70
95th Queue (ft)	235	75	196
Link Distance (ft)	502	19	325
Upstream Blk Time (%)	0	8	3
Queuing Penalty (veh)	0	10	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Epping Road / NH 27 & Beech Hill Road (E)

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: Epping Road / NH 27 & Watson Road

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 433

Timing Report, Sorted By Phase
 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

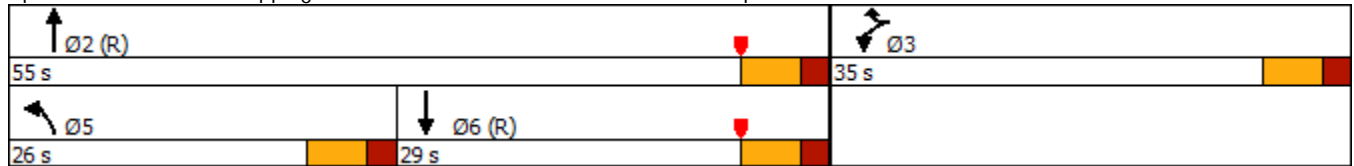
2030 Mid-Term Build
 Weekday AM

	↑	↘	↙	↓
Phase Number	2	3	5	6
Movement	NBT	WBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	C-Min	None	None	C-Min
Maximum Split (s)	55	35	26	29
Maximum Split (%)	61.1%	38.9%	28.9%	32.2%
Minimum Split (s)	16	11	11	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	5	5	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	No	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	41	6	41	67
End Time (s)	6	41	67	6
Yield/Force Off (s)	0	35	61	0
Yield/Force Off 170(s)	0	35	61	0
Local Start Time (s)	41	6	41	67
Local Yield (s)	0	35	61	0
Local Yield 170(s)	0	35	61	0

Intersection Summary


















Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 65
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Splits and Phases: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp



HCM 6th Signalized Intersection Summary
 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

2030 Mid-Term Build
 Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	490	0	100	245	170	0	0	300	30
Future Volume (veh/h)	0	0	0	490	0	100	245	170	0	0	300	30
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No			No	
Adj Sat Flow, veh/h/ln				1921	0	1921	1864	1864	0	0	1847	1847
Adj Flow Rate, veh/h				544	0	111	272	189	0	0	333	33
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				577	0	513	307	1028	0	0	515	51
Arrive On Green				0.32	0.00	0.32	0.29	0.92	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1829	0	1628	1776	1864	0	0	1653	164
Grp Volume(v), veh/h				544	0	111	272	189	0	0	0	366
Grp Sat Flow(s),veh/h/ln				1829	0	1628	1776	1864	0	0	0	1817
Q Serve(g_s), s				26.1	0.0	4.5	13.2	0.9	0.0	0.0	0.0	15.6
Cycle Q Clear(g_c), s				26.1	0.0	4.5	13.2	0.9	0.0	0.0	0.0	15.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.09
Lane Grp Cap(c), veh/h				577	0	513	307	1028	0	0	0	566
V/C Ratio(X)				0.94	0.00	0.22	0.89	0.18	0.00	0.00	0.00	0.65
Avail Cap(c_a), veh/h				589	0	524	395	1028	0	0	0	566
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				30.0	0.0	22.6	31.1	1.6	0.0	0.0	0.0	26.7
Incr Delay (d2), s/veh				23.6	0.0	0.2	16.1	0.4	0.0	0.0	0.0	5.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				14.4	0.0	1.7	6.0	0.4	0.0	0.0	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				53.6	0.0	22.8	47.2	2.0	0.0	0.0	0.0	32.3
LnGrp LOS				D	A	C	D	A	A	A	A	C
Approach Vol, veh/h					655			461			366	
Approach Delay, s/veh					48.4			28.7			32.3	
Approach LOS					D			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		55.6			21.6	34.0		34.4				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		49.0			20.0	23.0		29.0				
Max Q Clear Time (g_c+I1), s		2.9			15.2	17.6		28.1				
Green Ext Time (p_c), s		0.7			0.4	0.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				38.3								
HCM 6th LOS				D								

Timing Report, Sorted By Phase

2030 Mid-Term Build

2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp Weekday AM

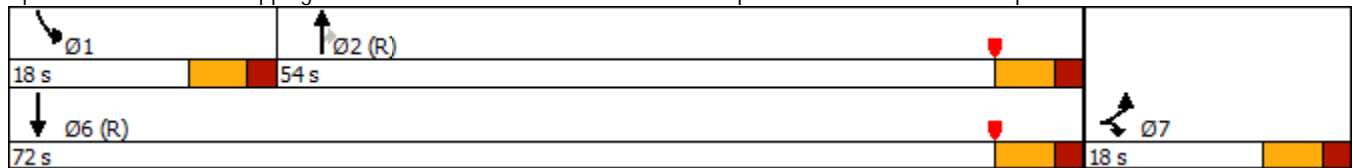


Phase Number	1	2	6	7
Movement	SBL	NBT	SBT	EBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize				
Recall Mode	None	C-Min	C-Min	None
Maximum Split (s)	18	54	72	18
Maximum Split (%)	20.0%	60.0%	80.0%	20.0%
Minimum Split (s)	11	16	16	11
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	10	10	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	No	Yes	Yes	No
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	19	37	19	1
End Time (s)	37	1	1	19
Yield/Force Off (s)	31	85	85	13
Yield/Force Off 170(s)	31	85	85	13
Local Start Time (s)	24	42	24	6
Local Yield (s)	36	0	0	18
Local Yield 170(s)	36	0	0	18

Intersection Summary

Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 45
 Offset: 85 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow



















Splits and Phases: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp



HCM 6th Signalized Intersection Summary

2030 Mid-Term Build

2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp Weekday AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	355	0	0	0	0	410	365	180	620	0
Future Volume (veh/h)	5	0	355	0	0	0	0	410	365	180	620	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1921	0	1921				0	1890	1890	1909	1909	0
Adj Flow Rate, veh/h	6	0	0				0	456	406	200	689	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	55	0					0	1308	1073	263	1682	0
Arrive On Green	0.03	0.00	0.00				0.00	0.69	0.67	0.29	1.00	0.00
Sat Flow, veh/h	1829	0	2865				0	1890	1602	1818	1909	0
Grp Volume(v), veh/h	6	0	0				0	456	406	200	689	0
Grp Sat Flow(s),veh/h/ln	1829	0	1432				0	1890	1602	1818	1909	0
Q Serve(g_s), s	0.3	0.0	0.0				0.0	8.8	10.1	9.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0				0.0	8.8	10.1	9.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	55	0					0	1308	1073	263	1682	0
V/C Ratio(X)	0.11	0.00					0.00	0.35	0.38	0.76	0.41	0.00
Avail Cap(c_a), veh/h	285	0					0	1308	1073	283	1682	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.49	0.49	0.00
Uniform Delay (d), s/veh	42.5	0.0	0.0				0.0	5.6	6.6	30.6	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0				0.0	0.7	1.0	5.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0				0.0	2.9	3.0	3.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	0.0	0.0				0.0	6.4	7.6	36.1	0.4	0.0
LnGrp LOS	D	A					A	A	A	D	A	A
Approach Vol, veh/h		6	A					862			889	
Approach Delay, s/veh		43.4						6.9			8.4	
Approach LOS		D						A			A	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.0	66.3		6.7		83.3						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	12.0	48.0		12.0		66.0						
Max Q Clear Time (g_c+I1), s	11.0	12.1		2.3		2.0						
Green Ext Time (p_c), s	0.1	3.4		0.0		3.1						

Intersection Summary

HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh	79.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↘		↗	↕	↗
Traffic Vol, veh/h	105	0	60	45	0	10	55	660	115	70	800	105
Future Vol, veh/h	105	0	60	45	0	10	55	660	115	70	800	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	150	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-3	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	117	0	67	50	0	11	61	733	128	78	889	117

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1970	2028	889	2056	2081	797	1006	0	0	861	0	0
Stage 1	1045	1045	-	919	919	-	-	-	-	-	-	-
Stage 2	925	983	-	1137	1162	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 47	57	342	~ 36	47	378	689	-	-	781	-	-
Stage 1	276	306	-	309	333	-	-	-	-	-	-	-
Stage 2	323	327	-	230	252	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 39	47	342	~ 25	39	378	689	-	-	781	-	-
Mov Cap-2 Maneuver	~ 39	47	-	~ 25	39	-	-	-	-	-	-	-
Stage 1	251	275	-	281	303	-	-	-	-	-	-	-
Stage 2	286	298	-	167	227	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s\$	716.4		763.9		0.7		0.7	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	689	-	-	39	342	30	781	-	-
HCM Lane V/C Ratio	0.089	-	-	2.991	0.195	2.037	0.1	-	-
HCM Control Delay (s)	10.7	-	-	\$ 1115.5	18.1\$	763.9	10.1	-	-
HCM Lane LOS	B	-	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	13.1	0.7	7.1	0.3	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	30	0	830	870	35
Future Vol, veh/h	0	30	0	830	870	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	-2	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	0	922	967	39

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	-	987	0	-	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-
Pot Cap-1 Maneuver	0	300	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	300	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	18.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
-----------------------	-----------	-----	-----

Capacity (veh/h)	-	300	-	-
HCM Lane V/C Ratio	-	0.111	-	-
HCM Control Delay (s)	-	18.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	0	0	5	5	0	10	0	820	5	5	895	5
Future Vol, veh/h	0	0	5	5	0	10	0	820	5	5	895	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	6	6	0	11	0	911	6	6	994	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1929	1926	997	1926	1926	914	1000	0	0	917	0	0
Stage 1	1009	1009	-	914	914	-	-	-	-	-	-	-
Stage 2	920	917	-	1012	1012	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	50	67	296	50	67	331	692	-	-	744	-	-
Stage 1	290	318	-	327	352	-	-	-	-	-	-	-
Stage 2	325	351	-	288	317	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	48	66	296	49	66	331	692	-	-	744	-	-
Mov Cap-2 Maneuver	48	66	-	49	66	-	-	-	-	-	-	-
Stage 1	290	315	-	327	352	-	-	-	-	-	-	-
Stage 2	314	351	-	280	314	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.4		40.1		0		0.1	
HCM LOS	C		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	692	-	-	296	49	331	744	-	-
HCM Lane V/C Ratio	-	-	-	0.019	0.113	0.034	0.007	-	-
HCM Control Delay (s)	0	-	-	17.4	87.7	16.3	9.9	-	-
HCM Lane LOS	A	-	-	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	0	-	-

Timing Report, Sorted By Phase
6: Epping Road / NH 27 & Continental Drive

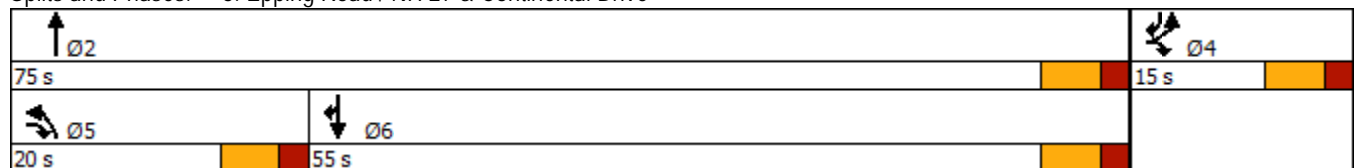
2030 Mid-Term Build
Weekday AM

	↑	↖	↗	↓
Phase Number	2	4	5	6
Movement	NBT	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	Min	None	None	Min
Maximum Split (s)	75	15	20	55
Maximum Split (%)	83.3%	16.7%	22.2%	61.1%
Minimum Split (s)	16	11	11	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	5	5	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	75	0	20
End Time (s)	75	0	20	75
Yield/Force Off (s)	69	84	14	69
Yield/Force Off 170(s)	69	84	14	69
Local Start Time (s)	70	55	70	0
Local Yield (s)	49	64	84	49
Local Yield 170(s)	49	64	84	49

Intersection Summary













Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 6: Epping Road / NH 27 & Continental Drive



HCM 6th Signalized Intersection Summary
6: Epping Road / NH 27 & Continental Drive

2030 Mid-Term Build
Weekday AM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	5	55	700	780	130
Future Volume (veh/h)	20	5	55	700	780	130
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1949	1949	1864	1864	1949	1949
Adj Flow Rate, veh/h	22	6	61	778	867	144
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	142	295	182	1397	1091	1051
Arrive On Green	0.08	0.08	0.10	0.75	0.56	0.56
Sat Flow, veh/h	1856	1651	1776	1864	1949	1651
Grp Volume(v), veh/h	22	6	61	778	867	144
Grp Sat Flow(s),veh/h/ln	1856	1651	1776	1864	1949	1651
Q Serve(g_s), s	0.5	0.1	1.5	8.2	16.2	1.6
Cycle Q Clear(g_c), s	0.5	0.1	1.5	8.2	16.2	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	142	295	182	1397	1091	1051
V/C Ratio(X)	0.16	0.02	0.34	0.56	0.79	0.14
Avail Cap(c_a), veh/h	445	565	619	2883	2164	1960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	15.5	19.2	2.5	8.0	3.3
Incr Delay (d2), s/veh	0.5	0.0	1.1	0.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.6	0.6	4.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	15.6	20.2	2.8	9.4	3.4
LnGrp LOS	C	B	C	A	A	A
Approach Vol, veh/h	28			839	1011	
Approach Delay, s/veh	19.3			4.1	8.5	
Approach LOS	B			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.4		7.5	8.7	29.7
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		69.0		9.0	14.0	49.0
Max Q Clear Time (g_c+I1), s		10.2		2.5	3.5	18.2
Green Ext Time (p_c), s		4.1		0.0	0.1	5.5
Intersection Summary						
HCM 6th Ctrl Delay			6.7			
HCM 6th LOS			A			

HCM 6th TWSC
 7: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

2030 Mid-Term Build
 Weekday AM

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↑	↑		↑	↑	
Traffic Vol, veh/h	5	0	5	0	0	25	5	730	10	180	610	5
Future Vol, veh/h	5	0	5	0	0	25	5	730	10	180	610	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	6	0	0	28	6	811	11	200	678	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1924	1915	681	1913	1913	817	684	0	0	822	0	0
Stage 1	1081	1081	-	829	829	-	-	-	-	-	-	-
Stage 2	843	834	-	1084	1084	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	6.92	6.32	6.12	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	51	68	450	57	75	385	909	-	-	807	-	-
Stage 1	264	294	-	382	403	-	-	-	-	-	-	-
Stage 2	358	383	-	279	311	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	38	51	450	45	56	385	909	-	-	807	-	-
Mov Cap-2 Maneuver	38	51	-	45	56	-	-	-	-	-	-	-
Stage 1	262	221	-	379	400	-	-	-	-	-	-	-
Stage 2	330	380	-	207	234	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	65.9		15.1		0.1		2.5	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	909	-	-	70	385	807	-	-
HCM Lane V/C Ratio	0.006	-	-	0.159	0.072	0.248	-	-
HCM Control Delay (s)	9	-	-	65.9	15.1	10.9	-	-
HCM Lane LOS	A	-	-	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.2	1	-	-

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	0	10	0	15	5	740	55	65	515	5
Future Vol, veh/h	5	0	0	10	0	15	5	740	55	65	515	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	2	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	11	0	17	6	822	61	72	572	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1592	1614	575	1584	1587	853	578	0	0	883	0	0
Stage 1	719	719	-	865	865	-	-	-	-	-	-	-
Stage 2	873	895	-	719	722	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	79	95	509	80	99	350	996	-	-	766	-	-
Stage 1	403	416	-	332	353	-	-	-	-	-	-	-
Stage 2	329	342	-	403	414	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	70	86	509	74	89	350	996	-	-	766	-	-
Mov Cap-2 Maneuver	70	86	-	74	89	-	-	-	-	-	-	-
Stage 1	401	377	-	330	351	-	-	-	-	-	-	-
Stage 2	311	340	-	365	375	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	60.8	37	0.1	1.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	996	-	-	70	140	766	-
HCM Lane V/C Ratio	0.006	-	-	0.079	0.198	0.094	-
HCM Control Delay (s)	8.6	-	-	60.8	37	10.2	-
HCM Lane LOS	A	-	-	F	E	B	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.7	0.3	-

Intersection												
Int Delay, s/veh	11.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↕		↖	↗		↖	↗	
Traffic Vol, veh/h	90	0	35	10	0	10	50	700	10	5	455	65
Future Vol, veh/h	90	0	35	10	0	10	50	700	10	5	455	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	75	-	-	-	150	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	0	39	11	0	11	56	778	11	6	506	72

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1455	1455	542	1470	1486	784	578	0	0	789	0	0
Stage 1	554	554	-	896	896	-	-	-	-	-	-	-
Stage 2	901	901	-	574	590	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	130	540	105	124	393	996	-	-	831	-	-
Stage 1	517	514	-	335	359	-	-	-	-	-	-	-
Stage 2	333	357	-	504	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	100	122	540	93	116	393	996	-	-	831	-	-
Mov Cap-2 Maneuver	100	122	-	93	116	-	-	-	-	-	-	-
Stage 1	488	510	-	316	339	-	-	-	-	-	-	-
Stage 2	305	337	-	464	492	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	124.6		33.1		0.6		0.1	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	996	-	-	100	540	150	831	-	-
HCM Lane V/C Ratio	0.056	-	-	1	0.072	0.148	0.007	-	-
HCM Control Delay (s)	8.8	-	-	168.3	12.2	33.1	9.4	-	-
HCM Lane LOS	A	-	-	F	B	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	6.1	0.2	0.5	0	-	-

Intersection

Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↗		↖	↗	
Traffic Vol, veh/h	10	0	5	20	0	40	0	720	10	5	455	0
Future Vol, veh/h	10	0	5	20	0	40	0	720	10	5	455	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	30	-	-	-	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	6	22	0	44	0	800	11	6	506	0

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1346	1329	506	1327	1324	806	-	0	0	811	0	0
Stage 1	518	518	-	806	806	-	-	-	-	-	-	-
Stage 2	828	811	-	521	518	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	128	155	566	123	145	373	0	-	-	815	-	-
Stage 1	541	533	-	359	377	-	0	-	-	-	-	-
Stage 2	365	393	-	523	518	-	0	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	112	154	566	121	144	373	-	-	-	815	-	-
Mov Cap-2 Maneuver	228	272	-	246	262	-	-	-	-	-	-	-
Stage 1	541	529	-	359	377	-	-	-	-	-	-	-
Stage 2	322	393	-	514	514	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	18.2		19.3			0			0.1		
HCM LOS	C		C								

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	228	566	318	815	-	-
HCM Lane V/C Ratio	-	-	0.049	0.01	0.21	0.007	-	-
HCM Control Delay (s)	-	-	21.6	11.4	19.3	9.4	-	-
HCM Lane LOS	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0.8	0	-	-

Intersection

Int Delay, s/veh	5.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	35	460	410	90	195	70
Future Vol, veh/h	35	460	410	90	195	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Stop	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	511	456	100	217	78

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	456	0	-	0	1095
Stage 1	-	-	-	-	506
Stage 2	-	-	-	-	589
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1105	-	-	-	236
Stage 1	-	-	-	-	606
Stage 2	-	-	-	-	554
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1105	-	-	-	224
Mov Cap-2 Maneuver	-	-	-	-	360
Stage 1	-	-	-	-	576
Stage 2	-	-	-	-	554

Approach	NB	SB	NE
HCM Control Delay, s	0.6	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	SBR
Capacity (veh/h)	360	566	1105	-	-	-
HCM Lane V/C Ratio	0.602	0.137	0.035	-	-	-
HCM Control Delay (s)	29	12.4	8.4	0	-	-
HCM Lane LOS	D	B	A	A	-	-
HCM 95th %tile Q(veh)	3.8	0.5	0.1	-	-	-

Intersection

Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	260	5	0	125	0	70
Future Vol, veh/h	260	5	0	125	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	289	6	0	139	0	78

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	431 292
Stage 1	-	-	-	-	292 -
Stage 2	-	-	-	-	139 -
Critical Hdwy	-	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	0	-	581 747
Stage 1	-	-	0	-	758 -
Stage 2	-	-	0	-	888 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	581 747
Mov Cap-2 Maneuver	-	-	-	-	581 -
Stage 1	-	-	-	-	758 -
Stage 2	-	-	-	-	888 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	747	-	-	-
HCM Lane V/C Ratio	0.104	-	-	-
HCM Control Delay (s)	10.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-2	-	3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	7.02
Critical Hdwy Stg 1	-	-	-	-	6.02
Critical Hdwy Stg 2	-	-	-	-	6.02
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	5.82
Critical Hdwy Stg 1	-	-	-	-	4.82
Critical Hdwy Stg 2	-	-	-	-	4.82
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	5	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	8.12	7.52	6.72	6.72	6.12	6.02
Critical Hdwy Stg 1	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	893	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			0		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	380	225	346	238	246
Average Queue (ft)	177	131	173	90	149
95th Queue (ft)	305	225	289	194	239
Link Distance (ft)	990			780	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		200	600		
Storage Blk Time (%)	4	1	0	0	
Queuing Penalty (veh)	11	5	0	0	

Intersection: 2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp

Movement	EB	EB	EB	NB	NB	SB	SB
Directions Served	L	R	R	T	R	L	T
Maximum Queue (ft)	163	268	212	296	223	164	146
Average Queue (ft)	39	78	55	111	71	76	18
95th Queue (ft)	120	240	188	227	162	137	86
Link Distance (ft)		982		764			780
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150		200		200	200	
Storage Blk Time (%)	0	13	3	1	0	0	0
Queuing Penalty (veh)	0	25	5	5	0	0	0

Intersection: 3: Epping Road / NH 27 & Gateway North/Mobil South

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	1272	1277	104	62	12	68	7	37
Average Queue (ft)	1201	993	70	23	1	23	0	2
95th Queue (ft)	1417	1787	110	48	6	58	2	22
Link Distance (ft)	1253	1253	72		232		764	
Upstream Blk Time (%)	76	66	76					
Queuing Penalty (veh)	0	0	0					
Storage Bay Dist (ft)				150		150		150
Storage Blk Time (%)						0		
Queuing Penalty (veh)						1		

Intersection: 4: Epping Road / NH 27 & Gateway South

Movement	EB
Directions Served	R
Maximum Queue (ft)	60
Average Queue (ft)	23
95th Queue (ft)	51
Link Distance (ft)	1143
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Epping Road / NH 27 & Exeter Decorating/Ray Farmstead Rd

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	TR	L
Maximum Queue (ft)	36	35	44	22	2	33
Average Queue (ft)	7	5	11	2	0	7
95th Queue (ft)	27	24	36	15	2	25
Link Distance (ft)	109	290			589	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200	100		100
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Epping Road / NH 27 & Continental Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	167	108	46	325	320	68
Average Queue (ft)	78	38	13	182	160	3
95th Queue (ft)	140	83	40	292	270	37
Link Distance (ft)	375			1375	589	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		175	225			275
Storage Blk Time (%)	0			3	1	
Queuing Penalty (veh)	0			0	0	

Intersection: 7: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	44	231	25	1	47
Average Queue (ft)	10	90	2	0	15
95th Queue (ft)	35	183	14	1	38
Link Distance (ft)	148	589		1061	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		100
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Epping Road / NH 27 & Business Driveway/Industrial Dr (S)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	30	183	29	45
Average Queue (ft)	11	82	2	11
95th Queue (ft)	32	152	16	39
Link Distance (ft)	19	655		
Upstream Blk Time (%)	6			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 9: Epping Road / NH 27 & McKay Drive/Meeting Place Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	236	95	63	48	1	26	23
Average Queue (ft)	80	24	18	15	0	6	1
95th Queue (ft)	217	82	49	39	1	22	11
Link Distance (ft)	436		558		535		585
Upstream Blk Time (%)	0						
Queuing Penalty (veh)	0						
Storage Bay Dist (ft)		75		150		175	
Storage Blk Time (%)	22	0					
Queuing Penalty (veh)	8	0					

Intersection: 10: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	TR	LTR
Maximum Queue (ft)	47	47	57	11	223
Average Queue (ft)	16	15	22	0	38
95th Queue (ft)	43	40	51	6	129
Link Distance (ft)		94	579	478	535
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	30				
Storage Blk Time (%)	9	3			
Queuing Penalty (veh)	2	1			

Intersection: 11: Brentwood Road / NH 111A & Epping Road / NH 27

Movement	NB	SB	NE	NE
Directions Served	LT	TR	L	R
Maximum Queue (ft)	212	111	68	77
Average Queue (ft)	64	27	42	45
95th Queue (ft)	154	84	65	78
Link Distance (ft)	392	478	9	9
Upstream Blk Time (%)			44	8
Queuing Penalty (veh)			51	9
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 12: Columbus Avenue & Brentwood Road / NH 111A

Movement	EB	WB	NB
Directions Served	TR	T	LR
Maximum Queue (ft)	194	76	160
Average Queue (ft)	50	37	44
95th Queue (ft)	140	63	134
Link Distance (ft)	508	9	316
Upstream Blk Time (%)		3	1
Queuing Penalty (veh)		10	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Epping Road / NH 27 & Watson Road

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 24: Epping Road / NH 27 & Beech Hill Road (E)

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 25: Beech Hill Road Ext/Redberry Road & Epping Road / NH 27

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 134

1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 Timing Report, Sorted By Phase

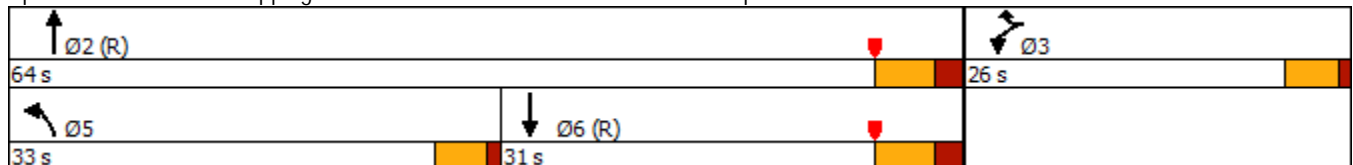
2030 Interim Build
 Weekday PM

	↑	↘	↙	↓
Phase Number	2	3	5	6
Movement	NBT	WBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	C-Min	None	None	C-Min
Maximum Split (s)	64	26	33	31
Maximum Split (%)	71.1%	28.9%	36.7%	34.4%
Minimum Split (s)	16	9.5	9.5	16
Yellow Time (s)	4	3.5	3.5	4
All-Red Time (s)	2	1	1	2
Minimum Initial (s)	10	5	5	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	No	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	32	6	32	65
End Time (s)	6	32	65	6
Yield/Force Off (s)	0	27.5	60.5	0
Yield/Force Off 170(s)	0	27.5	60.5	0
Local Start Time (s)	32	6	32	65
Local Yield (s)	0	27.5	60.5	0
Local Yield 170(s)	0	27.5	60.5	0

Intersection Summary


















Cycle Length 90
 Control Type Actuated-Coordinated
 Natural Cycle 55
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Splits and Phases: 1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp



1: Epping Road / NH 27 & NH 101 Exit 9 WB Off-Ramp
 HCM 6th Signalized Intersection Summary

2030 Interim Build
 Weekday PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	335	0	240	400	340	0	0	330	5
Future Volume (veh/h)	0	0	0	335	0	240	400	340	0	0	330	5
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No			No	
Adj Sat Flow, veh/h/ln				1921	0	1921	1864	1864	0	0	1847	1847
Adj Flow Rate, veh/h				372	0	267	444	378	0	0	367	6
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Cap, veh/h				447	0	398	509	1274	0	0	669	11
Arrive On Green				0.24	0.00	0.24	0.38	0.91	0.00	0.00	0.37	0.35
Sat Flow, veh/h				1829	0	1628	1776	1864	0	0	1812	30
Grp Volume(v), veh/h				372	0	267	444	378	0	0	0	373
Grp Sat Flow(s),veh/h/ln				1829	0	1628	1776	1864	0	0	0	1841
Q Serve(g_s), s				17.4	0.0	13.3	20.9	2.3	0.0	0.0	0.0	14.4
Cycle Q Clear(g_c), s				17.4	0.0	13.3	20.9	2.3	0.0	0.0	0.0	14.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.02
Lane Grp Cap(c), veh/h				447	0	398	509	1274	0	0	0	680
V/C Ratio(X)				0.83	0.00	0.67	0.87	0.30	0.00	0.00	0.00	0.55
Avail Cap(c_a), veh/h				478	0	425	602	1274	0	0	0	680
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.69	0.69	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				32.2	0.0	30.7	26.3	1.4	0.0	0.0	0.0	22.5
Incr Delay (d2), s/veh				11.3	0.0	3.8	8.6	0.4	0.0	0.0	0.0	3.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.7	0.0	5.4	8.6	0.7	0.0	0.0	0.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				43.6	0.0	34.5	34.9	1.8	0.0	0.0	0.0	25.7
LnGrp LOS				D	A	C	C	A	A	A	A	C
Approach Vol, veh/h					639			822			373	
Approach Delay, s/veh					39.8			19.7			25.7	
Approach LOS					D			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.5			28.3	37.2		24.5				
Change Period (Y+Rc), s		6.0			4.5	6.0		4.5				
Max Green Setting (Gmax), s		58.0			28.5	25.0		21.5				
Max Q Clear Time (g_c+I1), s		4.3			22.9	16.4		19.4				
Green Ext Time (p_c), s		1.4			0.9	0.9		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				27.9								
HCM 6th LOS				C								

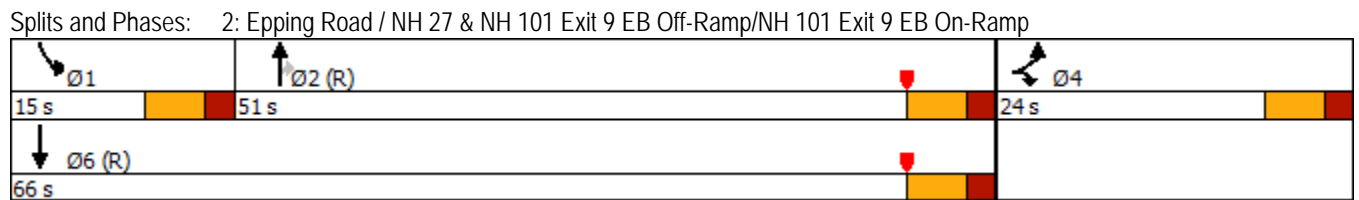
2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp Interim Build
 Timing Report, Sorted By Phase Weekday PM

	↙	↑	↘	↓
Phase Number	1	2	4	6
Movement	SBL	NBT	EBL	SBT
Lead/Lag	Lead	Lag		
Lead-Lag Optimize				
Recall Mode	None	C-Min	None	C-Min
Maximum Split (s)	15	51	24	66
Maximum Split (%)	16.7%	56.7%	26.7%	73.3%
Minimum Split (s)	11	16	11	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	10	5	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	5	20	71	5
End Time (s)	20	71	5	71
Yield/Force Off (s)	14	65	89	65
Yield/Force Off 170(s)	14	65	89	65
Local Start Time (s)	30	45	6	30
Local Yield (s)	39	0	24	0
Local Yield 170(s)	39	0	24	0

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60

Offset: 65 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow



2: Epping Road / NH 27 & NH 101 Exit 9 EB Off-Ramp/NH 101 Exit 9 EB On-Ramp Interim Build
 HCM 6th Signalized Intersection Summary Weekday PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	0	315	0	0	0	0	710	485	125	540	0
Future Volume (veh/h)	30	0	315	0	0	0	0	710	485	125	540	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1921	0	1921				0	1890	1890	1909	1909	0
Adj Flow Rate, veh/h	33	0	0				0	789	539	139	600	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	57	0					0	1326	1123	203	1638	0
Arrive On Green	0.03	0.00	0.00				0.00	0.70	0.70	0.22	1.00	0.00
Sat Flow, veh/h	1829	0	2865				0	1890	1602	1818	1909	0
Grp Volume(v), veh/h	33	0	0				0	789	539	139	600	0
Grp Sat Flow(s),veh/h/ln	1829	0	1432				0	1890	1602	1818	1909	0
Q Serve(g_s), s	1.6	0.0	0.0				0.0	19.3	13.6	6.3	0.0	0.0
Cycle Q Clear(g_c), s	1.6	0.0	0.0				0.0	19.3	13.6	6.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	57	0					0	1326	1123	203	1638	0
V/C Ratio(X)	0.58	0.00					0.00	0.60	0.48	0.68	0.37	0.00
Avail Cap(c_a), veh/h	366	0					0	1326	1123	222	1638	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	43.0	0.0	0.0				0.0	6.9	6.0	33.5	0.0	0.0
Incr Delay (d2), s/veh	8.9	0.0	0.0				0.0	2.0	1.5	5.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0				0.0	6.3	3.8	2.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	0.0	0.0				0.0	8.9	7.5	38.6	0.4	0.0
LnGrp LOS	D	A					A	A	A	D	A	A
Approach Vol, veh/h		33	A					1328			739	
Approach Delay, s/veh		51.9						8.3			7.6	
Approach LOS		D						A			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.1	67.1		8.8				81.2				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	9.0	45.0		18.0				60.0				
Max Q Clear Time (g_c+I1), s	8.3	21.3		3.6				2.0				
Green Ext Time (p_c), s	0.0	8.1		0.0				4.3				

Intersection Summary

HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

3: Epping Road / NH 27 & Gateway North/Mobil South
 HCM 6th TWSC

2030 Interim Build
 Weekday PM

Intersection

Int Delay, s/veh	162.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↘		↗	↕	↗
Traffic Vol, veh/h	125	0	70	30	0	10	65	1060	115	30	770	125
Future Vol, veh/h	125	0	70	30	0	10	65	1060	115	30	770	125
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	150	-	-	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-3	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	139	0	78	33	0	11	72	1178	128	33	856	139

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	2314	2372	856	2417	2447	1242	995	0	0	1306	0	0
Stage 1	922	922	-	1386	1386	-	-	-	-	-	-	-
Stage 2	1392	1450	-	1031	1061	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 27	35	357	~ 20	27	206	695	-	-	530	-	-
Stage 1	324	349	-	164	195	-	-	-	-	-	-	-
Stage 2	176	196	-	266	283	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 22	29	357	~ 14	23	206	695	-	-	530	-	-
Mov Cap-2 Maneuver	~ 22	29	-	~ 14	23	-	-	-	-	-	-	-
Stage 1	290	327	-	147	175	-	-	-	-	-	-	-
Stage 2	149	176	-	195	265	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s \$	1763	\$ 1111.3	0.6	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	695	-	-	22	357	18	530	-	-
HCM Lane V/C Ratio	0.104	-	-	6.313	0.218	2.469	0.063	-	-
HCM Control Delay (s)	10.8	-	-	\$ 2740.3	17.9	1111.3	12.2	-	-
HCM Lane LOS	B	-	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	17.6	0.8	6.1	0.2	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	35	0	1280	760	40
Future Vol, veh/h	0	35	0	1280	760	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	-2	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	0	1422	844	44

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	-	866	0	-	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-
Pot Cap-1 Maneuver	0	353	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	353	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	16.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
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Capacity (veh/h)	-	353	-	-
HCM Lane V/C Ratio	-	0.11	-	-
HCM Control Delay (s)	-	16.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	5	0	0	5	0	10	5	1225	5	10	860	0
Future Vol, veh/h	5	0	0	5	0	10	5	1225	5	10	860	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	200	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	6	0	11	6	1361	6	11	956	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2360	2357	956	2354	2354	1364	956	0	0	1367	0	0
Stage 1	978	978	-	1376	1376	-	-	-	-	-	-	-
Stage 2	1382	1379	-	978	978	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	25	36	313	25	36	181	719	-	-	502	-	-
Stage 1	301	329	-	179	213	-	-	-	-	-	-	-
Stage 2	178	212	-	301	329	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	23	35	313	24	35	181	719	-	-	502	-	-
Mov Cap-2 Maneuver	23	35	-	24	35	-	-	-	-	-	-	-
Stage 1	299	322	-	178	211	-	-	-	-	-	-	-
Stage 2	166	210	-	294	322	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	205.7	82.6	0	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	719	-	-	23	24	181	502	-	-
HCM Lane V/C Ratio	0.008	-	-	0.242	0.231	0.061	0.022	-	-
HCM Control Delay (s)	10	-	-	205.7	195.5	26.2	12.3	-	-
HCM Lane LOS	B	-	-	F	F	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.7	0.2	0.1	-	-

6: Epping Road / NH 27 & Continental Drive
 Timing Report, Sorted By Phase

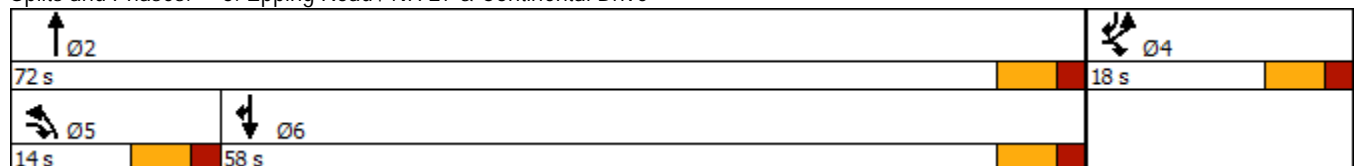
2030 Interim Build
 Weekday PM

	↑	↖	↗	↓
Phase Number	2	4	5	6
Movement	NBT	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize				
Recall Mode	Min	None	None	Min
Maximum Split (s)	72	18	14	58
Maximum Split (%)	80.0%	20.0%	15.6%	64.4%
Minimum Split (s)	16	14	14	16
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	8	8	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)				
Flash Dont Walk (s)				
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	72	0	14
End Time (s)	72	0	14	72
Yield/Force Off (s)	66	84	8	66
Yield/Force Off 170(s)	66	84	8	66
Local Start Time (s)	76	58	76	0
Local Yield (s)	52	70	84	52
Local Yield 170(s)	52	70	84	52

Intersection Summary













Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 6: Epping Road / NH 27 & Continental Drive



6: Epping Road / NH 27 & Continental Drive
 HCM 6th Signalized Intersection Summary

2030 Interim Build
 Weekday PM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	70	15	970	760	35
Future Volume (veh/h)	150	70	15	970	760	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1949	1949	1864	1864	1949	1949
Adj Flow Rate, veh/h	167	78	17	1078	844	39
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	338	417	125	1248	1023	1167
Arrive On Green	0.18	0.18	0.07	0.67	0.52	0.52
Sat Flow, veh/h	1856	1651	1776	1864	1949	1651
Grp Volume(v), veh/h	167	78	17	1078	844	39
Grp Sat Flow(s),veh/h/ln	1856	1651	1776	1864	1949	1651
Q Serve(g_s), s	4.4	2.0	0.5	24.4	19.6	0.4
Cycle Q Clear(g_c), s	4.4	2.0	0.5	24.4	19.6	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	338	417	125	1248	1023	1167
V/C Ratio(X)	0.49	0.19	0.14	0.86	0.83	0.03
Avail Cap(c_a), veh/h	483	546	330	2354	1954	1956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	15.8	23.5	7.0	10.7	2.4
Incr Delay (d2), s/veh	1.1	0.2	0.5	1.9	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.2	5.9	6.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.9	16.0	24.0	8.9	12.5	2.4
LnGrp LOS	C	B	C	A	B	A
Approach Vol, veh/h	245			1095	883	
Approach Delay, s/veh	19.4			9.1	12.0	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		40.1		13.8	7.8	32.3
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		66.0		12.0	8.0	52.0
Max Q Clear Time (g_c+I1), s		26.4		6.4	2.5	21.6
Green Ext Time (p_c), s		7.4		0.5	0.0	4.7
Intersection Summary						
HCM 6th Ctrl Delay			11.4			
HCM 6th LOS			B			

7: Epping Road / NH 27 & Dearborn Park/Industrial Drive (N)
 HCM 6th TWSC

2030 Interim Build
 Weekday PM

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	5	15	0	185	5	730	10	40	805	5
Future Vol, veh/h	5	0	5	15	0	185	5	730	10	40	805	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	6	17	0	206	6	811	11	44	894	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1917	1819	897	1817	1817	817	900	0	0	822	0	0
Stage 1	985	985	-	829	829	-	-	-	-	-	-	-
Stage 2	932	834	-	988	988	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	6.92	6.32	6.12	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	5.92	5.32	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	51	78	339	67	86	385	755	-	-	807	-	-
Stage 1	299	326	-	382	403	-	-	-	-	-	-	-
Stage 2	320	383	-	314	343	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	23	73	339	63	81	385	755	-	-	807	-	-
Mov Cap-2 Maneuver	23	73	-	63	81	-	-	-	-	-	-	-
Stage 1	297	308	-	379	400	-	-	-	-	-	-	-
Stage 2	148	380	-	292	324	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	115.7		54.6		0.1		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	755	-	-	43	278	807	-
HCM Lane V/C Ratio	0.007	-	-	0.258	0.799	0.055	-
HCM Control Delay (s)	9.8	-	-	115.7	54.6	9.7	-
HCM Lane LOS	A	-	-	F	F	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	6.3	0.2	-

Intersection												
Int Delay, s/veh	39.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	10	80	5	90	5	620	25	25	770	25
Future Vol, veh/h	5	0	10	80	5	90	5	620	25	25	770	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	2	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	11	89	6	100	6	689	28	28	856	28

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1694	1655	870	1647	1655	703	884	0	0	717	0	0
Stage 1	926	926	-	715	715	-	-	-	-	-	-	-
Stage 2	768	729	-	932	940	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	67	89	342	~ 72	89	429	765	-	-	884	-	-
Stage 1	306	330	-	405	418	-	-	-	-	-	-	-
Stage 2	378	411	-	304	325	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	47	85	342	~ 68	85	429	765	-	-	884	-	-
Mov Cap-2 Maneuver	47	85	-	~ 68	85	-	-	-	-	-	-	-
Stage 1	304	319	-	402	415	-	-	-	-	-	-	-
Stage 2	284	408	-	285	315	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	43.1	\$ 371.7	0.1	0.3
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	765	-	-	111 121	884	-	-
HCM Lane V/C Ratio	0.007	-	-	0.15 1.607	0.031	-	-
HCM Control Delay (s)	9.7	-	-	43.1\$ 371.7	9.2	-	-
HCM Lane LOS	A	-	-	E F	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5 14.3	0.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh	11.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↘		↗	↘	
Traffic Vol, veh/h	70	0	35	15	0	5	30	565	15	20	775	90
Future Vol, veh/h	70	0	35	15	0	5	30	565	15	20	775	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	75	-	-	-	150	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	0	39	17	0	6	33	628	17	22	861	100

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1661	1666	911	1678	1708	637	961	0	0	645	0	0
Stage 1	955	955	-	703	703	-	-	-	-	-	-	-
Stage 2	706	711	-	975	1005	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 77	97	332	75	91	477	716	-	-	940	-	-
Stage 1	310	337	-	428	440	-	-	-	-	-	-	-
Stage 2	427	436	-	303	319	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 72	90	332	63	85	477	716	-	-	940	-	-
Mov Cap-2 Maneuver	~ 72	90	-	63	85	-	-	-	-	-	-	-
Stage 1	296	329	-	408	420	-	-	-	-	-	-	-
Stage 2	403	416	-	261	312	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	159.1		66.5		0.5		0.2	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	716	-	-	72	332	80	940	-	-
HCM Lane V/C Ratio	0.047	-	-	1.08	0.117	0.278	0.024	-	-
HCM Control Delay (s)	10.3	-	-	230	17.3	66.5	8.9	-	-
HCM Lane LOS	B	-	-	F	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.8	0.4	1	0.1	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

10: Epping Road / NH 27 & Great Bay Kids Co. Driveway/Brookside Drive 2030 Interim Build
 HCM 6th TWSC Weekday PM

Intersection

Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	0	20	10	0	20	0	570	40	40	760	0
Future Vol, veh/h	20	0	20	10	0	20	0	570	40	40	760	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	30	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	1	-	-	1	-	-	-1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	0	22	11	0	22	0	633	44	44	844	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1598	1609	844	1598	1587	655	-	0	0	677	0	0
Stage 1	932	932	-	655	655	-	-	-	-	-	-	-
Stage 2	666	677	-	943	932	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.32	6.72	6.32	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	86	105	363	78	99	458	0	-	-	915	-	-
Stage 1	320	345	-	439	446	-	0	-	-	-	-	-
Stage 2	449	452	-	299	328	-	0	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	76	95	363	68	90	458	-	-	-	915	-	-
Mov Cap-2 Maneuver	193	204	-	176	202	-	-	-	-	-	-	-
Stage 1	320	314	-	439	446	-	-	-	-	-	-	-
Stage 2	427	452	-	255	298	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	20.9		18.5		0			0.5		
HCM LOS	C		C							

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	193	363	299	915	-	-
HCM Lane V/C Ratio	-	-	0.115	0.061	0.111	0.049	-	-
HCM Control Delay (s)	-	-	26.1	15.6	18.5	9.1	-	-
HCM Lane LOS	-	-	D	C	C	A	-	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.4	0.2	-	-

Intersection

Int Delay, s/veh	3.3					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	100	410	550	245	100	65
Future Vol, veh/h	100	410	550	245	100	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Stop	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	456	611	272	111	72

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	611	0	-	0	1425 747
Stage 1	-	-	-	-	747 -
Stage 2	-	-	-	-	678 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	968	-	-	-	149 413
Stage 1	-	-	-	-	468 -
Stage 2	-	-	-	-	504 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	968	-	-	-	126 413
Mov Cap-2 Maneuver	-	-	-	-	259 -
Stage 1	-	-	-	-	396 -
Stage 2	-	-	-	-	504 -

Approach	NB	SB	NE
HCM Control Delay, s	1.8	0	23.7
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	NBL	NBT	SBT	SBR
Capacity (veh/h)	259	413	968	-	-	-
HCM Lane V/C Ratio	0.429	0.175	0.115	-	-	-
HCM Control Delay (s)	29	15.6	9.2	0	-	-
HCM Lane LOS	D	C	A	A	-	-
HCM 95th %tile Q(veh)	2	0.6	0.4	-	-	-

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	160	5	0	345	0	70
Future Vol, veh/h	160	5	0	345	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	6	0	383	0	78

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - 564 181
Stage 1	-	-	- - 181 -
Stage 2	-	-	- - 383 -
Critical Hdwy	-	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	-	-	- - 3.518 3.318
Pot Cap-1 Maneuver	-	-	0 - 487 862
Stage 1	-	-	0 - 850 -
Stage 2	-	-	0 - 689 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 487 862
Mov Cap-2 Maneuver	-	-	- - 487 -
Stage 1	-	-	- - 850 -
Stage 2	-	-	- - 689 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	862	-	-	-
HCM Lane V/C Ratio	0.09	-	-	-
HCM Control Delay (s)	9.6	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	-2	-	-3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	5.82
Critical Hdwy Stg 1	-	-	-	-	4.82
Critical Hdwy Stg 2	-	-	-	-	4.82
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-2	-	3	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	1	0	0	1	1
Stage 1	-	-	-	1	-
Stage 2	-	-	-	0	-
Critical Hdwy	4.12	-	-	7.02	6.52
Critical Hdwy Stg 1	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	6.02	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	1022	1084
Stage 1	-	-	-	1022	-
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	1022	-
Stage 1	-	-	-	1022	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
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HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
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Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection

Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	-1	-	-	5	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1	0	0	1	0	0	2	2	1	2	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	1	1	-	1	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	8.12	7.52	6.72	6.72	6.12	6.02
Critical Hdwy Stg 1	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.12	6.52	-	5.72	5.12	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1020	893	1083	1020	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1020	893	-	1020	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1022	895	-	1022	895	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0		0		0		0
HCM LOS					A		A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1622	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Conceptual Plan: Mid-Term Conditions



PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020




DATE PLOTTED	VHB PROJECT NO.
28-Sep-20	52676.00

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN				
MID-TERM IMPROVEMENTS				
DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS	
52676_11X17_3LANE		1	5	



GREAT BAY KIDS

MCKAY DRIVE

NH 27

MEETING PL DRIVE

FIRST STUDENT

COLCORD POND DRIVE

JAY'S CUTOFF ROAD

SERVICE CREDIT UNION

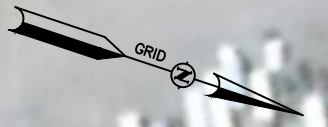
INDUSTRIAL DRIVE (SOUTH)

PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



DATE PLOTTED	VHB PROJECT NO.
28-Sep-20	52676.00

STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN				
MID-TERM IMPROVEMENTS				
DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS	
52676_11X17_3LANE		2	5	



MICHAEL AVE

EXETER MOTOR WORKS

KINGS WAY AVE

NH 27

JAY'S CUTOFF ROAD

INDUSTRIAL DRIVE (NORTH)

FUNERAL HOME

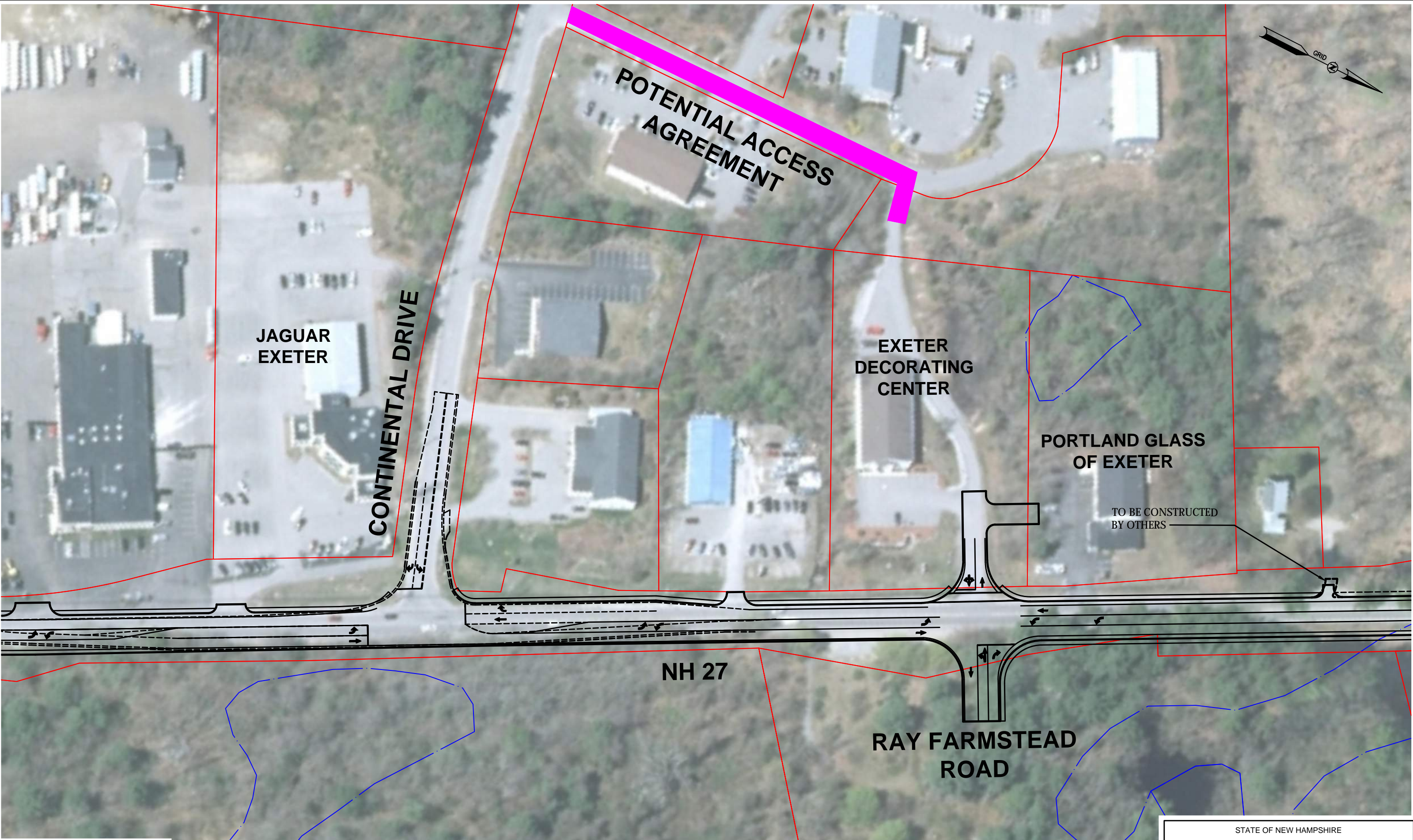
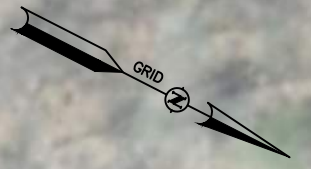
PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
28-Sep-20	52676.00	52676_11X17_3LANE		3	5

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN

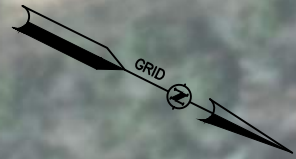
MID-TERM IMPROVEMENTS



PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN					
MID-TERM IMPROVEMENTS					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
28-Sep-20	52676.00	52676_11X17_3LANE		4	5



POTENTIAL FUTURE DEVELOPMENT DRIVE

APPROXIMATE URBAN COMPACT LIMIT

TOWN OF EXETER ← NHDOT →

TO BE CONSTRUCTED BY OTHERS

STRIPING TO BE MODIFIED BY OTHERS

NH 27

**NH 101
EB OFF RAMP**

CRONIN ROAD

MOBIL

**NH 101
EB ON RAMP**

NH 101 EAST

NH 101 WEST

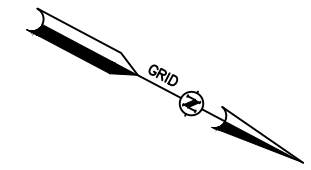
PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



DATE PLOTTED	VHB PROJECT NO.
28-Sep-20	52676.00

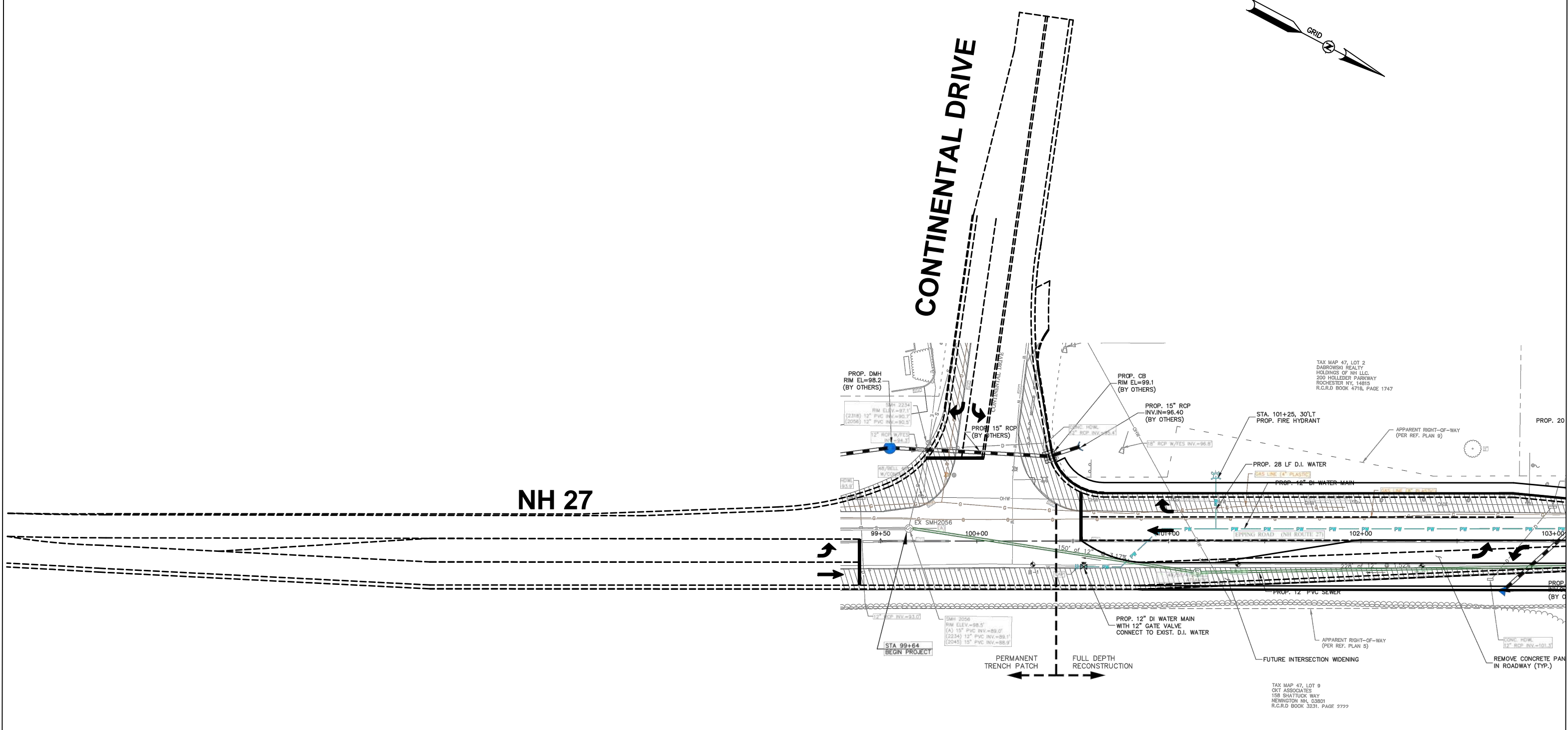
STATE OF NEW HAMPSHIRE				
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN				
MID-TERM IMPROVEMENTS				
DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS	
52676_11X17_3LANE		5	5	

Conceptual Plan: Near-Term Conditions



CONTINENTAL DRIVE

NH 27

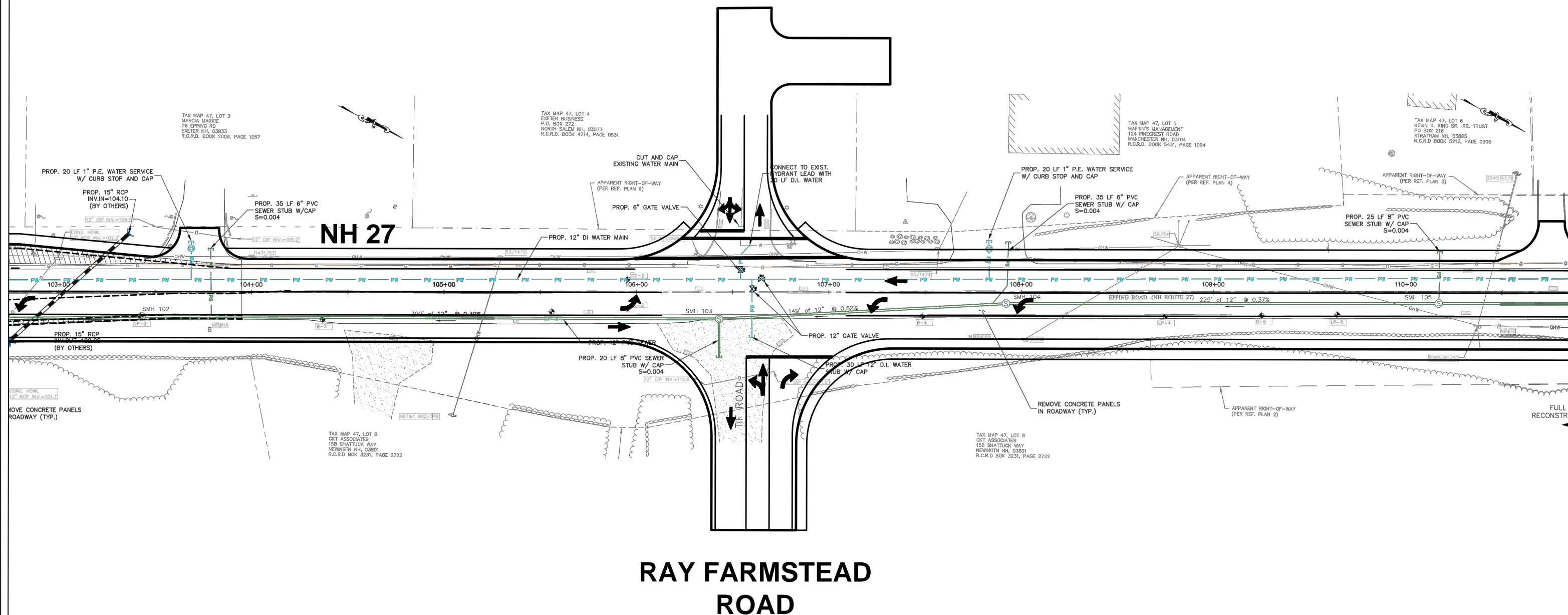
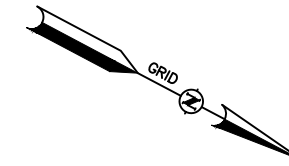


PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



		STATE OF NEW HAMPSHIRE			
		DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
28-Sep-20	52676.00			1	3

STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN					
NEAR-TERM IMPROVEMENTS					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
28-Sep-20	52676.00			1	3



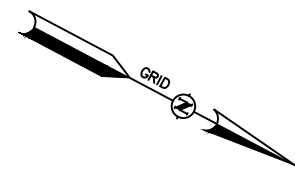
RAY FARMSTEAD ROAD

**PROGRESS PLANS
 SUBJECT TO CHANGE
 DATE 9/28/2020**

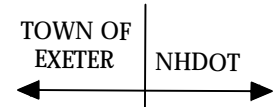


DATE PLOTTED	VHB PROJECT NO.
28-Sep-20	52676.00

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
NEAR-TERM IMPROVEMENTS			
DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
		2	3



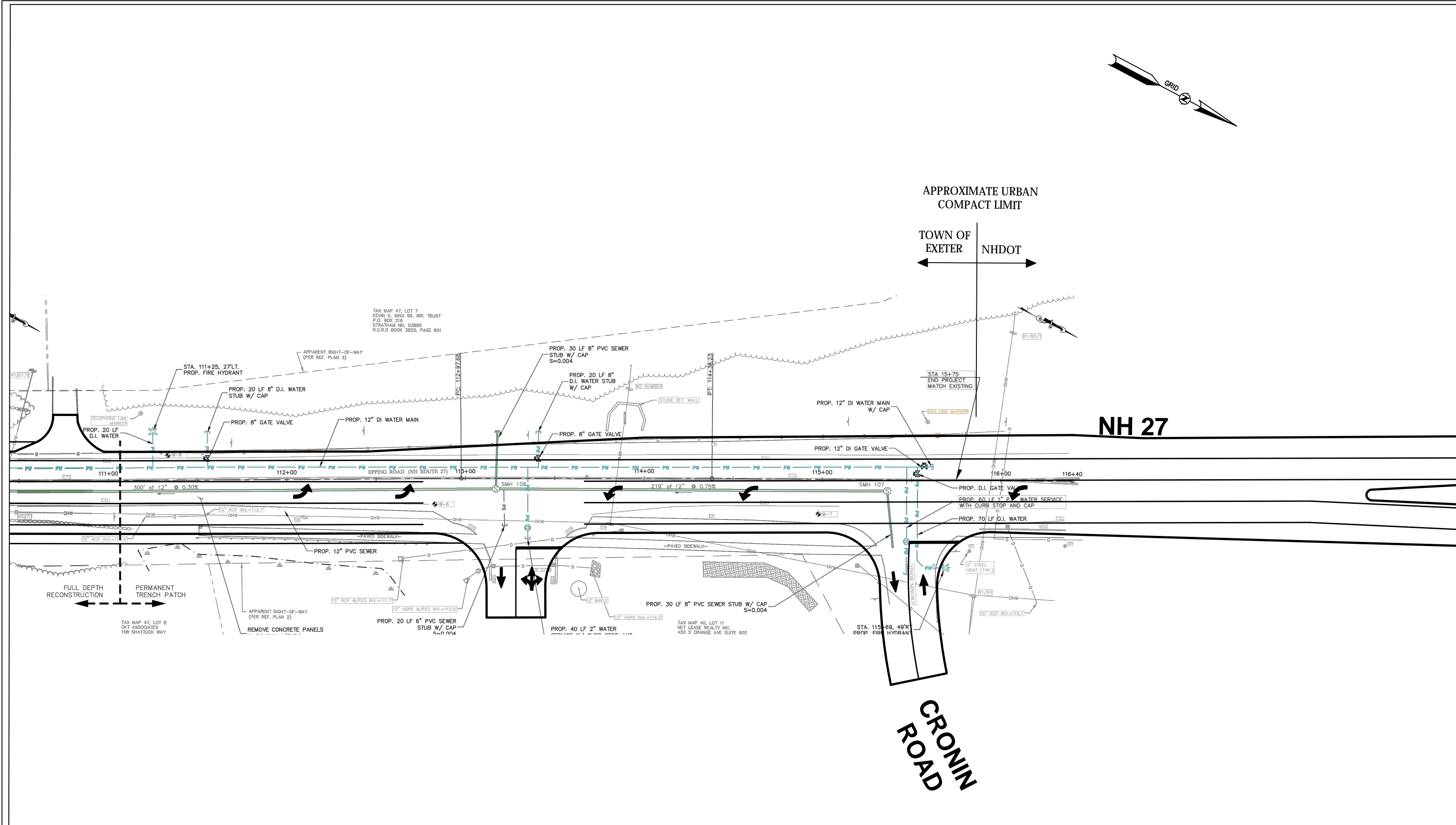
APPROXIMATE URBAN
COMPACT LIMIT



TAX MAP 47, LOT 7
KEVIN K. KING SR. TRUST
P.O. BOX 216
STRATHAM NH, 03885
R.G.D. BOOK 2922, PAGE 601

TAX MAP 47, LOT 8
OXT ASSOCIATES
158 SHATTUCK WAY

TAX MAP 40, LOT 11
NET LEASE REALTY INC
450 S ORANGE AVE SUITE 900



NH 27

**CRONIN
ROAD**

PROGRESS PLANS
SUBJECT TO CHANGE
DATE 9/28/2020



		DATE PLOTTED	VHB PROJECT NO.
		28-Sep-20	52676.00

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
NEAR-TERM IMPROVEMENTS			
DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
		3	3

Matrix of Potential Improvements

<i>Cost Category</i>		<i>Roadway Segments</i>					TOTALS
		<i>Comings Court to Brookside Drive</i>	<i>Brookside Drive to Michael Avenue</i>	<i>Michael Avenue to Continental Drive</i>	<i>Continental Drive to Cronin Road</i>	<i>Cronin Road to NH 101 WB Ramps</i>	
Long Term	Construction	\$3.20M	\$4.60M	\$5.00M	\$4.60M	\$4.90M	\$22.30M
	Final Design and Permitting	\$0.48M	\$0.69M	\$0.75M	\$0.69M	\$0.74M	\$3.35M
	Right-of-Way*	\$2.10M	\$1.40M	\$0.20M	\$0.30M	-	\$4.00M
	Total	\$5.78M	\$6.69M	\$5.95M	\$5.59M	\$5.64M	\$29.65M
Mid Term	Construction	\$0.80M	\$1.80M	\$2.40M	\$0.72M	-	\$5.72M
	Final Design and Permitting	\$0.12M	\$0.27M	\$0.36M	\$0.11M		\$0.86M
	Right-of-Way*	\$0.02M	\$0.15M	\$0.04M	\$0.07M	-	\$0.28M
	Total	\$0.94M	\$2.22M	\$2.80M	\$0.90M	-	\$6.86M
Near Term	Construction	-	-	-	\$0.72M	-	\$0.72M
	Final Design and Permitting				\$0.11M		\$0.11M
	Right-of-Way*	-	-	-	\$0.07M	-	\$0.07M
	Total	-	-	-	\$0.90M	-	\$0.90M

* The Right-of-Way costs are computed from the approximate impact areas times the 2019 per square foot assessed land values. The costs of appraisals, business relocations or other damages, and administrative costs are not currently included in the Right-of-Way costs.

