CITY OF DOVER

# PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

**REVISED**

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room, City Hall, 288 Central Ave, Dover NH 03820
Meeting Date: **Thursday, February 19, 2026**
Meeting Time: **10:30 AM**

1. Site Plan for Lafrance Bowden Hospitality II, LLC (Owners: ARC CAFEUSA001, LLC) Assessor's Map 17, Lot 76, zoned G, located at 47 Central Avenue. (Proposal is to construct a four-story, 50,120 s.f., 94-unit hotel with associated patios, landscaping, parking, and utilities.) (SITE-2026-0001) *(There are three (3) Conditional Use Permits associated with this application.*

2. Conditional Use Permits for Equinox Properties, LLC, Assessor's Map 24, Lot 34, zoned RM-U, located at 24 Winter Street, (The proposal requests relief from the minimum lot coverage and from the front built-to, side, and rear setback requirements to construct a four-unit townhouse.) (COND-2026-0005)

# PLAN SNAPSHOT REPORT SITE-2026-0001
# FOR CITY OF DOVER, N.H.

| | | | | | |
|---|---|---|---|---|---|
| **Plan Type:** | Site Plan - Major | **Project:** | | **App Date:** | 01/30/2026 |
| **Work Class:** | New Construction | **District:** | None | **Exp Date:** | 04/05/2026 |
| **Status:** | In Review | **Square Feet:** | 0.00 | **Completed:** | NOT COMPLETED |
| **Valuation:** | $0.00 | **Assigned To:** | Glidden, Jean | **Approval Expire Date:** | |

**Description:** Project consists of the design and construction of approximately 50,120 square-foot, 94-unit extend stay hotel with associated patios, landscaping, parking and utilities. The hotel will be limited service, but offer some amenities, such as: lobby/community area, buffet breakfast, fitness, small convenience store, guest laundry, and outdoor patio with cooking grills & fireplace. There will be a total of 97 parking spaces that includes 2 EV charging stations and accessible spaces, all in compliance with franchise standards (note: 1 space per room is required by Marriott).

| **Parcel:** | 17076-000000 | Main | **Address:** | 47 Central Av<br>Dover, NH | Main | **Zone:** |
|---|---|---|---|---|---|---|

Engineer
Brian Jones
Business: (603) 527-5500

Engineer
Jeffrey Dirk
Business: (978) 269-6830

Applicant
Barry Stowe
11 Corporate Drive
Belmont, NH 03220
Business: (603) 527-9090

Wetlands Scientist
Cynthia Balcius
Business: (603) 527-9090

Developer
Timothy Burkhardt
Business: (508) 676-7888

Architect
David Sherborne
Business: (603) 527-9090

**Plan Custom Fields**

| | | | | | |
|---|---|---|---|---|---|
| Total2 | 0 | Total3 | 0 | Total | 0 |
| Total5 | 0 | Total4 | 0 | Total6 | 94 |
| Total7 | 0 | Total9 | 50120 | Total8 | 50120 |
| Street Classification Type | Municipal | Recording Number | Doc# 0012211 | Net Change in # Parking Spaces (+/-) | 18 |
| Water Service | Municipal | Sewer Service | Municipal | Deed Book | 4148 |
| Total Acres (GIS) | 1.77 | Deed Page | 0409 | Total SQFT | 77101.2 |
| Deed Date | July 18, 2013 | Proposed Property Use | Hotel | Area of Parcel to be Developed (SQFT) | 77900 |
| Number of Parking Spaces Existing | 79 | Number of Parking Spaces Proposed | 97 | Number of Employees Total | 20 |
| Number of Employees in Max Shift | 13 | Distance to City Water | 315 | Distance to City Sewer | 170 |
| Type of Building to be Built | Hotel made of Type 2B Non-combustible construction type consisting of structural steel building frame, steel bar joists with concrete floors and light gage metal wall framing. | Estimated Construction Value | 15000000.00 | Refuse Removal | Private |
| Is there an existing Conservation Easement? | No | Existing Conservation Easement Details | | Total of Impact Fees to be Assessed | 0.00 |
| TotalImpactFeeSDTOD | 0.00 | Sub Total Residential | 0.00 | TotalImpactFeeTHTOD | 0.00 |
| TotalImpactFee23FTOD | 0.00 | TotalImpactFeeA4TOD | 0.00 | TotalImpactFeeMHTOD | 0.00 |
| TotalImpactFeeADUTOD | 0.00 | TotalImpactFeeAONRTOD | 0.00 | TotalImpactFeeAR55TCD | 0.00 |
| TotalImpactFeeAR62TCD | 0.00 | TotalImpactFeeRIRCTCD | 0.00 | Sub Total Non-Residential | 0.00 |
| TotalImpactFeeOCSTOD | 0.00 | TotalImpactFeeITWCTCD | 0.00 | TotalImpactFeeNHALTCD | 0.00 |

# PLAN SNAPSHOT REPORT (SITE-2026-0001)

| | |
|---|---|
| TotalImpactFeeOIUTOD | 0.00 |
| TotalImpactFeeAFAOTOD | 0.00 |

| Attachment File Name | Added On | Added By | Attachment Group | Notes |
|---|---|---|---|---|
| Signature_Barry_Stowe_1/30/2026.jpg | 01/30/2026 9:35 | Stowe, Barry | | Uploaded via CSS |

| Invoice No. | Fee | | Fee Amount | Amount Paid |
|---|---|---|---|---|
| INV-2026000274 | Planning General Application Fee | | $200.00 | $0.00 |
| | | **Total for Invoice INV-2026000274** | **$200.00** | **$0.00** |
| NOT INVOICED | Planning Residential Fee | | $9,400.00 | $0.00 |
| | | **Total for Invoice NOT INVOICED** | **$9,400.00** | **$0.00** |
| | | **Grand Total for Plan** | **$9,600.00** | **$0.00** |

| Workflow Step / Action Name | Action Type | Start Date | End Date |
|---|---|---|---|
| **Review v.1** | | 01/30/2026 14:55 | |
| Confirm application complete v.1 | Generic Action | | 01/30/2026 14:55 |
| Technical Review Committee Meeting Agenda v.1 | Task | 01/30/2026 14:55 | |
| Land Use Plan Technical Review v.1 | Receive Submittal | | |
| Technical Review Committee Meeting v.1 | Hold Meeting | | |
| **Planning Board v.1** | | | |
| Planning Board Agenda v.1 | Task | | |
| Invoice for Notices v.1 | Task | | |
| Send Notices v.1 | Task | | |
| Planner Creates Staff Recommendations v.1 | Plan Activity | | |
| Distribute Planning Board Materials v.1 | Task | | |
| Planning Board Hearing v.1 | Hold Hearing | | |
| Planning Board Decision v.1 | Plan Activity | | |
| NOD Sent to Applicant v.1 | Create Report | | |
| **Final Plan v.1** | | | |
| Land Use Plan Stamped and Signed v.1 | Generic Action | | |
| Recording v.1 | Task | | |
| Document Archival v.1 | Generic Action | | |
| Internal Notification of Plan Completion v.1 | Generic Action | | |
| Building Official Notifies Address v.1 | Generic Action | | |
| Pre-Con Meeting v.1 | Hold Meeting | | |
| **Create/Link to Records v.1** | | | |
| Create / Link to Permit - Building Major v.1 | Create Sub Permit | | |
| Create / Link to Permit - Site Work, Construction v.1 | Create Sub Permit | | |

# City of Dover, New Hampshire
# SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

| *Office Use Only* | Project #: | | Date Received: | |
|---|---|---|---|---|
| | Amount Paid: | | Time Received: | |

## APPLICANT AND OWNER INFORMATION

Name of Applicant: Lafrance Bowden Hospitality II, LLC Telephone # 603-527-9090 (agent)

Address of Applicant: 41 Old Bedford Road, Westport, MA 02790

E-Mail Address: barrys@opechee.com (agent)

Name of Property Owner (*if different from applicant*): Arc Cafeusa001 Llc Telephone # 603-527-9090 (agent)

Address of Property Owner: 11995 El Camino Real, San Diego, CA 92130

## PROPERTY INFORMATION

Address of Property: 47 Central Avenue

Assessor's Map # 17 Lot(s) # 76

Zoning District(s) Gateway District (G) Overlay District(s) _____

Size of Parcel: 77,053 sq. ft. 1.77 ac. Property Deed: Book 4148 Page: 409

Existing Use of Property: Abandon Burger King Fast Food Restaurant

## SITE PLAN INFORMATION

Describe Proposed Use: Extended-Stay Hotel

Area of Parcel to be Developed: 76,995 sq. ft.

If Multi-family Residential: Number of Units _____ & Buildings Proposed _____

If lodging: Number of Units 94 & number of Buildings 1

Number of Parking Spaces: Existing 76 Proposed 97

Highway Access (check where applicable): ✓ City Street ____ State Highway (NHDOT Urban Compact Zone)

Number of Employees Total: ± 20 In Maximum Shift: ± 13

Disposition of Parcel:

Building Footprint 12,620 sq. ft.

Total Building Area 50,120 sq. ft.

Paved Area 37,500 sq. ft.

Building Setbacks:

Front Yard 153.8' (primary) 16.7' (secondary) ft.

Rear Yard N/A ft.

Side Yard: 29.3' ft.

City Water? ✓ Yes ___ No How far is city water from the property? *315 LF of water line*

City Sewer? ✓ Yes ___ No How far is city sewer from the property? *170 LF of sewer line*

**TRANSFER OF DEVELOPMENT RIGHTS INFORMATION**

**Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):**

□ Residential □ Residential (reduced size) □ Industrial | □ Purchase □ Land Preservation

**Relief sought (Check All That Apply):**

□ Lot Size □ Frontage □ Setback □ 30' Buffer □ Increase by _____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

_____

_____

_____

**BUILDING INFORMATION**

Type of Building to be Built: *A hotel consisting of Type 2B Non-combustible construction consisting of structural steel frame, steel bar joists, concrete floors and light gage metal wall framing.*

Height of Building: *4-story 53'-3" top of parapet)* Finished Floor Elevation: *105.5 '*

Number of Seats (where applicable) *N/A*

Estimated value of construction: *$15mm* Refuse removal: Public/Private (circle one)

**WAIVER REQUESTS**

Site Review Regulations section(s) to be waived: _____

Justification for waiver request(s) (*attach additional sheets as needed*):

_____

_____

_____

_____

_____

_____

_____

**SURVEYOR INFORMATION**

Name of Surveyor and Company (Licensed in N.H.) James P. Smith, Allen & Major Associates, Inc.

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: 603-627-5500

Professional License #: 908 E-mail address: jsmith@allenmajor.com

**ENGINEER INFORMATION**

Name of Engineer and Company (Licensed in N.H.) Brian Jones, P.E., Allen & Major Associates, Inc.

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: 603-627-5500

Professional License #: 13,809 E-mail address: bjones@allenmajor.com

**ARCHITECT INFORMATION**

Name of Architect and Company (Licensed in N.H.) David Sherborne, Architect, Opechee Construction Corporation.

Address 11 Corporate Drive, Belmont, NH 03220 Telephone #: 603-527-9090

Professional License #: 4,114 E-mail address: davids@opechee.com

**LANDSCAPE ARCHITECT INFORMATION**

Name of Landscape Architect and Company (Licensed in N.H.) Bethany Dermody, L.A., Allen & Major Associates, Inc.

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: 603-627-5500

Professional License #: 06 E-mail address: bdermody@allenmajor.com

**SOIL SCIENTIST INFORMATION**

Name of Soil Scientist and Company (Licensed in N.H.) Stoney Ridge Environmental, LLC

Address 8 Kiana Road, Alton, NH 03809 Telephone #: 603-776-5825

Professional License #: 06 E-mail address: cbalcius@stoneyridgeenv.com

**CONSERVATION EASEMENT HOLDER**

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

# Abutters List

TownePlace Suites by Marriott
47 Central Avenue, Dover, NH 0303820
January 28, 2026

**Owner:**

*Tax Map 17 Lot 76*
Arc Cafeusa001
11995 El Camino Real
San Diego, CA 92130

**Applicant:**

Lafrance Bowden Hospitality II, LLC
c/o: Tim Burkhardt, CHA
41 Old Bedford Road
Westport, MA 02790

**Design-Build Firm/Architect/Agent:**

Opechee Construction Corporation
c/o: Barry Stowe & David Sherborne, Architect
11 Corporate Drive
Belmont, NH 03220

**Civil Engineer/Surveyor/Landscape Architect:**

Allen & Major Associates, LLC
c/o: Brian Jones, P.E/James Smith, L.S./ Bethany Dermondy, L.A
400 Harvey Road, Suite D
Manchester, NH 03103

**Transportation Engineer:**

Vanasse & Associates, Inc.
c/o: Jeffrey Dirk, P.E.
35 New England Business Center Drive,
Suite 140
Andover, MA 01810-1066

**Wetland Scientist:**

Stoney Ridge Environmental, LLC
c/o: Cynthia Balcius, CSS, CWS
8 Kiana Road
Alton, NH 03809

**SIGNATURES**

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: Barry Stowe Date: Jan. 28, 2026

**AUTHORIZATION TO ENTER SUBJECT PROPERTY**

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Barry Stowe (Agent) Date: Jan. 28, 2026

**AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY**

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Barry Stowe (Agent) Date: Jan. 28, 2026

Signature of Applicant (*if different from owner*): _____ Date: _____

**CERTIFICATION OF FEES**

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): Barry Stowe (Agent) Date: Jan. 28, 2026

# PLANNING BOARD FEE SCHEDULE/INVOICE

*(Revised July 24, 2023)*

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

**A. Plan Review Fees**

**1. Application fee for the following (SELECT ALL THAT APPLY):**

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☐ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # _____ sq. ft. = $_____

**SUBTOTAL PLAN REVIEW FEE = $_____**

**AND**

**B. Abutter Notification/Mailing Labels -** this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # _____ of x $10.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $10.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

**C. Foster's newspaper public notice fee $120.00 x # _____ applications =** $_____

**SUBTOTAL = $_____**

**TOTAL INVOICE AMOUNT = $_____**

**PLAN REVIEW FEE COLLECTED/PAID = $ _____**

**BALANCE DUE = $ _____**

**The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.**

# City of Dover, New Hampshire
# SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

**The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.**

**Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.**

*The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.*

APPLICANT: Lafrance Bowden Hospitality II, LLC File Number: _____

PROJECT TITLE: Proposed Hotel

PROPERTY LOCATION: 47 Central Avenue Tax Map: 17 Lot: 76

| | Where/How Provided | Reviewed |
|---|---|---|
| **1. Completed and signed Application form** | Yes | |
| **2. Plan Review Fees are provided** | Pending invoice from city | |
| **3. Electronic copy of the engineered/surveyed plan layout** | Yes | |
| **4. Electronic copy of supplementary materials and application** | Yes | |
| **5. Traffic Impact Assessment and Analysis (Standard or Advanced)** | Yes | |
| **6. Waiver requests to the Site Plan Review Regulations, with written justification** | N/A | |
| **7. Conditional Use Permit applications** | Yes | |
| **8. A colored rendering of the streetscape that will be created along the existing public right-of-way** | A3.03 | |
| **9. A colored architectural plan showing all sides of buildings** | A3.01 & A3.02 | |
| **10. Folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:** | Yes | |
| Location map at appropriate scale | Cover Sheet | |
| Proposed Project name and title and Planning File # | Yes and file # pending | |
| Date, north arrow and scale | Yes | |
| Names of all abutting property owners | C106 | |
| Name and address of owners and/or applicants | Yes | |
| Signature & stamp of NH licensed land surveyor and/or engineer | Yes | |
| Zoning District boundaries, including any special or overlay districts | C106 | |
| Location of Conservation District areas | N/A | |
| Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks | V101 | |
| Location and widths of existing & proposed easements & right of ways | V101 | |
| Location and width of existing and proposed access/egress ways | V101 (existing) C102 (proposed) | |

| | Explain How Provided | Reviewed |
|---|---|---|
| Depict pedestrian walkways and accessible access | *C102* | |
| Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system | *V101* | |
| Existing and proposed topographic information at two foot intervals | *V101 (existing) C102 (proposed)* | |
| Existing and proposed buildings and structure locations | *V101 (existing) C102 (proposed)* | |
| Minimum building setbacks or build to lines on all lots | *C102* | |
| Location and size of existing and proposed electric, telephone, gas cable and other underground utilities | *C104* | |
| Existing and proposed water lines and fire hydrants, including materials and capacity needed | *C104* | |
| Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load | *C104* | |
| Existing and proposed stormwater lines and facilities | *C103* | |
| Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots | *C105* | |
| Location of Flood Hazard Zone | *N/A* | |
| Location of all bodies of water and watercourses | *N/A, see letter from CWS* | |
| Location of wetlands and buffers | *N/A, see letter from CWS* | |
| Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set | *C106* | |
| Existing natural features and/or significant vegetation on property | *V101* | |
| Depict existing contours up to 100 ft. beyond project limits | *V101* | |
| Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect | *V101* | |
| Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces | *C102* | |
| Location, material and size of existing and proposed pavement area | *V101 (existing) C102 (proposed)* | |
| Location of proposed fire lanes | *C102 (travel lanes)* | |
| Specify finished floor elevations of buildings | *C103* | |
| Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening | *C102* | |
| Depict all service, storage, loading bays and utility areas | *N/A* | |
| All applicable Dover Common Site Plan notes | *Yes* | |
| **11. Additional Information if appropriate** | | |
| Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis | *Drainage report provided* | |
| Stormwater Management System Operation and Maintenance Plan | *Drainage report provided* | |
| Letter to Serve from Public and Private Utilities | *sewer/water/gas (elec pending)* | |
| Erosion and Sedimentation Control Plan | *C101* | |
| Landscape Operation and Maintenance Plan | *C502* | |
| Proposed restrictive covenants or homeowners association documents | *N/A* | |
| Dates and permit numbers of all required state and federal permits | *Pending* | |
| If wetland buffer, indicate placards locations, as applicable | *N/A, see letter from CWS* | |
| Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs | *C103* | |
| Location of proposed drive-in facilities | *C102* | |
| Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required | *Traffic report* | |

REVIEWED BY: _____ DATE_____ TRC DATE_____

OPECHEE
CONSTRUCTION CORPORATION

**Site Plan Review Narrative**
TownePlace Suites by Marriott
47 Central Avenue, Dover, New Hampshire

The applicant proposes the redevelopment of a previously developed property located at **47 Central Avenue** in the City of Dover. The site was formerly occupied by a Burger King restaurant that has since been abandoned and currently contains existing impervious surfaces and site improvements. The proposed project consists of the construction of a **94-room TownePlace Suites by Marriott** hotel within the City's **Gateway District**, representing reinvestment in an underutilized parcel along a major gateway corridor.

The subject parcel is approximately **1.77± acres** in size and is uniquely configured with **dual frontage along Central Avenue and the Spaulding Turnpike (Route 16)**. Central Avenue functions as the primary frontage, while the Spaulding Turnpike serves as a secondary frontage with limited-access characteristics. The site's irregular geometry, curved roadway frontage along Route 16, and proximity to the Spaulding Turnpike interchange significantly influence building placement, access, and circulation. Unlike properties located within Dover's downtown core, this portion of Central Avenue is characterized by regional traffic patterns and gateway-scale development.

The proposed site layout has been designed to respond directly to these physical constraints while maintaining a strong and visible architectural presence along Central Avenue. Building placement prioritizes frontage visibility, safe vehicular access, and efficient internal circulation while maintaining appropriate separation from the Spaulding Turnpike right-of-way. Parking areas are arranged to support hotel operations while minimizing their visual prominence from the public way, reinforcing the intent of the Gateway District to balance corridor visibility with orderly site design.

The development includes requests for **three Conditional Use Permits**, including approvals related to the Central Avenue primary frontage build-to standards, the Spaulding Turnpike secondary frontage build-out standards, and the proposed hotel use within the Gateway District. These requests are addressed separately and are not the subject of this Site Plan Review narrative, which focuses on the physical layout, circulation, and infrastructure of the site.

Vehicular access to the site is provided from Central Avenue, with internal circulation designed to accommodate guest arrival, parking, and service movements in a clear and intuitive manner. Parking is provided on site in a configuration consistent with the operational needs of a **limited-service, extended-stay hotel** and aligns with industry-recognized standards for the TownePlace Suites brand, which generally anticipate approximately one parking space per guestroom. The parking layout provides spaces proximate to building entrances while maintaining safe circulation and minimizing conflicts between vehicles and pedestrians.

Pedestrian connectivity is an integral component of the site design. An **ADA-compliant pedestrian walkway** is provided to establish a direct and accessible connection between the primary building entrance and the **public**

**sidewalk along Central Avenue**. Internal pedestrian routes also connect parking areas to the building entrance, providing safe and clearly defined circulation throughout the site consistent with Gateway District objectives.

The proposed hotel is a **limited-service, extended-stay lodging use** intended to accommodate guests staying for longer durations, including business travelers, and families. The hotel program is intentionally limited in scope and does not include restaurants, bars, drive-through facilities, or meeting and conference spaces. Food and beverage service is limited to continental breakfast offerings and small grab-and-go items. In addition to indoor amenities, the project includes an **outdoor guest patio area with a fireplace and grilling facilities**, intended as amenity-scale features for registered guests only. The patio is not designed or programmed for public access, events, or amplified activities.

Architecturally, the building is designed as a **four-story structure** consistent with established TownePlace Suites design standards and adapted to the Gateway District context. Exterior materials include a combination of **fiber-cement panel siding and exterior insulation finish systems (EIFS)**, providing visual variation, articulation, and long-term durability. Façade modulation, material transitions, and window placement are used to reduce perceived building mass and establish an appropriate scale along Central Avenue, while maintaining a cohesive architectural form visible from both road frontages. Windows consist of thermally broken aluminum frames with insulated glazing, and the roof utilizes a low-slope membrane system with internal drainage to maintain a clean roofline profile.

The project qualifies as a **redevelopment** under the City's Site Plan Review Regulations, with existing impervious surface coverage exceeding forty percent (40%). Stormwater management for the site has been designed in accordance with the City's redevelopment standards and incorporates **on-site mitigation and treatment measures**, resulting in improved stormwater management relative to the abandoned prior use. Municipal water and sewer services are available to the site, and utilities will be extended and coordinated as part of the redevelopment.

Overall, the proposed project represents a thoughtful reinvestment in a previously developed and abandoned site and is consistent with the intent of the Gateway District. The site layout, circulation, parking, pedestrian access, stormwater management, and architectural design have been carefully coordinated to respond to documented site constraints while avoiding adverse impacts to adjacent properties or the public realm. The application satisfies the objectives of the City's Site Plan Review regulations and is appropriate for Planning Board approval.

Doc # 0012211 Jul 18, 2013 1:56 PM
Book 4148 Page 0409 Page 1 of 4
Register of Deeds, Strafford County

C/H
L-CHIP
STA068186

Return to:
First American Title Ins Co.
Attn: Jay Melkonian
101 Huntington Ave., 13th Floor
Boston, MA 02199

STATE OF NEW HAMPSHIRE
DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
***36 Thousand 6 Hundred 35 Dollars
DATE 07/18/2013 ST827372 AMOUNT $ ***36635.00
VOID IF ALTERED

# WARRANTY DEED

GRANTOR: RAI RESTAURANTS, INC.

GRANTE: ARC CAFEUSA001, LLC

PROPERTY: 47 Central Avenue, Dover, NH

# QUITCLAIM DEED (WITH COVENANTS)

KNOW ALL MEN BY THESE PRESENTS:

**RAI RESTAURANTS, INC.**, a Florida corporation ("***Grantor***"), for consideration paid, grants to **ARC CAFEUSA001, LLC**, a Delaware limited liability company ("***Grantee***"), whose address is 106 York Road, Jenkintown, Pennsylvania 19046, with quitclaim covenants, a certain parcel of land with the buildings thereon situated in Strafford County, New Hampshire, more fully described on ***Exhibit A*** to this Deed (the "***Property***").

The Property is conveyed subject to current taxes and assessments, reservations in patents, all easements, rights-of-way, encumbrances, liens, covenants, conditions, restrictions, obligations, liabilities and other matters as may appear of record, the rights of parties in possession under unrecorded leases, and all matters which an accurate survey of the Property or a physical inspection of the Property would disclose. The Grantor covenants with the Grantee, its heirs and assigns, that it will warrant and forever defend the Property to said Grantee, its heirs and assigns forever, against the lawful claims and demands of all persons claiming by, through or under it but against none other.

For Grantor's title see Quit Claim Deed from CNL Restaurant Investments III, a Florida general partnership, dated February 25, 2005, and recorded in the Strafford County, New Hampshire Registry of Deeds on March 15, 2005, at Book 3155, Pages 515-518.

Executed as an instrument under seal as of this 27 day of June, 2013.

PLEASE RETURN TO: JAY MELKONIAN
FIRST AMERICAN TITLE INSURANCE COMPANY
101 HUNTINGTON AVENUE, 13TH FLOOR
BOSTON, MA 02199
60592INH04

Asset No. 700
Dover, NH

**GRANTOR:**

**RAI RESTAURANTS, INC.**, a Florida corporation

By: _____
Printed Name: Todd V. Jones
Its Vice President

STATE OF ARIZONA )
) ss
COUNTY OF MARICOPA ) June 21, 2013

Then personally appeared the above-named Todd V. Jones, the Vice President of RAI Restaurants, Inc., a Florida corporation, as aforesaid, and acknowledged the foregoing to be the free act and deed of RAI Restaurants, Inc., a Florida corporation, before me.

OFFICIAL SEAL
ANNIE M. CAPARROS
Notary Public - State of Arizona
MARICOPA COUNTY
My Comm. Expires April 16, 2015

Notary Public

My Commission Expires:
4/16/2015

Asset No. 700
Dover, NH

**EXHIBIT A**
**LEGAL DESCRIPTION**

That parcel of land situated in Dover, County of Strafford, State of New Hampshire, bounded and described as follows:

Beginning at a point in the southeasterly sideline of Central Avenue at the westerly corner of the parcel herein described, and at land of the State of New Hampshire;

Thence N 40° 59' E by Central Avenue for a distance of 47.45 feet to a New Hampshire Highway Bound at other land of the State of New Hampshire, said land being the southerly boundary of the ramp connection from Central Avenue to the Spaulding Turnpike;

Thence N 87° 17' 52" E for a distance of 114.50 feet to another New Hampshire Highway Bound;

Thence S 47° 40' 28" E for a distance of 237.85 feet by land of the State of New Hampshire to another New Hampshire Highway Bound;

Thence continuing by the arc of a curve to the right having a radius of 101 feet for a distance of 290.37 feet to another New Hampshire Highway Bound in the northerly sideline of Spaulding Turnpike;

Thence N 66° 49' 59" W for a distance of 212.01 feet to another New Hampshire Highway Bound;

Thence N 49° 03' 09" W for a distance of 20.70 feet to a point;

Thence N 40° 59' 00" E by land now or formerly of Jeannine Lord for a distance of 90.00 feet to a point;

Thence N 02° 21' 59" W by a mutual right of way with the said Jeannine Lord for a distance of 72.84 feet to a point;

Thence N 49° 03' 19" W for a distance of 70.00 feet to the southeasterly sideline of Central Avenue, at the point of beginning.

# APPLICANT
# LETTER OF AUTHORIZATION

City of Dover, c/o City Planning
288 Central Avenue, Dover, NH 03820

New Hampshire Department of Transportation, c/o District 6
271 Main Street, PO Box 740, Durham, NH 03824

New Hampshire Department of Environmental Services
29 Hazen Drive, Concord, NH 03302

**Re: Proposed Hotel**
**Assessors Map 17 Lot 76 (Parcel ID: 17076)**
**47 Central Avenue, Dover, NH 03820**

To Whom It May Concern:

By this letter, I hereby Authorize Opechee Construction Corporation and their design consultants to act as agents for the purposes of preparing, executing, submitting, and representing permit applications to the City of Dover and New Hampshire state agencies for a proposed hotel at the property referenced above.

List of agents, including, but not limited to:

- Andrew Pike, President, Opechee Construction Corporation
- David Sherborne, Architect & Vice President, Opechee Construction Corporation
- Barry Stowe, Civil Design Manager, Opechee Construction Corporation
- Brian Jones, Civil Engineer, Allen & Major Associates, Inc.
- Jeffrey Dirk, Transportation Engineer, Vanasse & Associates, Inc.

**ARC CAFEUSA001, LLC,** a Delaware limited liability company
By: VEREIT Operating Partnership, L.P., a Delaware limited partnership, its member manager

Daniel Haug
Daniel Haug (Jan 20, 2026 17:12:52 MST)
Signature

January 20, 2026
Date

Daniel Haug, SVP, Associate General Counsel
Print Name

Landowner: Arc Cafeusa001 LLC Address: 11995 El Camino Real, San Diego, CA 92130

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# LETTER OF AUTHORIZATION

City of Dover, c/o City Planning
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- Brian Jones, Civil Engineer, Allen & Major Associates, Inc.
- Jeffrey Dirk, Transportation Engineer, Vanasse & Associates, Inc.

Timothy Burkhardt, President of Hotels, CHA
Lafrance Hospitality

1/8/26
Date

Applicant:

Lafrance Bowden Hospitality II, LLC
PO Box 248
41 Old Bedford Road,
Westport, MA 02790

Unitil
Northern Utilities, Inc.

January 28th, 2026

Barry Stowe
Civil Design Manager
Opechee Construction Corporation
11 Corporate Dr
Belmont, NH

**Natural Gas to Proposed Hotel at 47 Central Ave. in Dover, NH**

Hello Barry.

Unitil/Northern Utilities Natural Gas Division has reviewed the requested site for Natural Gas service.

Unitil hereby confirms that natural gas is available for the proposed building at 47 Central Ave. in Dover, New Hampshire.

If you have any questions, please contact me at 603-264-2033.

Sincerely,

**Josh Wilk**
Senior Business Development Rep
Unitil
**T** 603.227.4628
**M** 603.264.2033
**F** 603.294.5264
Email wilkj@unitil.com

## Barry Stowe

**From:** Semprini, Jillian <J.Semprini@dover.nh.gov>
**Sent:** Friday, January 23, 2026 1:15 PM
**To:** Barry Stowe
**Subject:** RE: Proposed Hotel, 47 Central Ave (Existing Burger King)

Good afternoon, Barry,

Water and sewer are available at the subject property. City records indicate the sewer main is 10" VCP and the water main is 8" CI. Please reach out to the Water/Sewer Billing to determine if the previous usage is similar to the proposed usage. You may contact Water/Sewer Billing at dover-utilitybilling@dover.nh.gov or (603) 516-6028.

Also, please note that if you need to submit a NHDES Wastewater Connection Permit, the city's Engineering Department has standardized around using the unit design flows in Env-WQ Table 1008-1 to be consistent with how the investment fees are calculated. This ensures that the city has capacity for the flows that the applicants are paying for. See the Dover Utilities Commission Rules and Regulations for more information: https://www.dover.nh.gov/Assets/government/city-operations/2document/community-services/utilities/2010%20DUC%20Rules%20and%20Regulations.pdf.

Please let me know if you have questions.

Thank you,

**Jillian Semprini**
**City Engineer**
**City of Dover, NH**

---

**From:** Barry Stowe <barrys@opechee.com>
**Sent:** Wednesday, January 21, 2026 4:31 PM
**To:** Semprini, Jillian <J.Semprini@dover.nh.gov>
**Subject:** Proposed Hotel, 47 Central Ave (Existing Burger King)

**Security Notice:** External sender. Use caution with hyperlinks or attachments.

Hello Jillian,

Opechee Construction is pleased to inform you that we will be proposing a new hotel in the City of Dover at the former Burger King site at 47 Central Avenue. We are currently in the civil design phase and plan to submit our planning board applications on January 30th. We would like to request a basic "Ability to Serve" letter from DPW for the sewer & water as required by the planning board site plan review check list. Please let me know next steps to obtain this letter.

Thank you!

# APPLICANT
# LETTER OF AUTHORIZATION

City of Dover, c/o City Planning
288 Central Avenue, Dover, NH 03820

New Hampshire Department of Transportation, c/o District 6
271 Main Street, PO Box 740, Durham, NH 03824

New Hampshire Department of Environmental Services
29 Hazen Drive, Concord, NH 03302

**Re: Proposed Hotel**
**Assessors Map 17 Lot 76 (Parcel ID: 17076)**
**47 Central Avenue, Dover, NH 03820**

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- Barry Stowe, Civil Design Manager, Opechee Construction Corporation
- Brian Jones, Civil Engineer, Allen & Major Associates, Inc.
- Jeffrey Dirk, Transportation Engineer, Vanasse & Associates, Inc.

**ARC CAFEUSA001, LLC,** a Delaware limited liability company
By: VEREIT Operating Partnership, L.P., a Delaware limited partnership, its member manager

Daniel Haug
Daniel Haug (Jan 20, 2026 17:12:52 MST)
Signature

January 20, 2026
Date

Daniel Haug, SVP, Associate General Counsel
Print Name

Landowner: Arc Cafeusa001 LLC Address: 11995 El Camino Real, San Diego, CA 92130

# City of Dover, New Hampshire
# CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

| Office Use Only | Project #: | | Date Received: | |
|---|---|---|---|---|
| | Amount Paid: | | Time Received: | |

## APPLICANT AND OWNER INFORMATION

Name of Applicant: *Lafrance Bowden Hospitality II, LLC* Telephone # *603-527-9090 (agent)*

Address of Applicant: *41 Old Bedford Road, Westport, MA 02790*

E-Mail Address: *barrys@opechee.com (agent)*

Name of Property Owner (if different from applicant): *Arc Cafeusa001 Llc* Telephone # *603-527-9090 (agent)*

Address of Property Owner: *11995 El Camino Real, San Diego, CA 92130*

## PROPERTY INFORMATION

Assessor's Map # *17* Lot(s) # *76*

Address of Property: *47 Central Avenue*

Zoning District(s) *Gateway District (G)* Overlay District(s) *N/A*

Existing Use of Property: *Abandon Burger King Fast Food Restaurant*

## CONDITIONAL USE PERMIT INFORMATION

**Type of Conditional Use Permit (Check All That Apply):**

| | | |
|---|---|---|
| ☐ Conservation District | ☐ RCM Use Overlay District | ☑ Gateway District |
| ☐ Groundwater Protection | ☐ Off-Street Parking and Loading | ☐ Alternative Treatment Center |
| ☐ Wetland Protection District | ☐ Central Business District | ☐ Heritage Residential District |

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

*Hotel Use - See attached CUP narrative*

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES Sewer Connection Permit (pending)

NHDES Sewer Connection Permit (pending)

Name of Professional That Prepared Plans: Brian Jones, P.E., Allen & Major Associates, Inc.

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: 603-627-5500

Professional License #: 13,809 E-mail address: bjones@allenmajor.com

**SIGNATURES**

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: Barry Stowe Date: 1-28-2026

**AUTHORIZATION TO ENTER SUBJECT PROPERTY**

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Barry Stowe (Agent) Date: 1-28-2026

OPECHEE
CONSTRUCTION CORPORATION

**Conditional Use Permit Narrative**
**Hotel Use – Gateway District**
TownePlace Suites by Marriott
47 Central Avenue, Dover, New Hampshire

The applicant proposes a **94-room TownePlace Suites by Marriott** hotel at **47 Central Avenue** within the City of Dover's **Gateway District**. A Conditional Use Permit is requested for the **hotel use**, as required by Chapter 170 of the Zoning Ordinance. This narrative addresses the appropriateness of the proposed use relative to the intent of the Gateway District and applicable conditional use criteria.

The project represents the **redevelopment of a previously developed and abandoned commercial site**, formerly occupied by a fast-food restaurant. The replacement of an underutilized property with a professionally managed lodging use supports reinvestment along a designated gateway corridor and aligns with the district's purpose of accommodating commercial and service-oriented uses that benefit from regional access.

TownePlace Suites is a **limited-service, extended-stay hotel** designed to accommodate longer guest stays, including business travelers, relocating households, and families. The hotel is intentionally limited in scope and does not include meeting or conference facilities, restaurants, bars, drive-through services, or entertainment venues. Food and beverage service is limited to continental breakfast offerings and small grab-and-go items for registered guests. These characteristics result in **lower daily turnover, reduced peak-hour activity, and predictable operational patterns** when compared to many other commercial uses permitted within the Gateway District.

The hotel includes an **outdoor guest patio with a fireplace and grilling facilities**, intended solely as an amenity for hotel guests. The patio is not open to the public, is not programmed for events, and does not function as an assembly or entertainment space. As such, the outdoor amenities do not create noise, traffic, or activity beyond what is typical for an extended-stay lodging use.

The site's location outside of Dover's traditional downtown core and in close proximity to the **Spaulding Turnpike** makes it particularly well suited for a hotel serving regional travelers. This placement allows lodging demand to be accommodated in a gateway location designed for regional access, while avoiding additional pressure on the downtown street network.

Operationally, the hotel functions with **relatively low staffing levels**, limited service traffic, and vehicle trips that are distributed throughout the day rather than concentrated during peak commuter periods. Compared to the site's former fast-food restaurant use—or a potential reactivation of that use—the proposed hotel represents a **lower-intensity alternative** in terms of traffic generation, late-night activity, and off-site impacts.

The proposed hotel use is compatible with surrounding commercial development, will not be detrimental to adjacent properties, and will not adversely affect public health, safety, or municipal services. The use is consistent with the intent of the Gateway District and satisfies the Conditional Use Permit criteria set forth in Chapter 170 of the Zoning Ordinance. Approval of the requested Conditional Use Permit will allow for the productive reuse of an abandoned site in a manner consistent with the City's planning objectives.

# Abutters List

TownePlace Suites by Marriott
47 Central Avenue, Dover, NH 0303820
January 28, 2026

**Owner:**

*Tax Map 17 Lot 76*
Arc Cafeusa001
11995 El Camino Real
San Diego, CA 92130

**Applicant:**

Lafrance Bowden Hospitality II, LLC
c/o: Tim Burkhardt, CHA
41 Old Bedford Road
Westport, MA 02790

**Design-Build Firm/Architect/Agent:**

Opechee Construction Corporation
c/o: Barry Stowe & David Sherborne, Architect
11 Corporate Drive
Belmont, NH 03220

**Civil Engineer/Surveyor/Landscape Architect:**

Allen & Major Associates, LLC
c/o: Brian Jones, P.E/James Smith, L.S./ Bethany Dermondy, L.A
400 Harvey Road, Suite D
Manchester, NH 03103

**Transportation Engineer:**

Vanasse & Associates, Inc.
c/o: Jeffrey Dirk, P.E.
35 New England Business Center Drive,
Suite 140
Andover, MA 01810-1066

**Wetland Scientist:**

Stoney Ridge Environmental, LLC
c/o: Cynthia Balcius, CSS, CWS
8 Kiana Road
Alton, NH 03809

# City of Dover, New Hampshire
# CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

| Office Use Only | Project #: | | Date Received: | |
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Name of Applicant: *Lafrance Bowden Hospitality II, LLC* Telephone # *603-527-9090 (agent)*

Address of Applicant: *41 Old Bedford Road, Westport, MA 02790*

E-Mail Address: *barrys@opechee.com (agent)*

Name of Property Owner (if different from applicant): *Arc Cafeusa001 Llc* Telephone # *603-527-9090 (agent)*

Address of Property Owner: *11995 El Camino Real, San Diego, CA 92130*

## PROPERTY INFORMATION

Assessor's Map # *17* Lot(s) # *76*

Address of Property: *47 Central Avenue*

Zoning District(s) *Gateway District (G)* Overlay District(s) *N/A*

Existing Use of Property: *Abandon Burger King Fast Food Restaurant*

## CONDITIONAL USE PERMIT INFORMATION

**Type of Conditional Use Permit (Check All That Apply):**

| | | |
|---|---|---|
| ☐ Conservation District | ☐ RCM Use Overlay District | ☑ Gateway District |
| ☐ Groundwater Protection | ☐ Off-Street Parking and Loading | ☐ Alternative Treatment Center |
| ☐ Wetland Protection District | ☐ Central Business District | ☐ Heritage Residential District |

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

*Central Avenue primary frontage build-to and percentage build-out*

*See attached CUP narrative*

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES Sewer Connection Permit (pending)

NHDES Sewer Connection Permit (pending)

Name of Professional That Prepared Plans: Brian Jones, P.E., Allen & Major Associates, Inc.

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: 603-627-5500

Professional License #: 13,809 E-mail address: bjones@allenmajor.com

**SIGNATURES**

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: Barry Stowe Date: 1-28-2026

**AUTHORIZATION TO ENTER SUBJECT PROPERTY**

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Barry Stowe (Agent) Date: 1-28-2026

OPECHEE
CONSTRUCTION CORPORATION

**Conditional Use Permit Narrative**
**Primary Secondary Frontages Build-to and Build-out – Gateway District**
TownePlace Suites by Marriott
47 Central Avenue, Dover, New Hampshire

The applicant is proposing to redevelop the existing Burger King property at 47 Central Avenue into a 94-room TownePlace Suites by Marriott hotel within the City of Dover's Gateway District. The 1.77± acre site is uniquely configured with frontage along both Central Avenue and the Spaulding Turnpike (Route 16), with Central Avenue functioning as the primary frontage and the Spaulding Turnpike serving as a secondary frontage.

As illustrated on the provided civil plans, the parcel is irregularly shaped and constrained by its curvature along the Spaulding Turnpike right-of-way, existing interchange geometry, and the need to accommodate safe vehicular access and internal circulation. These physical characteristics significantly influence building placement and limit the extent to which a continuous building façade can be located directly along the Central Avenue frontage and the Spaulding Turnpike.

The subject site is located outside of Dover's traditional downtown core and functions as part of a gateway corridor serving both local and regional traffic, with immediate proximity to the Spaulding Turnpike interchange. The site design reflects a development pattern appropriate for a hotel use serving regional and interstate travelers rather than a fine-grained downtown street environment.

Two Conditional Use Permits are requested to allow flexibility with **(1) the Central Avenue Primary Frontage build-to line and associated percentage of frontage build-out, and (2) the Spaulding Turnpike Secondary Frontage percentage of frontage build-out**. The proposed building placement responds to the site's constrained geometry by balancing frontage visibility, guest access, and parking demands while maintaining an appropriate setback from the Spaulding Turnpike right-of-way.

While the proposed building does not fully meet the prescriptive build-to line and frontage build-out standards along Central Avenue & Spaulding Turnpike, the layout maintains the intent of the Gateway District regulations by establishing a strong architectural presence along the corridor and reinforcing the role of Central Avenue as a gateway into the City.

The requested flexibility is directly attributable to the site's irregular geometry, dual-frontage condition, and proximity to a limited-access highway, rather than a departure from the goals of the zoning ordinance. The proposed development will not result in adverse impacts to surrounding properties and is consistent with the Gateway District's purpose of accommodating hospitality uses in locations well suited for regional access without placing additional pressure on the downtown core.

Accordingly, the proposed Conditional Use Permit represents a reasonable and appropriate application of zoning flexibility in response to documented site constraints and satisfies the intent of the Gateway District frontage standards.

# Abutters List

TownePlace Suites by Marriott
47 Central Avenue, Dover, NH 0303820
January 28, 2026

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11995 El Camino Real
San Diego, CA 92130

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c/o: Tim Burkhardt, CHA
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# City of Dover, New Hampshire
# CONDITIONAL USE PERMIT APPLICATION

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| ☐ Groundwater Protection | ☐ Off-Street Parking and Loading | ☐ Alternative Treatment Center |
| ☐ Wetland Protection District | ☐ Central Business District | ☐ Heritage Residential District |

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

*Spaulding Turnpike (Route 16) secondary frontage percentage build-out*

*See attached CUP narrative*

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NHDES Sewer Connection Permit (pending)

NHDES Sewer Connection Permit (pending)

Name of Professional That Prepared Plans: Brian Jones, P.E., Allen & Major Associates, Inc.

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**SIGNATURES**

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Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: Barry Stowe Date: 1-28-2026

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OPECHEE
CONSTRUCTION CORPORATION

**Conditional Use Permit Narrative**
TownePlace Suites by Marriott
47 Central Avenue, Dover, New Hampshire

The applicant is proposing to redevelop the existing Burger King property at 47 Central Avenue into a 94-room TownePlace Suites by Marriott hotel within the City of Dover's Gateway District. The 1.77± acre site is uniquely configured with frontage along both Central Avenue and the Spaulding Turnpike (Route 16), with Central Avenue functioning as the primary frontage and the Spaulding Turnpike serving as a secondary frontage.

As illustrated on the provided civil plans, the parcel is irregularly shaped and constrained by its curvature along the Spaulding Turnpike right-of-way, existing interchange geometry, and the need to accommodate safe vehicular access and internal circulation. These physical characteristics significantly influence building placement and limit the extent to which a continuous building façade can be located directly along the Central Avenue frontage and the Spaulding Turnpike.

The subject site is located outside of Dover's traditional downtown core and functions as part of a gateway corridor serving both local and regional traffic, with immediate proximity to the Spaulding Turnpike interchange. The site design reflects a development pattern appropriate for a hotel use serving regional and interstate travelers rather than a fine-grained downtown street environment.

Two Conditional Use Permits are requested to allow flexibility with **(1) the Central Avenue Primary Frontage build-to line and associated percentage of frontage build-out, and (2) the Spaulding Turnpike Secondary Frontage percentage of frontage build-out**. The proposed building placement responds to the site's constrained geometry by balancing frontage visibility, guest access, and parking demands while maintaining an appropriate setback from the Spaulding Turnpike right-of-way.

While the proposed building does not fully meet the prescriptive build-to line and frontage build-out standards along Central Avenue & Spaulding Turnpike, the layout maintains the intent of the Gateway District regulations by establishing a strong architectural presence along the corridor and reinforcing the role of Central Avenue as a gateway into the City.

The requested flexibility is directly attributable to the site's irregular geometry, dual-frontage condition, and proximity to a limited-access highway, rather than a departure from the goals of the zoning ordinance. The proposed development will not result in adverse impacts to surrounding properties and is consistent with the Gateway District's purpose of accommodating hospitality uses in locations well suited for regional access without placing additional pressure on the downtown core.

Accordingly, the proposed Conditional Use Permit represents a reasonable and appropriate application of zoning flexibility in response to documented site constraints and satisfies the intent of the Gateway District frontage standards.

11 CORPORATE DRIVE ▪ BELMONT ▪ NH 03220
PHONE (603) 527-9090 ▪ WWW.OPECHEE.COM

# Abutters List

TownePlace Suites by Marriott
47 Central Avenue, Dover, NH 0303820
January 28, 2026

**Owner:**

*Tax Map 17 Lot 76*
Arc Cafeusa001
11995 El Camino Real
San Diego, CA 92130

**Applicant:**

Lafrance Bowden Hospitality II, LLC
c/o: Tim Burkhardt, CHA
41 Old Bedford Road
Westport, MA 02790

**Design-Build Firm/Architect/Agent:**

Opechee Construction Corporation
c/o: Barry Stowe & David Sherborne, Architect
11 Corporate Drive
Belmont, NH 03220

**Civil Engineer/Surveyor/Landscape Architect:**

Allen & Major Associates, LLC
c/o: Brian Jones, P.E/James Smith, L.S./ Bethany Dermondy, L.A
400 Harvey Road, Suite D
Manchester, NH 03103

**Transportation Engineer:**

Vanasse & Associates, Inc.
c/o: Jeffrey Dirk, P.E.
35 New England Business Center Drive,
Suite 140
Andover, MA 01810-1066

**Wetland Scientist:**

Stoney Ridge Environmental, LLC
c/o: Cynthia Balcius, CSS, CWS
8 Kiana Road
Alton, NH 03809

December 29, 2025

Stoney Ridge ENVIRONMENTAL LLC

Barry Stowe
Opechee Construction Corp.
11 Corporate Drive
Belmont, NH 03220

RE: **47 Central Avenue**
**Tax Map 17 Lot 76**
**Dover, NH**

Subject: **Wetland Delineation**

Stoney Ridge Environmental, LLC (SRE) assessed the lot referenced above for the presence of wetlands.

The following standards were utilized to identify jurisdictional wetlands:

1) United States Department of Agriculture, Natural Resources Conservation Service. 2018. *Field Indicators of Hydric Soils in the United States*, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
2) *Field Indicators for Identifying Hydric Soils In New England*. Version 4. April 2019. New England Hydric Soils Technical Committee.
3) *U.S. Army Corps of Engineers 2020: National Wetland Plant List, version 3.5 (http://wetland_plants.usace.army.mil)*. U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH.
4) *The National Wetland Plant List: 2016 wetland ratings.* Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
5) *Corps of Engineers Wetlands Delineation Manual*. January 1987. Wetlands Research Program Technical Report Y-87-1.
6) *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: Northcentral and Northeast Region. January 2012, Version 2. U.S. Army Corps of Engineers. Environmental Laboratory ERDC/EL TR-12-1.
7) *Classification of Wetlands and Deepwater Habitats of the United States*. December 1979. L. Cowardin, V. Carter, F. Golet, and E. LaRoe. US Department of the Interior. Fish and Wildlife Service. FWS/OBS-79/31.
8) *NHDES Env-Wt 100-900*. New Hampshire Department of Environmental Services Wetland Rules, 2020.

SRE assessed the site for wetlands using the US Army Corps of Engineers three parameter analysis to identify wetlands. This process involves documenting hydric soils, hydrophytic

vegetation and hydrology. SRE determined there were no wetlands on this site due to the lack of hydric soils, hydrophytic vegetation, and hydrology.

**Site Description:**

This site is located off Central Avenue in Dover, NH at Tax Map 17, Lot 76. The subject property is bounded to the east and south by the Spaulding Turnpike (Rt 16), to the west by a commercial building and parking lot, and to the north by Central Avenue. The northern central portion of the subject property contains one vacant commercial building. Much of the remainder of the lot is paved parking areas as well as a drive-through. To the south and west of the parking area is a small, vegetated area dominated by northern red oak (*Quercus rubra*), white pine (*Pinus strobus*), and golden rod (*Solidago spp.*). The vegetation identified on site are primarily upland species. No primary or secondary indicators of wetland hydrology were identified on site. No hydric soil was observed.

Photo 1: A view of the northern paved portion of the lot looking toward Central Avenue.

Photo 2: A view of the vacant building and portion of the paved lot on the western half of the property.

Photo 3: A view of the southern vegetated portion of the lot facing the Spaulding Turnpike.

Photo 4: A view of the paved parking area located on the southern half of the lot.

Based on this assessment SRE has determined there are no wetlands on the lot. If there are any additional questions regarding this wetlands assessment, please feel free to contact us at (603) 776-5825.

Sincerely,
**Stoney Ridge Environmental, LLC**

STATE OF NEW HAMPSHIRE
CYNTHIA M. BALCIUS
1/5/20
No. 061
CERTIFIED WETLAND SCIENTIST

Cynthia M. Balcius, CSS, CWS, CPESC
Senior Soil and Wetland Scientist

Jenna Sabia
Assistant Project Manager

Stoney Ridge ENVIRONMENTAL LLC

Vanasse & Associates inc

Transportation Engineers & Planners

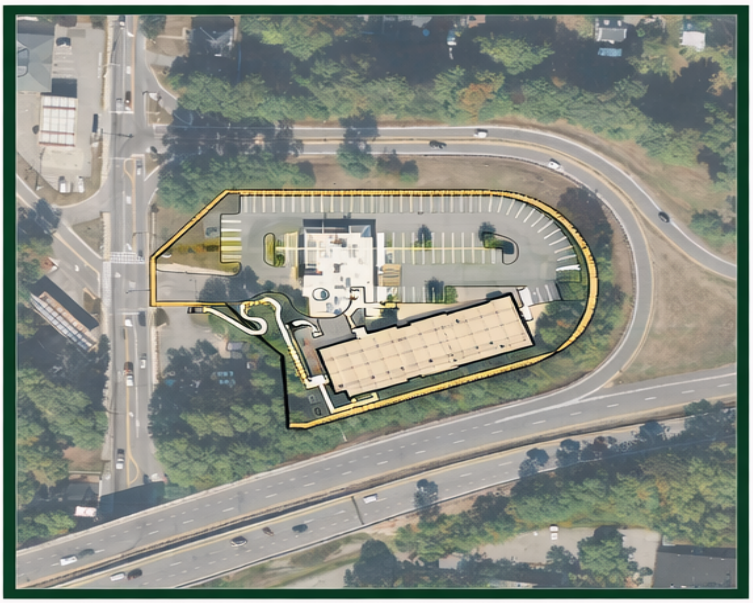
# TRAFFIC IMPACT STUDY

## Proposed Hotel Development

## 47 Central Avenue (NH Route 108)

## Dover, New Hampshire

### LOCUS MAP



**Prepared for:**

- **Opechee Construction Corporation**
  11 Corporate Drive
  Belmont, NH 03220

**Attn: Mr. Barry Stowe**
Civil Design Manager

**Prepared by:**


- **Vanasse & Associates, Inc.**
  35 New England Business Center Drive, Suite 140
  Andover, MA 01810
  (978) 474-8800


**Project No.: 10566** Date: January 29, 2026

*Traffic Impact Study prepared to evaluate existing and projected traffic conditions associated with the proposed four-story, 94-guest-room hotel development located at 47 Central Avenue in Dover, New Hampshire.*

# MEMORANDUM

**TO:** Mr. Barry Stowe
Civil Design Manager
Opechee Construction Corporation
11 Corporate Drive
Belmont, NH 03220

**FROM:** Scott W. Thornton, P.E. *and*
Stephan Zaets, P.E., PTOE
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810
(978) 474-8800

**DATE:** January 29, 2026

**RE:** 10566

**SUBJECT:** Traffic Impact Study
Proposed Hotel – 47 Central Avenue (NH Route 108)
Dover, New Hampshire

---

Vanasse & Associates, Inc. (VAI) has prepared this Traffic Impact Study (TIS) in order to identify traffic impacts associated with a proposed hotel development to be located at 47 Central Avenue (NH Route 108) in Dover, New Hampshire (hereafter referred to as the "Project"). The purpose of this memorandum is to review existing and future traffic conditions in the vicinity of the Project site, determine the traffic impact of the proposed Project at key intersections expected to experience increased traffic levels from the Project, and review the need for improvements to mitigate the Project's traffic impact.

## PROJECT DESCRIPTION

The Project entails the construction of a four story, 94 guest room hotel. At present, the Project site is vacant and previously contained a Burger King with a drive-through and indoor seating. The Project site is bordered by Spaulding Turnpike (NH Route 16) to the south, Route 16's northbound on and off ramps to the north and the east, and Route 108 to the west.

Vehicle access to and egress from the proposed development will be provided an existing driveway opening that meets the Route 108 at Locust Street intersection.

## EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in January 2026. The field investigation consisted of an inventory of existing roadway geometrics, traffic volumes, and operating characteristics, as well as posted speed limits, sight distance, and land use information within the study area. The study area for the Project is listed below and graphically depicted in Figure 1:

- Central Avenue at NH Route 16 southbound on/off-ramps
- Central Avenue at Locust Street and Project site driveway
- Central Avenue at NH Route 16 northbound on/off-ramps

The following describes the study area roadway and intersections.

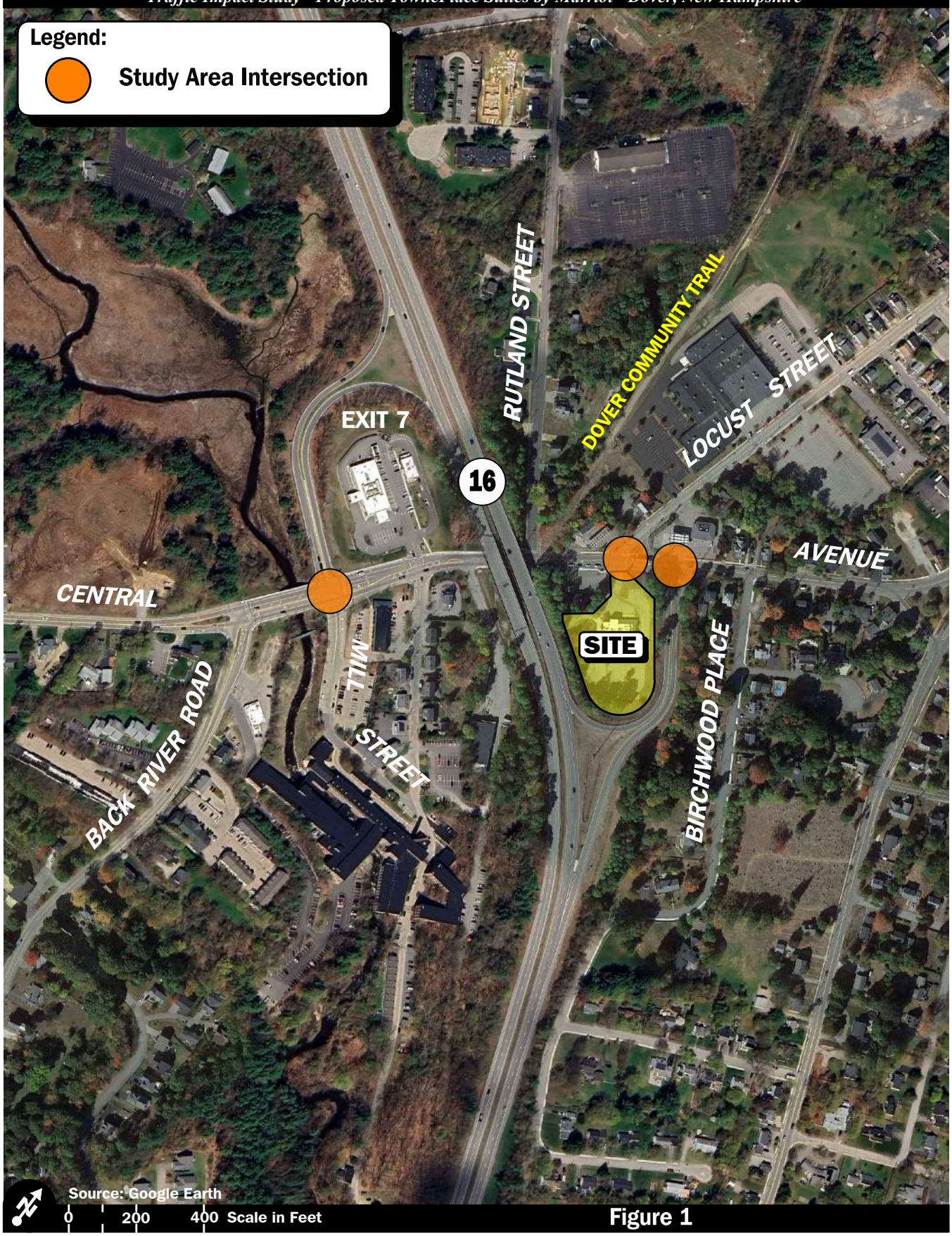



**Figure 1**

**Site Location and Study Area Map**

Vanasse & Associates inc

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## Study Area

### Roadways

#### *Central Avenue*

Central Avenue is a two-lane minor arterial roadway under the jurisdiction of the City of Dover and traverses the study area in a general north-south direction, providing additional turn lanes at major intersections. Central Avenue features 11- to 14-foot-wide travel lanes in each direction, separated by a painted double-yellow centerline. The road also includes 4- to 5-foot-wide sidewalk on the north side of the roadway. Illumination is provided within the study area through lights attached to utility poles. The posted speed limit along Central Avenue within the study area is 30 miles per hour (mph). Land use within this area is predominantly commercial with some residential properties.

### Intersections

Figure 2 summarizes existing traffic control, lane use, travel lane widths, and pedestrian and bicycle accommodations at the study area intersections as observed in January 2026.

## Existing Traffic Volumes

In order to establish base traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts and manual turning movement counts (TMCs) were completed in December 2025. TMCs were conducted on Thursday, December 18, 2025, during the weekday morning (7:00 to 9:00 AM) and weekday evening (3:00 to 6:00 PM) peak periods, and on December 20, 2025 during the Saturday midday (11:00 AM to 2:00 PM) peak periods. The ATR counts were conducted over a 72-hour period on Central Avenue, south of Locust Street, from December 18 to December 20, 2025.

### Traffic-Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, NHDOT 2024 Monthly Data, provided for Urban Group 4 (Urban Highways), were reviewed. Based on a review of this data, December volumes were found to be approximately 14.0 percent *below* peak-month conditions. As such, an adjustment factor of 1.14 was applied to the 2025 traffic volumes to represent peak-month conditions in accordance with NHDOT standards. The 2025 Existing traffic volumes are summarized in Table 1, with weekday morning, weekday evening, and Saturday midday peak-month peak-hour traffic volumes graphically depicted on Figures 3, 4, and 5, respectively.

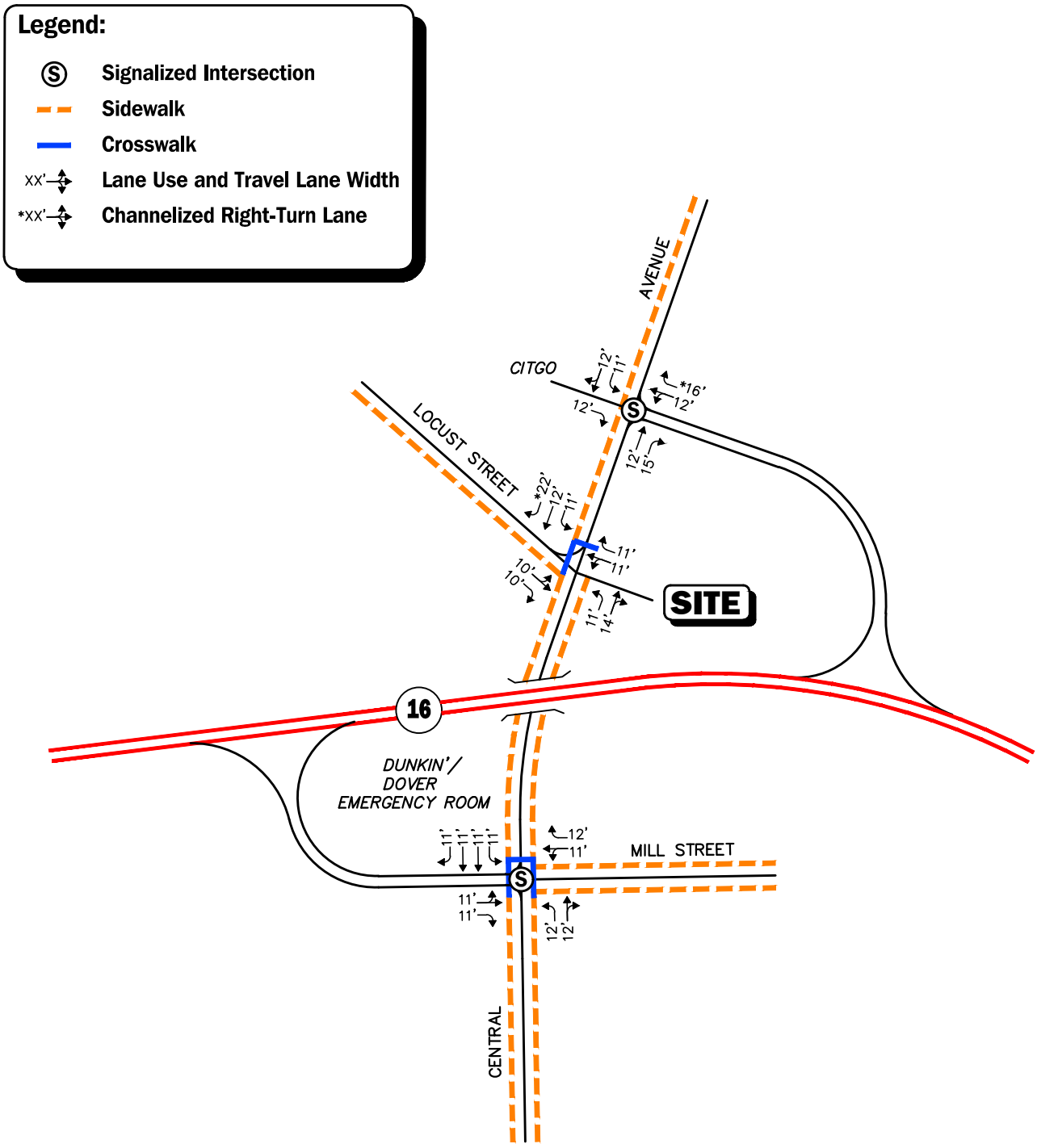


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**Figure 2**

**Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities**

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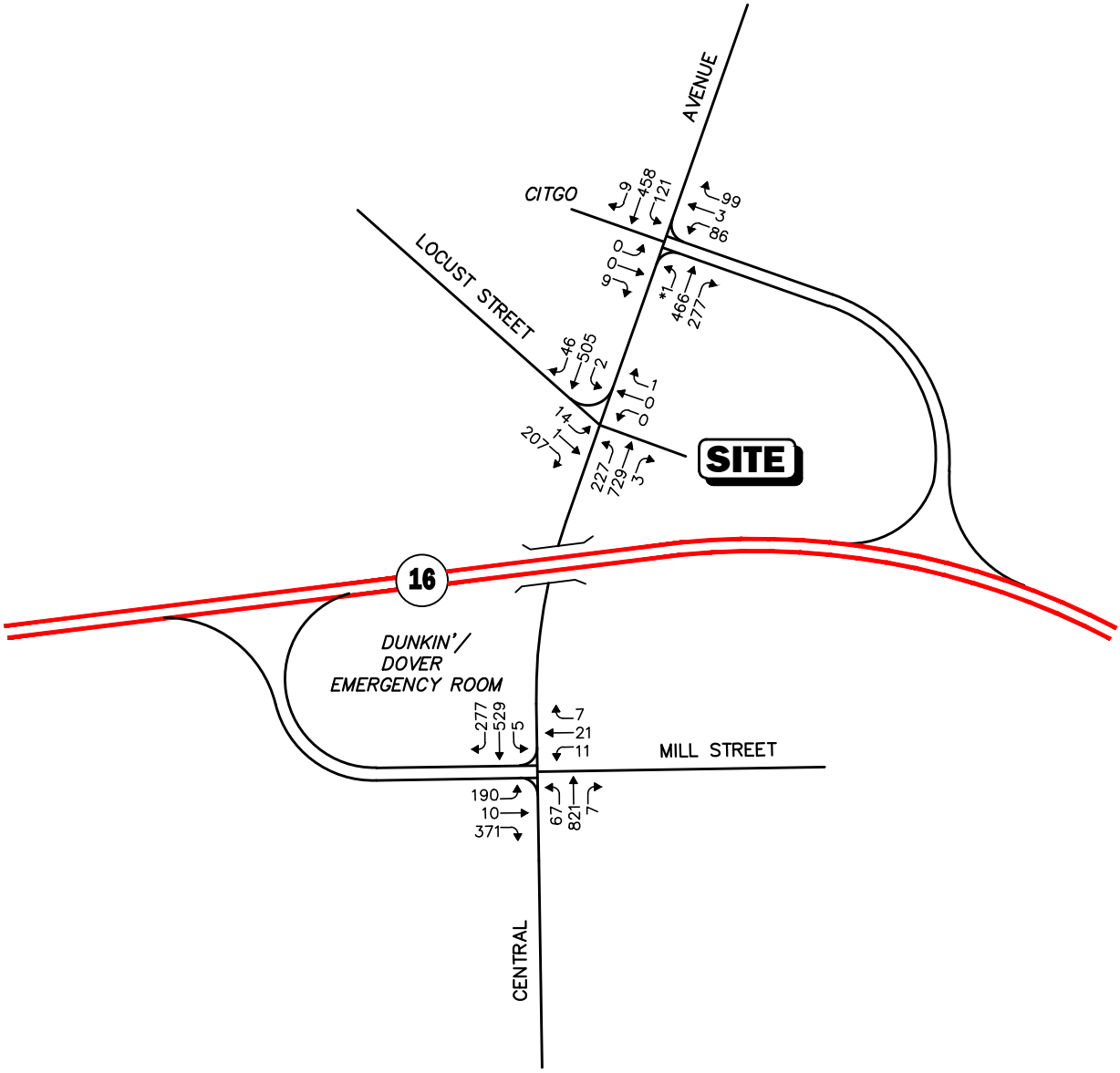


* Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

**Figure 3**

Vanasse & Associates inc

**2025 Existing**
**Peak-Month**
**Weekday Morning**
**Peak-Hour Traffic Volumes**

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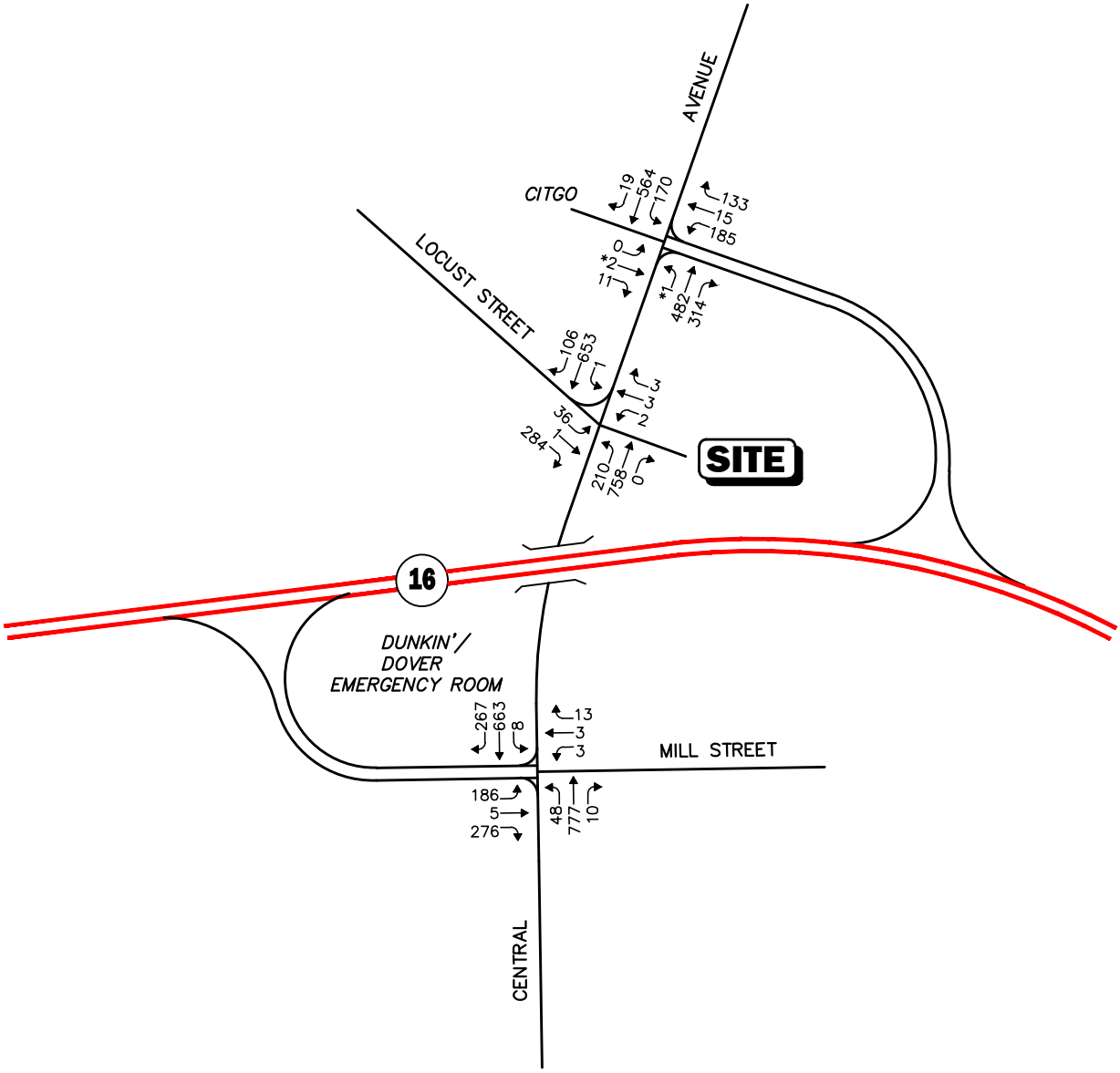


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 4**

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**2025 Existing**
**Peak-Month**
**Weekday Evening**
**Peak-Hour Traffic Volumes**

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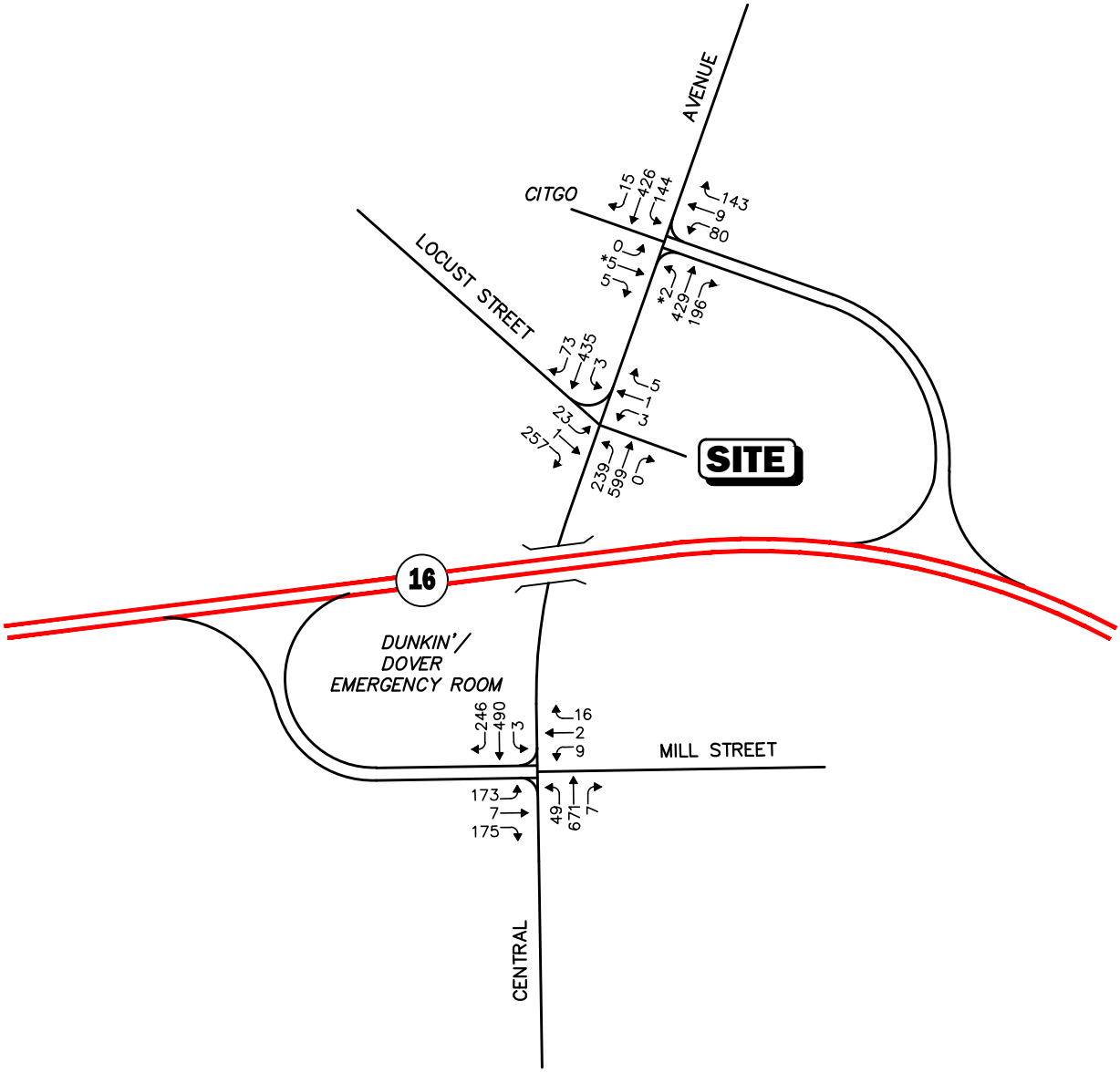


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 5**

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**2025 Existing**
**Peak-Month**
**Saturday Midday**
**Peak-Hour Traffic Volumes**

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**Table 1**
**EXISTING ROADWAY TRAFFIC-VOLUME SUMMARY**

| Location/Peak Hour | Daily Volume (vpd)[a] | Volume (vph)[b] | K Factor[c] | Directional Distribution[d] |
|---|---|---|---|---|
| *Central Avenue, south of Locust Road:* | | | | |
| Weekday Daily | 18,784 | -- | -- | -- |
| Weekday Morning | -- | 1,671 | 8.9 | 57% NB |
| Weekday Evening | -- | 1,907 | 10.2 | 51% NB |
| Saturday Daily | 15,961 | -- | -- | -- |
| Saturday Midday | -- | 1,533 | 9.6 | 55% NB |

Source: TMCs conducted by VAI in December 2025 adjusted to account for seasonal factors.
[a]Two-way daily traffic expressed in vehicles per day, ATRs conducted by VAI in December 2025 adjusted to account for seasonal factors.
[b]Two-way peak-hour volume expressed in vehicles per hour.
[c]The percentage of daily traffic that occurs during the peak hour.
[d]Percent traveling in peak direction.

As can be seen in Table 1, Central Avenue, in the vicinity of the site, is observed to carry approximately 18,784 vehicles on an average weekday and 15,961 vehicles on an average Saturday under peak-month conditions, with approximately 1,671 vehicles per hour (vph) during the weekday morning peak hour, 1,907 vph during the weekday evening peak hour, and 1,533 vph during the Saturday midday peak hour.

## Public Transportation

Public transportation services are provided within the City of Dover by the Cooperative Alliance for Seacoast Transportation (COAST). However, there are no public transportation stops in the vicinity of the Project site.

## Motor Vehicle Crash Data

Motor vehicle crash data for the study area intersections were requested from the City of Dover Police Department for the most recent three-year period available (2022 through 2024) to examine crash trends in the study area. To date, these data have not been provided. When the data are provided, an update or supplement will be issued.

## Vehicle Speed Measurements

Existing vehicle speeds along Central Avenue, south of Locust Street, in the vicinity of the Project site were recorded in conjunction with the ATR to determine the average and 85$^{th}$ percentile vehicle speeds. The speed limit on Central Avenue in the vicinity of the site is posted at 30 mph. The results of the speed measurements are shown in Table 2.

**Table 2**
**VEHICLE TRAVEL SPEED MEASUREMENTS**

| | Central Avenue | |
|---|---|---|
| | Northbound | Southbound |
| Average Travel Speed (mph) | 24 | 24 |
| 85th Percentile Speed (mph) | 28 | 29 |
| Speed Limit (mph) | 30 | 30 |

mph = miles per hour.

As can be seen in Table 2, the mean vehicle travel speed along Central Avenue in the vicinity of the Project site was found to be 24 mph in both directions. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 28 mph in the northbound direction and 29 mph in the southbound direction.

## FUTURE CONDITIONS

To determine the impact of site-generated traffic volumes on the roadway network under future conditions, existing traffic volumes in the study area were projected to the years 2026 and 2036. Traffic volumes on the roadway network at that time, in the absence of the Project (i.e., the No-Build condition), would include existing traffic, new traffic due to general background traffic growth, and traffic related to specific development by others expected to be completed by 2026 and 2036. Inclusion of these factors resulted in the development of 2026 and 2036 No-Build traffic volumes. Anticipated site-generated traffic volumes were then superimposed upon these No-Build traffic-flow networks to develop the 2026 Opening-Year and 2036 Design-Year Build traffic-volume conditions.

### Future Traffic Growth

Traffic growth on area roadways is a function of the expected land development impacting the study area. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all existing traffic volumes under study. In addition, we research the location and type of planned development affecting the study area.

#### General Background Growth

To assess general traffic growth trends within the study area, NHDOT traffic-volume data from several permanent count stations within Region E were summarized and reviewed. NHDOT indicates that traffic volumes in Region E have fluctuated between 2014 and 2024, with a compound annual growth rate of approximately 0.87 percent. An exponential projection suggests that the average annual daily traffic is expected to grow by 0.25 percent annually. By averaging both compounded annual growth and exponential projections, the traffic in this area is anticipated to increase by an average of 0.56 percent per year.

In order to provide a prudent planning condition for the Project, a slightly higher 1.0 percent per year compounded annual traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

**Specific Development by Others**

The City of Dover Planning Department was contacted in order to determine if there are any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on these discussions, the following project was identified for possible inclusion in this assessment:

- ***Proposed Multifamily Development – 23 Cataract Avenue.*** This project entails the construction of 176 units dispersed between four (4) four-story buildings to be located at 23 Cataract Avenue in Dover, New Hampshire. This project has been approved and is currently under construction. Estimates of traffic expected to be generated by this development were obtained from the *Traffic Impact Study*[1] *and Traffic Impact Evaluation*[2] prepared for this project and have been incorporated into the analysis of the 2026 and 2036 future traffic conditions.

- ***Proposed Residential Development – 105 Durham Road***. This project entails the construction of 9 residential units to be located at 105 Durham Road in Dover, New Hampshire. This project has been approved and is currently under construction. Based on the unit count, It is assumed that traffic under this development is encompassed within the one percent background growth rate.

No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate of 1.0 percent.

**Planned Roadway Improvements**

The City of Dover Department of Public Works and NHDOT were contacted in order to determine if there were any planned future roadway improvement projects within the study area. Based on these discussions, the corridor recently underwent signal improvements to all of the signalized intersections within the study. No projects aside from routine maintenance activities were identified to be planned within the study area at this time.

**No-Build Traffic Volumes**

The 2026 and 2036 No-Build peak-month peak-hour traffic-volume networks were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to 2025 Existing peak-month peak-hour traffic volumes and incorporating the above background development traffic volumes. The resulting 2026 and 2036 No-Build weekday morning, weekday evening, and Saturday midday peak-month peak-hour traffic volumes are graphically depicted on Figures 6 through 11, respectively.

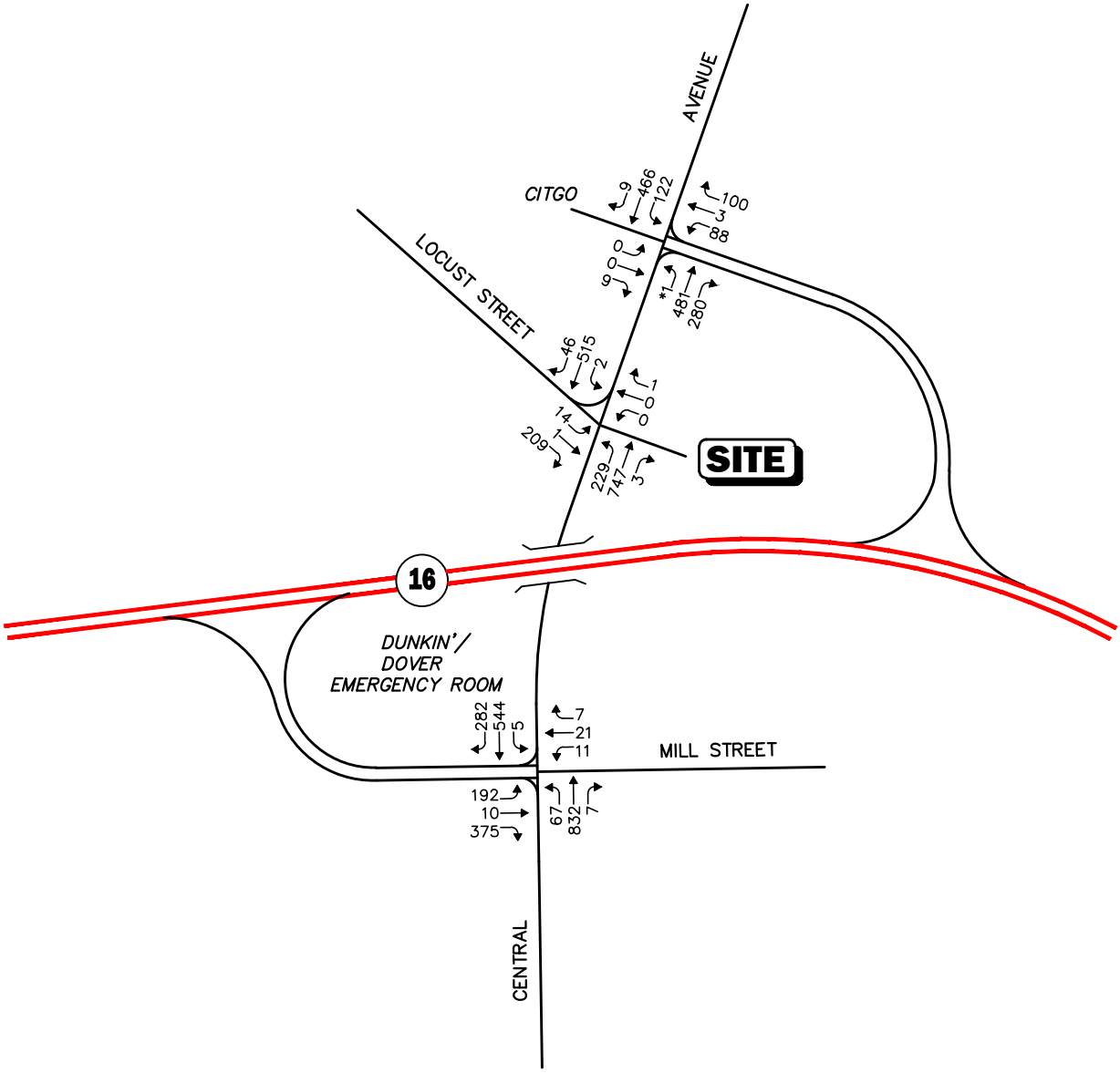
**Project-Generated Traffic**

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)[3] for similar land uses as those proposed were used. ITE Land Use Code (LUC) 311, *All Suites Hotel* was used to develop the anticipated traffic characteristics of the Project. In addition to this, the proposed hotel land use was compared to the by-right fast food restaurant, as the site currently contains a vacant Burger King with one drive-through lane (Identified as LUC 934, *Fast-Food Restaurant with Drive-Through Window)*.

[1] *Traffic Impact Assessment*, Proposed Residential Development – 23 Cataract Avenue , *Dover, New Hampshire*; Stephen G. Pernaw & Company, Inc. (July 2021)

[2] *Traffic Impact Evaluation,* McIntosh Apartments Expansion – 23 Cataract Avenue, *Dover, New Hampshire*; VAI, (July 2025)

[3] *Trip Generation Manual,* 12th Edition; Institute of Transportation Engineers; Washington, DC; 2025.




* Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

**Figure 6**

Vanasse & Associates inc

**2026 No-Build**
**Peak-Month**
**Weekday Morning**
**Peak-Hour Traffic Volumes**

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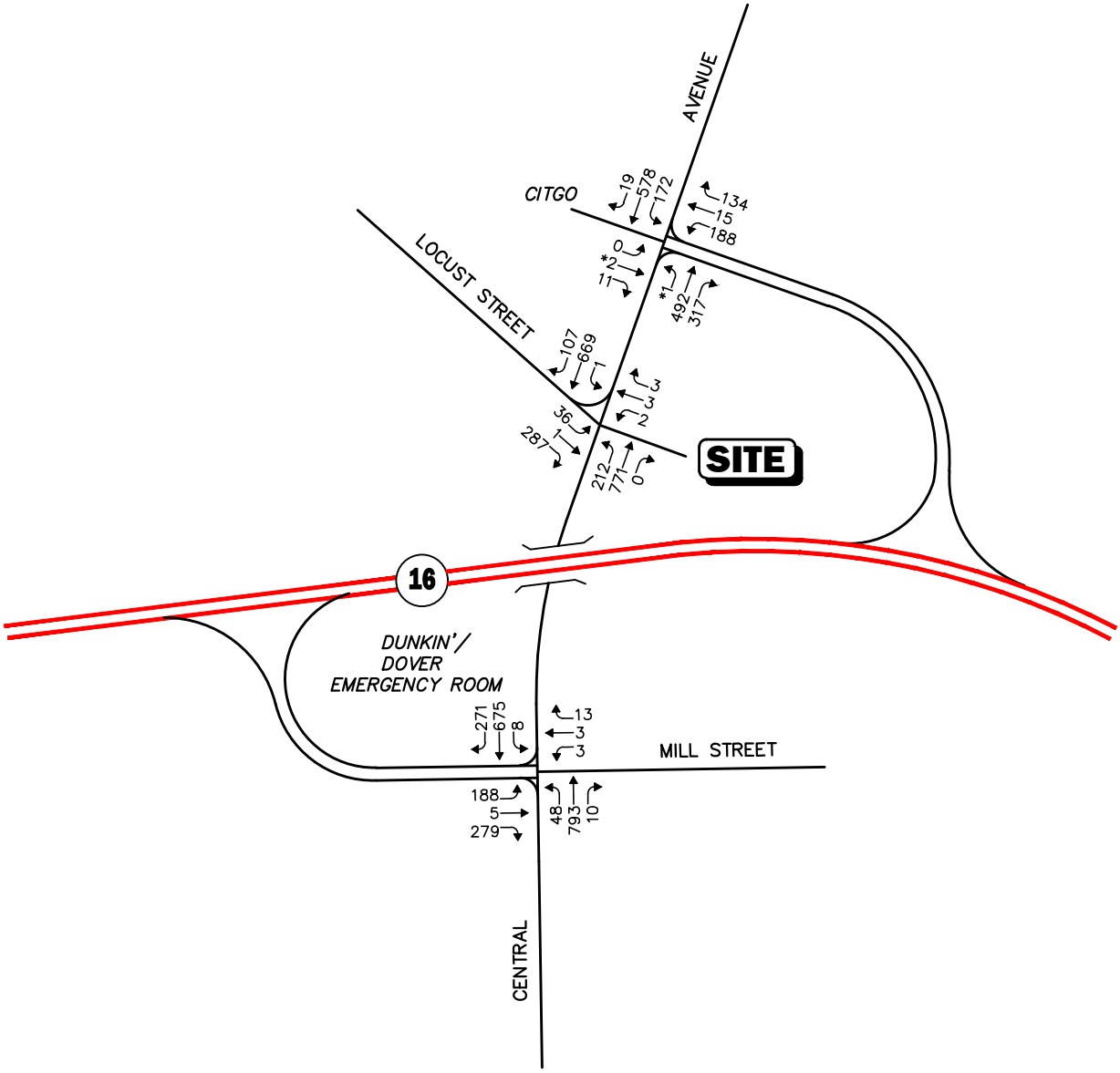


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 7**

Vanasse & Associates inc

**2026 No-Build**
**Peak-Month**
**Weekday Evening**
**Peak-Hour Traffic Volumes**

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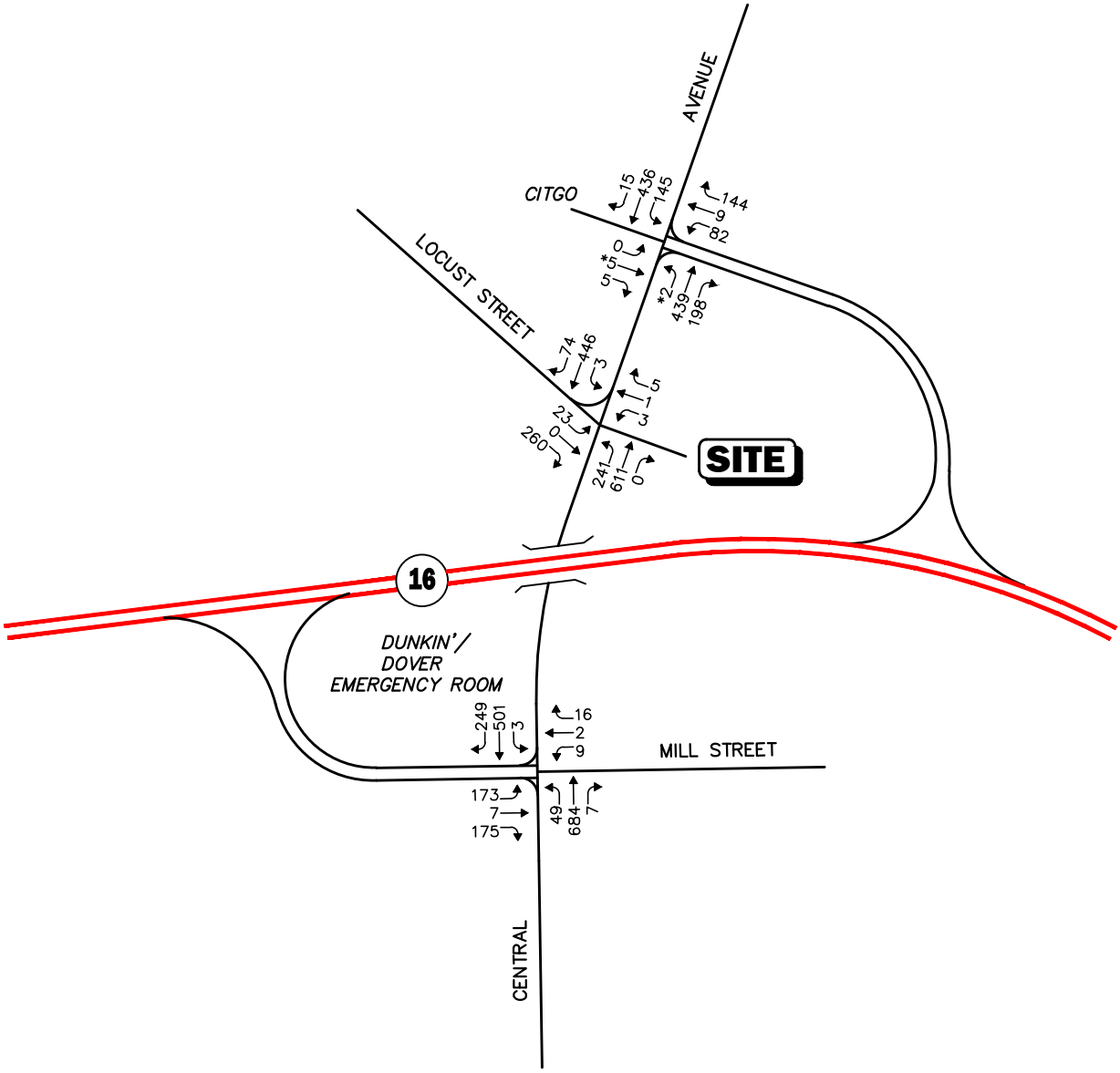


* Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

**Figure 8**

Vanasse & Associates inc

**2026 No-Build**
**Peak-Month**
**Saturday Midday**
**Peak-Hour Traffic Volumes**

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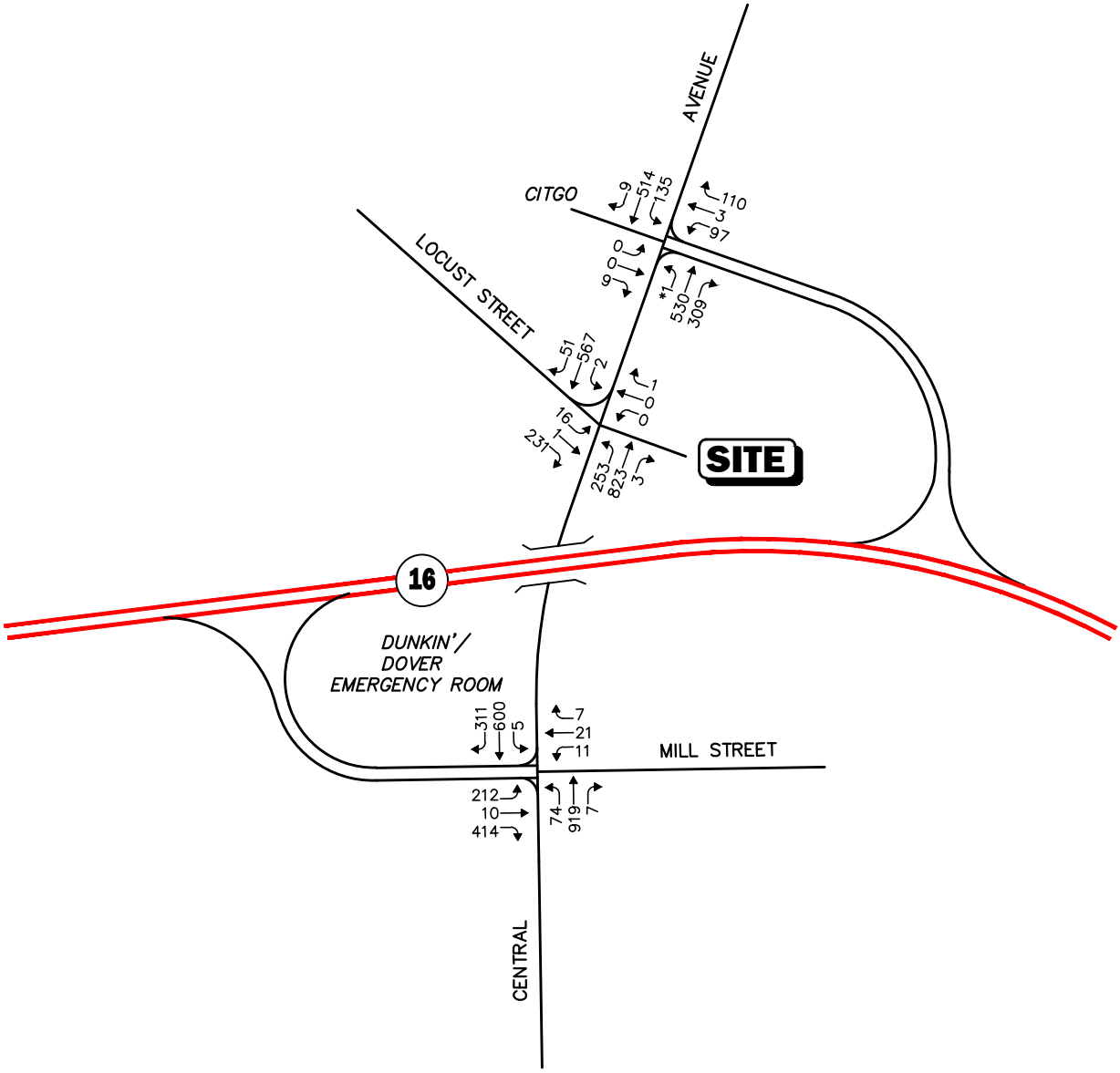


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 9**

Vanasse & Associates inc

**2036 No-Build**
**Peak-Month**
**Weekday Morning**
**Peak-Hour Traffic Volumes**

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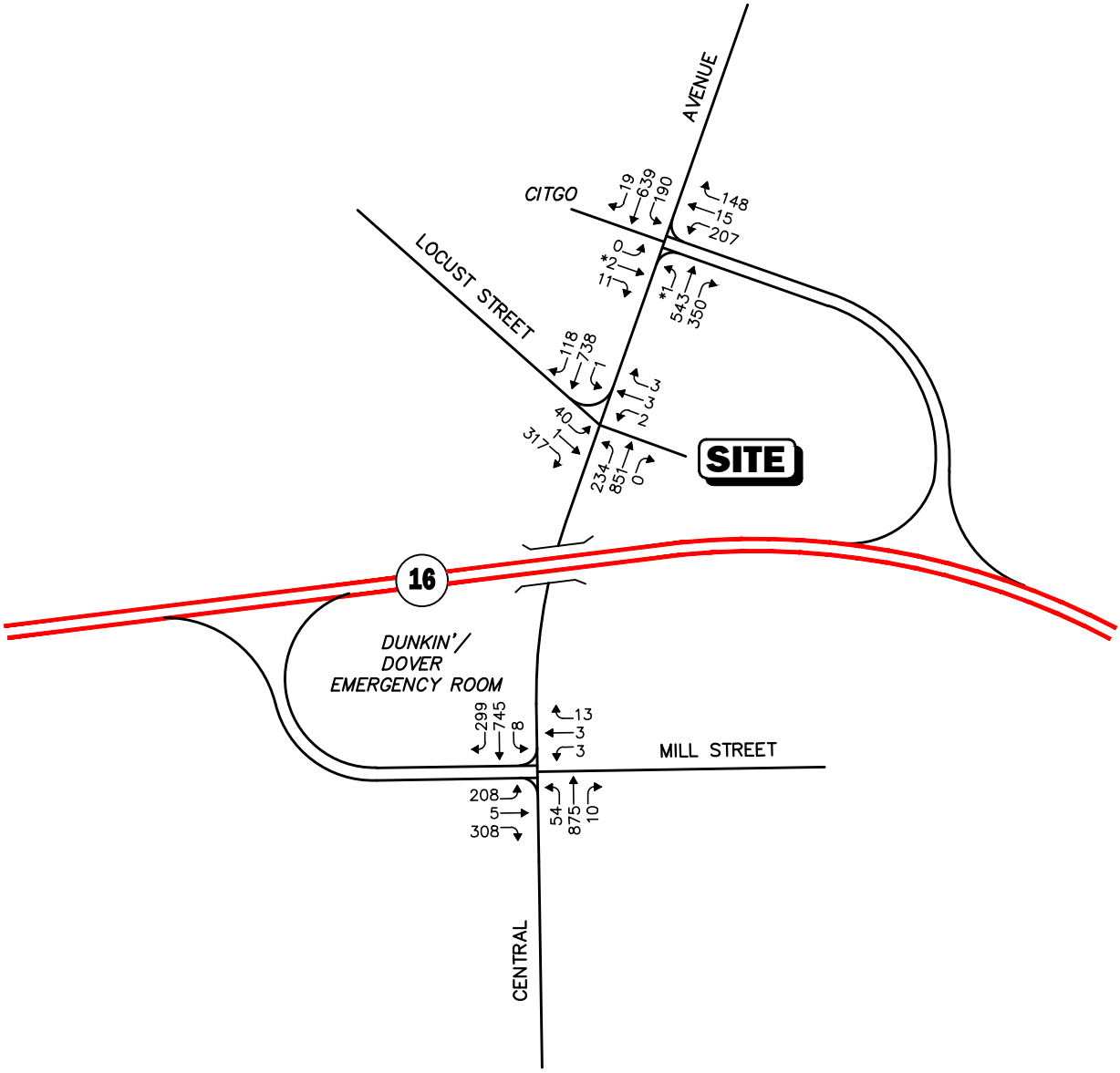


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 10**

Vanasse & Associates inc

**2036 No-Build**
**Peak-Month**
**Weekday Evening**
**Peak-Hour Traffic Volumes**

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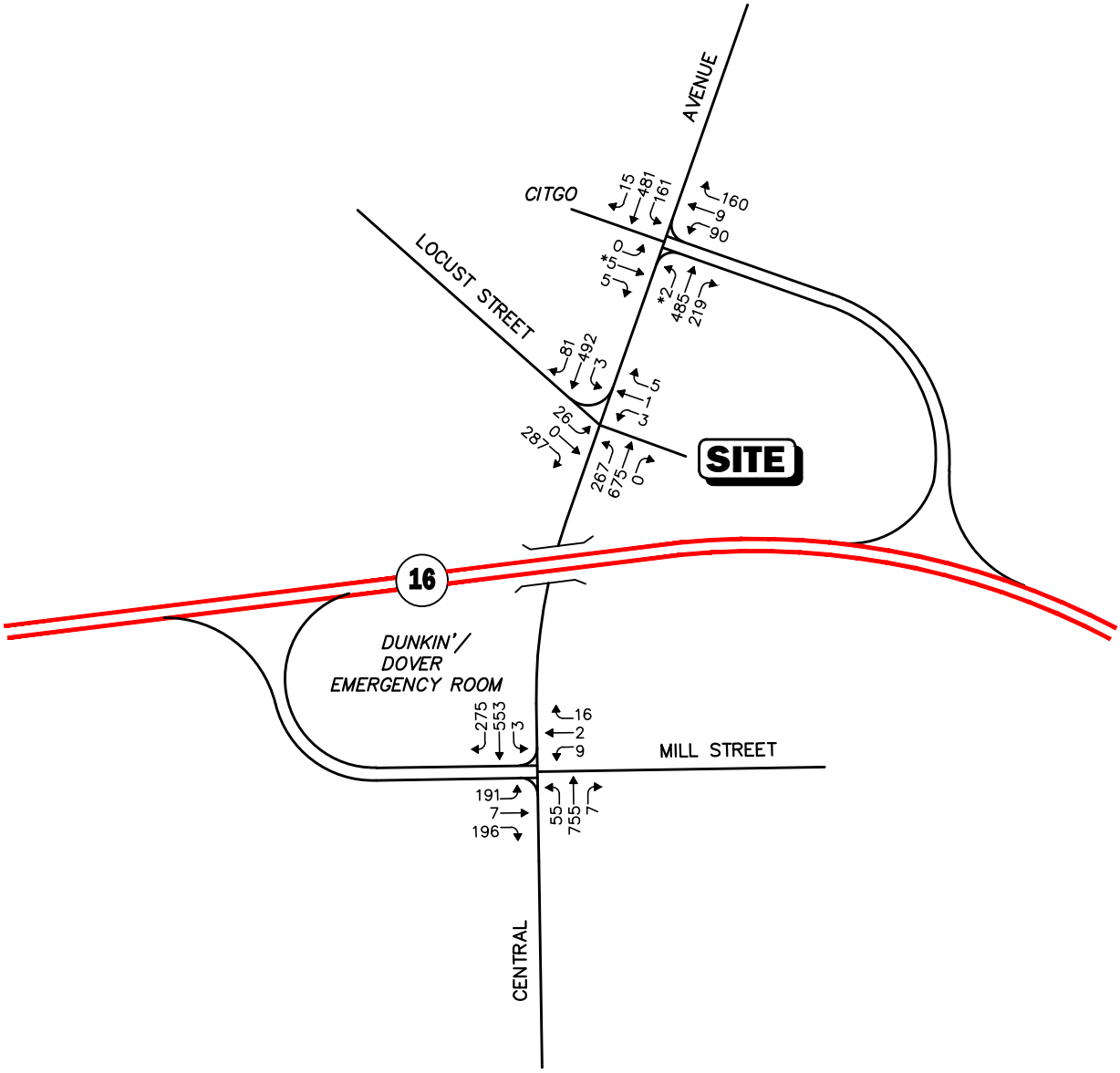


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 11**

Vanasse & Associates inc

**2036 No-Build**
**Peak-Month**
**Saturday Midday**
**Peak-Hour Traffic Volumes**

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Trip-generation calculations were performed for a typical weekday and Saturday as well as the weekday morning, weekday evening, and Saturday midday peak hours, the critical time periods for Project-related traffic activity. A summary of the expected vehicle-trip generation is summarized in Table 3.

**Table 3**
**TRIP-GENERATION COMPARISON**

| Time Period/ Directional Distribution | Proposed Hotel Trips[a] | By-Right Fast Food Restaurant Trips[b] |
|---|---|---|
| *Weekday Daily:* | | |
| Entering | 186 | 1,459 |
| Exiting | 186 | 1,459 |
| Total | 372 | 2,918 |
| *Weekday Morning Peak Hour:* | | |
| Entering | 11 | 110 |
| Exiting | 10 | 106 |
| Total | 21 | 216 |
| *Weekday Evening Peak Hour:* | | |
| Entering | 15 | 107 |
| Exiting | 15 | 99 |
| Total | 30 | 206 |
| *Saturday Daily:* | | |
| Entering | 235 | 1,700 |
| Exiting | 235 | 1,700 |
| Total | 470 | 3,400 |
| *Saturday Midday Peak Hour:* | | |
| Entering | 16 | 168 |
| Exiting | 16 | 162 |
| Total | 32 | 330 |

[a]Based on ITE LUC 311, *All Suites Hotel (94 rooms)*
[b]Based on ITE LUC 934, *Fast Food Restaurant with Drive-Through Window (6.51/ 1,000 SF).*

As shown in Table 3, the Project is expected to generate approximately 372 vehicle trips on an average weekday and 470 vehicle trips on an average Saturday, with 21 vehicle trips (11 entering and 10 exiting) during the weekday morning peak hour, 30 vehicle trips (15 entering and 15 exiting) during the weekday evening peak hour, and 32 vehicle trips (16 entering and 16 exiting) during the Saturday midday peak hour.

When comparing the proposed hotel to the by-right fast-food restaurant use, the proposed hotel is expected to generate approximately 90 percent less trips during a typical weekday and typical Saturday, with comparable reductions in vehicle trips expected during the weekday morning, weekday evening, and Saturday midday peak hour periods as well.

## Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was developed based on a review of existing traffic patterns along the study area roadways and at the study intersections. Because hotel business is typically a function of regional travel, trips to/ from Route 16 were proportionally scaled based on an assumption that approximately 70 percent of traffic will come from the highway. The general trip distribution for the Project is summarized in Table 4 and graphically depicted in Figure 12.

**Table 4**
**TRIP-DISTRIBUTION SUMMARY**

| Roadway | Direction (To/From) | Distribution Percentage (To/From) |
|---|---|---|
| Route 16 NB Ramp | East | 20 |
| Route 16 SB Ramp | West | 50 |
| NH Route 108 | North | 10 |
| NH Route 108 | South | 20 |
| **TOTAL** | | **100** |

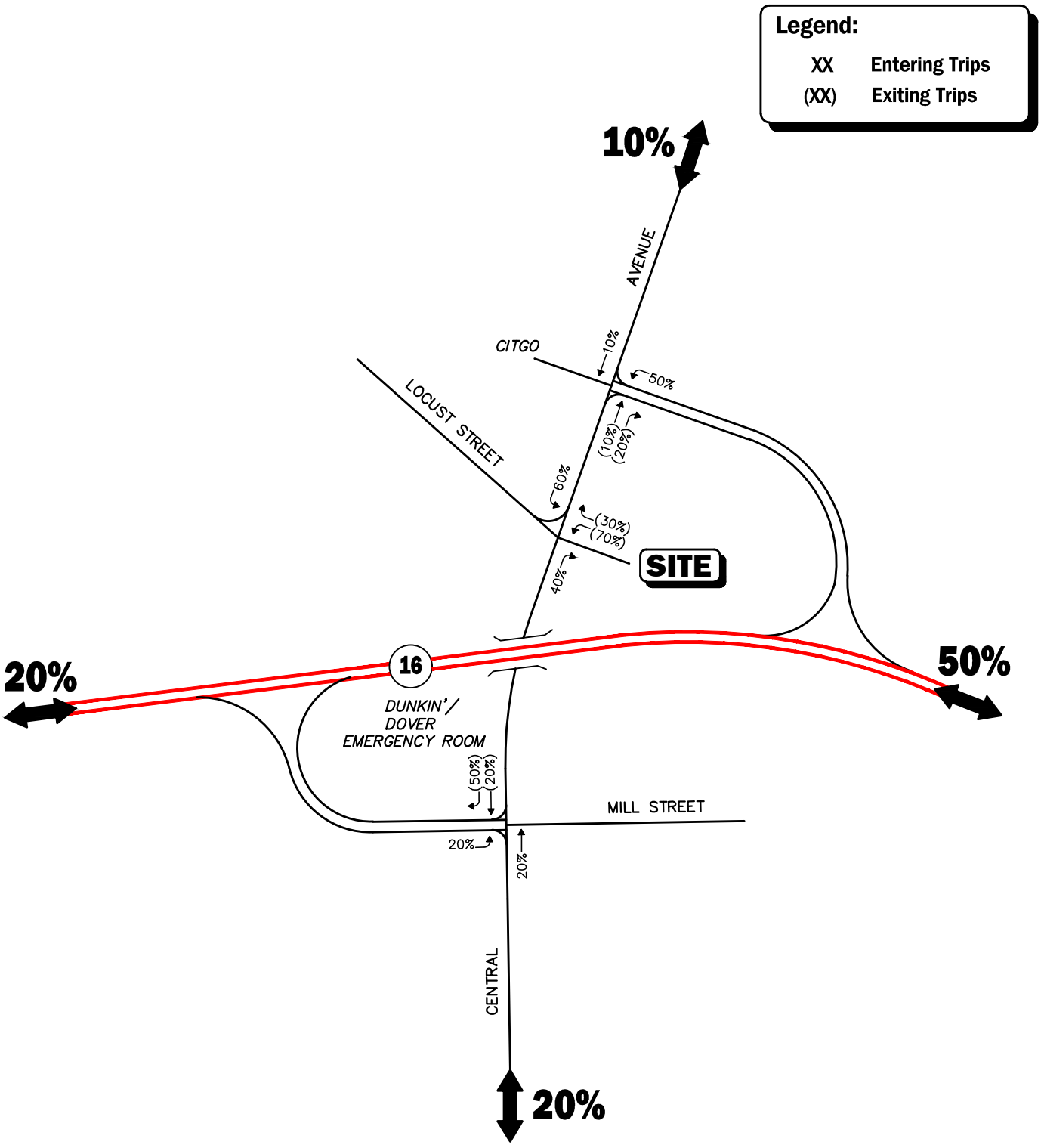
The weekday morning, weekday evening, and Saturday midday peak-month peak-hour traffic volumes expected to be generated by the Project were assigned on the study area roadway network as shown on Figures 13, 14, and 15, respectively.

## Future Traffic Volumes – Build Condition

The 2026 Opening-Year Build condition networks consist of the 2026 Opening-Year No-Build traffic volumes with the anticipated Project-generated traffic added to them. The 2026 Opening-Year Build weekday morning, weekday evening, and Saturday midday peak-hour traffic-volume networks are graphically depicted on Figures 16, 17, and 18, respectively.

The 2036 Design-Year Build condition networks consist of the 2036 Design-Year No-Build traffic volumes with the anticipated Project-generated traffic added to them. The 2036 Design-Year Build weekday morning, weekday evening, and Saturday midday peak-hour traffic-volume networks are graphically depicted on Figures 19, 20, and 21, respectively.

A summary of peak-month peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 5. These volumes are based on the expected increases from the Project.




Not To Scale

**Figure 12**

**Trip Distribution Map**

Vanasse & Associates inc

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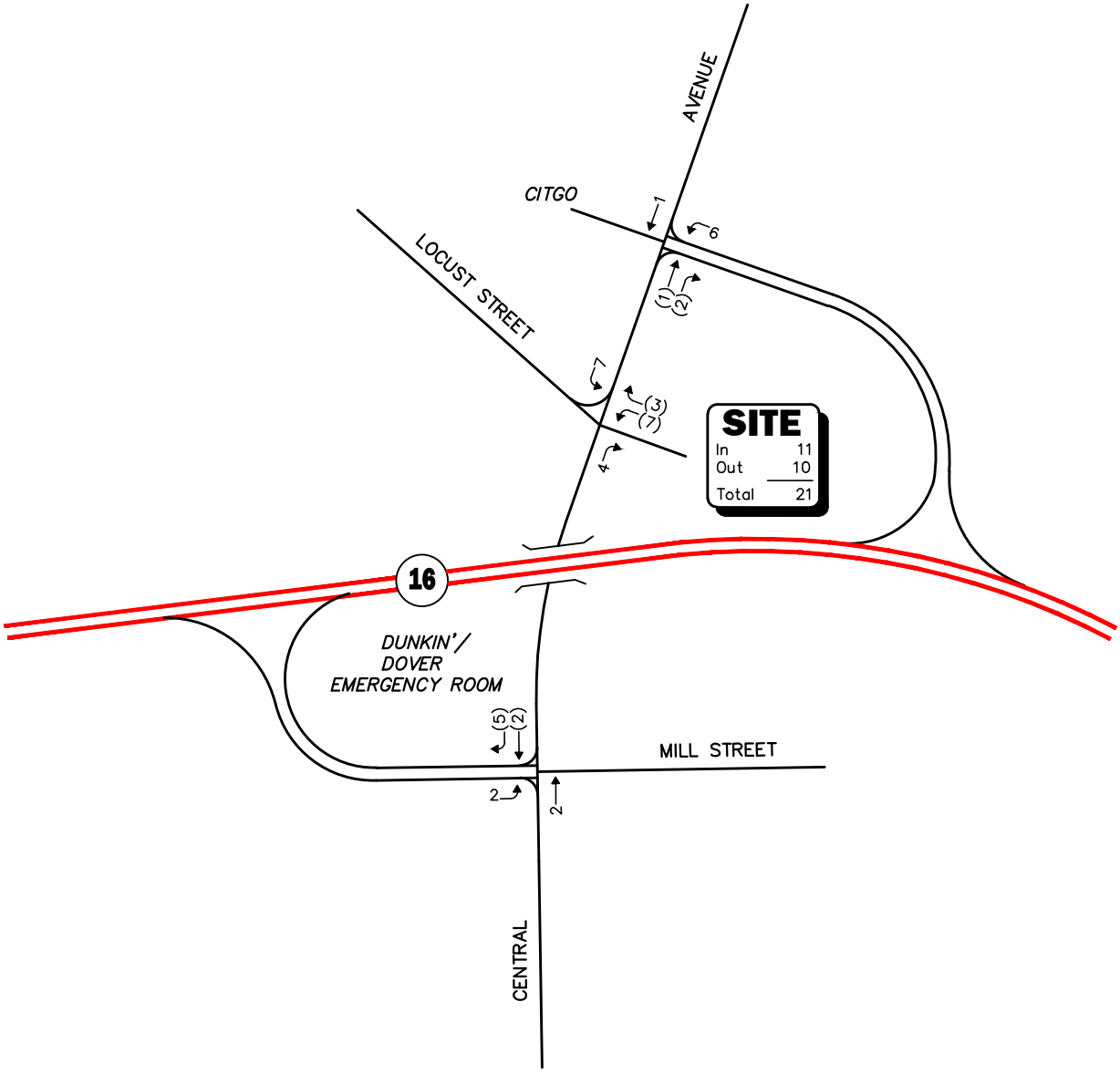
**Legend:**

| | |
|---|---|
| XX | Entering Trips |
| (XX) | Exiting Trips |




Not To Scale

**Figure 13**

**Site-Generated Peak-Month Weekday Morning Peak-Hour Traffic Volumes**

Vanasse & Associates inc

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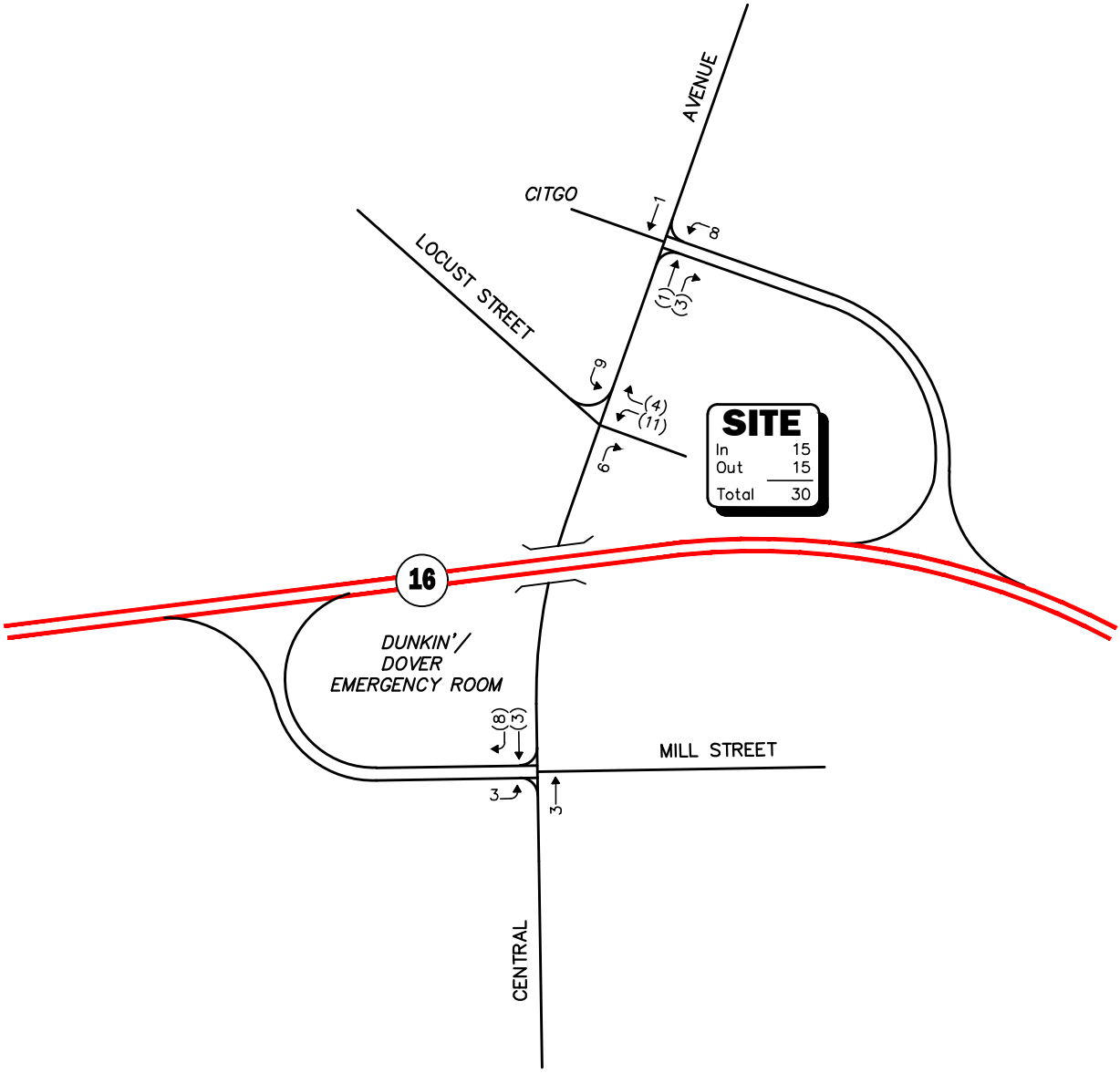
**Legend:**

| | |
|---|---|
| XX | Entering Trips |
| (XX) | Exiting Trips |




Not To Scale

**Figure 14**

**Site-Generated
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes**

Vanasse & Associates inc

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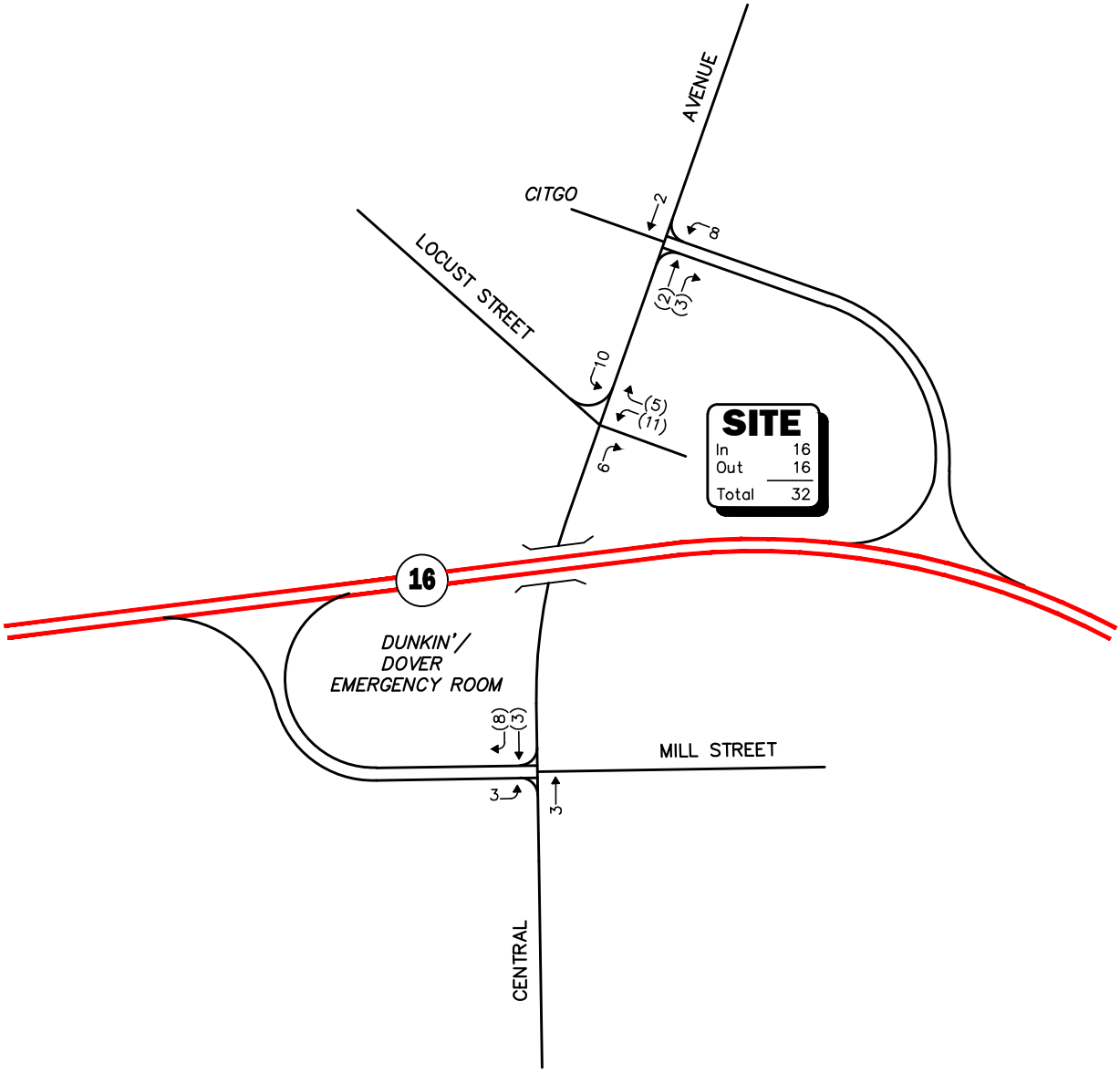
**Legend:**

| | |
|---|---|
| XX | Entering Trips |
| (XX) | Exiting Trips |




Not To Scale

**Figure 15**

**Site-Generated Peak-Month Saturday Midday Peak-Hour Traffic Volumes**

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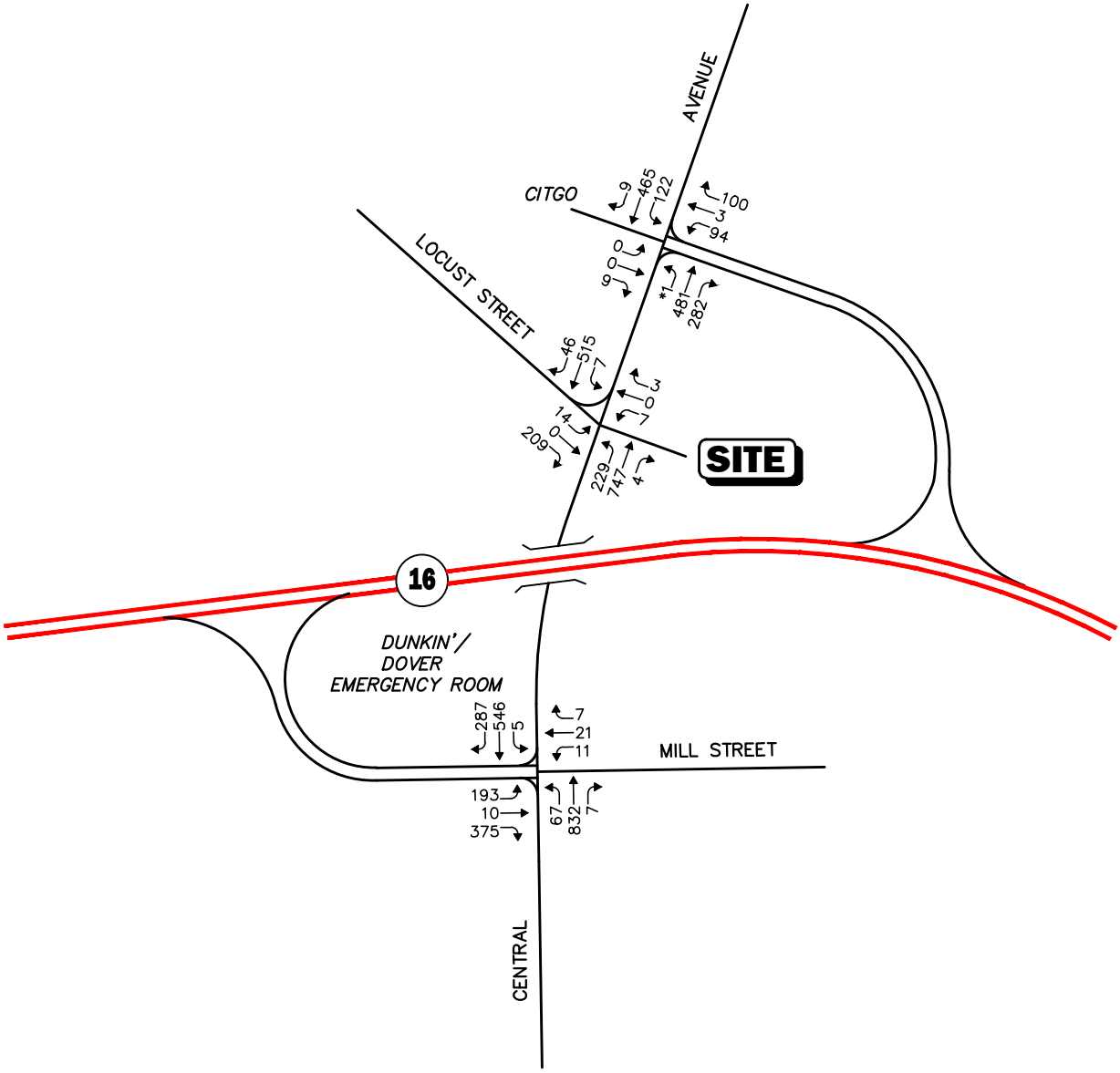


* Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

**Figure 16**

Vanasse & Associates inc

**2026 Build**
**Peak-Month**
**Weekday Morning**
**Peak-Hour Traffic Volumes**

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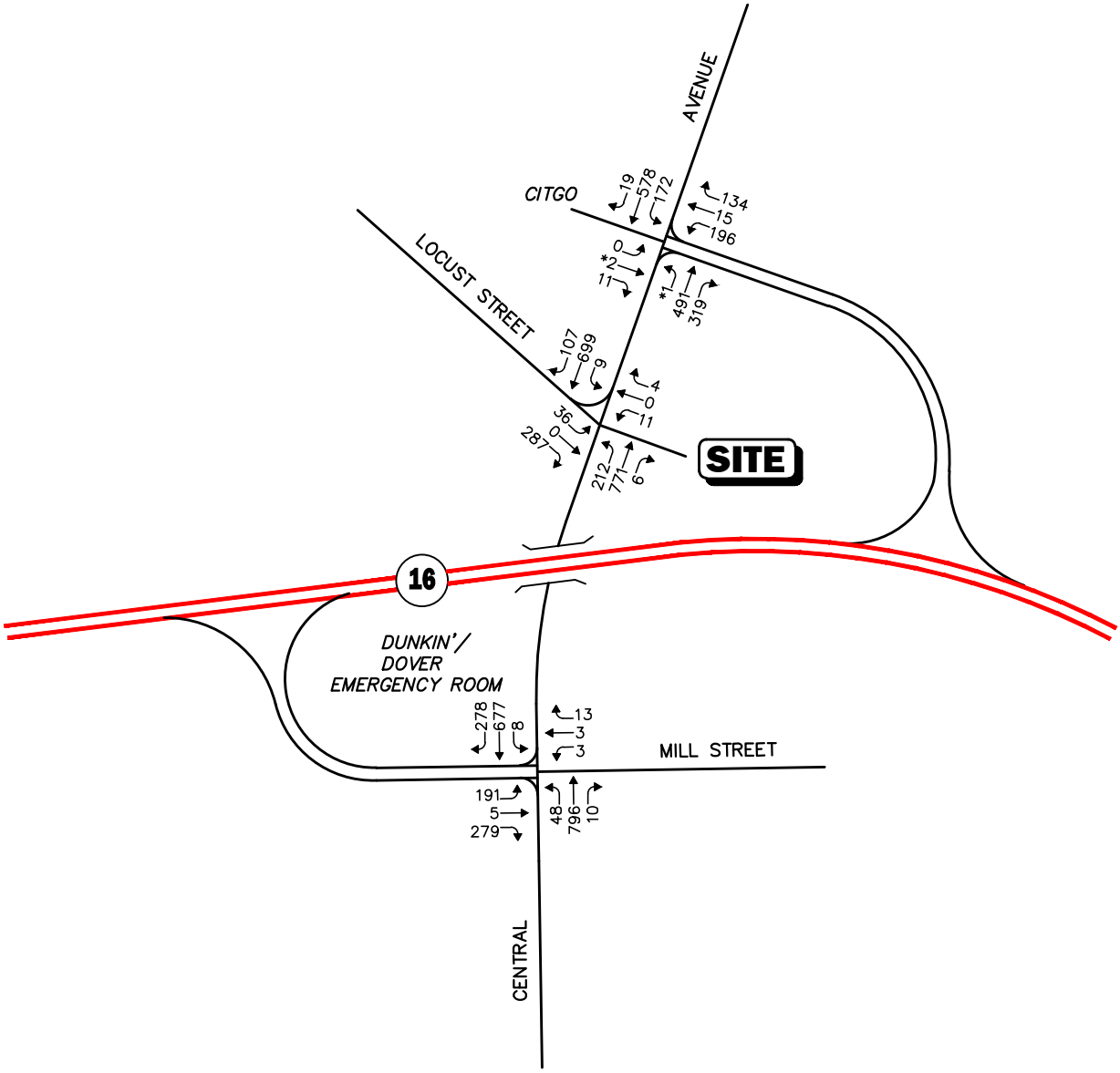


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 17**

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**2026 Build**
**Peak-Month**
**Weekday Evening**
**Peak-Hour Traffic Volumes**

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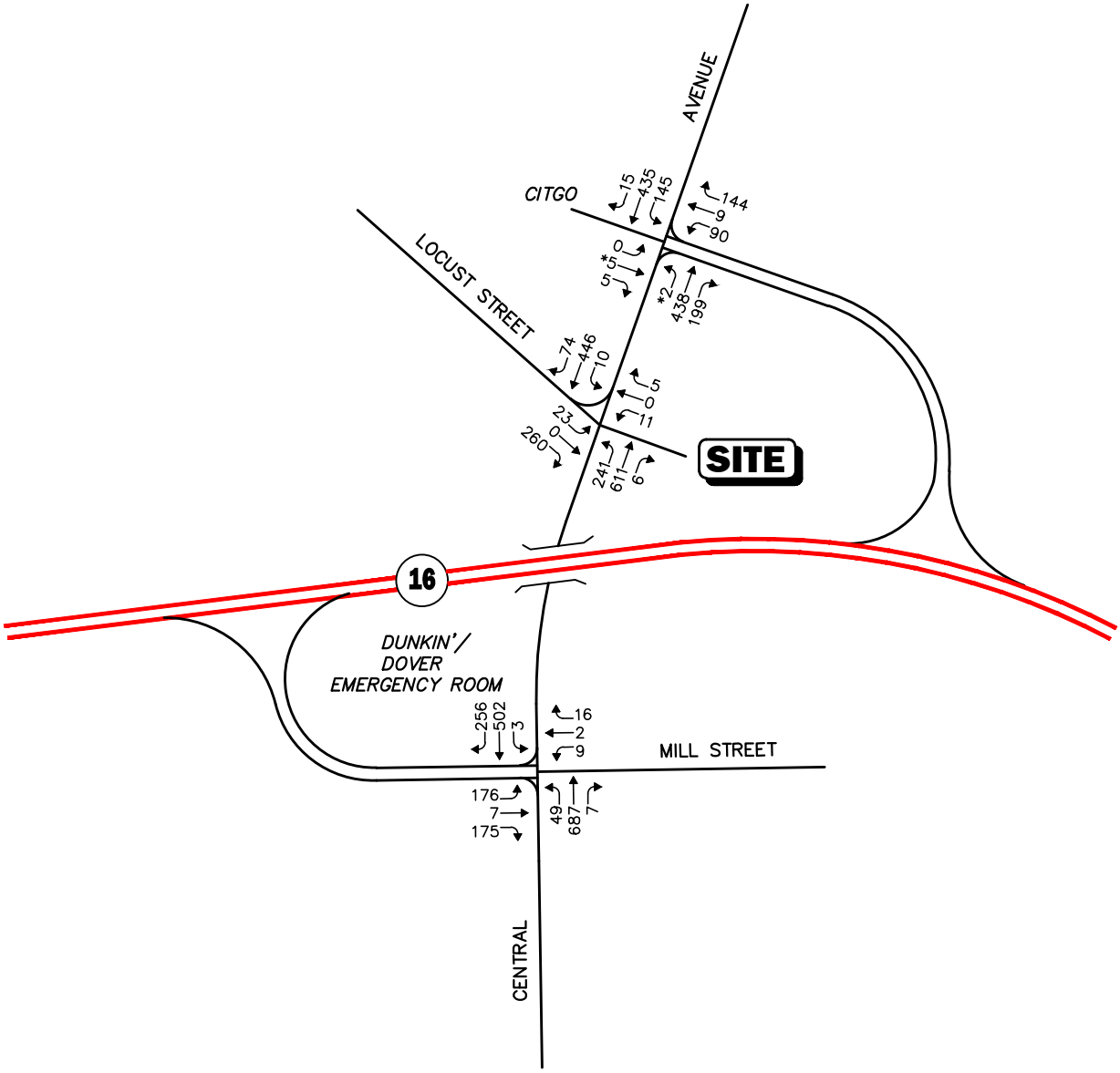


* Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

**Figure 18**

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**2026 Build**
**Peak-Month**
**Saturday Midday**
**Peak-Hour Traffic Volumes**

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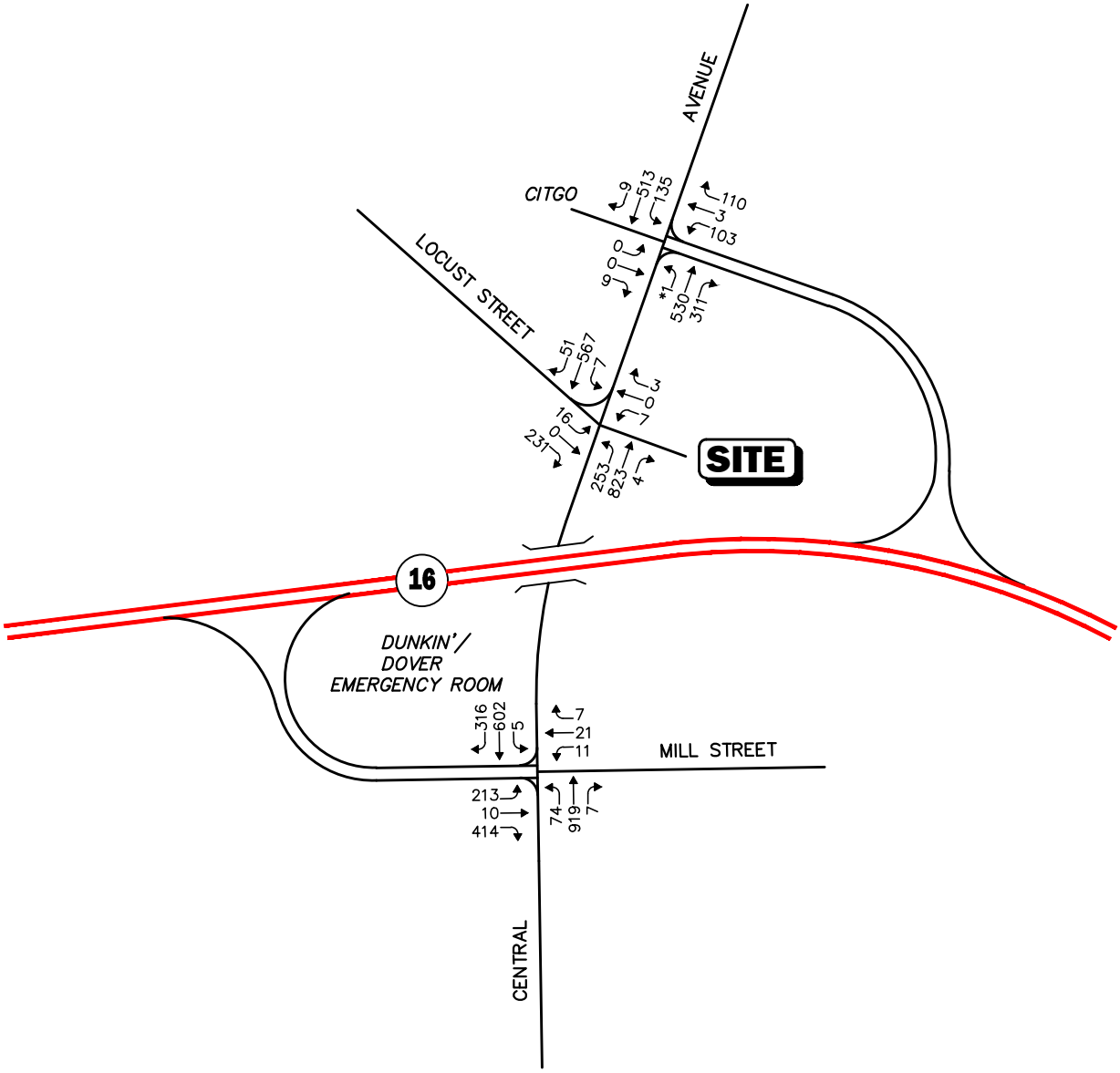


* Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

**Figure 19**

**2036 Build**
**Peak-Month**
**Weekday Morning**
**Peak-Hour Traffic Volumes**

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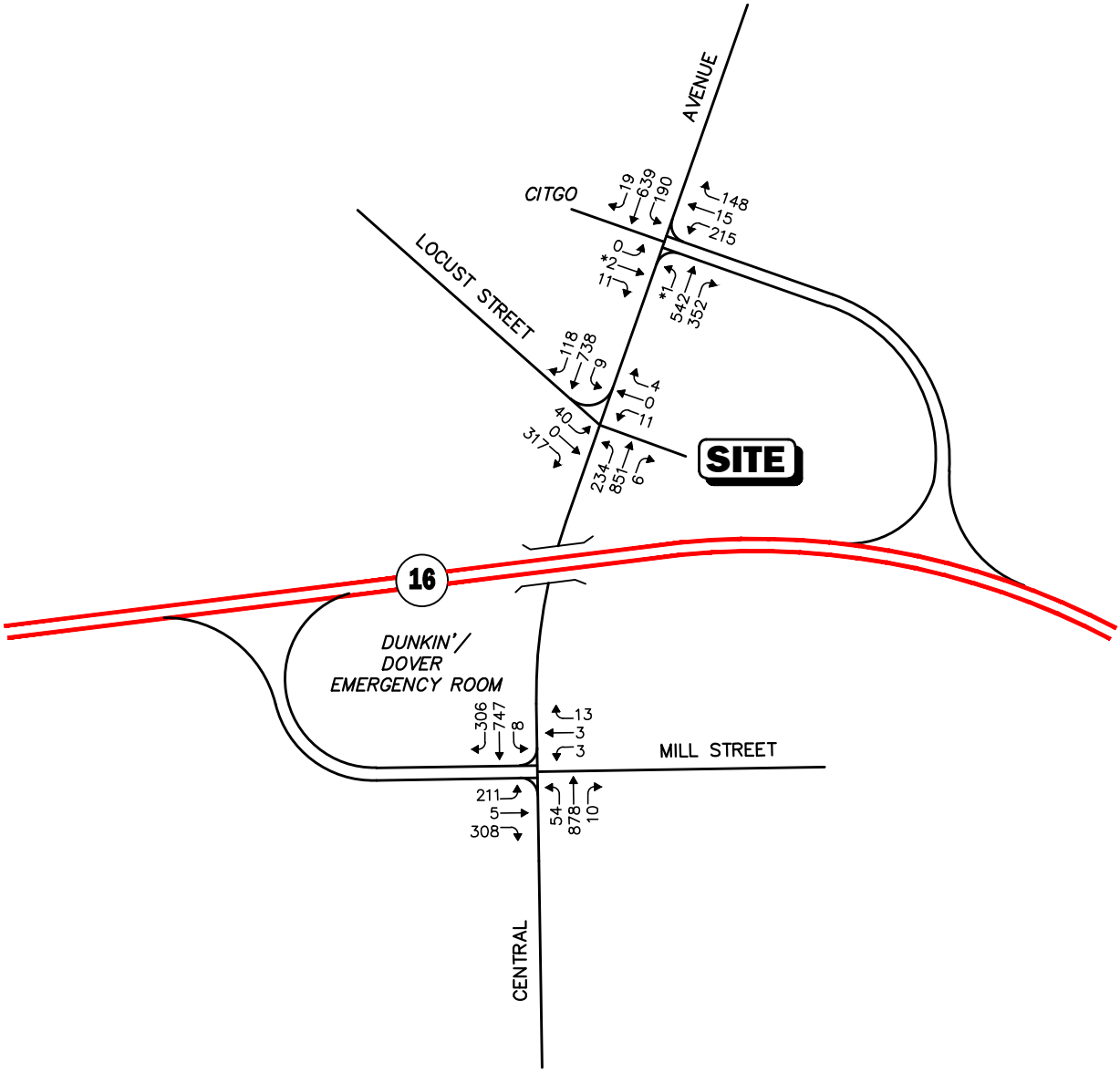


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 20**

Vanasse & Associates inc

**2036 Build**
**Peak-Month**
**Weekday Evening**
**Peak-Hour Traffic Volumes**

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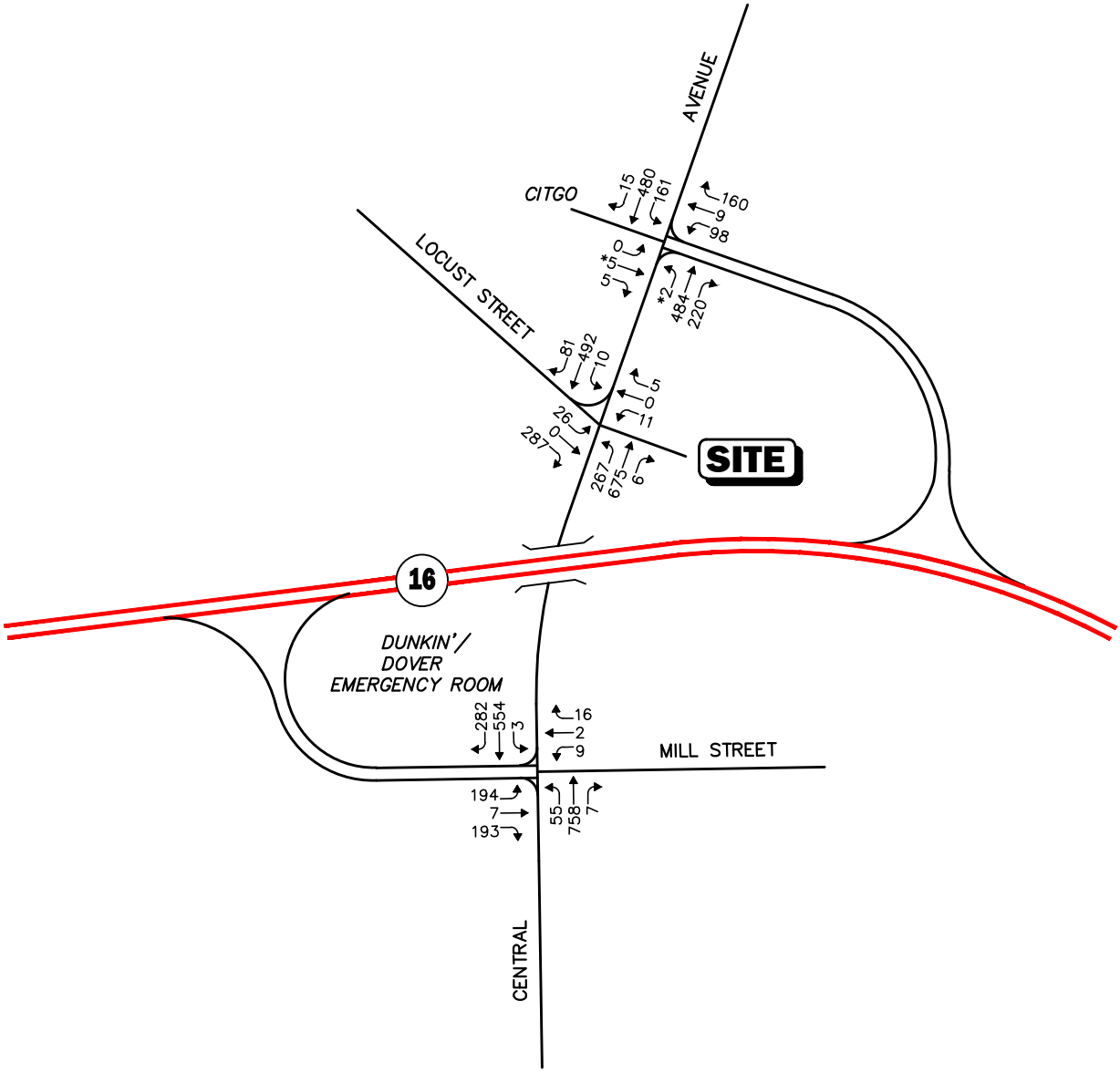


*** Illegal movement.**
**Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.**

**Not To Scale**

**Figure 21**

Vanasse & Associates inc

**2026 Build**
**Peak-Month**
**Saturday Midday**
**Peak-Hour Traffic Volumes**

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**Table 5**
**PEAK-MONTH PEAK-HOUR TRAFFIC-VOLUME INCREASES[a]**

| Location/Peak Hour | 2026 No-Build | 2026 Build | 2036 No-Build | 2036 Build | Traffic-Volume Increase Over No-Build | Percent Increase Over No-Build |
|---|---|---|---|---|---|---|
| *Central Avenue, north of Citgo Driveway:* | | | | | | |
| Weekday Morning | 1,178 | 1,177 | 1,298 | 1,297 | -1 | 0.1/0.1 |
| Weekday Evening | 1,395 | 1,394 | 1,539 | 1,538 | -1 | 0.1/0.1 |
| Saturday Midday | 1,179 | 1,177 | 1,302 | 1,300 | -2 | 0.2/0.2 |
| *Central Avenue, South of Mill Street:* | | | | | | |
| Weekday Morning | 1,836 | 1,838 | 2,025 | 2,027 | 2 | 0.1/0.1 |
| Weekday Evening | 1,808 | 1,813 | 1,995 | 2,000 | 5 | 0.3/0.3 |
| Saturday Midday | 1,425 | 1,429 | 1,572 | 1,576 | 4 | 0.3/0.3 |

[a]Two-way traffic flow in vehicles per hour (vph).

As shown in Table 5, Project-related traffic-volume increases external to the study area relative to 2026 and 2036 No-Build conditions are anticipated to range from -1 to 5 vehicles or -0.1 to 0.3 percent during the peak periods.

## SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the proposed site driveway intersection with Locust Street and Central Avenue in accordance with NHDOT and the American Association of State Highway and Transportation Officials (AASHTO)[4] recommendations. For this evaluation, the required 400-foot "all-season safe sight distance" required by the NHDOT Driveway Permit Policy[5] was also included in this study. Stopping sight distance (SSD) and intersection sight distance (ISD) measurements were also performed. In brief, SSD is the distance recommended to be provided by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD is the sight distance recommended to be provided to a driver entering or crossing an intersecting roadway in order to be perceived by an on-coming vehicle and not require the on-coming vehicle to need to reduce their speed to less than 70 percent of their initial speed.

Table 6 summarizes the sight distances available at the driveway location.

[4]*A Policy on Geometric Design of Highway and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

[5]NHDOT Policy for Permitting Driveways on State Highways, Item 8.a, Driveway Limitation, p. 16.

**Table 6**
**SIGHT DISTANCE MEASUREMENTS[a]**

| Intersection/Sight Distance Measurement | Recommended Minimum Distances (Feet) AASHTO (Based on Vehicle Speeds)[b] | NHDOT All-Season Safe Sight Distance[c] | Measured |
|---|---|---|---|
| ***Central Avenue at the Proposed Site Driveway*** | | | |
| *Stopping Sight Distance:* | | | |
| Central Avenue approaching from the north | 190 | -- | 500+ |
| Central Avenue approaching from the south | 180 | -- | 500+ |
| *Intersection Sight Distance:* | | | |
| Looking to the north from the driveway | 320 | 400 | 500+ |
| Looking to the south from the driveway | 310 | 400 | 500+ |

[a]Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018.
[b]Central Avenue: 28 mph northbound and 29 mph southbound.
[c]As defined in the NHDOT Driveway Permit Policy (Page 16).
[d]Values shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control.
[e]Sight distance if vegetation within the sight triangle is trimmed back.

As shown in Table 6, the available lines of sight at the proposed site driveway meet the NHDOT's requirements for sight distance. In addition, the measured sight distance at the sight driveway exceed AASHTO standards based on the observed vehicle speeds along Central Avenue.

## TRAFFIC OPERATIONS ANALYSIS

Six levels of service[6] are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best-operating conditions and LOS F representing congested or constrained operating conditions.

Following NHDOT Synchro guidelines,[7] under the future 2026 Opening-Year Build and 2036 Design-Year Build conditions, a peak-hour factor (PHF) of 0.90 was applied to lanes where calculations indicated a PHF below 0.90, as well as at intersections, where capacity is being increased through geometric improvements. The truck percentages at all analysis conditions were adjusted to the approach weighted average with the removal of the volumes at the approach with truck percentages above 8 percent.

### Analysis Results

Level-of-service analyses were conducted for 2025 Existing, 2026 Opening-Year No-Build, 2026 Opening-Year Build, 2036 Design-Year No-Build, and 2036 Design-Year Build conditions for the study area intersections. The results of the intersection capacity analysis within the study area are described below, with a tabular summary provided in Table 7.

[6]The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual 6th Edition;* Transportation Research Board; Washington, DC; 2016.
[7]NHDOT Synchro Inputs Checklist, Revised August 16, 2021.

## Signalized Intersection Analysis Results

### Route 108 at Route 16 Southbound Ramp and Mill Street

The intersection is anticipated to operate at LOS D or better during all analysis periods. When comparing the 2026 No-Build to 2026 Build, minimal delays are reported. In the 2036 conditions, overall delays due to project generated traffic increase by 0.5 seconds or less, with vehicle queues increasing by up to 1 vehicle.

### Route 108 at Locust Street and Project Site Driveway

The intersection is anticipated to operate at LOS C or better through all analysis periods. In comparing no-build to build conditions, delays are shown to increase by up to 1.1 second under any analysis period.

### Route 108 at Route 16 Northbound Ramp and Citgo Driveway

The intersection was shown to operate at varying level of services throughout the day, with observed LOS B to C in the weekday morning and Saturday midday peak hours and LOS D to E in the weekday evening peak hours. The existing conditions show that the Route 16 northbound ramps operate at capacity, with LOS F and queues ranging from 16-20 vehicles. Increases to overall intersection delay due to project generated traffic is up to 3.2 seconds in the weekday evening peak hours and less than 2 seconds in the weekday morning and Saturday midday peak hours.

**Table 7**
**SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY**

| Signalized Intersection/Peak-Hour/Movement | 2025 Existing | | | | 2026 Opening-Year No-Build | | | | 2026 Opening-Year Build | | | | 2036 Design-Year No-Build | | | | 2036 Design-Year Build | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | V/C[a] | Delay[b] | LOS[c] | Queue[d] Avg/95th | V/C | Delay | LOS | Queue Avg/95th | V/C | Delay | LOS | Queue Avg/95th | V/C | Delay | LOS | Queue Avg/95th | V/C | Delay | LOS | Queue Avg/95th |
| ***Route 108 at Route 16 Southbound Ramp and Mill Street*** | | | | | | | | | | | | | | | | | | | | |
| *Weekday Morning:* | | | | | | | | | | | | | | | | | | | | |
| Route 16 SB Off-Ramp EB LT/TH | 0.80 | 63.3 | E | 256/333 | 0.81 | 64.3 | E | 260/337 | 0.78 | 68.2 | E | 205/364 | 0.74 | 60.4 | E | 221/415 | 0.74 | 60.1 | E | 221/417 |
| Route 108 SB Off-Ramp EB RT | 0.38 | 37.3 | D | 23/46 | 0.40 | 37.6 | D | 30/60 | 0.27 | 41.5 | D | 0/51 | 0.30 | 38.0 | D | 0/52 | 0.30 | 37.9 | D | 0/52 |
| Mill Street WB LT/TH | 0.10 | 41.0 | D | 30/59 | 0.10 | 41.0 | D | 30/59 | 0.10 | 47.0 | D | 27/63 | 0.09 | 42.9 | D | 26/63 | 0.09 | 42.7 | D | 26/63 |
| Mill Street WB RT | 0.01 | 39.8 | D | 0/0 | 0.01 | 39.8 | D | 0/0 | 0.01 | 45.9 | D | 0/0 | 0.01 | 41.9 | D | 0/0 | 0.01 | 41.7 | D | 0/0 |
| Route 108 NB LT | 0.17 | 15.7 | B | 26/74 | 0.17 | 15.8 | B | 26/74 | 0.15 | 12.2 | B | 21/74 | 0.19 | 14.8 | B | 26/81 | 0.19 | 14.9 | B | 26/81 |
| Route 108 NB TH/RT | 0.92 | 44.2 | D | 645/1281 | 0.93 | 46.0 | D | 663/1305 | 0.82 | 28.6 | C | 506/1315 | 0.95 | 47.9 | D | 693/1518 | 0.96 | 48.3 | D | 698/1518 |
| Route 108 SB LT | 0.13 | 73.8 | E | 5/20 | 0.13 | 73.8 | E | 5/20 | 0.13 | 73.8 | E | 5/20 | 0.13 | 73.8 | E | 5/20 | 0.13 | 73.8 | E | 5/20 |
| Route 108 SB TH | 0.31 | 21.7 | C | 147/257 | 0.32 | 21.9 | C | 153/267 | 0.29 | 16.9 | B | 131/261 | 0.34 | 20.4 | C | 160/292 | 0.34 | 20.6 | C | 162/293 |
| Route 108 SB RT | 0.19 | 20.3 | C | 0/59 | 0.19 | 20.4 | C | 0/60 | 0.20 | 16.1 | B | 0/59 | 0.22 | 19.0 | B | 0/61 | 0.22 | 19.2 | B | 0/61 |
| **Overall** | -- | **37.0** | **D** | -- | -- | **37.8** | **D** | -- | -- | **30.0** | **C** | -- | -- | **36.9** | **D** | -- | -- | **37.0** | **D** | -- |
| *Weekday Evening:* | | | | | | | | | | | | | | | | | | | | |
| Route 16 SB Off-Ramp EB LT/TH | 0.79 | 71.9 | E | 199/331 | 0.79 | 71.5 | E | 200/335 | 0.79 | 71.4 | E | 201/345 | 0.78 | 67.4 | E | 215/390 | 0.78 | 66.1 | E | 217/396 |
| Route 108 SB Off-Ramp EB RT | 0.20 | 43.3 | D | 0/45 | 0.20 | 43.2 | D | 0/46 | 0.20 | 43.1 | D | 0/48 | 0.22 | 40.8 | D | 0/49 | 0.22 | 40.4 | D | 0/49 |
| Mill Street WB LT/TH | 0.02 | 48.4 | D | 6/21 | 0.02 | 48.1 | D | 6/21 | 0.02 | 48.0 | D | 5/19 | 0.02 | 45.5 | D | 5/19 | 0.02 | 45.0 | D | 5/19 |
| Mill Street WB RT | 0.01 | 48.2 | D | 0/0 | 0.01 | 47.9 | D | 0/0 | 0.01 | 47.9 | D | 0/0 | 0.01 | 45.4 | D | 0/0 | 0.01 | 44.9 | D | 0/0 |
| Route 108 NB LT | 0.13 | 11.3 | B | 14/56 | 0.13 | 11.5 | B | 15/56 | 0.12 | 11.5 | B | 14/57 | 0.16 | 13.3 | B | 17/63 | 0.16 | 13.6 | B | 17/63 |
| Route 108 NB TH/RT | 0.78 | 24.9 | C | 459/1170 | 0.80 | 26.1 | C | 483/1205 | 0.75 | 23.6 | C | 425/1228 | 0.85 | 31.5 | C | 564/1408 | 0.86 | 32.8 | C | 578/1414 |
| Route 108 SB LT | 0.21 | 74.9 | E | 9/29 | 0.21 | 74.9 | E | 9/29 | 0.21 | 74.9 | E | 9/29 | 0.21 | 74.9 | E | 9/29 | 0.21 | 74.9 | E | 9/29 |
| Route 108 SB TH | 0.34 | 15.7 | B | 162/326 | 0.35 | 15.9 | B | 166/334 | 0.35 | 16.0 | B | 167/333 | 0.40 | 18.5 | B | 204/381 | 0.41 | 18.9 | B | 207/382 |
| Route 108 SB RT | 0.19 | 14.1 | B | 0/55 | 0.19 | 14.2 | B | 0/56 | 0.19 | 14.3 | B | 0/56 | 0.21 | 16.1 | B | 0/59 | 0.21 | 16.5 | B | 0/59 |
| **Overall** | -- | **27.3** | **C** | -- | -- | **27.7** | **C** | -- | -- | **26.8** | **C** | -- | -- | **29.9** | **C** | -- | -- | **30.4** | **C** | -- |
| *Saturday Midday:* | | | | | | | | | | | | | | | | | | | | |
| Route 16 SB Off-Ramp EB LT/TH | 0.78 | 72.7 | E | 185/292 | 0.78 | 72.7 | E | 185/292 | 0.78 | 72.2 | E | 187/297 | 0.79 | 70.3 | E | 201/336 | 0.78 | 69.6 | E | 203/343 |
| Route 108 SB Off-Ramp EB RT | 0.12 | 43.7 | D | 0/39 | 0.12 | 43.7 | D | 0/39 | 0.12 | 43.5 | D | 0/39 | 0.13 | 41.7 | D | 0/41 | 0.13 | 41.4 | D | 0/41 |
| Mill Street WB LT/TH | 0.06 | 50.1 | D | 12/28 | 0.06 | 50.1 | D | 12/28 | 0.04 | 49.7 | D | 10/29 | 0.04 | 47.8 | D | 9/29 | 0.04 | 47.4 | D | 9/29 |
| Mill Street WB RT | 0.01 | 49.7 | D | 0/0 | 0.01 | 49.7 | D | 0/0 | 0.01 | 49.3 | D | 0/0 | 0.01 | 47.5 | D | 0/0 | 0.01 | 47.1 | D | 0/0 |
| Route 108 NB LT | 0.11 | 10.1 | B | 13/58 | 0.11 | 10.1 | B | 13/58 | 0.10 | 10.1 | B | 13/58 | 0.12 | 11.3 | B | 16/64 | 0.13 | 11.5 | B | 16/64 |
| Route 108 NB TH/RT | 0.63 | 18.1 | B | 295/924 | 0.64 | 18.4 | B | 304/953 | 0.63 | 18.3 | B | 300/965 | 0.71 | 22.1 | C | 388/1123 | 0.72 | 22.6 | C | 397/1129 |
| Route 108 SB LT | 0.10 | 73.5 | E | 4/16 | 0.10 | 73.5 | E | 4/16 | 0.08 | 73.3 | E | 3/14 | 0.08 | 73.3 | E | 3/14 | 0.08 | 73.3 | E | 3/14 |
| Route 108 SB TH | 0.27 | 13.9 | B | 113/236 | 0.27 | 14.0 | B | 116/241 | 0.26 | 14.0 | B | 111/245 | 0.29 | 15.6 | B | 133/274 | 0.30 | 15.8 | B | 135/275 |
| Route 108 SB RT | 0.19 | 13.3 | B | 0/43 | 0.19 | 13.4 | B | 0/43 | 0.18 | 13.4 | B | 0/56 | 0.20 | 14.7 | B | 0/58 | 0.20 | 15.0 | B | 0/58 |
| **Overall** | -- | **24.2** | **C** | -- | -- | **24.2** | **C** | -- | -- | **24.3** | **C** | -- | -- | **25.9** | **C** | -- | -- | **26.1** | **C** | -- |

See notes at the end of table.

**Table 7 (CONTINUED)**
**SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY**

| Signalized Intersection/Peak-Hour/Movement | 2025 Existing | | | | 2026 Opening-Year No-Build | | | | 2026 Opening-Year Build | | | | 2036 Design-Year No-Build | | | | 2036 Design-Year Build | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | V/C[a] | Delay[b] | LOS[c] | Queue[d] Avg/95th | V/C | Delay | LOS | Queue Avg/95th | V/C | Delay | LOS | Queue Avg/95th | V/C | Delay | LOS | Queue Avg/95th | V/C | Delay | LOS | Queue Avg/95th |
| ***Route 108 at Locust Street and Project Site Driveway*** | | | | | | | | | | | | | | | | | | | | |
| *Weekday Morning:* | | | | | | | | | | | | | | | | | | | | |
| Locust Street EB LT/TH | 0.35 | 72.1 | E | 16/42 | 0.35 | 72.1 | E | 16/42 | 0.32 | 71.4 | E | 15/40 | 0.30 | 69.1 | E | 17/46 | 0.28 | 68.6 | E | 16/44 |
| Locust Street EB RT | 0.16 | 50.8 | D | 0/50 | 0.16 | 50.4 | D | 0/49 | 0.16 | 50.4 | D | 0/49 | 0.18 | 45.3 | D | 0/45 | 0.18 | 45.3 | D | 0/45 |
| Project Site Driveway WB LT/TH | 0.00 | 0.0 | A | 0/0 | 0.00 | 0.0 | A | 0/0 | 0.14 | 68.5 | E | 7/25 | 0.00 | 0.0 | A | 0/0 | 0.11 | 66.5 | A | 7/25 |
| Project Site Driveway WB RT | 0.00 | 66.9 | E | 0/0 | 0.00 | 66.9 | E | 0/0 | 0.00 | 66.9 | E | 0/0 | 0.00 | 65.4 | E | 0/0 | 0.00 | 65.4 | E | 0/0 |
| Route 108 NB LT | 0.38 | 4.6 | A | 0/117 | 0.38 | 4.8 | A | 0/118 | 0.38 | 4.8 | A | 0/119 | 0.45 | 7.8 | A | 27/133 | 0.45 | 7.8 | A | 27/134 |
| Route 108 NB TH/RT | 0.49 | 3.7 | A | 0/498 | 0.51 | 3.8 | A | 0/521 | 0.51 | 3.8 | A | 0/526 | 0.56 | 4.8 | A | 140/628 | 0.56 | 4.8 | A | 141/633 |
| Route 108 SB LT | 0.00 | 7.1 | A | 0/6 | 0.00 | 7.2 | A | 0/6 | 0.02 | 7.3 | A | 1/13 | 0.01 | 9.5 | A | 1/7 | 0.02 | 9.7 | A | 2/14 |
| Route 108 SB TH/RT | 0.43 | 11.5 | B | 141/515 | 0.47 | 11.8 | B | 147/537 | 0.47 | 11.8 | B | 147/540 | 0.56 | 16.6 | B | 296/697 | 0.56 | 16.6 | B | 296/699 |
| **Overall** | -- | **12.7** | **B** | -- | -- | **12.7** | **B** | -- | -- | **12.9** | **B** | -- | -- | **14.3** | **B** | -- | -- | **14.5** | **B** | -- |
| *Weekday Evening:* | | | | | | | | | | | | | | | | | | | | |
| Locust Street EB LT/TH | 0.42 | 67.3 | E | 36/74 | 0.42 | 67.3 | E | 36/74 | 0.40 | 66.9 | E | 35/73 | 0.45 | 67.3 | E | 40/80 | 0.43 | 67.0 | E | 39/79 |
| Locust Street EB RT | 0.20 | 46.7 | D | 0/48 | 0.20 | 46.6 | D | 0/48 | 0.20 | 46.7 | D | 0/48 | 0.22 | 45.1 | D | 0/50 | 0.22 | 45.2 | D | 0/50 |
| Project Site Driveway WB LT/TH | 0.11 | 63.2 | E | 12/15 | 0.11 | 63.2 | E | 12/15 | 0.12 | 63.4 | E | 11/32 | 0.04 | 62.1 | E | 4/18 | 0.11 | 62.9 | E | 11/31 |
| Project Site Driveway WB RT | 0.00 | 62.3 | E | 0/0 | 0.00 | 62.3 | E | 0/0 | 0.00 | 62.4 | E | 0/0 | 0.00 | 61.8 | E | 0/0 | 0.00 | 61.9 | E | 0/0 |
| Route 108 NB LT | 0.46 | 14.1 | B | 24/110 | 0.48 | 15.3 | B | 24/111 | 0.48 | 15.2 | B | 24/111 | 0.59 | 29.2 | C | 55/197 | 0.59 | 29.0 | C | 53/196 |
| Route 108 NB TH/RT | 0.48 | 4.9 | A | 123/504 | 0.49 | 5.0 | A | 127/519 | 0.50 | 5.0 | A | 128/525 | 0.55 | 5.7 | A | 156/628 | 0.55 | 5.7 | A | 159/636 |
| Route 108 SB LT | 0.00 | 9.0 | A | 0/4 | 0.00 | 9.0 | A | 0/4 | 0.02 | 9.2 | A | 3/18 | 0.00 | 9.9 | A | 0/4 | 0.03 | 10.1 | A | 3/18 |
| Route 108 SB TH/RT | 0.70 | 20.0 | B | 412/1107 | 0.72 | 20.6 | C | 432/1144 | 0.72 | 20.5 | C | 431/1144 | 0.81 | 26.6 | C | 568/1325 | 0.81 | 26.5 | C | 568/1325 |
| **Overall** | -- | **19.0** | **B** | -- | -- | **19.3** | **B** | -- | -- | **19.1** | **B** | -- | -- | **22.8** | **C** | -- | -- | **22.7** | **C** | -- |
| *Saturday Midday:* | | | | | | | | | | | | | | | | | | | | |
| Locust Street EB LT/TH | 0.36 | 69.0 | E | 24/56 | 0.36 | 69.0 | E | 24/56 | 0.36 | 69.1 | E | 24/56 | 0.36 | 69.1 | E | 24/56 | 0.39 | 69.4 | E | 26/60 |
| Locust Street EB RT | 0.19 | 50.4 | D | 0/51 | 0.19 | 50.1 | D | 0/51 | 0.19 | 50.1 | D | 0/53 | 0.19 | 55.5 | E | 0/54 | 0.21 | 46.5 | D | 0/49 |
| Project Site Driveway WB LT/TH | 0.06 | 65.3 | E | 5/13 | 0.06 | 65.3 | E | 5/13 | 0.15 | 66.2 | E | 11/32 | 0.15 | 66.2 | E | 11/32 | 0.15 | 66.0 | E | 11/32 |
| Project Site Driveway WB RT | 0.00 | 64.8 | E | 0/0 | 0.00 | 64.8 | E | 0/0 | 0.00 | 64.8 | E | 0/0 | 0.00 | 64.8 | E | 0/0 | 0.00 | 64.6 | E | 0/0 |
| Route 108 NB LT | 0.37 | 4.7 | A | 25/121 | 0.38 | 4.9 | A | 25/122 | 0.38 | 4.9 | A | 25/122 | 0.39 | 4.3 | A | 25/122 | 0.43 | 6.9 | A | 30/138 |
| Route 108 NB TH/RT | 0.38 | 3.4 | A | 79/342 | 0.39 | 3.5 | A | 81/351 | 0.39 | 3.5 | A | 81/355 | 0.39 | 3.5 | A | 81/355 | 0.43 | 3.8 | A | 98/415 |
| Route 108 SB LT | 0.01 | 7.4 | A | 1/7 | 0.01 | 7.5 | A | 1/7 | 0.02 | 7.6 | A | 3/16 | 0.02 | 5.6 | A | 2/16 | 0.02 | 9.3 | A | 3/19 |
| Route 108 SB TH/RT | 0.44 | 11.5 | B | 198/480 | 0.45 | 11.9 | B | 207/497 | 0.45 | 11.9 | B | 207/497 | 0.42 | 8.8 | A | 152/496 | 0.52 | 15.4 | B | 269/650 |
| **Overall** | -- | **15.3** | **B** | -- | -- | **15.3** | **B** | -- | -- | **15.4** | **B** | -- | -- | **15.2** | **B** | -- | -- | **16.3** | **B** | -- |
| ***Route 108 at Route 16 NB Ramp and Citgo Driveway*** | | | | | | | | | | | | | | | | | | | | |
| *Weekday Morning:* | | | | | | | | | | | | | | | | | | | | |
| Route 16 NB Ramp WB LT/TH/RT | 0.70 | 55.3 | E | 123/204 | 0.71 | 55.8 | E | 126/209 | 0.72 | 56.2 | E | 132/217 | 0.75 | 58.6 | E | 141/233 | 0.77 | 59.3 | E | 147/254 |
| Route 108 NB TH/RT | 0.72 | 17.9 | B | 376/618 | 0.74 | 18.8 | B | 399/651 | 0.75 | 19.4 | B | 410/653 | 0.83 | 24.1 | C | 520/881 | 0.84 | 25.0 | C | 534/884 |
| Route 108 SB LT | 0.26 | 5.9 | A | 23/44 | 0.27 | 6.1 | A | 23/44 | 0.27 | 6.3 | A | 24/44 | 0.32 | 7.1 | A | 28/48 | 0.32 | 7.3 | A | 29/48 |
| Route 108 SB TH/RT | 0.36 | 5.2 | A | 112/178 | 0.36 | 5.3 | A | 116/182 | 0.37 | 5.5 | A | 120/181 | 0.41 | 5.9 | A | 144/208 | 0.41 | 6.1 | A | 148/207 |
| **Overall** | -- | **17.9** | **B** | -- | -- | **18.5** | **B** | -- | -- | **18.9** | **B** | -- | -- | **21.6** | **C** | -- | -- | **22.3** | **C** | -- |
| *Weekday Evening:* | | | | | | | | | | | | | | | | | | | | |
| Route 16 NB Ramp WB LT/TH/RT | 1.16 | >80 | F | 404/508 | 1.21 | >80 | F | 417/517 | 1.08 | >80 | F | 347/551 | 1.25 | >80 | F | 395/598 | 1.29 | >80 | F | 412/617 |
| Route 108 NB TH/RT | 0.87 | 32.0 | C | 496/703 | 0.87 | 32.3 | C | 507/729 | 0.87 | 32.3 | C | 508/730 | 0.94 | 39.1 | D | 630/974 | 0.94 | 38.8 | D | 630/975 |
| Route 108 SB LT | 0.43 | 10.9 | B | 40/61 | 0.44 | 10.8 | B | 40/61 | 0.44 | 10.8 | B | 40/61 | 0.50 | 11.0 | B | 43/67 | 0.50 | 10.9 | B | 43/67 |
| Route 108 SB TH/RT | 0.48 | 9.6 | A | 183/241 | 0.49 | 9.4 | A | 186/250 | 0.49 | 9.4 | A | 186/250 | 0.53 | 9.0 | A | 212/291 | 0.53 | 9.0 | A | 212/291 |
| **Overall** | -- | **45.8** | **D** | -- | -- | **49.0** | **D** | -- | -- | **38.4** | **D** | -- | -- | **52.1** | **D** | -- | -- | **55.3** | **E** | -- |
| *Saturday Midday:* | | | | | | | | | | | | | | | | | | | | |
| Route 16 NB Ramp WB LT/TH/RT | 0.71 | 53.7 | D | 144/227 | 0.74 | 55.8 | E | 147/241 | 0.76 | 56.3 | E | 157/278 | 0.76 | 56.3 | E | 157/278 | 0.78 | 56.7 | E | 173/332 |
| Route 108 NB TH/RT | 0.61 | 16.2 | B | 294/485 | 0.62 | 16.3 | B | 309/467 | 0.62 | 16.9 | B | 318/455 | 0.62 | 16.9 | B | 318/455 | 0.71 | 21.0 | C | 412/533 |
| Route 108 SB LT | 0.31 | 6.6 | A | 34/61 | 0.31 | 6.6 | A | 35/55 | 0.29 | 6.8 | A | 33/53 | 0.29 | 6.8 | A | 33/53 | 0.36 | 8.3 | A | 41/57 |
| Route 108 SB TH/RT | 0.37 | 6.2 | A | 128/193 | 0.38 | 6.1 | A | 134/178 | 0.35 | 6.2 | A | 126/173 | 0.35 | 6.2 | A | 126/173 | 0.40 | 7.2 | A | 159/191 |
| **Overall** | -- | **18.0** | **B** | -- | -- | **18.3** | **B** | -- | -- | **19.2** | **B** | -- | -- | **19.2** | **B** | -- | -- | **21.5** | **C** | -- |

[a]Volume to capacity ratio.
[b]Delay in seconds per vehicle.
[c]Level of service.
[d]95th percentile queue length in feet.
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

## RECOMMENDATIONS

### On-Site Recommendations

The Project site will maintain the existing curb cut onto Central Avenue. No signal modifications would be required as part of the project. The following recommendations are offered with respect to the design and operation of the Project site driveway:

- The driveway should be restriped to show one left-through lane and one right-turn lane. Prior to occupancy, signal detection should be reviewed to confirm that the movement will actuate after construction.

- All signs and other pavement markings to be installed within the Project site shall conform to the applicable standards of the current MUTCD.

- Signs and landscaping adjacent to the Project site driveway should be designed and maintained to remain below 24 inches above the driveway so as not to restrict lines of sight.

- Snow windrows within sight triangle areas of the Project site driveway should be promptly removed where such accumulations would impede sightlines.

## CONCLUSIONS

VAI has prepared this TIS in order to identify traffic impacts associated with a proposed hotel development to be located at 47 Central Avenue (NH Route 18) in Dover, New Hampshire. We have the following conclusions:

- The Project is expected to generate approximately 372 vehicle trips on an average weekday and 470 vehicle trips on an average Saturday (two-way, 24-hour volume), with 21 vehicle trips (11 entering and 10 exiting) during the weekday morning peak hour, 30 vehicle trips (15 entering and 15 exiting) during the weekday evening peak hour, and 32 vehicle trips (16 entering and 16 exiting) during the Saturday midday peak hour.

- When compared to the by-right fast-food restaurant use, the proposed hotel is expected to generate approximately 90 percent fewer trips during a typical weekday and typical Saturday, with comparable reductions during the peak hours.

- Traffic-volume increases related to the Project, external to the study, are anticipated to range from -2 to 5 vehicles or -0.1 to 0.3 percent, during peak periods.

- Lines of sight at the Project site driveway intersection were found to exceed the recommended minimum distance for safe operation based on the measured 85$^{th}$ percentile vehicle speeds.

- The Project will not have a significant impact on motorist delays or vehicle queuing at signalized intersections compared to anticipated future conditions without the Project, with a maximum increase in overall intersection delay of less than 3.2 seconds.

As documented in this study, Project-related traffic increases will not result in significant increases in overall traffic volumes or traffic delays within the study area. The hotel represents a decrease in site traffic activity compared with the previous and by-right use of the site. Project-related traffic can be adequately accommodated within the existing infrastructure with minimal impact on operations within the study area.

# APPENDIX

PROJECT SITE PLAN
TRAFFIC COUNT DATA
SEASONAL ADJUSTMENT DATA
VEHICLE SPEED MEASUREMENTS
GROWTH RATE DATA
TRIP GENERATION DATA
REMOVE EXISTING TRIPS NETWORKS
CAPACITY ANALYSIS

PROJECT SITE PLAN

N

PLAN

SITE PLAN

0 15 30 60

GRAPHIC SCALE

December 12, 2025

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# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

OPECHEE
CONSTRUCTION CORPORATION

TRAFFIC COUNT DATA

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 18 | 135 | 1 | 13 | 2 | 12 | 1 | 63 | 43 | 0 | 1 | 1 | 290 |
| 07:15 AM | 19 | 77 | 5 | 14 | 1 | 22 | 0 | 86 | 67 | 0 | 0 | 2 | 293 |
| 07:30 AM | 17 | 105 | 1 | 10 | 1 | 22 | 0 | 89 | 54 | 0 | 0 | 2 | 301 |
| 07:45 AM | 28 | 98 | 2 | 24 | 0 | 21 | 0 | 103 | 58 | 0 | 0 | 3 | 337 |
| Total | 82 | 415 | 9 | 61 | 4 | 77 | 1 | 341 | 222 | 0 | 1 | 8 | 1221 |
| | | | | | | | | | | | | | |
| 08:00 AM | 29 | 108 | 3 | 18 | 1 | 20 | 1 | 83 | 76 | 0 | 0 | 0 | 339 |
| 08:15 AM | 26 | 97 | 1 | 15 | 1 | 30 | 0 | 117 | 62 | 0 | 0 | 3 | 352 |
| 08:30 AM | 23 | 91 | 2 | 18 | 1 | 16 | 0 | 106 | 47 | 0 | 0 | 2 | 306 |
| 08:45 AM | 18 | 89 | 4 | 18 | 1 | 20 | 1 | 92 | 33 | 0 | 0 | 3 | 279 |
| Total | 96 | 385 | 10 | 69 | 4 | 86 | 2 | 398 | 218 | 0 | 0 | 8 | 1276 |
| | | | | | | | | | | | | | |
| Grand Total | 178 | 800 | 19 | 130 | 8 | 163 | 3 | 739 | 440 | 0 | 1 | 16 | 2497 |
| Apprch % | 17.9 | 80.2 | 1.9 | 43.2 | 2.7 | 54.2 | 0.3 | 62.5 | 37.2 | 0 | 5.9 | 94.1 | |
| Total % | 7.1 | 32 | 0.8 | 5.2 | 0.3 | 6.5 | 0.1 | 29.6 | 17.6 | 0 | 0 | 0.6 | |
| Cars | 174 | 777 | 17 | 126 | 8 | 160 | 3 | 723 | 408 | 0 | 1 | 16 | 2413 |
| % Cars | 97.8 | 97.1 | 89.5 | 96.9 | 100 | 98.2 | 100 | 97.8 | 92.7 | 0 | 100 | 100 | 96.6 |
| Trucks | 4 | 23 | 2 | 4 | 0 | 3 | 0 | 16 | 32 | 0 | 0 | 0 | 84 |
| % Trucks | 2.2 | 2.9 | 10.5 | 3.1 | 0 | 1.8 | 0 | 2.2 | 7.3 | 0 | 0 | 0 | 3.4 |

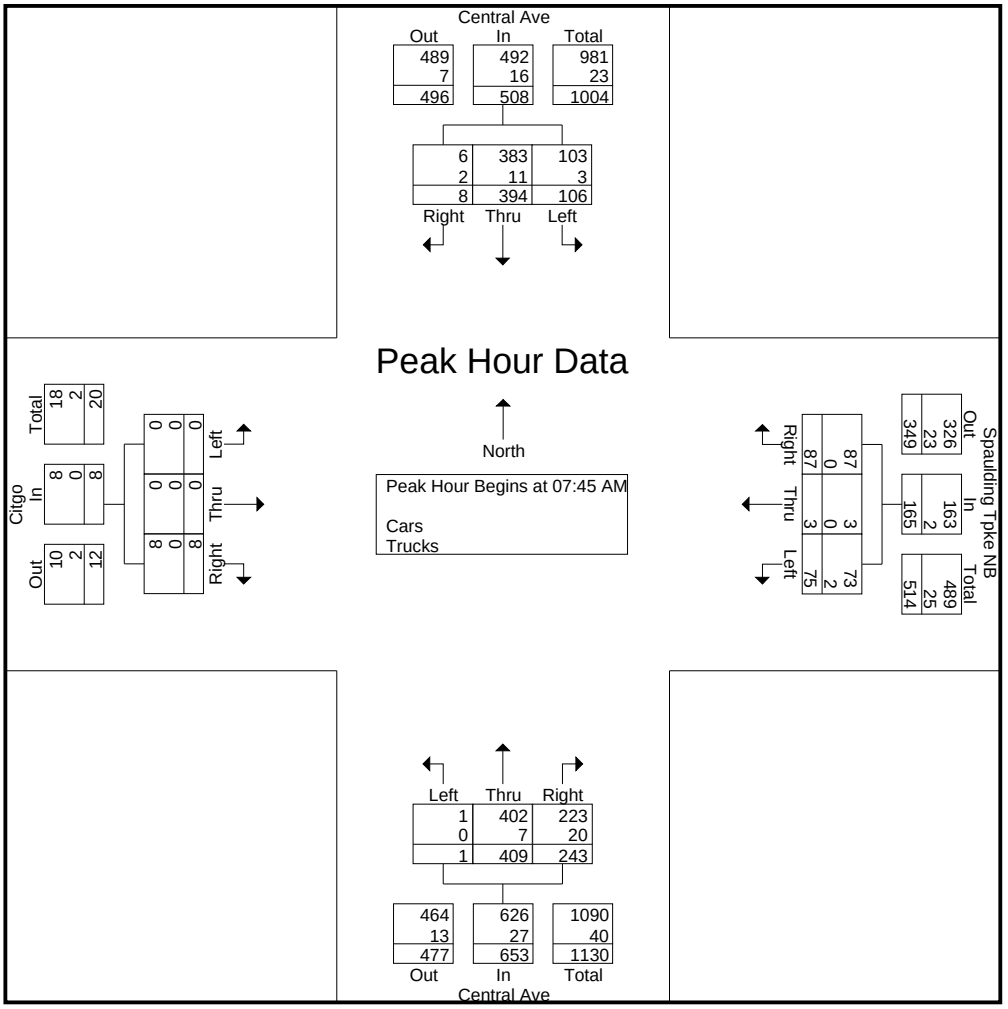
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:45 AM | | | | | | | | | | | | | | | | | |
| 07:45 AM | 28 | 98 | 2 | 128 | **24** | 0 | 21 | 45 | 0 | 103 | 58 | 161 | 0 | 0 | **3** | **3** | 337 |
| 08:00 AM | **29** | **108** | **3** | **140** | 18 | **1** | 20 | 39 | **1** | 83 | **76** | 160 | 0 | 0 | 0 | 0 | 339 |
| 08:15 AM | 26 | 97 | 1 | 124 | 15 | 1 | **30** | **46** | 0 | **117** | 62 | **179** | 0 | 0 | 3 | 3 | **352** |
| 08:30 AM | 23 | 91 | 2 | 116 | 18 | 1 | 16 | 35 | 0 | 106 | 47 | 153 | 0 | 0 | 2 | 2 | 306 |
| Total Volume | 106 | 394 | 8 | 508 | 75 | 3 | 87 | 165 | 1 | 409 | 243 | 653 | 0 | 0 | 8 | 8 | 1334 |
| % App. Total | 20.9 | 77.6 | 1.6 | | 45.5 | 1.8 | 52.7 | | 0.2 | 62.6 | 37.2 | | 0 | 0 | 100 | | |
| PHF | .914 | .912 | .667 | .907 | .781 | .750 | .725 | .897 | .250 | .874 | .799 | .912 | .000 | .000 | .667 | .667 | .947 |
| Cars | 103 | 383 | 6 | 492 | 73 | 3 | 87 | 163 | 1 | 402 | 223 | 626 | 0 | 0 | 8 | 8 | 1289 |
| % Cars | 97.2 | 97.2 | 75.0 | 96.9 | 97.3 | 100 | 100 | 98.8 | 100 | 98.3 | 91.8 | 95.9 | 0 | 0 | 100 | 100 | 96.6 |
| Trucks | 3 | 11 | 2 | 16 | 2 | 0 | 0 | 2 | 0 | 7 | 20 | 27 | 0 | 0 | 0 | 0 | 45 |
| % Trucks | 2.8 | 2.8 | 25.0 | 3.1 | 2.7 | 0 | 0 | 1.2 | 0 | 1.7 | 8.2 | 4.1 | 0 | 0 | 0 | 0 | 3.4 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 2




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

Peak Hour for Each Approach Begins at:

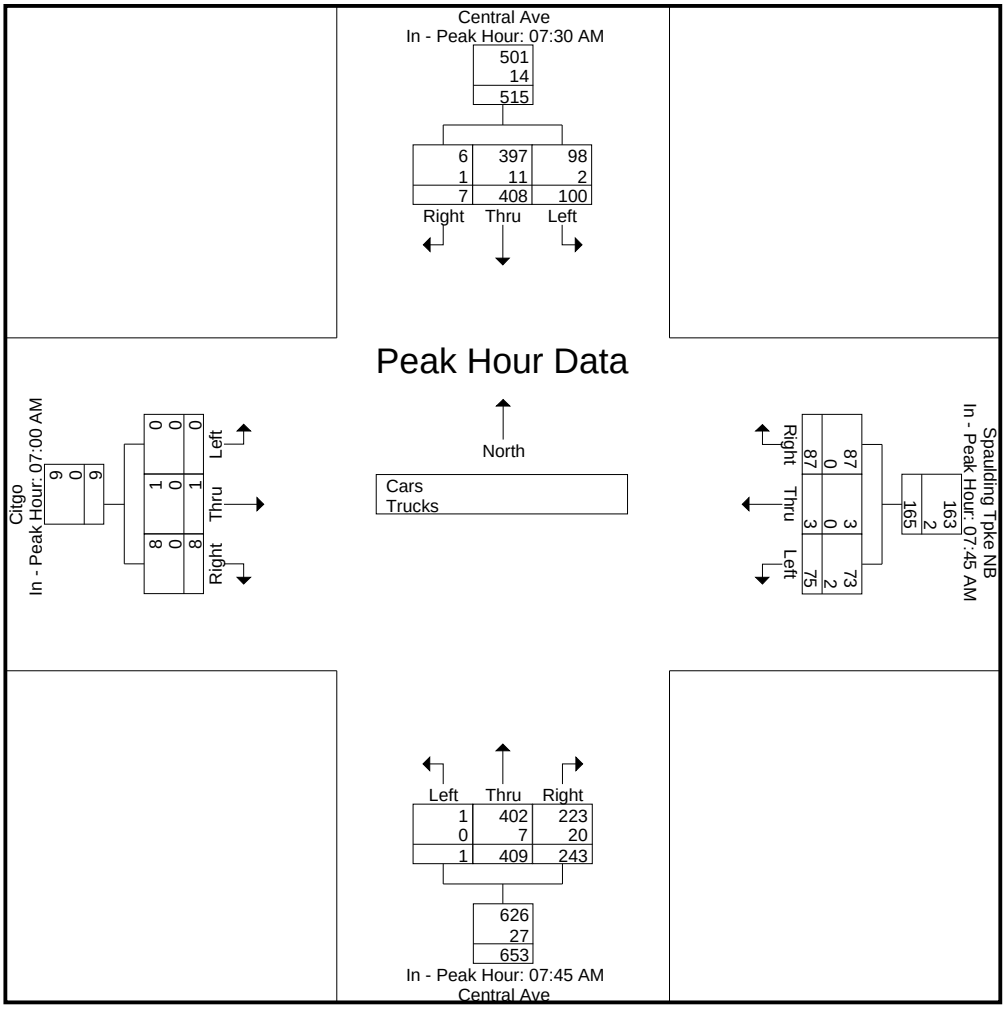
| | 07:30 AM | | | | 07:45 AM | | | | 07:45 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 17 | 105 | 1 | 123 | **24** | 0 | 21 | 45 | 0 | 103 | 58 | 161 | 0 | **1** | 1 | 2 |
| +15 mins. | 28 | 98 | 2 | 128 | 18 | **1** | 20 | 39 | **1** | 83 | **76** | 160 | 0 | 0 | 2 | 2 |
| +30 mins. | **29** | **108** | **3** | **140** | 15 | 1 | **30** | **46** | 0 | **117** | 62 | **179** | 0 | 0 | 2 | 2 |
| +45 mins. | 26 | 97 | 1 | 124 | 18 | 1 | 16 | 35 | 0 | 106 | 47 | 153 | 0 | 0 | **3** | **3** |
| Total Volume | 100 | 408 | 7 | 515 | 75 | 3 | 87 | 165 | 1 | 409 | 243 | 653 | 0 | 1 | 8 | 9 |
| % App. Total | 19.4 | 79.2 | 1.4 | | 45.5 | 1.8 | 52.7 | | 0.2 | 62.6 | 37.2 | | 0 | 11.1 | 88.9 | |
| PHF | .862 | .944 | .583 | .920 | .781 | .750 | .725 | .897 | .250 | .874 | .799 | .912 | .000 | .250 | .667 | .750 |
| Cars | 98 | 397 | 6 | 501 | 73 | 3 | 87 | 163 | 1 | 402 | 223 | 626 | 0 | 1 | 8 | 9 |
| % Cars | 98 | 97.3 | 85.7 | 97.3 | 97.3 | 100 | 100 | 98.8 | 100 | 98.3 | 91.8 | 95.9 | 0 | 100 | 100 | 100 |
| Trucks | 2 | 11 | 1 | 14 | 2 | 0 | 0 | 2 | 0 | 7 | 20 | 27 | 0 | 0 | 0 | 0 |
| % Trucks | 2 | 2.7 | 14.3 | 2.7 | 2.7 | 0 | 0 | 1.2 | 0 | 1.7 | 8.2 | 4.1 | 0 | 0 | 0 | 0 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 18 | 129 | 1 | 12 | 2 | 12 | 1 | 62 | 41 | 0 | 1 | 1 | 280 |
| 07:15 AM | 19 | 77 | 5 | 13 | 1 | 20 | 0 | 84 | 59 | 0 | 0 | 2 | 280 |
| 07:30 AM | 17 | 103 | 1 | 10 | 1 | 22 | 0 | 86 | 54 | 0 | 0 | 2 | 296 |
| 07:45 AM | 27 | 94 | 1 | 23 | 0 | 21 | 0 | 100 | 53 | 0 | 0 | 3 | 322 |
| Total | 81 | 403 | 8 | 58 | 4 | 75 | 1 | 332 | 207 | 0 | 1 | 8 | 1178 |
| | | | | | | | | | | | | | |
| 08:00 AM | 29 | 106 | 3 | 17 | 1 | 20 | 1 | 82 | 66 | 0 | 0 | 0 | 325 |
| 08:15 AM | 25 | 94 | 1 | 15 | 1 | 30 | 0 | 116 | 61 | 0 | 0 | 3 | 346 |
| 08:30 AM | 22 | 89 | 1 | 18 | 1 | 16 | 0 | 104 | 43 | 0 | 0 | 2 | 296 |
| 08:45 AM | 17 | 85 | 4 | 18 | 1 | 19 | 1 | 89 | 31 | 0 | 0 | 3 | 268 |
| Total | 93 | 374 | 9 | 68 | 4 | 85 | 2 | 391 | 201 | 0 | 0 | 8 | 1235 |
| | | | | | | | | | | | | | |
| Grand Total | 174 | 777 | 17 | 126 | 8 | 160 | 3 | 723 | 408 | 0 | 1 | 16 | 2413 |
| Apprch % | 18 | 80.3 | 1.8 | 42.9 | 2.7 | 54.4 | 0.3 | 63.8 | 36 | 0 | 5.9 | 94.1 | |
| Total % | 7.2 | 32.2 | 0.7 | 5.2 | 0.3 | 6.6 | 0.1 | 30 | 16.9 | 0 | 0 | 0.7 | |

| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 17 | 103 | 1 | 121 | 10 | **1** | 22 | 33 | 0 | 86 | 54 | 140 | 0 | 0 | 2 | 2 | 296 |
| 07:45 AM | 27 | 94 | 1 | 122 | **23** | 0 | 21 | 44 | 0 | 100 | 53 | 153 | 0 | 0 | **3** | **3** | 322 |
| 08:00 AM | **29** | **106** | **3** | **138** | 17 | 1 | 20 | 38 | **1** | 82 | **66** | 149 | 0 | 0 | 0 | 0 | 325 |
| 08:15 AM | 25 | 94 | 1 | 120 | 15 | 1 | **30** | **46** | 0 | **116** | 61 | **177** | 0 | 0 | 3 | 3 | **346** |
| Total Volume | 98 | 397 | 6 | 501 | 65 | 3 | 93 | 161 | 1 | 384 | 234 | 619 | 0 | 0 | 8 | 8 | 1289 |
| % App. Total | 19.6 | 79.2 | 1.2 | | 40.4 | 1.9 | 57.8 | | 0.2 | 62 | 37.8 | | 0 | 0 | 100 | | |
| PHF | .845 | .936 | .500 | .908 | .707 | .750 | .775 | .875 | .250 | .828 | .886 | .874 | .000 | .000 | .667 | .667 | .931 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
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File Name : 10566001
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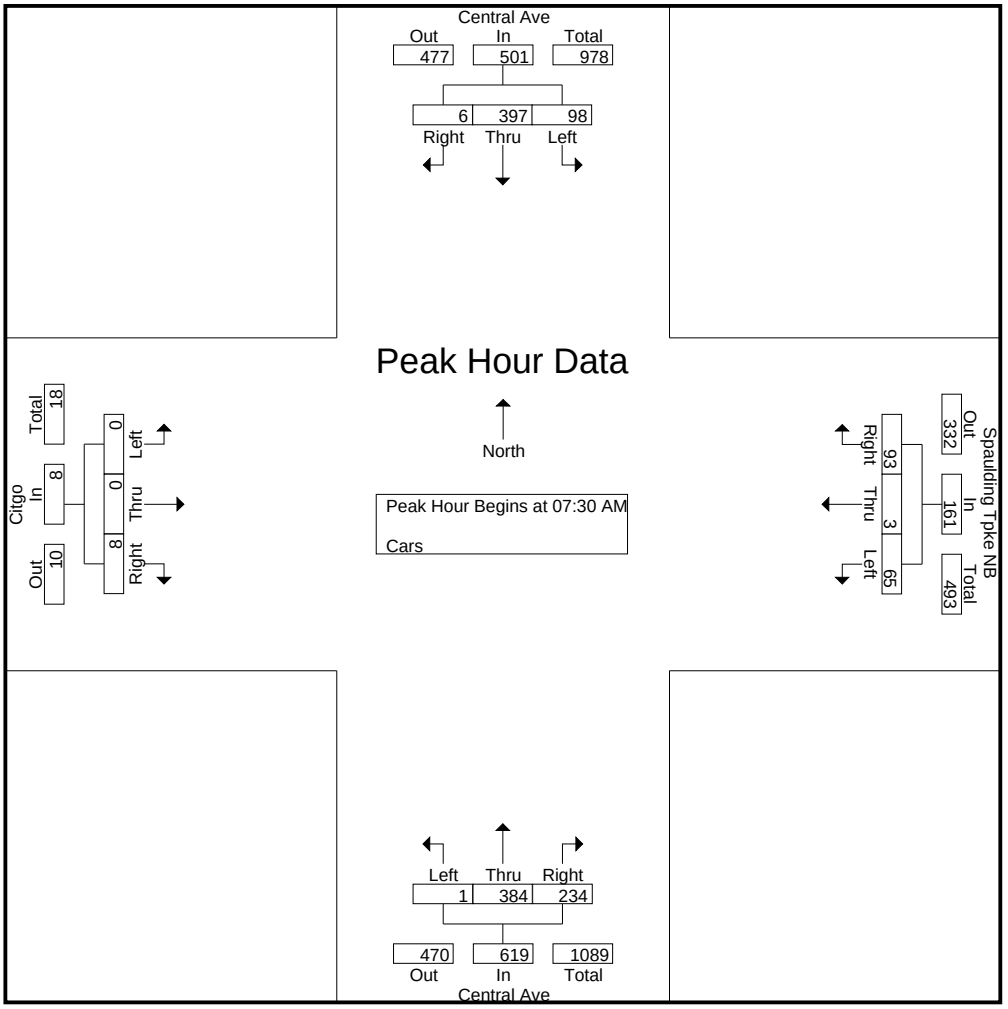
Start Date : 12/18/2025
Page No : 5




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

Peak Hour for Each Approach Begins at:

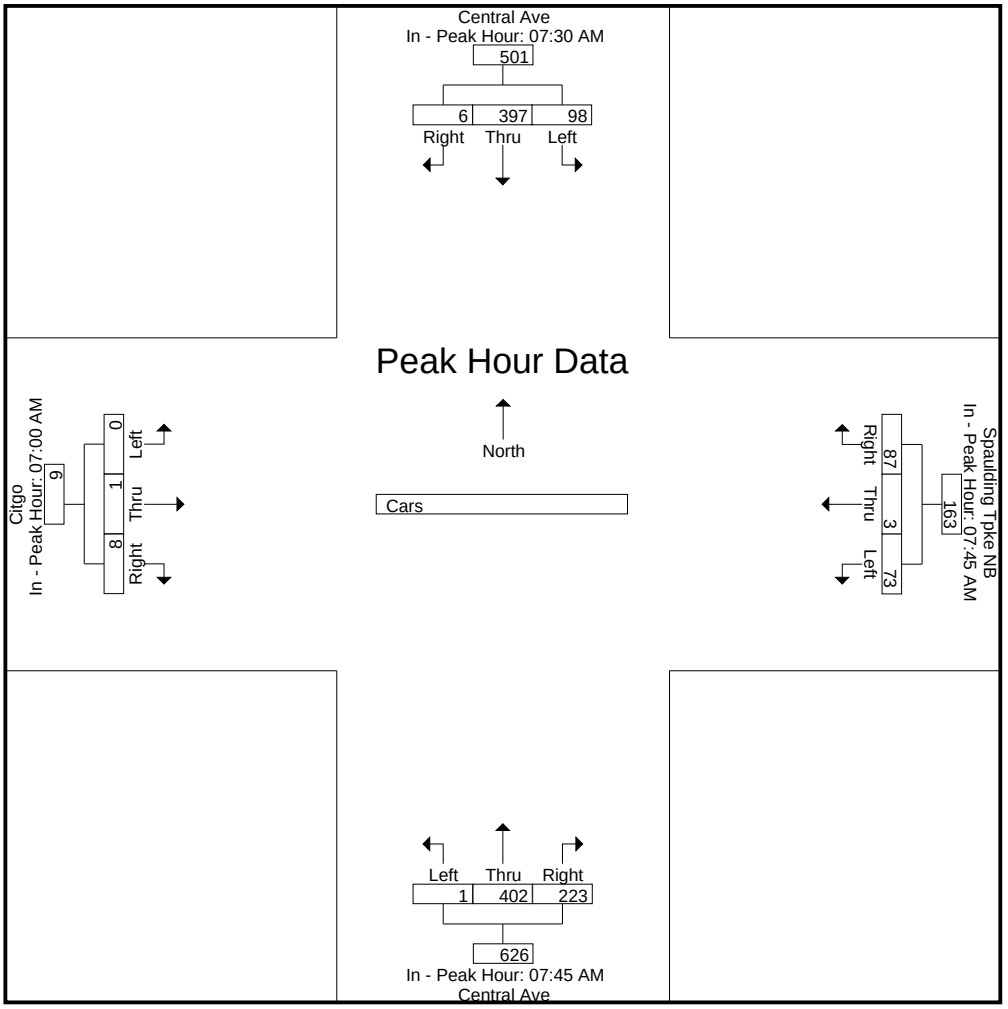
| | 07:30 AM | | | | 07:45 AM | | | | 07:45 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 17 | 103 | 1 | 121 | **23** | 0 | 21 | 44 | 0 | 100 | 53 | 153 | 0 | **1** | 1 | 2 |
| +15 mins. | 27 | 94 | 1 | 122 | 17 | **1** | 20 | 38 | **1** | 82 | **66** | 149 | 0 | 0 | 2 | 2 |
| +30 mins. | **29** | **106** | **3** | **138** | 15 | 1 | **30** | **46** | 0 | **116** | 61 | **177** | 0 | 0 | 2 | 2 |
| +45 mins. | 25 | 94 | 1 | 120 | 18 | 1 | 16 | 35 | 0 | 104 | 43 | 147 | 0 | 0 | **3** | **3** |
| Total Volume | 98 | 397 | 6 | 501 | 73 | 3 | 87 | 163 | 1 | 402 | 223 | 626 | 0 | 1 | 8 | 9 |
| % App. Total | 19.6 | 79.2 | 1.2 | | 44.8 | 1.8 | 53.4 | | 0.2 | 64.2 | 35.6 | | 0 | 11.1 | 88.9 | |
| PHF | .845 | .936 | .500 | .908 | .793 | .750 | .725 | .886 | .250 | .866 | .845 | .884 | .000 | .250 | .667 | .750 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 7

Groups Printed- Trucks

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 10 |
| 07:15 AM | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 8 | 0 | 0 | 0 | 13 |
| 07:30 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| 07:45 AM | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 15 |
| Total | 1 | 12 | 1 | 3 | 0 | 2 | 0 | 9 | 15 | 0 | 0 | 0 | 43 |
| | | | | | | | | | | | | | |
| 08:00 AM | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 14 |
| 08:15 AM | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 6 |
| 08:30 AM | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 10 |
| 08:45 AM | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 0 | 0 | 11 |
| Total | 3 | 11 | 1 | 1 | 0 | 1 | 0 | 7 | 17 | 0 | 0 | 0 | 41 |
| | | | | | | | | | | | | | |
| Grand Total | 4 | 23 | 2 | 4 | 0 | 3 | 0 | 16 | 32 | 0 | 0 | 0 | 84 |
| Apprch % | 13.8 | 79.3 | 6.9 | 57.1 | 0 | 42.9 | 0 | 33.3 | 66.7 | 0 | 0 | 0 | |
| Total % | 4.8 | 27.4 | 2.4 | 4.8 | 0 | 3.6 | 0 | 19 | 38.1 | 0 | 0 | 0 | |

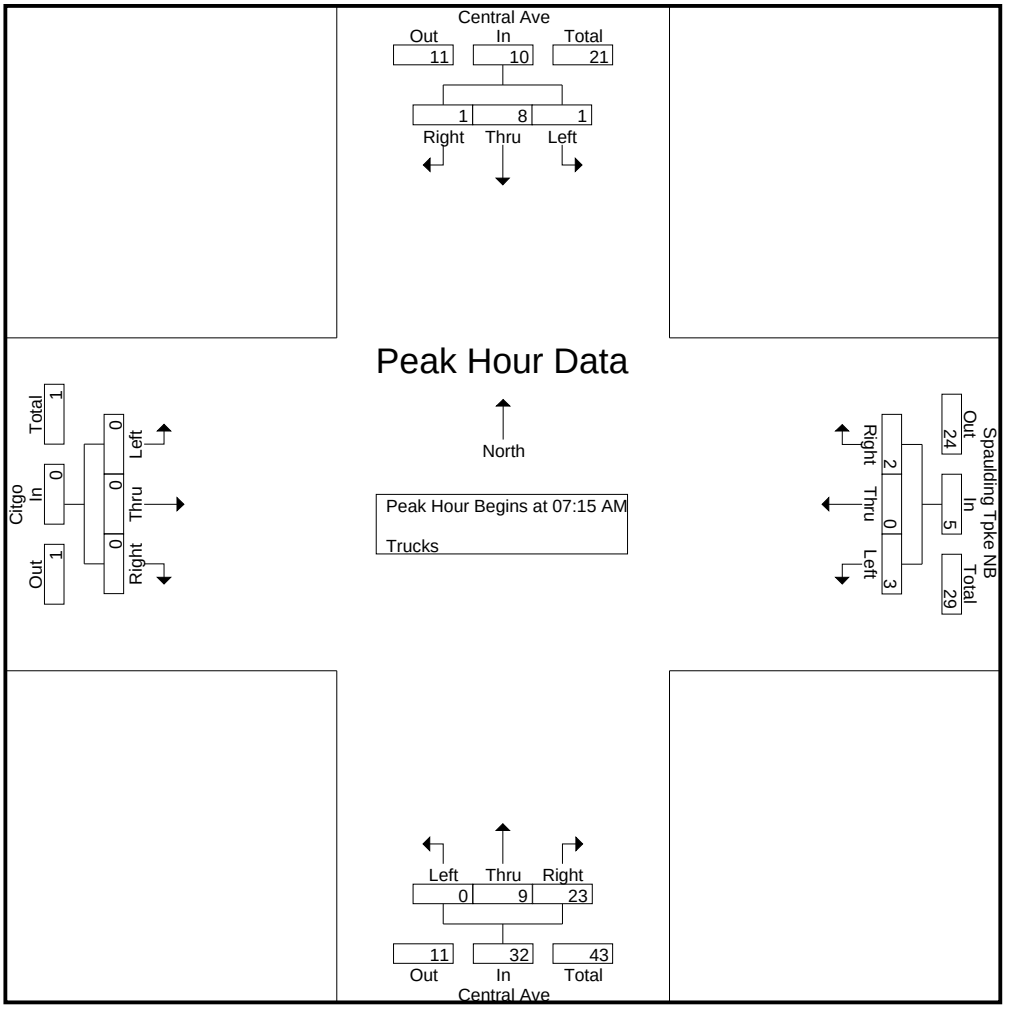
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. 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 | 0 | 0 | 0 | **1** | 0 | **2** | **3** | 0 | 2 | 8 | 10 | 0 | 0 | 0 | 0 | 13 |
| 07:30 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | **3** | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| 07:45 AM | **1** | **4** | **1** | **6** | 1 | 0 | 0 | 1 | 0 | 3 | 5 | 8 | 0 | 0 | 0 | 0 | **15** |
| 08:00 AM | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | **10** | **11** | 0 | 0 | 0 | 0 | 14 |
| Total Volume | 1 | 8 | 1 | 10 | 3 | 0 | 2 | 5 | 0 | 9 | 23 | 32 | 0 | 0 | 0 | 0 | 47 |
| % App. Total | 10 | 80 | 10 | | 60 | 0 | 40 | | 0 | 28.1 | 71.9 | | 0 | 0 | 0 | | |
| PHF | .250 | .500 | .250 | .417 | .750 | .000 | .250 | .417 | .000 | .750 | .575 | .727 | .000 | .000 | .000 | .000 | .783 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 8




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

Peak Hour for Each Approach Begins at:

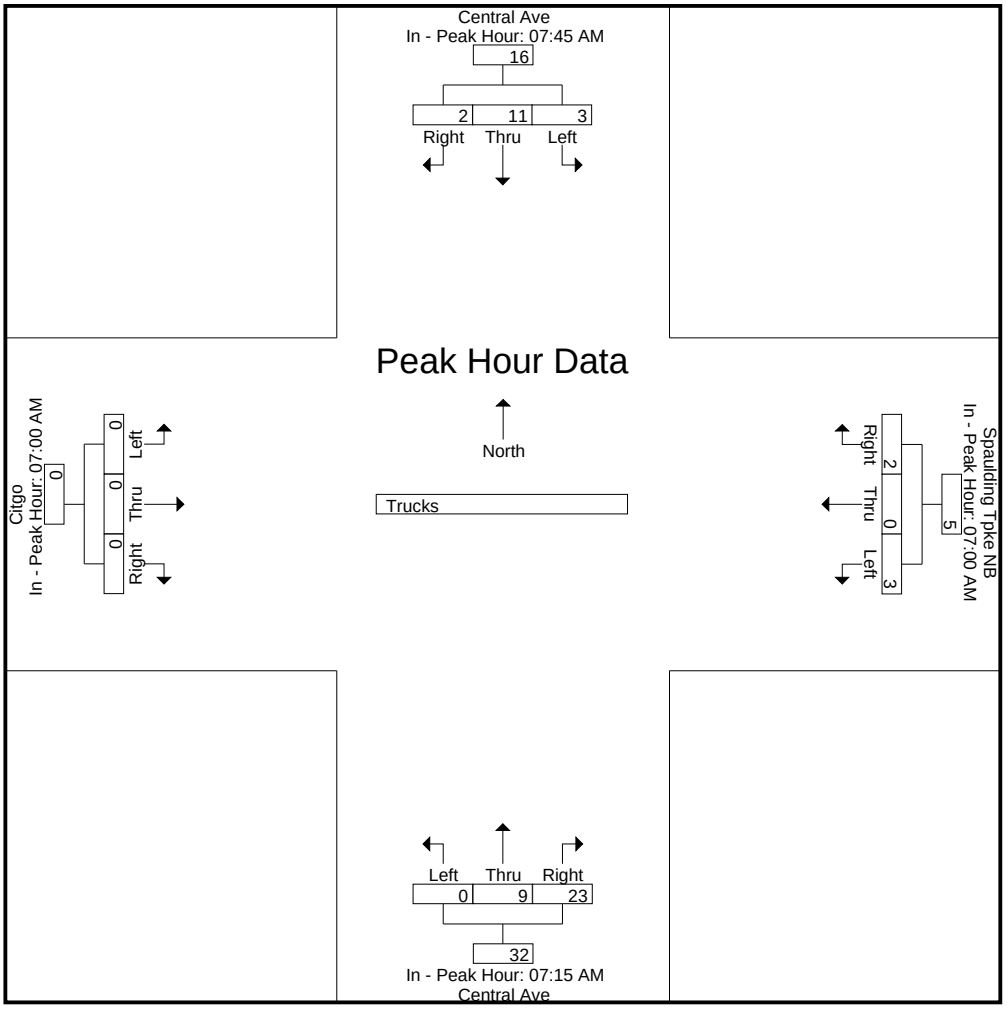
| | 07:45 AM | | | | 07:00 AM | | | | 07:15 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **1** | **4** | **1** | **6** | **1** | 0 | 0 | 1 | 0 | 2 | 8 | 10 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 2 | 0 | 2 | 1 | 0 | **2** | **3** | 0 | **3** | 0 | 3 | 0 | 0 | 0 | 0 |
| +30 mins. | 1 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 8 | 0 | 0 | 0 | 0 |
| +45 mins. | 1 | 2 | 1 | 4 | 1 | 0 | 0 | 1 | 0 | 1 | **10** | **11** | 0 | 0 | 0 | 0 |
| Total Volume | 3 | 11 | 2 | 16 | 3 | 0 | 2 | 5 | 0 | 9 | 23 | 32 | 0 | 0 | 0 | 0 |
| % App. Total | 18.8 | 68.8 | 12.5 | | 60 | 0 | 40 | | 0 | 28.1 | 71.9 | | 0 | 0 | 0 | |
| PHF | .750 | .688 | .500 | .667 | .750 | .000 | .250 | .417 | .000 | .750 | .575 | .727 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025


Groups Printed- Bikes Peds

| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 |
| 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 | 2 | 2 | 0 | 2 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 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 | 3 | 3 | 0 | 3 |
| 08:45 AM | 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 | 5 | 5 | 0 | 5 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 7 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

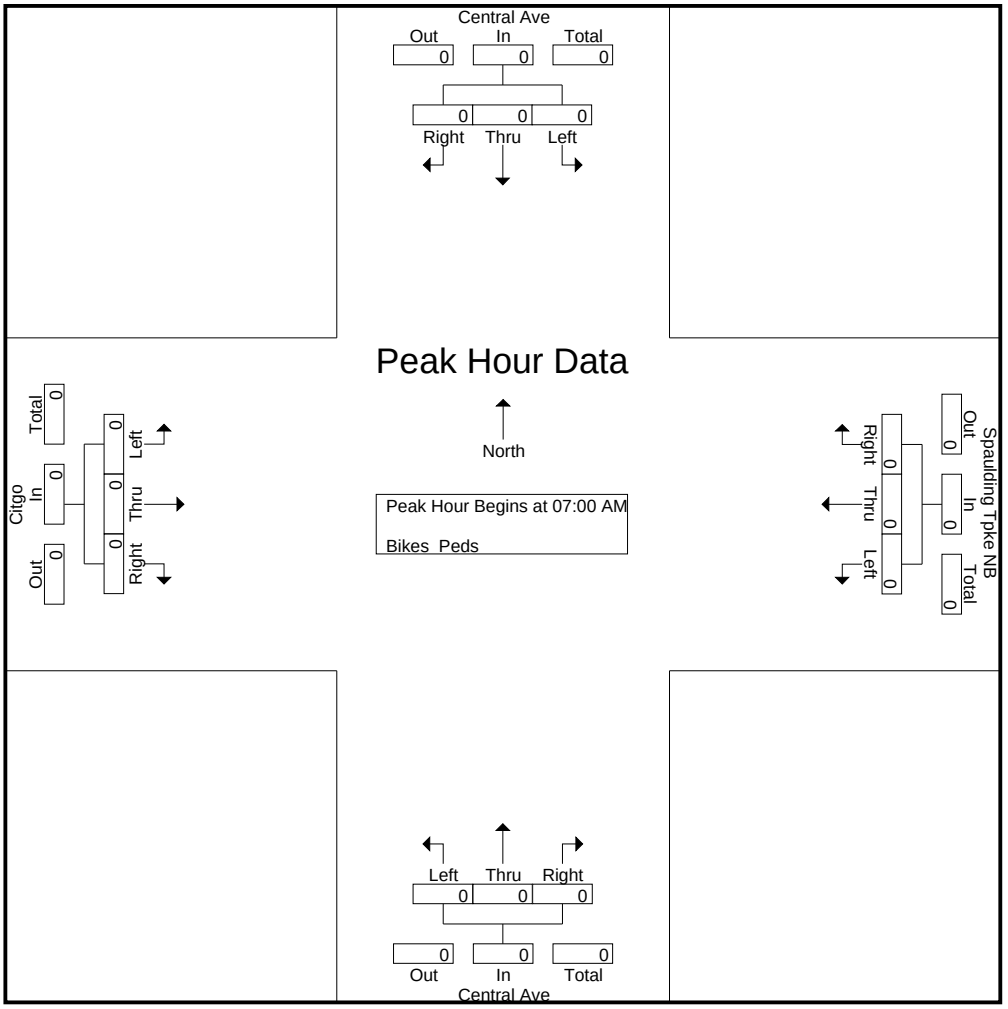
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. 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 |
| 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

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 11




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

Peak Hour for Each Approach Begins at:

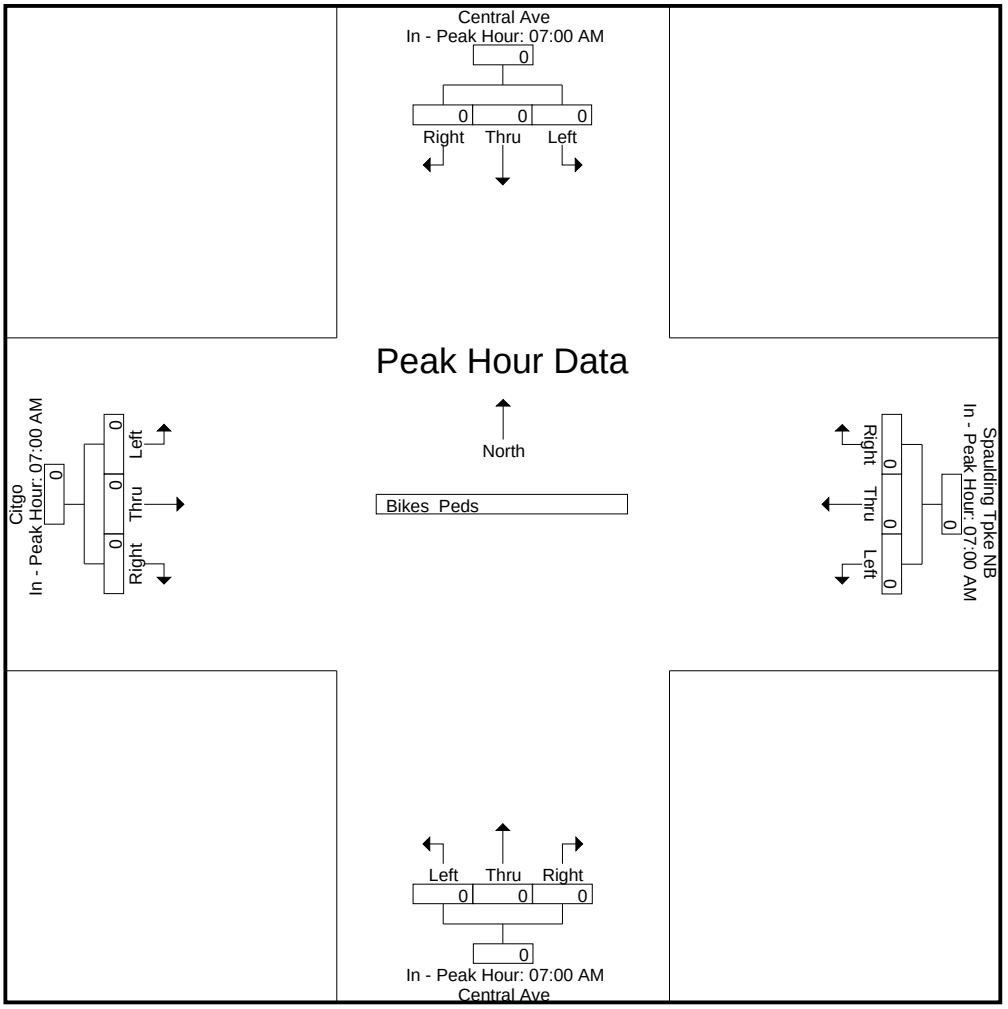
| | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 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 |
| % 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 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 52 | 103 | 9 | 36 | 2 | 29 | 0 | 83 | 65 | 0 | 0 | 5 | 384 |
| 03:15 PM | 51 | 115 | 4 | 31 | 2 | 31 | 1 | 123 | 53 | 0 | 2 | 3 | 416 |
| 03:30 PM | 35 | 108 | 6 | 35 | 2 | 24 | 0 | 102 | 74 | 0 | 0 | 2 | 388 |
| 03:45 PM | 45 | 127 | 4 | 43 | 2 | 28 | 0 | 101 | 77 | 0 | 2 | 3 | 432 |
| Total | 183 | 453 | 23 | 145 | 8 | 112 | 1 | 409 | 269 | 0 | 4 | 13 | 1620 |
| 04:00 PM | 37 | 116 | 1 | 31 | 4 | 33 | 0 | 118 | 74 | 0 | 0 | 1 | 415 |
| 04:15 PM | 37 | 124 | 6 | 46 | 3 | 30 | 1 | 97 | 62 | 0 | 0 | 3 | 409 |
| 04:30 PM | 33 | 122 | 1 | 31 | 3 | 19 | 0 | 100 | 75 | 0 | 1 | 1 | 386 |
| 04:45 PM | 42 | 133 | 9 | 54 | 3 | 35 | 0 | 103 | 62 | 0 | 1 | 5 | 447 |
| Total | 149 | 495 | 17 | 162 | 13 | 117 | 1 | 418 | 273 | 0 | 2 | 10 | 1657 |
| 05:00 PM | 47 | 88 | 5 | 30 | 4 | 19 | 0 | 105 | 72 | 0 | 1 | 2 | 373 |
| 05:15 PM | 37 | 126 | 6 | 35 | 1 | 30 | 0 | 109 | 52 | 0 | 0 | 0 | 396 |
| 05:30 PM | 34 | 97 | 3 | 32 | 3 | 35 | 0 | 89 | 45 | 0 | 0 | 2 | 340 |
| 05:45 PM | 22 | 93 | 3 | 45 | 1 | 34 | 0 | 90 | 45 | 0 | 1 | 3 | 337 |
| Total | 140 | 404 | 17 | 142 | 9 | 118 | 0 | 393 | 214 | 0 | 2 | 7 | 1446 |
| Grand Total | 472 | 1352 | 57 | 449 | 30 | 347 | 2 | 1220 | 756 | 0 | 8 | 30 | 4723 |
| Apprch % | 25.1 | 71.9 | 3 | 54.4 | 3.6 | 42 | 0.1 | 61.7 | 38.2 | 0 | 21.1 | 78.9 | |
| Total % | 10 | 28.6 | 1.2 | 9.5 | 0.6 | 7.3 | 0 | 25.8 | 16 | 0 | 0.2 | 0.6 | |
| Cars | 468 | 1337 | 57 | 441 | 30 | 342 | 2 | 1210 | 751 | 0 | 8 | 30 | 4676 |
| % Cars | 99.2 | 98.9 | 100 | 98.2 | 100 | 98.6 | 100 | 99.2 | 99.3 | 0 | 100 | 100 | 99 |
| Trucks | 4 | 15 | 0 | 8 | 0 | 5 | 0 | 10 | 5 | 0 | 0 | 0 | 47 |
| % Trucks | 0.8 | 1.1 | 0 | 1.8 | 0 | 1.4 | 0 | 0.8 | 0.7 | 0 | 0 | 0 | 1 |

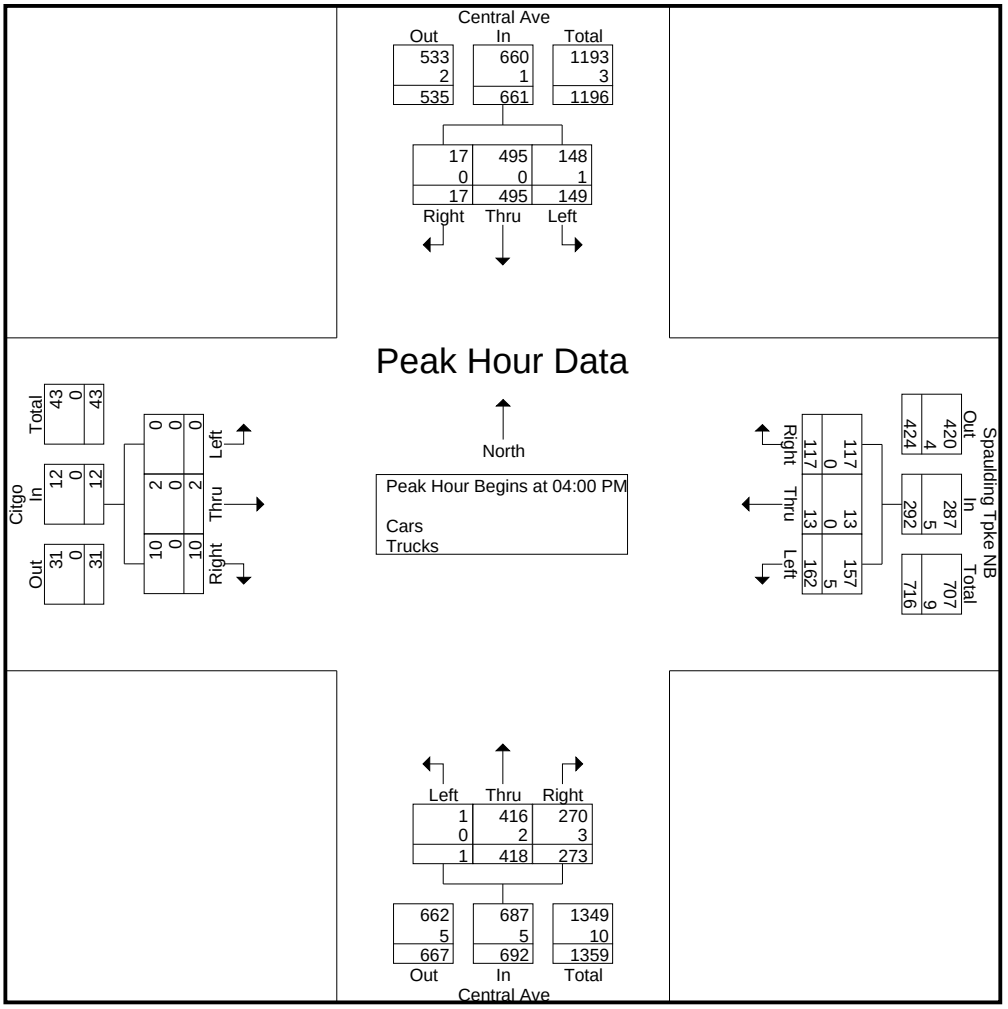
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | 37 | 116 | 1 | 154 | 31 | **4** | 33 | 68 | 0 | **118** | 74 | **192** | 0 | 0 | 1 | 1 | 415 |
| 04:15 PM | 37 | 124 | 6 | 167 | 46 | 3 | 30 | 79 | **1** | 97 | 62 | 160 | 0 | 0 | 3 | 3 | 409 |
| 04:30 PM | 33 | 122 | 1 | 156 | 31 | 3 | 19 | 53 | 0 | 100 | **75** | 175 | 0 | **1** | 1 | 2 | 386 |
| 04:45 PM | **42** | **133** | **9** | **184** | **54** | 3 | **35** | **92** | 0 | 103 | 62 | 165 | 0 | 1 | **5** | **6** | **447** |
| Total Volume | 149 | 495 | 17 | 661 | 162 | 13 | 117 | 292 | 1 | 418 | 273 | 692 | 0 | 2 | 10 | 12 | 1657 |
| % App. Total | 22.5 | 74.9 | 2.6 | | 55.5 | 4.5 | 40.1 | | 0.1 | 60.4 | 39.5 | | 0 | 16.7 | 83.3 | | |
| PHF | .887 | .930 | .472 | .898 | .750 | .813 | .836 | .793 | .250 | .886 | .910 | .901 | .000 | .500 | .500 | .500 | .927 |
| Cars | 148 | 495 | 17 | 660 | 157 | 13 | 117 | 287 | 1 | 416 | 270 | 687 | 0 | 2 | 10 | 12 | 1646 |
| % Cars | 99.3 | 100 | 100 | 99.8 | 96.9 | 100 | 100 | 98.3 | 100 | 99.5 | 98.9 | 99.3 | 0 | 100 | 100 | 100 | 99.3 |
| Trucks | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 5 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 11 |
| % Trucks | 0.7 | 0 | 0 | 0.2 | 3.1 | 0 | 0 | 1.7 | 0 | 0.5 | 1.1 | 0.7 | 0 | 0 | 0 | 0 | 0.7 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 2




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

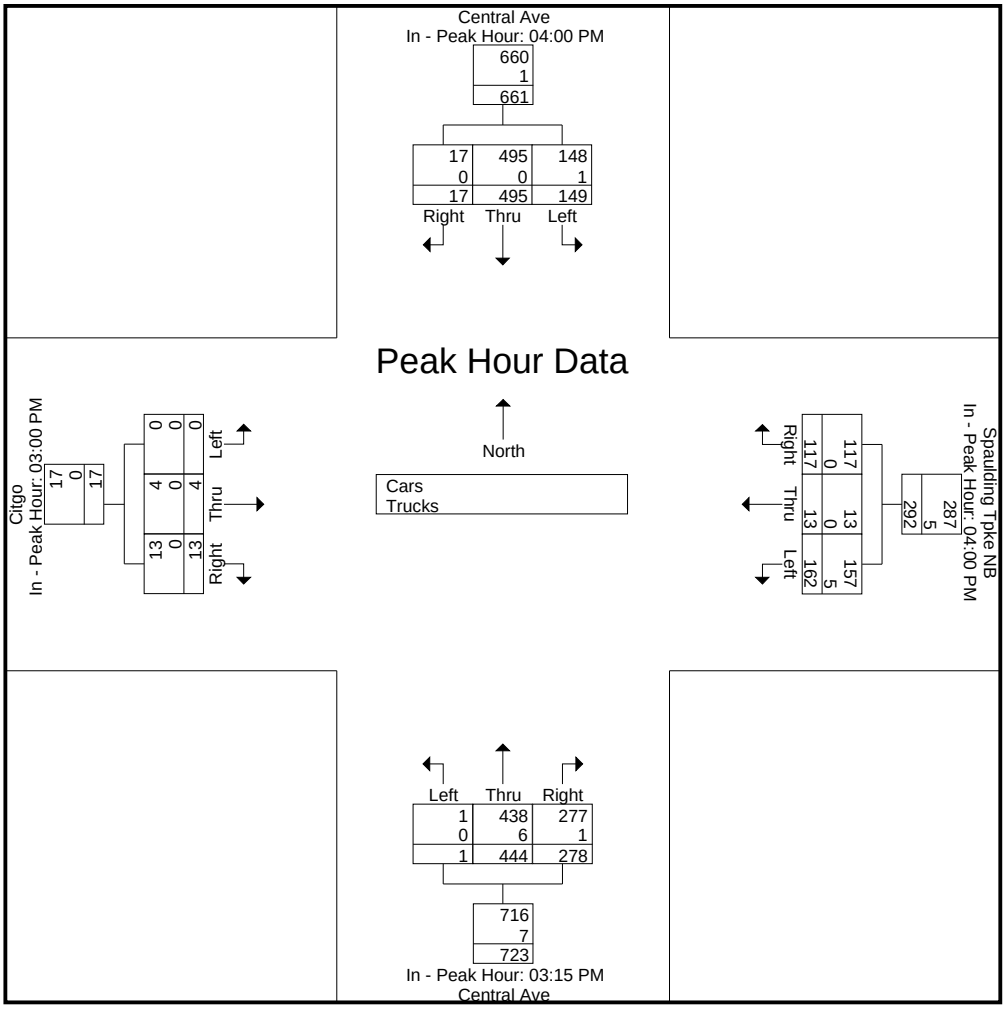
| | 04:00 PM | | | | 04:00 PM | | | | 03:15 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 37 | 116 | 1 | 154 | 31 | **4** | 33 | 68 | **1** | **123** | 53 | 177 | 0 | 0 | **5** | **5** |
| +15 mins. | 37 | 124 | 6 | 167 | 46 | 3 | 30 | 79 | 0 | 102 | 74 | 176 | 0 | **2** | 3 | 5 |
| +30 mins. | 33 | 122 | 1 | 156 | 31 | 3 | 19 | 53 | 0 | 101 | **77** | 178 | 0 | 0 | 2 | 2 |
| +45 mins. | **42** | **133** | **9** | **184** | **54** | 3 | **35** | **92** | 0 | 118 | 74 | **192** | 0 | 2 | 3 | 5 |
| Total Volume | 149 | 495 | 17 | 661 | 162 | 13 | 117 | 292 | 1 | 444 | 278 | 723 | 0 | 4 | 13 | 17 |
| % App. Total | 22.5 | 74.9 | 2.6 | | 55.5 | 4.5 | 40.1 | | 0.1 | 61.4 | 38.5 | | 0 | 23.5 | 76.5 | |
| PHF | .887 | .930 | .472 | .898 | .750 | .813 | .836 | .793 | .250 | .902 | .903 | .941 | .000 | .500 | .650 | .850 |
| Cars | 148 | 495 | 17 | 660 | 157 | 13 | 117 | 287 | 1 | 438 | 277 | 716 | 0 | 4 | 13 | 17 |
| % Cars | 99.3 | 100 | 100 | 99.8 | 96.9 | 100 | 100 | 98.3 | 100 | 98.6 | 99.6 | 99 | 0 | 100 | 100 | 100 |
| Trucks | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 5 | 0 | 6 | 1 | 7 | 0 | 0 | 0 | 0 |
| % Trucks | 0.7 | 0 | 0 | 0.2 | 3.1 | 0 | 0 | 1.7 | 0 | 1.4 | 0.4 | 1 | 0 | 0 | 0 | 0 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 51 | 100 | 9 | 36 | 2 | 28 | 0 | 81 | 65 | 0 | 0 | 5 | 377 |
| 03:15 PM | 50 | 111 | 4 | 31 | 2 | 30 | 1 | 119 | 53 | 0 | 2 | 3 | 406 |
| 03:30 PM | 35 | 106 | 6 | 33 | 2 | 24 | 0 | 101 | 74 | 0 | 0 | 2 | 383 |
| 03:45 PM | 44 | 125 | 4 | 42 | 2 | 26 | 0 | 101 | 76 | 0 | 2 | 3 | 425 |
| Total | 180 | 442 | 23 | 142 | 8 | 108 | 1 | 402 | 268 | 0 | 4 | 13 | 1591 |
| | | | | | | | | | | | | | |
| 04:00 PM | 36 | 116 | 1 | 29 | 4 | 33 | 0 | 117 | 74 | 0 | 0 | 1 | 411 |
| 04:15 PM | 37 | 124 | 6 | 44 | 3 | 30 | 1 | 97 | 60 | 0 | 0 | 3 | 405 |
| 04:30 PM | 33 | 122 | 1 | 30 | 3 | 19 | 0 | 99 | 74 | 0 | 1 | 1 | 383 |
| 04:45 PM | 42 | 133 | 9 | 54 | 3 | 35 | 0 | 103 | 62 | 0 | 1 | 5 | 447 |
| Total | 148 | 495 | 17 | 157 | 13 | 117 | 1 | 416 | 270 | 0 | 2 | 10 | 1646 |
| | | | | | | | | | | | | | |
| 05:00 PM | 47 | 87 | 5 | 30 | 4 | 19 | 0 | 105 | 72 | 0 | 1 | 2 | 372 |
| 05:15 PM | 37 | 125 | 6 | 35 | 1 | 29 | 0 | 108 | 51 | 0 | 0 | 0 | 392 |
| 05:30 PM | 34 | 96 | 3 | 32 | 3 | 35 | 0 | 89 | 45 | 0 | 0 | 2 | 339 |
| 05:45 PM | 22 | 92 | 3 | 45 | 1 | 34 | 0 | 90 | 45 | 0 | 1 | 3 | 336 |
| Total | 140 | 400 | 17 | 142 | 9 | 117 | 0 | 392 | 213 | 0 | 2 | 7 | 1439 |
| | | | | | | | | | | | | | |
| Grand Total | 468 | 1337 | 57 | 441 | 30 | 342 | 2 | 1210 | 751 | 0 | 8 | 30 | 4676 |
| Apprch % | 25.1 | 71.8 | 3.1 | 54.2 | 3.7 | 42.1 | 0.1 | 61.6 | 38.3 | 0 | 21.1 | 78.9 | |
| Total % | 10 | 28.6 | 1.2 | 9.4 | 0.6 | 7.3 | 0 | 25.9 | 16.1 | 0 | 0.2 | 0.6 | |

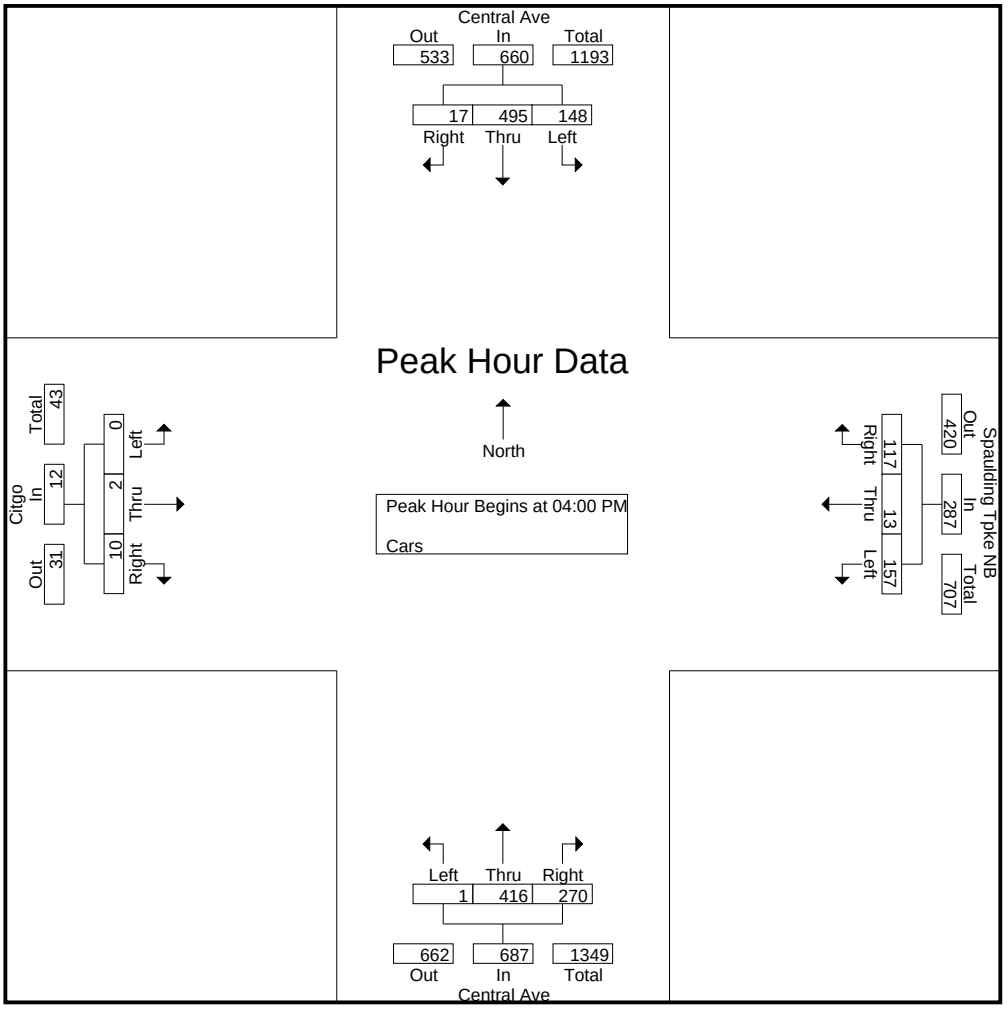
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | 36 | 116 | 1 | 153 | 29 | **4** | 33 | 66 | 0 | **117** | **74** | **191** | 0 | 0 | 1 | 1 | 411 |
| 04:15 PM | 37 | 124 | 6 | 167 | 44 | 3 | 30 | 77 | **1** | 97 | 60 | 158 | 0 | 0 | 3 | 3 | 405 |
| 04:30 PM | 33 | 122 | 1 | 156 | 30 | 3 | 19 | 52 | 0 | 99 | 74 | 173 | 0 | **1** | 1 | 2 | 383 |
| 04:45 PM | **42** | **133** | **9** | **184** | **54** | 3 | **35** | **92** | 0 | 103 | 62 | 165 | 0 | 1 | **5** | **6** | **447** |
| Total Volume | 148 | 495 | 17 | 660 | 157 | 13 | 117 | 287 | 1 | 416 | 270 | 687 | 0 | 2 | 10 | 12 | 1646 |
| % App. Total | 22.4 | 75 | 2.6 | | 54.7 | 4.5 | 40.8 | | 0.1 | 60.6 | 39.3 | | 0 | 16.7 | 83.3 | | |
| PHF | .881 | .930 | .472 | .897 | .727 | .813 | .836 | .780 | .250 | .889 | .912 | .899 | .000 | .500 | .500 | .500 | .921 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 5




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

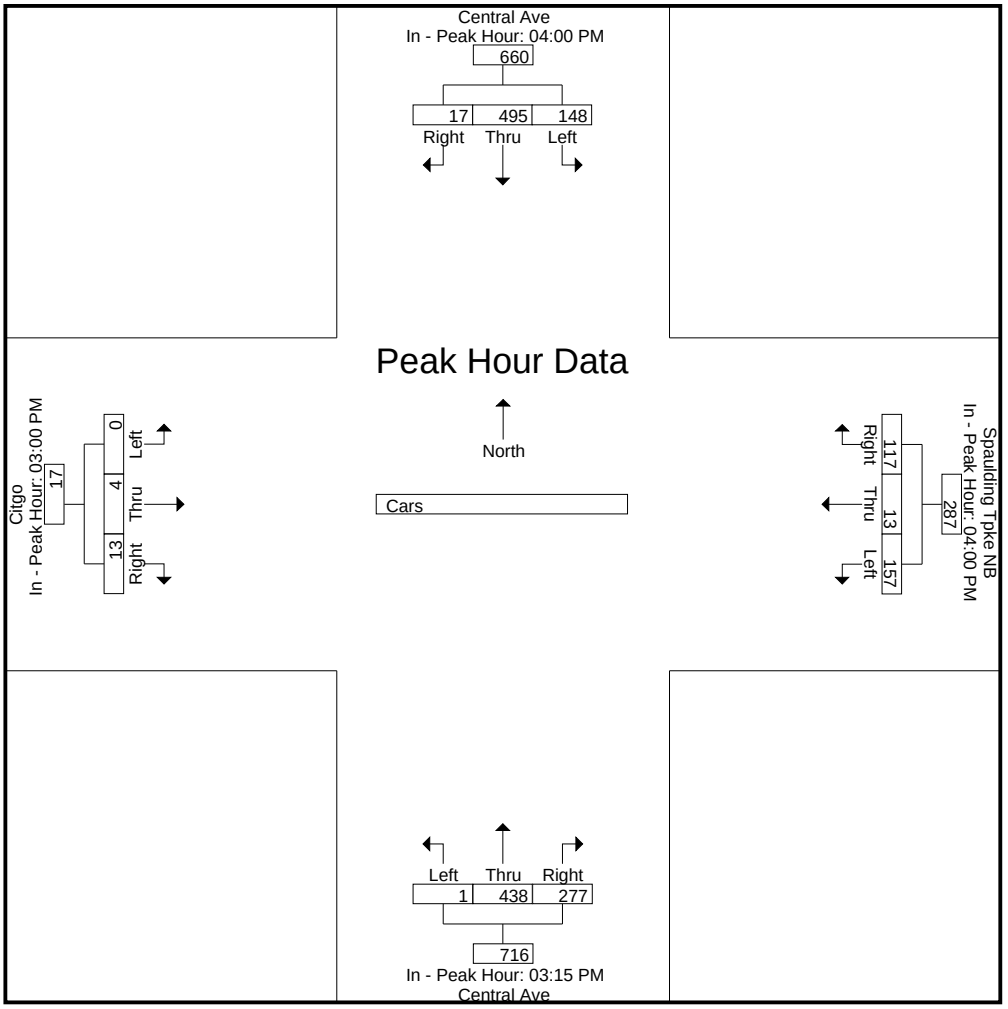
| | 04:00 PM | | | | 04:00 PM | | | | 03:15 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 36 | 116 | 1 | 153 | 29 | **4** | 33 | 66 | **1** | **119** | 53 | 173 | 0 | 0 | **5** | **5** |
| +15 mins. | 37 | 124 | 6 | 167 | 44 | 3 | 30 | 77 | 0 | 101 | 74 | 175 | 0 | **2** | 3 | 5 |
| +30 mins. | 33 | 122 | 1 | 156 | 30 | 3 | 19 | 52 | 0 | 101 | **76** | 177 | 0 | 0 | 2 | 2 |
| +45 mins. | **42** | **133** | **9** | **184** | **54** | 3 | **35** | **92** | 0 | 117 | 74 | **191** | 0 | 2 | 3 | 5 |
| Total Volume | 148 | 495 | 17 | 660 | 157 | 13 | 117 | 287 | 1 | 438 | 277 | 716 | 0 | 4 | 13 | 17 |
| % App. Total | 22.4 | 75 | 2.6 | | 54.7 | 4.5 | 40.8 | | 0.1 | 61.2 | 38.7 | | 0 | 23.5 | 76.5 | |
| PHF | .881 | .930 | .472 | .897 | .727 | .813 | .836 | .780 | .250 | .920 | .911 | .937 | .000 | .500 | .650 | .850 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025


Groups Printed- Trucks

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 7 |
| 03:15 PM | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 10 |
| 03:30 PM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 03:45 PM | 1 | 2 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 7 |
| Total | 3 | 11 | 0 | 3 | 0 | 4 | 0 | 7 | 1 | 0 | 0 | 0 | 29 |
| | | | | | | | | | | | | | |
| 04:00 PM | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| 04:15 PM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 |
| 04:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 11 |
| | | | | | | | | | | | | | |
| 05:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:15 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 4 |
| 05:30 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 7 |
| | | | | | | | | | | | | | |
| Grand Total | 4 | 15 | 0 | 8 | 0 | 5 | 0 | 10 | 5 | 0 | 0 | 0 | 47 |
| Apprch % | 21.1 | 78.9 | 0 | 61.5 | 0 | 38.5 | 0 | 66.7 | 33.3 | 0 | 0 | 0 | |
| Total % | 8.5 | 31.9 | 0 | 17 | 0 | 10.6 | 0 | 21.3 | 10.6 | 0 | 0 | 0 | |

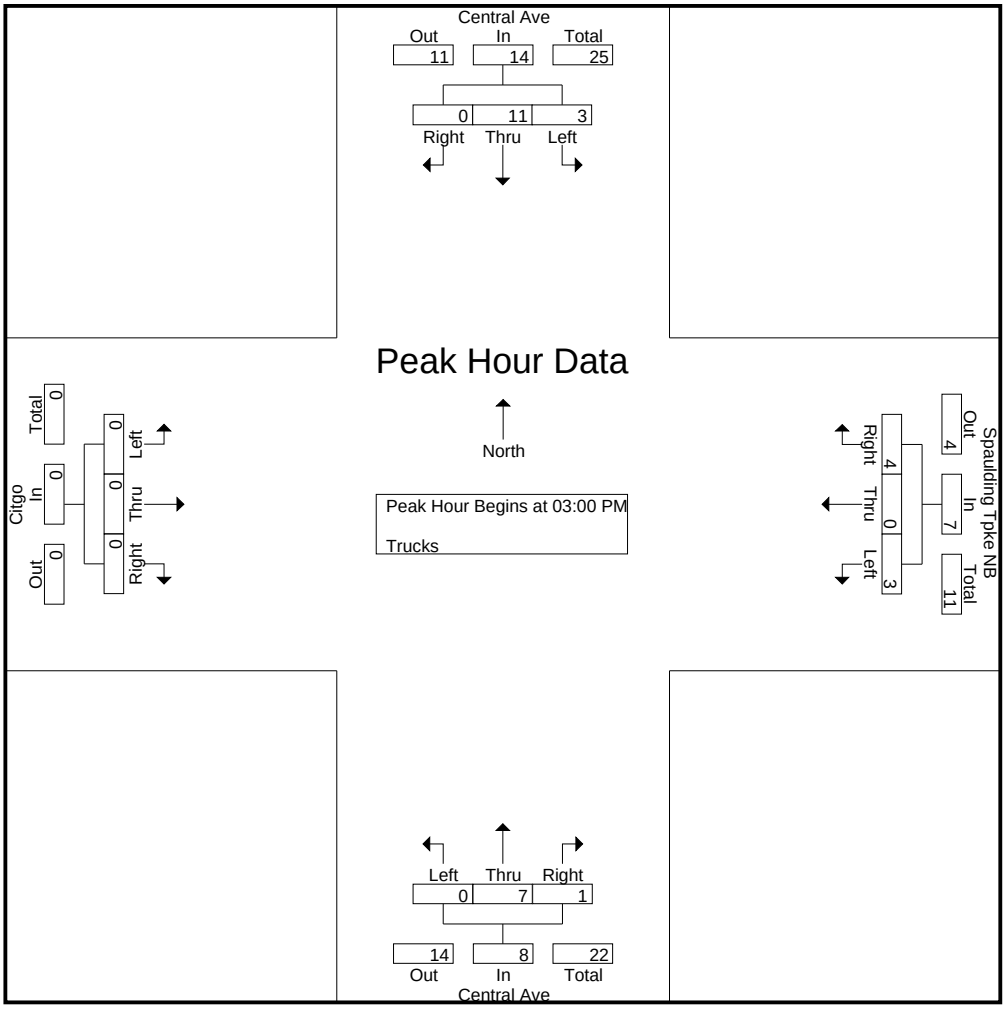
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:00 PM | | | | | | | | | | | | | | | | | |
| 03:00 PM | **1** | 3 | 0 | 4 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 7 |
| 03:15 PM | 1 | **4** | 0 | **5** | 0 | 0 | 1 | 1 | 0 | **4** | 0 | **4** | 0 | 0 | 0 | 0 | **10** |
| 03:30 PM | 0 | 2 | 0 | 2 | **2** | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 03:45 PM | 1 | 2 | 0 | 3 | 1 | 0 | **2** | **3** | 0 | 0 | **1** | 1 | 0 | 0 | 0 | 0 | 7 |
| Total Volume | 3 | 11 | 0 | 14 | 3 | 0 | 4 | 7 | 0 | 7 | 1 | 8 | 0 | 0 | 0 | 0 | 29 |
| % App. Total | 21.4 | 78.6 | 0 | | 42.9 | 0 | 57.1 | | 0 | 87.5 | 12.5 | | 0 | 0 | 0 | | |
| PHF | .750 | .688 | .000 | .700 | .375 | .000 | .500 | .583 | .000 | .438 | .250 | .500 | .000 | .000 | .000 | .000 | .725 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 8




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

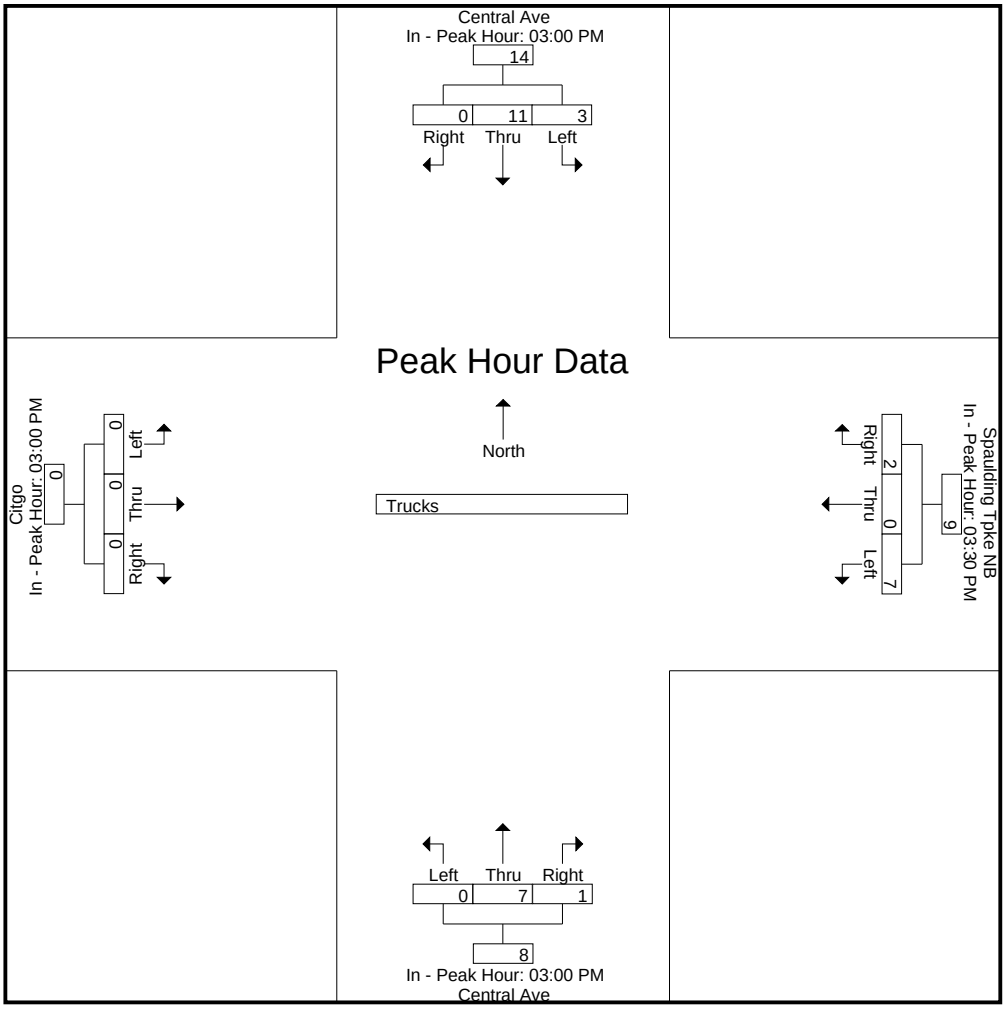
| | 03:00 PM | | | | 03:30 PM | | | | 03:00 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **1** | 3 | 0 | 4 | **2** | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| +15 mins. | 1 | **4** | 0 | **5** | 1 | 0 | **2** | **3** | 0 | **4** | 0 | **4** | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +45 mins. | 1 | 2 | 0 | 3 | 2 | 0 | 0 | 2 | 0 | 0 | **1** | 1 | 0 | 0 | 0 | 0 |
| Total Volume | 3 | 11 | 0 | 14 | 7 | 0 | 2 | 9 | 0 | 7 | 1 | 8 | 0 | 0 | 0 | 0 |
| % App. Total | 21.4 | 78.6 | 0 | | 77.8 | 0 | 22.2 | | 0 | 87.5 | 12.5 | | 0 | 0 | 0 | |
| PHF | .750 | .688 | .000 | .700 | .875 | .000 | .250 | .750 | .000 | .438 | .250 | .500 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 10

Groups Printed- Bikes Peds

| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 |
| 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 | 3 | 3 | 0 | 3 |
| 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 | 3 | 3 | 0 | 3 |
| 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 | 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 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Grand Total | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 1 | 6 |
| Apprch % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 83.3 | 16.7 | |

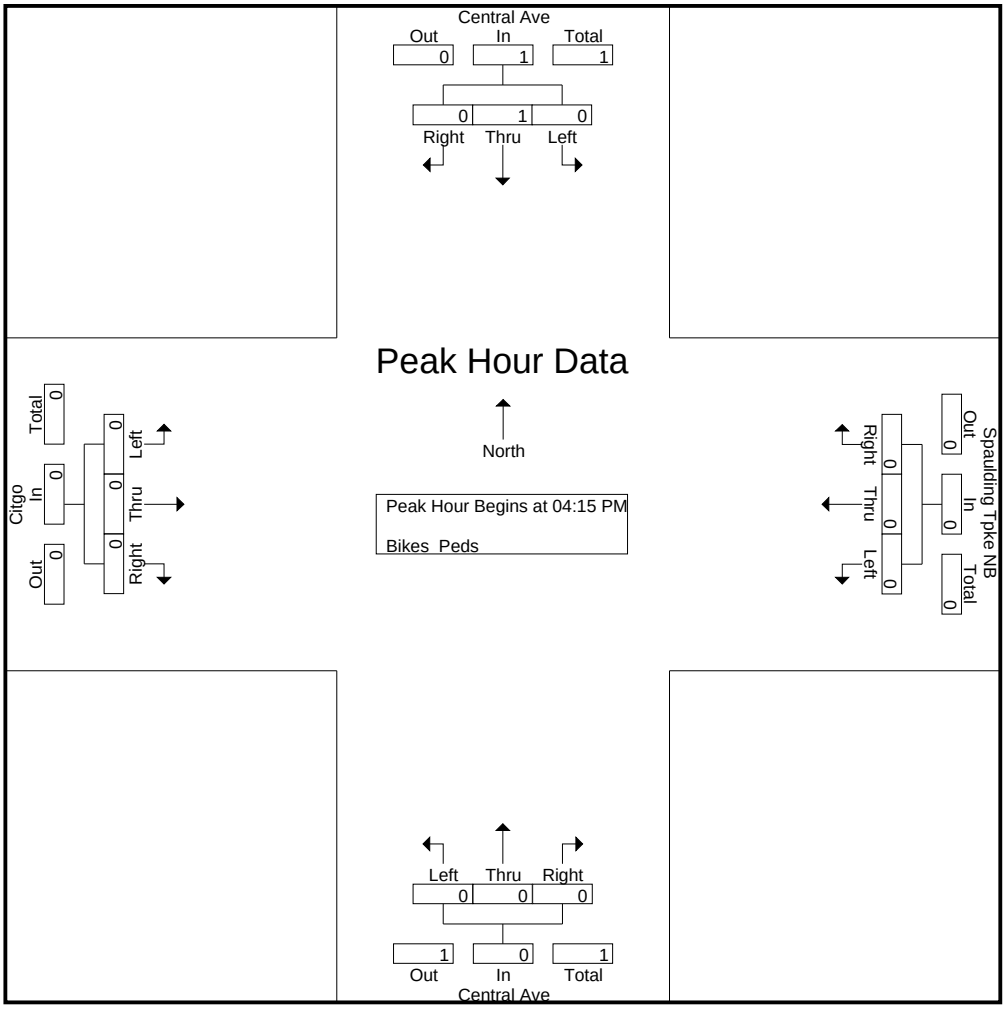
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 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 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00 PM | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| Total Volume | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 11




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

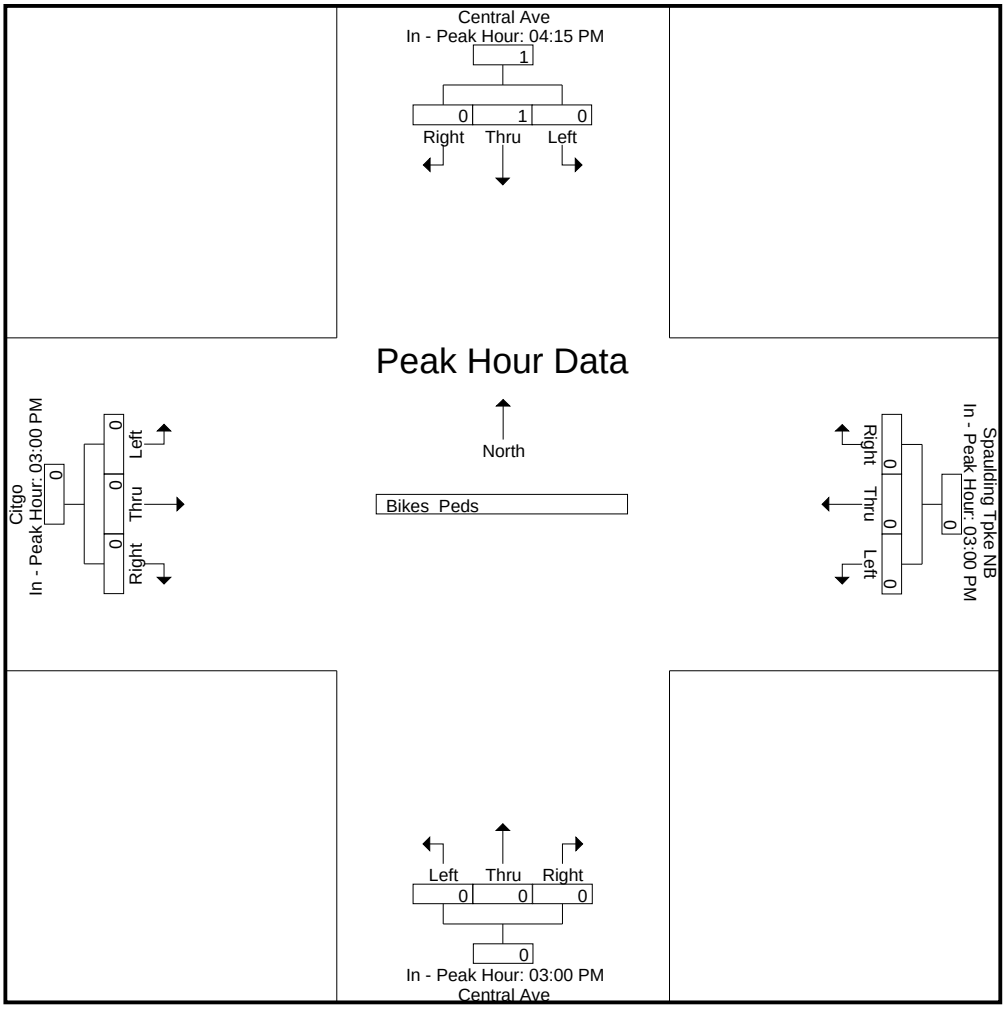
| | 04:15 PM | | | | 03:00 PM | | | | 03:00 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566001
Site Code : 10566001
Start Date : 12/18/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 19 | 103 | 6 | 17 | 1 | 26 | 1 | 108 | 31 | 0 | 0 | 3 | 315 |
| 11:15 AM | 25 | 79 | 1 | 18 | 1 | 29 | 0 | 100 | 47 | 0 | 0 | 0 | 300 |
| 11:30 AM | 34 | 91 | 4 | 18 | 1 | 20 | 0 | 91 | 54 | 0 | 0 | 0 | 313 |
| 11:45 AM | 30 | 90 | 8 | 27 | 3 | 33 | 0 | 89 | 41 | 0 | 0 | 3 | 324 |
| Total | 108 | 363 | 19 | 80 | 6 | 108 | 1 | 388 | 173 | 0 | 0 | 6 | 1252 |
| | | | | | | | | | | | | | |
| 12:00 PM | 29 | 94 | 1 | 15 | 0 | 29 | 1 | 93 | 40 | 0 | 0 | 2 | 304 |
| 12:15 PM | 24 | 82 | 4 | 15 | 2 | 23 | 1 | 95 | 32 | 0 | 1 | 3 | 282 |
| 12:30 PM | 22 | 93 | 3 | 12 | 2 | 11 | 0 | 86 | 28 | 0 | 3 | 1 | 261 |
| 12:45 PM | 30 | 94 | 4 | 16 | 2 | 28 | 0 | 99 | 48 | 0 | 0 | 1 | 322 |
| Total | 105 | 363 | 12 | 58 | 6 | 91 | 2 | 373 | 148 | 0 | 4 | 7 | 1169 |
| | | | | | | | | | | | | | |
| 01:00 PM | 31 | 67 | 3 | 9 | 2 | 36 | 2 | 103 | 46 | 0 | 1 | 1 | 301 |
| 01:15 PM | 39 | 108 | 2 | 21 | 2 | 29 | 0 | 93 | 42 | 0 | 1 | 2 | 339 |
| 01:30 PM | 26 | 87 | 4 | 21 | 2 | 32 | 0 | 81 | 36 | 0 | 2 | 0 | 291 |
| 01:45 PM | 32 | 104 | 1 | 20 | 2 | 27 | 0 | 62 | 30 | 0 | 1 | 1 | 280 |
| Total | 128 | 366 | 10 | 71 | 8 | 124 | 2 | 339 | 154 | 0 | 5 | 4 | 1211 |
| | | | | | | | | | | | | | |
| Grand Total | 341 | 1092 | 41 | 209 | 20 | 323 | 5 | 1100 | 475 | 0 | 9 | 17 | 3632 |
| Apprch % | 23.1 | 74.1 | 2.8 | 37.9 | 3.6 | 58.5 | 0.3 | 69.6 | 30.1 | 0 | 34.6 | 65.4 | |
| Total % | 9.4 | 30.1 | 1.1 | 5.8 | 0.6 | 8.9 | 0.1 | 30.3 | 13.1 | 0 | 0.2 | 0.5 | |
| Cars | 339 | 1089 | 41 | 206 | 20 | 318 | 5 | 1093 | 474 | 0 | 8 | 17 | 3610 |
| % Cars | 99.4 | 99.7 | 100 | 98.6 | 100 | 98.5 | 100 | 99.4 | 99.8 | 0 | 88.9 | 100 | 99.4 |
| Trucks | 2 | 3 | 0 | 3 | 0 | 5 | 0 | 7 | 1 | 0 | 1 | 0 | 22 |
| % Trucks | 0.6 | 0.3 | 0 | 1.4 | 0 | 1.5 | 0 | 0.6 | 0.2 | 0 | 11.1 | 0 | 0.6 |

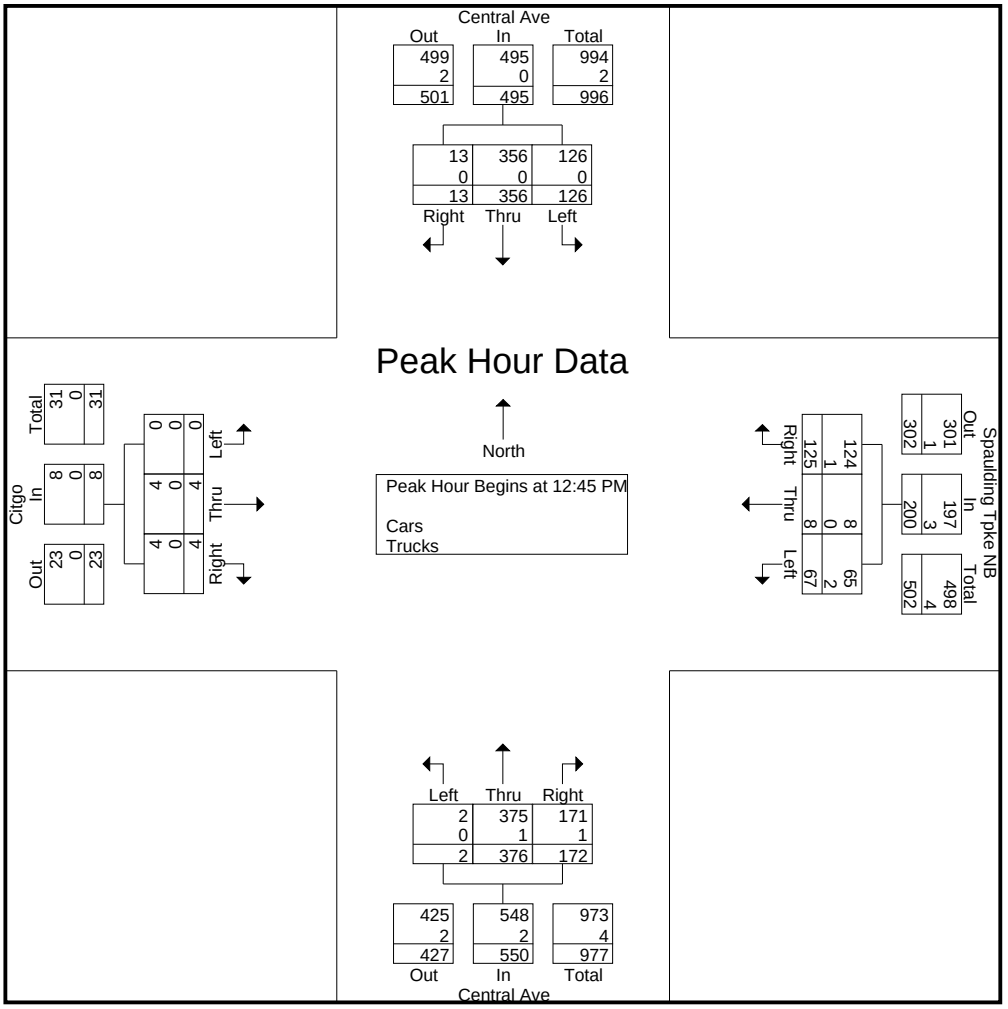
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:45 PM | | | | | | | | | | | | | | | | | |
| 12:45 PM | 30 | 94 | **4** | 128 | 16 | **2** | 28 | 46 | 0 | 99 | **48** | 147 | 0 | 0 | 1 | 1 | 322 |
| 01:00 PM | 31 | 67 | 3 | 101 | 9 | 2 | **36** | 47 | **2** | **103** | 46 | **151** | 0 | 1 | 1 | 2 | 301 |
| 01:15 PM | **39** | **108** | 2 | **149** | **21** | 2 | 29 | 52 | 0 | 93 | 42 | 135 | 0 | 1 | **2** | **3** | **339** |
| 01:30 PM | 26 | 87 | 4 | 117 | 21 | 2 | 32 | **55** | 0 | 81 | 36 | 117 | 0 | **2** | 0 | 2 | 291 |
| Total Volume | 126 | 356 | 13 | 495 | 67 | 8 | 125 | 200 | 2 | 376 | 172 | 550 | 0 | 4 | 4 | 8 | 1253 |
| % App. Total | 25.5 | 71.9 | 2.6 | | 33.5 | 4 | 62.5 | | 0.4 | 68.4 | 31.3 | | 0 | 50 | 50 | | |
| PHF | .808 | .824 | .813 | .831 | .798 | 1.00 | .868 | .909 | .250 | .913 | .896 | .911 | .000 | .500 | .500 | .667 | .924 |
| Cars | 126 | 356 | 13 | 495 | 65 | 8 | 124 | 197 | 2 | 375 | 171 | 548 | 0 | 4 | 4 | 8 | 1248 |
| % Cars | 100 | 100 | 100 | 100 | 97.0 | 100 | 99.2 | 98.5 | 100 | 99.7 | 99.4 | 99.6 | 0 | 100 | 100 | 100 | 99.6 |
| Trucks | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 5 |
| % Trucks | 0 | 0 | 0 | 0 | 3.0 | 0 | 0.8 | 1.5 | 0 | 0.3 | 0.6 | 0.4 | 0 | 0 | 0 | 0 | 0.4 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 2




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

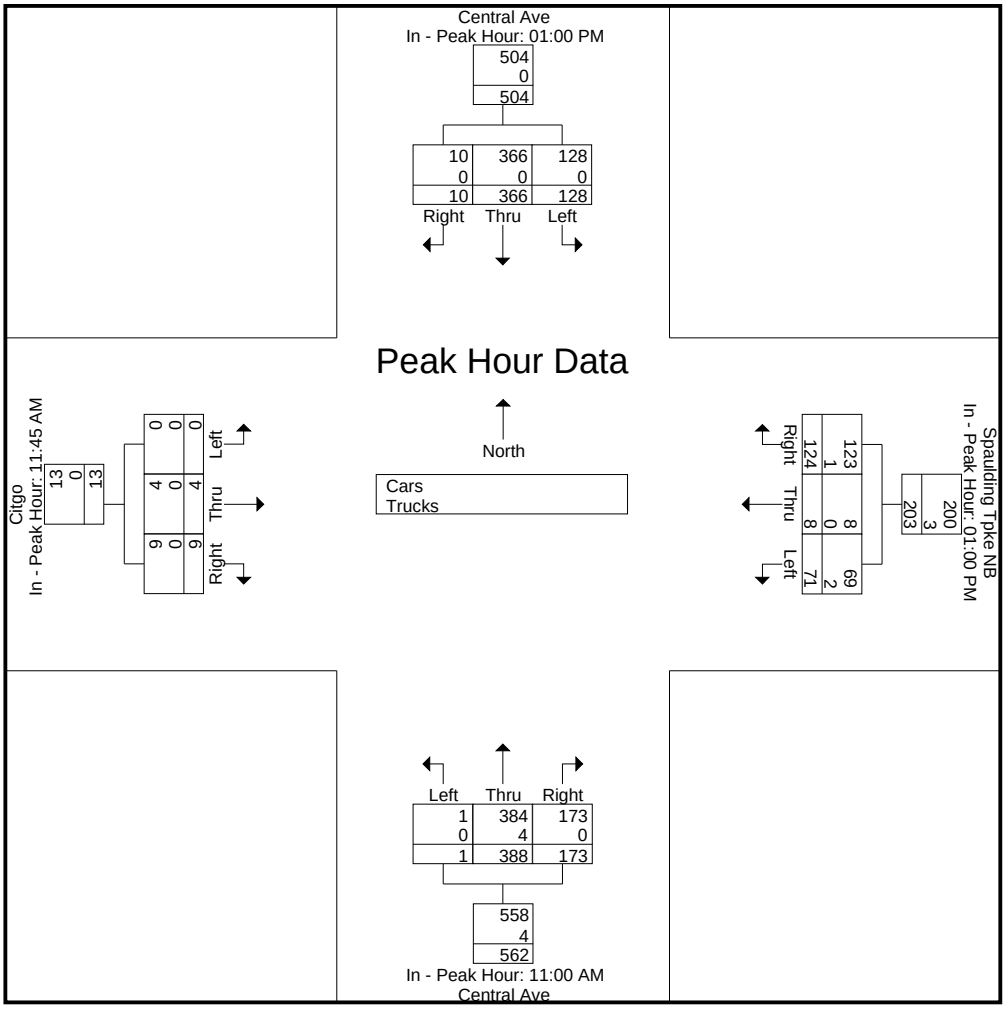
| | 01:00 PM | | | | 01:00 PM | | | | 11:00 AM | | | | 11:45 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 31 | 67 | 3 | 101 | 9 | **2** | **36** | 47 | **1** | **108** | 31 | 140 | 0 | 0 | **3** | 3 |
| +15 mins. | **39** | **108** | 2 | **149** | **21** | 2 | 29 | 52 | 0 | 100 | 47 | **147** | 0 | 0 | 2 | 2 |
| +30 mins. | 26 | 87 | **4** | 117 | 21 | 2 | 32 | **55** | 0 | 91 | **54** | 145 | 0 | 1 | 3 | **4** |
| +45 mins. | 32 | 104 | 1 | 137 | 20 | 2 | 27 | 49 | 0 | 89 | 41 | 130 | 0 | **3** | 1 | 4 |
| Total Volume | 128 | 366 | 10 | 504 | 71 | 8 | 124 | 203 | 1 | 388 | 173 | 562 | 0 | 4 | 9 | 13 |
| % App. Total | 25.4 | 72.6 | 2 | | 35 | 3.9 | 61.1 | | 0.2 | 69 | 30.8 | | 0 | 30.8 | 69.2 | |
| PHF | .821 | .847 | .625 | .846 | .845 | 1.000 | .861 | .923 | .250 | .898 | .801 | .956 | .000 | .333 | .750 | .813 |
| Cars | 128 | 366 | 10 | 504 | 69 | 8 | 123 | 200 | 1 | 384 | 173 | 558 | 0 | 4 | 9 | 13 |
| % Cars | 100 | 100 | 100 | 100 | 97.2 | 100 | 99.2 | 98.5 | 100 | 99 | 100 | 99.3 | 0 | 100 | 100 | 100 |
| Trucks | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 |
| % Trucks | 0 | 0 | 0 | 0 | 2.8 | 0 | 0.8 | 1.5 | 0 | 1 | 0 | 0.7 | 0 | 0 | 0 | 0 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 19 | 103 | 6 | 17 | 1 | 25 | 1 | 107 | 31 | 0 | 0 | 3 | 313 |
| 11:15 AM | 25 | 79 | 1 | 17 | 1 | 28 | 0 | 98 | 47 | 0 | 0 | 0 | 296 |
| 11:30 AM | 34 | 90 | 4 | 18 | 1 | 19 | 0 | 90 | 54 | 0 | 0 | 0 | 310 |
| 11:45 AM | 30 | 90 | 8 | 27 | 3 | 32 | 0 | 89 | 41 | 0 | 0 | 3 | 323 |
| Total | 108 | 362 | 19 | 79 | 6 | 104 | 1 | 384 | 173 | 0 | 0 | 6 | 1242 |
| | | | | | | | | | | | | | |
| 12:00 PM | 28 | 92 | 1 | 15 | 0 | 29 | 1 | 93 | 40 | 0 | 0 | 2 | 301 |
| 12:15 PM | 23 | 82 | 4 | 15 | 2 | 23 | 1 | 95 | 32 | 0 | 1 | 3 | 281 |
| 12:30 PM | 22 | 93 | 3 | 12 | 2 | 11 | 0 | 84 | 28 | 0 | 3 | 1 | 259 |
| 12:45 PM | 30 | 94 | 4 | 16 | 2 | 28 | 0 | 98 | 48 | 0 | 0 | 1 | 321 |
| Total | 103 | 361 | 12 | 58 | 6 | 91 | 2 | 370 | 148 | 0 | 4 | 7 | 1162 |
| | | | | | | | | | | | | | |
| 01:00 PM | 31 | 67 | 3 | 9 | 2 | 35 | 2 | 103 | 45 | 0 | 1 | 1 | 299 |
| 01:15 PM | 39 | 108 | 2 | 21 | 2 | 29 | 0 | 93 | 42 | 0 | 1 | 2 | 339 |
| 01:30 PM | 26 | 87 | 4 | 19 | 2 | 32 | 0 | 81 | 36 | 0 | 2 | 0 | 289 |
| 01:45 PM | 32 | 104 | 1 | 20 | 2 | 27 | 0 | 62 | 30 | 0 | 0 | 1 | 279 |
| Total | 128 | 366 | 10 | 69 | 8 | 123 | 2 | 339 | 153 | 0 | 4 | 4 | 1206 |
| | | | | | | | | | | | | | |
| Grand Total | 339 | 1089 | 41 | 206 | 20 | 318 | 5 | 1093 | 474 | 0 | 8 | 17 | 3610 |
| Apprch % | 23.1 | 74.1 | 2.8 | 37.9 | 3.7 | 58.5 | 0.3 | 69.5 | 30.2 | 0 | 32 | 68 | |
| Total % | 9.4 | 30.2 | 1.1 | 5.7 | 0.6 | 8.8 | 0.1 | 30.3 | 13.1 | 0 | 0.2 | 0.5 | |

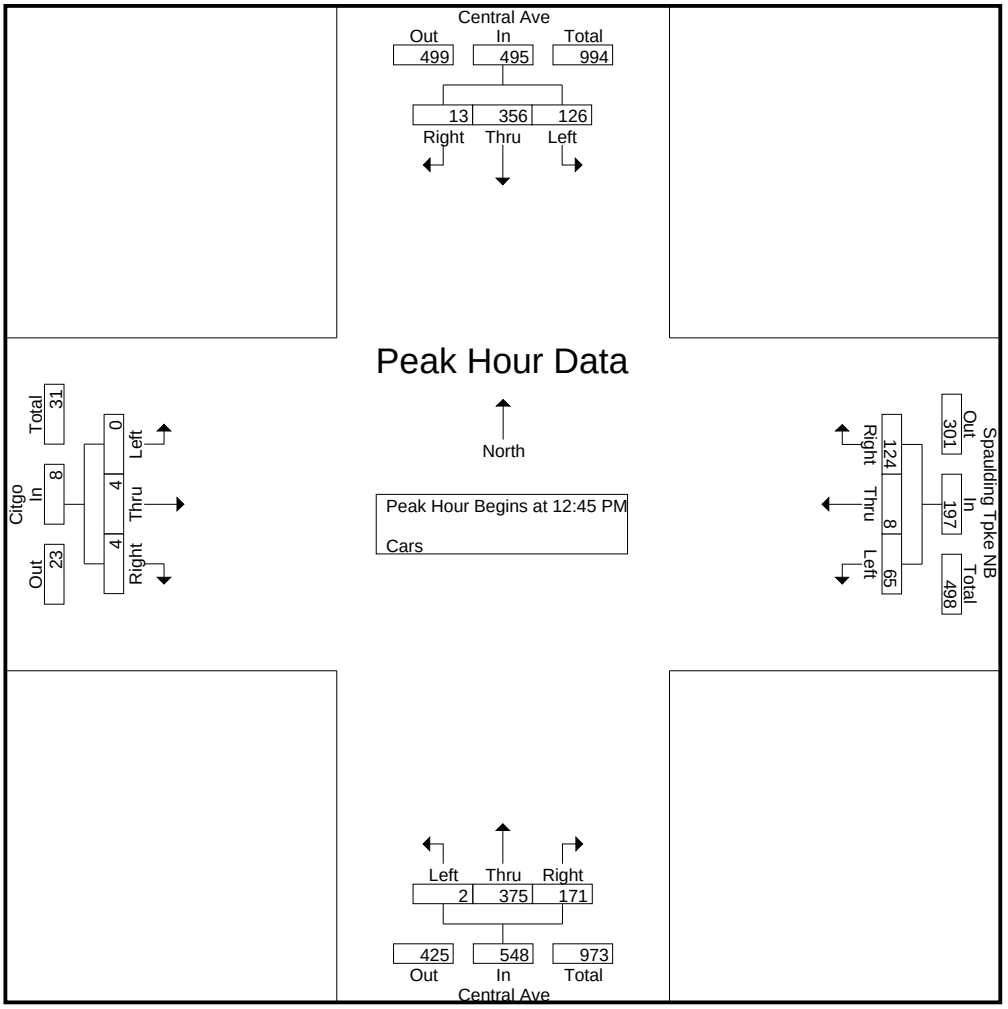
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:45 PM | | | | | | | | | | | | | | | | | |
| 12:45 PM | 30 | 94 | **4** | 128 | 16 | **2** | 28 | 46 | 0 | 98 | **48** | 146 | 0 | 0 | 1 | 1 | 321 |
| 01:00 PM | 31 | 67 | 3 | 101 | 9 | 2 | **35** | 46 | **2** | **103** | 45 | **150** | 0 | 1 | 1 | 2 | 299 |
| 01:15 PM | **39** | **108** | 2 | **149** | **21** | 2 | 29 | 52 | 0 | 93 | 42 | 135 | 0 | 1 | **2** | **3** | **339** |
| 01:30 PM | 26 | 87 | 4 | 117 | 19 | 2 | 32 | **53** | 0 | 81 | 36 | 117 | 0 | **2** | 0 | 2 | 289 |
| Total Volume | 126 | 356 | 13 | 495 | 65 | 8 | 124 | 197 | 2 | 375 | 171 | 548 | 0 | 4 | 4 | 8 | 1248 |
| % App. Total | 25.5 | 71.9 | 2.6 | | 33 | 4.1 | 62.9 | | 0.4 | 68.4 | 31.2 | | 0 | 50 | 50 | | |
| PHF | .808 | .824 | .813 | .831 | .774 | 1.00 | .886 | .929 | .250 | .910 | .891 | .913 | .000 | .500 | .500 | .667 | .920 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 5




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

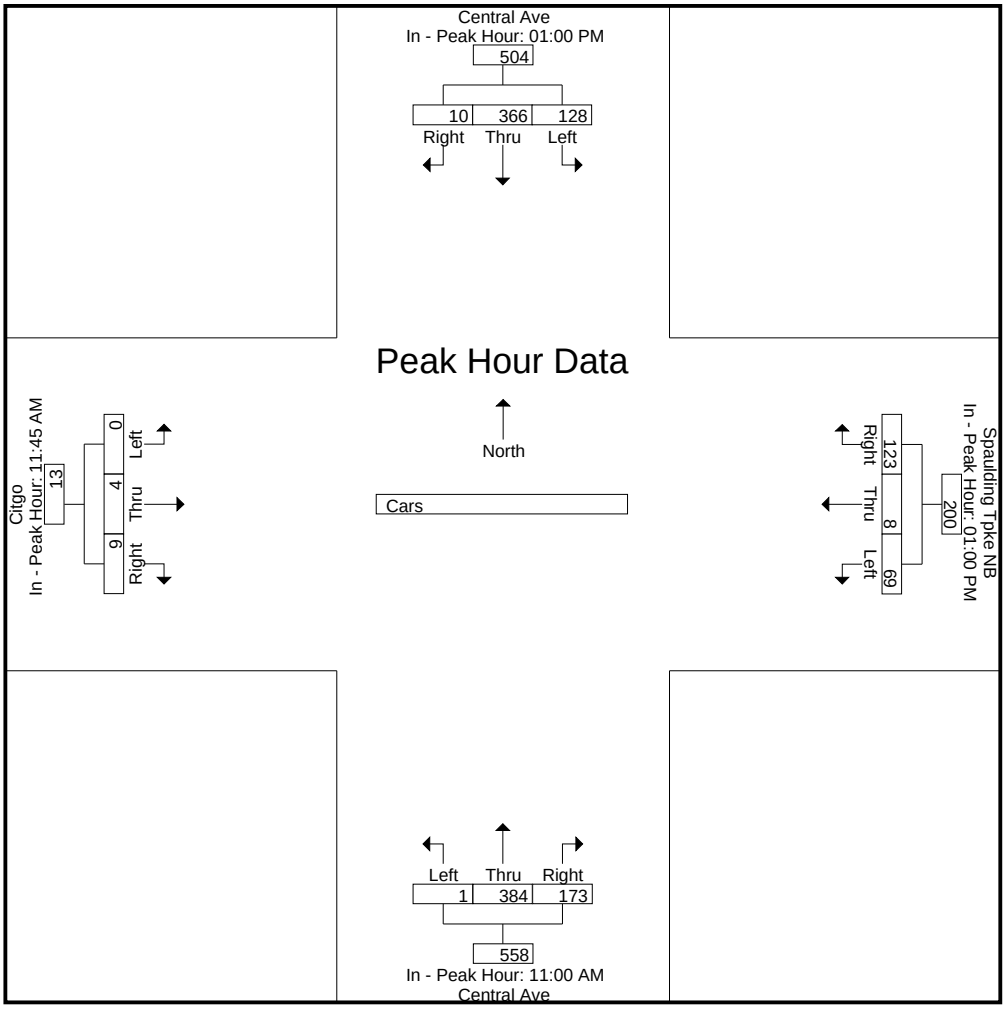
| | 01:00 PM | | | | 01:00 PM | | | | 11:00 AM | | | | 11:45 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 31 | 67 | 3 | 101 | 9 | **2** | **35** | 46 | **1** | **107** | 31 | 139 | 0 | 0 | **3** | 3 |
| +15 mins. | **39** | **108** | 2 | **149** | **21** | 2 | 29 | 52 | 0 | 98 | 47 | **145** | 0 | 0 | 2 | 2 |
| +30 mins. | 26 | 87 | **4** | 117 | 19 | 2 | 32 | **53** | 0 | 90 | **54** | 144 | 0 | 1 | 3 | **4** |
| +45 mins. | 32 | 104 | 1 | 137 | 20 | 2 | 27 | 49 | 0 | 89 | 41 | 130 | 0 | **3** | 1 | 4 |
| Total Volume | 128 | 366 | 10 | 504 | 69 | 8 | 123 | 200 | 1 | 384 | 173 | 558 | 0 | 4 | 9 | 13 |
| % App. Total | 25.4 | 72.6 | 2 | | 34.5 | 4 | 61.5 | | 0.2 | 68.8 | 31 | | 0 | 30.8 | 69.2 | |
| PHF | .821 | .847 | .625 | .846 | .821 | 1.000 | .879 | .943 | .250 | .897 | .801 | .962 | .000 | .333 | .750 | .813 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 7

Groups Printed- Trucks

| | Central Ave From North | | | Spaulding Tpke NB From East | | | Central Ave From South | | | Citgo From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 11:15 AM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 4 |
| 11:30 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 10 |
| | | | | | | | | | | | | | |
| 12:00 PM | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 12:15 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 7 |
| | | | | | | | | | | | | | |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:30 PM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 5 |
| | | | | | | | | | | | | | |
| Grand Total | 2 | 3 | 0 | 3 | 0 | 5 | 0 | 7 | 1 | 0 | 1 | 0 | 22 |
| Apprch % | 40 | 60 | 0 | 37.5 | 0 | 62.5 | 0 | 87.5 | 12.5 | 0 | 100 | 0 | |
| Total % | 9.1 | 13.6 | 0 | 13.6 | 0 | 22.7 | 0 | 31.8 | 4.5 | 0 | 4.5 | 0 | |

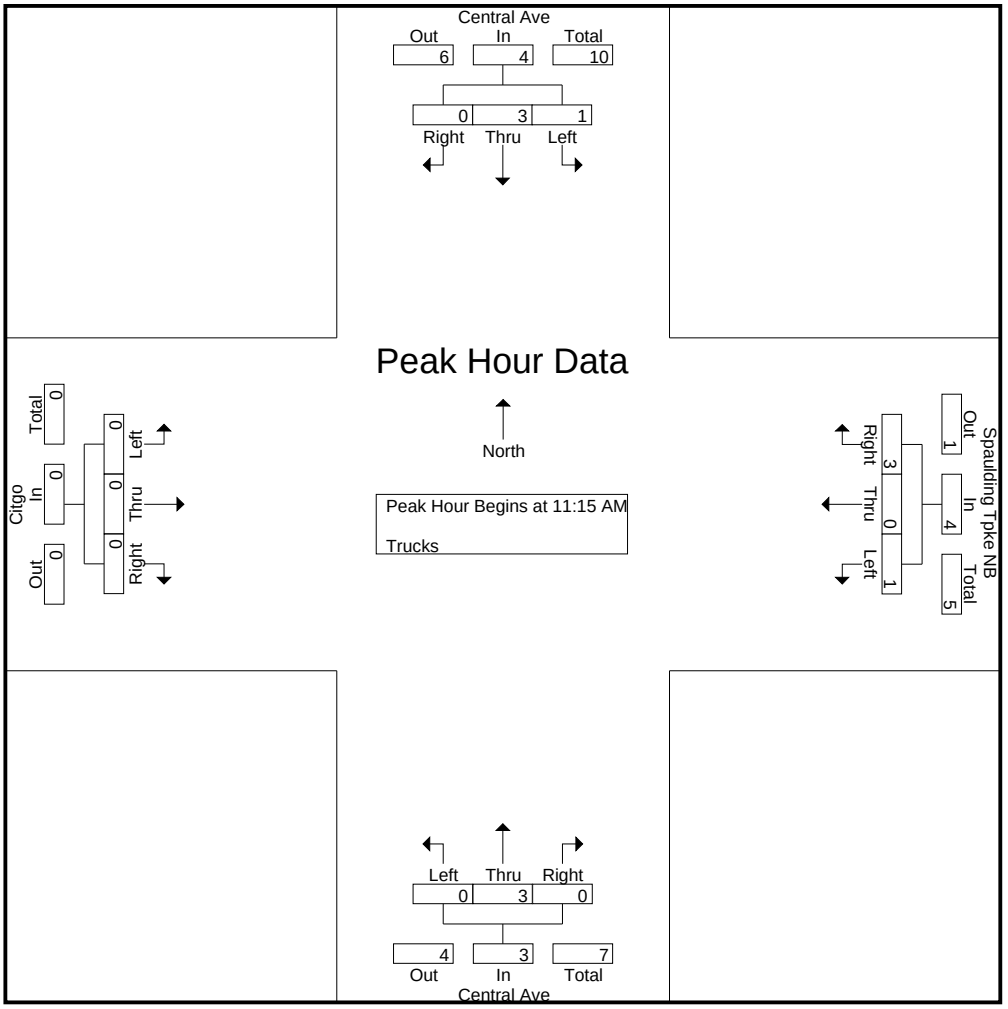
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:15 AM | | | | | | | | | | | | | | | | | |
| 11:15 AM | 0 | 0 | 0 | 0 | **1** | 0 | **1** | **2** | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | **4** |
| 11:30 AM | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:00 PM | **1** | **2** | 0 | **3** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total Volume | 1 | 3 | 0 | 4 | 1 | 0 | 3 | 4 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 11 |
| % App. Total | 25 | 75 | 0 | | 25 | 0 | 75 | | 0 | 100 | 0 | | 0 | 0 | 0 | | |
| PHF | .250 | .375 | .000 | .333 | .250 | .000 | .750 | .500 | .000 | .375 | .000 | .375 | .000 | .000 | .000 | .000 | .688 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 8




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

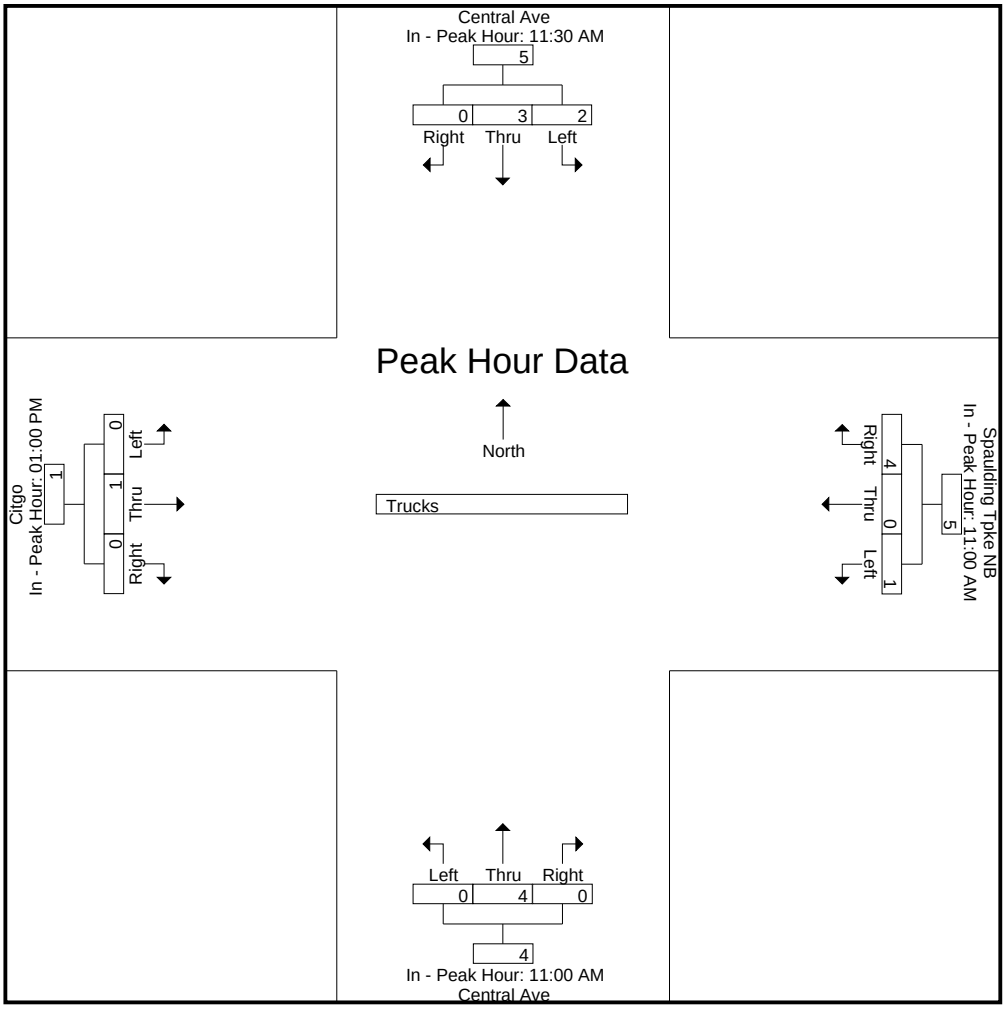
| | 11:30 AM | | | | 11:00 AM | | | | 11:00 AM | | | | 01:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 1 | 0 | 1 | 0 | 0 | **1** | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | **1** | 0 | 1 | **2** | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 |
| +30 mins. | **1** | **2** | 0 | **3** | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +45 mins. | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | **1** | 0 | **1** |
| Total Volume | 2 | 3 | 0 | 5 | 1 | 0 | 4 | 5 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 1 |
| % App. Total | 40 | 60 | 0 | | 20 | 0 | 80 | | 0 | 100 | 0 | | 0 | 100 | 0 | |
| PHF | .500 | .375 | .000 | .417 | .250 | .000 | 1.000 | .625 | .000 | .500 | .000 | .500 | .000 | .250 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 10

Groups Printed- Bikes Peds

| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 11:45 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 | 5 | 5 | 0 | 5 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 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 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 |
| 01:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 4 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:45 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 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 5 |
| Grand Total | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 2 | 13 |
| Apprch % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 84.6 | 15.4 | |

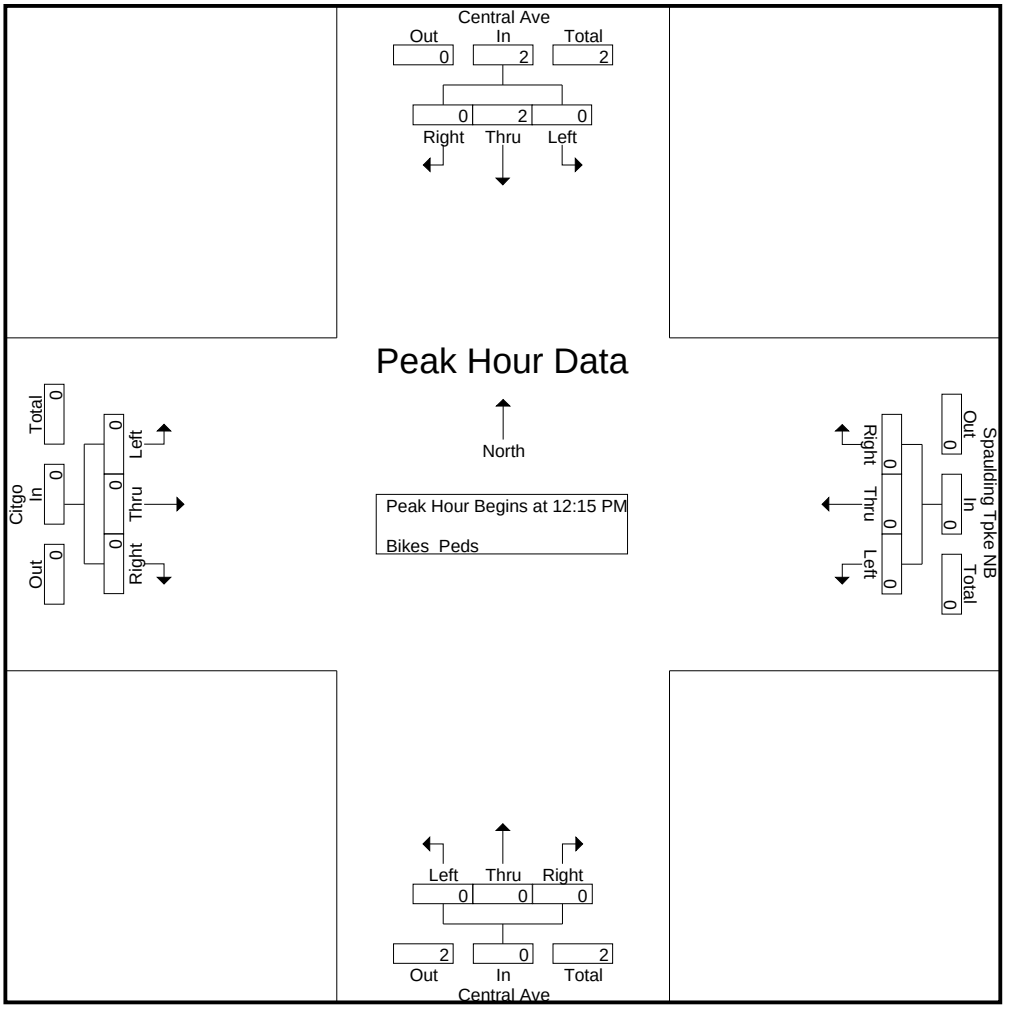
| | Central Ave From North | | | | Spaulding Tpke NB From East | | | | Central Ave From South | | | | Citgo From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 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 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:00 PM | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **2** |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 11




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

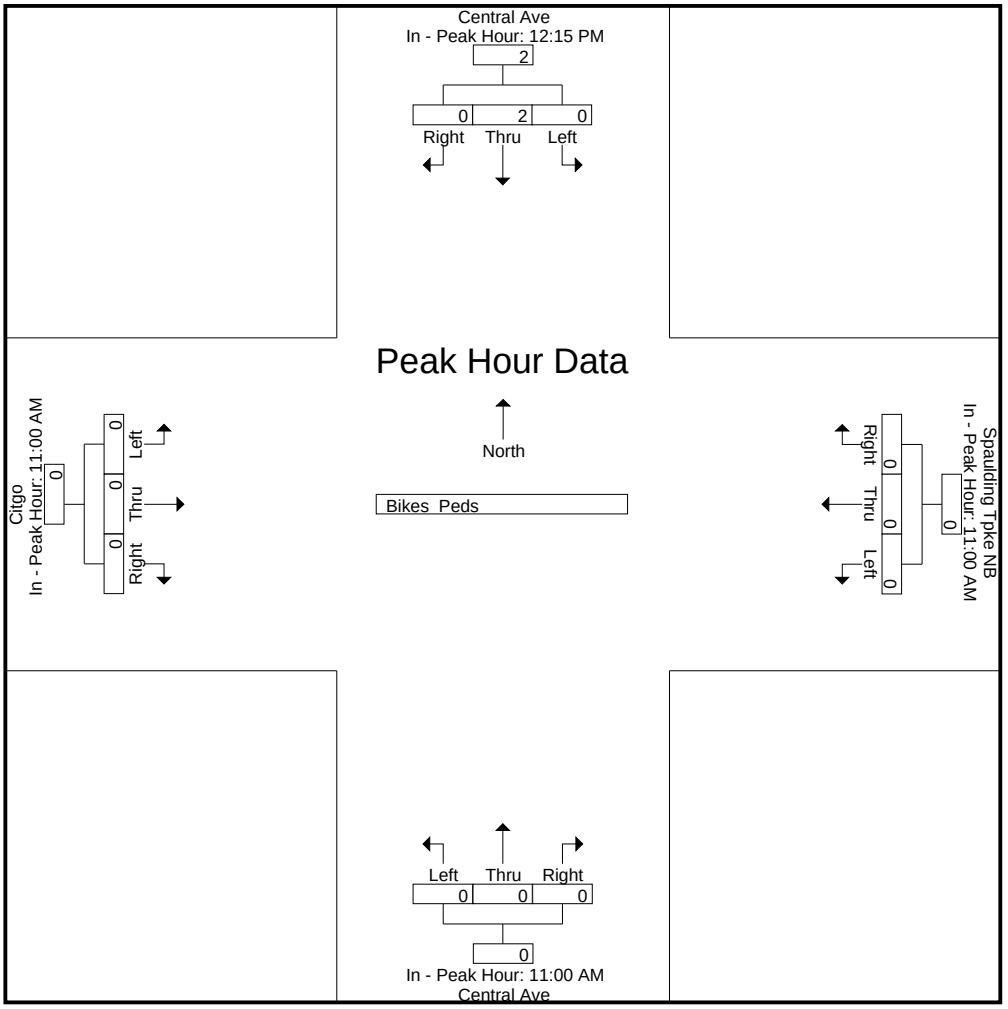
| | 12:15 PM | | | | 11:00 AM | | | | 11:00 AM | | | | 11:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Spaulding Tpke NB / Citgo
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S1
Site Code : 10566001
Start Date : 12/20/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 143 | 4 | 0 | 0 | 0 | 21 | 105 | 0 | 3 | 0 | 28 | 304 |
| 07:15 AM | 0 | 80 | 6 | 0 | 0 | 0 | 42 | 145 | 0 | 5 | 0 | 38 | 316 |
| 07:30 AM | 0 | 111 | 4 | 0 | 0 | 0 | 42 | 138 | 0 | 4 | 1 | 49 | 349 |
| 07:45 AM | 1 | 106 | 19 | 0 | 0 | 0 | 63 | 153 | 1 | 1 | 0 | 52 | 396 |
| Total | 1 | 440 | 33 | 0 | 0 | 0 | 168 | 541 | 1 | 13 | 1 | 167 | 1365 |
| | | | | | | | | | | | | | |
| 08:00 AM | 0 | 118 | 11 | 0 | 0 | 0 | 35 | 154 | 1 | 3 | 0 | 37 | 359 |
| 08:15 AM | 1 | 108 | 6 | 0 | 0 | 1 | 59 | 167 | 0 | 4 | 0 | 44 | 390 |
| 08:30 AM | 0 | 98 | 16 | 0 | 0 | 1 | 40 | 141 | 0 | 5 | 0 | 47 | 348 |
| 08:45 AM | 0 | 100 | 11 | 0 | 0 | 0 | 45 | 117 | 0 | 5 | 0 | 49 | 327 |
| Total | 1 | 424 | 44 | 0 | 0 | 2 | 179 | 579 | 1 | 17 | 0 | 177 | 1424 |
| | | | | | | | | | | | | | |
| Grand Total | 2 | 864 | 77 | 0 | 0 | 2 | 347 | 1120 | 2 | 30 | 1 | 344 | 2789 |
| Apprch % | 0.2 | 91.6 | 8.2 | 0 | 0 | 100 | 23.6 | 76.2 | 0.1 | 8 | 0.3 | 91.7 | |
| Total % | 0.1 | 31 | 2.8 | 0 | 0 | 0.1 | 12.4 | 40.2 | 0.1 | 1.1 | 0 | 12.3 | |
| Cars | 2 | 834 | 76 | 0 | 0 | 2 | 339 | 1072 | 2 | 28 | 1 | 338 | 2694 |
| % Cars | 100 | 96.5 | 98.7 | 0 | 0 | 100 | 97.7 | 95.7 | 100 | 93.3 | 100 | 98.3 | 96.6 |
| Trucks | 0 | 30 | 1 | 0 | 0 | 0 | 8 | 48 | 0 | 2 | 0 | 6 | 95 |
| % Trucks | 0 | 3.5 | 1.3 | 0 | 0 | 0 | 2.3 | 4.3 | 0 | 6.7 | 0 | 1.7 | 3.4 |

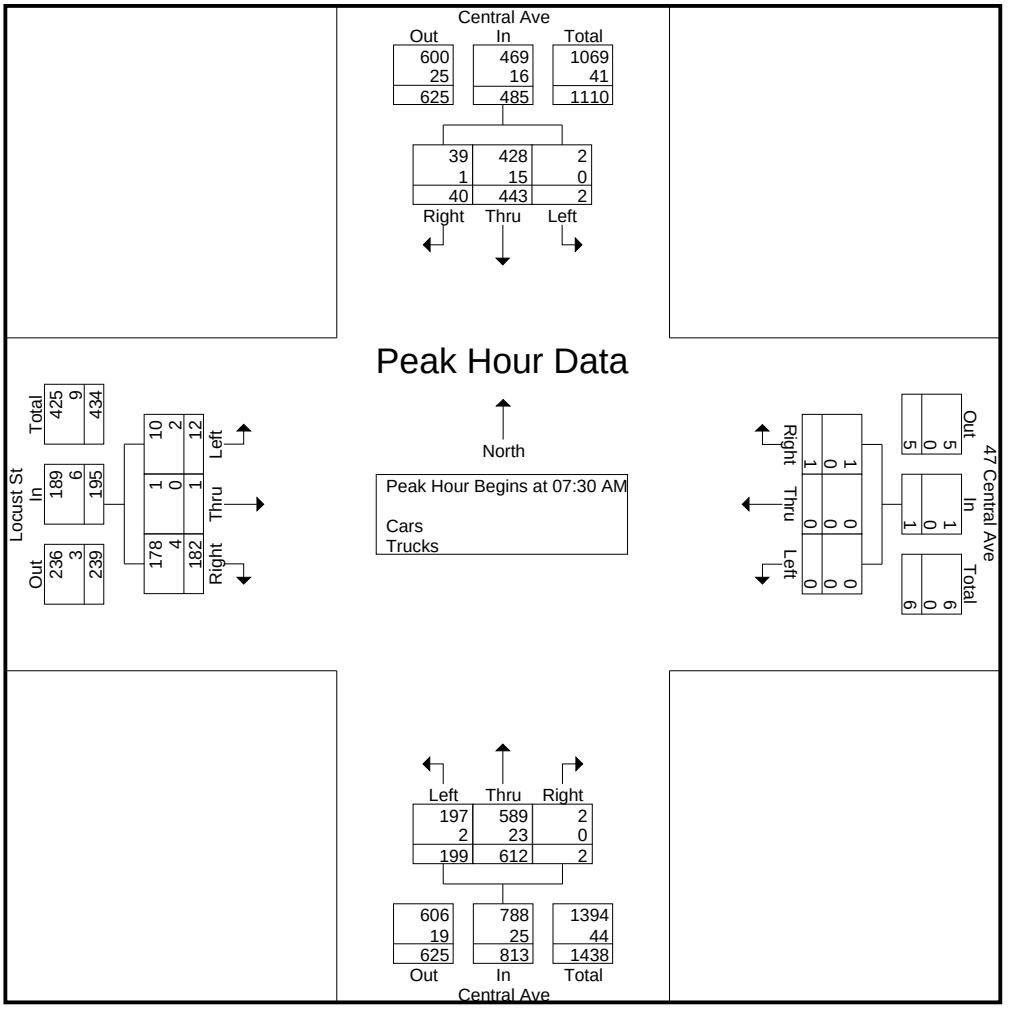
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 0 | 111 | 4 | 115 | 0 | 0 | 0 | 0 | 42 | 138 | 0 | 180 | **4** | **1** | 49 | **54** | 349 |
| 07:45 AM | **1** | 106 | **19** | 126 | 0 | 0 | 0 | 0 | **63** | 153 | **1** | 217 | 1 | 0 | **52** | 53 | **396** |
| 08:00 AM | 0 | **118** | 11 | **129** | 0 | 0 | 0 | 0 | 35 | 154 | 1 | 190 | 3 | 0 | 37 | 40 | 359 |
| 08:15 AM | 1 | 108 | 6 | 115 | 0 | 0 | **1** | **1** | 59 | **167** | 0 | **226** | 4 | 0 | 44 | 48 | 390 |
| Total Volume | 2 | 443 | 40 | 485 | 0 | 0 | 1 | 1 | 199 | 612 | 2 | 813 | 12 | 1 | 182 | 195 | 1494 |
| % App. Total | 0.4 | 91.3 | 8.2 | | 0 | 0 | 100 | | 24.5 | 75.3 | 0.2 | | 6.2 | 0.5 | 93.3 | | |
| PHF | .500 | .939 | .526 | .940 | .000 | .000 | .250 | .250 | .790 | .916 | .500 | .899 | .750 | .250 | .875 | .903 | .943 |
| Cars | 2 | 428 | 39 | 469 | 0 | 0 | 1 | 1 | 197 | 589 | 2 | 788 | 10 | 1 | 178 | 189 | 1447 |
| % Cars | 100 | 96.6 | 97.5 | 96.7 | 0 | 0 | 100 | 100 | 99.0 | 96.2 | 100 | 96.9 | 83.3 | 100 | 97.8 | 96.9 | 96.9 |
| Trucks | 0 | 15 | 1 | 16 | 0 | 0 | 0 | 0 | 2 | 23 | 0 | 25 | 2 | 0 | 4 | 6 | 47 |
| % Trucks | 0 | 3.4 | 2.5 | 3.3 | 0 | 0 | 0 | 0 | 1.0 | 3.8 | 0 | 3.1 | 16.7 | 0 | 2.2 | 3.1 | 3.1 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 2




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

Peak Hour for Each Approach Begins at:

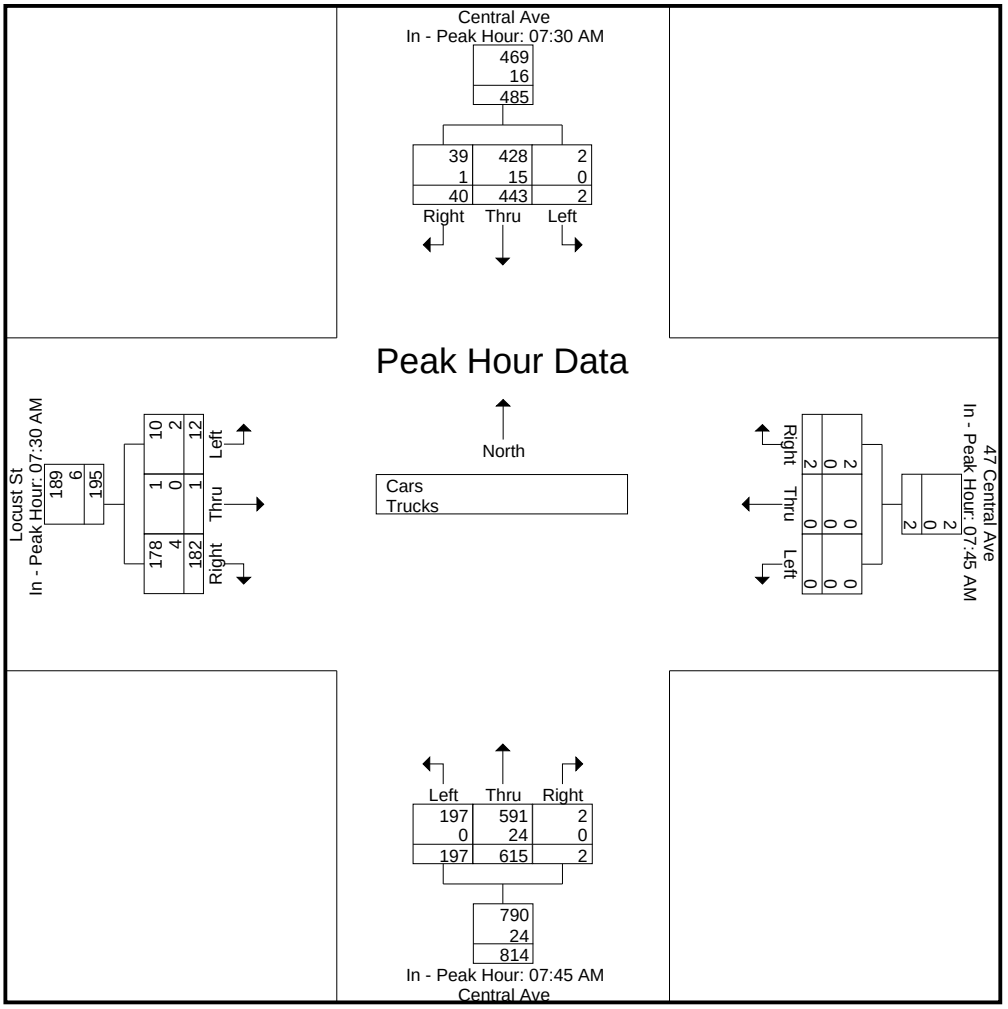
| | 07:30 AM | | | | 07:45 AM | | | | 07:45 AM | | | | 07:30 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 111 | 4 | 115 | 0 | 0 | 0 | 0 | **63** | 153 | **1** | 217 | **4** | **1** | 49 | **54** |
| +15 mins. | **1** | 106 | **19** | 126 | 0 | 0 | 0 | 0 | 35 | 154 | 1 | 190 | 1 | 0 | **52** | 53 |
| +30 mins. | 0 | **118** | 11 | **129** | 0 | 0 | **1** | **1** | 59 | **167** | 0 | **226** | 3 | 0 | 37 | 40 |
| +45 mins. | 1 | 108 | 6 | 115 | 0 | 0 | 1 | 1 | 40 | 141 | 0 | 181 | 4 | 0 | 44 | 48 |
| Total Volume | 2 | 443 | 40 | 485 | 0 | 0 | 2 | 2 | 197 | 615 | 2 | 814 | 12 | 1 | 182 | 195 |
| % App. Total | 0.4 | 91.3 | 8.2 | | 0 | 0 | 100 | | 24.2 | 75.6 | 0.2 | | 6.2 | 0.5 | 93.3 | |
| PHF | .500 | .939 | .526 | .940 | .000 | .000 | .500 | .500 | .782 | .921 | .500 | .900 | .750 | .250 | .875 | .903 |
| Cars | 2 | 428 | 39 | 469 | 0 | 0 | 2 | 2 | 197 | 591 | 2 | 790 | 10 | 1 | 178 | 189 |
| % Cars | 100 | 96.6 | 97.5 | 96.7 | 0 | 0 | 100 | 100 | 100 | 96.1 | 100 | 97.1 | 83.3 | 100 | 97.8 | 96.9 |
| Trucks | 0 | 15 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 24 | 2 | 0 | 4 | 6 |
| % Trucks | 0 | 3.4 | 2.5 | 3.3 | 0 | 0 | 0 | 0 | 0 | 3.9 | 0 | 2.9 | 16.7 | 0 | 2.2 | 3.1 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025


Groups Printed- Cars

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 136 | 4 | 0 | 0 | 0 | 21 | 102 | 0 | 3 | 0 | 27 | 293 |
| 07:15 AM | 0 | 79 | 6 | 0 | 0 | 0 | 37 | 134 | 0 | 5 | 0 | 37 | 298 |
| 07:30 AM | 0 | 109 | 4 | 0 | 0 | 0 | 40 | 134 | 0 | 4 | 1 | 48 | 340 |
| 07:45 AM | 1 | 101 | 19 | 0 | 0 | 0 | 63 | 146 | 1 | 0 | 0 | 50 | 381 |
| Total | 1 | 425 | 33 | 0 | 0 | 0 | 161 | 516 | 1 | 12 | 1 | 162 | 1312 |
| | | | | | | | | | | | | | |
| 08:00 AM | 0 | 113 | 10 | 0 | 0 | 0 | 35 | 144 | 1 | 2 | 0 | 36 | 341 |
| 08:15 AM | 1 | 105 | 6 | 0 | 0 | 1 | 59 | 165 | 0 | 4 | 0 | 44 | 385 |
| 08:30 AM | 0 | 95 | 16 | 0 | 0 | 1 | 40 | 136 | 0 | 5 | 0 | 47 | 340 |
| 08:45 AM | 0 | 96 | 11 | 0 | 0 | 0 | 44 | 111 | 0 | 5 | 0 | 49 | 316 |
| Total | 1 | 409 | 43 | 0 | 0 | 2 | 178 | 556 | 1 | 16 | 0 | 176 | 1382 |
| | | | | | | | | | | | | | |
| Grand Total | 2 | 834 | 76 | 0 | 0 | 2 | 339 | 1072 | 2 | 28 | 1 | 338 | 2694 |
| Apprch % | 0.2 | 91.4 | 8.3 | 0 | 0 | 100 | 24 | 75.9 | 0.1 | 7.6 | 0.3 | 92.1 | |
| Total % | 0.1 | 31 | 2.8 | 0 | 0 | 0.1 | 12.6 | 39.8 | 0.1 | 1 | 0 | 12.5 | |

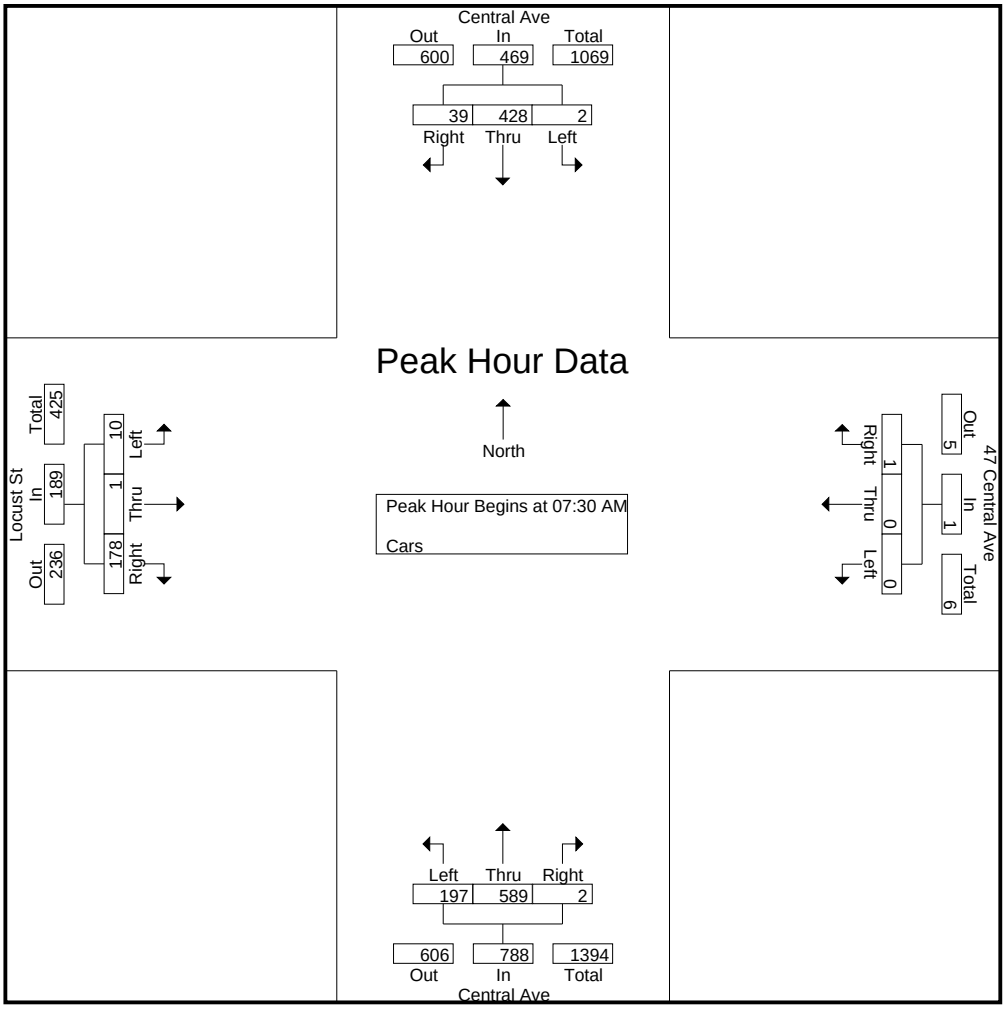
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 0 | 109 | 4 | 113 | 0 | 0 | 0 | 0 | 40 | 134 | 0 | 174 | **4** | **1** | 48 | **53** | 340 |
| 07:45 AM | **1** | 101 | **19** | 121 | 0 | 0 | 0 | 0 | **63** | 146 | **1** | 210 | 0 | 0 | **50** | 50 | 381 |
| 08:00 AM | 0 | **113** | 10 | **123** | 0 | 0 | 0 | 0 | 35 | 144 | 1 | 180 | 2 | 0 | 36 | 38 | 341 |
| 08:15 AM | 1 | 105 | 6 | 112 | 0 | 0 | **1** | **1** | 59 | **165** | 0 | **224** | 4 | 0 | 44 | 48 | **385** |
| Total Volume | 2 | 428 | 39 | 469 | 0 | 0 | 1 | 1 | 197 | 589 | 2 | 788 | 10 | 1 | 178 | 189 | 1447 |
| % App. Total | 0.4 | 91.3 | 8.3 | | 0 | 0 | 100 | | 25 | 74.7 | 0.3 | | 5.3 | 0.5 | 94.2 | | |
| PHF | .500 | .947 | .513 | .953 | .000 | .000 | .250 | .250 | .782 | .892 | .500 | .879 | .625 | .250 | .890 | .892 | .940 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 5




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

Peak Hour for Each Approach Begins at:

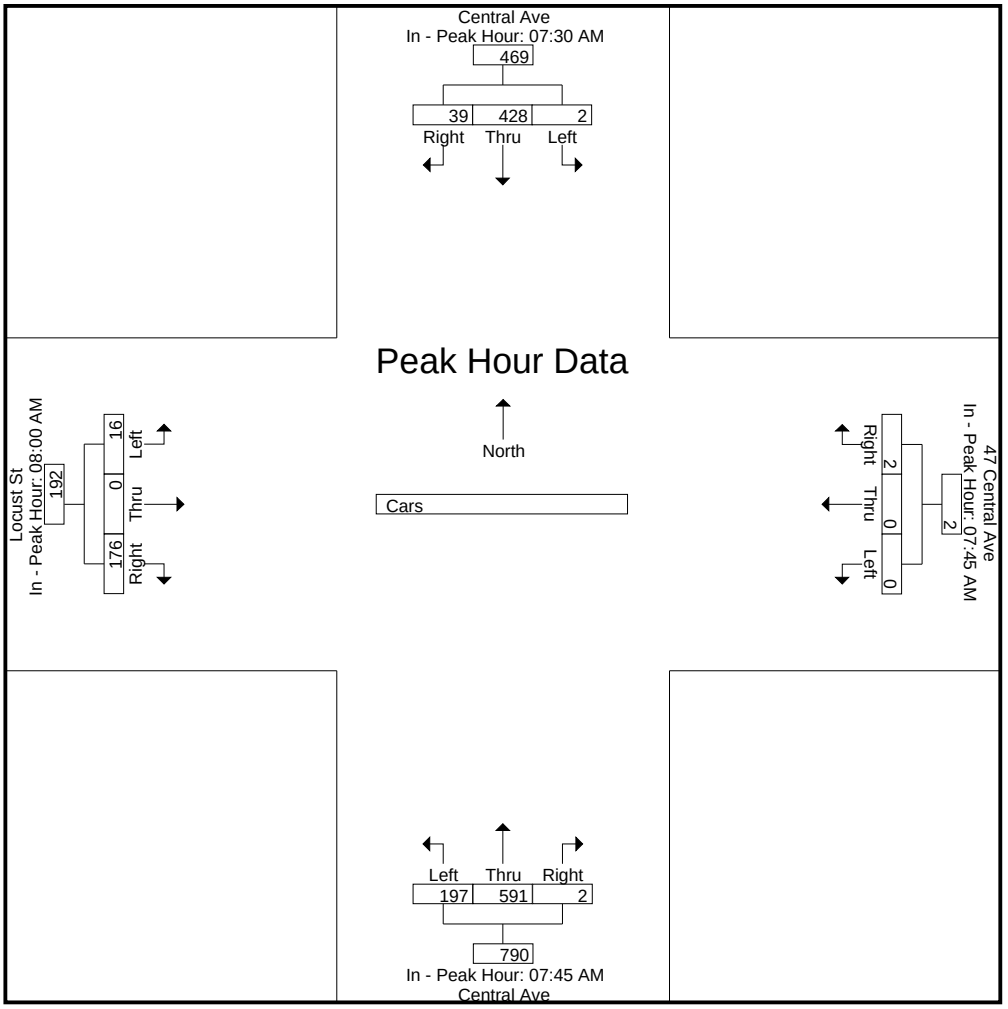
| | 07:30 AM | | | | 07:45 AM | | | | 07:45 AM | | | | 08:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 109 | 4 | 113 | 0 | 0 | 0 | 0 | **63** | 146 | **1** | 210 | 2 | 0 | 36 | 38 |
| +15 mins. | **1** | 101 | **19** | 121 | 0 | 0 | 0 | 0 | 35 | 144 | 1 | 180 | 4 | 0 | 44 | 48 |
| +30 mins. | 0 | **113** | 10 | **123** | 0 | 0 | **1** | **1** | 59 | **165** | 0 | **224** | **5** | 0 | 47 | 52 |
| +45 mins. | 1 | 105 | 6 | 112 | 0 | 0 | 1 | 1 | 40 | 136 | 0 | 176 | 5 | 0 | **49** | **54** |
| Total Volume | 2 | 428 | 39 | 469 | 0 | 0 | 2 | 2 | 197 | 591 | 2 | 790 | 16 | 0 | 176 | 192 |
| % App. Total | 0.4 | 91.3 | 8.3 | | 0 | 0 | 100 | | 24.9 | 74.8 | 0.3 | | 8.3 | 0 | 91.7 | |
| PHF | .500 | .947 | .513 | .953 | .000 | .000 | .500 | .500 | .782 | .895 | .500 | .882 | .800 | .000 | .898 | .889 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025


Groups Printed- Trucks

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 11 |
| 07:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 11 | 0 | 0 | 0 | 1 | 18 |
| 07:30 AM | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 1 | 9 |
| 07:45 AM | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 0 | 2 | 15 |
| Total | 0 | 15 | 0 | 0 | 0 | 0 | 7 | 25 | 0 | 1 | 0 | 5 | 53 |
| | | | | | | | | | | | | | |
| 08:00 AM | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 1 | 18 |
| 08:15 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| 08:30 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 8 |
| 08:45 AM | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 11 |
| Total | 0 | 15 | 1 | 0 | 0 | 0 | 1 | 23 | 0 | 1 | 0 | 1 | 42 |
| | | | | | | | | | | | | | |
| Grand Total | 0 | 30 | 1 | 0 | 0 | 0 | 8 | 48 | 0 | 2 | 0 | 6 | 95 |
| Apprch % | 0 | 96.8 | 3.2 | 0 | 0 | 0 | 14.3 | 85.7 | 0 | 25 | 0 | 75 | |
| Total % | 0 | 31.6 | 1.1 | 0 | 0 | 0 | 8.4 | 50.5 | 0 | 2.1 | 0 | 6.3 | |

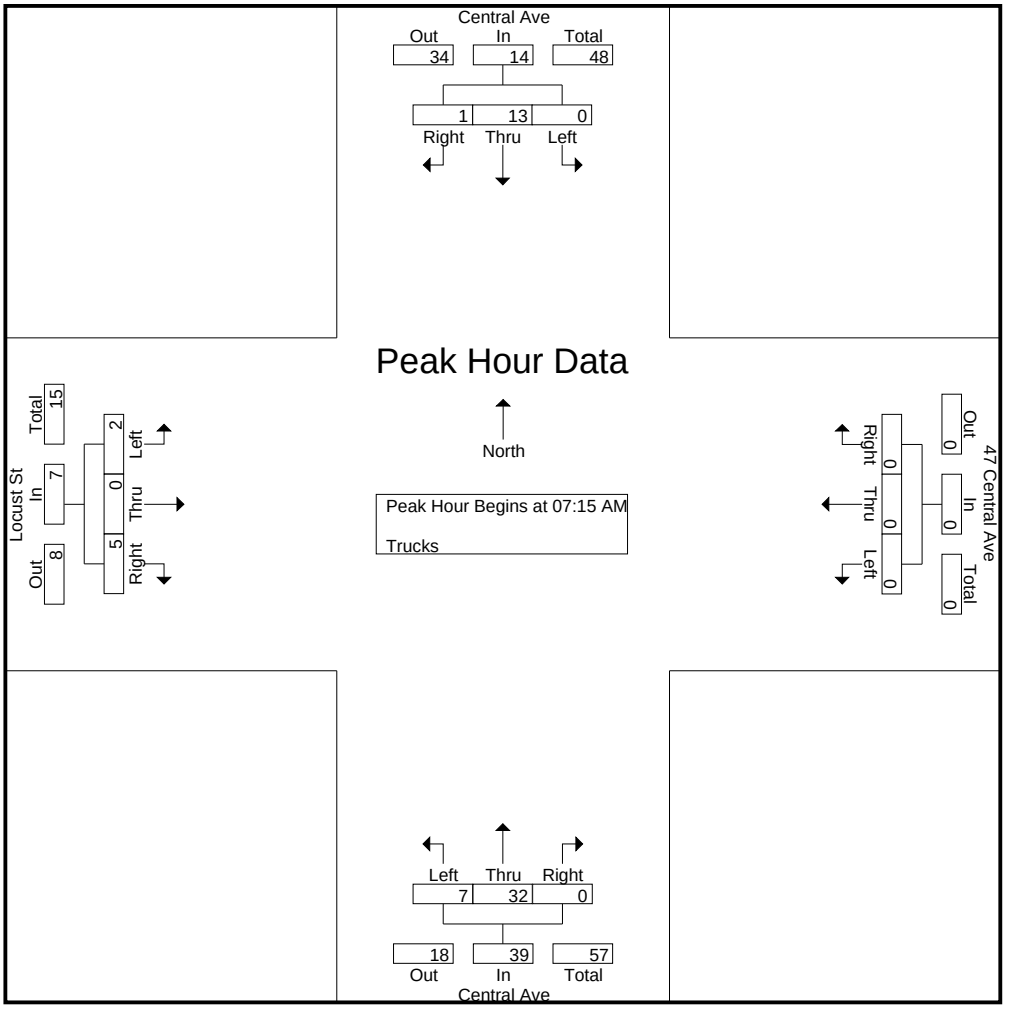
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. 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 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | **5** | **11** | 0 | **16** | 0 | 0 | 1 | 1 | **18** |
| 07:30 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 0 | 1 | 1 | 9 |
| 07:45 AM | 0 | **5** | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | **1** | 0 | **2** | **3** | 15 |
| 08:00 AM | 0 | 5 | **1** | **6** | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 1 | 0 | 1 | 2 | 18 |
| Total Volume | 0 | 13 | 1 | 14 | 0 | 0 | 0 | 0 | 7 | 32 | 0 | 39 | 2 | 0 | 5 | 7 | 60 |
| % App. Total | 0 | 92.9 | 7.1 | | 0 | 0 | 0 | | 17.9 | 82.1 | 0 | | 28.6 | 0 | 71.4 | | |
| PHF | .000 | .650 | .250 | .583 | .000 | .000 | .000 | .000 | .350 | .727 | .000 | .609 | .500 | .000 | .625 | .583 | .833 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 8




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

Peak Hour for Each Approach Begins at:

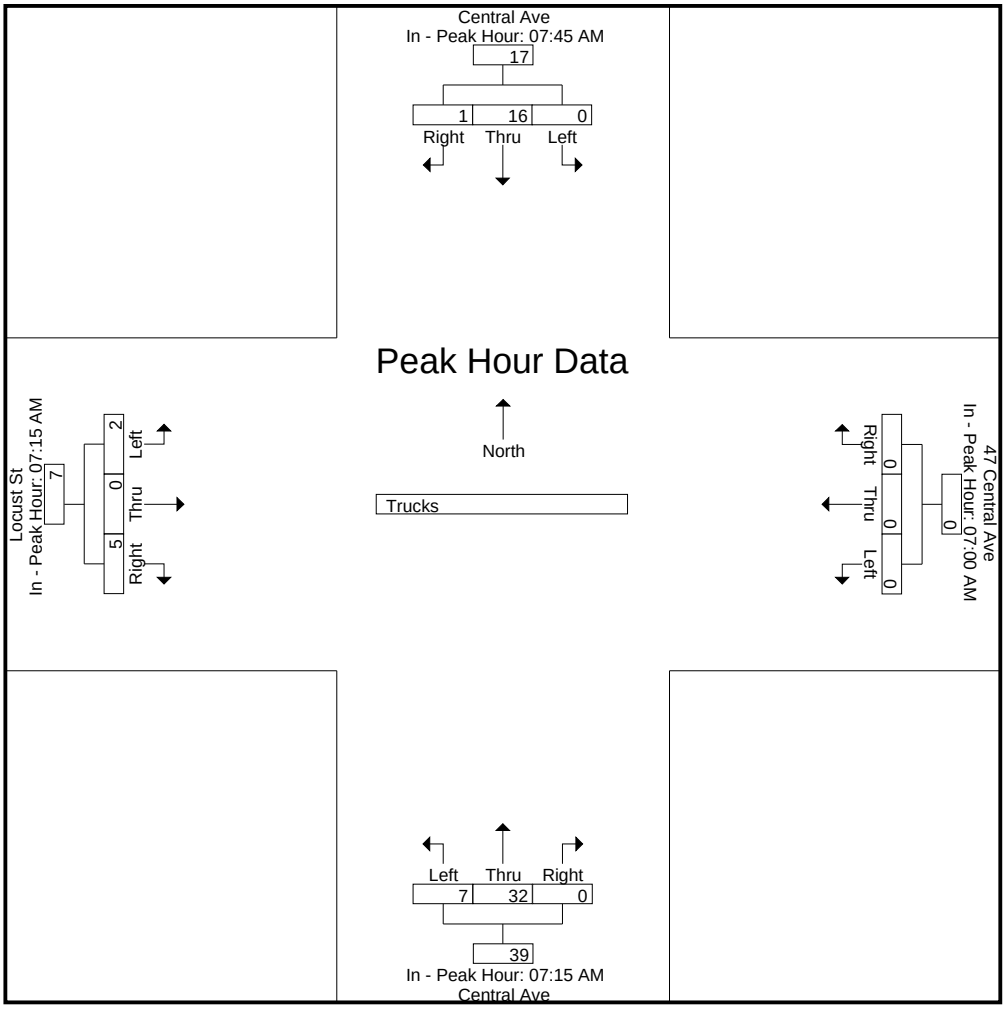
| | 07:45 AM | | | | 07:00 AM | | | | 07:15 AM | | | | 07:15 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | **5** | 0 | 5 | 0 | 0 | 0 | 0 | **5** | **11** | 0 | **16** | 0 | 0 | 1 | 1 |
| +15 mins. | 0 | 5 | **1** | **6** | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 0 | 1 | 1 |
| +30 mins. | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | **1** | 0 | **2** | **3** |
| +45 mins. | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 1 | 0 | 1 | 2 |
| Total Volume | 0 | 16 | 1 | 17 | 0 | 0 | 0 | 0 | 7 | 32 | 0 | 39 | 2 | 0 | 5 | 7 |
| % App. Total | 0 | 94.1 | 5.9 | | 0 | 0 | 0 | | 17.9 | 82.1 | 0 | | 28.6 | 0 | 71.4 | |
| PHF | .000 | .800 | .250 | .708 | .000 | .000 | .000 | .000 | .350 | .727 | .000 | .609 | .500 | .000 | .625 | .583 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 10

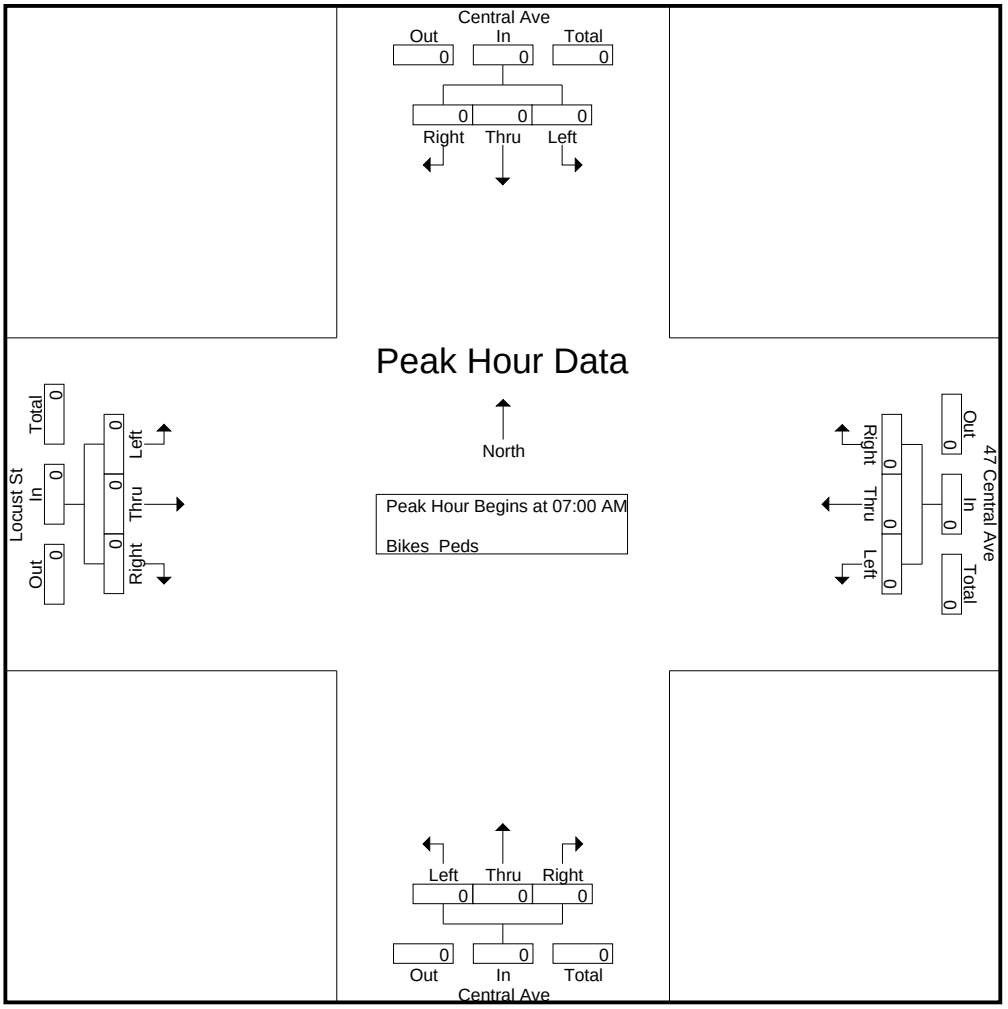
Groups Printed- Bikes Peds

| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 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 | 3 | 3 | 0 | 3 |
| 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 | 3 | 3 | 0 | 3 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 3 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 0 | 7 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 10 | 0 | 10 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | | | | | | | | | | | | | | | | | 100 | 0 | |

| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. 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 |
| 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 |

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 11




Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

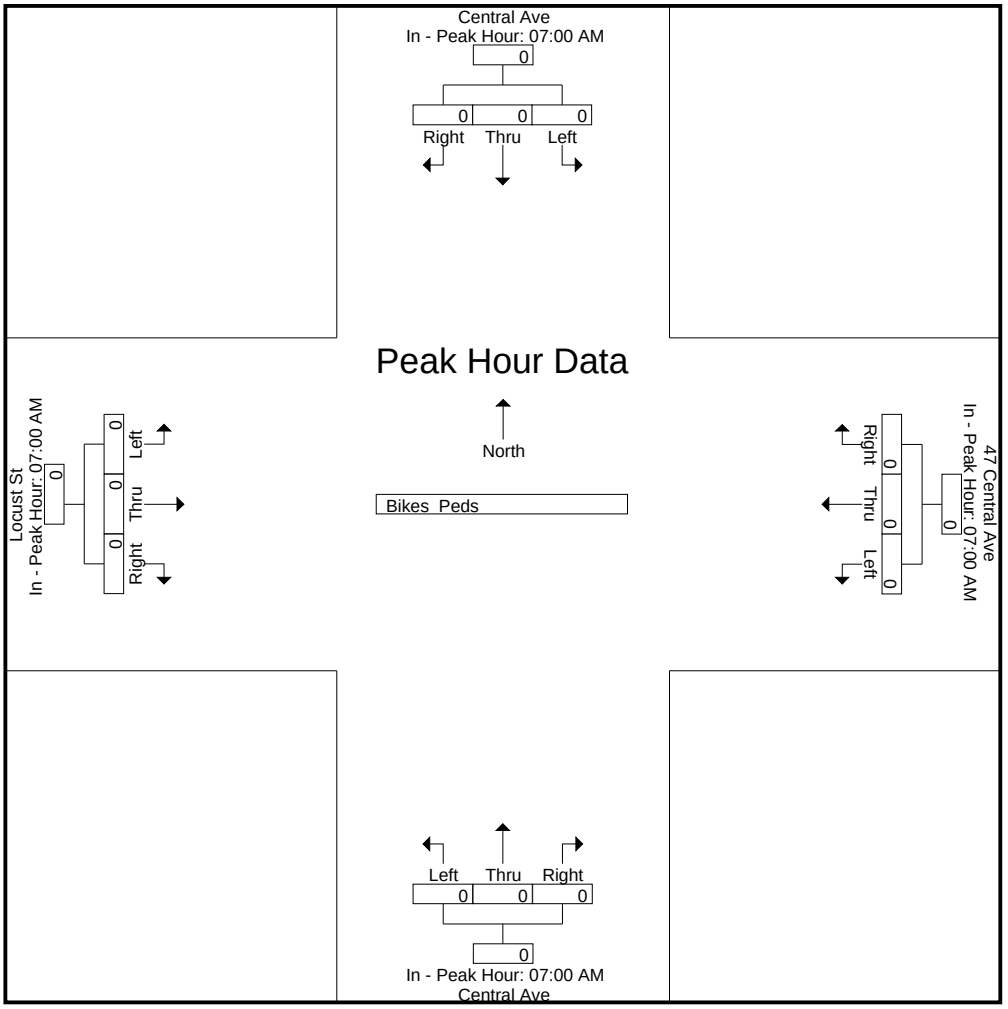
| | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 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 |
| % 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 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 0 | 128 | 17 | 1 | 1 | 0 | 48 | 131 | 0 | 6 | 1 | 81 | 414 |
| 03:15 PM | 0 | 124 | 18 | 2 | 1 | 2 | 52 | 163 | 0 | 7 | 0 | 66 | 435 |
| 03:30 PM | 0 | 126 | 19 | 0 | 1 | 0 | 45 | 165 | 0 | 7 | 0 | 59 | 422 |
| 03:45 PM | 0 | 148 | 23 | 0 | 1 | 0 | 44 | 160 | 0 | 10 | 0 | 65 | 451 |
| Total | 0 | 526 | 77 | 3 | 4 | 2 | 189 | 619 | 0 | 30 | 1 | 271 | 1722 |
| 04:00 PM | 1 | 132 | 26 | 0 | 0 | 1 | 43 | 177 | 0 | 8 | 1 | 59 | 448 |
| 04:15 PM | 0 | 143 | 31 | 1 | 0 | 1 | 47 | 136 | 0 | 9 | 0 | 66 | 434 |
| 04:30 PM | 0 | 137 | 15 | 1 | 0 | 1 | 26 | 155 | 0 | 13 | 0 | 63 | 411 |
| 04:45 PM | 0 | 165 | 23 | 1 | 0 | 1 | 56 | 137 | 0 | 11 | 0 | 66 | 460 |
| Total | 1 | 577 | 95 | 3 | 0 | 4 | 172 | 605 | 0 | 41 | 1 | 254 | 1753 |
| 05:00 PM | 0 | 100 | 19 | 0 | 0 | 1 | 39 | 158 | 0 | 16 | 0 | 70 | 403 |
| 05:15 PM | 0 | 139 | 23 | 1 | 1 | 0 | 34 | 149 | 0 | 6 | 0 | 47 | 400 |
| 05:30 PM | 0 | 106 | 29 | 1 | 0 | 1 | 39 | 121 | 0 | 3 | 0 | 42 | 342 |
| 05:45 PM | 0 | 115 | 31 | 1 | 0 | 0 | 39 | 115 | 0 | 5 | 0 | 47 | 353 |
| Total | 0 | 460 | 102 | 3 | 1 | 2 | 151 | 543 | 0 | 30 | 0 | 206 | 1498 |
| Grand Total | 1 | 1563 | 274 | 9 | 5 | 8 | 512 | 1767 | 0 | 101 | 2 | 731 | 4973 |
| Apprch % | 0.1 | 85 | 14.9 | 40.9 | 22.7 | 36.4 | 22.5 | 77.5 | 0 | 12.1 | 0.2 | 87.6 | |
| Total % | 0 | 31.4 | 5.5 | 0.2 | 0.1 | 0.2 | 10.3 | 35.5 | 0 | 2 | 0 | 14.7 | |
| Cars | 1 | 1542 | 273 | 9 | 5 | 8 | 511 | 1754 | 0 | 100 | 2 | 729 | 4934 |
| % Cars | 100 | 98.7 | 99.6 | 100 | 100 | 100 | 99.8 | 99.3 | 0 | 99 | 100 | 99.7 | 99.2 |
| Trucks | 0 | 21 | 1 | 0 | 0 | 0 | 1 | 13 | 0 | 1 | 0 | 2 | 39 |
| % Trucks | 0 | 1.3 | 0.4 | 0 | 0 | 0 | 0.2 | 0.7 | 0 | 1 | 0 | 0.3 | 0.8 |

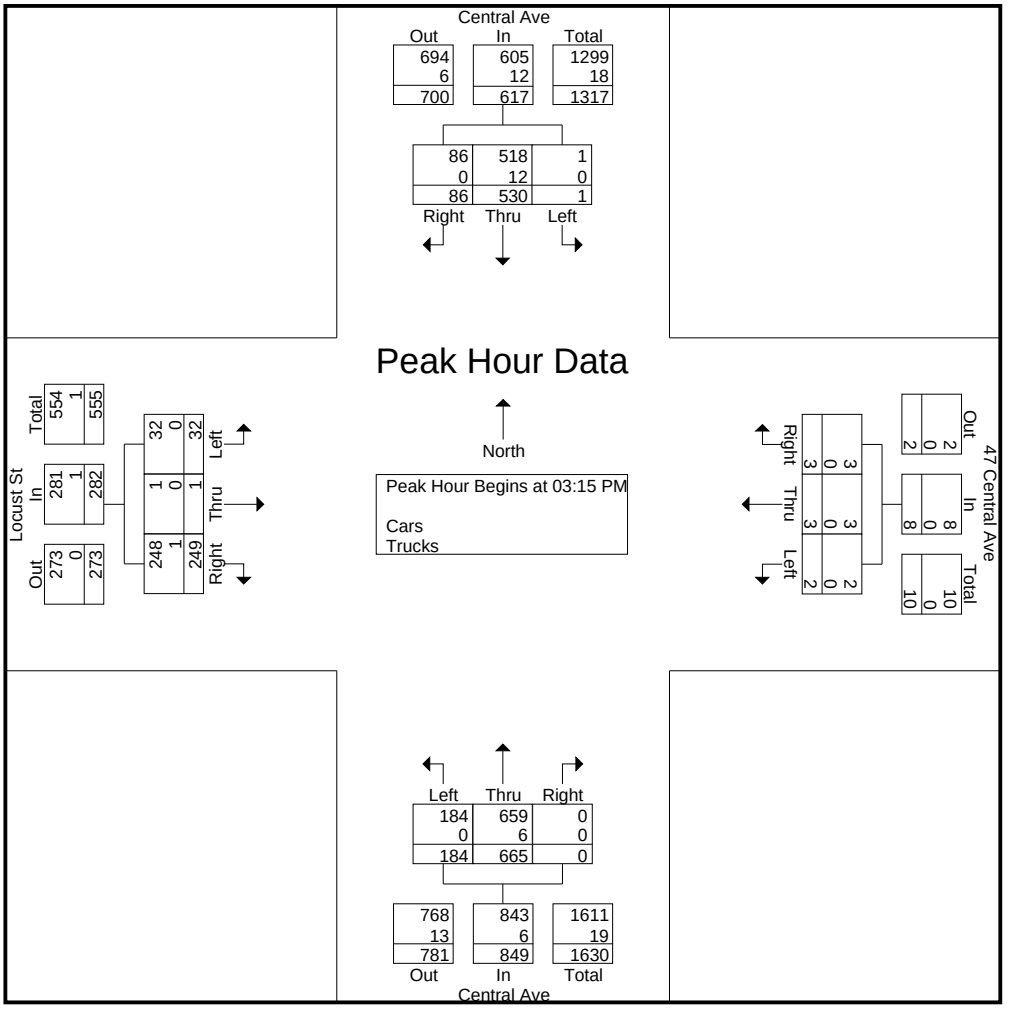
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:15 PM | | | | | | | | | | | | | | | | | |
| 03:15 PM | 0 | 124 | 18 | 142 | **2** | **1** | **2** | **5** | **52** | 163 | 0 | 215 | 7 | 0 | **66** | 73 | 435 |
| 03:30 PM | 0 | 126 | 19 | 145 | 0 | 1 | 0 | 1 | 45 | 165 | 0 | 210 | 7 | 0 | 59 | 66 | 422 |
| 03:45 PM | 0 | **148** | 23 | **171** | 0 | 1 | 0 | 1 | 44 | 160 | 0 | 204 | **10** | 0 | 65 | **75** | **451** |
| 04:00 PM | **1** | 132 | **26** | 159 | 0 | 0 | 1 | 1 | 43 | **177** | 0 | **220** | 8 | **1** | 59 | 68 | 448 |
| Total Volume | 1 | 530 | 86 | 617 | 2 | 3 | 3 | 8 | 184 | 665 | 0 | 849 | 32 | 1 | 249 | 282 | 1756 |
| % App. Total | 0.2 | 85.9 | 13.9 | | 25 | 37.5 | 37.5 | | 21.7 | 78.3 | 0 | | 11.3 | 0.4 | 88.3 | | |
| PHF | .250 | .895 | .827 | .902 | .250 | .750 | .375 | .400 | .885 | .939 | .000 | .965 | .800 | .250 | .943 | .940 | .973 |
| Cars | 1 | 518 | 86 | 605 | 2 | 3 | 3 | 8 | 184 | 659 | 0 | 843 | 32 | 1 | 248 | 281 | 1737 |
| % Cars | 100 | 97.7 | 100 | 98.1 | 100 | 100 | 100 | 100 | 100 | 99.1 | 0 | 99.3 | 100 | 100 | 99.6 | 99.6 | 98.9 |
| Trucks | 0 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 1 | 1 | 19 |
| % Trucks | 0 | 2.3 | 0 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0.9 | 0 | 0.7 | 0 | 0 | 0.4 | 0.4 | 1.1 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 2




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

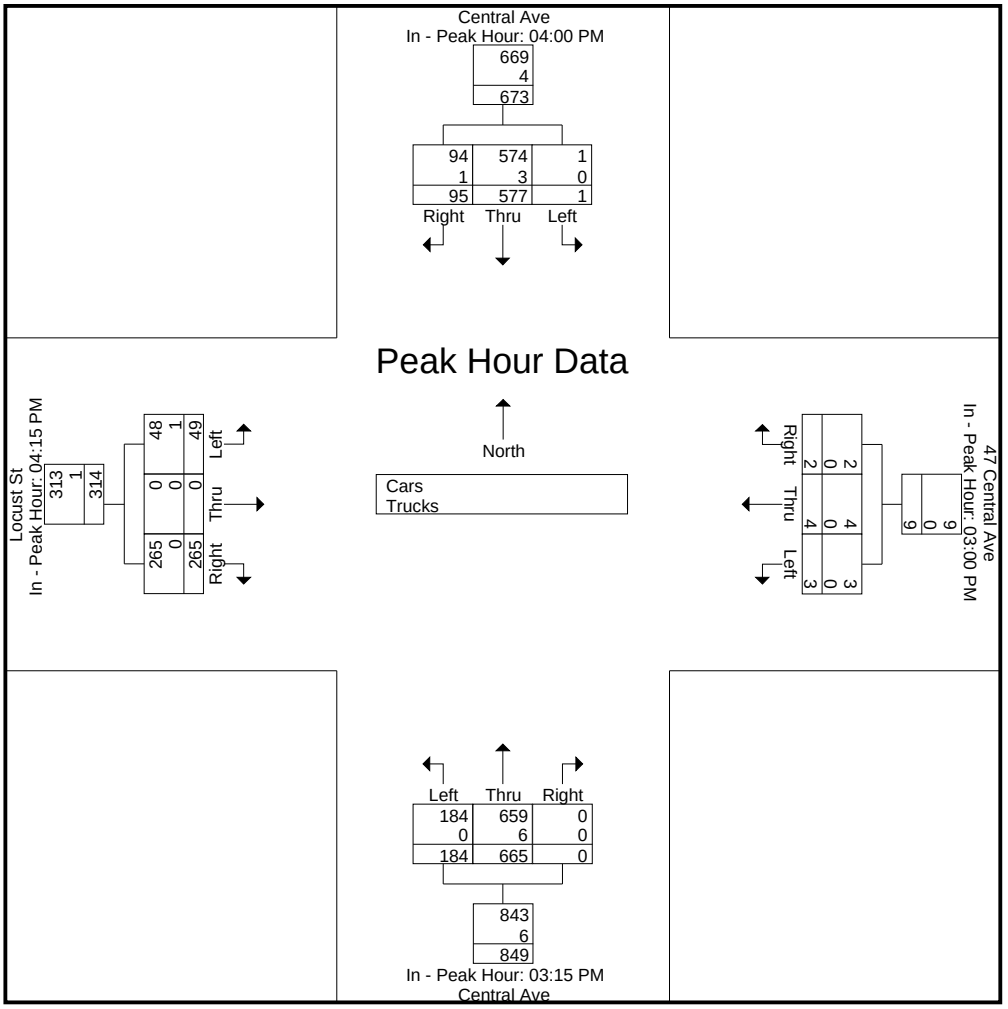
| | 04:00 PM | | | | 03:00 PM | | | | 03:15 PM | | | | 04:15 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **1** | 132 | 26 | 159 | 1 | **1** | 0 | 2 | **52** | 163 | 0 | 215 | 9 | 0 | 66 | 75 |
| +15 mins. | 0 | 143 | **31** | 174 | **2** | 1 | **2** | **5** | 45 | 165 | 0 | 210 | 13 | 0 | 63 | 76 |
| +30 mins. | 0 | 137 | 15 | 152 | 0 | 1 | 0 | 1 | 44 | 160 | 0 | 204 | 11 | 0 | 66 | 77 |
| +45 mins. | 0 | **165** | 23 | **188** | 0 | 1 | 0 | 1 | 43 | **177** | 0 | **220** | **16** | 0 | **70** | **86** |
| Total Volume | 1 | 577 | 95 | 673 | 3 | 4 | 2 | 9 | 184 | 665 | 0 | 849 | 49 | 0 | 265 | 314 |
| % App. Total | 0.1 | 85.7 | 14.1 | | 33.3 | 44.4 | 22.2 | | 21.7 | 78.3 | 0 | | 15.6 | 0 | 84.4 | |
| PHF | .250 | .874 | .766 | .895 | .375 | 1.000 | .250 | .450 | .885 | .939 | .000 | .965 | .766 | .000 | .946 | .913 |
| Cars | 1 | 574 | 94 | 669 | 3 | 4 | 2 | 9 | 184 | 659 | 0 | 843 | 48 | 0 | 265 | 313 |
| % Cars | 100 | 99.5 | 98.9 | 99.4 | 100 | 100 | 100 | 100 | 100 | 99.1 | 0 | 99.3 | 98 | 0 | 100 | 99.7 |
| Trucks | 0 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 1 | 0 | 0 | 1 |
| % Trucks | 0 | 0.5 | 1.1 | 0.6 | 0 | 0 | 0 | 0 | 0 | 0.9 | 0 | 0.7 | 2 | 0 | 0 | 0.3 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025


Groups Printed- Cars

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 0 | 125 | 17 | 1 | 1 | 0 | 48 | 129 | 0 | 6 | 1 | 81 | 409 |
| 03:15 PM | 0 | 120 | 18 | 2 | 1 | 2 | 52 | 159 | 0 | 7 | 0 | 65 | 426 |
| 03:30 PM | 0 | 122 | 19 | 0 | 1 | 0 | 45 | 164 | 0 | 7 | 0 | 59 | 417 |
| 03:45 PM | 0 | 146 | 23 | 0 | 1 | 0 | 44 | 159 | 0 | 10 | 0 | 65 | 448 |
| Total | 0 | 513 | 77 | 3 | 4 | 2 | 189 | 611 | 0 | 30 | 1 | 270 | 1700 |
| | | | | | | | | | | | | | |
| 04:00 PM | 1 | 130 | 26 | 0 | 0 | 1 | 43 | 177 | 0 | 8 | 1 | 59 | 446 |
| 04:15 PM | 0 | 142 | 30 | 1 | 0 | 1 | 47 | 133 | 0 | 9 | 0 | 66 | 429 |
| 04:30 PM | 0 | 137 | 15 | 1 | 0 | 1 | 26 | 154 | 0 | 12 | 0 | 63 | 409 |
| 04:45 PM | 0 | 165 | 23 | 1 | 0 | 1 | 56 | 137 | 0 | 11 | 0 | 66 | 460 |
| Total | 1 | 574 | 94 | 3 | 0 | 4 | 172 | 601 | 0 | 40 | 1 | 254 | 1744 |
| | | | | | | | | | | | | | |
| 05:00 PM | 0 | 99 | 19 | 0 | 0 | 1 | 38 | 158 | 0 | 16 | 0 | 70 | 401 |
| 05:15 PM | 0 | 138 | 23 | 1 | 1 | 0 | 34 | 148 | 0 | 6 | 0 | 47 | 398 |
| 05:30 PM | 0 | 104 | 29 | 1 | 0 | 1 | 39 | 121 | 0 | 3 | 0 | 41 | 339 |
| 05:45 PM | 0 | 114 | 31 | 1 | 0 | 0 | 39 | 115 | 0 | 5 | 0 | 47 | 352 |
| Total | 0 | 455 | 102 | 3 | 1 | 2 | 150 | 542 | 0 | 30 | 0 | 205 | 1490 |
| | | | | | | | | | | | | | |
| Grand Total | 1 | 1542 | 273 | 9 | 5 | 8 | 511 | 1754 | 0 | 100 | 2 | 729 | 4934 |
| Apprch % | 0.1 | 84.9 | 15 | 40.9 | 22.7 | 36.4 | 22.6 | 77.4 | 0 | 12 | 0.2 | 87.7 | |
| Total % | 0 | 31.3 | 5.5 | 0.2 | 0.1 | 0.2 | 10.4 | 35.5 | 0 | 2 | 0 | 14.8 | |

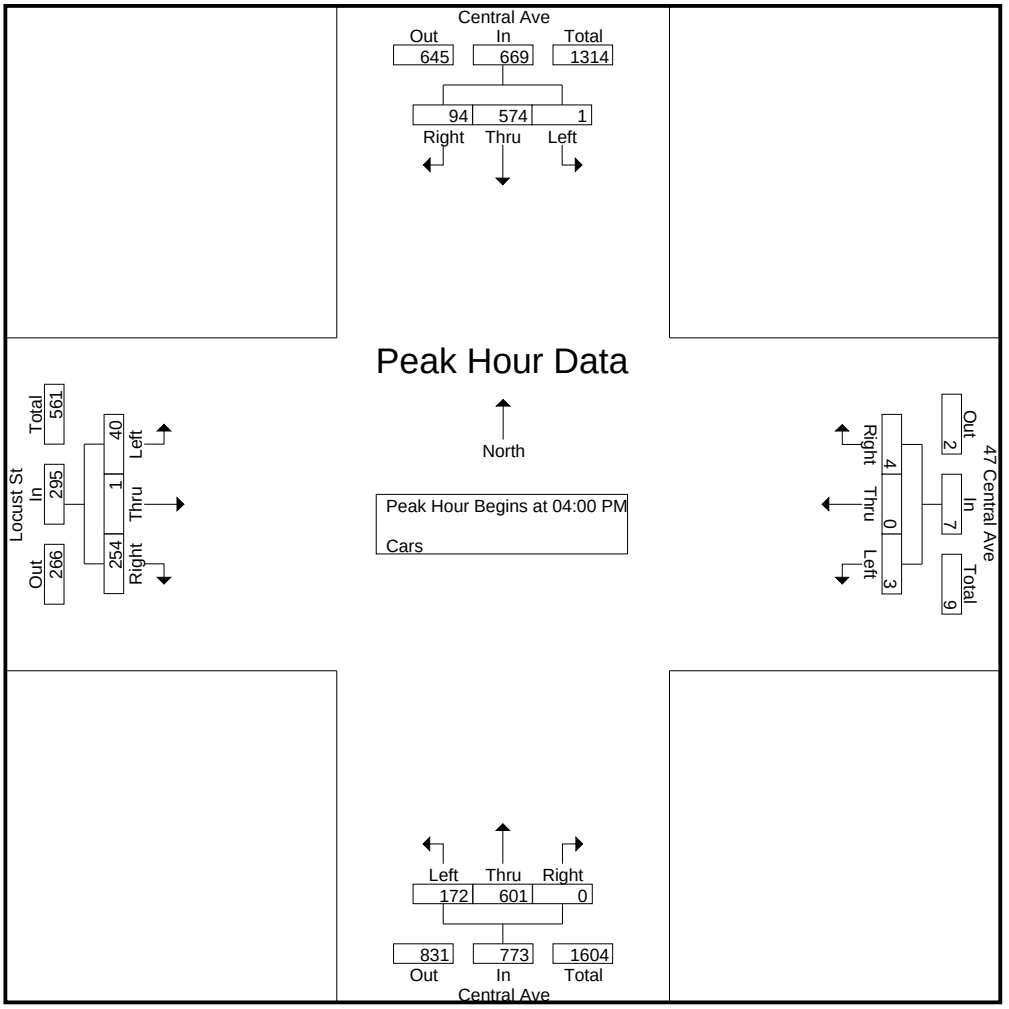
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | **1** | 130 | 26 | 157 | 0 | 0 | **1** | 1 | 43 | **177** | 0 | **220** | 8 | **1** | 59 | 68 | 446 |
| 04:15 PM | 0 | 142 | **30** | 172 | **1** | 0 | 1 | **2** | 47 | 133 | 0 | 180 | 9 | 0 | **66** | 75 | 429 |
| 04:30 PM | 0 | 137 | 15 | 152 | 1 | 0 | 1 | 2 | 26 | 154 | 0 | 180 | **12** | 0 | 63 | 75 | 409 |
| 04:45 PM | 0 | **165** | 23 | **188** | 1 | 0 | 1 | 2 | **56** | 137 | 0 | 193 | 11 | 0 | 66 | **77** | **460** |
| Total Volume | 1 | 574 | 94 | 669 | 3 | 0 | 4 | 7 | 172 | 601 | 0 | 773 | 40 | 1 | 254 | 295 | 1744 |
| % App. Total | 0.1 | 85.8 | 14.1 | | 42.9 | 0 | 57.1 | | 22.3 | 77.7 | 0 | | 13.6 | 0.3 | 86.1 | | |
| PHF | .250 | .870 | .783 | .890 | .750 | .000 | 1.00 | .875 | .768 | .849 | .000 | .878 | .833 | .250 | .962 | .958 | .948 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 5




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

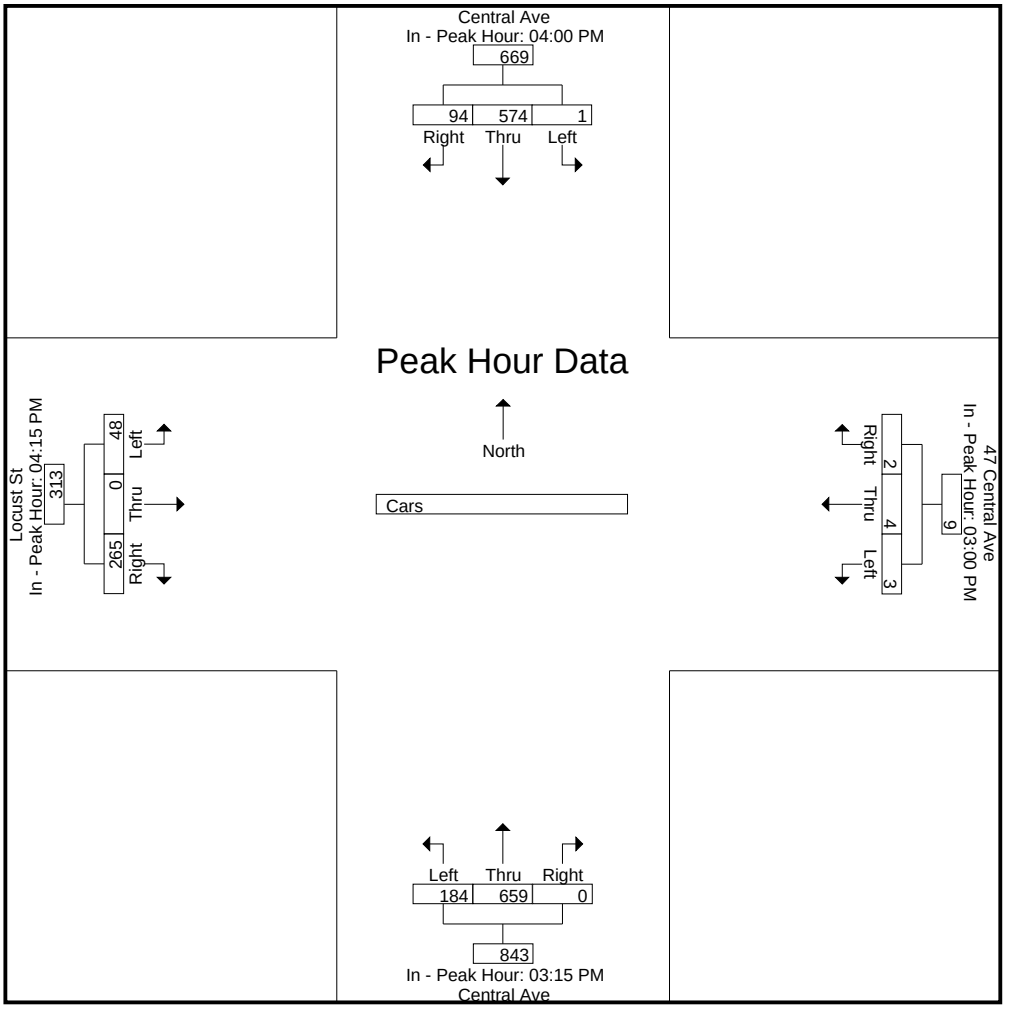
| | 04:00 PM | | | | 03:00 PM | | | | 03:15 PM | | | | 04:15 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **1** | 130 | 26 | 157 | 1 | **1** | 0 | 2 | **52** | 159 | 0 | 211 | 9 | 0 | 66 | 75 |
| +15 mins. | 0 | 142 | **30** | 172 | **2** | 1 | **2** | **5** | 45 | 164 | 0 | 209 | 12 | 0 | 63 | 75 |
| +30 mins. | 0 | 137 | 15 | 152 | 0 | 1 | 0 | 1 | 44 | 159 | 0 | 203 | 11 | 0 | 66 | 77 |
| +45 mins. | 0 | **165** | 23 | **188** | 0 | 1 | 0 | 1 | 43 | **177** | 0 | **220** | **16** | 0 | **70** | **86** |
| Total Volume | 1 | 574 | 94 | 669 | 3 | 4 | 2 | 9 | 184 | 659 | 0 | 843 | 48 | 0 | 265 | 313 |
| % App. Total | 0.1 | 85.8 | 14.1 | | 33.3 | 44.4 | 22.2 | | 21.8 | 78.2 | 0 | | 15.3 | 0 | 84.7 | |
| PHF | .250 | .870 | .783 | .890 | .375 | 1.000 | .250 | .450 | .885 | .931 | .000 | .958 | .750 | .000 | .946 | .910 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 7

Groups Printed- Trucks

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| 03:15 PM | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 1 | 9 |
| 03:30 PM | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 03:45 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Total | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 1 | 22 |
| | | | | | | | | | | | | | |
| 04:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 04:15 PM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 9 |
| | | | | | | | | | | | | | |
| 05:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:15 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 05:30 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 05:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 8 |
| | | | | | | | | | | | | | |
| Grand Total | 0 | 21 | 1 | 0 | 0 | 0 | 1 | 13 | 0 | 1 | 0 | 2 | 39 |
| Apprch % | 0 | 95.5 | 4.5 | 0 | 0 | 0 | 7.1 | 92.9 | 0 | 33.3 | 0 | 66.7 | |
| Total % | 0 | 53.8 | 2.6 | 0 | 0 | 0 | 2.6 | 33.3 | 0 | 2.6 | 0 | 5.1 | |

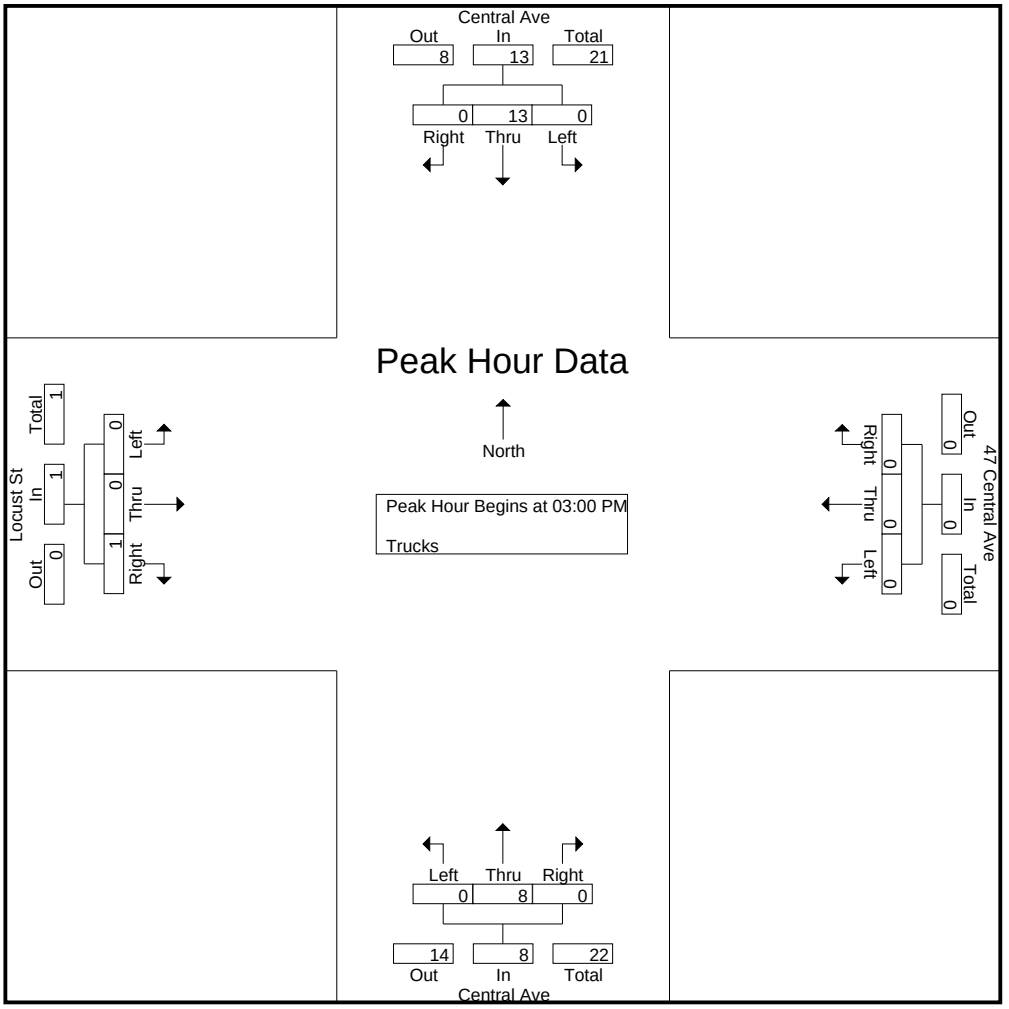
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:00 PM | | | | | | | | | | | | | | | | | |
| 03:00 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 |
| 03:15 PM | 0 | **4** | 0 | **4** | 0 | 0 | 0 | 0 | 0 | **4** | 0 | **4** | 0 | 0 | **1** | **1** | **9** |
| 03:30 PM | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 03:45 PM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Total Volume | 0 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 1 | 1 | 22 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 100 | | |
| PHF | .000 | .813 | .000 | .813 | .000 | .000 | .000 | .000 | .000 | .500 | .000 | .500 | .000 | .000 | .250 | .250 | .611 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 8




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

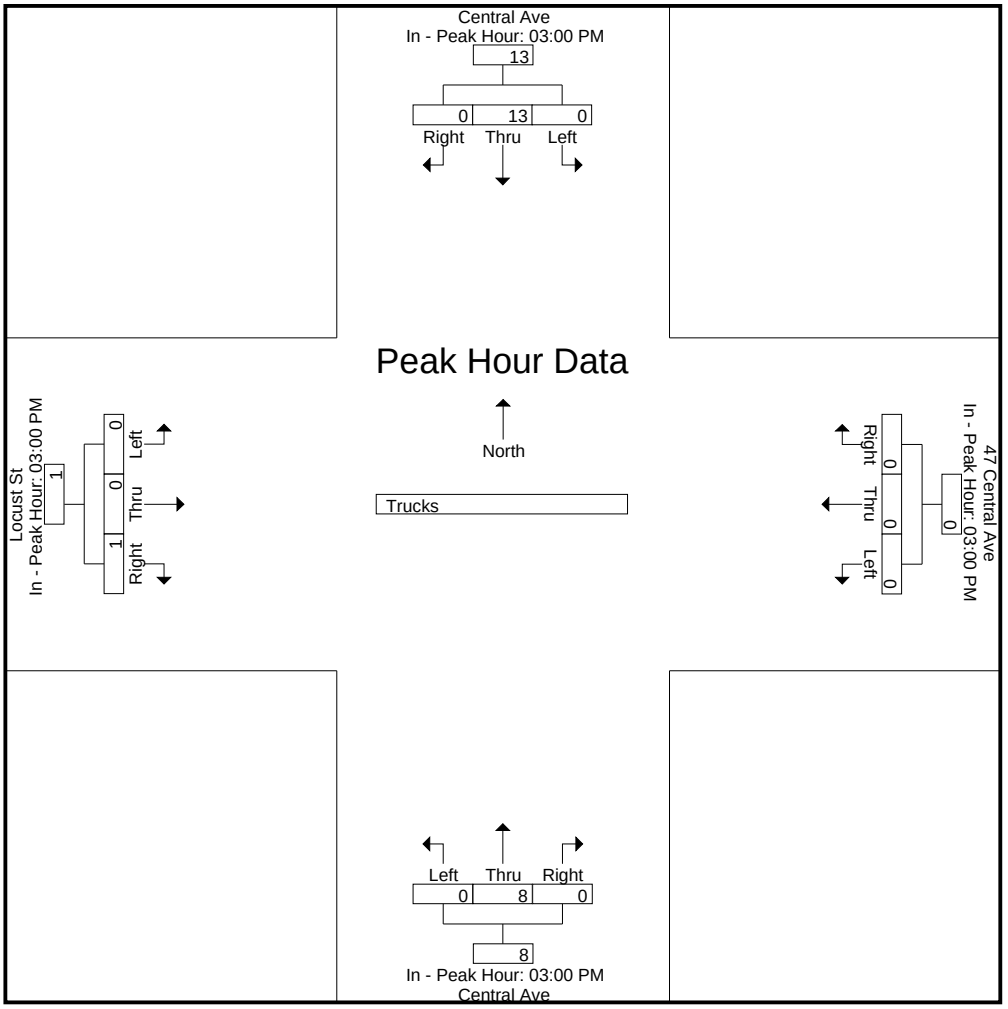
| | 03:00 PM | | | | 03:00 PM | | | | 03:00 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | **4** | 0 | **4** | 0 | 0 | 0 | 0 | 0 | **4** | 0 | **4** | 0 | 0 | **1** | **1** |
| +30 mins. | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 1 | 1 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 100 | |
| PHF | .000 | .813 | .000 | .813 | .000 | .000 | .000 | .000 | .000 | .500 | .000 | .500 | .000 | .000 | .250 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 10

Groups Printed- Bikes Peds

| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 03:00 PM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| 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 | 1 | 1 | 0 | 1 |
| 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 5 |
| 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 | 1 | 1 | 0 | 1 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 2 |
| 05:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 |
| 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 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 3 |
| Grand Total | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 9 | 1 | 10 |
| Apprch % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 90 | 10 | |

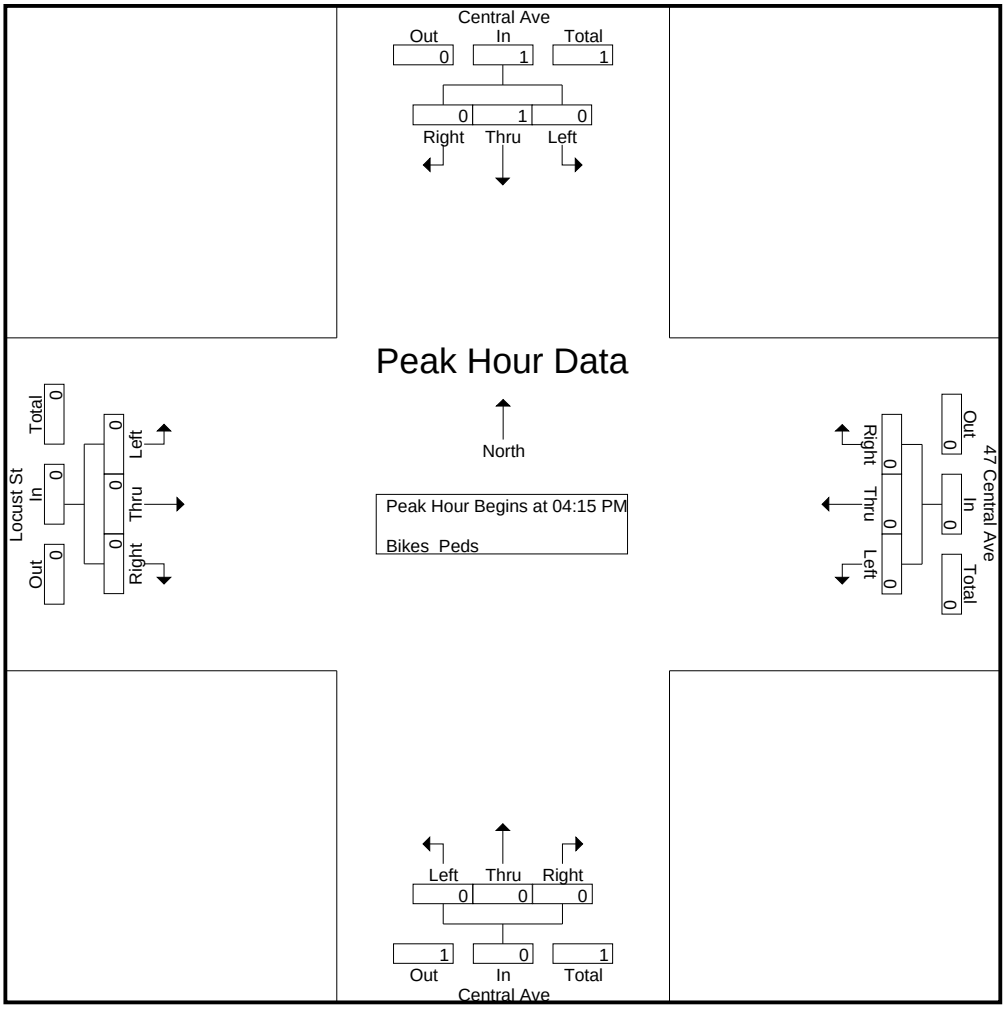
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 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 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00 PM | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| Total Volume | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 11




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

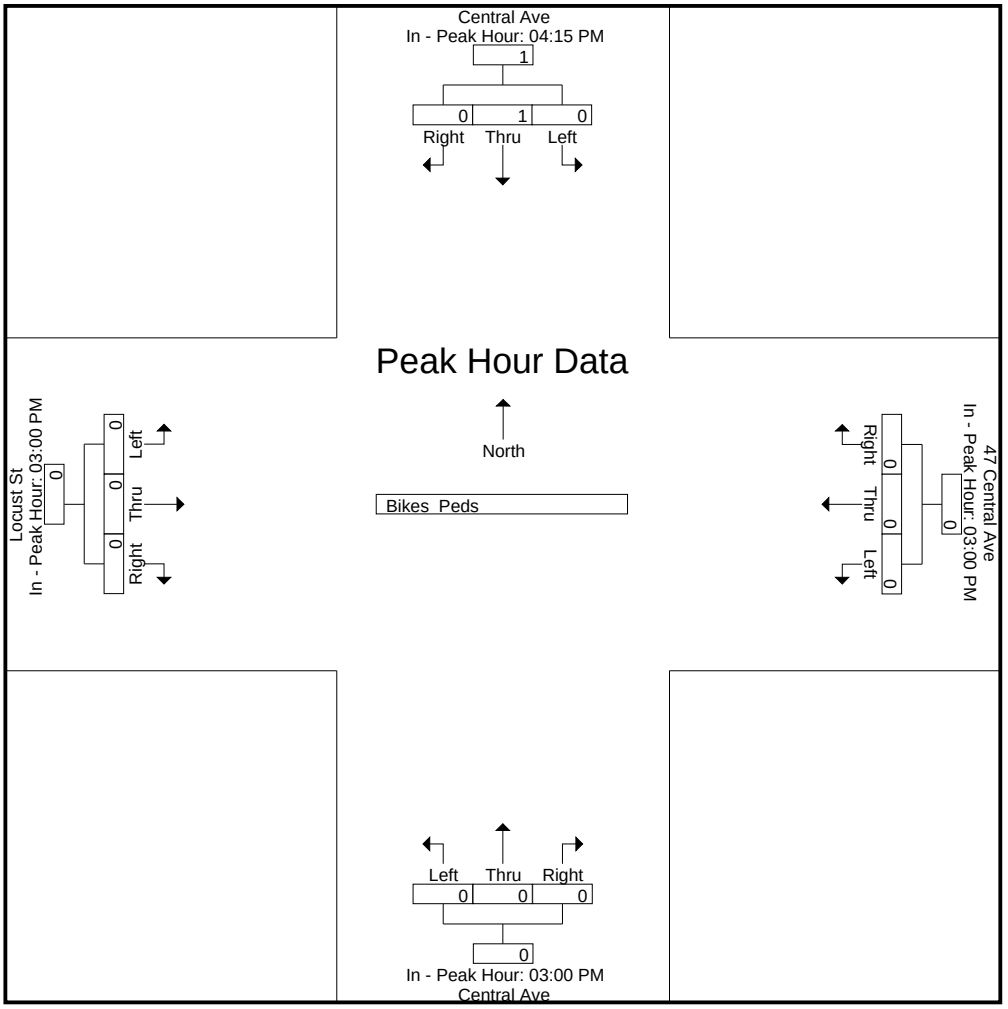
| | 04:15 PM | | | | 03:00 PM | | | | 03:00 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566002
Site Code : 10566002
Start Date : 12/18/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 1 | 111 | 12 | 0 | 0 | 2 | 54 | 130 | 0 | 2 | 0 | 61 | 373 |
| 11:15 AM | 1 | 84 | 14 | 1 | 0 | 0 | 52 | 138 | 0 | 6 | 0 | 48 | 344 |
| 11:30 AM | 1 | 92 | 16 | 0 | 1 | 2 | 44 | 138 | 0 | 4 | 0 | 65 | 363 |
| 11:45 AM | 0 | 95 | 22 | 2 | 0 | 0 | 60 | 114 | 0 | 8 | 0 | 51 | 352 |
| Total | 3 | 382 | 64 | 3 | 1 | 4 | 210 | 520 | 0 | 20 | 0 | 225 | 1432 |
| 12:00 PM | 0 | 97 | 14 | 1 | 0 | 0 | 43 | 121 | 0 | 9 | 0 | 59 | 344 |
| 12:15 PM | 0 | 90 | 13 | 1 | 0 | 1 | 37 | 110 | 0 | 7 | 0 | 81 | 340 |
| 12:30 PM | 0 | 98 | 8 | 0 | 0 | 1 | 35 | 105 | 0 | 5 | 0 | 64 | 316 |
| 12:45 PM | 0 | 98 | 15 | 2 | 0 | 0 | 38 | 136 | 0 | 7 | 0 | 49 | 345 |
| Total | 0 | 383 | 50 | 4 | 0 | 2 | 153 | 472 | 0 | 28 | 0 | 253 | 1345 |
| 01:00 PM | 1 | 67 | 10 | 1 | 1 | 4 | 36 | 140 | 1 | 5 | 0 | 58 | 324 |
| 01:15 PM | 0 | 122 | 13 | 0 | 1 | 0 | 35 | 123 | 0 | 2 | 0 | 49 | 345 |
| 01:30 PM | 0 | 94 | 13 | 0 | 1 | 0 | 25 | 104 | 0 | 7 | 1 | 65 | 310 |
| 01:45 PM | 1 | 111 | 14 | 0 | 0 | 2 | 32 | 85 | 0 | 5 | 0 | 48 | 298 |
| Total | 2 | 394 | 50 | 1 | 3 | 6 | 128 | 452 | 1 | 19 | 1 | 220 | 1277 |
| Grand Total | 5 | 1159 | 164 | 8 | 4 | 12 | 491 | 1444 | 1 | 67 | 1 | 698 | 4054 |
| Apprch % | 0.4 | 87.3 | 12.3 | 33.3 | 16.7 | 50 | 25.4 | 74.6 | 0.1 | 8.7 | 0.1 | 91.1 | |
| Total % | 0.1 | 28.6 | 4 | 0.2 | 0.1 | 0.3 | 12.1 | 35.6 | 0 | 1.7 | 0 | 17.2 | |
| Cars | 5 | 1153 | 164 | 8 | 4 | 12 | 489 | 1437 | 1 | 67 | 1 | 698 | 4039 |
| % Cars | 100 | 99.5 | 100 | 100 | 100 | 100 | 99.6 | 99.5 | 100 | 100 | 100 | 100 | 99.6 |
| Trucks | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 15 |
| % Trucks | 0 | 0.5 | 0 | 0 | 0 | 0 | 0.4 | 0.5 | 0 | 0 | 0 | 0 | 0.4 |

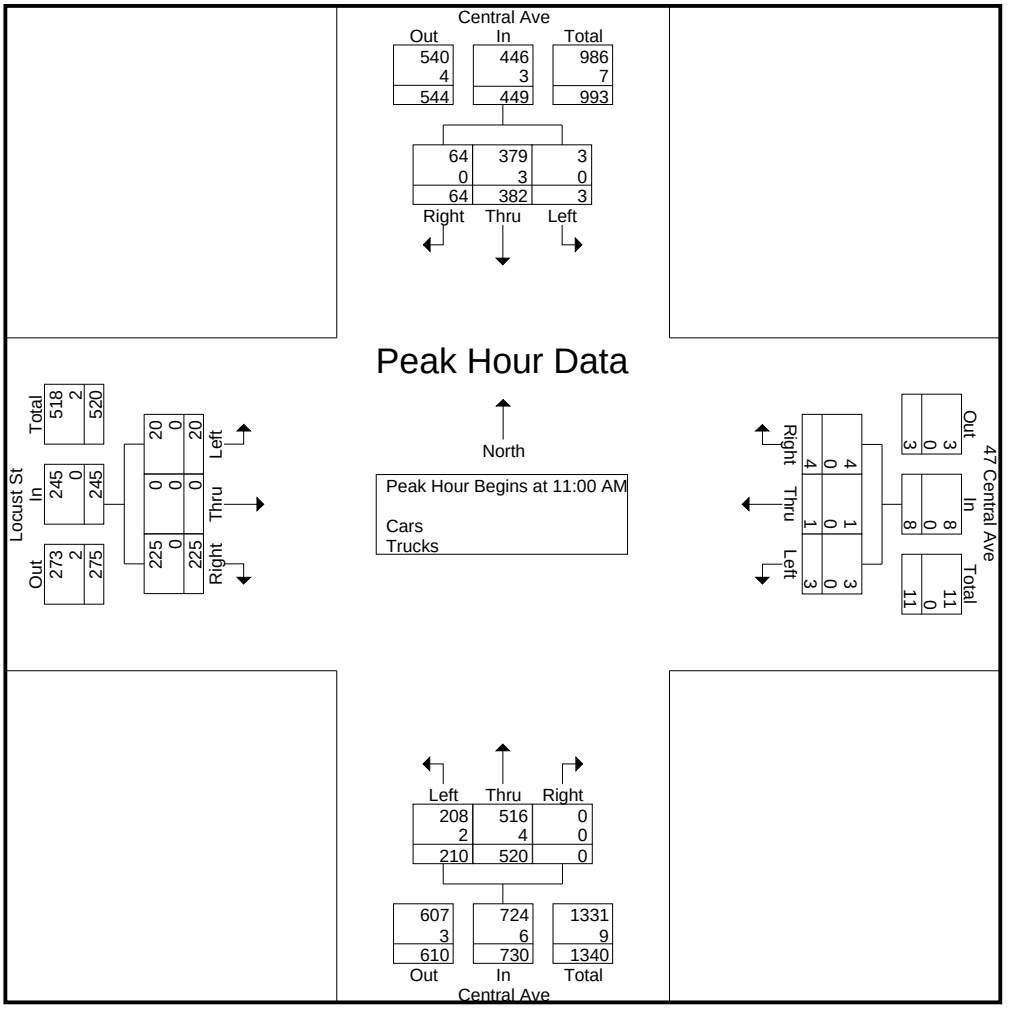
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:00 AM | | | | | | | | | | | | | | | | | |
| 11:00 AM | **1** | **111** | 12 | **124** | 0 | 0 | **2** | 2 | 54 | 130 | 0 | 184 | 2 | 0 | 61 | 63 | **373** |
| 11:15 AM | 1 | 84 | 14 | 99 | 1 | 0 | 0 | 1 | 52 | **138** | 0 | **190** | 6 | 0 | 48 | 54 | 344 |
| 11:30 AM | 1 | 92 | 16 | 109 | 0 | **1** | 2 | **3** | 44 | 138 | 0 | 182 | 4 | 0 | **65** | **69** | 363 |
| 11:45 AM | 0 | 95 | **22** | 117 | **2** | 0 | 0 | 2 | **60** | 114 | 0 | 174 | **8** | 0 | 51 | 59 | 352 |
| Total Volume | 3 | 382 | 64 | 449 | 3 | 1 | 4 | 8 | 210 | 520 | 0 | 730 | 20 | 0 | 225 | 245 | 1432 |
| % App. Total | 0.7 | 85.1 | 14.3 | | 37.5 | 12.5 | 50 | | 28.8 | 71.2 | 0 | | 8.2 | 0 | 91.8 | | |
| PHF | .750 | .860 | .727 | .905 | .375 | .250 | .500 | .667 | .875 | .942 | .000 | .961 | .625 | .000 | .865 | .888 | .960 |
| Cars | 3 | 379 | 64 | 446 | 3 | 1 | 4 | 8 | 208 | 516 | 0 | 724 | 20 | 0 | 225 | 245 | 1423 |
| % Cars | 100 | 99.2 | 100 | 99.3 | 100 | 100 | 100 | 100 | 99.0 | 99.2 | 0 | 99.2 | 100 | 0 | 100 | 100 | 99.4 |
| Trucks | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 9 |
| % Trucks | 0 | 0.8 | 0 | 0.7 | 0 | 0 | 0 | 0 | 1.0 | 0.8 | 0 | 0.8 | 0 | 0 | 0 | 0 | 0.6 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 2




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

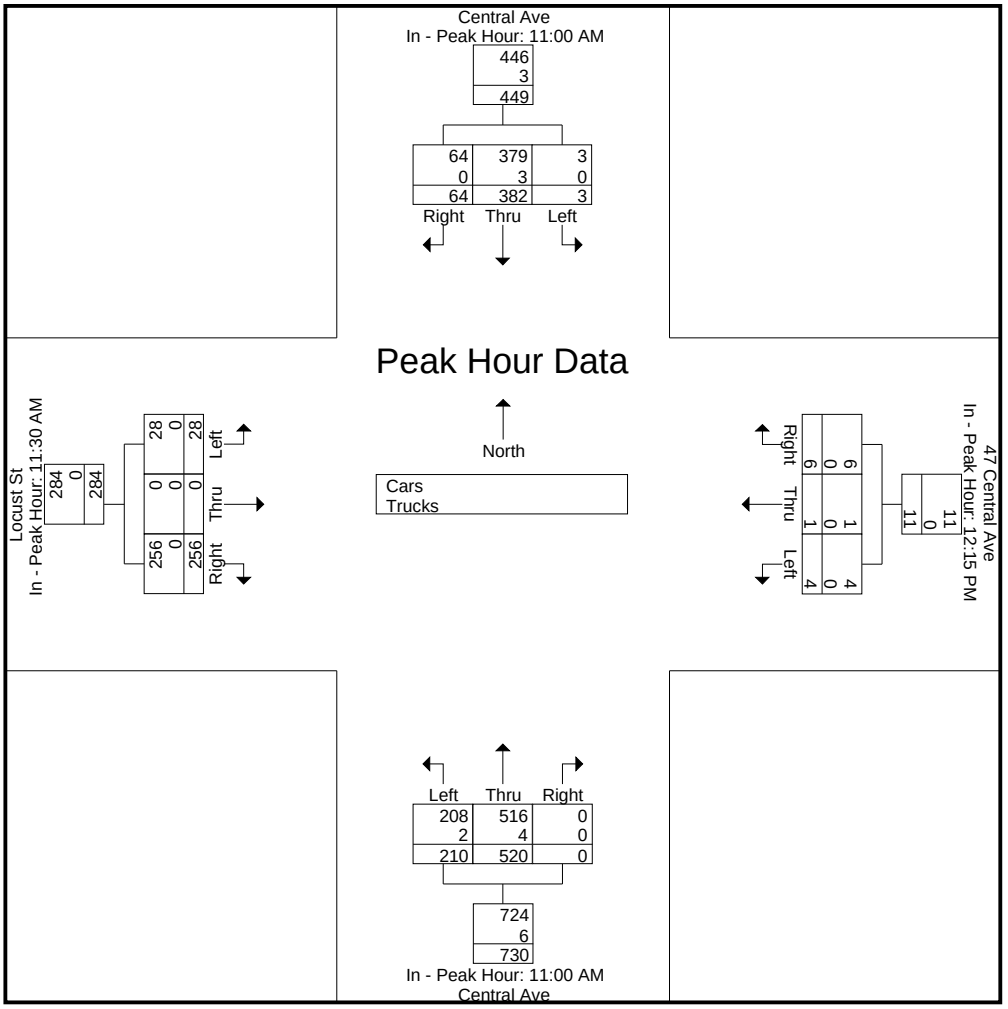
| | 11:00 AM | | | | 12:15 PM | | | | 11:00 AM | | | | 11:30 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **1** | **111** | 12 | **124** | 1 | 0 | 1 | 2 | 54 | 130 | 0 | 184 | 4 | 0 | 65 | 69 |
| +15 mins. | 1 | 84 | 14 | 99 | 0 | 0 | 1 | 1 | 52 | **138** | 0 | **190** | 8 | 0 | 51 | 59 |
| +30 mins. | 1 | 92 | 16 | 109 | **2** | 0 | 0 | 2 | 44 | 138 | 0 | 182 | **9** | 0 | 59 | 68 |
| +45 mins. | 0 | 95 | **22** | 117 | 1 | **1** | **4** | **6** | **60** | 114 | 0 | 174 | 7 | 0 | **81** | **88** |
| Total Volume | 3 | 382 | 64 | 449 | 4 | 1 | 6 | 11 | 210 | 520 | 0 | 730 | 28 | 0 | 256 | 284 |
| % App. Total | 0.7 | 85.1 | 14.3 | | 36.4 | 9.1 | 54.5 | | 28.8 | 71.2 | 0 | | 9.9 | 0 | 90.1 | |
| PHF | .750 | .860 | .727 | .905 | .500 | .250 | .375 | .458 | .875 | .942 | .000 | .961 | .778 | .000 | .790 | .807 |
| Cars | 3 | 379 | 64 | 446 | 4 | 1 | 6 | 11 | 208 | 516 | 0 | 724 | 28 | 0 | 256 | 284 |
| % Cars | 100 | 99.2 | 100 | 99.3 | 100 | 100 | 100 | 100 | 99 | 99.2 | 0 | 99.2 | 100 | 0 | 100 | 100 |
| Trucks | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 0 | 0 | 0 |
| % Trucks | 0 | 0.8 | 0 | 0.7 | 0 | 0 | 0 | 0 | 1 | 0.8 | 0 | 0.8 | 0 | 0 | 0 | 0 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 1 | 111 | 12 | 0 | 0 | 2 | 53 | 129 | 0 | 2 | 0 | 61 | 371 |
| 11:15 AM | 1 | 83 | 14 | 1 | 0 | 0 | 52 | 136 | 0 | 6 | 0 | 48 | 341 |
| 11:30 AM | 1 | 90 | 16 | 0 | 1 | 2 | 43 | 137 | 0 | 4 | 0 | 65 | 359 |
| 11:45 AM | 0 | 95 | 22 | 2 | 0 | 0 | 60 | 114 | 0 | 8 | 0 | 51 | 352 |
| Total | 3 | 379 | 64 | 3 | 1 | 4 | 208 | 516 | 0 | 20 | 0 | 225 | 1423 |
| | | | | | | | | | | | | | |
| 12:00 PM | 0 | 96 | 14 | 1 | 0 | 0 | 43 | 121 | 0 | 9 | 0 | 59 | 343 |
| 12:15 PM | 0 | 90 | 13 | 1 | 0 | 1 | 37 | 110 | 0 | 7 | 0 | 81 | 340 |
| 12:30 PM | 0 | 98 | 8 | 0 | 0 | 1 | 35 | 103 | 0 | 5 | 0 | 64 | 314 |
| 12:45 PM | 0 | 98 | 15 | 2 | 0 | 0 | 38 | 135 | 0 | 7 | 0 | 49 | 344 |
| Total | 0 | 382 | 50 | 4 | 0 | 2 | 153 | 469 | 0 | 28 | 0 | 253 | 1341 |
| | | | | | | | | | | | | | |
| 01:00 PM | 1 | 67 | 10 | 1 | 1 | 4 | 36 | 140 | 1 | 5 | 0 | 58 | 324 |
| 01:15 PM | 0 | 122 | 13 | 0 | 1 | 0 | 35 | 123 | 0 | 2 | 0 | 49 | 345 |
| 01:30 PM | 0 | 92 | 13 | 0 | 1 | 0 | 25 | 104 | 0 | 7 | 1 | 65 | 308 |
| 01:45 PM | 1 | 111 | 14 | 0 | 0 | 2 | 32 | 85 | 0 | 5 | 0 | 48 | 298 |
| Total | 2 | 392 | 50 | 1 | 3 | 6 | 128 | 452 | 1 | 19 | 1 | 220 | 1275 |
| | | | | | | | | | | | | | |
| Grand Total | 5 | 1153 | 164 | 8 | 4 | 12 | 489 | 1437 | 1 | 67 | 1 | 698 | 4039 |
| Apprch % | 0.4 | 87.2 | 12.4 | 33.3 | 16.7 | 50 | 25.4 | 74.6 | 0.1 | 8.7 | 0.1 | 91.1 | |
| Total % | 0.1 | 28.5 | 4.1 | 0.2 | 0.1 | 0.3 | 12.1 | 35.6 | 0 | 1.7 | 0 | 17.3 | |

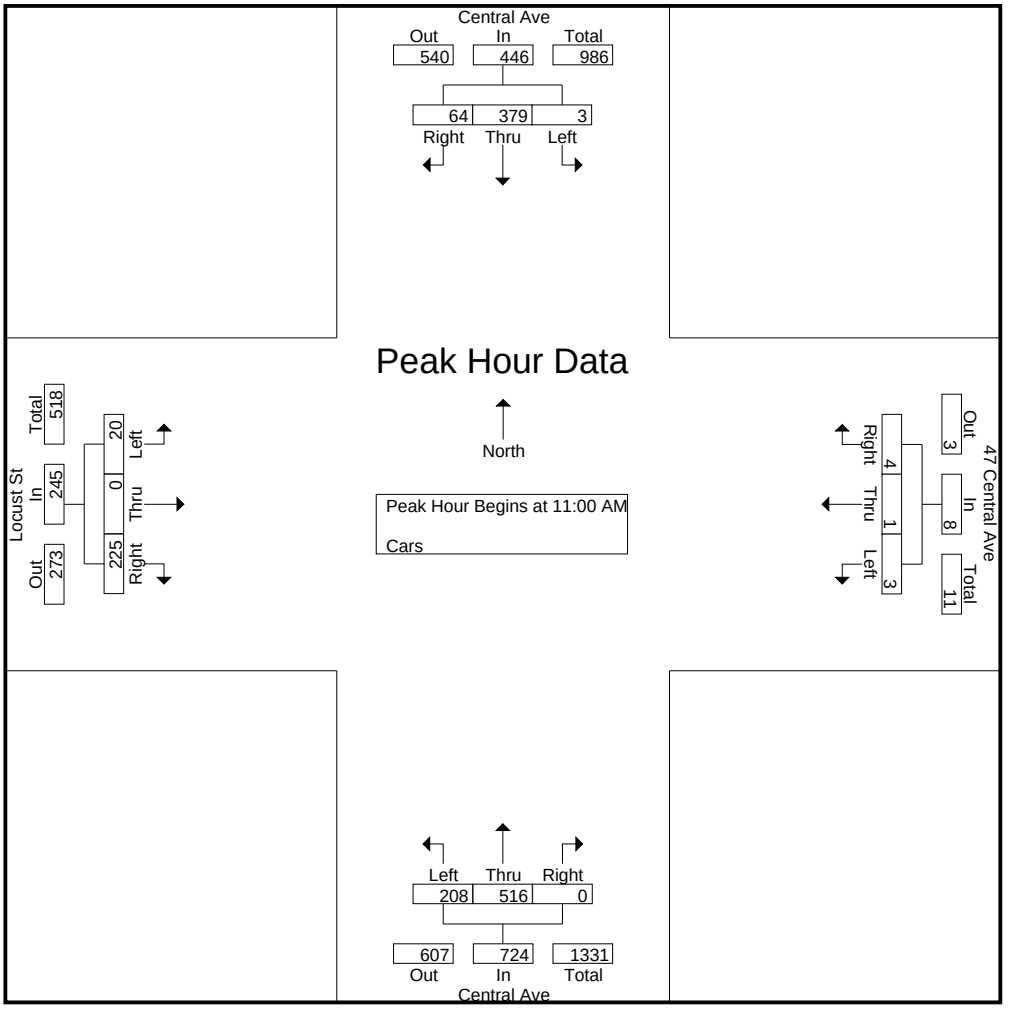
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:00 AM | | | | | | | | | | | | | | | | | |
| 11:00 AM | **1** | **111** | 12 | **124** | 0 | 0 | **2** | 2 | 53 | 129 | 0 | 182 | 2 | 0 | 61 | 63 | **371** |
| 11:15 AM | 1 | 83 | 14 | 98 | 1 | 0 | 0 | 1 | 52 | 136 | 0 | **188** | 6 | 0 | 48 | 54 | 341 |
| 11:30 AM | 1 | 90 | 16 | 107 | 0 | **1** | 2 | **3** | 43 | **137** | 0 | 180 | 4 | 0 | **65** | **69** | 359 |
| 11:45 AM | 0 | 95 | **22** | 117 | **2** | 0 | 0 | 2 | **60** | 114 | 0 | 174 | **8** | 0 | 51 | 59 | 352 |
| Total Volume | 3 | 379 | 64 | 446 | 3 | 1 | 4 | 8 | 208 | 516 | 0 | 724 | 20 | 0 | 225 | 245 | 1423 |
| % App. Total | 0.7 | 85 | 14.3 | | 37.5 | 12.5 | 50 | | 28.7 | 71.3 | 0 | | 8.2 | 0 | 91.8 | | |
| PHF | .750 | .854 | .727 | .899 | .375 | .250 | .500 | .667 | .867 | .942 | .000 | .963 | .625 | .000 | .865 | .888 | .959 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 5




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

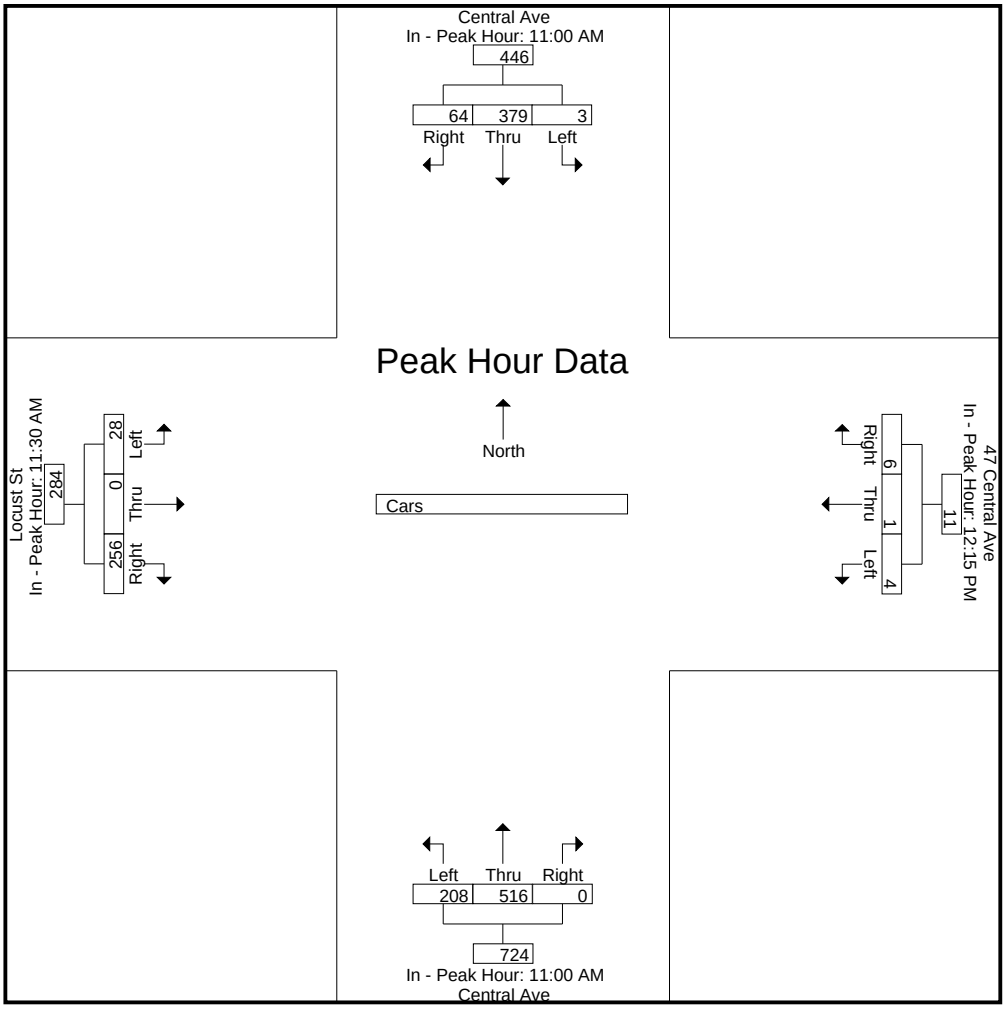
| | 11:00 AM | | | | 12:15 PM | | | | 11:00 AM | | | | 11:30 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **1** | **111** | 12 | **124** | 1 | 0 | 1 | 2 | 53 | 129 | 0 | 182 | 4 | 0 | 65 | 69 |
| +15 mins. | 1 | 83 | 14 | 98 | 0 | 0 | 1 | 1 | 52 | 136 | 0 | **188** | 8 | 0 | 51 | 59 |
| +30 mins. | 1 | 90 | 16 | 107 | **2** | 0 | 0 | 2 | 43 | **137** | 0 | 180 | **9** | 0 | 59 | 68 |
| +45 mins. | 0 | 95 | **22** | 117 | 1 | **1** | **4** | **6** | **60** | 114 | 0 | 174 | 7 | 0 | **81** | **88** |
| Total Volume | 3 | 379 | 64 | 446 | 4 | 1 | 6 | 11 | 208 | 516 | 0 | 724 | 28 | 0 | 256 | 284 |
| % App. Total | 0.7 | 85 | 14.3 | | 36.4 | 9.1 | 54.5 | | 28.7 | 71.3 | 0 | | 9.9 | 0 | 90.1 | |
| PHF | .750 | .854 | .727 | .899 | .500 | .250 | .375 | .458 | .867 | .942 | .000 | .963 | .778 | .000 | .790 | .807 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025


Groups Printed- Trucks

| | Central Ave From North | | | 47 Central Ave From East | | | Central Ave From South | | | Locust St From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 11:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 11:30 AM | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 9 |
| | | | | | | | | | | | | | |
| 12:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 4 |
| | | | | | | | | | | | | | |
| 01:00 PM | 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 | 0 | 0 |
| 01:30 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | | | | | | | | | | | |
| Grand Total | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 15 |
| Apprch % | 0 | 100 | 0 | 0 | 0 | 0 | 22.2 | 77.8 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 40 | 0 | 0 | 0 | 0 | 13.3 | 46.7 | 0 | 0 | 0 | 0 | |

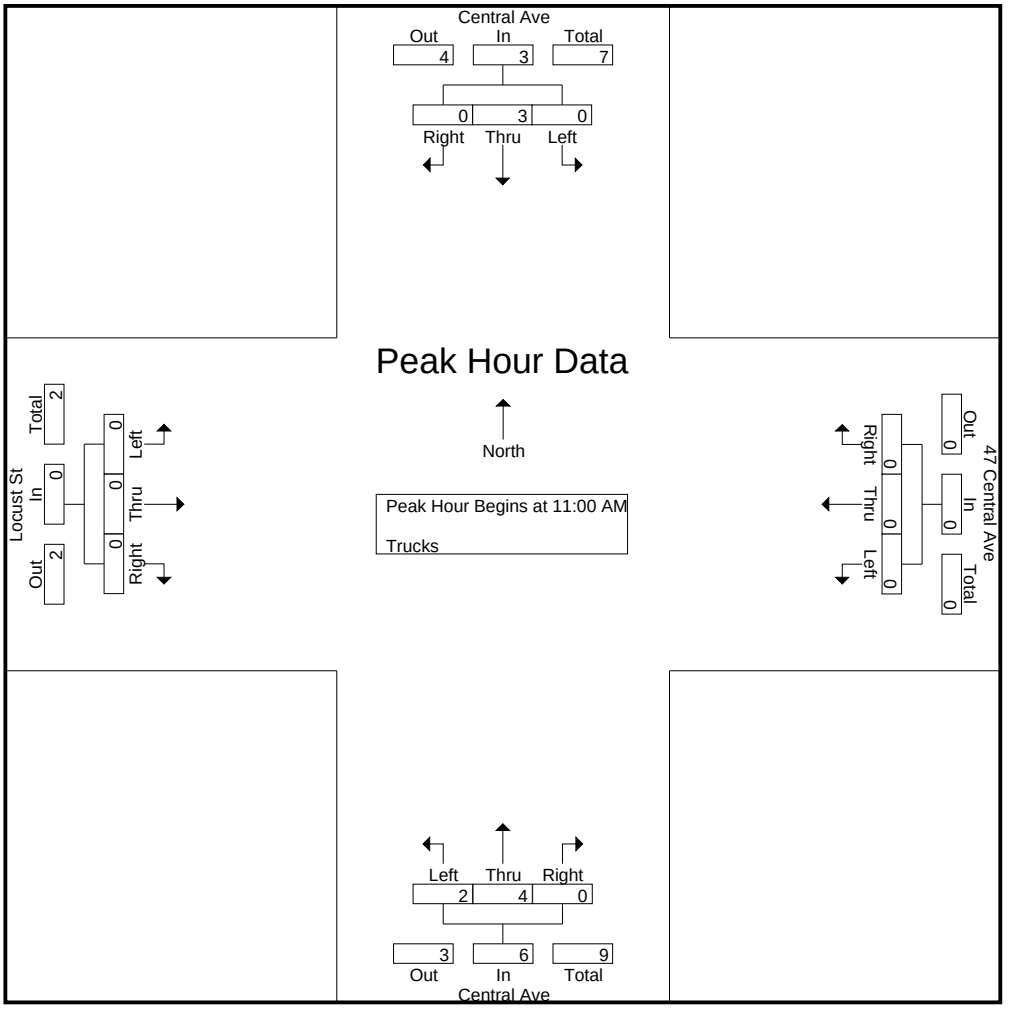
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:00 AM | | | | | | | | | | | | | | | | | |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | 1 | 0 | **2** | 0 | 0 | 0 | 0 | 2 |
| 11:15 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **2** | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 11:30 AM | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | **4** |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 9 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 33.3 | 66.7 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .375 | .000 | .375 | .000 | .000 | .000 | .000 | .500 | .500 | .000 | .750 | .000 | .000 | .000 | .000 | .563 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 8




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

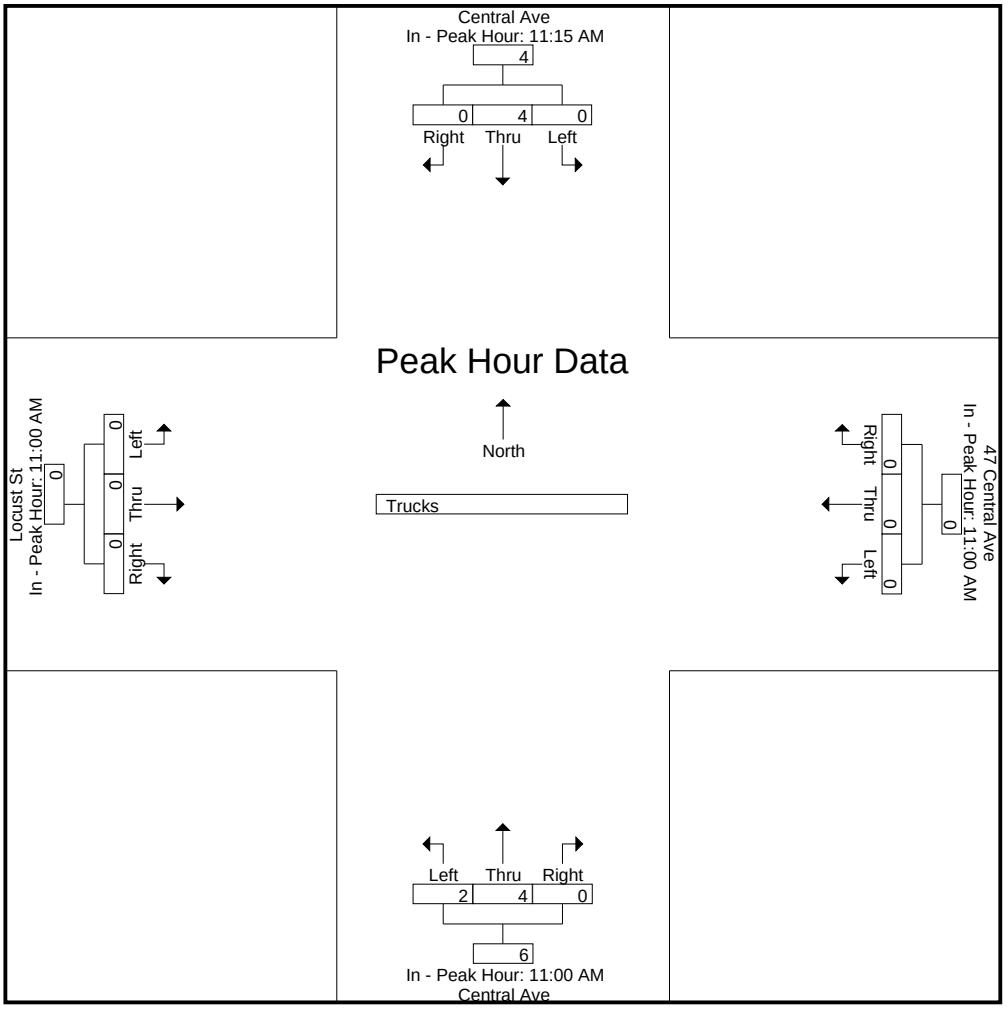
| | 11:15 AM | | | | 11:00 AM | | | | 11:00 AM | | | | 11:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | **1** | 1 | 0 | **2** | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 0 | **2** | 0 | 2 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 33.3 | 66.7 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .500 | .000 | .500 | .000 | .000 | .000 | .000 | .500 | .500 | .000 | .750 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 10

Groups Printed- Bikes Peds

| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 11:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 4 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 01:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:45 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 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 3 | 7 |
| Grand Total | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 9 | 3 | 12 |
| Apprch % | 0 | 100 | 0 | | 0 | 0 | 0 | | 100 | 0 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 66.7 | 0 | | 0 | 0 | 0 | | 33.3 | 0 | 0 | | 0 | 0 | 0 | | 75 | 25 | |

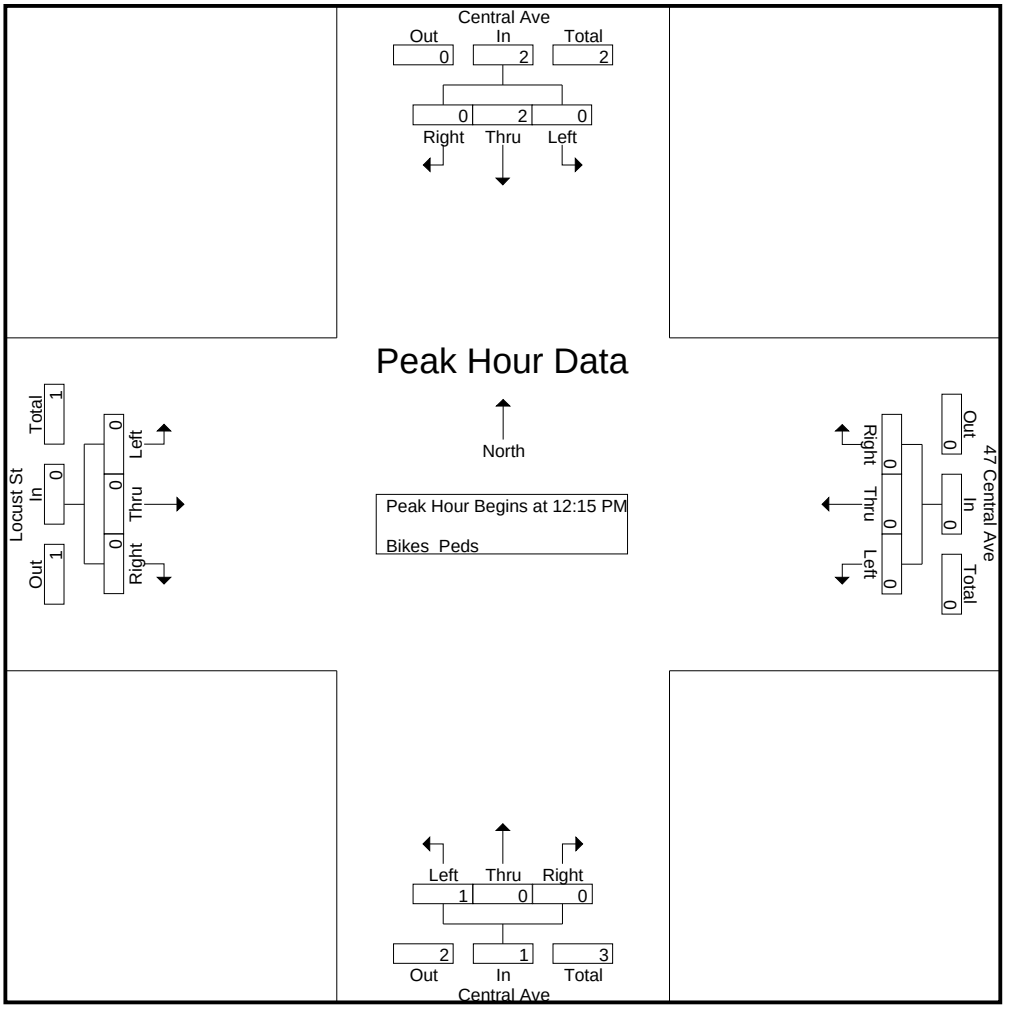
| | Central Ave From North | | | | 47 Central Ave From East | | | | Central Ave From South | | | | Locust St From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 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 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:00 PM | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | **1** | 0 | 0 | **1** | 0 | 0 | 0 | 0 | **3** |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 100 | 0 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .250 | .000 | .000 | .250 | .000 | .000 | .000 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 11




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

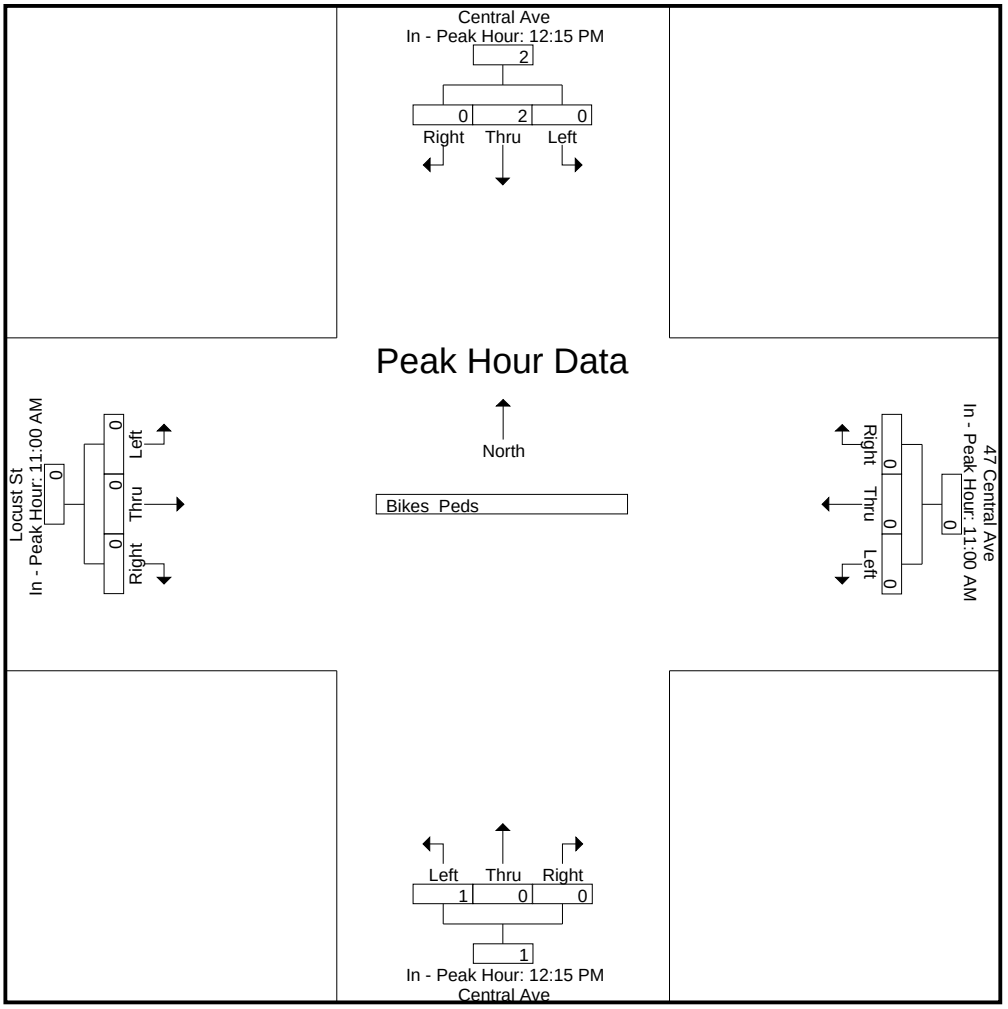
| | 12:15 PM | | | | 11:00 AM | | | | 12:15 PM | | | | 11:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | **1** | 0 | 0 | **1** | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 100 | 0 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .250 | .000 | .000 | .250 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : 47 Central Ave / Locust St
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S2
Site Code : 10566002
Start Date : 12/20/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 146 | 38 | 3 | 4 | 4 | 13 | 102 | 0 | 32 | 2 | 92 | 436 |
| 07:15 AM | 0 | 124 | 40 | 2 | 4 | 2 | 16 | 171 | 0 | 35 | 1 | 92 | 487 |
| 07:30 AM | 1 | 125 | 59 | 3 | 7 | 1 | 18 | 160 | 1 | 43 | 3 | 89 | 510 |
| 07:45 AM | 0 | 134 | 53 | 2 | 4 | 1 | 11 | 174 | 1 | 56 | 4 | 119 | 559 |
| Total | 1 | 529 | 190 | 10 | 19 | 8 | 58 | 607 | 2 | 166 | 10 | 392 | 1992 |
| | | | | | | | | | | | | | |
| 08:00 AM | 1 | 110 | 62 | 3 | 2 | 4 | 16 | 170 | 4 | 24 | 1 | 64 | 461 |
| 08:15 AM | 2 | 95 | 69 | 2 | 5 | 0 | 13 | 216 | 0 | 44 | 1 | 53 | 500 |
| 08:30 AM | 0 | 91 | 59 | 1 | 3 | 2 | 10 | 139 | 1 | 34 | 1 | 42 | 383 |
| 08:45 AM | 1 | 104 | 47 | 5 | 2 | 1 | 11 | 144 | 0 | 36 | 2 | 45 | 398 |
| Total | 4 | 400 | 237 | 11 | 12 | 7 | 50 | 669 | 5 | 138 | 5 | 204 | 1742 |
| | | | | | | | | | | | | | |
| Grand Total | 5 | 929 | 427 | 21 | 31 | 15 | 108 | 1276 | 7 | 304 | 15 | 596 | 3734 |
| Apprch % | 0.4 | 68.3 | 31.4 | 31.3 | 46.3 | 22.4 | 7.8 | 91.7 | 0.5 | 33.2 | 1.6 | 65.1 | |
| Total % | 0.1 | 24.9 | 11.4 | 0.6 | 0.8 | 0.4 | 2.9 | 34.2 | 0.2 | 8.1 | 0.4 | 16 | |
| Cars | 5 | 897 | 420 | 20 | 31 | 15 | 107 | 1223 | 7 | 303 | 15 | 577 | 3620 |
| % Cars | 100 | 96.6 | 98.4 | 95.2 | 100 | 100 | 99.1 | 95.8 | 100 | 99.7 | 100 | 96.8 | 96.9 |
| Trucks | 0 | 32 | 7 | 1 | 0 | 0 | 1 | 53 | 0 | 1 | 0 | 19 | 114 |
| % Trucks | 0 | 3.4 | 1.6 | 4.8 | 0 | 0 | 0.9 | 4.2 | 0 | 0.3 | 0 | 3.2 | 3.1 |

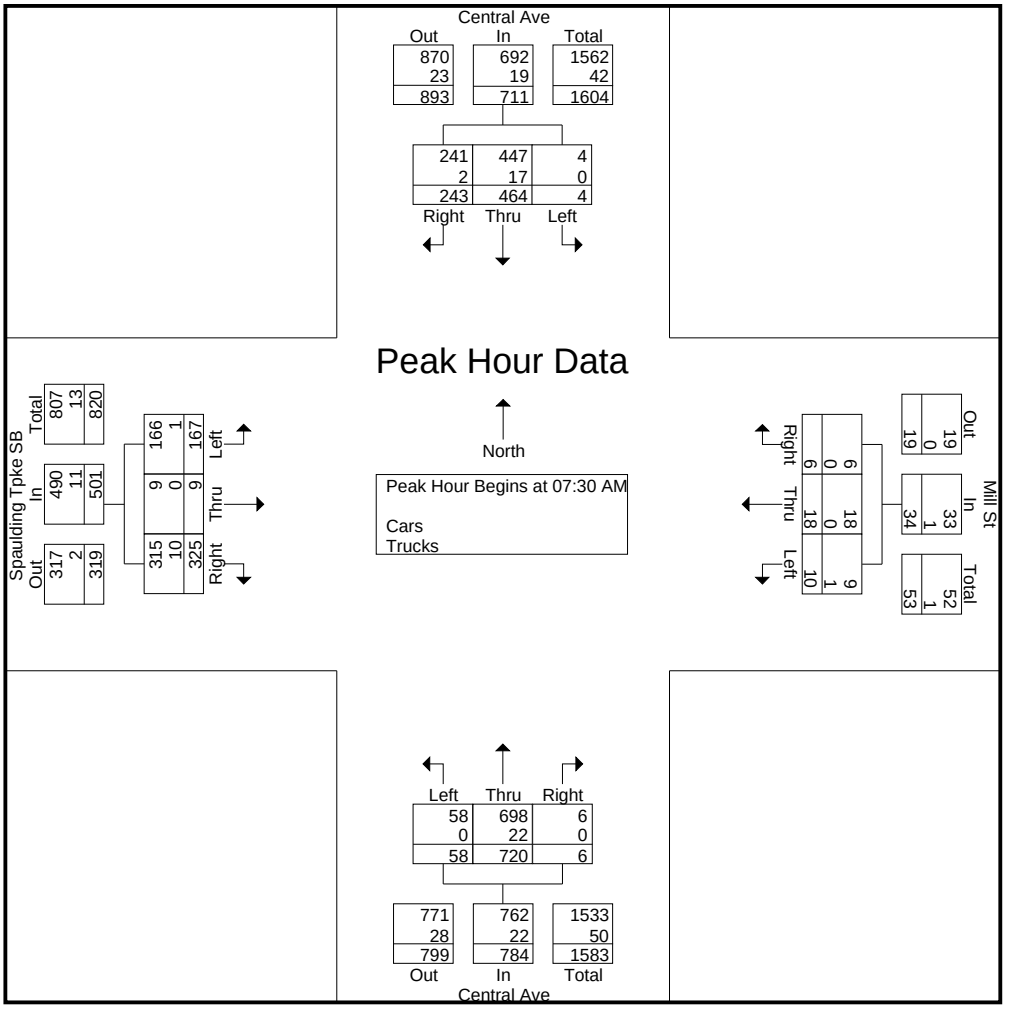
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 1 | 125 | 59 | 185 | **3** | **7** | 1 | **11** | **18** | 160 | 1 | 179 | 43 | 3 | 89 | 135 | 510 |
| 07:45 AM | 0 | **134** | 53 | **187** | 2 | 4 | 1 | 7 | 11 | 174 | 1 | 186 | **56** | **4** | **119** | **179** | **559** |
| 08:00 AM | 1 | 110 | 62 | 173 | 3 | 2 | **4** | 9 | 16 | 170 | **4** | 190 | 24 | 1 | 64 | 89 | 461 |
| 08:15 AM | **2** | 95 | **69** | 166 | 2 | 5 | 0 | 7 | 13 | **216** | 0 | **229** | 44 | 1 | 53 | 98 | 500 |
| Total Volume | 4 | 464 | 243 | 711 | 10 | 18 | 6 | 34 | 58 | 720 | 6 | 784 | 167 | 9 | 325 | 501 | 2030 |
| % App. Total | 0.6 | 65.3 | 34.2 | | 29.4 | 52.9 | 17.6 | | 7.4 | 91.8 | 0.8 | | 33.3 | 1.8 | 64.9 | | |
| PHF | .500 | .866 | .880 | .951 | .833 | .643 | .375 | .773 | .806 | .833 | .375 | .856 | .746 | .563 | .683 | .700 | .908 |
| Cars | 4 | 447 | 241 | 692 | 9 | 18 | 6 | 33 | 58 | 698 | 6 | 762 | 166 | 9 | 315 | 490 | 1977 |
| % Cars | 100 | 96.3 | 99.2 | 97.3 | 90.0 | 100 | 100 | 97.1 | 100 | 96.9 | 100 | 97.2 | 99.4 | 100 | 96.9 | 97.8 | 97.4 |
| Trucks | 0 | 17 | 2 | 19 | 1 | 0 | 0 | 1 | 0 | 22 | 0 | 22 | 1 | 0 | 10 | 11 | 53 |
| % Trucks | 0 | 3.7 | 0.8 | 2.7 | 10.0 | 0 | 0 | 2.9 | 0 | 3.1 | 0 | 2.8 | 0.6 | 0 | 3.1 | 2.2 | 2.6 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 2




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

Peak Hour for Each Approach Begins at:

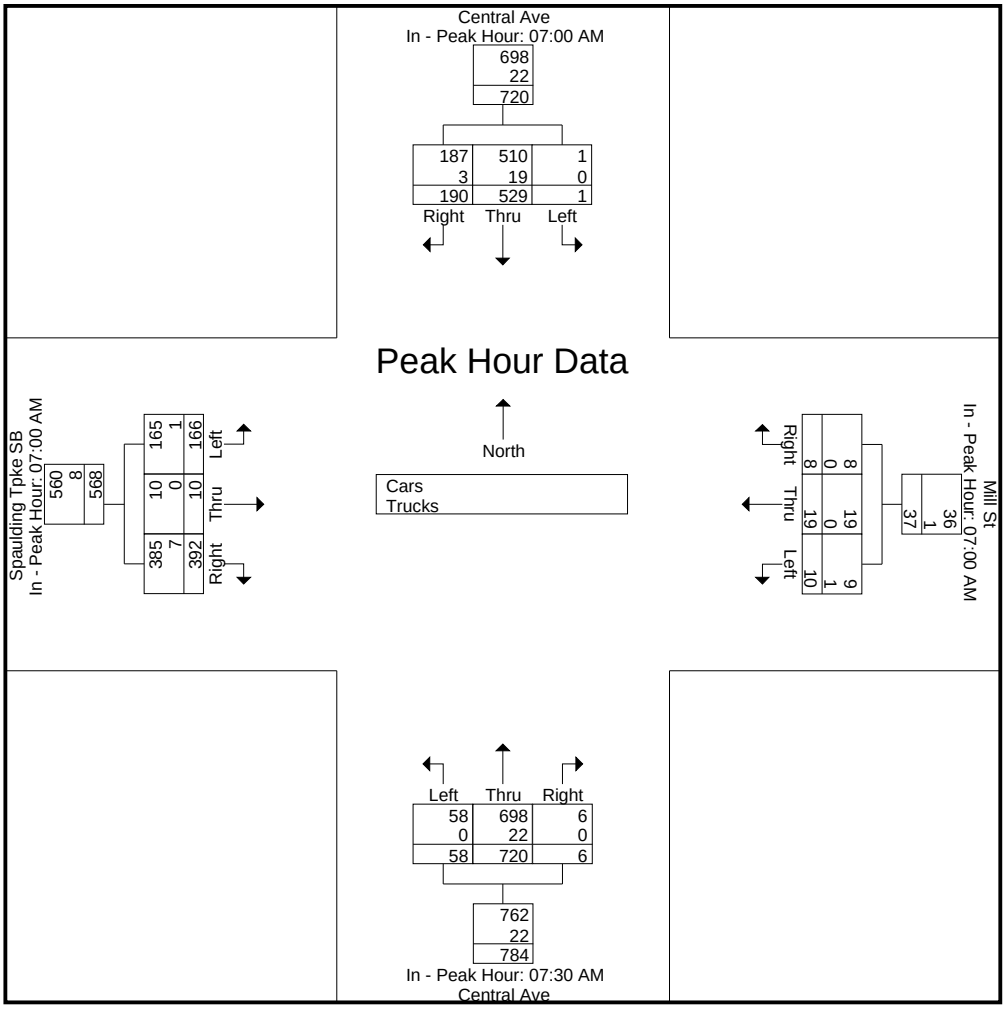
| | 07:00 AM | | | | 07:00 AM | | | | 07:30 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | **146** | 38 | 184 | **3** | 4 | **4** | **11** | **18** | 160 | 1 | 179 | 32 | 2 | 92 | 126 |
| +15 mins. | 0 | 124 | 40 | 164 | 2 | 4 | 2 | 8 | 11 | 174 | 1 | 186 | 35 | 1 | 92 | 128 |
| +30 mins. | **1** | 125 | **59** | 185 | 3 | **7** | 1 | 11 | 16 | 170 | **4** | 190 | 43 | 3 | 89 | 135 |
| +45 mins. | 0 | 134 | 53 | **187** | 2 | 4 | 1 | 7 | 13 | **216** | 0 | **229** | **56** | **4** | **119** | **179** |
| Total Volume | 1 | 529 | 190 | 720 | 10 | 19 | 8 | 37 | 58 | 720 | 6 | 784 | 166 | 10 | 392 | 568 |
| % App. Total | 0.1 | 73.5 | 26.4 | | 27 | 51.4 | 21.6 | | 7.4 | 91.8 | 0.8 | | 29.2 | 1.8 | 69 | |
| PHF | .250 | .906 | .805 | .963 | .833 | .679 | .500 | .841 | .806 | .833 | .375 | .856 | .741 | .625 | .824 | .793 |
| Cars | 1 | 510 | 187 | 698 | 9 | 19 | 8 | 36 | 58 | 698 | 6 | 762 | 165 | 10 | 385 | 560 |
| % Cars | 100 | 96.4 | 98.4 | 96.9 | 90 | 100 | 100 | 97.3 | 100 | 96.9 | 100 | 97.2 | 99.4 | 100 | 98.2 | 98.6 |
| Trucks | 0 | 19 | 3 | 22 | 1 | 0 | 0 | 1 | 0 | 22 | 0 | 22 | 1 | 0 | 7 | 8 |
| % Trucks | 0 | 3.6 | 1.6 | 3.1 | 10 | 0 | 0 | 2.7 | 0 | 3.1 | 0 | 2.8 | 0.6 | 0 | 1.8 | 1.4 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 138 | 36 | 3 | 4 | 4 | 12 | 100 | 0 | 32 | 2 | 90 | 421 |
| 07:15 AM | 0 | 121 | 40 | 2 | 4 | 2 | 16 | 153 | 0 | 35 | 1 | 91 | 465 |
| 07:30 AM | 1 | 122 | 59 | 2 | 7 | 1 | 18 | 157 | 1 | 43 | 3 | 86 | 500 |
| 07:45 AM | 0 | 129 | 52 | 2 | 4 | 1 | 11 | 168 | 1 | 55 | 4 | 118 | 545 |
| Total | 1 | 510 | 187 | 9 | 19 | 8 | 57 | 578 | 2 | 165 | 10 | 385 | 1931 |
| | | | | | | | | | | | | | |
| 08:00 AM | 1 | 104 | 61 | 3 | 2 | 4 | 16 | 160 | 4 | 24 | 1 | 60 | 440 |
| 08:15 AM | 2 | 92 | 69 | 2 | 5 | 0 | 13 | 213 | 0 | 44 | 1 | 51 | 492 |
| 08:30 AM | 0 | 90 | 57 | 1 | 3 | 2 | 10 | 133 | 1 | 34 | 1 | 37 | 369 |
| 08:45 AM | 1 | 101 | 46 | 5 | 2 | 1 | 11 | 139 | 0 | 36 | 2 | 44 | 388 |
| Total | 4 | 387 | 233 | 11 | 12 | 7 | 50 | 645 | 5 | 138 | 5 | 192 | 1689 |
| | | | | | | | | | | | | | |
| Grand Total | 5 | 897 | 420 | 20 | 31 | 15 | 107 | 1223 | 7 | 303 | 15 | 577 | 3620 |
| Apprch % | 0.4 | 67.9 | 31.8 | 30.3 | 47 | 22.7 | 8 | 91.5 | 0.5 | 33.9 | 1.7 | 64.5 | |
| Total % | 0.1 | 24.8 | 11.6 | 0.6 | 0.9 | 0.4 | 3 | 33.8 | 0.2 | 8.4 | 0.4 | 15.9 | |

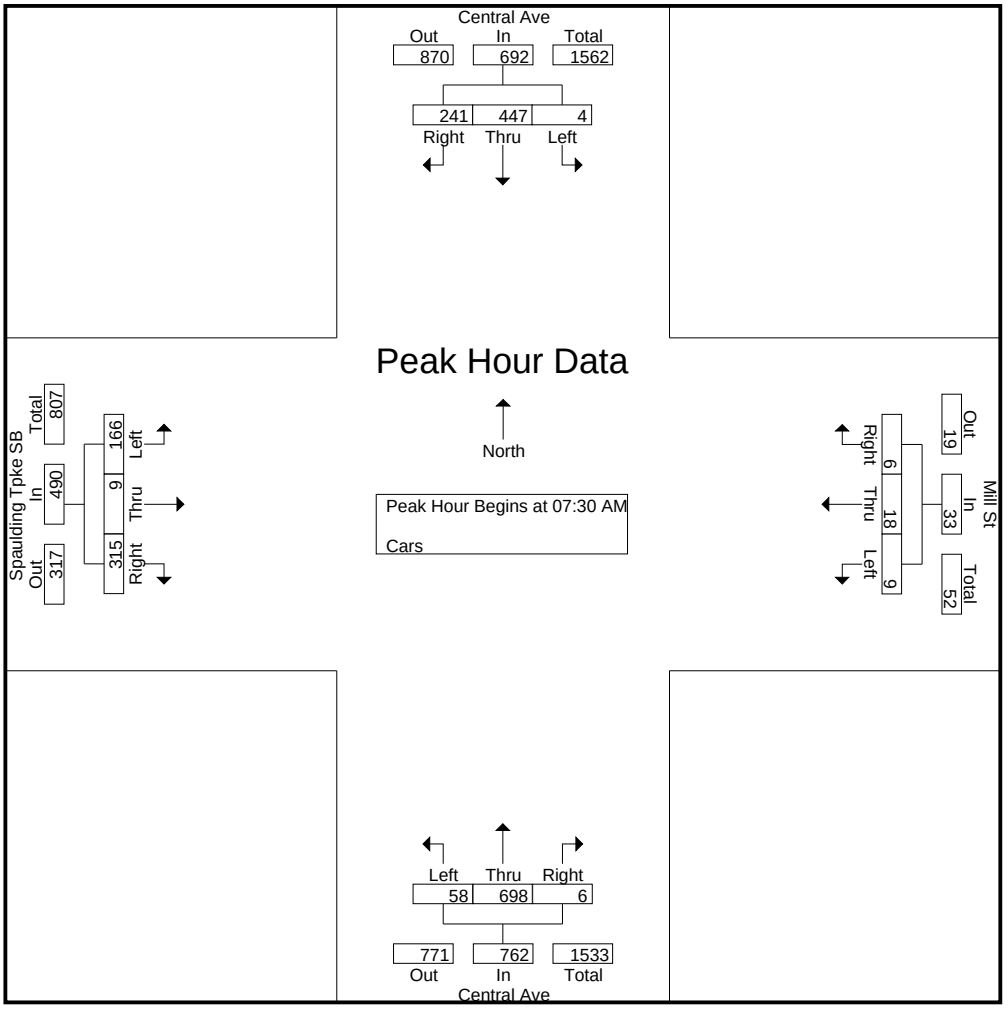
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 1 | 122 | 59 | **182** | 2 | **7** | 1 | **10** | **18** | 157 | 1 | 176 | 43 | 3 | 86 | 132 | 500 |
| 07:45 AM | 0 | **129** | 52 | 181 | 2 | 4 | 1 | 7 | 11 | 168 | 1 | 180 | **55** | **4** | **118** | **177** | **545** |
| 08:00 AM | 1 | 104 | 61 | 166 | **3** | 2 | **4** | 9 | 16 | 160 | **4** | 180 | 24 | 1 | 60 | 85 | 440 |
| 08:15 AM | **2** | 92 | **69** | 163 | 2 | 5 | 0 | 7 | 13 | **213** | 0 | **226** | 44 | 1 | 51 | 96 | 492 |
| Total Volume | 4 | 447 | 241 | 692 | 9 | 18 | 6 | 33 | 58 | 698 | 6 | 762 | 166 | 9 | 315 | 490 | 1977 |
| % App. Total | 0.6 | 64.6 | 34.8 | | 27.3 | 54.5 | 18.2 | | 7.6 | 91.6 | 0.8 | | 33.9 | 1.8 | 64.3 | | |
| PHF | .500 | .866 | .873 | .951 | .750 | .643 | .375 | .825 | .806 | .819 | .375 | .843 | .755 | .563 | .667 | .692 | .907 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 5




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

Peak Hour for Each Approach Begins at:

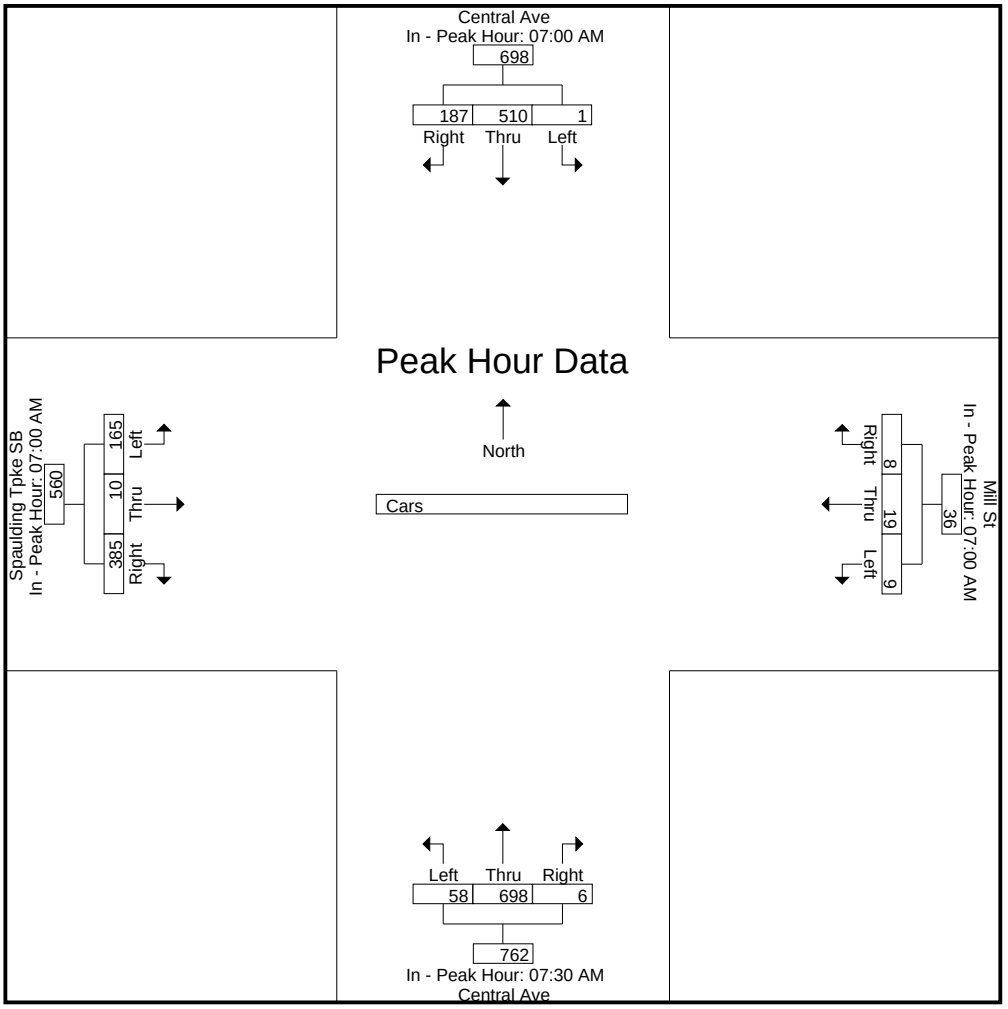
| | 07:00 AM | | | | 07:00 AM | | | | 07:30 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | **138** | 36 | 174 | **3** | 4 | **4** | **11** | **18** | 157 | 1 | 176 | 32 | 2 | 90 | 124 |
| +15 mins. | 0 | 121 | 40 | 161 | 2 | 4 | 2 | 8 | 11 | 168 | 1 | 180 | 35 | 1 | 91 | 127 |
| +30 mins. | **1** | 122 | **59** | **182** | 2 | **7** | 1 | 10 | 16 | 160 | **4** | 180 | 43 | 3 | 86 | 132 |
| +45 mins. | 0 | 129 | 52 | 181 | 2 | 4 | 1 | 7 | 13 | **213** | 0 | **226** | **55** | **4** | **118** | **177** |
| Total Volume | 1 | 510 | 187 | 698 | 9 | 19 | 8 | 36 | 58 | 698 | 6 | 762 | 165 | 10 | 385 | 560 |
| % App. Total | 0.1 | 73.1 | 26.8 | | 25 | 52.8 | 22.2 | | 7.6 | 91.6 | 0.8 | | 29.5 | 1.8 | 68.8 | |
| PHF | .250 | .924 | .792 | .959 | .750 | .679 | .500 | .818 | .806 | .819 | .375 | .843 | .750 | .625 | .816 | .791 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025


Groups Printed- Trucks

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 07:00 AM | 0 | 8 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 15 |
| 07:15 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 1 | 22 |
| 07:30 AM | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 10 |
| 07:45 AM | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 1 | 14 |
| Total | 0 | 19 | 3 | 1 | 0 | 0 | 1 | 29 | 0 | 1 | 0 | 7 | 61 |
| | | | | | | | | | | | | | |
| 08:00 AM | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | 21 |
| 08:15 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 8 |
| 08:30 AM | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 5 | 14 |
| 08:45 AM | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 10 |
| Total | 0 | 13 | 4 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 12 | 53 |
| | | | | | | | | | | | | | |
| Grand Total | 0 | 32 | 7 | 1 | 0 | 0 | 1 | 53 | 0 | 1 | 0 | 19 | 114 |
| Apprch % | 0 | 82.1 | 17.9 | 100 | 0 | 0 | 1.9 | 98.1 | 0 | 5 | 0 | 95 | |
| Total % | 0 | 28.1 | 6.1 | 0.9 | 0 | 0 | 0.9 | 46.5 | 0 | 0.9 | 0 | 16.7 | |

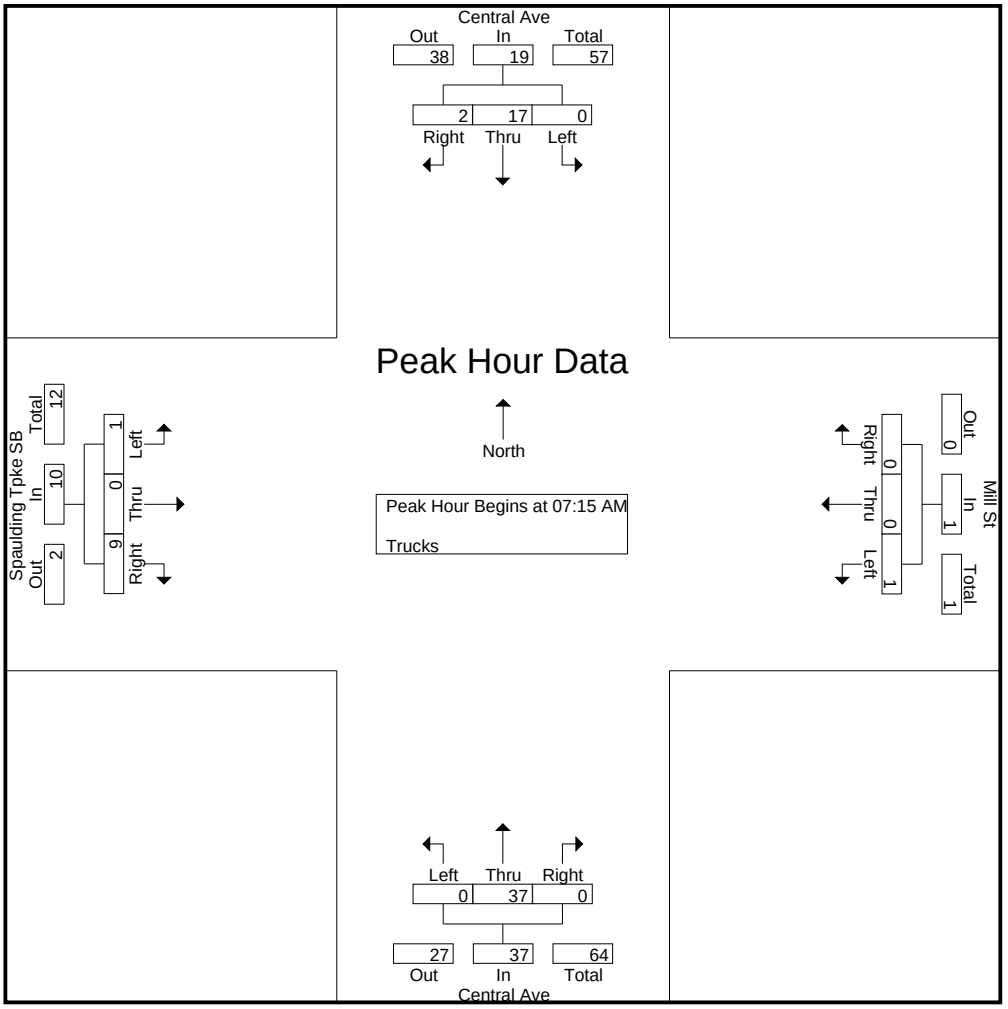
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. 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 | **18** | 0 | **18** | 0 | 0 | 1 | 1 | **22** |
| 07:30 AM | 0 | 3 | 0 | 3 | **1** | 0 | 0 | **1** | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 3 | 10 |
| 07:45 AM | 0 | 5 | **1** | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | **1** | 0 | 1 | 2 | 14 |
| 08:00 AM | 0 | **6** | 1 | **7** | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | **4** | **4** | 21 |
| Total Volume | 0 | 17 | 2 | 19 | 1 | 0 | 0 | 1 | 0 | 37 | 0 | 37 | 1 | 0 | 9 | 10 | 67 |
| % App. Total | 0 | 89.5 | 10.5 | | 100 | 0 | 0 | | 0 | 100 | 0 | | 10 | 0 | 90 | | |
| PHF | .000 | .708 | .500 | .679 | .250 | .000 | .000 | .250 | .000 | .514 | .000 | .514 | .250 | .000 | .563 | .625 | .761 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 8




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

Peak Hour for Each Approach Begins at:

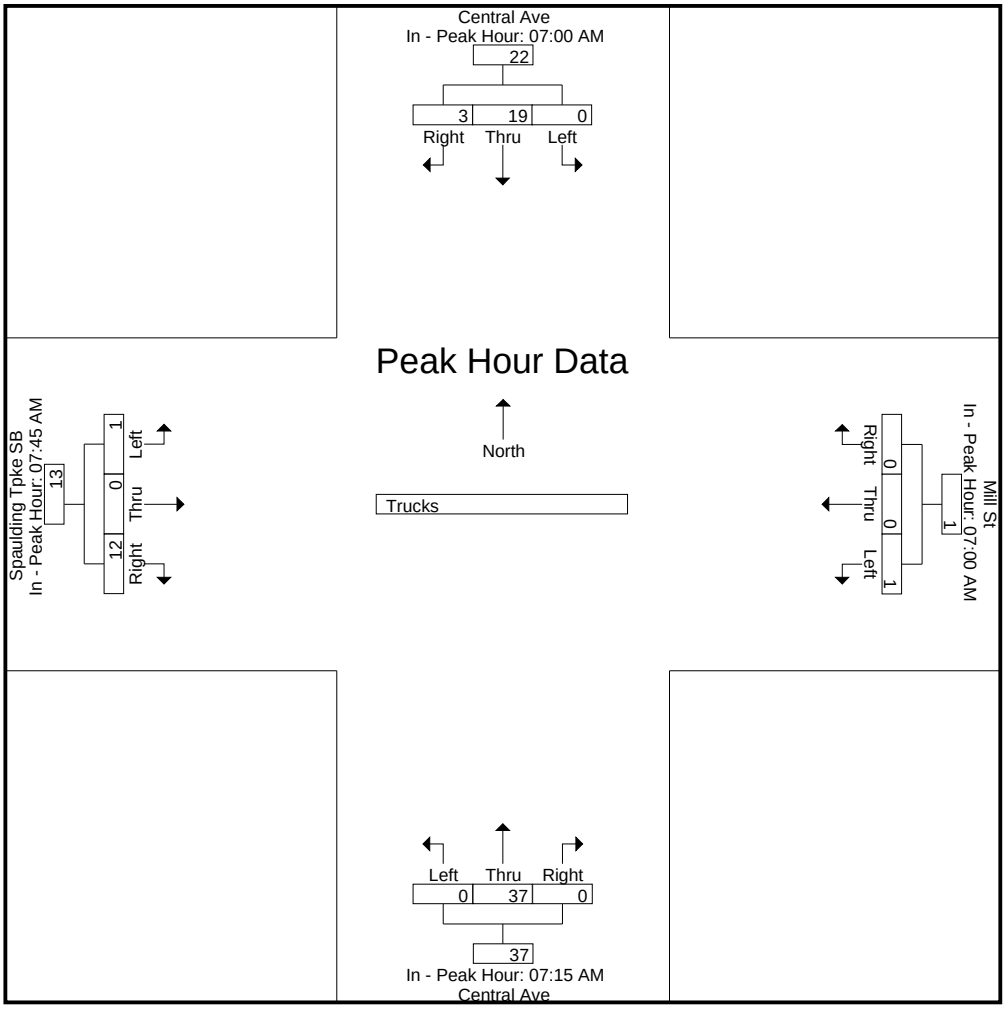
| | 07:00 AM | | | | 07:00 AM | | | | 07:15 AM | | | | 07:45 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | **8** | **2** | **10** | 0 | 0 | 0 | 0 | 0 | **18** | 0 | **18** | **1** | 0 | 1 | 2 |
| +15 mins. | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 4 | 4 |
| +30 mins. | 0 | 3 | 0 | 3 | **1** | 0 | 0 | **1** | 0 | 6 | 0 | 6 | 0 | 0 | 2 | 2 |
| +45 mins. | 0 | 5 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | **5** | **5** |
| Total Volume | 0 | 19 | 3 | 22 | 1 | 0 | 0 | 1 | 0 | 37 | 0 | 37 | 1 | 0 | 12 | 13 |
| % App. Total | 0 | 86.4 | 13.6 | | 100 | 0 | 0 | | 0 | 100 | 0 | | 7.7 | 0 | 92.3 | |
| PHF | .000 | .594 | .375 | .550 | .250 | .000 | .000 | .250 | .000 | .514 | .000 | .514 | .250 | .000 | .600 | .650 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 10

Groups Printed- Bikes Peds

| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 07:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 07:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 1 | 7 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 3 |
| 07:45 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 8 | 9 | 3 | 12 |
| 08:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 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 | 1 | 0 | 0 | 0 | 0 | 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 | 1 | 1 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 3 |
| Grand Total | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 11 | 4 | 15 |
| Apprch % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 75 | 0 | | 0 | 0 | 0 | | 0 | 25 | 0 | | 0 | 0 | 0 | | 73.3 | 26.7 | |

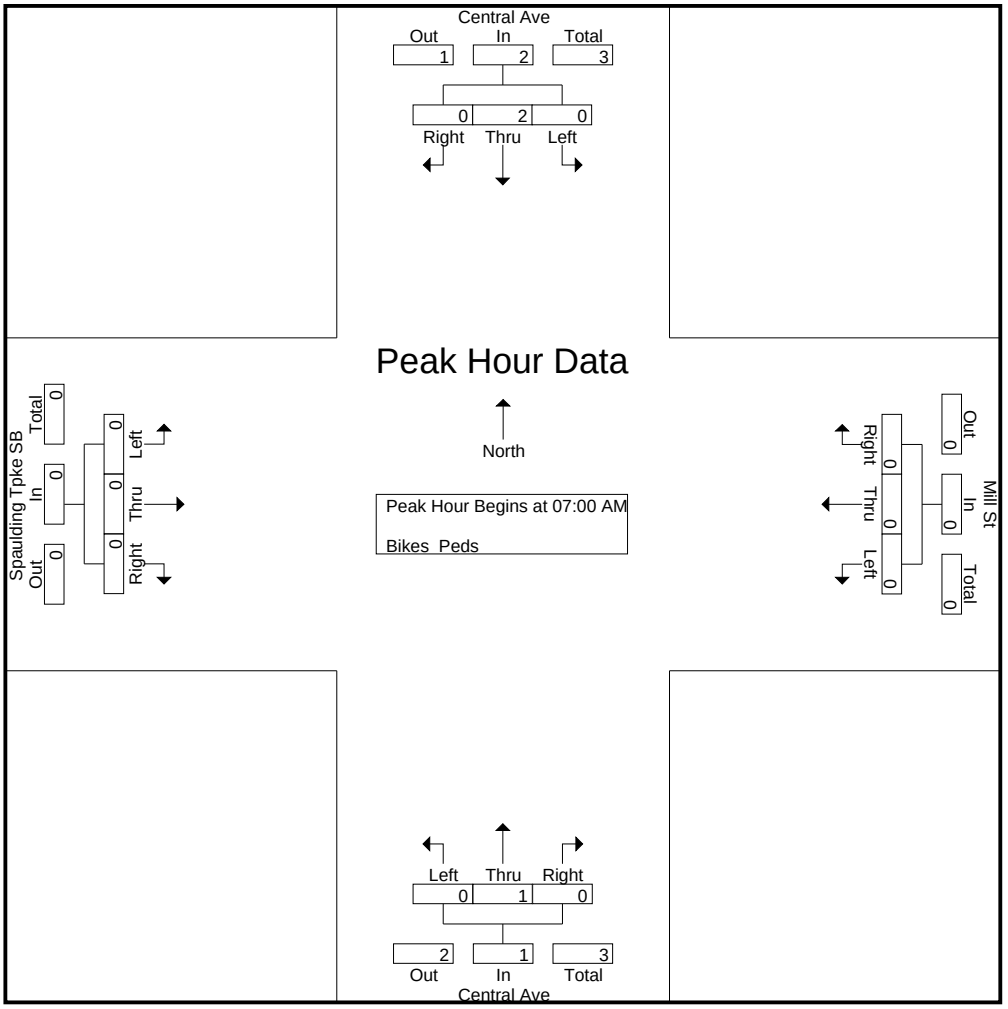
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. 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 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| 07:15 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 1 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .500 | .000 | .500 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .750 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 11




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

Peak Hour for Each Approach Begins at:

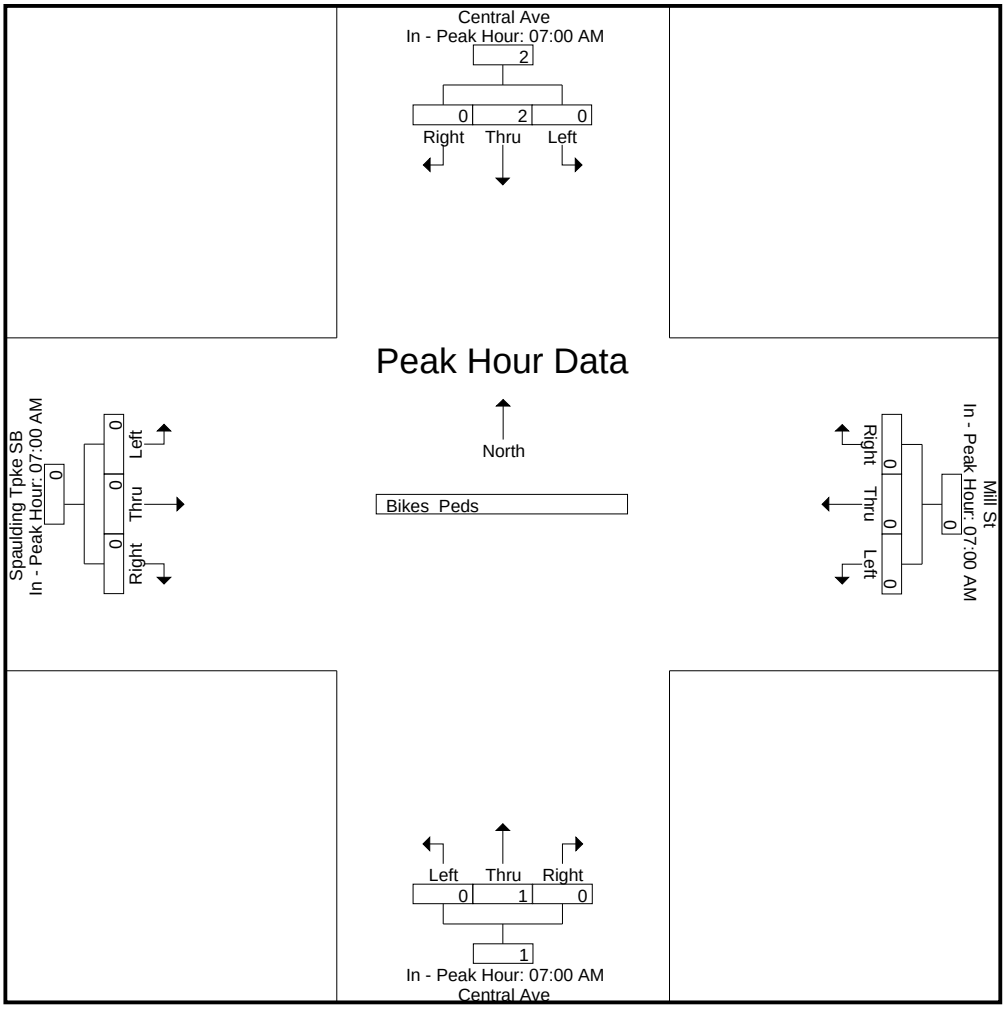
| | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | | 07:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .500 | .000 | .500 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 5 | 159 | 55 | 4 | 0 | 1 | 13 | 167 | 2 | 24 | 1 | 74 | 505 |
| 03:15 PM | 0 | 164 | 48 | 3 | 1 | 3 | 5 | 191 | 1 | 34 | 2 | 49 | 501 |
| 03:30 PM | 1 | 129 | 42 | 3 | 0 | 2 | 9 | 174 | 7 | 35 | 2 | 57 | 461 |
| 03:45 PM | 1 | 141 | 61 | 2 | 0 | 4 | 8 | 167 | 0 | 46 | 1 | 69 | 500 |
| Total | 7 | 593 | 206 | 12 | 1 | 10 | 35 | 699 | 10 | 139 | 6 | 249 | 1967 |
| 04:00 PM | 2 | 143 | 46 | 0 | 1 | 3 | 9 | 207 | 3 | 42 | 1 | 54 | 511 |
| 04:15 PM | 2 | 158 | 67 | 1 | 1 | 2 | 12 | 160 | 4 | 36 | 1 | 56 | 500 |
| 04:30 PM | 1 | 120 | 60 | 1 | 1 | 2 | 12 | 135 | 1 | 44 | 1 | 70 | 448 |
| 04:45 PM | 2 | 161 | 61 | 1 | 0 | 4 | 9 | 180 | 1 | 41 | 1 | 62 | 523 |
| Total | 7 | 582 | 234 | 3 | 3 | 11 | 42 | 682 | 9 | 163 | 4 | 242 | 1982 |
| 05:00 PM | 2 | 117 | 60 | 3 | 2 | 2 | 8 | 180 | 2 | 38 | 5 | 50 | 469 |
| 05:15 PM | 1 | 125 | 46 | 1 | 1 | 0 | 8 | 156 | 2 | 38 | 2 | 61 | 441 |
| 05:30 PM | 0 | 106 | 46 | 1 | 0 | 0 | 11 | 137 | 1 | 37 | 2 | 61 | 402 |
| 05:45 PM | 0 | 120 | 38 | 2 | 1 | 2 | 3 | 127 | 2 | 30 | 0 | 55 | 380 |
| Total | 3 | 468 | 190 | 7 | 4 | 4 | 30 | 600 | 7 | 143 | 9 | 227 | 1692 |
| Grand Total | 17 | 1643 | 630 | 22 | 8 | 25 | 107 | 1981 | 26 | 445 | 19 | 718 | 5641 |
| Apprch % | 0.7 | 71.7 | 27.5 | 40 | 14.5 | 45.5 | 5.1 | 93.7 | 1.2 | 37.6 | 1.6 | 60.7 | |
| Total % | 0.3 | 29.1 | 11.2 | 0.4 | 0.1 | 0.4 | 1.9 | 35.1 | 0.5 | 7.9 | 0.3 | 12.7 | |
| Cars | 17 | 1624 | 624 | 21 | 8 | 25 | 102 | 1967 | 26 | 444 | 19 | 710 | 5587 |
| % Cars | 100 | 98.8 | 99 | 95.5 | 100 | 100 | 95.3 | 99.3 | 100 | 99.8 | 100 | 98.9 | 99 |
| Trucks | 0 | 19 | 6 | 1 | 0 | 0 | 5 | 14 | 0 | 1 | 0 | 8 | 54 |
| % Trucks | 0 | 1.2 | 1 | 4.5 | 0 | 0 | 4.7 | 0.7 | 0 | 0.2 | 0 | 1.1 | 1 |

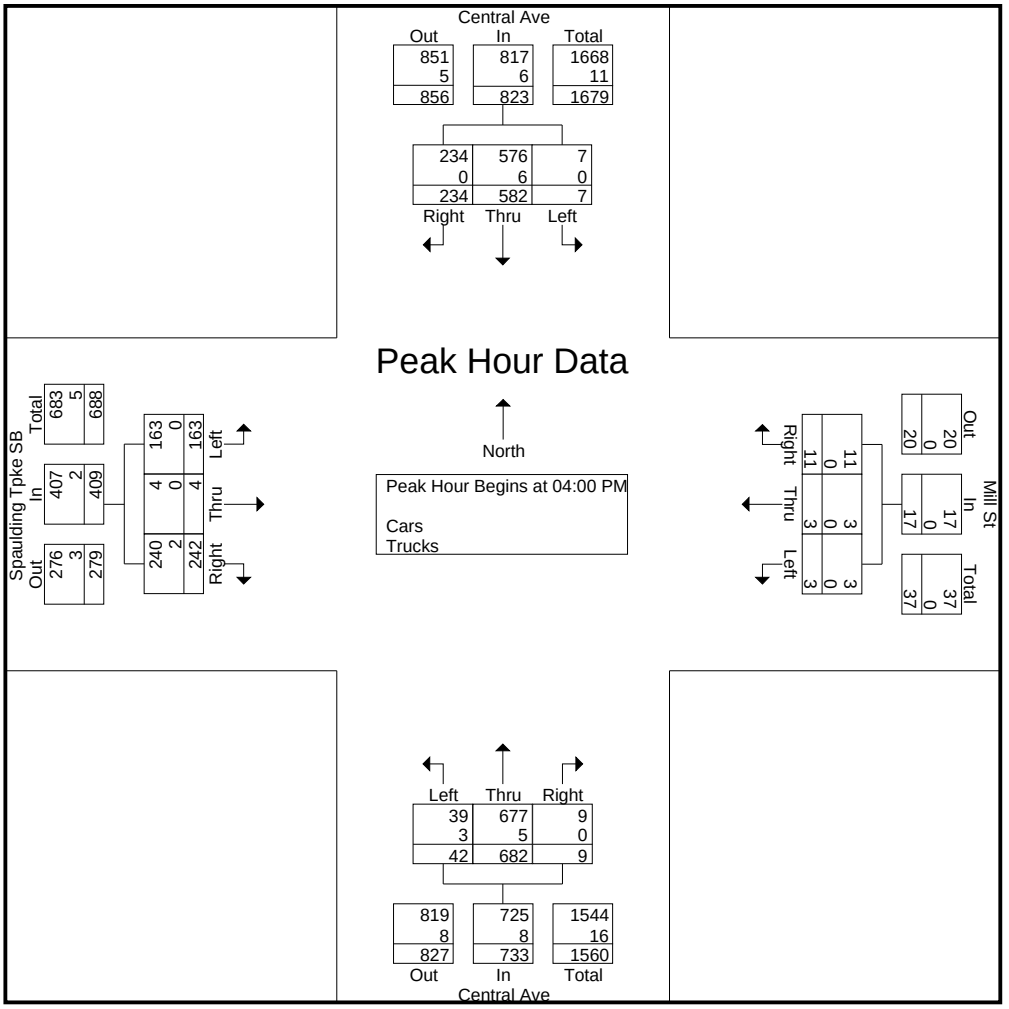
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | **2** | 143 | 46 | 191 | 0 | **1** | 3 | 4 | 9 | **207** | 3 | **219** | 42 | **1** | 54 | 97 | 511 |
| 04:15 PM | 2 | 158 | **67** | **227** | **1** | 1 | 2 | 4 | **12** | 160 | **4** | 176 | 36 | 1 | 56 | 93 | 500 |
| 04:30 PM | 1 | 120 | 60 | 181 | 1 | 1 | 2 | 4 | 12 | 135 | 1 | 148 | **44** | 1 | **70** | **115** | 448 |
| 04:45 PM | 2 | **161** | 61 | 224 | 1 | 0 | **4** | **5** | 9 | 180 | 1 | 190 | 41 | 1 | 62 | 104 | **523** |
| Total Volume | 7 | 582 | 234 | 823 | 3 | 3 | 11 | 17 | 42 | 682 | 9 | 733 | 163 | 4 | 242 | 409 | 1982 |
| % App. Total | 0.9 | 70.7 | 28.4 | | 17.6 | 17.6 | 64.7 | | 5.7 | 93 | 1.2 | | 39.9 | 1 | 59.2 | | |
| PHF | .875 | .904 | .873 | .906 | .750 | .750 | .688 | .850 | .875 | .824 | .563 | .837 | .926 | 1.00 | .864 | .889 | .947 |
| Cars | 7 | 576 | 234 | 817 | 3 | 3 | 11 | 17 | 39 | 677 | 9 | 725 | 163 | 4 | 240 | 407 | 1966 |
| % Cars | 100 | 99.0 | 100 | 99.3 | 100 | 100 | 100 | 100 | 92.9 | 99.3 | 100 | 98.9 | 100 | 100 | 99.2 | 99.5 | 99.2 |
| Trucks | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 8 | 0 | 0 | 2 | 2 | 16 |
| % Trucks | 0 | 1.0 | 0 | 0.7 | 0 | 0 | 0 | 0 | 7.1 | 0.7 | 0 | 1.1 | 0 | 0 | 0.8 | 0.5 | 0.8 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 2




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

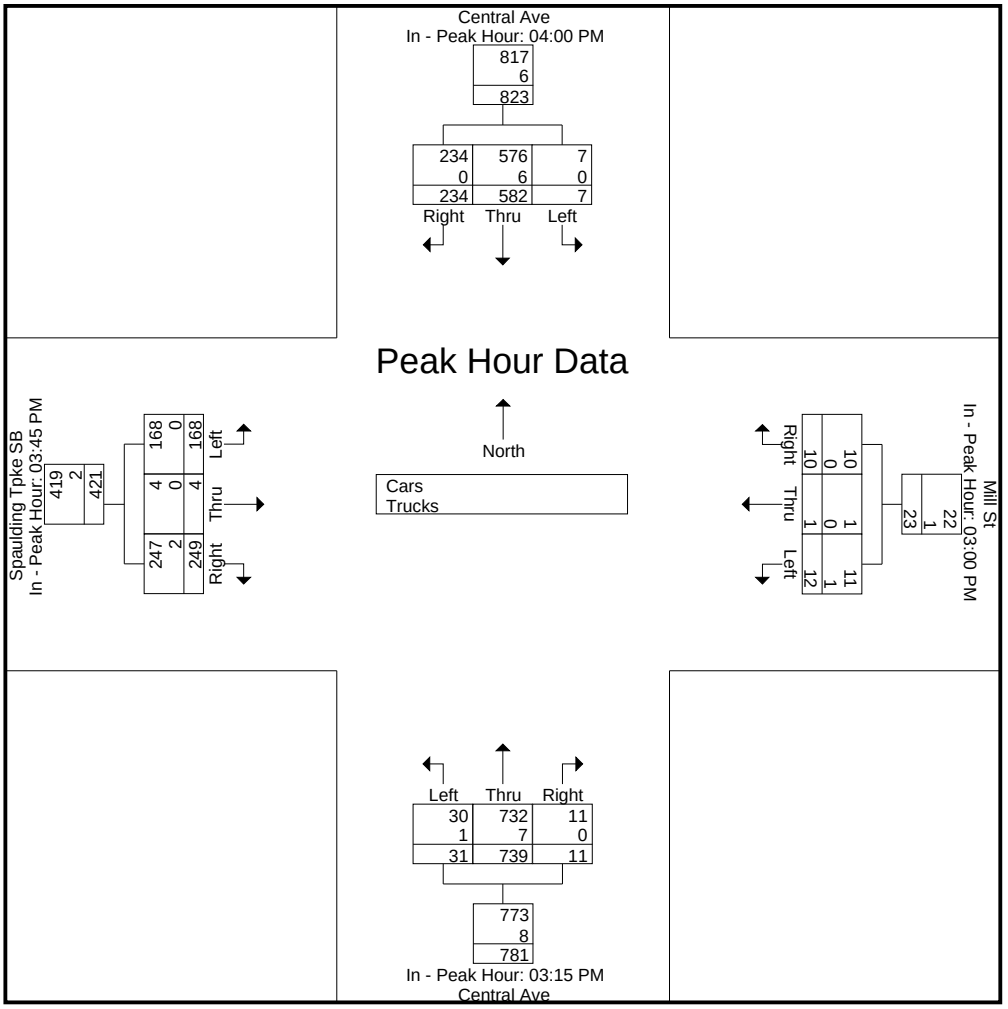
| | 04:00 PM | | | | 03:00 PM | | | | 03:15 PM | | | | 03:45 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **2** | 143 | 46 | 191 | **4** | 0 | 1 | 5 | 5 | 191 | 1 | 197 | **46** | **1** | 69 | **116** |
| +15 mins. | 2 | 158 | **67** | **227** | 3 | **1** | 3 | **7** | **9** | 174 | **7** | 190 | 42 | 1 | 54 | 97 |
| +30 mins. | 1 | 120 | 60 | 181 | 3 | 0 | 2 | 5 | 8 | 167 | 0 | 175 | 36 | 1 | 56 | 93 |
| +45 mins. | 2 | **161** | 61 | 224 | 2 | 0 | **4** | 6 | 9 | **207** | 3 | **219** | 44 | 1 | **70** | 115 |
| Total Volume | 7 | 582 | 234 | 823 | 12 | 1 | 10 | 23 | 31 | 739 | 11 | 781 | 168 | 4 | 249 | 421 |
| % App. Total | 0.9 | 70.7 | 28.4 | | 52.2 | 4.3 | 43.5 | | 4 | 94.6 | 1.4 | | 39.9 | 1 | 59.1 | |
| PHF | .875 | .904 | .873 | .906 | .750 | .250 | .625 | .821 | .861 | .893 | .393 | .892 | .913 | 1.000 | .889 | .907 |
| Cars | 7 | 576 | 234 | 817 | 11 | 1 | 10 | 22 | 30 | 732 | 11 | 773 | 168 | 4 | 247 | 419 |
| % Cars | 100 | 99 | 100 | 99.3 | 91.7 | 100 | 100 | 95.7 | 96.8 | 99.1 | 100 | 99 | 100 | 100 | 99.2 | 99.5 |
| Trucks | 0 | 6 | 0 | 6 | 1 | 0 | 0 | 1 | 1 | 7 | 0 | 8 | 0 | 0 | 2 | 2 |
| % Trucks | 0 | 1 | 0 | 0.7 | 8.3 | 0 | 0 | 4.3 | 3.2 | 0.9 | 0 | 1 | 0 | 0 | 0.8 | 0.5 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 5 | 157 | 54 | 4 | 0 | 1 | 13 | 165 | 2 | 23 | 1 | 73 | 498 |
| 03:15 PM | 0 | 162 | 46 | 2 | 1 | 3 | 4 | 187 | 1 | 34 | 2 | 49 | 491 |
| 03:30 PM | 1 | 126 | 40 | 3 | 0 | 2 | 9 | 173 | 7 | 35 | 2 | 56 | 454 |
| 03:45 PM | 1 | 139 | 61 | 2 | 0 | 4 | 8 | 166 | 0 | 46 | 1 | 68 | 496 |
| Total | 7 | 584 | 201 | 11 | 1 | 10 | 34 | 691 | 10 | 138 | 6 | 246 | 1939 |
| 04:00 PM | 2 | 140 | 46 | 0 | 1 | 3 | 9 | 206 | 3 | 42 | 1 | 53 | 506 |
| 04:15 PM | 2 | 157 | 67 | 1 | 1 | 2 | 11 | 158 | 4 | 36 | 1 | 56 | 496 |
| 04:30 PM | 1 | 119 | 60 | 1 | 1 | 2 | 10 | 134 | 1 | 44 | 1 | 70 | 444 |
| 04:45 PM | 2 | 160 | 61 | 1 | 0 | 4 | 9 | 179 | 1 | 41 | 1 | 61 | 520 |
| Total | 7 | 576 | 234 | 3 | 3 | 11 | 39 | 677 | 9 | 163 | 4 | 240 | 1966 |
| 05:00 PM | 2 | 116 | 60 | 3 | 2 | 2 | 8 | 180 | 2 | 38 | 5 | 49 | 467 |
| 05:15 PM | 1 | 125 | 45 | 1 | 1 | 0 | 8 | 155 | 2 | 38 | 2 | 60 | 438 |
| 05:30 PM | 0 | 104 | 46 | 1 | 0 | 0 | 11 | 137 | 1 | 37 | 2 | 60 | 399 |
| 05:45 PM | 0 | 119 | 38 | 2 | 1 | 2 | 2 | 127 | 2 | 30 | 0 | 55 | 378 |
| Total | 3 | 464 | 189 | 7 | 4 | 4 | 29 | 599 | 7 | 143 | 9 | 224 | 1682 |
| Grand Total | 17 | 1624 | 624 | 21 | 8 | 25 | 102 | 1967 | 26 | 444 | 19 | 710 | 5587 |
| Apprch % | 0.8 | 71.7 | 27.5 | 38.9 | 14.8 | 46.3 | 4.9 | 93.9 | 1.2 | 37.9 | 1.6 | 60.5 | |
| Total % | 0.3 | 29.1 | 11.2 | 0.4 | 0.1 | 0.4 | 1.8 | 35.2 | 0.5 | 7.9 | 0.3 | 12.7 | |

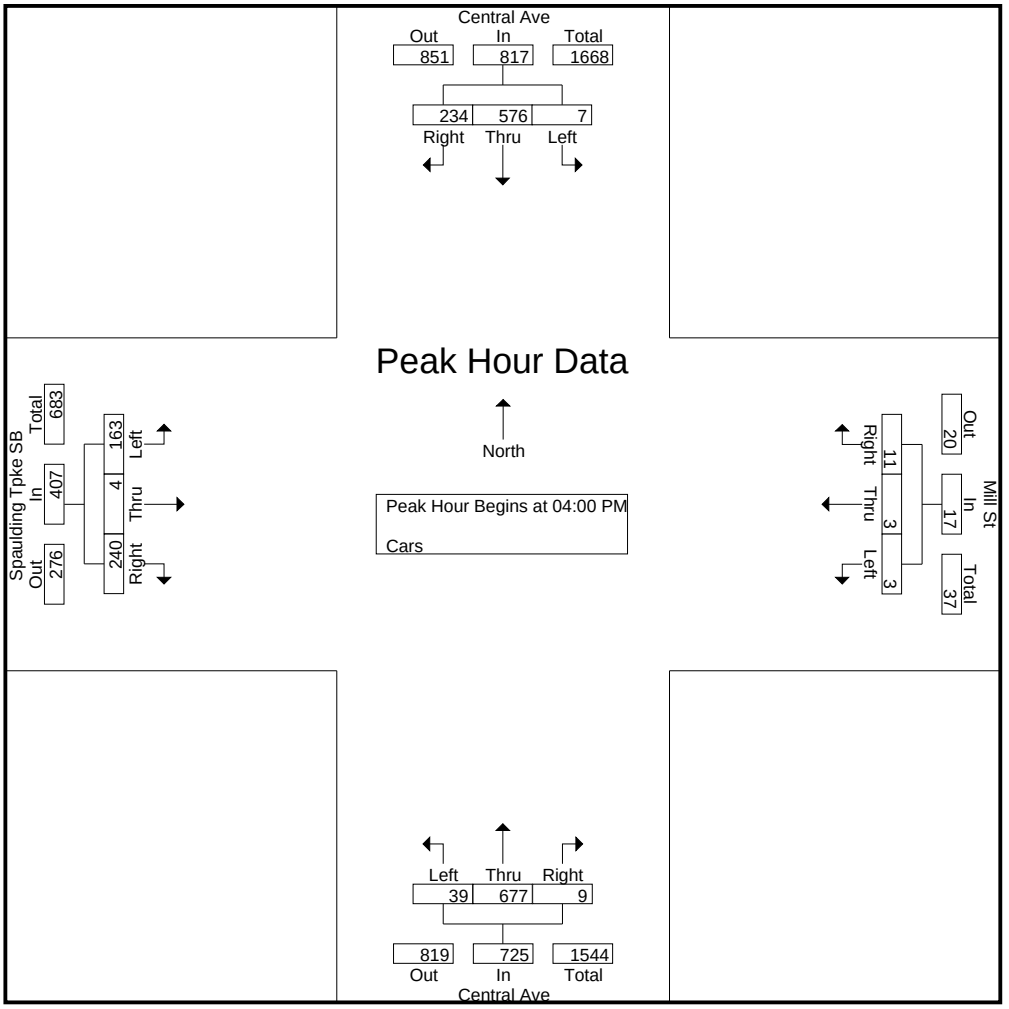
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:00 PM | | | | | | | | | | | | | | | | | |
| 04:00 PM | **2** | 140 | 46 | 188 | 0 | **1** | 3 | 4 | 9 | **206** | 3 | **218** | 42 | **1** | 53 | 96 | 506 |
| 04:15 PM | 2 | 157 | **67** | **226** | **1** | 1 | 2 | 4 | **11** | 158 | **4** | 173 | 36 | 1 | 56 | 93 | 496 |
| 04:30 PM | 1 | 119 | 60 | 180 | 1 | 1 | 2 | 4 | 10 | 134 | 1 | 145 | **44** | 1 | **70** | **115** | 444 |
| 04:45 PM | 2 | **160** | 61 | 223 | 1 | 0 | **4** | **5** | 9 | 179 | 1 | 189 | 41 | 1 | 61 | 103 | **520** |
| Total Volume | 7 | 576 | 234 | 817 | 3 | 3 | 11 | 17 | 39 | 677 | 9 | 725 | 163 | 4 | 240 | 407 | 1966 |
| % App. Total | 0.9 | 70.5 | 28.6 | | 17.6 | 17.6 | 64.7 | | 5.4 | 93.4 | 1.2 | | 40 | 1 | 59 | | |
| PHF | .875 | .900 | .873 | .904 | .750 | .750 | .688 | .850 | .886 | .822 | .563 | .831 | .926 | 1.00 | .857 | .885 | .945 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 5




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

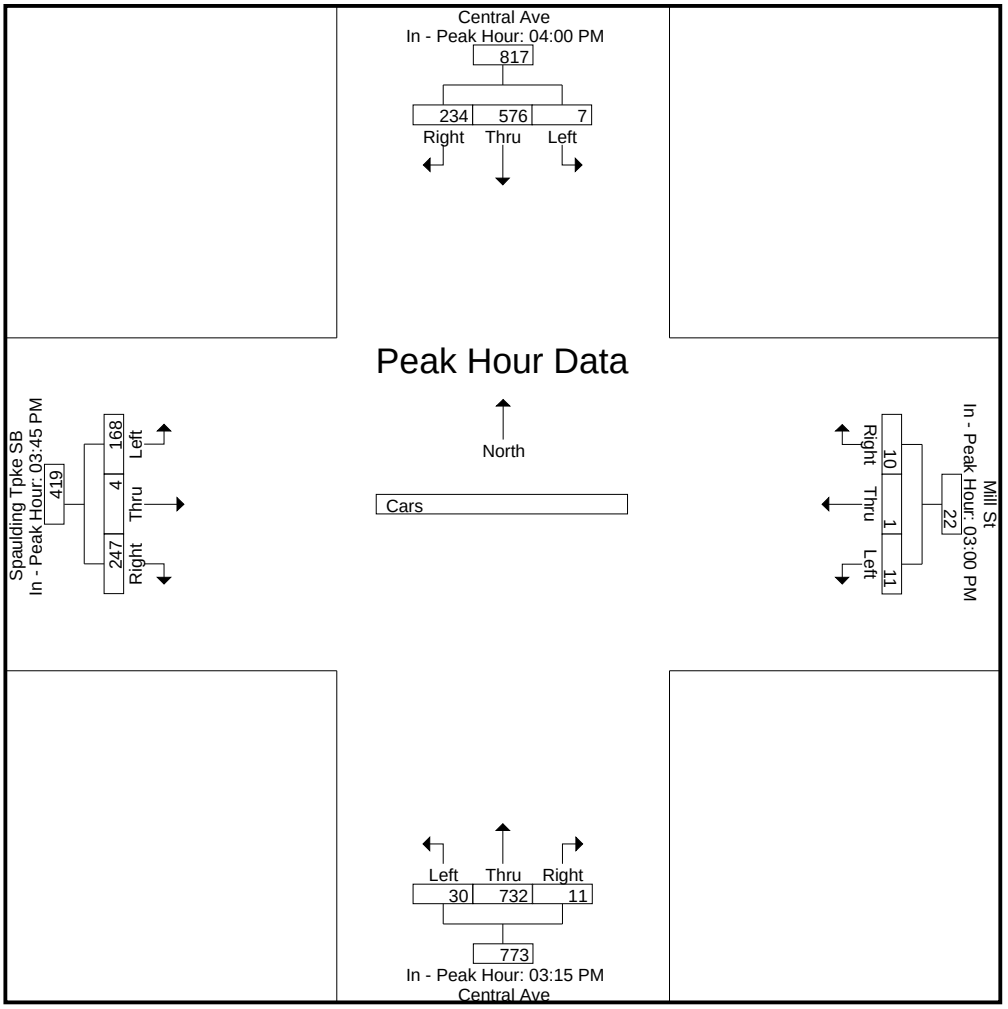
| | 04:00 PM | | | | 03:00 PM | | | | 03:15 PM | | | | 03:45 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | **2** | 140 | 46 | 188 | **4** | 0 | 1 | 5 | 4 | 187 | 1 | 192 | **46** | **1** | 68 | **115** |
| +15 mins. | 2 | 157 | **67** | **226** | 2 | **1** | 3 | **6** | **9** | 173 | **7** | 189 | 42 | 1 | 53 | 96 |
| +30 mins. | 1 | 119 | 60 | 180 | 3 | 0 | 2 | 5 | 8 | 166 | 0 | 174 | 36 | 1 | 56 | 93 |
| +45 mins. | 2 | **160** | 61 | 223 | 2 | 0 | **4** | 6 | 9 | **206** | 3 | **218** | 44 | 1 | **70** | 115 |
| Total Volume | 7 | 576 | 234 | 817 | 11 | 1 | 10 | 22 | 30 | 732 | 11 | 773 | 168 | 4 | 247 | 419 |
| % App. Total | 0.9 | 70.5 | 28.6 | | 50 | 4.5 | 45.5 | | 3.9 | 94.7 | 1.4 | | 40.1 | 1 | 58.9 | |
| PHF | .875 | .900 | .873 | .904 | .688 | .250 | .625 | .917 | .833 | .888 | .393 | .886 | .913 | 1.000 | .882 | .911 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 7

Groups Printed- Trucks

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 03:00 PM | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 7 |
| 03:15 PM | 0 | 2 | 2 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 10 |
| 03:30 PM | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 7 |
| 03:45 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 |
| Total | 0 | 9 | 5 | 1 | 0 | 0 | 1 | 8 | 0 | 1 | 0 | 3 | 28 |
| | | | | | | | | | | | | | |
| 04:00 PM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 5 |
| 04:15 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 4 |
| 04:30 PM | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| 04:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Total | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 2 | 16 |
| | | | | | | | | | | | | | |
| 05:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 05:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| 05:30 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 05:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 4 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 10 |
| | | | | | | | | | | | | | |
| Grand Total | 0 | 19 | 6 | 1 | 0 | 0 | 5 | 14 | 0 | 1 | 0 | 8 | 54 |
| Apprch % | 0 | 76 | 24 | 100 | 0 | 0 | 26.3 | 73.7 | 0 | 11.1 | 0 | 88.9 | |
| Total % | 0 | 35.2 | 11.1 | 1.9 | 0 | 0 | 9.3 | 25.9 | 0 | 1.9 | 0 | 14.8 | |

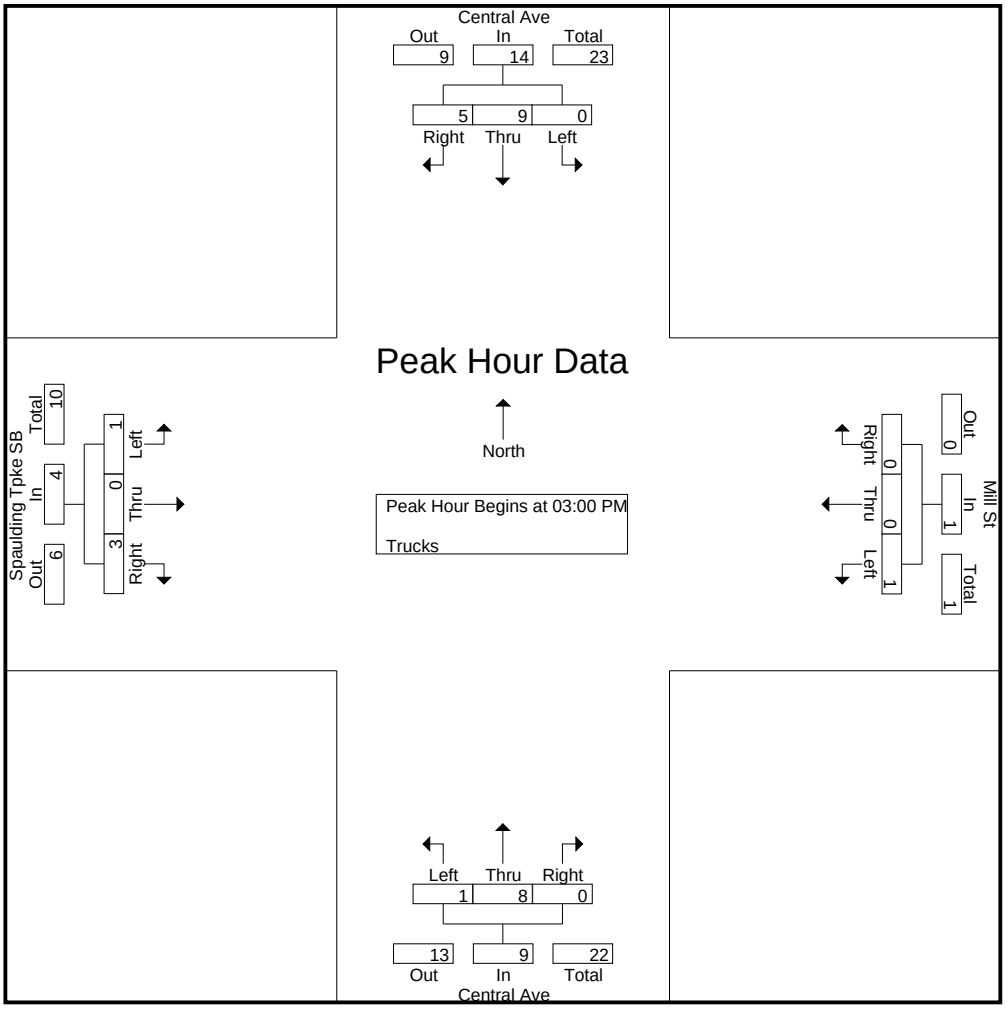
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:00 PM | | | | | | | | | | | | | | | | | |
| 03:00 PM | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | **1** | 0 | **1** | **2** | 7 |
| 03:15 PM | 0 | 2 | **2** | 4 | **1** | 0 | 0 | **1** | **1** | **4** | 0 | **5** | 0 | 0 | 0 | 0 | **10** |
| 03:30 PM | 0 | **3** | 2 | **5** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 7 |
| 03:45 PM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 4 |
| Total Volume | 0 | 9 | 5 | 14 | 1 | 0 | 0 | 1 | 1 | 8 | 0 | 9 | 1 | 0 | 3 | 4 | 28 |
| % App. Total | 0 | 64.3 | 35.7 | | 100 | 0 | 0 | | 11.1 | 88.9 | 0 | | 25 | 0 | 75 | | |
| PHF | .000 | .750 | .625 | .700 | .250 | .000 | .000 | .250 | .250 | .500 | .000 | .450 | .250 | .000 | .750 | .500 | .700 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 8



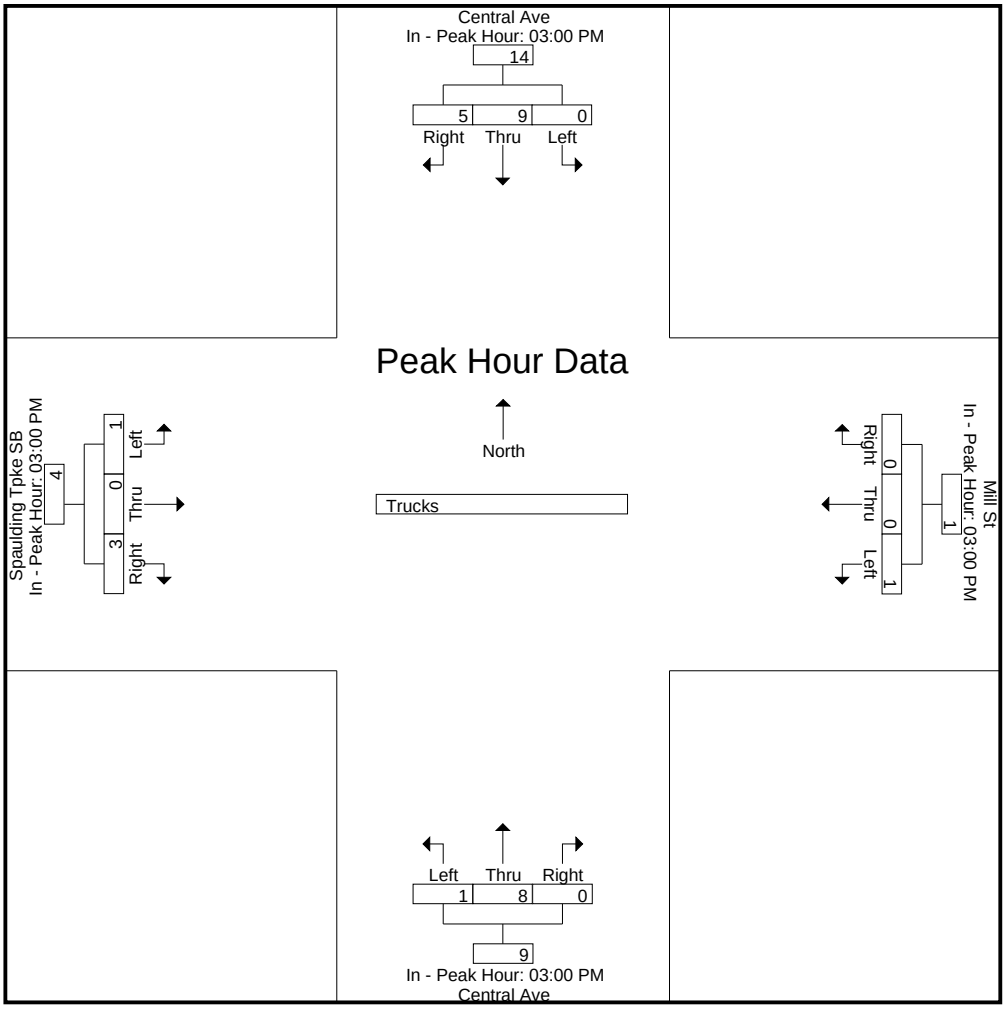

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 03:00 PM | | | | 03:00 PM | | | | 03:00 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | **1** | 0 | **1** | **2** |
| +15 mins. | 0 | 2 | **2** | 4 | **1** | 0 | 0 | **1** | **1** | **4** | 0 | **5** | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | **3** | 2 | **5** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| +45 mins. | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Total Volume | 0 | 9 | 5 | 14 | 1 | 0 | 0 | 1 | 1 | 8 | 0 | 9 | 1 | 0 | 3 | 4 |
| % App. Total | 0 | 64.3 | 35.7 | | 100 | 0 | 0 | | 11.1 | 88.9 | 0 | | 25 | 0 | 75 | |
| PHF | .000 | .750 | .625 | .700 | .250 | .000 | .000 | .250 | .250 | .500 | .000 | .450 | .250 | .000 | .750 | .500 |

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025


Groups Printed- Bikes Peds

| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 5 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 7 |
| 03:30 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 10 | 2 | 12 |
| 03:45 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 4 |
| Total | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 26 | 2 | 28 |
| | | | | | | | | | | | | | | | | | | | |
| 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 | 1 | 0 | 0 | 0 | 1 | 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 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | | | | | | | | | | | | | | | | | | | |
| 05:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 4 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 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 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 6 | 2 | 8 |
| | | | | | | | | | | | | | | | | | | | |
| Grand Total | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 30 | 34 | 4 | 38 |
| Apprch % | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 100 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 75 | 0 | | 0 | 0 | 0 | | 0 | 0 | 25 | | 0 | 0 | 0 | | 89.5 | 10.5 | |

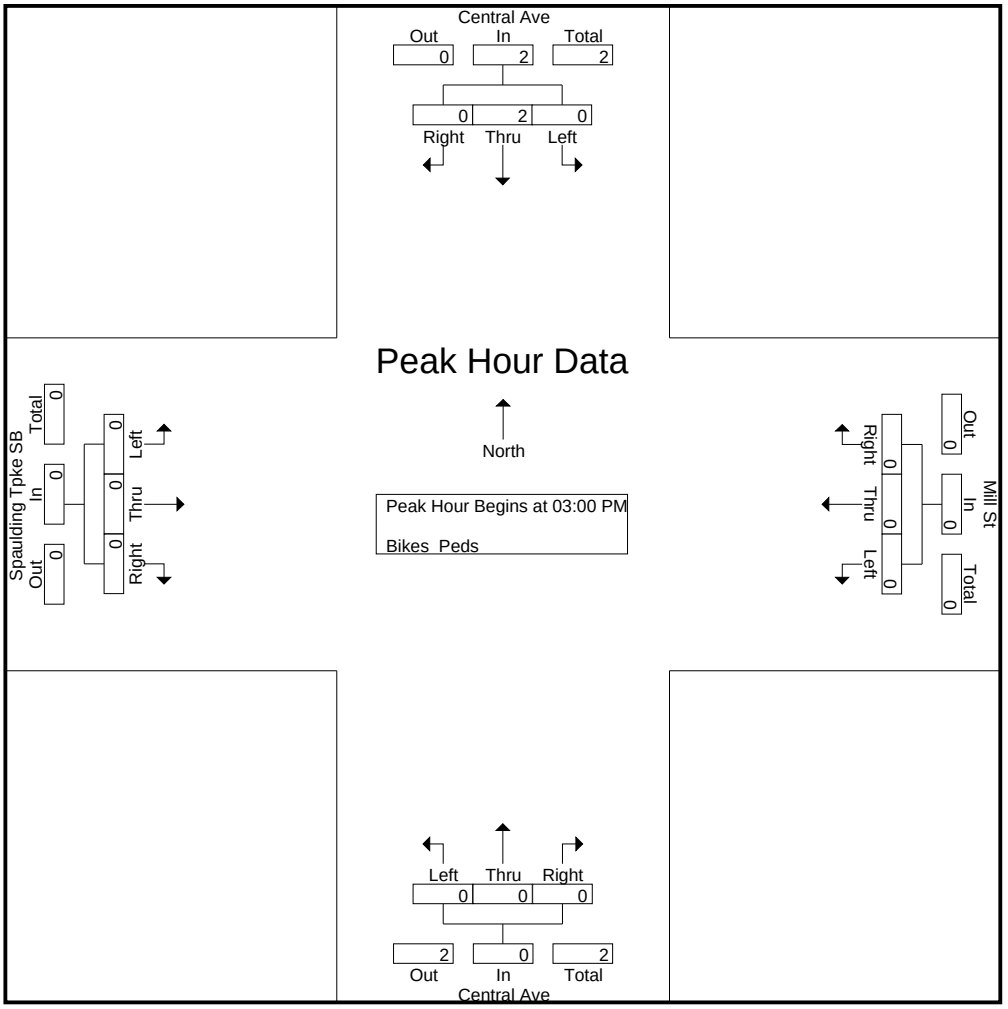
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:00 PM | | | | | | | | | | | | | | | | | |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **2** |
| 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 11




Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

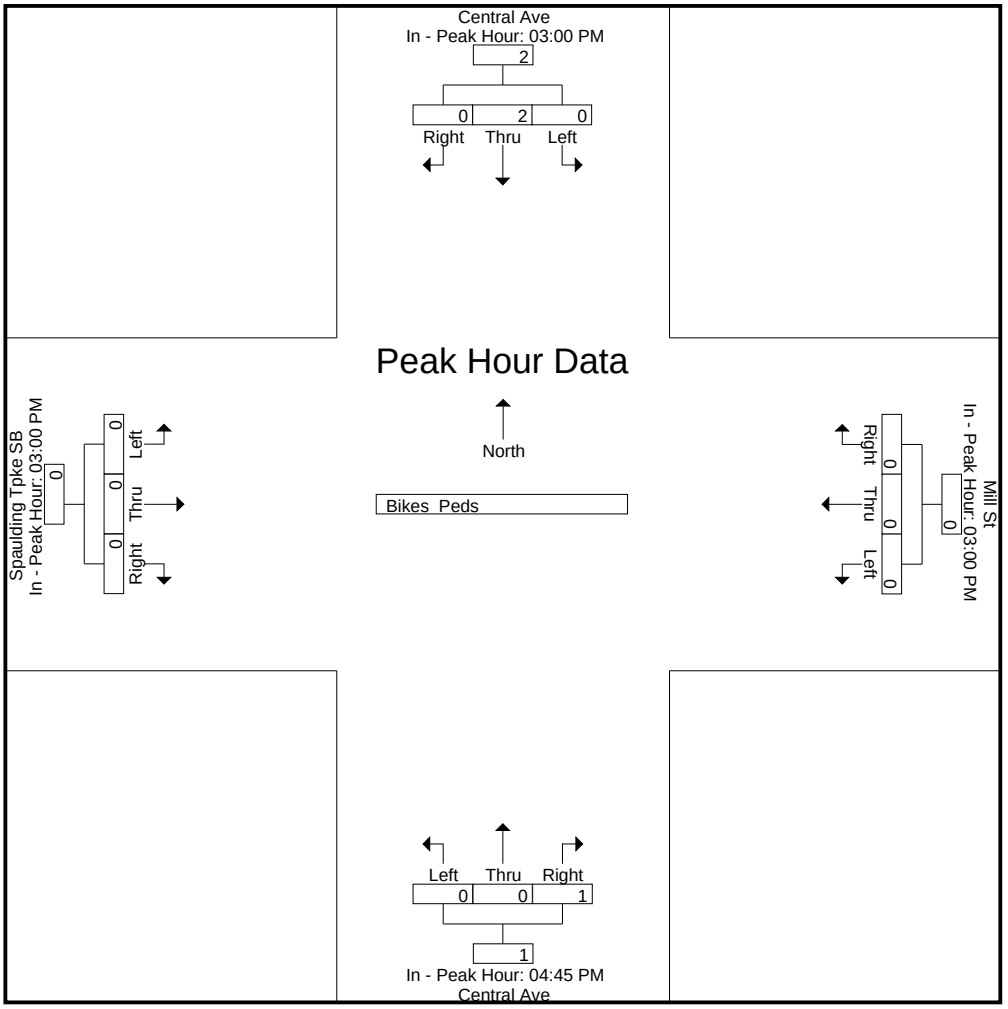
| | 03:00 PM | | | | 03:00 PM | | | | 04:45 PM | | | | 03:00 PM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **1** | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 0 | 0 | 100 | | 0 | 0 | 0 | |
| PHF | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .000 | .000 | .250 | .250 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 10566003
Site Code : 10566003
Start Date : 12/18/2025
Page No : 12



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 1

Groups Printed- Cars - Trucks

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 1 | 137 | 53 | 2 | 0 | 2 | 11 | 138 | 1 | 42 | 2 | 31 | 420 |
| 11:15 AM | 0 | 90 | 50 | 3 | 2 | 3 | 13 | 166 | 3 | 32 | 0 | 33 | 395 |
| 11:30 AM | 2 | 103 | 50 | 1 | 0 | 6 | 8 | 134 | 2 | 39 | 3 | 43 | 391 |
| 11:45 AM | 0 | 100 | 63 | 2 | 0 | 3 | 11 | 151 | 0 | 37 | 1 | 45 | 413 |
| Total | 3 | 430 | 216 | 8 | 2 | 14 | 43 | 589 | 6 | 150 | 6 | 152 | 1619 |
| 12:00 PM | 3 | 108 | 46 | 2 | 0 | 3 | 6 | 133 | 2 | 35 | 0 | 56 | 394 |
| 12:15 PM | 1 | 107 | 59 | 0 | 0 | 2 | 4 | 125 | 0 | 35 | 1 | 45 | 379 |
| 12:30 PM | 1 | 115 | 60 | 4 | 0 | 0 | 8 | 118 | 0 | 31 | 4 | 46 | 387 |
| 12:45 PM | 0 | 114 | 48 | 1 | 0 | 2 | 6 | 138 | 1 | 32 | 1 | 53 | 396 |
| Total | 5 | 444 | 213 | 7 | 0 | 7 | 24 | 514 | 3 | 133 | 6 | 200 | 1556 |
| 01:00 PM | 1 | 88 | 39 | 3 | 1 | 0 | 7 | 154 | 2 | 41 | 0 | 37 | 373 |
| 01:15 PM | 0 | 114 | 56 | 3 | 0 | 0 | 7 | 133 | 1 | 34 | 1 | 48 | 397 |
| 01:30 PM | 0 | 107 | 55 | 4 | 2 | 5 | 5 | 112 | 3 | 29 | 1 | 34 | 357 |
| 01:45 PM | 2 | 110 | 48 | 2 | 4 | 0 | 4 | 101 | 0 | 24 | 1 | 40 | 336 |
| Total | 3 | 419 | 198 | 12 | 7 | 5 | 23 | 500 | 6 | 128 | 3 | 159 | 1463 |
| Grand Total | 11 | 1293 | 627 | 27 | 9 | 26 | 90 | 1603 | 15 | 411 | 15 | 511 | 4638 |
| Apprch % | 0.6 | 67 | 32.5 | 43.5 | 14.5 | 41.9 | 5.3 | 93.9 | 0.9 | 43.9 | 1.6 | 54.5 | |
| Total % | 0.2 | 27.9 | 13.5 | 0.6 | 0.2 | 0.6 | 1.9 | 34.6 | 0.3 | 8.9 | 0.3 | 11 | |
| Cars | 11 | 1287 | 625 | 27 | 9 | 26 | 88 | 1600 | 15 | 409 | 15 | 509 | 4621 |
| % Cars | 100 | 99.5 | 99.7 | 100 | 100 | 100 | 97.8 | 99.8 | 100 | 99.5 | 100 | 99.6 | 99.6 |
| Trucks | 0 | 6 | 2 | 0 | 0 | 0 | 2 | 3 | 0 | 2 | 0 | 2 | 17 |
| % Trucks | 0 | 0.5 | 0.3 | 0 | 0 | 0 | 2.2 | 0.2 | 0 | 0.5 | 0 | 0.4 | 0.4 |

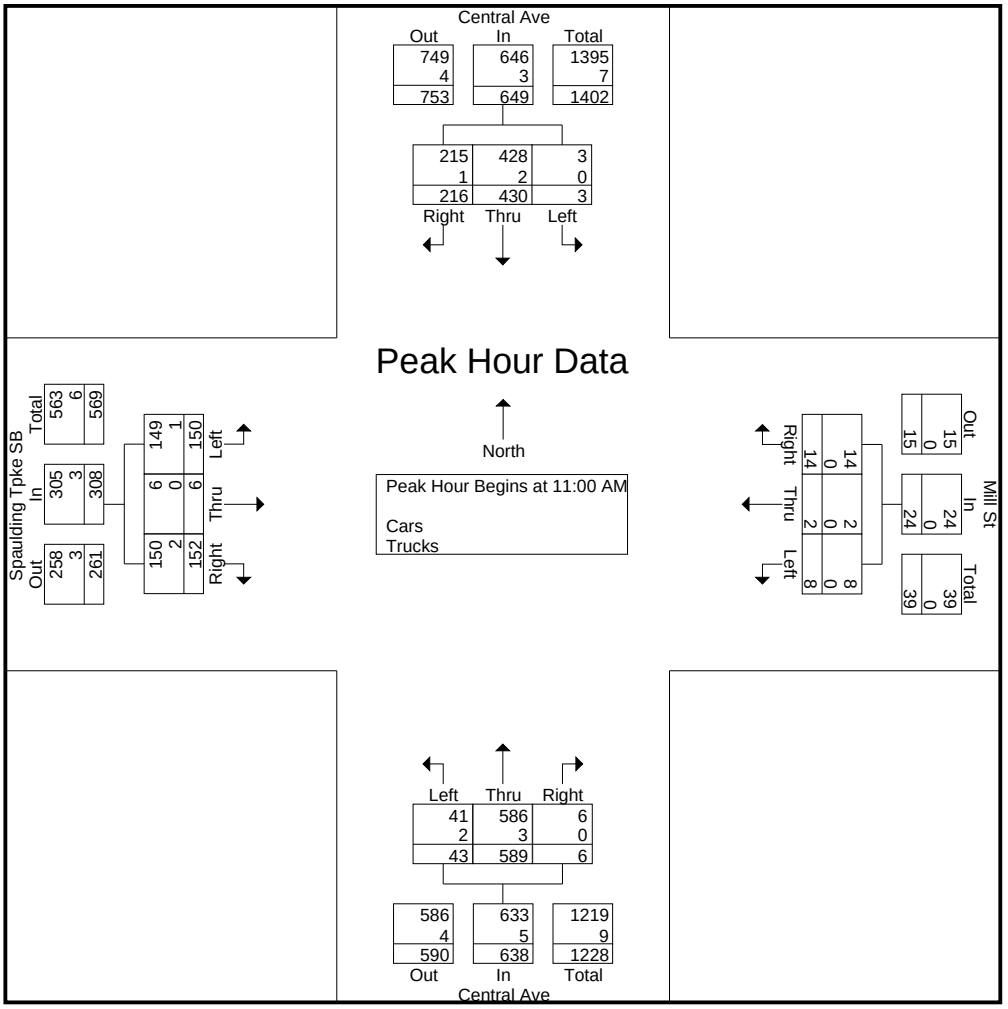
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:00 AM | | | | | | | | | | | | | | | | | |
| 11:00 AM | 1 | **137** | 53 | **191** | 2 | 0 | 2 | 4 | 11 | 138 | 1 | 150 | **42** | 2 | 31 | 75 | **420** |
| 11:15 AM | 0 | 90 | 50 | 140 | **3** | **2** | 3 | **8** | **13** | **166** | **3** | **182** | 32 | 0 | 33 | 65 | 395 |
| 11:30 AM | **2** | 103 | 50 | 155 | 1 | 0 | **6** | 7 | 8 | 134 | 2 | 144 | 39 | **3** | 43 | **85** | 391 |
| 11:45 AM | 0 | 100 | **63** | 163 | 2 | 0 | 3 | 5 | 11 | 151 | 0 | 162 | 37 | 1 | **45** | 83 | 413 |
| Total Volume | 3 | 430 | 216 | 649 | 8 | 2 | 14 | 24 | 43 | 589 | 6 | 638 | 150 | 6 | 152 | 308 | 1619 |
| % App. Total | 0.5 | 66.3 | 33.3 | | 33.3 | 8.3 | 58.3 | | 6.7 | 92.3 | 0.9 | | 48.7 | 1.9 | 49.4 | | |
| PHF | .375 | .785 | .857 | .849 | .667 | .250 | .583 | .750 | .827 | .887 | .500 | .876 | .893 | .500 | .844 | .906 | .964 |
| Cars | 3 | 428 | 215 | 646 | 8 | 2 | 14 | 24 | 41 | 586 | 6 | 633 | 149 | 6 | 150 | 305 | 1608 |
| % Cars | 100 | 99.5 | 99.5 | 99.5 | 100 | 100 | 100 | 100 | 95.3 | 99.5 | 100 | 99.2 | 99.3 | 100 | 98.7 | 99.0 | 99.3 |
| Trucks | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 5 | 1 | 0 | 2 | 3 | 11 |
| % Trucks | 0 | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 4.7 | 0.5 | 0 | 0.8 | 0.7 | 0 | 1.3 | 1.0 | 0.7 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 2




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

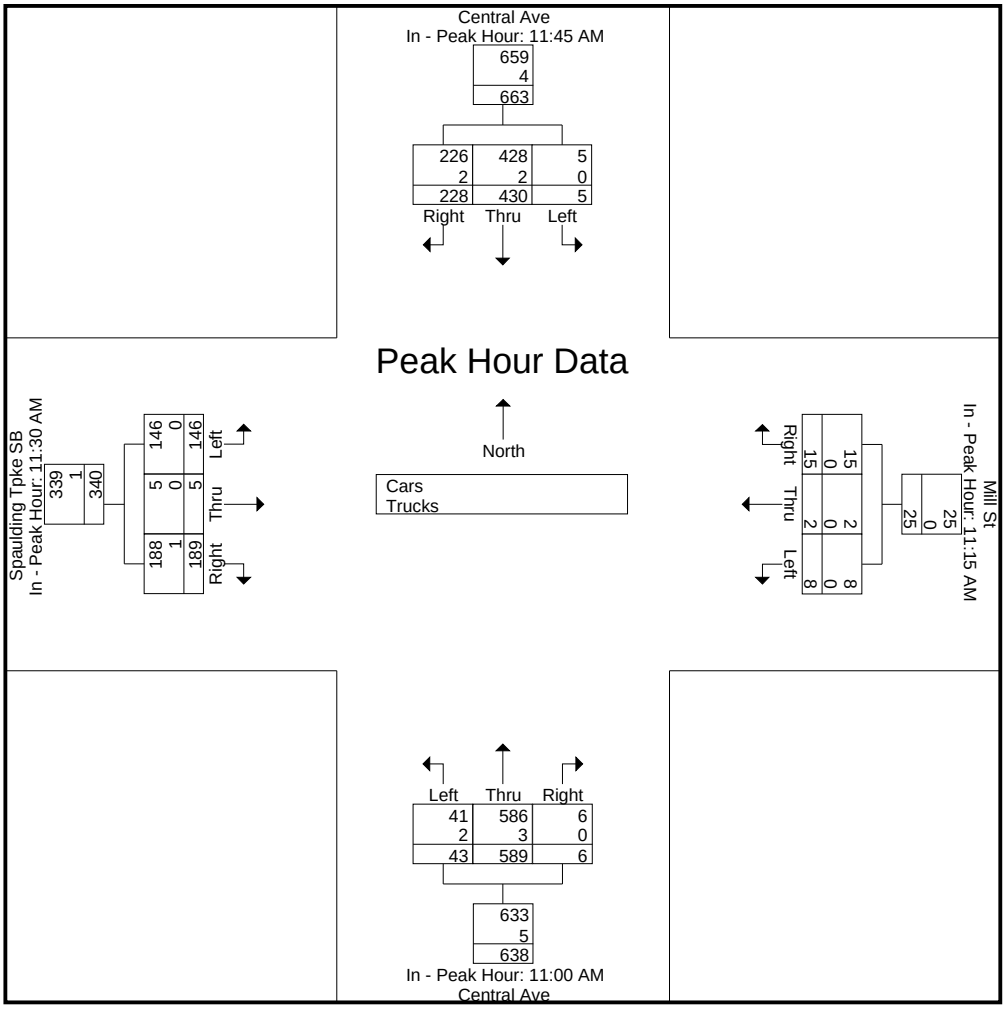
| | 11:45 AM | | | | 11:15 AM | | | | 11:00 AM | | | | 11:30 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 100 | **63** | 163 | **3** | **2** | 3 | **8** | 11 | 138 | 1 | 150 | **39** | **3** | 43 | 85 |
| +15 mins. | **3** | 108 | 46 | 157 | 1 | 0 | **6** | 7 | **13** | **166** | **3** | **182** | 37 | 1 | 45 | 83 |
| +30 mins. | 1 | 107 | 59 | 167 | 2 | 0 | 3 | 5 | 8 | 134 | 2 | 144 | 35 | 0 | **56** | **91** |
| +45 mins. | 1 | **115** | 60 | **176** | 2 | 0 | 3 | 5 | 11 | 151 | 0 | 162 | 35 | 1 | 45 | 81 |
| Total Volume | 5 | 430 | 228 | 663 | 8 | 2 | 15 | 25 | 43 | 589 | 6 | 638 | 146 | 5 | 189 | 340 |
| % App. Total | 0.8 | 64.9 | 34.4 | | 32 | 8 | 60 | | 6.7 | 92.3 | 0.9 | | 42.9 | 1.5 | 55.6 | |
| PHF | .417 | .935 | .905 | .942 | .667 | .250 | .625 | .781 | .827 | .887 | .500 | .876 | .936 | .417 | .844 | .934 |
| Cars | 5 | 428 | 226 | 659 | 8 | 2 | 15 | 25 | 41 | 586 | 6 | 633 | 146 | 5 | 188 | 339 |
| % Cars | 100 | 99.5 | 99.1 | 99.4 | 100 | 100 | 100 | 100 | 95.3 | 99.5 | 100 | 99.2 | 100 | 100 | 99.5 | 99.7 |
| Trucks | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 5 | 0 | 0 | 1 | 1 |
| % Trucks | 0 | 0.5 | 0.9 | 0.6 | 0 | 0 | 0 | 0 | 4.7 | 0.5 | 0 | 0.8 | 0 | 0 | 0.5 | 0.3 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 3



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 4

Groups Printed- Cars

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 1 | 137 | 53 | 2 | 0 | 2 | 11 | 138 | 1 | 42 | 2 | 30 | 419 |
| 11:15 AM | 0 | 89 | 50 | 3 | 2 | 3 | 12 | 165 | 3 | 31 | 0 | 33 | 391 |
| 11:30 AM | 2 | 102 | 50 | 1 | 0 | 6 | 8 | 132 | 2 | 39 | 3 | 43 | 388 |
| 11:45 AM | 0 | 100 | 62 | 2 | 0 | 3 | 10 | 151 | 0 | 37 | 1 | 44 | 410 |
| Total | 3 | 428 | 215 | 8 | 2 | 14 | 41 | 586 | 6 | 149 | 6 | 150 | 1608 |
| | | | | | | | | | | | | | |
| 12:00 PM | 3 | 106 | 46 | 2 | 0 | 3 | 6 | 133 | 2 | 35 | 0 | 56 | 392 |
| 12:15 PM | 1 | 107 | 58 | 0 | 0 | 2 | 4 | 125 | 0 | 35 | 1 | 45 | 378 |
| 12:30 PM | 1 | 115 | 60 | 4 | 0 | 0 | 8 | 118 | 0 | 30 | 4 | 46 | 386 |
| 12:45 PM | 0 | 114 | 48 | 1 | 0 | 2 | 6 | 138 | 1 | 32 | 1 | 53 | 396 |
| Total | 5 | 442 | 212 | 7 | 0 | 7 | 24 | 514 | 3 | 132 | 6 | 200 | 1552 |
| | | | | | | | | | | | | | |
| 01:00 PM | 1 | 88 | 39 | 3 | 1 | 0 | 7 | 154 | 2 | 41 | 0 | 37 | 373 |
| 01:15 PM | 0 | 114 | 56 | 3 | 0 | 0 | 7 | 133 | 1 | 34 | 1 | 48 | 397 |
| 01:30 PM | 0 | 105 | 55 | 4 | 2 | 5 | 5 | 112 | 3 | 29 | 1 | 34 | 355 |
| 01:45 PM | 2 | 110 | 48 | 2 | 4 | 0 | 4 | 101 | 0 | 24 | 1 | 40 | 336 |
| Total | 3 | 417 | 198 | 12 | 7 | 5 | 23 | 500 | 6 | 128 | 3 | 159 | 1461 |
| | | | | | | | | | | | | | |
| Grand Total | 11 | 1287 | 625 | 27 | 9 | 26 | 88 | 1600 | 15 | 409 | 15 | 509 | 4621 |
| Apprch % | 0.6 | 66.9 | 32.5 | 43.5 | 14.5 | 41.9 | 5.2 | 94 | 0.9 | 43.8 | 1.6 | 54.6 | |
| Total % | 0.2 | 27.9 | 13.5 | 0.6 | 0.2 | 0.6 | 1.9 | 34.6 | 0.3 | 8.9 | 0.3 | 11 | |

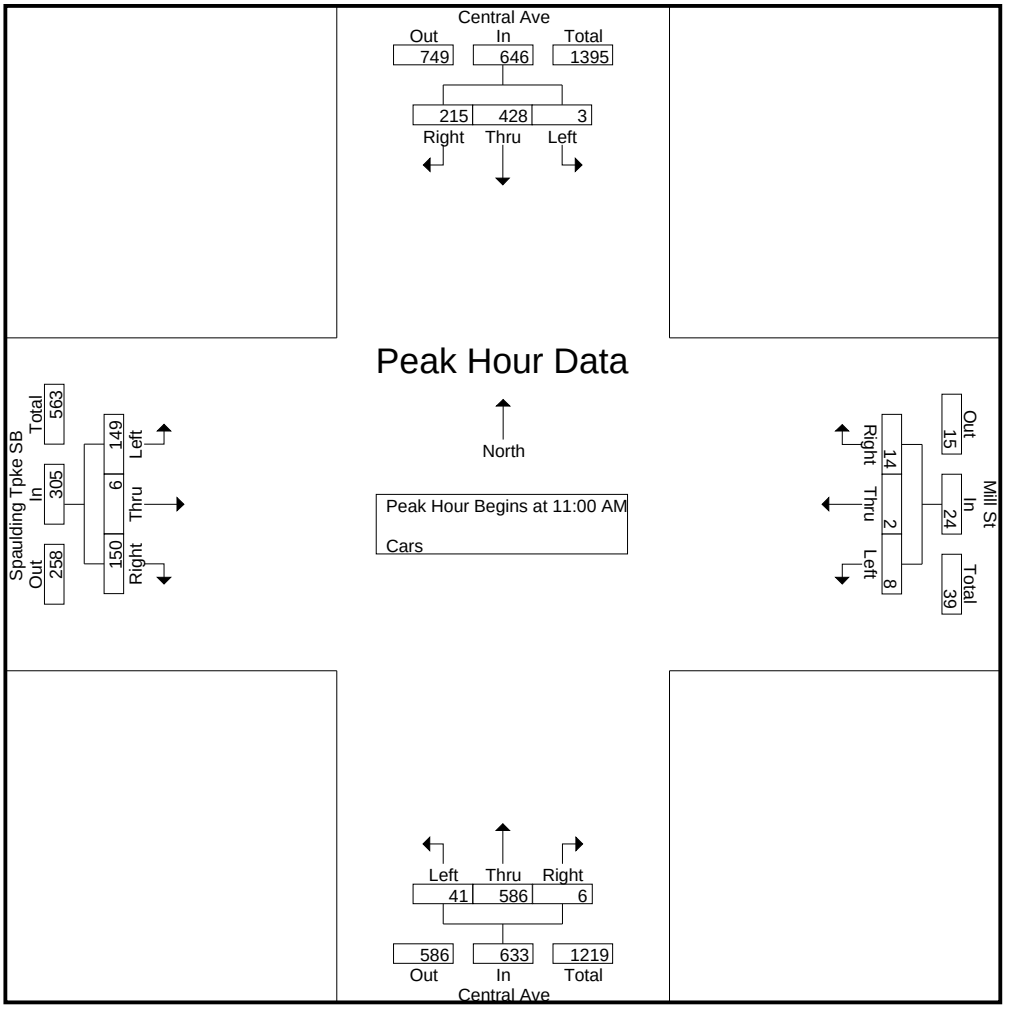
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:00 AM | | | | | | | | | | | | | | | | | |
| 11:00 AM | 1 | **137** | 53 | **191** | 2 | 0 | 2 | 4 | 11 | 138 | 1 | 150 | **42** | 2 | 30 | 74 | **419** |
| 11:15 AM | 0 | 89 | 50 | 139 | **3** | **2** | 3 | **8** | **12** | **165** | **3** | **180** | 31 | 0 | 33 | 64 | 391 |
| 11:30 AM | **2** | 102 | 50 | 154 | 1 | 0 | **6** | 7 | 8 | 132 | 2 | 142 | 39 | **3** | 43 | **85** | 388 |
| 11:45 AM | 0 | 100 | **62** | 162 | 2 | 0 | 3 | 5 | 10 | 151 | 0 | 161 | 37 | 1 | **44** | 82 | 410 |
| Total Volume | 3 | 428 | 215 | 646 | 8 | 2 | 14 | 24 | 41 | 586 | 6 | 633 | 149 | 6 | 150 | 305 | 1608 |
| % App. Total | 0.5 | 66.3 | 33.3 | | 33.3 | 8.3 | 58.3 | | 6.5 | 92.6 | 0.9 | | 48.9 | 2 | 49.2 | | |
| PHF | .375 | .781 | .867 | .846 | .667 | .250 | .583 | .750 | .854 | .888 | .500 | .879 | .887 | .500 | .852 | .897 | .959 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 5




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

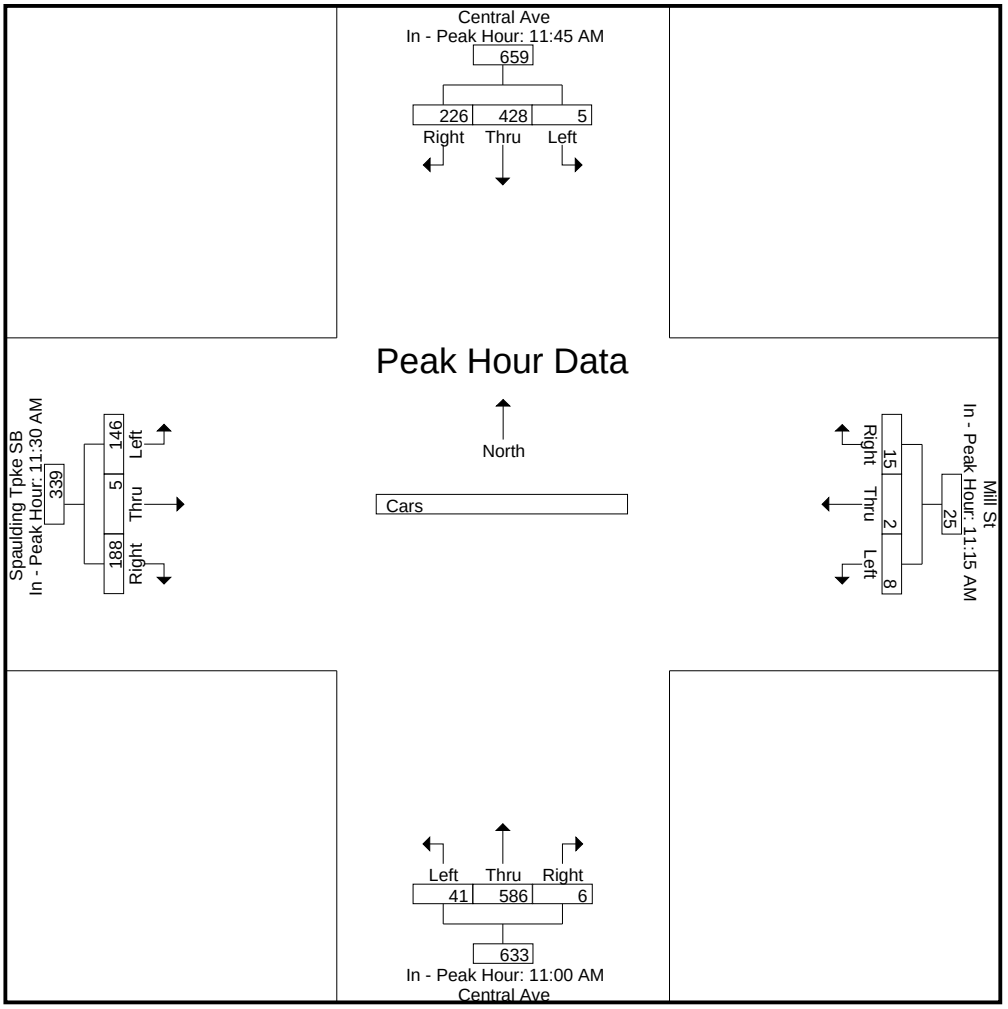
| | 11:45 AM | | | | 11:15 AM | | | | 11:00 AM | | | | 11:30 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 100 | **62** | 162 | **3** | **2** | 3 | **8** | 11 | 138 | 1 | 150 | **39** | **3** | 43 | 85 |
| +15 mins. | **3** | 106 | 46 | 155 | 1 | 0 | **6** | 7 | **12** | **165** | **3** | **180** | 37 | 1 | 44 | 82 |
| +30 mins. | 1 | 107 | 58 | 166 | 2 | 0 | 3 | 5 | 8 | 132 | 2 | 142 | 35 | 0 | **56** | **91** |
| +45 mins. | 1 | **115** | 60 | **176** | 2 | 0 | 3 | 5 | 10 | 151 | 0 | 161 | 35 | 1 | 45 | 81 |
| Total Volume | 5 | 428 | 226 | 659 | 8 | 2 | 15 | 25 | 41 | 586 | 6 | 633 | 146 | 5 | 188 | 339 |
| % App. Total | 0.8 | 64.9 | 34.3 | | 32 | 8 | 60 | | 6.5 | 92.6 | 0.9 | | 43.1 | 1.5 | 55.5 | |
| PHF | .417 | .930 | .911 | .936 | .667 | .250 | .625 | .781 | .854 | .888 | .500 | .879 | .936 | .417 | .839 | .931 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 6



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025


Groups Printed- Trucks

| | Central Ave From North | | | Mill St From East | | | Central Ave From South | | | Spaulding Tpke SB From West | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Int. Total |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 11:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 4 |
| 11:30 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 11:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 |
| Total | 0 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 0 | 2 | 11 |
| | | | | | | | | | | | | | |
| 12:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 12:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| | | | | | | | | | | | | | |
| 01:00 PM | 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 | 0 | 0 |
| 01:30 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | | | | | | | | | | | |
| Grand Total | 0 | 6 | 2 | 0 | 0 | 0 | 2 | 3 | 0 | 2 | 0 | 2 | 17 |
| Apprch % | 0 | 75 | 25 | 0 | 0 | 0 | 40 | 60 | 0 | 50 | 0 | 50 | |
| Total % | 0 | 35.3 | 11.8 | 0 | 0 | 0 | 11.8 | 17.6 | 0 | 11.8 | 0 | 11.8 | |

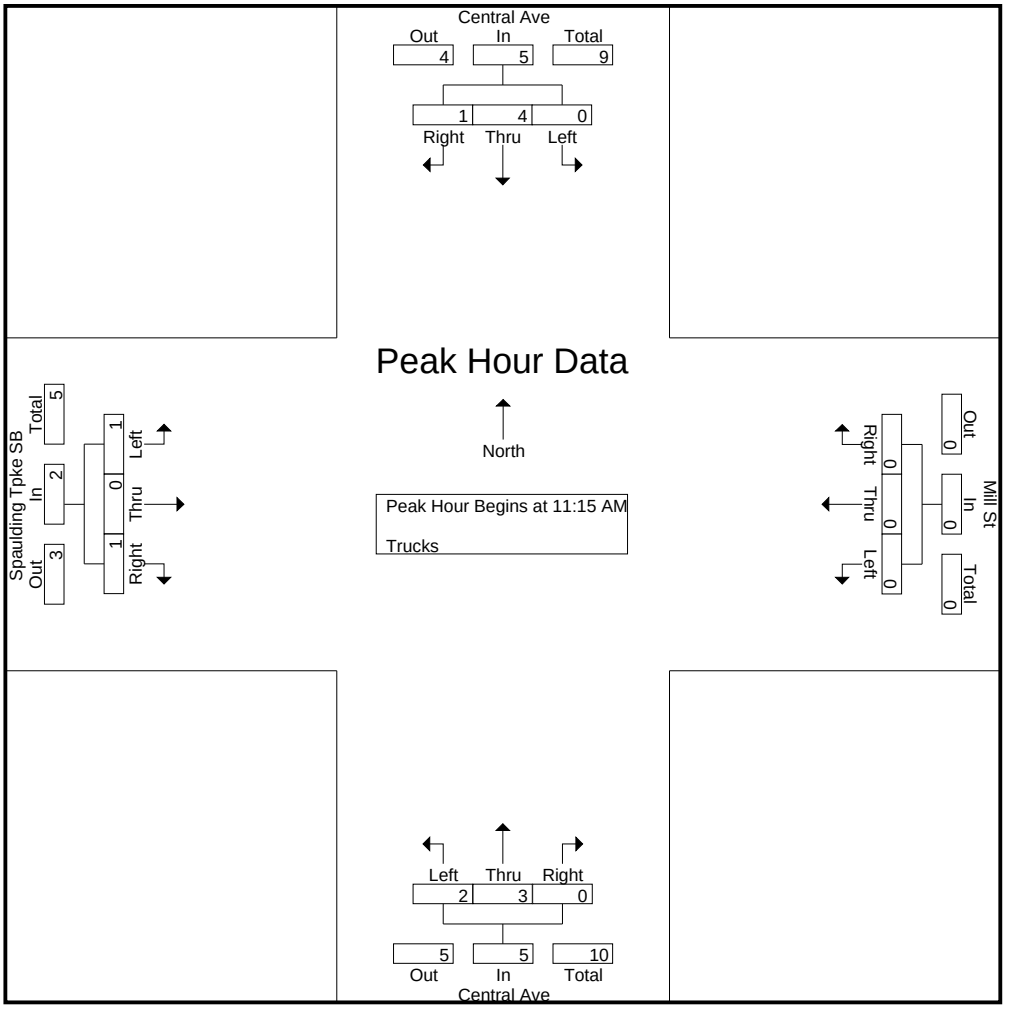
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 11:15 AM | | | | | | | | | | | | | | | | | |
| 11:15 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | **1** | 1 | 0 | **2** | **1** | 0 | 0 | **1** | **4** |
| 11:30 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **2** | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 11:45 AM | 0 | 0 | **1** | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | **1** | 1 | 3 |
| 12:00 PM | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Volume | 0 | 4 | 1 | 5 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 5 | 1 | 0 | 1 | 2 | 12 |
| % App. Total | 0 | 80 | 20 | | 0 | 0 | 0 | | 40 | 60 | 0 | | 50 | 0 | 50 | | |
| PHF | .000 | .500 | .250 | .625 | .000 | .000 | .000 | .000 | .500 | .375 | .000 | .625 | .250 | .000 | .250 | .500 | .750 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 8




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

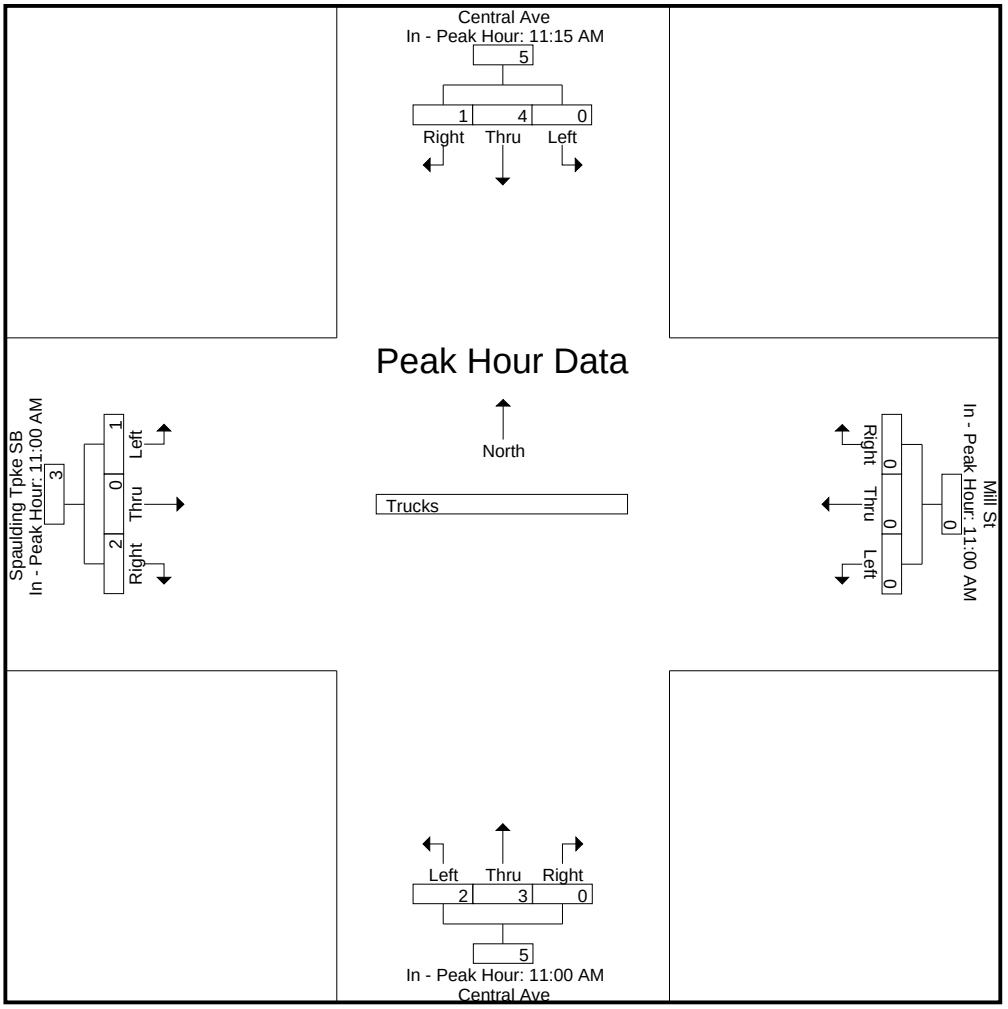
| | 11:15 AM | | | | 11:00 AM | | | | 11:00 AM | | | | 11:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **1** |
| +15 mins. | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | **1** | 1 | 0 | **2** | **1** | 0 | 0 | 1 |
| +30 mins. | 0 | 0 | **1** | 1 | 0 | 0 | 0 | 0 | 0 | **2** | 0 | 2 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | **2** | 0 | **2** | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| Total Volume | 0 | 4 | 1 | 5 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 5 | 1 | 0 | 2 | 3 |
| % App. Total | 0 | 80 | 20 | | 0 | 0 | 0 | | 40 | 60 | 0 | | 33.3 | 0 | 66.7 | |
| PHF | .000 | .500 | .250 | .625 | .000 | .000 | .000 | .000 | .500 | .375 | .000 | .625 | .250 | .000 | .500 | .750 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 9



# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025


Groups Printed- Bikes Peds

| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Exclu. Total | Inclu. Total | Int. Total |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 5 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 11:45 AM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 4 |
| Total | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 10 | 0 | 10 |
| 12:00 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 |
| 01:45 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 1 | 6 |
| Grand Total | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 8 | 17 | 1 | 18 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | | | |
| Total % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | 94.4 | 5.6 | |

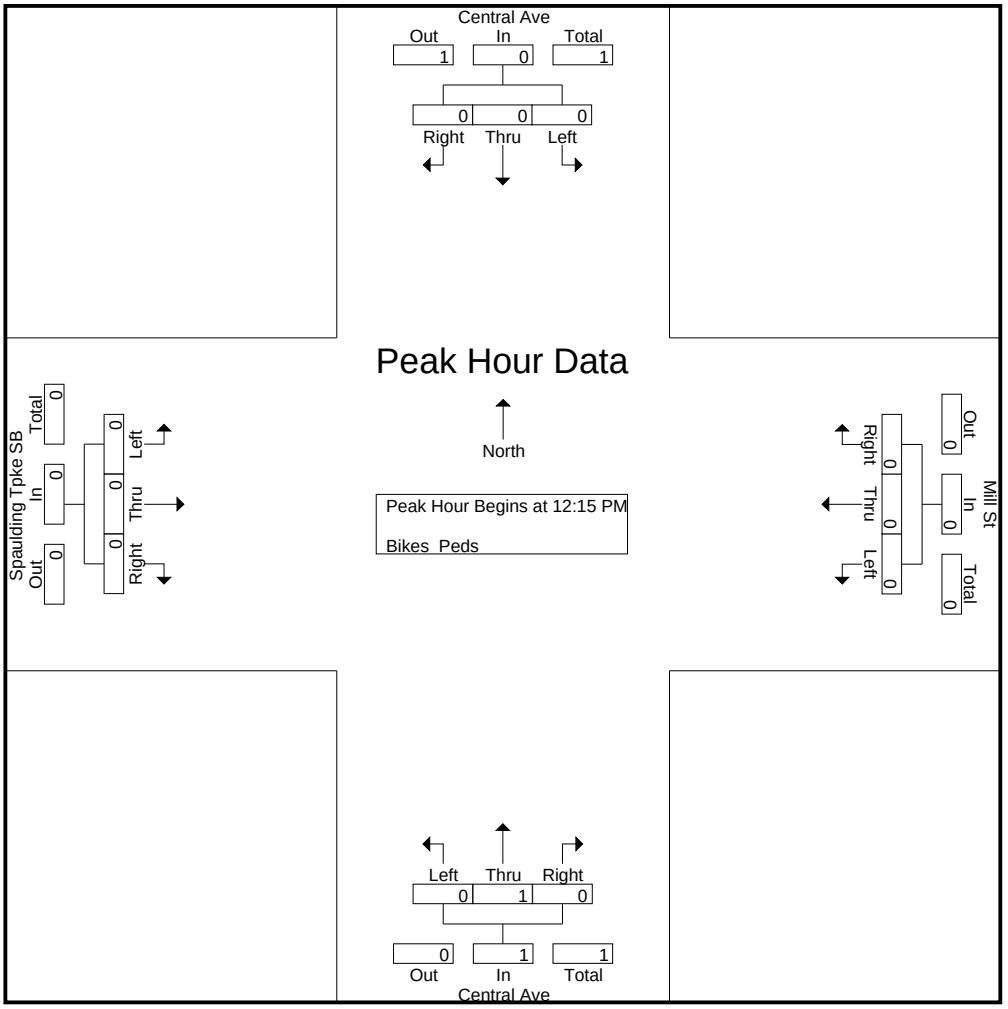
| | Central Ave From North | | | | Mill St From East | | | | Central Ave From South | | | | Spaulding Tpke SB From West | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 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 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 | **1** |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 | .250 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 11




Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

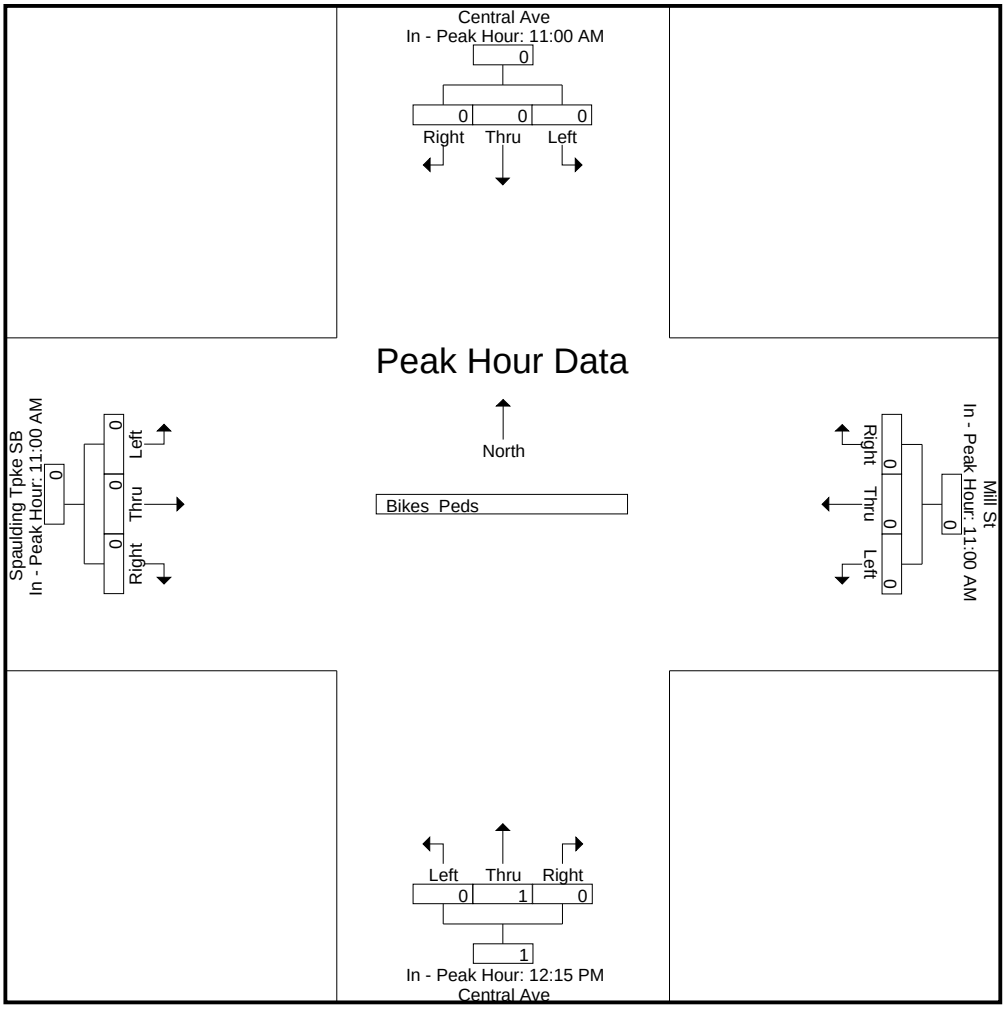
| | 11:00 AM | | | | 11:00 AM | | | | 12:15 PM | | | | 11:00 AM | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +0 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +30 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | 0 | **1** | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000 | .000 |

# Accurate Counts

978-664-2565

N/S Street : Central Avenue
E/W Street : Mill St / Spaulding Tpke SB
City/State : Dover, NH
Weather : Clear / Cloudy

File Name : 105660S3
Site Code : 10566003
Start Date : 12/20/2025
Page No : 12



SEASONAL ADJUSTMENT DATA

Year 2024 Monthly Data

Group 1 Averages: Rural Interstate

| Month | MADT | Adjustment to Average | Adjustment to Peak |
|---|---|---|---|
| January | 22,514 | 1.28 | 1.63 |
| February | 25,494 | 1.13 | 1.44 |
| March | 24,213 | 1.19 | 1.52 |
| April | 25,400 | 1.13 | 1.45 |
| May | 28,663 | 1.00 | 1.28 |
| June | 32,058 | 0.90 | 1.15 |
| July | 36,808 | 0.78 | 1.00 |
| August | 36,280 | 0.79 | 1.01 |
| September | 31,346 | 0.92 | 1.17 |
| October | 31,536 | 0.91 | 1.17 |
| November | 25,670 | 1.12 | 1.43 |
| December | 25,226 | 1.14 | 1.46 |

Average ADT: 28,767
Peak ADT: 36,808

| GROUP | Station | TOWN | LOCATION |
|---|---|---|---|
| *01* | *02067002* | *Plymouth* | *I-93 at Plymouth TL (Exit 26-27)* |
| 01 | 02197090 | Hampton | I-95 at Hampton Toll (Exit 2) |
| 01 | 02259090 | Lincoln | I-93 between Exit 33 & 34A |
| 01 | 02265092 | Littleton | I-93 at Vermont SL |
| *01* | *02409003* | *Seabrook* | *I 95 at Mass SL* |
| 01 | 02439005 | Warner | I 89 at Warner TL (Exit 9-10) |
| 01 | 02451001 | Northfield | I-93 south of US 3/NH 11 (Exit 19-20) |
| *01* | *82199051* | *Hampton Falls* | *Interstate 95 S Rte: I-95* |

** denotes Station that is not included in calculation*

Group 2 Averages: Rural Highways

| Month | MADT | Adjustment to Average | Adjustment to Peak |
|---|---|---|---|
| January | 7,116 | 1.15 | 1.31 |
| February | 7,772 | 1.06 | 1.20 |
| March | 7,393 | 1.11 | 1.26 |
| April | 7,621 | 1.08 | 1.22 |
| May | 8,555 | 0.96 | 1.09 |
| June | 8,985 | 0.91 | 1.03 |
| July | 9,298 | 0.88 | 1.00 |
| August | 9,232 | 0.89 | 1.01 |
| September | 8,762 | 0.94 | 1.06 |
| October | 8,720 | 0.94 | 1.07 |
| November | 7,678 | 1.07 | 1.21 |
| December | 7,261 | 1.13 | 1.28 |

Average ADT: 8,200
Peak ADT: 9,298

| GROUP | Station | TOWN | LOCATION |
|---|---|---|---|
| 02 | 02087021 | Chesterfield | NH 9 (Franklin Pierce Hwy) 0.9 miles east of Vermont SL |
| 02 | 02089002 | Chichester | US 4/US 202/NH 9 east of Main St |
| 02 | 02217001 | Hillsborough | NH 9/NH 31 west of NH 31 (north) |
| *02* | *02277021* | *Lyme* | *NH 10 north of N Thetford Rd* |
| 02 | 02347001 | Northumberlan | US 3 south of Ball Rd (south) |
| 02 | 02349001 | Nottingham | US 4 (First NH TPK) at Nottingham TL (east of NH 152) |
| 02 | 02395021 | Rumney | NH 25 south of School St (northwest of Polar Caves) |
| 02 | 22265079 | Littleton | Union St Rte: NH 116 |
| *02* | *62463050* | *Henniker* | *NH 114 at Henniker TL (east of Mink Hill Rd)* |
| 02 | 82015056 | Andover | US 4/NH 11 (Main St) west of Ragged Mtn Club Rd |
| *02* | *82095058* | *Colebrook* | *Park St Rte: NH 145* |
| *02* | *82145083* | *Enfield* | *Shaker Hill Rd* |
| *02* | *82335055* | *New London* | *Main St Rte: NH 114* |

** denotes Station that is not included in calculation*

Group 3 Averages: Urban Interstate

| Month | MADT | Adjustment to Average | Adjustment to Peak |
|---|---|---|---|
| January | 55,896 | 1.13 | 1.24 |
| February | 60,551 | 1.04 | 1.14 |
| March | 59,483 | 1.06 | 1.16 |
| April | 59,780 | 1.06 | 1.16 |
| May | 64,795 | 0.98 | 1.07 |
| June | 67,952 | 0.93 | 1.02 |
| July | 68,918 | 0.92 | 1.00 |
| August | 69,116 | 0.91 | 1.00 |
| September | 65,947 | 0.96 | 1.05 |
| October | 66,777 | 0.95 | 1.04 |
| November | 60,102 | 1.05 | 1.15 |
| December | 59,223 | 1.07 | 1.17 |

Average ADT: 63,212
Peak ADT: 69,116

| GROUP | Station | TOWN | LOCATION |
|---|---|---|---|
| 03 | 02037090 | Bedford | FEET at Bedford Tolls |
| 03 | 02071090 | Candia | NH 101 at Raymond TL (Exit 3-4) |
| 03 | 02099091 | Concord | I-93 south of US 4 Exit (16-17) |
| 03 | 02099092 | Concord | I-93 south of US 3 (Exit 12-13) |
| 03 | 02099103 | Concord | I-393/US 4/US 202 at Merrimack River (Exit 1-2) |
| 03 | 02125090 | Dover | Spaulding TPK/NH 16 at Dover Toll (Exit 6-7) |
| 03 | 02153001 | Exeter | NH 101 east of NH 108 (Exit 11-12) |
| 03 | 02225091 | Hooksett | I-93/FEET at Hooksett Toll (Exit 11) |
| 03 | 02227001 | Hopkinton | I-89 north of Concord TL (Exit 3-4) |
| 03 | 02285092 | Hooksett | I-93 at Hooksett TL (Exit 9-10) |
| *03* | *02331001* | *Newington* | *US 4/NH 16 (Spaulding TPK) east/south of General Sullivan Bridge (Exit 4-5)* |
| 03 | 02389090 | Rochester | NH 16 (Spaulding TPK) at Rochester Toll (Exit 9-11) |
| 03 | 02399090 | Salem | I-93 at Mass SL |
| 03 | 02489002 | Derry | I-93 south of Kendall Pond Rd (Exit 3-4) |
| 03 | 22147021 | Epping | NH Route 101 W Rte: NH 101 WB |
| *03* | *62037058* | *Bedford* | *Interstate 293 S Rte: FE Everett Tpk SB Exit 4* |
| *03* | *62099149* | *Concord* | *Interstate 393 W Rte: I-393 WB* |
| *03* | *62225068* | *Hooksett* | *Interstate 293 S Rte: FE Everett Tpk SB Exit 7* |
| 03 | 62285152 | Manchester | Interstate 93 N |
| 03 | 62315281 | Nashua | FEET south of the Canal Bridge Exit 5-6 |
| *03* | *62399062* | *Salem* | *Interstate 93 S Rte: I-93 SB* |

** denotes Station that is not included in calculation*

Group 4 Averages: Urban Highways

| Month | MADT | Adjustment to Average | Adjustment to Peak |
|---|---|---|---|
| January | 14,556 | 1.04 | 1.09 |
| February | 15,385 | 0.98 | 1.03 |
| March | 14,276 | 1.06 | 1.11 |
| April | 14,515 | 1.04 | 1.10 |
| May | 15,571 | 0.97 | 1.02 |
| June | 15,918 | 0.95 | 1.00 |
| July | 15,765 | 0.96 | 1.01 |
| August | 15,856 | 0.95 | 1.00 |
| September | 15,571 | 0.97 | 1.02 |
| October | 15,698 | 0.96 | 1.01 |
| November | 14,429 | 1.05 | 1.10 |
| December | 13,960 | 1.08 | 1.14 |

Average ADT: 15,125
Peak ADT: 15,918

| GROUP | Station | TOWN | LOCATION |
|---|---|---|---|
| 04 | 02051003 | Bow | NH 3A south of Robinson Rd |
| 04 | 02089001 | Chichester | NH 28 (Suncook Valley Rd) north of Bear Hill Rd |
| 04 | 02091001 | Claremont | NH 12/103 east of Vermont SL |
| 04 | 02125001 | Dover | Dover Point Rd south of Thornwood Ln |
| 04 | 02133021 | Durham | US 4 east of NH 108 |
| 04 | 02229022 | Hudson | Circumferential Hwy east of Nashua TL |
| 04 | 02253025 | Lebanon | NH 120 1 mile south of Hanover TL (south of Lahaye Dr) |
| 04 | 02255001 | Barrington | NH 125 (Calef Hwy) north of Pinkham Rd |
| 04 | 02287001 | Marlborough | NH 12 at Swanzey TL |
| 04 | 02297001 | Merrimack | US 3 (Daniel Webster Hwy) north of Hilton Dr |
| *04* | *02303001* | *Amherst* | *NH 101A at Amherst TL (west of Overlook Dr)* |
| *04* | *02315051* | *Hudson* | *NH 111 (Bridge / Ferry St) at Hudson TL* |
| 04 | 02339001 | Newport | NH 10 1 mile south of Croydon TL (north of Corbin Rd) |
| 04 | 02345001 | North Hampto | US 1 (Lafayette Rd) north of North Rd |
| 04 | 02445001 | Wilton | NH 101 at Wilton TL (west of Old County Farm Rd) |
| *04* | *02489001* | *Windham* | *NH 28 at Derry TL (north of Northland Rd)* |
| *04* | *62099056* | *Concord* | *NH 106 (Sheep Davis Rd) at Loudon TL (north of Ashby Rd)* |
| *04* | *62099059* | *Concord* | *Clinton St Rte: NH 13* |
| *04* | *62387052* | *Rindge* | *US 202 at Jaffrey TL (north of County Rd)* |
| 04 | 62389040 | Rochester | Spaulding Tpke N |
| 04 | 72099278 | Concord | US 3 (Fisherville Rd) north of Sewalls Falls Rd |
| 04 | 82037087 | Bedford | New Boston Rd |
| *04* | *82101031* | *Conway* | *White Mountain Hwy at Washington St* |
| *04* | *82101032* | *Conway* | *Pleasent St* |
| *04* | *82101033* | *Conway* | *White Mountain Hwy at Pleasant St* |
| *04* | *82169060* | *Gilford* | *Weirs Rd Rte: NH 11B* |
| 04 | 82197076 | Hampton Falls | US 1 (Lafayette Rd) south of Ramp to NH 101 |
| *04* | *82213067* | *Henniker* | *Rush Rd* |
| *04* | *82237075* | *Keene* | *Keene By-Pass Rte: NH 101* |
| 04 | 82243052 | Kingston | NH Route 125 Rte: NH 107 |
| 04 | 82253117 | Lebanon | Meriden Rd Rte: NH 120 |
| *04* | *82253119* | *Lebanon* | *Etna Rd* |
| *04* | *82303020* | *Milford* | *NH 101 (Milford Bypass) North of Phelan Rd* |
| *04* | *82303066* | *Milford* | *NH 101 (Milford Bypass) East of NH 13* |

** denotes Station that is not included in calculation*

Group 5 Averages: Recreational Highways

| Month | MADT | Adjustment to Average | Adjustment to Peak |
|---|---|---|---|
| January | 8,660 | 1.03 | 1.30 |
| February | 9,328 | 0.96 | 1.20 |
| March | 6,917 | 1.29 | 1.62 |
| April | 7,605 | 1.17 | 1.48 |
| May | 9,166 | 0.97 | 1.22 |
| June | 10,361 | 0.86 | 1.08 |
| July | 11,221 | 0.79 | 1.00 |
| August | 10,753 | 0.83 | 1.04 |
| September | 9,214 | 0.97 | 1.22 |
| October | 8,998 | 0.99 | 1.25 |
| November | 7,542 | 1.18 | 1.49 |
| December | 7,144 | 1.25 | 1.57 |

Average ADT: 8,909
Peak ADT: 11,221

| GROUP | Station | TOWN | LOCATION |
|---|---|---|---|
| 05 | 02011001 | Alton | NH 11 (Mt Major Hwy) south of Rand Hill Rd |
| 05 | 02169053 | Gilford | US 3/NH 11 1.2 miles north of NH 11A |
| *05* | *02235001* | *Jefferson* | *US 2 east of NH 115 (east of Carters Cut rd)* |
| 05 | 02295022 | Meredith | NH 104 west of Chase Rd (by Wickwas Lake) |
| *05* | *02357021* | *Ossipee* | *NH 16 (White Mtn Hwy) south of Pine River Rd* |
| 05 | 02443001 | Tamworth | NH 25/NH 113 east of Lords Hill Rd |
| 05 | 22039022 | Belmont | US 3/NH 11 (Daniel Webster Hwy) south of Union Rd |
| *05* | *62177051* | *Gorham* | *Main St Rte: NH 16* |
| 05 | 62493054 | Alton | NH 28 at Alton TL (south of Drew Hill Rd) |
| 05 | 82101046 | Conway | East Conway Rd |
| 05 | 82313051 | Moultonboroug | Moultonboro Neck Rd |

** denotes Station that is not included in calculation*

Group 6 Averages: Other Recreational Highways

| Month | MADT | Adjustment to Average | Adjustment to Peak |
|---|---|---|---|
| January | 1,976 | 1.35 | 2.04 |
| February | 2,381 | 1.12 | 1.69 |
| March | 1,778 | 1.50 | 2.27 |
| April | 1,919 | 1.39 | 2.10 |
| May | 2,187 | 1.22 | 1.84 |
| June | 2,872 | 0.93 | 1.40 |
| July | 3,961 | 0.67 | 1.02 |
| August | 4,029 | 0.66 | 1.00 |
| September | 3,229 | 0.83 | 1.25 |
| October | 3,982 | 0.67 | 1.01 |
| November | 1,771 | 1.51 | 2.27 |
| December | 1,935 | 1.38 | 2.08 |

Average ADT: 2,668
Peak ADT: 4,029

| GROUP | Station | TOWN | LOCATION |
|---|---|---|---|
| 06 | 02029001 | Bartlett | US 302 2 miles east of Harts Location TL |
| *06* | *02197002* | *Seabrook* | *NH 1A (Ocean Blvd) at Seabrook TL* |
| *06* | *02231001* | *Jackson* | *NH 16 south of Blake House Dr* |

** denotes Station that is not included in calculation*

VEHICLE SPEED MEASUREMENTS

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: SB,

Site Code: 10566001

| 12/18/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 0 | 2 | 9 | 21 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 1:00 | 1 | 3 | 8 | 8 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 2:00 | 2 | 2 | 5 | 8 | 5 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 26 |
| 3:00 | 1 | 0 | 3 | 5 | 9 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 4:00 | 3 | 6 | 6 | 22 | 19 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| 5:00 | 5 | 15 | 26 | 59 | 51 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 169 |
| 6:00 | 6 | 28 | 72 | 199 | 66 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 377 |
| 7:00 | 114 | 50 | 145 | 226 | 61 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 603 |
| 8:00 | 20 | 60 | 154 | 274 | 97 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 611 |
| 9:00 | 7 | 43 | 107 | 204 | 78 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 448 |
| 10:00 | 9 | 33 | 132 | 234 | 71 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 489 |
| 11:00 | 12 | 33 | 132 | 232 | 91 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 509 |
| 12:00 PM | 32 | 57 | 145 | 235 | 79 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 555 |
| 1:00 | 20 | 55 | 198 | 253 | 62 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 591 |
| 2:00 | 45 | 143 | 278 | 203 | 34 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 707 |
| 3:00 | 191 | 225 | 283 | 121 | 13 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 838 |
| 4:00 | 69 | 185 | 344 | 223 | 37 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 860 |
| 5:00 | 41 | 105 | 253 | 263 | 30 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 694 |
| 6:00 | 17 | 37 | 162 | 249 | 45 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 512 |
| 7:00 | 13 | 35 | 96 | 154 | 45 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 |
| 8:00 | 8 | 17 | 89 | 162 | 31 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 311 |
| 9:00 | 9 | 31 | 54 | 86 | 43 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 226 |
| 10:00 | 2 | 7 | 28 | 58 | 26 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 |
| 11:00 | 4 | 6 | 21 | 43 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86 |
| Total | 631 | 1178 | 2750 | 3542 | 1017 | 106 | 7 | 2 | 0 | 0 | 1 | 0 | 0 | 9234 |

| | | | | |
|---|---|---|---|---|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 18 | 24 | 29 | 31 |

| | |
|---|---|
| Mean Speed (Average) | 24.6 |
| 10 MPH Pace Speed | 21-30 |
| Number in Pace | 6292 |
| Percent in Pace | 68.0% |
| Number > 25 MPH | 4675 |
| Percent > 25 MPH | 50.6% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: SB,

Site Code: 10566001

| 12/19/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 1 | 7 | 7 | 15 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 1:00 | 0 | 2 | 5 | 17 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 2:00 | 1 | 3 | 1 | 7 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 3:00 | 2 | 1 | 2 | 15 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 4:00 | 4 | 5 | 7 | 21 | 14 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 5:00 | 1 | 8 | 19 | 64 | 48 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 149 |
| 6:00 | 2 | 16 | 76 | 163 | 72 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 |
| 7:00 | 255 | 112 | 79 | 33 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 491 |
| 8:00 | 94 | 89 | 137 | 189 | 56 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 571 |
| 9:00 | 12 | 41 | 129 | 210 | 80 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 481 |
| 10:00 | 25 | 33 | 176 | 232 | 60 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 534 |
| 11:00 | 17 | 55 | 164 | 273 | 86 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 602 |
| 12:00 PM | 20 | 55 | 173 | 253 | 62 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 569 |
| 1:00 | 29 | 55 | 164 | 264 | 71 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 591 |
| 2:00 | 32 | 106 | 223 | 257 | 74 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 696 |
| 3:00 | 45 | 108 | 231 | 244 | 49 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 678 |
| 4:00 | 12 | 105 | 282 | 206 | 49 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 659 |
| 5:00 | 21 | 81 | 283 | 253 | 47 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 688 |
| 6:00 | 8 | 39 | 187 | 244 | 40 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 523 |
| 7:00 | 3 | 21 | 92 | 172 | 49 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 342 |
| 8:00 | 4 | 23 | 72 | 120 | 55 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 278 |
| 9:00 | 2 | 22 | 54 | 111 | 43 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 236 |
| 10:00 | 2 | 24 | 25 | 81 | 44 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 181 |
| 11:00 | 6 | 10 | 19 | 52 | 21 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| Total | 598 | 1021 | 2607 | 3496 | 1054 | 102 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 8887 |

| | | | | |
|---|---|---|---|---|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 18 | 24 | 29 | 31 |

| | |
|---|---|
| Mean Speed (Average) | 24.8 |
| 10 MPH Pace Speed | 21-30 |
| Number in Pace | 6103 |
| Percent in Pace | 69.0% |
| Number > 25 MPH | 4661 |
| Percent > 25 MPH | 52.4% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: SB,

Site Code: 10566001

| 12/20/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 2 | 8 | 12 | 35 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
| 1:00 | 2 | 9 | 8 | 11 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 2:00 | 1 | 0 | 8 | 12 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 3:00 | 0 | 0 | 1 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 4:00 | 0 | 3 | 8 | 11 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 5:00 | 1 | 9 | 9 | 19 | 17 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 63 |
| 6:00 | 6 | 4 | 28 | 50 | 34 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 128 |
| 7:00 | 3 | 8 | 36 | 83 | 68 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 207 |
| 8:00 | 8 | 10 | 59 | 140 | 64 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 290 |
| 9:00 | 8 | 27 | 103 | 222 | 90 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 457 |
| 10:00 | 14 | 36 | 192 | 256 | 74 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 581 |
| 11:00 | 21 | 43 | 193 | 259 | 107 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 632 |
| 12:00 PM | 24 | 39 | 183 | 289 | 99 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 639 |
| 1:00 | 7 | 41 | 191 | 294 | 76 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 615 |
| 2:00 | 15 | 54 | 216 | 283 | 94 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 665 |
| 3:00 | 13 | 59 | 165 | 291 | 78 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 613 |
| 4:00 | 10 | 33 | 132 | 249 | 64 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 501 |
| 5:00 | 5 | 33 | 134 | 189 | 55 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 420 |
| 6:00 | 2 | 28 | 92 | 198 | 61 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 386 |
| 7:00 | 4 | 21 | 71 | 160 | 50 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 309 |
| 8:00 | 9 | 18 | 51 | 129 | 56 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 268 |
| 9:00 | 8 | 14 | 43 | 108 | 44 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 219 |
| 10:00 | 8 | 12 | 34 | 71 | 33 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 161 |
| 11:00 | 2 | 9 | 23 | 39 | 32 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| Total | 173 | 518 | 1992 | 3406 | 1230 | 117 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 7447 |
| | | | Percentile | 15th | 50th | 85th | 95th | | | | | | | |
| | | | Speed | 21 | 26 | 29 | 32 | | | | | | | |
| | | | Mean Speed (Average) | 26.6 | | | | | | | | | | |
| | | | 10 MPH Pace Speed | 21-30 | | | | | | | | | | |
| | | | Number in Pace | 5231 | | | | | | | | | | |
| | | | Percent in Pace | 73.0% | | | | | | | | | | |
| | | | Number > 25 MPH | 4764 | | | | | | | | | | |
| | | | Percent > 25 MPH | 64.0% | | | | | | | | | | |
| Grand Total | 1402 | 2717 | 7349 | 10444 | 3301 | 325 | 25 | 4 | 0 | 0 | 1 | 0 | 0 | 25568 |
| Stats | | | Percentile | 15th | 50th | 85th | 95th | | | | | | | |
| | | | Speed | 19 | 24 | 29 | 31 | | | | | | | |
| | | | Mean Speed (Average) | 25.2 | | | | | | | | | | |
| | | | 10 MPH Pace Speed | 21-30 | | | | | | | | | | |
| | | | Number in Pace | 17731 | | | | | | | | | | |
| | | | Percent in Pace | 70.0% | | | | | | | | | | |
| | | | Number > 25 MPH | 14100 | | | | | | | | | | |
| | | | Percent > 25 MPH | 55.1% | | | | | | | | | | |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: NB,

Site Code: 10566001

| 12/18/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 1 | 7 | 6 | 14 | 8 | 4 | 5 | 3 | 2 | 1 | 0 | 0 | 0 | 51 |
| 1:00 | 0 | 2 | 2 | 8 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 20 |
| 2:00 | 2 | 2 | 5 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 3:00 | 0 | 1 | 7 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 4:00 | 0 | 3 | 9 | 15 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 5:00 | 2 | 8 | 21 | 74 | 26 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 137 |
| 6:00 | 17 | 19 | 91 | 119 | 27 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 278 |
| 7:00 | 26 | 63 | 181 | 225 | 50 | 5 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 553 |
| 8:00 | 39 | 92 | 223 | 244 | 28 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 632 |
| 9:00 | 41 | 47 | 167 | 185 | 52 | 4 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 499 |
| 10:00 | 26 | 67 | 164 | 185 | 49 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 500 |
| 11:00 | 34 | 45 | 131 | 165 | 39 | 6 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 422 |
| 12:00 PM | 48 | 71 | 165 | 126 | 43 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 458 |
| 1:00 | 43 | 76 | 168 | 133 | 36 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 459 |
| 2:00 | 48 | 77 | 190 | 154 | 29 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 502 |
| 3:00 | 94 | 133 | 209 | 73 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 519 |
| 4:00 | 121 | 145 | 167 | 79 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 525 |
| 5:00 | 77 | 99 | 180 | 107 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 476 |
| 6:00 | 35 | 63 | 169 | 111 | 16 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 396 |
| 7:00 | 6 | 52 | 136 | 141 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 355 |
| 8:00 | 8 | 19 | 76 | 85 | 31 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 221 |
| 9:00 | 11 | 14 | 67 | 81 | 14 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 192 |
| 10:00 | 1 | 5 | 22 | 44 | 11 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 86 |
| 11:00 | 2 | 4 | 22 | 15 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 |
| Total | 682 | 1114 | 2578 | 2398 | 545 | 65 | 16 | 9 | 3 | 5 | 0 | 2 | 0 | 7417 |

| | | | | |
|---|---|---|---|---|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 17 | 23 | 28 | 30 |

| | |
|---|---|
| Mean Speed (Average) | 23.5 |
| 10 MPH Pace Speed | 21-30 |
| Number in Pace | 4976 |
| Percent in Pace | 67.0% |
| Number > 25 MPH | 3043 |
| Percent > 25 MPH | 41.0% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: NB,

Site Code: 10566001

| 12/19/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 0 | 3 | 15 | 26 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 52 |
| 1:00 | 1 | 1 | 5 | 11 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 2:00 | 1 | 1 | 4 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 3:00 | 0 | 3 | 6 | 7 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 4:00 | 0 | 1 | 3 | 19 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 5:00 | 4 | 2 | 23 | 46 | 18 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| 6:00 | 8 | 26 | 78 | 122 | 36 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 272 |
| 7:00 | 45 | 83 | 173 | 139 | 28 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 469 |
| 8:00 | 39 | 92 | 237 | 189 | 42 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 604 |
| 9:00 | 21 | 40 | 153 | 240 | 38 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 498 |
| 10:00 | 15 | 56 | 182 | 178 | 34 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 470 |
| 11:00 | 49 | 45 | 153 | 153 | 42 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 452 |
| 12:00 PM | 99 | 114 | 194 | 131 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 563 |
| 1:00 | 38 | 83 | 164 | 157 | 35 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 482 |
| 2:00 | 59 | 105 | 172 | 129 | 34 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 503 |
| 3:00 | 81 | 101 | 209 | 125 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 534 |
| 4:00 | 73 | 134 | 168 | 121 | 21 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 518 |
| 5:00 | 52 | 96 | 185 | 122 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 469 |
| 6:00 | 20 | 61 | 171 | 133 | 27 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 416 |
| 7:00 | 5 | 14 | 97 | 133 | 30 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 284 |
| 8:00 | 2 | 12 | 72 | 110 | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 222 |
| 9:00 | 8 | 7 | 65 | 84 | 35 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 203 |
| 10:00 | 5 | 6 | 39 | 52 | 21 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 129 |
| 11:00 | 3 | 11 | 14 | 30 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 |
| Total | 628 | 1097 | 2582 | 2462 | 569 | 71 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 7417 |

| | | | | |
|---|---|---|---|---|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 17 | 23 | 28 | 30 |

| | |
|---|---|
| Mean Speed (Average) | 23.6 |
| 10 MPH Pace Speed | 21-30 |
| Number in Pace | 5044 |
| Percent in Pace | 68.0% |
| Number > 25 MPH | 3110 |
| Percent > 25 MPH | 41.9% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: NB,

Site Code: 10566001

| 12/20/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 3 | 1 | 21 | 49 | 9 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| 1:00 | 2 | 2 | 13 | 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 2:00 | 0 | 1 | 6 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 3:00 | 0 | 0 | 5 | 8 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 4:00 | 0 | 1 | 7 | 18 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 5:00 | 0 | 4 | 14 | 17 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 6:00 | 3 | 12 | 32 | 44 | 31 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 130 |
| 7:00 | 1 | 5 | 50 | 119 | 55 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 239 |
| 8:00 | 12 | 27 | 104 | 189 | 69 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 407 |
| 9:00 | 23 | 41 | 172 | 211 | 69 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 524 |
| 10:00 | 46 | 65 | 174 | 186 | 39 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 516 |
| 11:00 | 42 | 44 | 217 | 225 | 69 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 600 |
| 12:00 PM | 42 | 50 | 161 | 196 | 46 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 505 |
| 1:00 | 15 | 34 | 148 | 211 | 75 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 490 |
| 2:00 | 34 | 34 | 187 | 170 | 34 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 462 |
| 3:00 | 31 | 55 | 130 | 162 | 47 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 431 |
| 4:00 | 17 | 62 | 154 | 160 | 24 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 419 |
| 5:00 | 15 | 35 | 143 | 155 | 30 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 381 |
| 6:00 | 9 | 25 | 114 | 141 | 36 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 329 |
| 7:00 | 5 | 18 | 81 | 118 | 36 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 264 |
| 8:00 | 12 | 10 | 62 | 102 | 29 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 219 |
| 9:00 | 6 | 15 | 60 | 93 | 20 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 196 |
| 10:00 | 3 | 14 | 28 | 44 | 29 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 124 |
| 11:00 | 5 | 3 | 15 | 36 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| Total | 326 | 558 | 2098 | 2673 | 795 | 86 | 12 | 3 | 1 | 1 | 1 | 0 | 0 | 6554 |
| | | | Percentile | 15th | 50th | 85th | 95th | | | | | | | |
| | | | Speed | 20 | 24 | 29 | 31 | | | | | | | |
| | | Mean Speed (Average) | | 25.4 | | | | | | | | | | |
| | | 10 MPH Pace Speed | | 21-30 | | | | | | | | | | |
| | | Number in Pace | | 4648 | | | | | | | | | | |
| | | Percent in Pace | | 73.0% | | | | | | | | | | |
| | | Number > 25 MPH | | 3572 | | | | | | | | | | |
| | | Percent > 25 MPH | | 54.5% | | | | | | | | | | |
| Grand Total | 1636 | 2769 | 7258 | 7533 | 1909 | 222 | 34 | 14 | 4 | 6 | 1 | 2 | 0 | 21388 |
| Stats | | | Percentile | 15th | 50th | 85th | 95th | | | | | | | |
| | | | Speed | 18 | 24 | 28 | 31 | | | | | | | |
| | | Mean Speed (Average) | | 24.1 | | | | | | | | | | |
| | | 10 MPH Pace Speed | | 21-30 | | | | | | | | | | |
| | | Number in Pace | | 14740 | | | | | | | | | | |
| | | Percent in Pace | | 69.0% | | | | | | | | | | |
| | | Number > 25 MPH | | 9725 | | | | | | | | | | |
| | | Percent > 25 MPH | | 45.5% | | | | | | | | | | |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: Combined

Site Code: 10566001

| 12/18/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 1 | 9 | 15 | 35 | 19 | 7 | 5 | 3 | 2 | 1 | 0 | 0 | 0 | 97 |
| 1:00 | 1 | 5 | 10 | 16 | 10 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 46 |
| 2:00 | 4 | 4 | 10 | 14 | 7 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 43 |
| 3:00 | 1 | 1 | 10 | 14 | 12 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 4:00 | 3 | 9 | 15 | 37 | 31 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 98 |
| 5:00 | 7 | 23 | 47 | 133 | 77 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 306 |
| 6:00 | 23 | 47 | 163 | 318 | 93 | 8 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 655 |
| 7:00 | 140 | 113 | 326 | 451 | 111 | 11 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 1156 |
| 8:00 | 59 | 152 | 377 | 518 | 125 | 10 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1243 |
| 9:00 | 48 | 90 | 274 | 389 | 130 | 12 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 947 |
| 10:00 | 35 | 100 | 296 | 419 | 120 | 17 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 989 |
| 11:00 | 46 | 78 | 263 | 397 | 130 | 15 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 931 |
| 12:00 PM | 80 | 128 | 310 | 361 | 122 | 10 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1013 |
| 1:00 | 63 | 131 | 366 | 386 | 98 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1050 |
| 2:00 | 93 | 220 | 468 | 357 | 63 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1209 |
| 3:00 | 285 | 358 | 492 | 194 | 21 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1357 |
| 4:00 | 190 | 330 | 511 | 302 | 46 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1385 |
| 5:00 | 118 | 204 | 433 | 370 | 41 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1170 |
| 6:00 | 52 | 100 | 331 | 360 | 61 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 908 |
| 7:00 | 19 | 87 | 232 | 295 | 64 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 703 |
| 8:00 | 16 | 36 | 165 | 247 | 62 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 532 |
| 9:00 | 20 | 45 | 121 | 167 | 57 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 418 |
| 10:00 | 3 | 12 | 50 | 102 | 37 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 209 |
| 11:00 | 6 | 10 | 43 | 58 | 25 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 145 |
| Total | 1313 | 2292 | 5328 | 5940 | 1562 | 171 | 23 | 11 | 3 | 5 | 1 | 2 | 0 | 16651 |

| | 15th | 50th | 85th | 95th |
|---|---|---|---|---|
| Percentile Speed | 17 | 24 | 28 | 31 |

| | |
|---|---|
| Mean Speed (Average) | 24.1 |
| 10 MPH Pace Speed | 21-30 |
| Number in Pace | 11268 |
| Percent in Pace | 68.0% |
| Number > 25 MPH | 7718 |
| Percent > 25 MPH | 46.4% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: Combined

Site Code: 10566001

| 12/19/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 1 | 10 | 22 | 41 | 15 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 91 |
| 1:00 | 1 | 3 | 10 | 28 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| 2:00 | 2 | 4 | 5 | 12 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 3:00 | 2 | 4 | 8 | 22 | 13 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 4:00 | 4 | 6 | 10 | 40 | 24 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 91 |
| 5:00 | 5 | 10 | 42 | 110 | 66 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 249 |
| 6:00 | 10 | 42 | 154 | 285 | 108 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 607 |
| 7:00 | 300 | 195 | 252 | 172 | 39 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 960 |
| 8:00 | 133 | 181 | 374 | 378 | 98 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1175 |
| 9:00 | 33 | 81 | 282 | 450 | 118 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 979 |
| 10:00 | 40 | 89 | 358 | 410 | 94 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1004 |
| 11:00 | 66 | 100 | 317 | 426 | 128 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1054 |
| 12:00 PM | 119 | 169 | 367 | 384 | 87 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1132 |
| 1:00 | 67 | 138 | 328 | 421 | 106 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1073 |
| 2:00 | 91 | 211 | 395 | 386 | 108 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1199 |
| 3:00 | 126 | 209 | 440 | 369 | 66 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1212 |
| 4:00 | 85 | 239 | 450 | 327 | 70 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1177 |
| 5:00 | 73 | 177 | 468 | 375 | 58 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1157 |
| 6:00 | 28 | 100 | 358 | 377 | 67 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 939 |
| 7:00 | 8 | 35 | 189 | 305 | 79 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 626 |
| 8:00 | 6 | 35 | 144 | 230 | 80 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 500 |
| 9:00 | 10 | 29 | 119 | 195 | 78 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 439 |
| 10:00 | 7 | 30 | 64 | 133 | 65 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 310 |
| 11:00 | 9 | 21 | 33 | 82 | 38 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 190 |
| Total | 1226 | 2118 | 5189 | 5958 | 1623 | 173 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 16304 |

| | | | | |
|---|---|---|---|---|
| Percentile | 15th | 50th | 85th | 95th |
| Speed | 18 | 24 | 28 | 31 |

| | |
|---|---|
| Mean Speed (Average) | 24.3 |
| 10 MPH Pace Speed | 21-30 |
| Number in Pace | 11147 |
| Percent in Pace | 68.0% |
| Number > 25 MPH | 7771 |
| Percent > 25 MPH | 47.7% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH
Direction: Combined

Site Code: 10566001

| 12/20/2025 Time | 0 - 15 MPH | > 15 - 20 MPH | > 20 - 25 MPH | > 25 - 30 MPH | > 30 - 35 MPH | > 35 - 40 MPH | > 40 - 45 MPH | > 45 - 50 MPH | > 50 - 55 MPH | > 55 - 60 MPH | > 60 - 65 MPH | > 65 - 70 MPH | > 70 MPH | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 5 | 9 | 33 | 84 | 18 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 155 |
| 1:00 | 4 | 11 | 21 | 24 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| 2:00 | 1 | 1 | 14 | 18 | 15 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| 3:00 | 0 | 0 | 6 | 16 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 4:00 | 0 | 4 | 15 | 29 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 |
| 5:00 | 1 | 13 | 23 | 36 | 30 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 114 |
| 6:00 | 9 | 16 | 60 | 94 | 65 | 11 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 258 |
| 7:00 | 4 | 13 | 86 | 202 | 123 | 16 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 446 |
| 8:00 | 20 | 37 | 163 | 329 | 133 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 697 |
| 9:00 | 31 | 68 | 275 | 433 | 159 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 981 |
| 10:00 | 60 | 101 | 366 | 442 | 113 | 12 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1097 |
| 11:00 | 63 | 87 | 410 | 484 | 176 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1232 |
| 12:00 PM | 66 | 89 | 344 | 485 | 145 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1144 |
| 1:00 | 22 | 75 | 339 | 505 | 151 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1105 |
| 2:00 | 49 | 88 | 403 | 453 | 128 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1127 |
| 3:00 | 44 | 114 | 295 | 453 | 125 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1044 |
| 4:00 | 27 | 95 | 286 | 409 | 88 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 920 |
| 5:00 | 20 | 68 | 277 | 344 | 85 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 801 |
| 6:00 | 11 | 53 | 206 | 339 | 97 | 7 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 715 |
| 7:00 | 9 | 39 | 152 | 278 | 86 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 573 |
| 8:00 | 21 | 28 | 113 | 231 | 85 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 487 |
| 9:00 | 14 | 29 | 103 | 201 | 64 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 415 |
| 10:00 | 11 | 26 | 62 | 115 | 62 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 285 |
| 11:00 | 7 | 12 | 38 | 75 | 45 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 182 |
| Total | 499 | 1076 | 4090 | 6079 | 2025 | 203 | 22 | 4 | 1 | 1 | 1 | 0 | 0 | 14001 |
| | | | Percentile | 15th | 50th | 85th | 95th | | | | | | | |
| | | | Speed | 20 | 25 | 29 | 32 | | | | | | | |
| | | Mean Speed (Average) | | 26.0 | | | | | | | | | | |
| | | 10 MPH Pace Speed | | 21-30 | | | | | | | | | | |
| | | Number in Pace | | 9879 | | | | | | | | | | |
| | | Percent in Pace | | 73.0% | | | | | | | | | | |
| | | Number > 25 MPH | | 8336 | | | | | | | | | | |
| | | Percent > 25 MPH | | 59.5% | | | | | | | | | | |
| Grand Total | 3038 | 5486 | 14607 | 17977 | 5210 | 547 | 59 | 18 | 4 | 6 | 2 | 2 | 0 | 46956 |
| Stats | | | Percentile | 15th | 50th | 85th | 95th | | | | | | | |
| | | | Speed | 18 | 24 | 29 | 31 | | | | | | | |
| | | Mean Speed (Average) | | 24.7 | | | | | | | | | | |
| | | 10 MPH Pace Speed | | 21-30 | | | | | | | | | | |
| | | Number in Pace | | 32471 | | | | | | | | | | |
| | | Percent in Pace | | 69.0% | | | | | | | | | | |
| | | Number > 25 MPH | | 23825 | | | | | | | | | | |
| | | Percent > 25 MPH | | 50.7% | | | | | | | | | | |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH

Site Code: 10566001

| 12/18/2025 | SB, | | Hour Totals | | NB, | | Hour Totals | | Combined Totals | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | Morning | Afternoon | Morning | Afternon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 | 14 | 133 | | | 8 | 131 | | | | |
| 12:15 | 8 | 151 | | | 18 | 84 | | | | |
| 12:30 | 15 | 126 | | | 18 | 110 | | | | |
| 12:45 | 9 | 145 | 46 | 555 | 7 | 133 | 51 | 458 | 97 | 1013 |
| 1:00 | 6 | 148 | | | 5 | 127 | | | | |
| 1:15 | 6 | 138 | | | 4 | 110 | | | | |
| 1:30 | 7 | 158 | | | 7 | 117 | | | | |
| 1:45 | 7 | 147 | 26 | 591 | 4 | 105 | 20 | 459 | 46 | 1050 |
| 2:00 | 11 | 185 | | | 5 | 112 | | | | |
| 2:15 | 6 | 174 | | | 3 | 115 | | | | |
| 2:30 | 6 | 175 | | | 4 | 142 | | | | |
| 2:45 | 3 | 173 | 26 | 707 | 5 | 133 | 17 | 502 | 43 | 1209 |
| 3:00 | 2 | 208 | | | 3 | 129 | | | | |
| 3:15 | 7 | 227 | | | 5 | 115 | | | | |
| 3:30 | 6 | 176 | | | 3 | 147 | | | | |
| 3:45 | 6 | 227 | 21 | 838 | 9 | 128 | 20 | 519 | 41 | 1357 |
| 4:00 | 12 | 189 | | | 6 | 148 | | | | |
| 4:15 | 14 | 220 | | | 7 | 130 | | | | |
| 4:30 | 12 | 190 | | | 14 | 112 | | | | |
| 4:45 | 20 | 261 | 58 | 860 | 13 | 135 | 40 | 525 | 98 | 1385 |
| 5:00 | 23 | 180 | | | 17 | 120 | | | | |
| 5:15 | 41 | 181 | | | 32 | 129 | | | | |
| 5:30 | 45 | 165 | | | 43 | 121 | | | | |
| 5:45 | 60 | 168 | 169 | 694 | 45 | 106 | 137 | 476 | 306 | 1170 |
| 6:00 | 40 | 147 | | | 54 | 94 | | | | |
| 6:15 | 61 | 126 | | | 71 | 98 | | | | |
| 6:30 | 115 | 126 | | | 72 | 108 | | | | |
| 6:45 | 161 | 113 | 377 | 512 | 81 | 96 | 278 | 396 | 655 | 908 |
| 7:00 | 163 | 96 | | | 108 | 98 | | | | |
| 7:15 | 123 | 95 | | | 137 | 105 | | | | |
| 7:30 | 161 | 93 | | | 145 | 80 | | | | |
| 7:45 | 156 | 64 | 603 | 348 | 163 | 72 | 553 | 355 | 1156 | 703 |
| 8:00 | 164 | 62 | | | 173 | 48 | | | | |
| 8:15 | 149 | 90 | | | 168 | 77 | | | | |
| 8:30 | 148 | 90 | | | 144 | 49 | | | | |
| 8:45 | 150 | 69 | 611 | 311 | 147 | 47 | 632 | 221 | 1243 | 532 |
| 9:00 | 110 | 70 | | | 138 | 50 | | | | |
| 9:15 | 119 | 64 | | | 127 | 55 | | | | |
| 9:30 | 117 | 49 | | | 109 | 43 | | | | |
| 9:45 | 102 | 43 | 448 | 226 | 125 | 44 | 499 | 192 | 947 | 418 |
| 10:00 | 103 | 31 | | | 126 | 18 | | | | |
| 10:15 | 128 | 34 | | | 119 | 25 | | | | |
| 10:30 | 132 | 34 | | | 123 | 21 | | | | |
| 10:45 | 126 | 24 | 489 | 123 | 132 | 22 | 500 | 86 | 989 | 209 |
| 11:00 | 110 | 28 | | | 100 | 18 | | | | |
| 11:15 | 133 | 25 | | | 85 | 18 | | | | |
| 11:30 | 134 | 22 | | | 120 | 10 | | | | |
| 11:45 | 132 | 11 | 509 | 86 | 117 | 13 | 422 | 59 | 931 | 145 |
| Total | 3383 | 5851 | | | 3169 | 4248 | | | 6552 | 10099 |
| Percent | 36.6% | 63.4% | | | 42.7% | 57.3% | | | 39.3% | 60.7% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH

Site Code: 10566001

| 12/19/2025 | SB, | | Hour Totals | | NB, | | Hour Totals | | Combined Totals | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | Morning | Afternoon | Morning | Afternon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 | 14 | 140 | | | 12 | 134 | | | | |
| 12:15 | 11 | 153 | | | 15 | 142 | | | | |
| 12:30 | 8 | 131 | | | 16 | 147 | | | | |
| 12:45 | 6 | 145 | 39 | 569 | 9 | 140 | 52 | 563 | 91 | 1132 |
| 1:00 | 7 | 157 | | | 13 | 129 | | | | |
| 1:15 | 5 | 121 | | | 3 | 133 | | | | |
| 1:30 | 7 | 170 | | | 7 | 110 | | | | |
| 1:45 | 10 | 143 | 29 | 591 | 2 | 110 | 25 | 482 | 54 | 1073 |
| 2:00 | 5 | 174 | | | 5 | 103 | | | | |
| 2:15 | 3 | 168 | | | 3 | 114 | | | | |
| 2:30 | 6 | 178 | | | 6 | 159 | | | | |
| 2:45 | 4 | 176 | 18 | 696 | 2 | 127 | 16 | 503 | 34 | 1199 |
| 3:00 | 5 | 154 | | | 5 | 149 | | | | |
| 3:15 | 4 | 194 | | | 3 | 135 | | | | |
| 3:30 | 5 | 172 | | | 9 | 119 | | | | |
| 3:45 | 15 | 158 | 29 | 678 | 6 | 131 | 23 | 534 | 52 | 1212 |
| 4:00 | 11 | 167 | | | 8 | 127 | | | | |
| 4:15 | 10 | 190 | | | 3 | 142 | | | | |
| 4:30 | 9 | 157 | | | 12 | 126 | | | | |
| 4:45 | 26 | 145 | 56 | 659 | 12 | 123 | 35 | 518 | 91 | 1177 |
| 5:00 | 25 | 191 | | | 18 | 129 | | | | |
| 5:15 | 26 | 170 | | | 18 | 109 | | | | |
| 5:30 | 43 | 165 | | | 32 | 117 | | | | |
| 5:45 | 55 | 162 | 149 | 688 | 32 | 114 | 100 | 469 | 249 | 1157 |
| 6:00 | 35 | 118 | | | 42 | 93 | | | | |
| 6:15 | 68 | 137 | | | 80 | 133 | | | | |
| 6:30 | 91 | 141 | | | 64 | 104 | | | | |
| 6:45 | 141 | 127 | 335 | 523 | 86 | 86 | 272 | 416 | 607 | 939 |
| 7:00 | 149 | 101 | | | 105 | 68 | | | | |
| 7:15 | 60 | 94 | | | 118 | 75 | | | | |
| 7:30 | 153 | 84 | | | 121 | 74 | | | | |
| 7:45 | 129 | 63 | 491 | 342 | 125 | 67 | 469 | 284 | 960 | 626 |
| 8:00 | 142 | 71 | | | 134 | 72 | | | | |
| 8:15 | 161 | 84 | | | 190 | 45 | | | | |
| 8:30 | 135 | 57 | | | 157 | 48 | | | | |
| 8:45 | 133 | 66 | 571 | 278 | 123 | 57 | 604 | 222 | 1175 | 500 |
| 9:00 | 129 | 63 | | | 129 | 57 | | | | |
| 9:15 | 117 | 69 | | | 139 | 60 | | | | |
| 9:30 | 121 | 53 | | | 107 | 36 | | | | |
| 9:45 | 114 | 51 | 481 | 236 | 123 | 50 | 498 | 203 | 979 | 439 |
| 10:00 | 113 | 47 | | | 115 | 31 | | | | |
| 10:15 | 132 | 48 | | | 117 | 33 | | | | |
| 10:30 | 139 | 47 | | | 110 | 35 | | | | |
| 10:45 | 150 | 39 | 534 | 181 | 128 | 30 | 470 | 129 | 1004 | 310 |
| 11:00 | 130 | 31 | | | 131 | 21 | | | | |
| 11:15 | 143 | 32 | | | 105 | 25 | | | | |
| 11:30 | 138 | 29 | | | 98 | 15 | | | | |
| 11:45 | 191 | 20 | 602 | 112 | 118 | 17 | 452 | 78 | 1054 | 190 |
| Total | 3334 | 5553 | | | 3016 | 4401 | | | 6350 | 9954 |
| Percent | 37.5% | 62.5% | | | 40.7% | 59.3% | | | 38.9% | 61.1% |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH

Site Code: 10566001

| 12/20/2025 | SB, | | Hour Totals | | NB, | | Hour Totals | | Combined Totals | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | Morning | Afternoon | Morning | Afternon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 | 23 | 159 | | | 20 | 143 | | | | |
| 12:15 | 21 | 162 | | | 32 | 108 | | | | |
| 12:30 | 13 | 158 | | | 20 | 127 | | | | |
| 12:45 | 11 | 160 | 68 | 639 | 15 | 127 | 87 | 505 | 155 | 1144 |
| 1:00 | 11 | 136 | | | 12 | 128 | | | | |
| 1:15 | 10 | 157 | | | 10 | 134 | | | | |
| 1:30 | 12 | 170 | | | 7 | 114 | | | | |
| 1:45 | 6 | 152 | 39 | 615 | 7 | 114 | 36 | 490 | 75 | 1105 |
| 2:00 | 13 | 163 | | | 6 | 103 | | | | |
| 2:15 | 7 | 175 | | | 6 | 145 | | | | |
| 2:30 | 3 | 160 | | | 7 | 92 | | | | |
| 2:45 | 7 | 167 | 30 | 665 | 4 | 122 | 23 | 462 | 53 | 1127 |
| 3:00 | 2 | 178 | | | 6 | 113 | | | | |
| 3:15 | 2 | 158 | | | 4 | 117 | | | | |
| 3:30 | 1 | 152 | | | 5 | 109 | | | | |
| 3:45 | 8 | 125 | 13 | 613 | 3 | 92 | 18 | 431 | 31 | 1044 |
| 4:00 | 8 | 121 | | | 6 | 95 | | | | |
| 4:15 | 13 | 129 | | | 7 | 103 | | | | |
| 4:30 | 8 | 128 | | | 8 | 114 | | | | |
| 4:45 | 6 | 123 | 35 | 501 | 8 | 107 | 29 | 419 | 64 | 920 |
| 5:00 | 9 | 123 | | | 4 | 97 | | | | |
| 5:15 | 9 | 88 | | | 12 | 98 | | | | |
| 5:30 | 16 | 115 | | | 16 | 84 | | | | |
| 5:45 | 29 | 94 | 63 | 420 | 19 | 102 | 51 | 381 | 114 | 801 |
| 6:00 | 25 | 108 | | | 23 | 82 | | | | |
| 6:15 | 25 | 80 | | | 36 | 94 | | | | |
| 6:30 | 33 | 99 | | | 36 | 75 | | | | |
| 6:45 | 45 | 99 | 128 | 386 | 35 | 78 | 130 | 329 | 258 | 715 |
| 7:00 | 27 | 78 | | | 37 | 68 | | | | |
| 7:15 | 45 | 82 | | | 62 | 75 | | | | |
| 7:30 | 74 | 85 | | | 59 | 59 | | | | |
| 7:45 | 61 | 64 | 207 | 309 | 81 | 62 | 239 | 264 | 446 | 573 |
| 8:00 | 42 | 60 | | | 80 | 60 | | | | |
| 8:15 | 60 | 77 | | | 95 | 47 | | | | |
| 8:30 | 98 | 65 | | | 86 | 67 | | | | |
| 8:45 | 90 | 66 | 290 | 268 | 146 | 45 | 407 | 219 | 697 | 487 |
| 9:00 | 99 | 62 | | | 129 | 51 | | | | |
| 9:15 | 105 | 61 | | | 137 | 44 | | | | |
| 9:30 | 126 | 54 | | | 122 | 55 | | | | |
| 9:45 | 127 | 42 | 457 | 219 | 136 | 46 | 524 | 196 | 981 | 415 |
| 10:00 | 143 | 52 | | | 139 | 35 | | | | |
| 10:15 | 141 | 40 | | | 119 | 36 | | | | |
| 10:30 | 148 | 37 | | | 122 | 33 | | | | |
| 10:45 | 149 | 32 | 581 | 161 | 136 | 20 | 516 | 124 | 1097 | 285 |
| 11:00 | 178 | 35 | | | 134 | 22 | | | | |
| 11:15 | 147 | 32 | | | 165 | 18 | | | | |
| 11:30 | 149 | 29 | | | 146 | 21 | | | | |
| 11:45 | 158 | 12 | 632 | 108 | 155 | 13 | 600 | 74 | 1232 | 182 |
| Total | 2543 | 4904 | | | 2660 | 3894 | | | 5203 | 8798 |
| Percent | 34.1% | 65.9% | | | 40.6% | 59.4% | | | 37.2% | 62.8% |
| Grand Total | 9260 | 16308 | | | 8845 | 12543 | | | 18105 | 28851 |
| Percent | 36.2% | 63.8% | | | 41.4% | 58.6% | | | 38.6% | 61.4% |
| ADT | | ADT: 15,652 | | AADT: 15,652 | | | | | | |

# Accurate Counts
978-664-2565

Location : Central Avenue
Location : South of 47 Central Avenue
City/State: Dover, NH

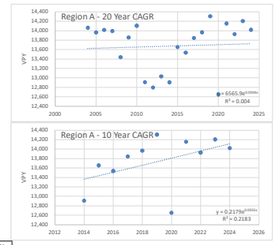
Site Code: 10566001

| 12/15/2025 | Monday | | Tuesday | | Wednesday | | Thursday | | Friday | | Saturday | | Sunday | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | SB, | NB, | SB, | NB, | SB, | NB, | SB, | NB, | SB, | NB, | SB, | NB, | SB, | NB, | SB, | NB, |
| 12:00 AM | * | * | * | * | * | * | 46 | 51 | 39 | 52 | 68 | 87 | * | * | 51 | 63 |
| 1:00 | * | * | * | * | * | * | 26 | 20 | 29 | 25 | 39 | 36 | * | * | 31 | 27 |
| 2:00 | * | * | * | * | * | * | 26 | 17 | 18 | 16 | 30 | 23 | * | * | 25 | 19 |
| 3:00 | * | * | * | * | * | * | 21 | 20 | 29 | 23 | 13 | 18 | * | * | 21 | 20 |
| 4:00 | * | * | * | * | * | * | 58 | 40 | 56 | 35 | 35 | 29 | * | * | 50 | 35 |
| 5:00 | * | * | * | * | * | * | 169 | 137 | 149 | 100 | 63 | 51 | * | * | 127 | 96 |
| 6:00 | * | * | * | * | * | * | 377 | 278 | 335 | 272 | 128 | 130 | * | * | 280 | 227 |
| 7:00 | * | * | * | * | * | * | 603 | 553 | 491 | 469 | 207 | 239 | * | * | 434 | 420 |
| 8:00 | * | * | * | * | * | * | 611 | 632 | 571 | 604 | 290 | 407 | * | * | 491 | 548 |
| 9:00 | * | * | * | * | * | * | 448 | 499 | 481 | 498 | 457 | 524 | * | * | 462 | 507 |
| 10:00 | * | * | * | * | * | * | 489 | 500 | 534 | 470 | 581 | 516 | * | * | 535 | 495 |
| 11:00 | * | * | * | * | * | * | 509 | 422 | 602 | 452 | 632 | 600 | * | * | 581 | 491 |
| 12:00 PM | * | * | * | * | * | * | 555 | 458 | 569 | 563 | 639 | 505 | * | * | 588 | 509 |
| 1:00 | * | * | * | * | * | * | 591 | 459 | 591 | 482 | 615 | 490 | * | * | 599 | 477 |
| 2:00 | * | * | * | * | * | * | 707 | 502 | 696 | 503 | 665 | 462 | * | * | 689 | 489 |
| 3:00 | * | * | * | * | * | * | 838 | 519 | 678 | 534 | 613 | 431 | * | * | 710 | 495 |
| 4:00 | * | * | * | * | * | * | 860 | 525 | 659 | 518 | 501 | 419 | * | * | 673 | 487 |
| 5:00 | * | * | * | * | * | * | 694 | 476 | 688 | 469 | 420 | 381 | * | * | 601 | 442 |
| 6:00 | * | * | * | * | * | * | 512 | 396 | 523 | 416 | 386 | 329 | * | * | 474 | 380 |
| 7:00 | * | * | * | * | * | * | 348 | 355 | 342 | 284 | 309 | 264 | * | * | 333 | 301 |
| 8:00 | * | * | * | * | * | * | 311 | 221 | 278 | 222 | 268 | 219 | * | * | 286 | 221 |
| 9:00 | * | * | * | * | * | * | 226 | 192 | 236 | 203 | 219 | 196 | * | * | 227 | 197 |
| 10:00 | * | * | * | * | * | * | 123 | 86 | 181 | 129 | 161 | 124 | * | * | 155 | 113 |
| 11:00 | * | * | * | * | * | * | 86 | 59 | 112 | 78 | 108 | 74 | * | * | 102 | 70 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 9234 | 7417 | 8887 | 7417 | 7447 | 6554 | 0 | 0 | 8525 | 7129 |
| Day | 0 | | 0 | | 0 | | 16651 | | 16304 | | 14001 | | 0 | | 15654 | |
| AM Peak | | | | | | | 8:00 | 8:00 | 11:00 | 8:00 | 11:00 | 11:00 | | | 11:00 | 8:00 |
| Volume | | | | | | | 611 | 632 | 602 | 604 | 632 | 600 | | | 581 | 548 |
| PM Peak | | | | | | | 4:00 | 4:00 | 2:00 | 12:00 PM | 2:00 | 12:00 PM | | | 3:00 | 12:00 PM |
| Volume | | | | | | | 860 | 525 | 696 | 563 | 665 | 505 | | | 710 | 509 |
| Comb Total | 0 | | 0 | | 0 | | 16651 | | 16304 | | 14001 | | 0 | | 15654 | |
| ADT | ADT: 15,652 | | AADT: 15,652 | | | | | | | | | | | | | |

GROWTH RATE DATA

| | Region A | |
|---|---|---|
| Year | VPY | Annual Change |
| 2004 | 14,061 | |
| 2005 | 13,962 | -0.70% |
| 2006 | 14,014 | 0.37% |
| 2007 | 13,993 | -0.15% |
| 2008 | 13,437 | -3.97% |
| 2009 | 13,855 | 3.11% |
| 2010 | 14,105 | 1.80% |
| 2011 | 12,909 | -8.48% |
| 2012 | 12,797 | -0.87% |
| 2013 | 13,032 | 1.84% |
| 2014 | 12,907 | -0.96% |
| 2015 | 13,653 | 5.78% |
| 2016 | 13,536 | -0.86% |
| 2017 | 13,843 | 2.27% |
| 2018 | 13,965 | 0.88% |
| 2019 | 14,306 | 2.44% |
| 2020 | 12,649 | -11.58% |
| 2021 | 14,154 | 11.90% |
| 2022 | 13,926 | -1.61% |
| 2023 | 14,205 | 2.00% |
| 2024 | 14,018 | -1.32% |

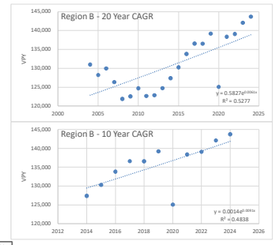
| | | | |
|---|---|---|---|
| 20 Year CAGR: | -0.02% | 10 Year CAGR: | 0.83% |
| 20 Year EXP: | 0.04% | 10 Year EXP: | 0.55% |
| 20-Average: | 0.01% | 10-Average: | 0.69% |




| Town | Bartlett | Jackson | Jefferson | Northumberland |
|---|---|---|---|---|
| Station | 02029001 | 02231001 | 02235001 | 02347001 |
| 2004 | 2,600 | 3,491 | 4,626 | 3,344 |
| 2005 | 2,393 | 3,684 | 4,614 | 3,271 |
| 2006 | 2,500 | 3,500 | 4,637 | 3,377 |
| 2007 | 2,400 | 3,673 | 4,600 | 3,320 |
| 2008 | 2,546 | 3,494 | 4,361 | 3,036 |
| 2009 | 2,691 | 3,682 | 4,467 | 3,015 |
| 2010 | 3,100 | 3,700 | 4,326 | 2,979 |
| 2011 | 2,438 | 3,381 | 4,300 | 2,790 |
| 2012 | 2,491 | 3,216 | 4,322 | 2,768 |
| 2013 | 2,643 | 3,358 | 4,272 | 2,759 |
| 2014 | 2,943 | 3,273 | 3,842 | 2,849 |
| 2015 | 2,874 | 3,460 | 4,419 | 2,900 |
| 2016 | 2,754 | 3,310 | 4,520 | 2,952 |
| 2017 | 2,773 | 3,472 | 4,585 | 3,013 |
| 2018 | 2,776 | 3,516 | 4,617 | 3,056 |
| 2019 | 2,848 | 3,636 | 4,781 | 3,041 |
| 2020 | 2,419 | 3,217 | 4,115 | 2,898 |
| 2021 | 2,794 | 3,625 | 4,657 | 3,078 |
| 2022 | 2,719 | 3,513 | 4,701 | 2,993 |
| 2023 | 2,713 | 3,464 | 5,009 | 3,019 |
| 2024 | 2,668 | 3,474 | 4,898 | 2,978 |

| | Region B | |
|---|---|---|
| Year | VPY | Annual Change |
| 2004 | 131,019 | |
| 2005 | 128,234 | -2.13% |
| 2006 | 129,966 | 1.35% |
| 2007 | 126,348 | -2.78% |
| 2008 | 121,909 | -3.51% |
| 2009 | 122,567 | 0.54% |
| 2010 | 124,720 | 1.76% |
| 2011 | 122,682 | -1.63% |
| 2012 | 122,867 | 0.15% |
| 2013 | 124,756 | 1.54% |
| 2014 | 127,382 | 2.10% |
| 2015 | 130,271 | 2.27% |
| 2016 | 133,810 | 2.72% |
| 2017 | 136,559 | 2.05% |
| 2018 | 136,543 | -0.01% |
| 2019 | 139,186 | 1.94% |
| 2020 | 125,069 | -10.14% |
| 2021 | 138,361 | 10.63% |
| 2022 | 139,083 | 0.52% |
| 2023 | 142,064 | 2.14% |
| 2024 | 143,694 | 1.15% |

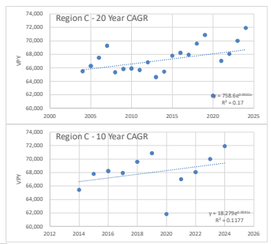
| | | | |
|---|---|---|---|
| 20 Year CAGR: | 0.46% | 10 Year CAGR: | 1.21% |
| 20 Year EXP: | 0.61% | 10 Year EXP: | 0.91% |
| 20-Average: | 0.54% | 10-Average: | 1.06% |




| Town | Alton | Alton | Belmont | Gilford | | Lincoln | Littleton | Meredith | Northfield | Ossipee | Plymouth | Tamworth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station | 02011001 | 62493054 | 22039022 | 02169053 | | 02259090 | 02265092 | 02295022 | 02451001 | 02357021 | 02067002 | 02443001 |
| 2004 | 5,626 | 7,200 | 19,224 | | 9,419 | 8,300 | 5,810 | 12,388 | 28,331 | 12,033 | 17,607 | 5,081 |
| 2005 | 6,000 | 6,600 | 17,744 | | 9,100 | 7,500 | 5,900 | 12,406 | 28,073 | 11,833 | 18,000 | 5,078 |
| 2006 | 5,456 | 7,003 | 19,000 | | 9,133 | 7,909 | 5,948 | 13,000 | 27,636 | 11,853 | 17,846 | 5,182 |
| 2007 | 5,628 | 7,085 | 16,647 | | 8,796 | 7,900 | 5,943 | 12,451 | 27,795 | 11,000 | 18,003 | 5,100 |
| 2008 | 5,386 | 6,733 | 16,445 | | 8,368 | 8,007 | 5,603 | 11,636 | 26,448 | 11,227 | 16,988 | 5,068 |
| 2009 | 5,063 | 6,800 | 16,539 | | 8,400 | 8,296 | 5,900 | 11,169 | 27,280 | 11,127 | 17,221 | 4,772 |
| 2010 | 5,404 | 7,078 | 17,285 | | 8,436 | 8,498 | 6,000 | 11,632 | 26,441 | 11,417 | 17,591 | 4,938 |
| 2011 | 5,183 | 6,837 | 16,586 | | 8,221 | 8,322 | 5,800 | 11,586 | 27,159 | 11,272 | 16,920 | 4,796 |
| 2012 | 5,160 | 6,811 | 16,811 | | 8,201 | 8,298 | 5,961 | 11,595 | 27,152 | 11,277 | 16,810 | 4,791 |
| 2013 | 5,338 | 6,794 | 17,160 | | 8,528 | 8,522 | 6,370 | 11,678 | 27,326 | 11,303 | 16,960 | 4,777 |
| 2014 | 5,472 | 6,956 | 17,633 | | 9,125 | 8,587 | 6,000 | 11,658 | 27,867 | 11,428 | 17,747 | 4,909 |
| 2015 | 5,592 | 7,024 | 17,737 | | 9,275 | 8,171 | 6,329 | 12,020 | 28,857 | 11,772 | 18,482 | 5,012 |
| 2016 | 5,802 | 7,212 | 18,200 | | 8,927 | 9,432 | 6,494 | 11,976 | 29,793 | 11,984 | 18,882 | 5,108 |
| 2017 | 5,782 | 7,244 | 18,142 | | 8,975 | 9,847 | 6,663 | 12,499 | 30,432 | 12,276 | 19,553 | 5,146 |
| 2018 | 5,775 | 7,334 | 17,715 | | 9,159 | 9,888 | 6,695 | 12,480 | 30,537 | 12,178 | 19,795 | 4,987 |
| 2019 | 5,942 | 7,490 | 17,663 | | 9,783 | 10,233 | 6,910 | 12,638 | 30,744 | 12,434 | 20,187 | 5,162 |
| 2020 | 5,650 | 6,668 | 16,172 | | 8,657 | 9,158 | 5,348 | 11,415 | 27,521 | 11,265 | 18,588 | 4,627 |
| 2021 | 6,225 | 7,706 | 17,510 | | 9,404 | 10,263 | 6,081 | 12,776 | 30,493 | 12,504 | 20,311 | 5,088 |
| 2022 | 6,245 | 7,942 | 17,426 | | 9,365 | 10,271 | 6,570 | 12,632 | 30,485 | 12,679 | 20,450 | 5,018 |
| 2023 | 6,310 | 7,949 | 17,584 | | 9,349 | 10,582 | 7,166 | 12,997 | 30,962 | 12,869 | 21,024 | 5,272 |
| 2024 | 6,283 | 8,057 | 17,551 | | 9,379 | 10,967 | 7,412 | 12,686 | 31,408 | 13,207 | 21,544 | 5,200 |

| | Region C | |
|---|---|---|
| Year | VPY | Annual Change |
| 2004 | 65,484 | |
| 2005 | 66,267 | 1.20% |
| 2006 | 67,492 | 1.85% |
| 2007 | 69,270 | 2.63% |
| 2008 | 65,341 | -5.67% |
| 2009 | 65,819 | 0.73% |
| 2010 | 65,900 | 0.12% |
| 2011 | 65,667 | -0.35% |
| 2012 | 66,807 | 1.74% |
| 2013 | 64,614 | -3.28% |
| 2014 | 65,433 | 1.27% |
| 2015 | 67,796 | 3.61% |
| 2016 | 68,222 | 0.63% |
| 2017 | 67,938 | -0.42% |
| 2018 | 69,584 | 2.42% |
| 2019 | 70,859 | 1.83% |
| 2020 | 61,846 | -12.72% |
| 2021 | 67,012 | 8.35% |
| 2022 | 68,062 | 1.57% |
| 2023 | 70,004 | 2.85% |
| 2024 | 71,912 | 2.73% |

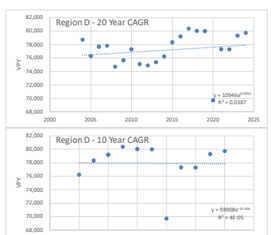
| | | | |
|---|---|---|---|
| 20 Year CAGR: | 0.47% | 10 Year CAGR: | 0.95% |
| 20 Year EXP: | 0.22% | 10 Year EXP: | 0.41% |
| 20-Average: | 0.35% | 10-Average: | 0.68% |




| Town | Lebanon | Lebanon | Lyme | Rumney |
|---|---|---|---|---|
| Station | 02253025 | 02253090 | 02277021 | 02395021 |
| 2004 | 18,183 | 38,478 | 2,074 | 6,749 |
| 2005 | 19,576 | 38,000 | 1,997 | 6,694 |
| 2006 | 21,000 | 38,000 | 1,868 | 6,624 |
| 2007 | 22,000 | 39,000 | 1,979 | 6,291 |
| 2008 | 19,799 | 37,642 | 1,900 | 6,000 |
| 2009 | 19,735 | 38,234 | 1,750 | 6,100 |
| 2010 | 19,873 | 38,000 | 1,759 | 6,268 |
| 2011 | 19,474 | 38,500 | 1,785 | 5,908 |
| 2012 | 19,856 | 39,000 | 1,817 | 6,134 |
| 2013 | 19,112 | 38,048 | 1,814 | 5,640 |
| 2014 | 19,096 | 38,726 | 1,740 | 5,871 |
| 2015 | 19,146 | 40,866 | 1,758 | 6,026 |
| 2016 | 19,358 | 40,979 | 1,793 | 6,092 |
| 2017 | 19,256 | 40,700 | 1,752 | 6,230 |
| 2018 | 19,552 | 42,009 | 1,709 | 6,314 |
| 2019 | 20,106 | 42,639 | 1,748 | 6,366 |
| 2020 | 15,077 | 39,228 | 1,577 | 5,964 |
| 2021 | 16,773 | 42,170 | 1,618 | 6,451 |
| 2022 | 17,327 | 42,634 | 1,615 | 6,486 |
| 2023 | 17,938 | 43,487 | 1,862 | 6,717 |
| 2024 | 18,558 | 44,601 | 2,023 | 6,731 |

| | Region D | |
|---|---|---|
| Year | VPY | Annual Change |
| 2004 | 78,724 | |
| 2005 | 76,288 | -3.09% |
| 2006 | 77,671 | 1.81% |
| 2007 | 77,815 | 0.19% |
| 2008 | 74,707 | -3.99% |
| 2009 | 75,658 | 1.27% |
| 2010 | 77,290 | 2.16% |
| 2011 | 75,104 | -2.83% |
| 2012 | 74,894 | -0.28% |
| 2013 | 75,380 | 0.65% |
| 2014 | 76,223 | 1.12% |
| 2015 | 78,315 | 2.74% |
| 2016 | 79,197 | 1.13% |
| 2017 | 80,352 | 1.46% |
| 2018 | 80,020 | -0.41% |
| 2019 | 79,989 | -0.04% |
| 2020 | 69,728 | -12.83% |
| 2021 | 77,308 | 10.87% |
| 2022 | 77,293 | -0.02% |
| 2023 | 79,301 | 2.60% |
| 2024 | 79,729 | 0.54% |

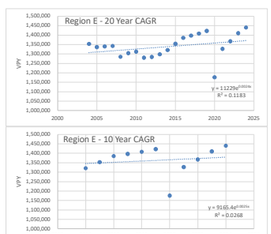
| | | | |
|---|---|---|---|
| 20 Year CAGR: | 0.06% | 10 Year CAGR: | 0.45% |
| 20 Year EXP: | 0.10% | 10 Year EXP: | -0.01% |
| 20-Average: | 0.08% | 10-Average: | 0.22% |




| Town | Chesterfield | Claremont | Henniker | Hillsborough | | Marlborou | Newport | Rindge | Warner | Wilton |
|---|---|---|---|---|---|---|---|---|---|---|
| Station | 02087021 | 02091001 | 62463050 | 02217001 | | 02287001 | 02339001 | 62387052 | 02439005 | 02445001 |
| 2004 | 12,210 | 9,206 | 3,134 | | 5,804 | 9,786 | 3,948 | 8,698 | 17,826 | 8,112 |
| 2005 | 12,000 | 9,100 | 3,200 | | 5,704 | 9,469 | 3,976 | 8,100 | 17,139 | 7,600 |
| 2006 | 12,047 | 9,466 | 3,166 | | 5,773 | 9,652 | 3,973 | 8,247 | 17,376 | 7,971 |
| 2007 | 12,019 | 9,306 | 3,179 | | 5,830 | 9,355 | 3,944 | 8,158 | 18,000 | 8,024 |
| 2008 | 11,500 | 9,078 | 2,953 | | 5,539 | 9,199 | 3,808 | 8,018 | 16,937 | 7,675 |
| 2009 | 11,956 | 8,969 | 3,242 | | 5,700 | 9,229 | 3,880 | 8,053 | 17,000 | 7,629 |
| 2010 | 11,880 | 9,210 | 3,180 | | 6,085 | 9,432 | 3,927 | 8,090 | 17,911 | 7,575 |
| 2011 | 11,499 | 8,997 | 2,944 | | 5,759 | 9,234 | 3,778 | 7,979 | 17,691 | 7,223 |
| 2012 | 11,527 | 8,959 | 2,999 | | 5,801 | 9,099 | 3,751 | 7,859 | 17,691 | 7,208 |
| 2013 | 11,824 | 8,896 | 3,046 | | 5,898 | 9,066 | 3,718 | 7,907 | 17,796 | 7,229 |
| 2014 | 12,075 | 8,639 | 3,159 | | 5,954 | 9,256 | 3,690 | 7,932 | 18,165 | 7,353 |
| 2015 | 12,167 | 9,208 | 3,225 | | 6,299 | 9,487 | 3,770 | 8,142 | 18,628 | 7,389 |
| 2016 | 12,151 | 9,480 | 3,319 | | 6,560 | 9,739 | 3,788 | 8,114 | 18,560 | 7,486 |
| 2017 | 12,326 | 9,297 | 3,387 | | 6,742 | 9,824 | 3,823 | 8,155 | 19,299 | 7,499 |
| 2018 | 12,068 | 9,317 | 3,380 | | 6,614 | 9,669 | 3,836 | 8,237 | 19,481 | 7,418 |
| 2019 | 11,993 | 9,379 | 3,428 | | 6,316 | 9,701 | 3,897 | 8,319 | 19,418 | 7,538 |
| 2020 | 9,969 | 8,468 | 3,529 | | 5,520 | 8,339 | 3,512 | 7,221 | 16,855 | 6,315 |
| 2021 | 11,167 | 9,229 | 3,884 | | 6,678 | 9,203 | 3,703 | 8,023 | 18,473 | 6,948 |
| 2022 | 11,201 | 9,157 | 3,984 | | 6,761 | 9,269 | 3,677 | 8,103 | 18,296 | 6,845 |
| 2023 | 11,517 | 9,277 | 3,928 | | 7,411 | 9,335 | 3,774 | 8,225 | 18,912 | 6,922 |
| 2024 | 11,725 | 9,299 | 3,861 | | 7,250 | 9,240 | 3,835 | 8,144 | 19,496 | 6,880 |

| | Region E | |
|---|---|---|
| Year | VPY | Annual Change |
| 2004 | 1,353,263 | |
| 2005 | 1,336,129 | -1.27% |
| 2006 | 1,340,011 | 0.29% |
| 2007 | 1,341,995 | 0.15% |
| 2008 | 1,285,116 | -4.24% |
| 2009 | 1,303,948 | 1.47% |
| 2010 | 1,312,251 | 0.64% |
| 2011 | 1,279,824 | -2.47% |
| 2012 | 1,284,314 | 0.35% |
| 2013 | 1,298,171 | 1.08% |
| 2014 | 1,320,862 | 1.75% |
| 2015 | 1,353,486 | 2.47% |
| 2016 | 1,385,361 | 2.36% |
| 2017 | 1,396,932 | 0.84% |
| 2018 | 1,408,237 | 0.81% |
| 2019 | 1,422,176 | 0.99% |
| 2020 | 1,176,424 | -17.28% |
| 2021 | 1,326,889 | 12.79% |
| 2022 | 1,367,310 | 3.05% |
| 2023 | 1,409,876 | 3.11% |
| 2024 | 1,439,862 | 2.13% |

| | | | |
|---|---|---|---|
| 20 Year CAGR: | 0.31% | 10 Year CAGR: | 0.87% |
| 20 Year EXP: | 0.24% | 10 Year EXP: | 0.25% |
| 20-Average: | 0.27% | 10-Average: | 0.56% |




*Not in 2023 count *Not in 2023 count

| Town | Amherst | Barrington | Bedford | Bow | | Candia | Chichester | Chichester | Concord | Concord | Concord | Concord | Concord | Derry | Dover | Dover | Durham | Exeter | Hampton | Hampton Falls | Hooksett | Hooksett | Hopkinton | Hudson | Hudson | Merrimack | Nashua | Newington | North Hampton | Nottingham | Rochester | Salem | Seabrook | Seabrook | Windham |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station | 02330001 | 02255001 | 02037090 | 02051003 | | 02071090 | 02089002 | 02089002 | 02095092 | 02095092 | 02099103 | 02099103 | 02099056 | 72099278 | 02489002 | 02125001 | 02125090 | 02153001 | 02197090 | 02197076 | 02225091 | 02285092 | 02227001 | 02229022 | 02231051 | 02297001 | 62315281 | 02331001 | 02345001 | 02349001 | 02389090 | 02399090 | 02197002 | 02409003 | 02489001 |
| 2004 | 34,000 | 14,568 | 48,883 | | 8,464 | 35,570 | 13,895 | 17,717 | 45,135 | 74,294 | 41,050 | 17,253 | 13,173 | 76,000 | 12,912 | 39,727 | 18,170 | 38,143 | 62,936 | 20,000 | 68,697 | 58,687 | 36,052 | 39,206 | 37,000 | 13,809 | 117,824 | 70,866 | 17,379 | 9,200 | 24,683 | 116,000 | 10,037 | 89,424 | 12,509 |
| 2005 | 32,000 | 13,000 | 51,068 | | 8,670 | 36,000 | 14,000 | 17,605 | 43,000 | 72,000 | 41,000 | 16,311 | 13,188 | 73,658 | 13,275 | 39,414 | 17,551 | 39,274 | 65,610 | 20,000 | 69,630 | 58,077 | 35,000 | 40,678 | 35,005 | 13,000 | 119,332 | 71,000 | 15,869 | 9,202 | 25,528 | 108,000 | 8,900 | 88,000 | 12,284 |
| 2006 | 32,171 | 13,775 | 51,391 | | 8,650 | 36,947 | 13,975 | 17,775 | 44,278 | 74,000 | 40,709 | 17,017 | 13,021 | 71,712 | 13,637 | 38,890 | 17,492 | 40,000 | 64,477 | 20,261 | 69,024 | 58,353 | 36,366 | 41,702 | 35,606 | 13,519 | 117,000 | 69,945 | 16,525 | 9,363 | 24,668 | 109,688 | 9,036 | 87,038 | 12,000 |
| 2007 | 31,846 | 13,577 | 51,757 | | 8,658 | 37,436 | 13,800 | 17,000 | 44,577 | 73,442 | 41,000 | 16,905 | 12,559 | 72,306 | 14,000 | 39,009 | 17,342 | 41,000 | 64,988 | 20,111 | 69,209 | 59,500 | 35,000 | 41,597 | 35,000 | 13,306 | 118,919 | 69,614 | 16,527 | 9,247 | 25,323 | 108,516 | 9,239 | 88,453 | 11,232 |
| 2008 | 30,990 | 13,113 | 48,897 | | 8,679 | 35,372 | 13,269 | 16,776 | 42,376 | 70,930 | 39,000 | 16,133 | 11,000 | 69,304 | 13,393 | 36,174 | 16,535 | 39,000 | 60,791 | 20,468 | 65,756 | 57,648 | 35,143 | 40,822 | 34,909 | 12,558 | 114,461 | 68,000 | 16,764 | 8,838 | 23,320 | 102,000 | 8,711 | 82,423 | 11,563 |
| 2009 | 31,000 | 13,372 | 47,348 | | 8,727 | 36,780 | 13,263 | 17,251 | 43,000 | 72,000 | 39,000 | 16,054 | 10,573 | 70,712 | 13,500 | 35,687 | 16,830 | 40,000 | 61,166 | 21,000 | 66,502 | 58,000 | 36,000 | 41,084 | 34,396 | 13,000 | 117,000 | 68,000 | 16,953 | 9,100 | 22,776 | 106,542 | 8,900 | 87,000 | 11,932 |
| 2010 | 30,889 | 13,686 | 48,377 | | 8,696 | 37,433 | 13,678 | 17,325 | 44,153 | 72,644 | 38,371 | 16,371 | 10,146 | 70,864 | 13,567 | 36,127 | 16,682 | 39,804 | 61,950 | 21,313 | 68,103 | 59,000 | 36,000 | 42,255 | 35,000 | 12,455 | 120,000 | 67,491 | 16,970 | 9,458 | 22,348 | 105,293 | 8,211 | 85,591 | 12,000 |
| 2011 | 30,130 | 13,437 | 48,063 | | 8,471 | 36,990 | 13,307 | 16,792 | 43,127 | 71,180 | 37,664 | 16,026 | 9,701 | 67,614 | 13,024 | 35,623 | 16,000 | 39,375 | 60,860 | 20,000 | 67,133 | 57,000 | 36,405 | 42,183 | 34,000 | 12,378 | 114,349 | 66,177 | 17,000 | 9,056 | 22,409 | 100,000 | 8,485 | 84,865 | 11,000 |
| 2012 | 29,968 | 13,507 | 47,622 | | 8,498 | 36,818 | 13,137 | 16,509 | 42,501 | 70,046 | 37,388 | 16,095 | 9,974 | 68,906 | 12,639 | 36,018 | 16,152 | 40,319 | 61,139 | 20,667 | 66,344 | 60,898 | 35,873 | 42,215 | 33,244 | 12,670 | 116,405 | 66,537 | 16,434 | 9,077 | 22,923 | 103,891 | 8,594 | 85,328 | 10,978 |
| 2013 | 29,902 | 13,838 | 43,150 | | 8,515 | 36,628 | 13,180 | 16,695 | 42,963 | 71,142 | 37,746 | 16,118 | 11,005 | 70,488 | 12,461 | 36,930 | 15,989 | 40,555 | 62,595 | 20,349 | 68,144 | 60,189 | 36,458 | 41,664 | 32,553 | 12,902 | 117,735 | 66,679 | 16,267 | 9,021 | 23,965 | 106,309 | 8,574 | 86,443 | 11,019 |
| 2014 | 30,111 | 13,941 | 45,233 | | 8,579 | 39,124 | 13,291 | 16,721 | 43,400 | 72,640 | 38,153 | 16,326 | 11,417 | 71,948 | 12,490 | 37,747 | 15,969 | 43,725 | 63,884 | 20,373 | 70,051 | 63,072 | 37,545 | 42,152 | 32,238 | 13,307 | 120,827 | 66,891 | 16,172 | 9,075 | 25,005 | 100,925 | 8,820 | 88,895 | 10,815 |
| 2015 | 30,504 | 14,021 | 46,598 | | 8,296 | 40,767 | 13,412 | 16,965 | 44,865 | 72,977 | 39,351 | 16,447 | 11,859 | 71,060 | 12,396 | 39,097 | 16,208 | 43,525 | 66,160 | 21,837 | 73,052 | 64,968 | 38,926 | 43,285 | 32,439 | 14,197 | 124,280 | 67,673 | 16,290 | 9,124 | 26,512 | 104,409 | 8,959 | 92,380 | 10,647 |
| 2016 | 31,109 | 14,456 | 47,964 | | 8,560 | 42,411 | 13,797 | 16,947 | 45,993 | 74,816 | 39,628 | 16,587 | 12,063 | 72,253 | 12,219 | 40,725 | 16,591 | 45,161 | 69,034 | 20,846 | 75,870 | 67,440 | 39,514 | 44,573 | 31,045 | 14,827 | 123,875 | 70,393 | 16,353 | 9,360 | 27,897 | 106,630 | 9,377 | 96,128 | 10,917 |
| 2017 | 30,988 | 14,551 | 48,646 | | 8,713 | 42,751 | 13,803 | 16,741 | 46,389 | 77,535 | 38,198 | 16,418 | 11,483 | 73,698 | 11,436 | 41,642 | 16,450 | 45,888 | 69,490 | 18,964 | 77,242 | 68,226 | 40,088 | 45,310 | 31,666 | 15,284 | 124,932 | 70,335 | 16,356 | 9,389 | 28,601 | 107,320 | 9,466 | 97,907 | 11,026 |
| 2018 | 30,752 | 14,626 | 49,466 | | 8,727 | 43,429 | 13,784 | 16,756 | 47,810 | 77,246 | 38,513 | 16,461 | 11,469 | 75,172 | 10,938 | 42,315 | 16,021 | 46,393 | 70,410 | 20,220 | 77,846 | 67,299 | 40,406 | 46,216 | 32,299 | 15,446 | 125,001 | 70,054 | 16,254 | 9,411 | 29,168 | 109,466 | 9,166 | 98,783 | 10,914 |
| 2019 | 31,121 | 14,690 | 49,623 | | 8,762 | 44,064 | 13,810 | 16,866 | 48,697 | 77,332 | 38,641 | 16,791 | 11,428 | 76,074 | 11,100 | 43,124 | 15,596 | 46,686 | 71,739 | 20,600 | 78,558 | 68,053 | 40,632 | 46,771 | 32,687 | 15,553 | 125,544 | 70,895 | 16,139 | 9,438 | 30,064 | 110,780 | 9,164 | 100,908 | 10,246 |
| 2020 | 26,266 | 13,252 | 38,067 | | 7,598 | 35,726 | 12,342 | 14,519 | 41,172 | 63,860 | 31,773 | 14,507 | 10,396 | 64,206 | 9,876 | 36,202 | 11,885 | 36,231 | 56,200 | 18,847 | 63,190 | 58,665 | 31,394 | 39,475 | 27,588 | 13,234 | 100,357 | 59,835 | 13,985 | 7,881 | 26,560 | 93,498 | 9,300 | 80,619 | 7,918 |
| 2021 | 29,129 | 13,853 | 42,679 | | 8,201 | 40,325 | 13,621 | 16,229 | 45,579 | 71,279 | 35,299 | 15,923 | 11,175 | 71,204 | 10,410 | 40,460 | 14,711 | 41,152 | 67,785 | 20,354 | 72,035 | 65,410 | 37,216 | 43,778 | 31,551 | 14,598 | 110,055 | 66,357 | 15,079 | 8,883 | 29,467 | 109,291 | 9,776 | 95,378 | 8,647 |
| 2022 | 29,682 | 14,253 | 44,288 | | 8,628 | 40,585 | 13,606 | 16,321 | 45,903 | 73,532 | 35,759 | 15,893 | 11,096 | 80,514 | 10,373 | 41,165 | 15,532 | 41,161 | 70,625 | 20,578 | 74,563 | 67,037 | 38,456 | 44,610 | 32,150 | 14,946 | 114,282 | 67,618 | 15,098 | 9,156 | 29,796 | 113,331 | 9,293 | 98,777 | 8,703 |
| 2023 | 30,365 | 14,116 | 45,907 | | 8,582 | 42,223 | 13,723 | 16,681 | 47,197 | 75,055 | 36,711 | 16,150 | 10,952 | 83,612 | 11,319 | 42,315 | 16,677 | 42,836 | 72,024 | 21,187 | 78,659 | 67,475 | 40,350 | 45,636 | 32,889 | 15,036 | 118,864 | 69,173 | 15,436 | 9,418 | 30,697 | 116,980 | 9,402 | 103,563 | 8,666 |
| 2024 | 28,338 | 13,834 | 47,165 | | 8,799 | 43,229 | 13,151 | 16,526 | 48,059 | 76,508 | 37,050 | 16,040 | 11,065 | 86,477 | 11,222 | 43,870 | 16,645 | 44,254 | 74,555 | 21,084 | 80,657 | 71,080 | 41,009 | 44,543 | 27,884 | 15,116 | 116,856 | 92,809 | 15,628 | 8,969 | 31,953 | 113,842 | 9,277 | 103,738 | 8,630 |

TRIP GENERATION DATA

***Institute of Transportation Engineers (ITE)***
***Trip Generation, 12th Edition***
**Land Use Code (LUC) 311 - All Suites Hotel**

Average Vehicle Trips Ends vs: Rooms
Independent Variable (X): 94

**AVERAGE WEEKDAY DAILY**

T = 5.16 * (X) -112.23
T = 5.16 * 94 -112.23
T = 372.81
T = 372 vehicle trips
with 50% ( 186 vpd) entering and 50% ( 186 vpd) exiting.

**WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC**

T = 0.33* (X) -9.86
T = 0.33 * 94 -9.86
T = 21.16
T = 21.00 vehicle trips
with 51% ( 11 vpd) entering and 49% ( 10 vpd) exiting.

**WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC**

T = 0.36 * (X) -3.7
T = 0.36 * 94 -3.70
T = 30.14
T = 30.00 vehicle trips
with 51% ( 15 vpd) entering and 49% ( 15 vpd) exiting.

**SATURDAY DAILY (Not provided - uses average rate ratio of LUC 310 Daily to PM Peak)**

| | | | |
|---|---|---|---|
| LUC 310 Room Saturday | 6.92 | LUC 311 Room Saturday | X |
| LUC 310 Room PM Peak | 0.47 | LUC 311 Room PM Peak | 0.34 |

X = 5.01

T = 5.01 * (X)
T = 5.01 * 94.000
T = 470.94
T = 470 vehicle trips
with 50% ( 235 vph) entering and 50% ( 235 vph) exiting.

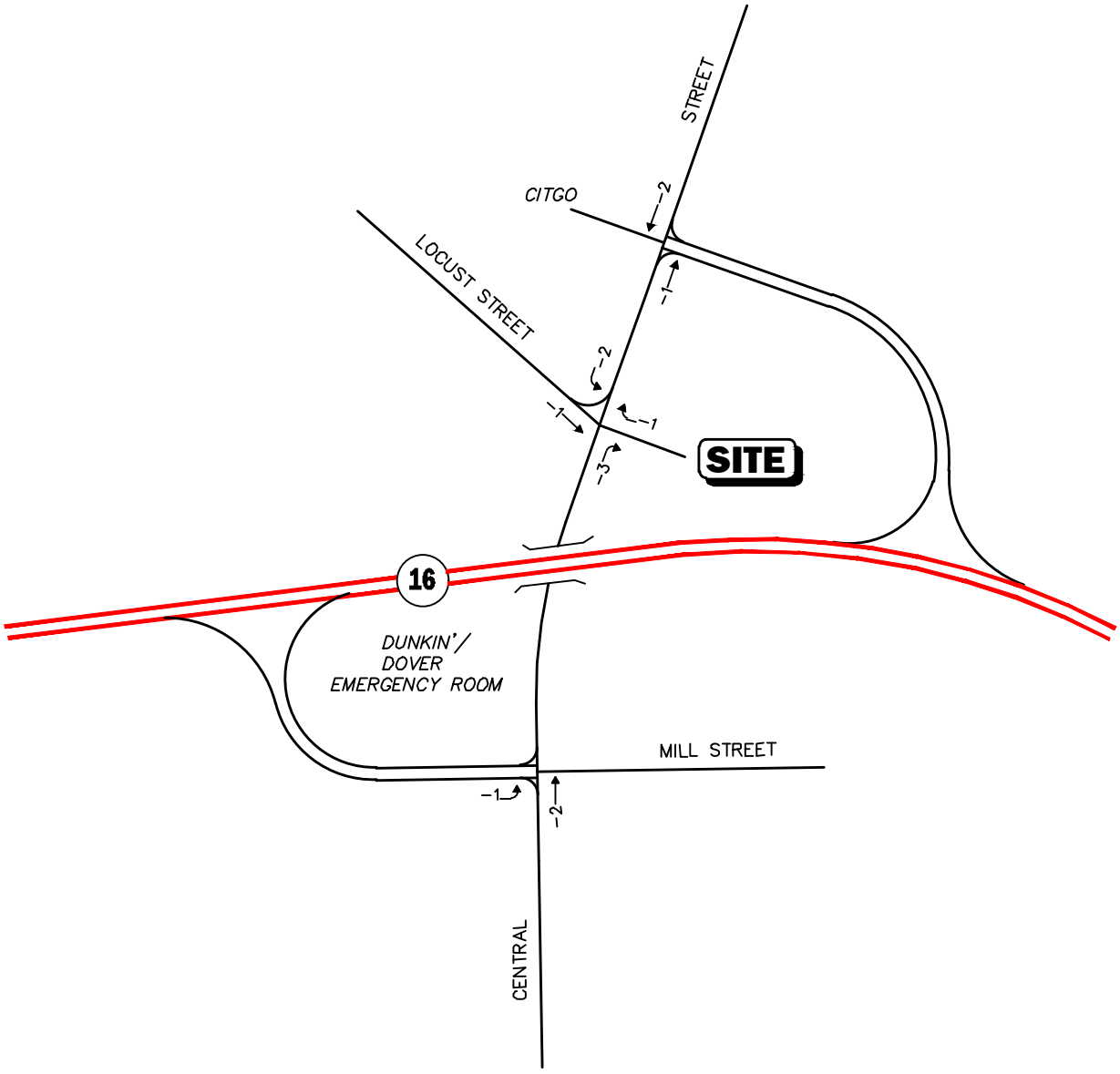
**SATURDAY MIDDAY PEAK HOUR OF GENERATOR (Not provided - uses average rate ratio of LUC 310 Saturday Peak to PM Peak)**

| | | | |
|---|---|---|---|
| LUC 310 Room Saturday Peak | 0.47 | LUC 311 Room Saturday Peak | X |
| LUC 310 Room PM Peak | 0.47 | LUC 311 Room PM Peak | 0.34 |

X = 0.34

T = 0.34 * (X)
T = 0.34 * 94.000
T = 31.96
T = 32 vehicle trips
with 50% ( 16 vph) entering and 50% ( 16 vph) exiting.

REMOVED EXISTING TRIPS NETWORKS




Not To Scale

**Figure A-1**

**Removed Existing Trips**
**Weekday Morning**
**Peak-Hour Traffic Volumes**

Vanasse & Associates inc

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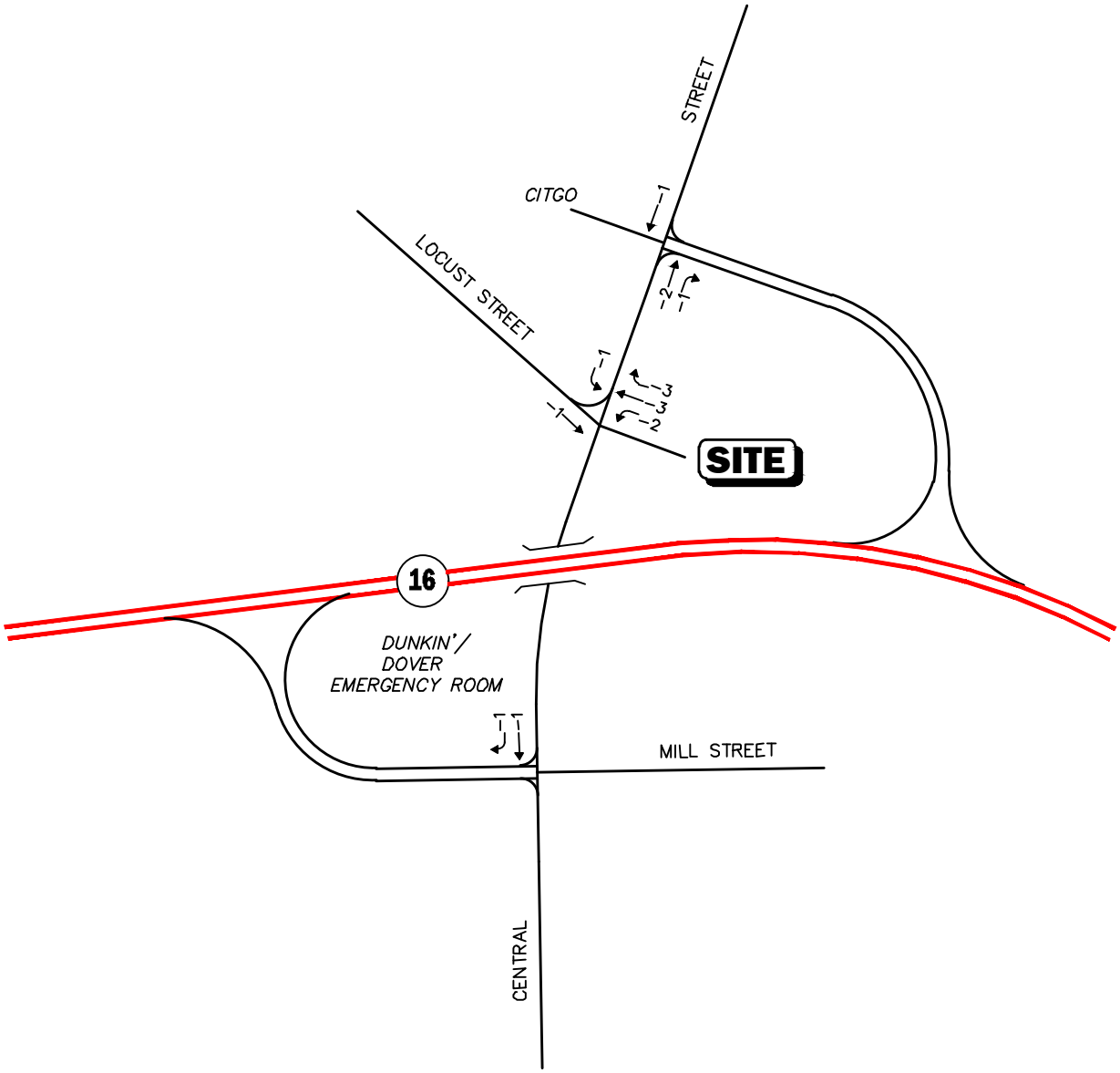


Not To Scale

**Figure A-2**

**Removed Existing Trips**
**Weekday Evening**
**Peak-Hour Traffic Volumes**

Vanasse & Associates inc

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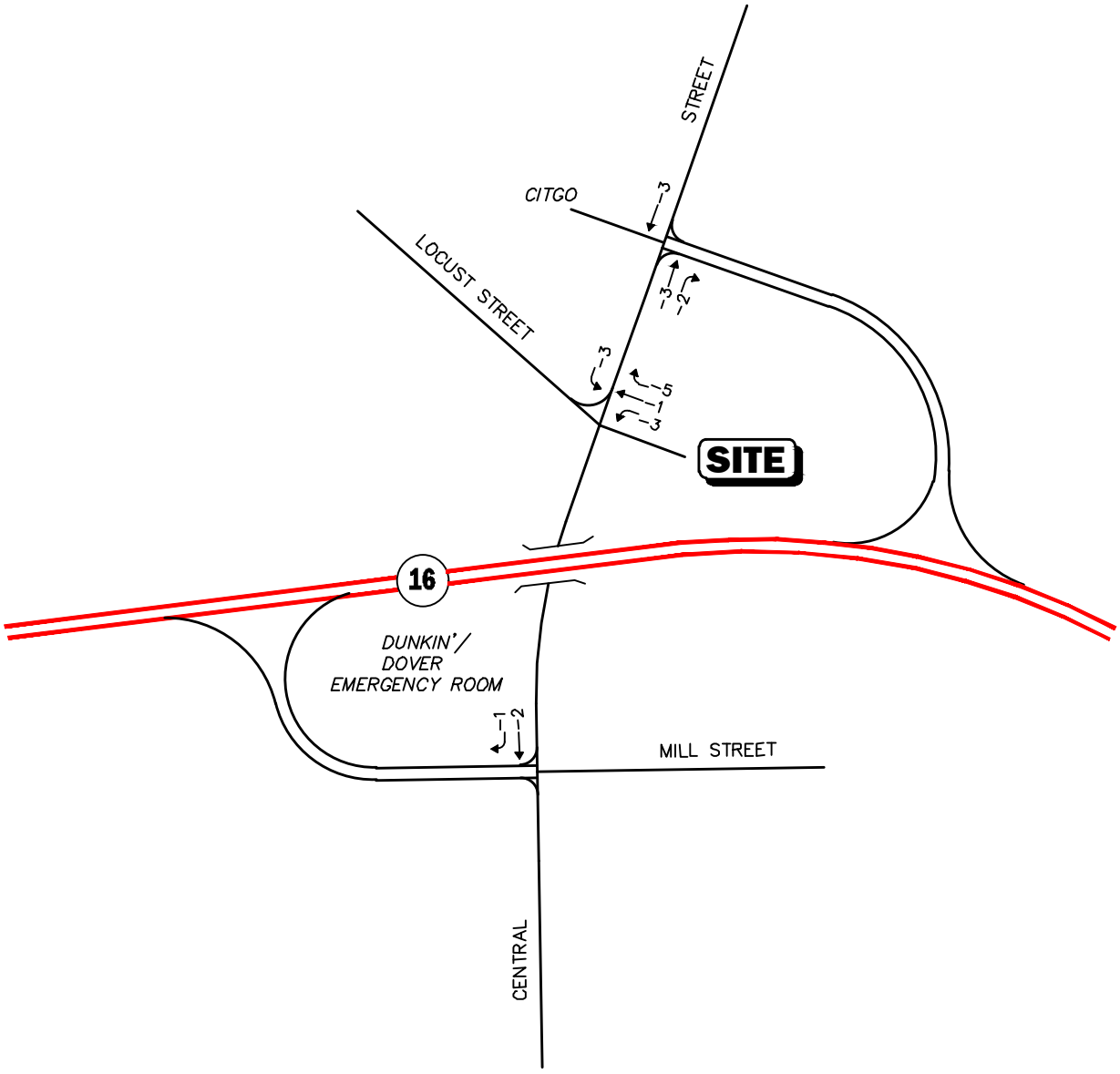


Not To Scale

**Figure A-3**

**Removed Existing Trips**
**Saturday Midday**
**Peak-Hour Traffic Volumes**

Vanasse & Associates inc

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# Graph Look Up

Graph Look Up
How to Use ITETripGen
TGM Desk Reference
TGM Appendices
Support Documents
Add Users
Comments

Add-ons to do more
Try OTISS Pro

Query | Filter

DATA SOURCE: Trip Generation Manual, 12th Ed

SEARCH BY LAND USE CODE: 934

LAND USE GROUP: (900-999) Services

LAND USE : 934 - Fast-Food Restaurant with Drive

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

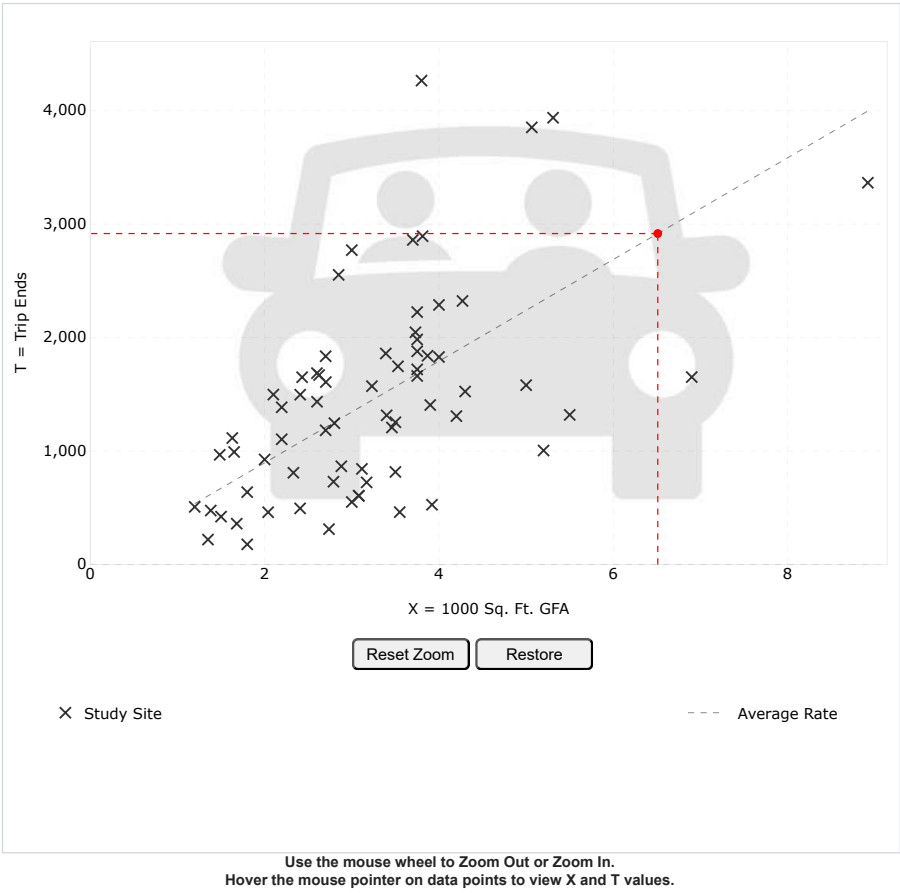
INDEPENDENT VARIABLE (IV): 1000 Sq. Ft. GFA

TIME PERIOD: Weekday

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 6.51 Calculate

## Data Plot and Equation




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

## DATA STATISTICS

**Land Use:**
Fast-Food Restaurant with Drive-Through Window (934) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
68

**Avg. 1000 Sq. Ft. GFA:**
3

**Average Rate:**
448.12

**Range of Rates:**
98.89 - 1122.37

**Standard Deviation:**
217.66

**Fitted Curve Equation:**
Not Given

**$R^2$:**
****

**Directional Distribution:**
50% entering, 50% exiting

**Calculated Trip Ends:**
Average Rate: 2917 (Total), 1459 (Entry), 1458 (Exit)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DATA SOURCE: Trip Generation Manual, 12th Ed

SEARCH BY LAND USE CODE: 934

LAND USE GROUP: (900-999) Services

LAND USE : 934 - Fast-Food Restaurant with Drive

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

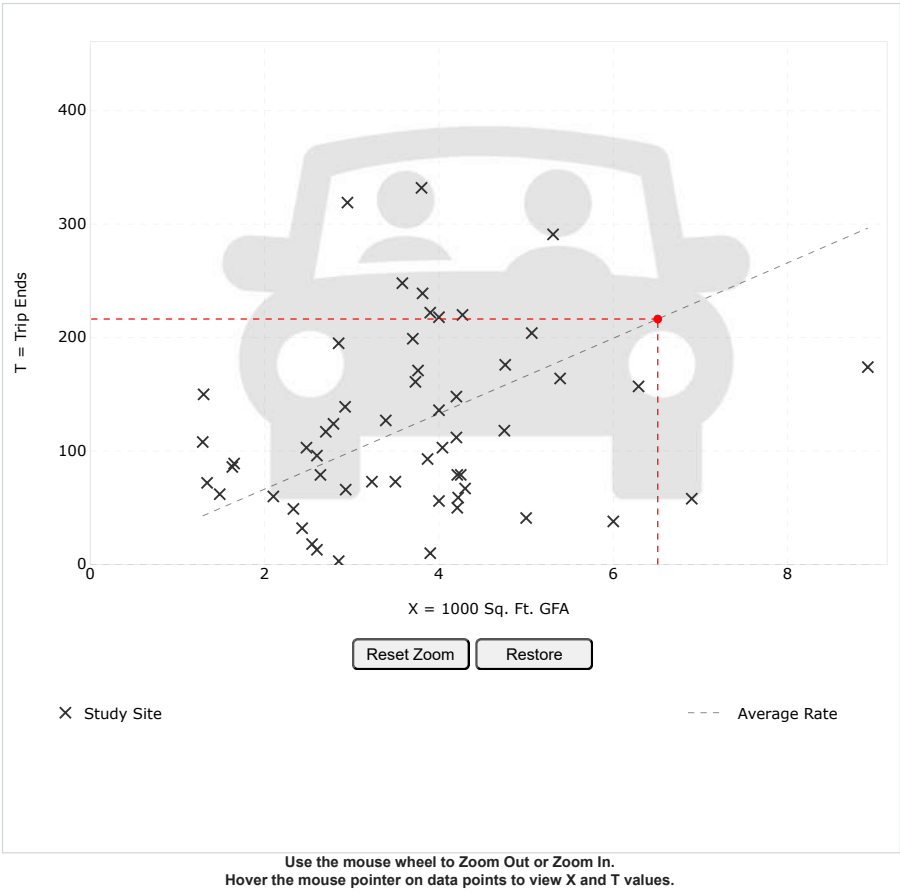
INDEPENDENT VARIABLE (IV): 1000 Sq. Ft. GFA

TIME PERIOD: Weekday, Peak Hour of Adjacent Stre

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 6.51 Calculate

## Data Plot and Equation




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

## DATA STATISTICS

**Land Use:**
Fast-Food Restaurant with Drive-Through Window (934) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
55

**Avg. 1000 Sq. Ft. GFA:**
4

**Average Rate:**
33.24

**Range of Rates:**
1.05 - 115.38

**Standard Deviation:**
22.70

**Fitted Curve Equation:**
Not Given

**$R^2$:**
****

**Directional Distribution:**
51% entering, 49% exiting

**Calculated Trip Ends:**
Average Rate: 216 (Total), 110 (Entry), 106 (Exit)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# Graph Look Up

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Add-ons to do more

Try OTISS Pro

Query | Filter

**DATA SOURCE:** Trip Generation Manual, 12th Ed

**SEARCH BY LAND USE CODE:** 934

**LAND USE GROUP:** (900-999) Services

**LAND USE :** 934 - Fast-Food Restaurant with Drive

**LAND USE SUBCATEGORY:** All Sites

**SETTING/LOCATION:** General Urban/Suburban

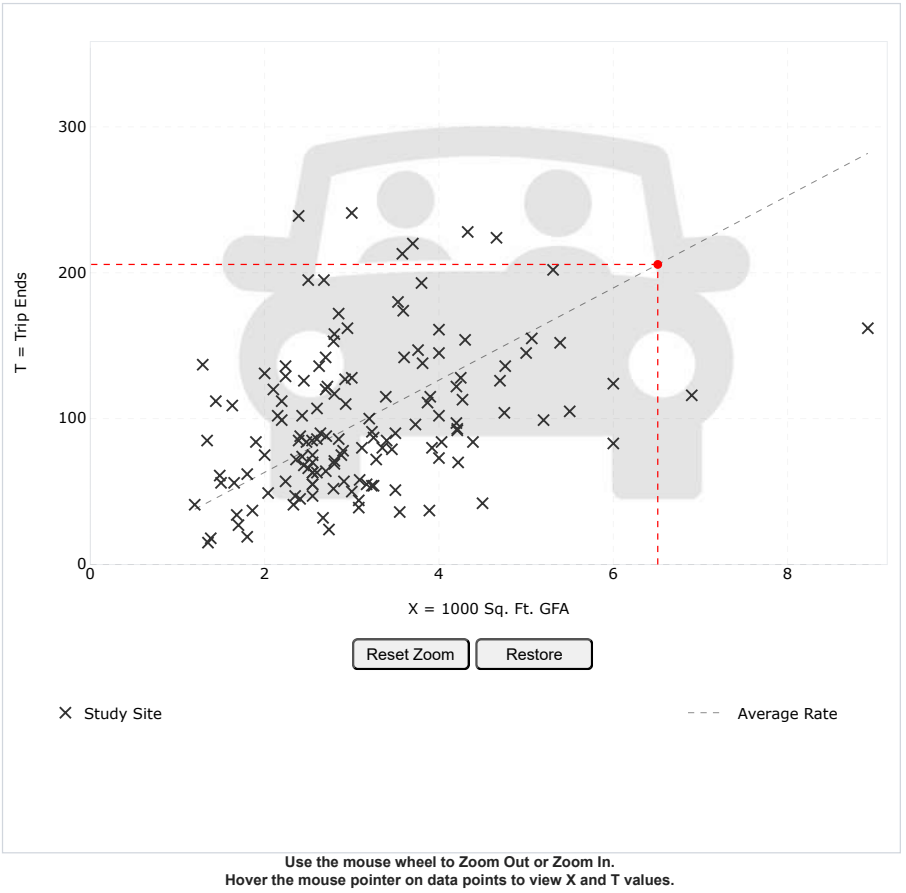
**INDEPENDENT VARIABLE (IV):** 1000 Sq. Ft. GFA

**TIME PERIOD:** Weekday, Peak Hour of Adjacent Stre

**TRIP TYPE:** Vehicle

**ENTER IV VALUE TO CALCULATE TRIPS:** 6.51 Calculate

## Data Plot and Equation




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

### DATA STATISTICS

**Land Use:**
Fast-Food Restaurant with Drive-Through Window (934) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
139

**Avg. 1000 Sq. Ft. GFA:**
3

**Average Rate:**
31.60

**Range of Rates:**
8.77 - 106.20

**Standard Deviation:**
16.21

**Fitted Curve Equation:**
Not Given

**$R^2$:**
****

**Directional Distribution:**
52% entering, 48% exiting

**Calculated Trip Ends:**
Average Rate: 206 (Total), 107 (Entry), 99 (Exit)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- Comments

Add-ons to do more

Try OTISS Pro

Query | Filter

DATA SOURCE:
Trip Generation Manual, 12th Ed

SEARCH BY LAND USE CODE:
934

LAND USE GROUP:
(900-999) Services

LAND USE :
934 - Fast-Food Restaurant with Drive

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

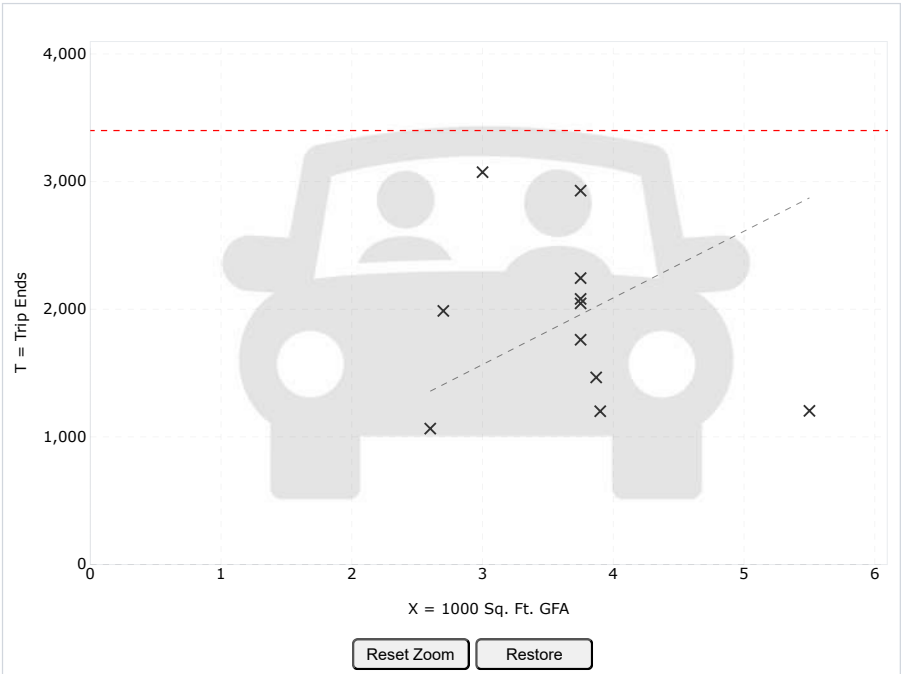
INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

TIME PERIOD:
Saturday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
6.51 Calculate

## Data Plot and Equation




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

## DATA STATISTICS

**Land Use:**
Fast-Food Restaurant with Drive-Through Window (934) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Saturday

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
11

**Avg. 1000 Sq. Ft. GFA:**
4

**Average Rate:**
522.28

**Range of Rates:**
218.91 - 1024.67

**Standard Deviation:**
231.69

**Fitted Curve Equation:**
Not Given

**$R^2$:**
****

**Directional Distribution:**
50% entering, 50% exiting

**Calculated Trip Ends:**
Average Rate: 3400 (Total), 1700 (Entry), 1700 (Exit)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- TGM Appendices
- Support Documents
- Add Users
- Comments

Add-ons to do more

Try OTISS Pro

Query | Filter

DATA SOURCE: Trip Generation Manual, 12th Ed

SEARCH BY LAND USE CODE: 934

LAND USE GROUP: (900-999) Services

LAND USE : 934 - Fast-Food Restaurant with Drive

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

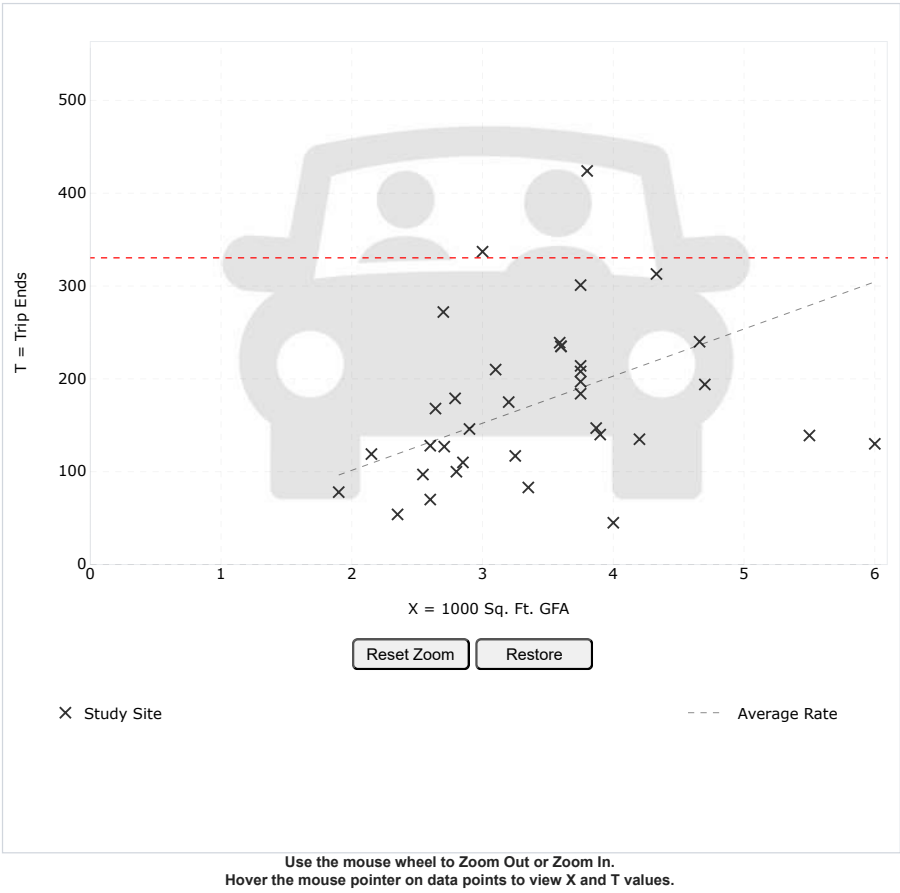
INDEPENDENT VARIABLE (IV): 1000 Sq. Ft. GFA

TIME PERIOD: Saturday, Peak Hour of Generator

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 6.51 Calculate

## Data Plot and Equation




Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

## DATA STATISTICS

**Land Use:**
Fast-Food Restaurant with Drive-Through Window (934) Click for Description and Data Plots

**Independent Variable:**
1000 Sq. Ft. GFA

**Time Period:**
Saturday
Peak Hour of Generator

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
36

**Avg. 1000 Sq. Ft. GFA:**
3

**Average Rate:**
50.75

**Range of Rates:**
11.25 - 112.33

**Standard Deviation:**
23.80

**Fitted Curve Equation:**
Not Given

**$R^2$:**
****

**Directional Distribution:**
51% entering, 49% exiting

**Calculated Trip Ends:**
Average Rate: 330 (Total), 168 (Entry), 162 (Exit)



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## CAPACITY ANALYSIS

2025 Existing Weekday Morning Peak Hour
2025 Existing Weekday Evening Peak Hour
2025 Existing Saturday Midday Peak Hour
2026 Opening Year No-Build Weekday Morning Peak Hour
2026 Opening Year No-Build Weekday Evening Peak Hour
2026 Opening Year No-Build Saturday Midday Peak Hour
2026 Opening Year Build Weekday Morning Peak Hour
2026 Opening Year Build Weekday Evening Peak Hour
2026 Opening Year Build Saturday Midday Peak Hour
2036 Design Year No-Build Weekday Morning Peak Hour
2036 Design Year No-Build Weekday Evening Peak Hour
2036 Design Year No-Build Saturday Midday Peak Hour
2036 Design Year Build Weekday Morning Peak Hour
2036 Design Year Build Weekday Evening Peak Hour
2036 Design Year Build Saturday Midday Peak Hour

2025 Existing Weekday Morning Peak Hour

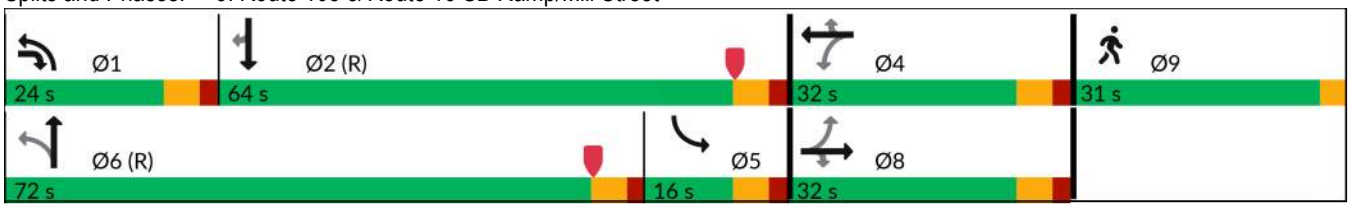
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 190 | 10 | 371 | 11 | 21 | 7 | 67 | 821 | 7 | 5 | 529 | 277 |
| Future Volume (vph) | 190 | 10 | 371 | 11 | 21 | 7 | 67 | 821 | 7 | 5 | 529 | 277 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.955 | | | 0.983 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1754 | 1561 | 0 | 1727 | 1544 | 1752 | 1843 | 0 | 1736 | 3473 | 1554 |
| Flt Permitted | | 0.706 | | | 0.869 | | 0.358 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1294 | 1561 | 0 | 1526 | 1509 | 660 | 1843 | 0 | 1736 | 3473 | 1519 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 493 | | | 130 | | | | | | 292 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.77 | 0.77 | 0.77 | 0.86 | 0.86 | 0.86 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 271 | 14 | 530 | 14 | 27 | 9 | 78 | 955 | 8 | 5 | 557 | 292 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 285 | 530 | 0 | 41 | 9 | 78 | 963 | 0 | 5 | 557 | 292 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 41.4 | 55.9 | | 41.4 | 41.4 | 92.8 | 92.8 | | 8.2 | 80.1 | 80.1 |
| Actuated g/C Ratio | | 0.27 | 0.37 | | 0.27 | 0.27 | 0.61 | 0.61 | | 0.05 | 0.53 | 0.53 |
| v/c Ratio | | 0.81 | 0.60 | | 0.10 | 0.02 | 0.16 | 0.85 | | 0.05 | 0.30 | 0.31 |
| Control Delay (s/veh) | | 68.8 | 6.1 | | 44.0 | 0.0 | 15.3 | 33.1 | | 68.6 | 21.9 | 3.5 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 68.8 | 6.1 | | 44.0 | 0.0 | 15.3 | 33.1 | | 68.6 | 21.9 | 3.5 |
| LOS | | E | A | | D | A | B | C | | E | C | A |
| Approach Delay (s/veh) | | 28.0 | | | 36.1 | | | 31.8 | | | 15.9 | |
| Approach LOS | | C | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.85 | | | |
| Intersection Signal Delay (s/veh): 25.8 | | Intersection LOS: C | |
| Intersection Capacity Utilization 75.5% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 285 | 530 | 41 | 9 | 78 | 963 | 5 | 557 | 292 |
| v/c Ratio | 0.81 | 0.60 | 0.10 | 0.02 | 0.16 | 0.85 | 0.05 | 0.30 | 0.31 |
| Control Delay (s/veh) | 68.8 | 6.1 | 44.0 | 0.0 | 15.3 | 33.1 | 68.6 | 21.9 | 3.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 68.8 | 6.1 | 44.0 | 0.0 | 15.3 | 33.1 | 68.6 | 21.9 | 3.5 |
| Queue Length 50th (ft) | 256 | 23 | 30 | 0 | 26 | 645 | 5 | 147 | 0 |
| Queue Length 95th (ft) | #333 | 4 | 59 | 0 | 74 | #1281 | 20 | 257 | 59 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 354 | 949 | 417 | 507 | 550 | 1132 | 137 | 1841 | 942 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.81 | 0.56 | 0.10 | 0.02 | 0.14 | 0.85 | 0.04 | 0.30 | 0.31 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 190 | 10 | 371 | 11 | 21 | 7 | 67 | 821 | 7 | 5 | 529 | 277 |
| Future Volume (vph) | 190 | 10 | 371 | 11 | 21 | 7 | 67 | 821 | 7 | 5 | 529 | 277 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1750 | 1561 | | 1727 | 1511 | 1752 | 1842 | | 1736 | 3473 | 1520 |
| Flt Permitted | | 0.71 | 1.00 | | 0.87 | 1.00 | 0.36 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1295 | 1561 | | 1526 | 1511 | 660 | 1842 | | 1736 | 3473 | 1520 |
| Peak-hour factor, PHF | 0.70 | 0.70 | 0.70 | 0.77 | 0.77 | 0.77 | 0.86 | 0.86 | 0.86 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 271 | 14 | 530 | 14 | 27 | 9 | 78 | 955 | 8 | 5 | 557 | 292 |
| RTOR Reduction (vph) | 0 | 0 | 321 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 142 |
| Lane Group Flow (vph) | 0 | 285 | 209 | 0 | 41 | 2 | 78 | 963 | 0 | 5 | 557 | 150 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 39.4 | 48.8 | | 39.4 | 39.4 | 83.6 | 83.6 | | 1.4 | 75.6 | 75.6 |
| Effective Green, g (s) | | 41.4 | 52.8 | | 41.4 | 41.4 | 85.6 | 85.6 | | 3.4 | 77.6 | 77.6 |
| Actuated g/C Ratio | | 0.27 | 0.35 | | 0.27 | 0.27 | 0.57 | 0.57 | | 0.02 | 0.51 | 0.51 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 355 | 545 | | 418 | 414 | 456 | 1044 | | 39 | 1784 | 781 |
| v/s Ratio Prot | | | 0.03 | | | | 0.01 | c0.52 | | 0.00 | c0.16 | |
| v/s Ratio Perm | | c0.22 | 0.11 | | 0.03 | 0.00 | 0.08 | | | | | 0.10 |
| v/c Ratio | | 0.80 | 0.38 | | 0.10 | 0.01 | 0.17 | 0.92 | | 0.13 | 0.31 | 0.19 |
| Uniform Delay, d1 | | 51.0 | 36.9 | | 40.9 | 39.8 | 15.6 | 29.7 | | 72.3 | 21.2 | 19.8 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 12.3 | 0.5 | | 0.1 | 0.0 | 0.2 | 14.5 | | 1.5 | 0.5 | 0.5 |
| Delay (s) | | 63.3 | 37.3 | | 41.0 | 39.8 | 15.7 | 44.2 | | 73.8 | 21.7 | 20.3 |
| Level of Service | | E | D | | D | D | B | D | | E | C | C |
| Approach Delay (s/veh) | | 46.4 | | | 40.8 | | | 42.0 | | | 21.5 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 37.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.84 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 75.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

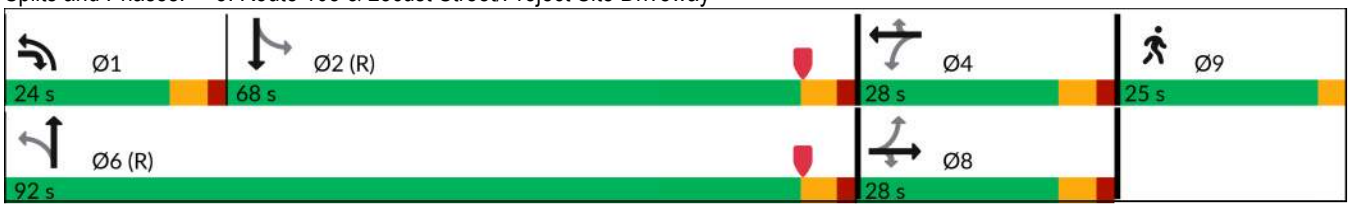
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 1 | 207 | 0 | 0 | 1 | 227 | 729 | 3 | 2 | 505 | 46 |
| Future Volume (vph) | 14 | 1 | 207 | 0 | 0 | 1 | 227 | 729 | 3 | 2 | 505 | 46 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.987 | |
| Flt Protected | | 0.955 | | | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1644 | 1463 | 0 | 1910 | 1624 | 1660 | 1926 | 0 | 1719 | 1845 | 0 |
| Flt Permitted | | 0.738 | | | | | 0.351 | | | 0.359 | | |
| Satd. Flow (perm) | 0 | 1271 | 1463 | 0 | 1910 | 1624 | 613 | 1926 | 0 | 650 | 1845 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 230 | | | 384 | | | | | 4 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.25 | 0.25 | 0.25 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 16 | 1 | 230 | 0 | 0 | 4 | 252 | 810 | 3 | 2 | 537 | 49 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 17 | 230 | 0 | 0 | 4 | 252 | 813 | 0 | 2 | 586 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | | | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 9.5 | 25.2 | | | 9.0 | 129.9 | 132.3 | | 106.0 | 106.0 | |
| Actuated g/C Ratio | | 0.07 | 0.17 | | | 0.06 | 0.90 | 0.91 | | 0.73 | 0.73 | |
| v/c Ratio | | 0.20 | 0.52 | | | 0.01 | 0.36 | 0.46 | | 0.00 | 0.43 | |
| Control Delay (s/veh) | | 69.3 | 8.1 | | | 0.0 | 4.3 | 4.9 | | 13.0 | 12.6 | |
| Queue Delay | | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | | 0.0 | 24.2 | |
| Total Delay (s/veh) | | 69.3 | 8.1 | | | 0.0 | 4.3 | 4.9 | | 13.0 | 36.8 | |
| LOS | | E | A | | | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 12.3 | | | | | | 4.8 | | | 36.7 | |
| Approach LOS | | B | | | | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.52 | | | |
| Intersection Signal Delay (s/veh): 15.6 | | Intersection LOS: B | |
| Intersection Capacity Utilization 61.1% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 17 | 230 | 4 | 252 | 813 | 2 | 586 |
| v/c Ratio | 0.20 | 0.52 | 0.01 | 0.36 | 0.46 | 0.00 | 0.43 |
| Control Delay (s/veh) | 69.3 | 8.1 | 0.0 | 4.3 | 4.9 | 13.0 | 12.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.2 |
| Total Delay (s/veh) | 69.3 | 8.1 | 0.0 | 4.3 | 4.9 | 13.0 | 36.8 |
| Queue Length 50th (ft) | 16 | 0 | 0 | 0 | 0 | 0 | 141 |
| Queue Length 95th (ft) | 42 | 50 | 0 | 117 | 498 | 6 | 515 |
| Internal Link Dist (ft) | 540 | | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | 170 | | 85 | |
| Base Capacity (vph) | 210 | 457 | 589 | 704 | 1758 | 475 | 1349 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 90 | 0 | 772 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.08 | 0.50 | 0.01 | 0.36 | 0.49 | 0.00 | 1.02 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 1 | 207 | 0 | 0 | 1 | 227 | 729 | 3 | 2 | 505 | 46 |
| Future Volume (vph) | 14 | 1 | 207 | 0 | 0 | 1 | 227 | 729 | 3 | 2 | 505 | 46 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | | 0.85 | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Flt Protected | | 0.96 | 1.00 | | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1644 | 1463 | | | 1624 | 1660 | 1927 | | 1719 | 1846 | |
| Flt Permitted | | 0.74 | 1.00 | | | 1.00 | 0.35 | 1.00 | | 0.36 | 1.00 | |
| Satd. Flow (perm) | | 1271 | 1463 | | | 1624 | 612 | 1927 | | 650 | 1846 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.25 | 0.25 | 0.25 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 16 | 1 | 230 | 0 | 0 | 4 | 252 | 810 | 3 | 2 | 537 | 49 |
| RTOR Reduction (vph) | 0 | 0 | 189 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 17 | 41 | 0 | 0 | 0 | 252 | 813 | 0 | 2 | 585 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | | | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 3.7 | 21.7 | | | 3.7 | 121.9 | 121.9 | | 97.9 | 97.9 | |
| Effective Green, g (s) | | 5.7 | 25.7 | | | 5.7 | 123.9 | 123.9 | | 99.9 | 99.9 | |
| Actuated g/C Ratio | | 0.04 | 0.18 | | | 0.04 | 0.85 | 0.85 | | 0.69 | 0.69 | |
| Clearance Time (s) | | 6.0 | 6.0 | | | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 49 | 259 | | | 63 | 667 | 1646 | | 447 | 1271 | |
| v/s Ratio Prot | | | 0.02 | | | | 0.05 | c0.42 | | | 0.32 | |
| v/s Ratio Perm | | c0.01 | 0.01 | | | 0.00 | 0.27 | | | 0.00 | | |
| v/c Ratio | | 0.35 | 0.16 | | | 0.00 | 0.38 | 0.49 | | 0.00 | 0.46 | |
| Uniform Delay, d1 | | 67.8 | 50.5 | | | 66.9 | 4.2 | 2.7 | | 7.0 | 10.3 | |
| Progression Factor | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 4.2 | 0.3 | | | 0.0 | 0.4 | 1.1 | | 0.0 | 1.2 | |
| Delay (s) | | 72.1 | 50.8 | | | 66.9 | 4.6 | 3.7 | | 7.1 | 11.5 | |
| Level of Service | | E | D | | | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 52.2 | | | 66.9 | | | 3.9 | | | 11.5 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 12.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 61.1% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

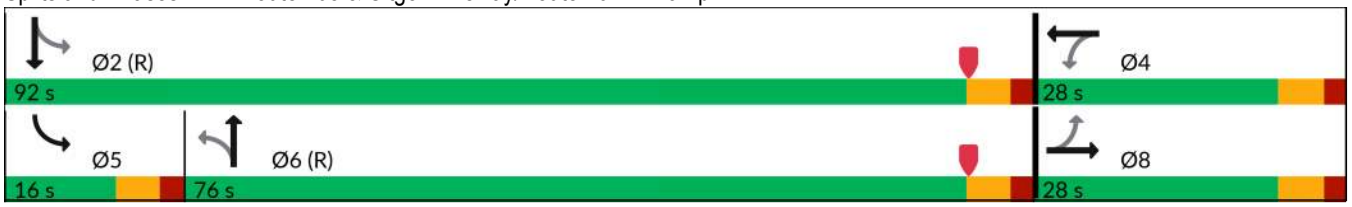
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 86 | 3 | 99 | 1 | 466 | 277 | 121 | 458 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 86 | 3 | 99 | 1 | 466 | 277 | 121 | 458 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.865 | | | 0.929 | | | 0.950 | | | 0.997 | |
| Flt Protected | | | | | 0.978 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1479 | 0 | 0 | 1743 | 0 | 0 | 1710 | 0 | 1719 | 1866 | 0 |
| Flt Permitted | | | | | 0.847 | | | | | 0.294 | | |
| Satd. Flow (perm) | 0 | 1479 | 0 | 0 | 1510 | 0 | 0 | 1710 | 0 | 532 | 1866 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 444 | | | 42 | | | 44 | | | 2 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.67 | 0.67 | 0.67 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Adj. Flow (vph) | 0 | 0 | 13 | 96 | 3 | 110 | 1 | 512 | 304 | 133 | 503 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 13 | 0 | 0 | 209 | 0 | 0 | 817 | 0 | 133 | 513 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 19.9 | | | 19.9 | | | 78.0 | | 92.1 | 92.1 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | | | 0.65 | | 0.77 | 0.77 | |
| v/c Ratio | | 0.02 | | | 0.73 | | | 0.72 | | 0.26 | 0.36 | |
| Control Delay (s/veh) | | 0.1 | | | 52.6 | | | 19.0 | | 5.3 | 5.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 51.2 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 0.1 | | | 52.6 | | | 70.3 | | 5.3 | 5.7 | |
| LOS | | A | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 0.1 | | | 52.6 | | | 70.3 | | | 5.6 | |
| Approach LOS | | A | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.73 | | | |
| Intersection Signal Delay (s/veh): 42.8 | | Intersection LOS: D | |
| Intersection Capacity Utilization 93.8% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 13 | 209 | 817 | 133 | 513 |
| v/c Ratio | 0.02 | 0.73 | 0.72 | 0.26 | 0.36 |
| Control Delay (s/veh) | 0.1 | 52.6 | 19.0 | 5.3 | 5.7 |
| Queue Delay | 0.0 | 0.0 | 51.2 | 0.0 | 0.0 |
| Total Delay (s/veh) | 0.1 | 52.6 | 70.3 | 5.3 | 5.7 |
| Queue Length 50th (ft) | 0 | 123 | 376 | 23 | 112 |
| Queue Length 95th (ft) | 0 | 204 | 618 | 44 | 178 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 651 | 336 | 1127 | 526 | 1433 |
| Starvation Cap Reductn | 0 | 0 | 448 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.02 | 0.62 | 1.20 | 0.25 | 0.36 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 86 | 3 | 99 | 1 | 466 | 277 | 121 | 458 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 86 | 3 | 99 | 1 | 466 | 277 | 121 | 458 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.87 | | | 0.93 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1479 | | | 1742 | | | 1709 | | 1719 | 1866 | |
| Flt Permitted | | 1.00 | | | 0.85 | | | 1.00 | | 0.29 | 1.00 | |
| Satd. Flow (perm) | | 1479 | | | 1509 | | | 1709 | | 533 | 1866 | |
| Peak-hour factor, PHF | 0.67 | 0.67 | 0.67 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 0 | 0 | 13 | 96 | 3 | 110 | 1 | 512 | 304 | 133 | 503 | 10 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 35 | 0 | 0 | 15 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2 | 0 | 0 | 174 | 0 | 0 | 802 | 0 | 133 | 513 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 17.9 | | | 17.9 | | | 76.0 | | 90.1 | 90.1 | |
| Effective Green, g (s) | | 19.9 | | | 19.9 | | | 78.0 | | 92.1 | 92.1 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | | | 0.65 | | 0.77 | 0.77 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 245 | | | 250 | | | 1110 | | 508 | 1432 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.02 | c0.27 | |
| v/s Ratio Perm | | | | | c0.12 | | | 0.47 | | 0.18 | | |
| v/c Ratio | | 0.01 | | | 0.70 | | | 0.72 | | 0.26 | 0.36 | |
| Uniform Delay, d1 | | 41.8 | | | 47.2 | | | 13.9 | | 5.6 | 4.5 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 8.1 | | | 4.1 | | 0.3 | 0.7 | |
| Delay (s) | | 41.8 | | | 55.3 | | | 17.9 | | 5.9 | 5.2 | |
| Level of Service | | D | | | E | | | B | | A | A | |
| Approach Delay (s/veh) | | 41.8 | | | 55.3 | | | 17.9 | | | 5.3 | |
| Approach LOS | | D | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 17.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 93.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2025 Existing Weekday Evening Peak Hour

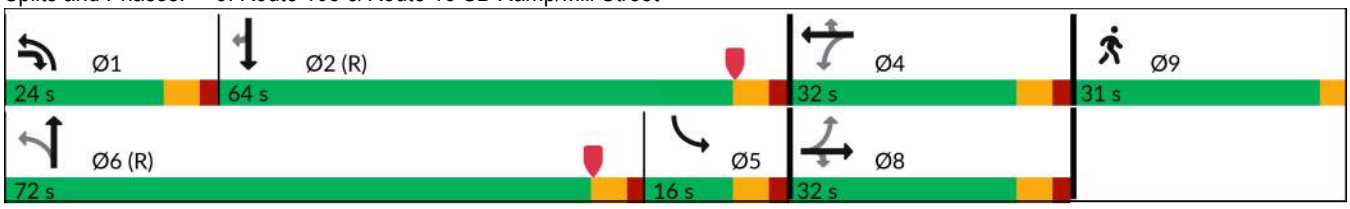
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 186 | 5 | 276 | 3 | 3 | 13 | 48 | 777 | 10 | 8 | 663 | 267 |
| Future Volume (vph) | 186 | 5 | 276 | 3 | 3 | 13 | 48 | 777 | 10 | 8 | 663 | 267 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | | 1.00 | | 1.00 | | |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.976 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1766 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.727 | | | 0.887 | | 0.304 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1345 | 1577 | 0 | 1605 | 1555 | 572 | 1877 | 0 | 1768 | 3541 | 1584 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 310 | | | 130 | | 1 | | | | 293 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.85 | 0.85 | 0.85 | 0.84 | 0.84 | 0.84 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 209 | 6 | 310 | 4 | 4 | 15 | 57 | 925 | 12 | 9 | 729 | 293 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 215 | 310 | 0 | 8 | 15 | 57 | 937 | 0 | 9 | 729 | 293 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 30.5 | 43.2 | | 30.5 | 30.5 | 103.5 | 103.5 | | 8.5 | 92.8 | 92.8 |
| Actuated g/C Ratio | | 0.20 | 0.29 | | 0.20 | 0.20 | 0.69 | 0.69 | | 0.06 | 0.61 | 0.61 |
| v/c Ratio | | 0.79 | 0.46 | | 0.02 | 0.04 | 0.12 | 0.73 | | 0.09 | 0.34 | 0.27 |
| Control Delay (s/veh) | | 77.4 | 5.0 | | 47.1 | 0.2 | 13.1 | 22.5 | | 69.0 | 17.0 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 77.4 | 5.0 | | 47.1 | 0.2 | 13.1 | 22.5 | | 69.0 | 17.0 | 2.9 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 34.7 | | | 16.5 | | | 22.0 | | | 13.4 | |
| Approach LOS | | C | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 140 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 21.1 | | Intersection LOS: C | |
| Intersection Capacity Utilization 70.4% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 215 | 310 | 8 | 15 | 57 | 937 | 9 | 729 | 293 |
| v/c Ratio | 0.79 | 0.46 | 0.02 | 0.04 | 0.12 | 0.73 | 0.09 | 0.34 | 0.27 |
| Control Delay (s/veh) | 77.4 | 5.0 | 47.1 | 0.2 | 13.1 | 22.5 | 69.0 | 17.0 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 77.4 | 5.0 | 47.1 | 0.2 | 13.1 | 22.5 | 69.0 | 17.0 | 2.9 |
| Queue Length 50th (ft) | 199 | 0 | 6 | 0 | 14 | 459 | 9 | 162 | 0 |
| Queue Length 95th (ft) | #331 | 45 | 21 | 0 | 56 | #1170 | 29 | 326 | 55 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 280 | 760 | 333 | 426 | 552 | 1286 | 140 | 2176 | 1086 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.41 | 0.02 | 0.04 | 0.10 | 0.73 | 0.06 | 0.34 | 0.27 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 186 | 5 | 276 | 3 | 3 | 13 | 48 | 777 | 10 | 8 | 663 | 267 |
| Future Volume (vph) | 186 | 5 | 276 | 3 | 3 | 13 | 48 | 777 | 10 | 8 | 663 | 267 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1765 | 1577 | | 1765 | 1555 | 1787 | 1877 | | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.73 | 1.00 | | 0.89 | 1.00 | 0.30 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1345 | 1577 | | 1605 | 1555 | 572 | 1877 | | 1771 | 3541 | 1584 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.85 | 0.85 | 0.85 | 0.84 | 0.84 | 0.84 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 209 | 6 | 310 | 4 | 4 | 15 | 57 | 925 | 12 | 9 | 729 | 293 |
| RTOR Reduction (vph) | 0 | 0 | 228 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 117 |
| Lane Group Flow (vph) | 0 | 215 | 82 | 0 | 8 | 3 | 57 | 937 | 0 | 9 | 729 | 176 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 28.5 | 35.9 | | 28.5 | 28.5 | 94.3 | 94.3 | | 1.6 | 88.5 | 88.5 |
| Effective Green, g (s) | | 30.5 | 39.9 | | 30.5 | 30.5 | 96.3 | 96.3 | | 3.6 | 90.5 | 90.5 |
| Actuated g/C Ratio | | 0.20 | 0.26 | | 0.20 | 0.20 | 0.64 | 0.64 | | 0.02 | 0.60 | 0.60 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 271 | 416 | | 324 | 314 | 440 | 1197 | | 42 | 2122 | 949 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.50 | | 0.01 | c0.21 | |
| v/s Ratio Perm | | c0.16 | 0.04 | | 0.00 | 0.00 | 0.07 | | | | | 0.11 |
| v/c Ratio | | 0.79 | 0.20 | | 0.02 | 0.01 | 0.13 | 0.78 | | 0.21 | 0.34 | 0.19 |
| Uniform Delay, d1 | | 57.3 | 43.1 | | 48.3 | 48.2 | 11.2 | 19.8 | | 72.3 | 15.3 | 13.6 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.7 | 0.2 | | 0.0 | 0.0 | 0.1 | 5.1 | | 2.6 | 0.4 | 0.4 |
| Delay (s) | | 71.9 | 43.3 | | 48.4 | 48.2 | 11.3 | 24.9 | | 74.9 | 15.7 | 14.1 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 55.1 | | | 48.2 | | | 24.1 | | | 15.8 | |
| Approach LOS | | E | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 27.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

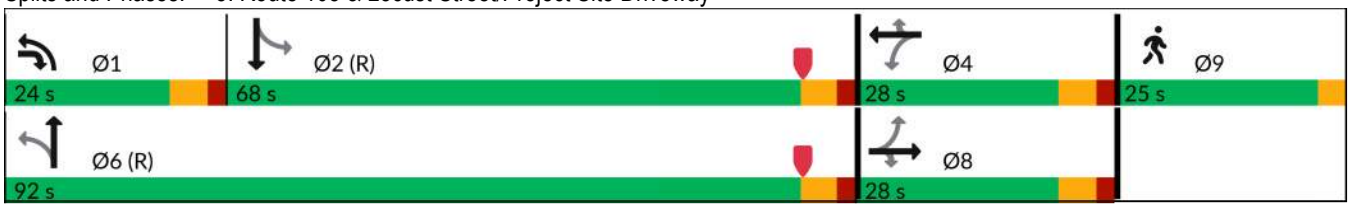
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 1 | 284 | 2 | 3 | 3 | 210 | 758 | 0 | 1 | 653 | 106 |
| Future Volume (vph) | 36 | 1 | 284 | 2 | 3 | 3 | 210 | 758 | 0 | 1 | 653 | 106 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.979 | |
| Flt Protected | | 0.954 | | | 0.981 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1692 | 1507 | 0 | 1874 | 1624 | 1693 | 1966 | 0 | 1736 | 1846 | 0 |
| Flt Permitted | | 0.722 | | | 0.888 | | 0.189 | | | 0.370 | | |
| Satd. Flow (perm) | 0 | 1280 | 1507 | 0 | 1696 | 1624 | 337 | 1966 | 0 | 676 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 302 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.40 | 0.40 | 0.40 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 38 | 1 | 302 | 5 | 8 | 8 | 216 | 781 | 0 | 1 | 726 | 118 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 39 | 302 | 0 | 13 | 8 | 216 | 781 | 0 | 1 | 844 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 11.7 | 33.6 | | 11.7 | 11.7 | 122.6 | 123.4 | | 97.6 | 97.6 | |
| Actuated g/C Ratio | | 0.08 | 0.23 | | 0.08 | 0.08 | 0.85 | 0.85 | | 0.67 | 0.67 | |
| v/c Ratio | | 0.38 | 0.52 | | 0.10 | 0.04 | 0.45 | 0.47 | | 0.00 | 0.68 | |
| Control Delay (s/veh) | | 72.5 | 6.1 | | 61.4 | 0.3 | 6.9 | 6.3 | | 17.0 | 22.0 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.5 | | 0.0 | 51.2 | |
| Total Delay (s/veh) | | 72.5 | 6.1 | | 61.4 | 0.3 | 6.9 | 6.8 | | 17.0 | 73.2 | |
| LOS | | E | A | | E | A | A | A | | B | E | |
| Approach Delay (s/veh) | | 13.7 | | | 38.1 | | | 6.8 | | | 73.1 | |
| Approach LOS | | B | | | D | | | A | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.68 | | | |
| Intersection Signal Delay (s/veh): 33.6 | | Intersection LOS: C | |
| Intersection Capacity Utilization 72.6% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 39 | 302 | 13 | 8 | 216 | 781 | 1 | 844 |
| v/c Ratio | 0.38 | 0.52 | 0.10 | 0.04 | 0.45 | 0.47 | 0.00 | 0.68 |
| Control Delay (s/veh) | 72.5 | 6.1 | 61.4 | 0.3 | 6.9 | 6.3 | 17.0 | 22.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 51.2 |
| Total Delay (s/veh) | 72.5 | 6.1 | 61.4 | 0.3 | 6.9 | 6.8 | 17.0 | 73.2 |
| Queue Length 50th (ft) | 36 | 0 | 12 | 0 | 24 | 123 | 0 | 412 |
| Queue Length 95th (ft) | 74 | 48 | 15 | 0 | 110 | 504 | 4 | #1107 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 211 | 595 | 280 | 343 | 497 | 1672 | 455 | 1245 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 464 | 0 | 519 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.18 | 0.51 | 0.05 | 0.02 | 0.43 | 0.65 | 0.00 | 1.16 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 1 | 284 | 2 | 3 | 3 | 210 | 758 | 0 | 1 | 653 | 106 |
| Future Volume (vph) | 36 | 1 | 284 | 2 | 3 | 3 | 210 | 758 | 0 | 1 | 653 | 106 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1691 | 1507 | | 1874 | 1624 | 1693 | 1966 | | 1736 | 1846 | |
| Flt Permitted | | 0.72 | 1.00 | | 0.89 | 1.00 | 0.19 | 1.00 | | 0.37 | 1.00 | |
| Satd. Flow (perm) | | 1281 | 1507 | | 1696 | 1624 | 336 | 1966 | | 676 | 1846 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.40 | 0.40 | 0.40 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 38 | 1 | 302 | 5 | 8 | 8 | 216 | 781 | 0 | 1 | 726 | 118 |
| RTOR Reduction (vph) | 0 | 0 | 236 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 39 | 66 | 0 | 13 | 1 | 216 | 781 | 0 | 1 | 842 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 8.6 | 27.6 | | 8.6 | 8.6 | 117.0 | 117.0 | | 92.0 | 92.0 | |
| Effective Green, g (s) | | 10.6 | 31.6 | | 10.6 | 10.6 | 119.0 | 119.0 | | 94.0 | 94.0 | |
| Actuated g/C Ratio | | 0.07 | 0.22 | | 0.07 | 0.07 | 0.82 | 0.82 | | 0.65 | 0.65 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 93 | 328 | | 123 | 118 | 472 | 1613 | | 438 | 1196 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.07 | c0.40 | | | c0.46 | |
| v/s Ratio Perm | | c0.03 | 0.01 | | 0.01 | 0.00 | 0.31 | | | 0.00 | | |
| v/c Ratio | | 0.42 | 0.20 | | 0.11 | 0.00 | 0.46 | 0.48 | | 0.00 | 0.70 | |
| Uniform Delay, d1 | | 64.3 | 46.4 | | 62.8 | 62.3 | 13.4 | 3.9 | | 9.0 | 16.5 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.0 | 0.3 | | 0.4 | 0.0 | 0.7 | 1.0 | | 0.0 | 3.5 | |
| Delay (s) | | 67.3 | 46.7 | | 63.2 | 62.3 | 14.1 | 4.9 | | 9.0 | 20.0 | |
| Level of Service | | E | D | | E | E | B | A | | A | B | |
| Approach Delay (s/veh) | | 49.0 | | | 62.8 | | | 6.9 | | | 20.0 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 19.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 72.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

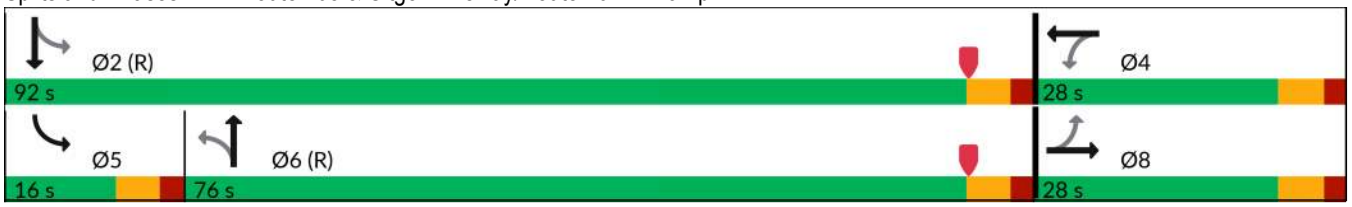
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 185 | 15 | 133 | 1 | 482 | 314 | 170 | 564 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 185 | 15 | 133 | 1 | 482 | 314 | 170 | 564 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 20 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.886 | | | 0.946 | | | 0.947 | | | 0.995 | |
| Flt Protected | | | | | 0.973 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1515 | 0 | 0 | 1749 | 0 | 0 | 1755 | 0 | 1771 | 1917 | 0 |
| Flt Permitted | | | | | 0.813 | | | | | 0.239 | | |
| Satd. Flow (perm) | 0 | 1515 | 0 | 0 | 1461 | 0 | 0 | 1755 | 0 | 446 | 1917 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 22 | | | 25 | | | 49 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Peak Hour Factor | 0.50 | 0.50 | 0.50 | 0.79 | 0.79 | 0.79 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 4 | 22 | 234 | 19 | 168 | 1 | 536 | 349 | 189 | 627 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 26 | 0 | 0 | 421 | 0 | 0 | 886 | 0 | 189 | 648 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 28.4 | | | 28.4 | | | 68.3 | | 83.6 | 83.6 | |
| Actuated g/C Ratio | | 0.24 | | | 0.24 | | | 0.57 | | 0.70 | 0.70 | |
| v/c Ratio | | 0.07 | | | 1.16 | | | 0.87 | | 0.43 | 0.48 | |
| Control Delay (s/veh) | | 18.0 | | | 136.5 | | | 30.8 | | 8.8 | 9.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 50.3 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 18.0 | | | 136.5 | | | 81.1 | | 8.8 | 9.3 | |
| LOS | | B | | | F | | | F | | A | A | |
| Approach Delay (s/veh) | | 18.0 | | | 136.5 | | | 81.1 | | | 9.2 | |
| Approach LOS | | B | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 1.16 | | | |
| Intersection Signal Delay (s/veh): 63.4 | | Intersection LOS: E | |
| Intersection Capacity Utilization 111.3% | | ICU Level of Service H | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 26 | 421 | 886 | 189 | 648 |
| v/c Ratio | 0.07 | 1.16 | 0.87 | 0.43 | 0.48 |
| Control Delay (s/veh) | 18.0 | 136.5 | 30.8 | 8.8 | 9.3 |
| Queue Delay | 0.0 | 0.0 | 50.3 | 0.0 | 0.0 |
| Total Delay (s/veh) | 18.0 | 136.5 | 81.1 | 8.8 | 9.3 |
| Queue Length 50th (ft) | 3 | ~404 | 496 | 40 | 183 |
| Queue Length 95th (ft) | 9 | #508 | 703 | 61 | 241 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 374 | 364 | 1072 | 443 | 1406 |
| Starvation Cap Reductn | 0 | 0 | 408 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.07 | 1.16 | 1.33 | 0.43 | 0.46 |

Intersection Summary

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 185 | 15 | 133 | 1 | 482 | 314 | 170 | 564 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 185 | 15 | 133 | 1 | 482 | 314 | 170 | 564 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.89 | | | 0.95 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1515 | | | 1749 | | | 1754 | | 1771 | 1918 | |
| Flt Permitted | | 1.00 | | | 0.81 | | | 1.00 | | 0.24 | 1.00 | |
| Satd. Flow (perm) | | 1515 | | | 1461 | | | 1754 | | 446 | 1918 | |
| Peak-hour factor, PHF | 0.50 | 0.50 | 0.50 | 0.79 | 0.79 | 0.79 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 4 | 22 | 234 | 19 | 168 | 1 | 536 | 349 | 189 | 627 | 21 |
| RTOR Reduction (vph) | 0 | 17 | 0 | 0 | 19 | 0 | 0 | 21 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 0 | 402 | 0 | 0 | 865 | 0 | 189 | 647 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 26.4 | | | 26.4 | | | 66.3 | | 81.6 | 81.6 | |
| Effective Green, g (s) | | 28.4 | | | 28.4 | | | 68.3 | | 83.6 | 83.6 | |
| Actuated g/C Ratio | | 0.24 | | | 0.24 | | | 0.57 | | 0.70 | 0.70 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 358 | | | 345 | | | 998 | | 435 | 1336 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | 0.04 | c0.34 | |
| v/s Ratio Perm | | | | | c0.28 | | | 0.49 | | 0.26 | | |
| v/c Ratio | | 0.03 | | | 1.16 | | | 0.87 | | 0.43 | 0.48 | |
| Uniform Delay, d1 | | 35.2 | | | 45.8 | | | 22.0 | | 10.2 | 8.3 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 101.3 | | | 10.0 | | 0.7 | 1.3 | |
| Delay (s) | | 35.2 | | | 147.1 | | | 32.0 | | 10.9 | 9.6 | |
| Level of Service | | D | | | F | | | C | | B | A | |
| Approach Delay (s/veh) | | 35.2 | | | 147.1 | | | 32.0 | | | 9.9 | |
| Approach LOS | | D | | | F | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 45.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 111.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2025 Existing Saturday Midday Peak Hour

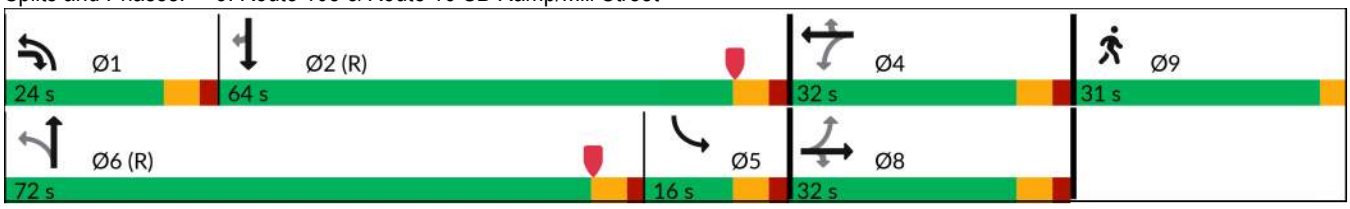
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 671 | 7 | 3 | 490 | 246 |
| Future Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 671 | 7 | 3 | 490 | 246 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | | 0.97 | 1.00 | 1.00 | | 1.00 | | 0.97 |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.962 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1740 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.724 | | | 0.783 | | 0.377 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1333 | 1577 | 0 | 1417 | 1546 | 707 | 1877 | 0 | 1767 | 3541 | 1541 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 192 | | | 130 | | | | | | 289 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.75 | 0.75 | 0.75 | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 190 | 8 | 192 | 12 | 3 | 21 | 56 | 763 | 8 | 4 | 576 | 289 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 198 | 192 | 0 | 15 | 21 | 56 | 771 | 0 | 4 | 576 | 289 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 28.7 | 41.2 | | 28.7 | 28.7 | 105.5 | 105.5 | | 8.1 | 94.8 | 94.8 |
| Actuated g/C Ratio | | 0.19 | 0.27 | | 0.19 | 0.19 | 0.70 | 0.70 | | 0.05 | 0.63 | 0.63 |
| v/c Ratio | | 0.78 | 0.34 | | 0.06 | 0.05 | 0.10 | 0.59 | | 0.04 | 0.26 | 0.27 |
| Control Delay (s/veh) | | 79.1 | 5.0 | | 48.5 | 0.3 | 12.6 | 18.4 | | 68.3 | 15.5 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 79.1 | 5.0 | | 48.5 | 0.3 | 12.6 | 18.4 | | 68.3 | 15.5 | 2.9 |
| LOS | | E | A | | D | A | B | B | | E | B | A |
| Approach Delay (s/veh) | | 42.6 | | | 20.4 | | | 18.0 | | | 11.5 | |
| Approach LOS | | D | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 110 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 19.9 | | Intersection LOS: B | |
| Intersection Capacity Utilization 64.0% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 198 | 192 | 15 | 21 | 56 | 771 | 4 | 576 | 289 |
| v/c Ratio | 0.78 | 0.34 | 0.06 | 0.05 | 0.10 | 0.59 | 0.04 | 0.26 | 0.27 |
| Control Delay (s/veh) | 79.1 | 5.0 | 48.5 | 0.3 | 12.6 | 18.4 | 68.3 | 15.5 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 79.1 | 5.0 | 48.5 | 0.3 | 12.6 | 18.4 | 68.3 | 15.5 | 2.9 |
| Queue Length 50th (ft) | 185 | 0 | 12 | 0 | 13 | 295 | 4 | 113 | 0 |
| Queue Length 95th (ft) | #292 | 39 | 28 | 0 | 58 | #924 | 16 | 236 | 43 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 268 | 667 | 284 | 414 | 636 | 1311 | 140 | 2221 | 1074 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.74 | 0.29 | 0.05 | 0.05 | 0.09 | 0.59 | 0.03 | 0.26 | 0.27 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 671 | 7 | 3 | 490 | 246 |
| Future Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 671 | 7 | 3 | 490 | 246 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1757 | 1577 | | 1740 | 1547 | 1786 | 1878 | | 1771 | 3541 | 1545 |
| Flt Permitted | | 0.72 | 1.00 | | 0.78 | 1.00 | 0.38 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1333 | 1577 | | 1417 | 1547 | 709 | 1878 | | 1771 | 3541 | 1545 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.75 | 0.75 | 0.75 | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 |
| Adj. Flow (vph) | 190 | 8 | 192 | 12 | 3 | 21 | 56 | 763 | 8 | 4 | 576 | 289 |
| RTOR Reduction (vph) | 0 | 0 | 144 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 112 |
| Lane Group Flow (vph) | 0 | 198 | 48 | 0 | 15 | 4 | 56 | 771 | 0 | 4 | 576 | 177 |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 26.7 | 34.1 | | 26.7 | 26.7 | 96.3 | 96.3 | | 1.4 | 90.3 | 90.3 |
| Effective Green, g (s) | | 28.7 | 38.1 | | 28.7 | 28.7 | 98.3 | 98.3 | | 3.4 | 92.3 | 92.3 |
| Actuated g/C Ratio | | 0.19 | 0.25 | | 0.19 | 0.19 | 0.65 | 0.65 | | 0.02 | 0.61 | 0.61 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 253 | 397 | | 269 | 294 | 528 | 1222 | | 39 | 2164 | 944 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.41 | | 0.00 | c0.16 | |
| v/s Ratio Perm | | c0.15 | 0.02 | | 0.01 | 0.00 | 0.06 | | | | | 0.11 |
| v/c Ratio | | 0.78 | 0.12 | | 0.06 | 0.01 | 0.11 | 0.63 | | 0.10 | 0.27 | 0.19 |
| Uniform Delay, d1 | | 58.2 | 43.5 | | 50.1 | 49.7 | 10.0 | 15.6 | | 72.3 | 13.6 | 12.9 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.5 | 0.1 | | 0.1 | 0.0 | 0.1 | 2.5 | | 1.2 | 0.3 | 0.4 |
| Delay (s) | | 72.7 | 43.7 | | 50.1 | 49.7 | 10.1 | 18.1 | | 73.5 | 13.9 | 13.3 |
| Level of Service | | E | D | | D | D | B | B | | E | B | B |
| Approach Delay (s/veh) | | 58.4 | | | 49.9 | | | 17.5 | | | 14.0 | |
| Approach LOS | | E | | | D | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 24.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 64.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

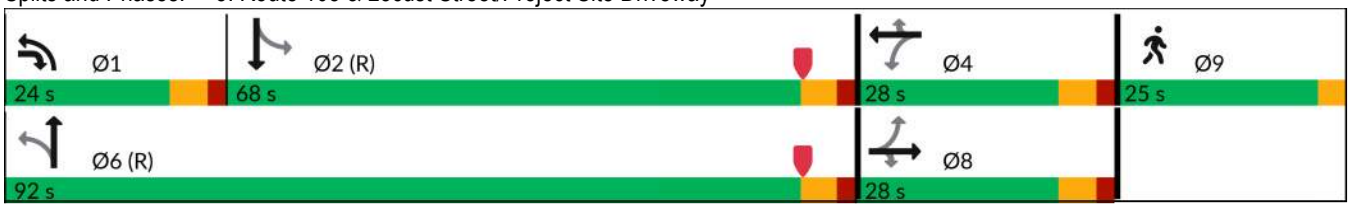
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 0 | 257 | 3 | 1 | 5 | 239 | 599 | 0 | 3 | 435 | 73 |
| Future Volume (vph) | 23 | 0 | 257 | 3 | 1 | 5 | 239 | 599 | 0 | 3 | 435 | 73 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.978 | |
| Flt Protected | | 0.950 | | | 0.962 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1838 | 1624 | 1693 | 1966 | 0 | 1753 | 1861 | 0 |
| Flt Permitted | | 0.754 | | | 0.769 | | 0.364 | | | 0.428 | | |
| Satd. Flow (perm) | 0 | 1333 | 1507 | 0 | 1469 | 1586 | 648 | 1966 | 0 | 790 | 1861 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 289 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.67 | 0.67 | 0.67 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 26 | 0 | 289 | 4 | 1 | 7 | 249 | 624 | 0 | 3 | 478 | 80 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 26 | 289 | 0 | 5 | 7 | 249 | 624 | 0 | 3 | 558 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 10.5 | 27.5 | | 10.2 | 10.2 | 126.4 | 128.0 | | 103.7 | 103.7 | |
| Actuated g/C Ratio | | 0.07 | 0.19 | | 0.07 | 0.07 | 0.87 | 0.88 | | 0.72 | 0.72 | |
| v/c Ratio | | 0.27 | 0.56 | | 0.05 | 0.04 | 0.36 | 0.36 | | 0.01 | 0.42 | |
| Control Delay (s/veh) | | 69.8 | 7.6 | | 62.0 | 0.4 | 4.8 | 4.5 | | 13.3 | 13.1 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.3 | | 0.0 | 7.8 | |
| Total Delay (s/veh) | | 69.8 | 7.6 | | 62.0 | 0.4 | 4.8 | 4.9 | | 13.3 | 21.0 | |
| LOS | | E | A | | E | A | A | A | | B | C | |
| Approach Delay (s/veh) | | 12.7 | | | 26.1 | | | 4.8 | | | 20.9 | |
| Approach LOS | | B | | | C | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.56 | | | |
| Intersection Signal Delay (s/veh): 11.5 | | Intersection LOS: B | |
| Intersection Capacity Utilization 58.5% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 26 | 289 | 5 | 7 | 249 | 624 | 3 | 558 |
| v/c Ratio | 0.27 | 0.56 | 0.05 | 0.04 | 0.36 | 0.36 | 0.01 | 0.42 |
| Control Delay (s/veh) | 69.8 | 7.6 | 62.0 | 0.4 | 4.8 | 4.5 | 13.3 | 13.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 7.8 |
| Total Delay (s/veh) | 69.8 | 7.6 | 62.0 | 0.4 | 4.8 | 4.9 | 13.3 | 21.0 |
| Queue Length 50th (ft) | 24 | 0 | 5 | 0 | 25 | 79 | 1 | 198 |
| Queue Length 95th (ft) | 56 | 51 | 13 | 0 | 121 | 342 | 7 | 480 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 220 | 537 | 243 | 337 | 714 | 1735 | 565 | 1333 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 543 | 0 | 725 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.12 | 0.54 | 0.02 | 0.02 | 0.35 | 0.52 | 0.01 | 0.92 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 0 | 257 | 3 | 1 | 5 | 239 | 599 | 0 | 3 | 435 | 73 |
| Future Volume (vph) | 23 | 0 | 257 | 3 | 1 | 5 | 239 | 599 | 0 | 3 | 435 | 73 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1670 | 1507 | | 1837 | 1577 | 1693 | 1966 | | 1753 | 1863 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.77 | 1.00 | 0.36 | 1.00 | | 0.43 | 1.00 | |
| Satd. Flow (perm) | | 1326 | 1507 | | 1469 | 1577 | 648 | 1966 | | 790 | 1863 | |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.67 | 0.67 | 0.67 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 26 | 0 | 289 | 4 | 1 | 7 | 249 | 624 | 0 | 3 | 478 | 80 |
| RTOR Reduction (vph) | 0 | 0 | 236 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 26 | 53 | 0 | 5 | 0 | 249 | 624 | 0 | 3 | 556 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 6.0 | 22.7 | | 6.0 | 6.0 | 119.6 | 119.6 | | 96.9 | 96.9 | |
| Effective Green, g (s) | | 8.0 | 26.7 | | 8.0 | 8.0 | 121.6 | 121.6 | | 98.9 | 98.9 | |
| Actuated g/C Ratio | | 0.06 | 0.18 | | 0.06 | 0.06 | 0.84 | 0.84 | | 0.68 | 0.68 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 73 | 277 | | 81 | 87 | 678 | 1648 | | 538 | 1270 | |
| v/s Ratio Prot | | | 0.02 | | | | 0.05 | c0.32 | | | c0.30 | |
| v/s Ratio Perm | | c0.02 | 0.01 | | 0.00 | 0.00 | 0.26 | | | 0.00 | | |
| v/c Ratio | | 0.36 | 0.19 | | 0.06 | 0.00 | 0.37 | 0.38 | | 0.01 | 0.44 | |
| Uniform Delay, d1 | | 66.0 | 50.0 | | 64.9 | 64.7 | 4.3 | 2.8 | | 7.4 | 10.4 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.0 | 0.3 | | 0.3 | 0.0 | 0.3 | 0.7 | | 0.0 | 1.1 | |
| Delay (s) | | 69.0 | 50.4 | | 65.3 | 64.8 | 4.7 | 3.4 | | 7.4 | 11.5 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 51.9 | | | 65.0 | | | 3.8 | | | 11.5 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 15.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.41 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 58.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

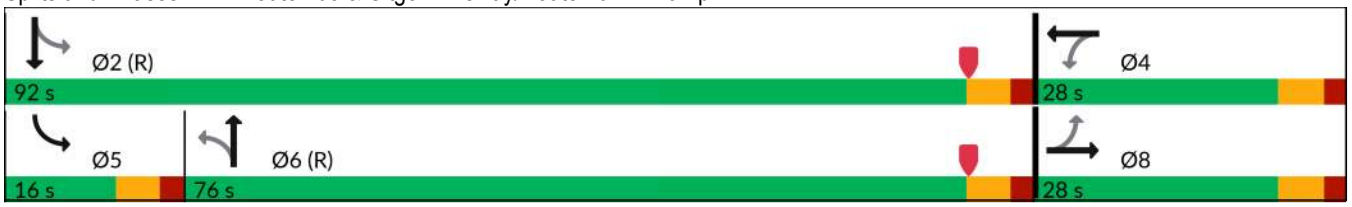
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 80 | 9 | 143 | 2 | 429 | 196 | 144 | 426 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 80 | 9 | 143 | 2 | 429 | 196 | 144 | 426 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.932 | | | 0.917 | | | 0.958 | | | 0.995 | |
| Flt Protected | | | | | 0.983 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1594 | 0 | 0 | 1713 | 0 | 0 | 1793 | 0 | 1771 | 1917 | 0 |
| Flt Permitted | | | | | 0.880 | | | 0.999 | | 0.331 | | |
| Satd. Flow (perm) | 0 | 1594 | 0 | 0 | 1533 | 0 | 0 | 1791 | 0 | 617 | 1917 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 7 | | | 60 | | | 34 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.67 | 0.67 | 0.67 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.83 | 0.83 | 0.83 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 7 | 7 | 88 | 10 | 157 | 2 | 471 | 215 | 173 | 513 | 18 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 14 | 0 | 0 | 255 | 0 | 0 | 688 | 0 | 173 | 531 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 22.7 | | | 22.7 | | | 74.6 | | 89.3 | 89.3 | |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | | 0.62 | | 0.74 | 0.74 | |
| v/c Ratio | | 0.05 | | | 0.75 | | | 0.61 | | 0.31 | 0.37 | |
| Control Delay (s/veh) | | 25.8 | | | 48.7 | | | 17.3 | | 6.5 | 6.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 52.5 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 25.8 | | | 48.7 | | | 69.8 | | 6.5 | 6.9 | |
| LOS | | C | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 25.8 | | | 48.7 | | | 69.8 | | | 6.8 | |
| Approach LOS | | C | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.75 | | | |
| Intersection Signal Delay (s/veh): 39.5 | | Intersection LOS: D | |
| Intersection Capacity Utilization 88.3% | | ICU Level of Service E | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 14 | 255 | 688 | 173 | 531 |
| v/c Ratio | 0.05 | 0.75 | 0.61 | 0.31 | 0.37 |
| Control Delay (s/veh) | 25.8 | 48.7 | 17.3 | 6.5 | 6.9 |
| Queue Delay | 0.0 | 0.0 | 52.5 | 0.0 | 0.0 |
| Total Delay (s/veh) | 25.8 | 48.7 | 69.8 | 6.5 | 6.9 |
| Queue Length 50th (ft) | 4 | 144 | 294 | 34 | 128 |
| Queue Length 95th (ft) | 15 | 227 | 485 | 61 | 193 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 345 | 373 | 1150 | 575 | 1453 |
| Starvation Cap Reductn | 0 | 0 | 535 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.68 | 1.12 | 0.30 | 0.37 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 80 | 9 | 143 | 2 | 429 | 196 | 144 | 426 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 80 | 9 | 143 | 2 | 429 | 196 | 144 | 426 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.93 | | | 0.92 | | | 0.96 | | 1.00 | 0.99 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1595 | | | 1713 | | | 1792 | | 1771 | 1917 | |
| Flt Permitted | | 1.00 | | | 0.88 | | | 1.00 | | 0.33 | 1.00 | |
| Satd. Flow (perm) | | 1595 | | | 1533 | | | 1791 | | 617 | 1917 | |
| Peak-hour factor, PHF | 0.67 | 0.67 | 0.67 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 0 | 7 | 7 | 88 | 10 | 157 | 2 | 471 | 215 | 173 | 513 | 18 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 49 | 0 | 0 | 13 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 0 | 206 | 0 | 0 | 675 | 0 | 173 | 530 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 20.7 | | | 20.7 | | | 72.6 | | 87.3 | 87.3 | |
| Effective Green, g (s) | | 22.7 | | | 22.7 | | | 74.6 | | 89.3 | 89.3 | |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | | 0.62 | | 0.74 | 0.74 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 301 | | | 289 | | | 1113 | | 562 | 1426 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | 0.03 | c0.28 | |
| v/s Ratio Perm | | | | | c0.13 | | | c0.38 | | 0.20 | | |
| v/c Ratio | | 0.03 | | | 0.71 | | | 0.61 | | 0.31 | 0.37 | |
| Uniform Delay, d1 | | 39.7 | | | 45.6 | | | 13.8 | | 6.3 | 5.4 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 8.1 | | | 2.5 | | 0.3 | 0.7 | |
| Delay (s) | | 39.7 | | | 53.7 | | | 16.2 | | 6.6 | 6.2 | |
| Level of Service | | D | | | D | | | B | | A | A | |
| Approach Delay (s/veh) | | 39.7 | | | 53.7 | | | 16.2 | | | 6.3 | |
| Approach LOS | | D | | | D | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 18.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 88.3% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2026 Opening Year No-Build Weekday Morning Peak Hour

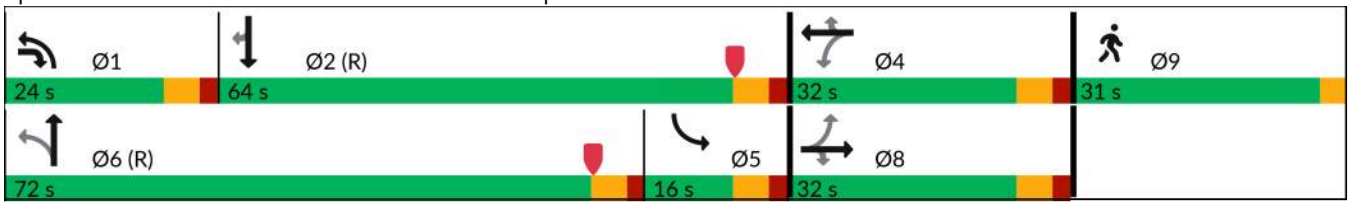
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 192 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 544 | 280 |
| Future Volume (vph) | 192 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 544 | 280 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.955 | | | 0.983 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1754 | 1561 | 0 | 1727 | 1544 | 1752 | 1843 | 0 | 1736 | 3473 | 1554 |
| Flt Permitted | | 0.706 | | | 0.868 | | 0.349 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1294 | 1561 | 0 | 1525 | 1509 | 643 | 1843 | 0 | 1736 | 3473 | 1519 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 487 | | | 130 | | | | | | 295 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.77 | 0.77 | 0.77 | 0.86 | 0.86 | 0.86 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 274 | 14 | 536 | 14 | 27 | 9 | 78 | 967 | 8 | 5 | 573 | 295 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 288 | 536 | 0 | 41 | 9 | 78 | 975 | 0 | 5 | 573 | 295 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 41.4 | 56.0 | | 41.4 | 41.4 | 92.8 | 92.8 | | 8.2 | 80.0 | 80.0 |
| Actuated g/C Ratio | | 0.27 | 0.37 | | 0.27 | 0.27 | 0.61 | 0.61 | | 0.05 | 0.53 | 0.53 |
| v/c Ratio | | 0.81 | 0.61 | | 0.10 | 0.02 | 0.16 | 0.86 | | 0.05 | 0.31 | 0.31 |
| Control Delay (s/veh) | | 69.6 | 6.5 | | 44.0 | 0.0 | 15.3 | 33.9 | | 68.6 | 22.1 | 3.5 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 69.6 | 6.5 | | 44.0 | 0.0 | 15.3 | 33.9 | | 68.6 | 22.1 | 3.5 |
| LOS | | E | A | | D | A | B | C | | E | C | A |
| Approach Delay (s/veh) | | 28.6 | | | 36.1 | | | 32.5 | | | 16.1 | |
| Approach LOS | | C | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.86 | | | |
| Intersection Signal Delay (s/veh): 26.3 | | Intersection LOS: C | |
| Intersection Capacity Utilization 76.2% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 288 | 536 | 41 | 9 | 78 | 975 | 5 | 573 | 295 |
| v/c Ratio | 0.81 | 0.61 | 0.10 | 0.02 | 0.16 | 0.86 | 0.05 | 0.31 | 0.31 |
| Control Delay (s/veh) | 69.6 | 6.5 | 44.0 | 0.0 | 15.3 | 33.9 | 68.6 | 22.1 | 3.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 69.6 | 6.5 | 44.0 | 0.0 | 15.3 | 33.9 | 68.6 | 22.1 | 3.5 |
| Queue Length 50th (ft) | 260 | 30 | 30 | 0 | 26 | 663 | 5 | 153 | 0 |
| Queue Length 95th (ft) | #337 | 8 | 59 | 0 | 74 | #1305 | 20 | 267 | 60 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 354 | 946 | 417 | 507 | 542 | 1132 | 137 | 1839 | 943 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.81 | 0.57 | 0.10 | 0.02 | 0.14 | 0.86 | 0.04 | 0.31 | 0.31 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 192 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 544 | 280 |
| Future Volume (vph) | 192 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 544 | 280 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1750 | 1561 | | 1727 | 1511 | 1752 | 1842 | | 1736 | 3473 | 1520 |
| Flt Permitted | | 0.71 | 1.00 | | 0.87 | 1.00 | 0.35 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1295 | 1561 | | 1525 | 1511 | 644 | 1842 | | 1736 | 3473 | 1520 |
| Peak-hour factor, PHF | 0.70 | 0.70 | 0.70 | 0.77 | 0.77 | 0.77 | 0.86 | 0.86 | 0.86 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 274 | 14 | 536 | 14 | 27 | 9 | 78 | 967 | 8 | 5 | 573 | 295 |
| RTOR Reduction (vph) | 0 | 0 | 316 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 144 |
| Lane Group Flow (vph) | 0 | 288 | 220 | 0 | 41 | 2 | 78 | 975 | 0 | 5 | 573 | 151 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 39.4 | 48.9 | | 39.4 | 39.4 | 83.6 | 83.6 | | 1.4 | 75.5 | 75.5 |
| Effective Green, g (s) | | 41.4 | 52.9 | | 41.4 | 41.4 | 85.6 | 85.6 | | 3.4 | 77.5 | 77.5 |
| Actuated g/C Ratio | | 0.27 | 0.35 | | 0.27 | 0.27 | 0.57 | 0.57 | | 0.02 | 0.51 | 0.51 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 355 | 546 | | 418 | 414 | 449 | 1044 | | 39 | 1782 | 780 |
| v/s Ratio Prot | | | 0.03 | | | | 0.01 | c0.53 | | 0.00 | c0.17 | |
| v/s Ratio Perm | | c0.22 | 0.11 | | 0.03 | 0.00 | 0.09 | | | | | 0.10 |
| v/c Ratio | | 0.81 | 0.40 | | 0.10 | 0.01 | 0.17 | 0.93 | | 0.13 | 0.32 | 0.19 |
| Uniform Delay, d1 | | 51.2 | 37.1 | | 40.9 | 39.8 | 15.6 | 30.1 | | 72.3 | 21.4 | 19.9 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 13.1 | 0.5 | | 0.1 | 0.0 | 0.2 | 15.9 | | 1.5 | 0.5 | 0.6 |
| Delay (s) | | 64.3 | 37.6 | | 41.0 | 39.8 | 15.8 | 46.0 | | 73.8 | 21.9 | 20.4 |
| Level of Service | | E | D | | D | D | B | D | | E | C | C |
| Approach Delay (s/veh) | | 46.9 | | | 40.8 | | | 43.7 | | | 21.7 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 37.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 76.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

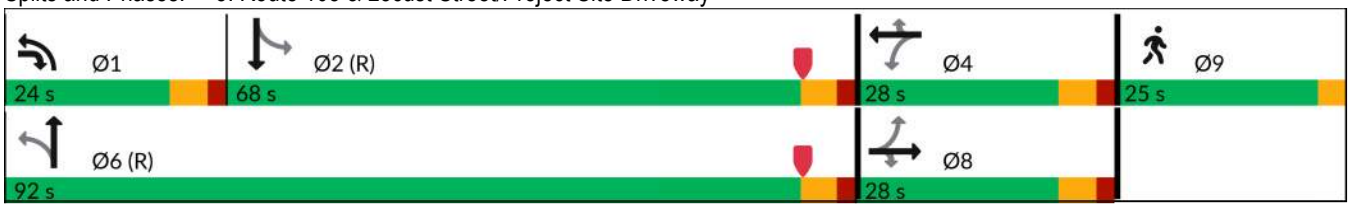
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 1 | 209 | 0 | 0 | 1 | 229 | 747 | 3 | 2 | 515 | 46 |
| Future Volume (vph) | 14 | 1 | 209 | 0 | 0 | 1 | 229 | 747 | 3 | 2 | 515 | 46 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.988 | |
| Flt Protected | | 0.955 | | | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1644 | 1463 | 0 | 1910 | 1624 | 1660 | 1926 | 0 | 1719 | 1846 | 0 |
| Flt Permitted | | 0.738 | | | | | 0.343 | | | 0.352 | | |
| Satd. Flow (perm) | 0 | 1271 | 1463 | 0 | 1910 | 1624 | 599 | 1926 | 0 | 637 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 232 | | | 377 | | | | | 4 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.25 | 0.25 | 0.25 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 16 | 1 | 232 | 0 | 0 | 4 | 254 | 830 | 3 | 2 | 548 | 49 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 17 | 232 | 0 | 0 | 4 | 254 | 833 | 0 | 2 | 597 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | | | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 9.5 | 25.8 | | | 9.0 | 129.9 | 132.3 | | 105.4 | 105.4 | |
| Actuated g/C Ratio | | 0.07 | 0.18 | | | 0.06 | 0.90 | 0.91 | | 0.73 | 0.73 | |
| v/c Ratio | | 0.20 | 0.52 | | | 0.01 | 0.37 | 0.47 | | 0.00 | 0.44 | |
| Control Delay (s/veh) | | 69.3 | 7.9 | | | 0.0 | 4.4 | 5.0 | | 13.5 | 13.1 | |
| Queue Delay | | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | | 0.0 | 26.4 | |
| Total Delay (s/veh) | | 69.3 | 7.9 | | | 0.0 | 4.4 | 5.0 | | 13.5 | 39.5 | |
| LOS | | E | A | | | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 12.1 | | | | | | 4.9 | | | 39.4 | |
| Approach LOS | | B | | | | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.52 | | | |
| Intersection Signal Delay (s/veh): 16.5 | | Intersection LOS: B | |
| Intersection Capacity Utilization 62.0% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 17 | 232 | 4 | 254 | 833 | 2 | 597 |
| v/c Ratio | 0.20 | 0.52 | 0.01 | 0.37 | 0.47 | 0.00 | 0.44 |
| Control Delay (s/veh) | 69.3 | 7.9 | 0.0 | 4.4 | 5.0 | 13.5 | 13.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.4 |
| Total Delay (s/veh) | 69.3 | 7.9 | 0.0 | 4.4 | 5.0 | 13.5 | 39.5 |
| Queue Length 50th (ft) | 16 | 0 | 0 | 0 | 0 | 0 | 147 |
| Queue Length 95th (ft) | 42 | 49 | 0 | 118 | 521 | 6 | 537 |
| Internal Link Dist (ft) | 540 | | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | 170 | | 85 | |
| Base Capacity (vph) | 210 | 462 | 583 | 696 | 1758 | 463 | 1343 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 88 | 0 | 760 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.08 | 0.50 | 0.01 | 0.36 | 0.50 | 0.00 | 1.02 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 1 | 209 | 0 | 0 | 1 | 229 | 747 | 3 | 2 | 515 | 46 |
| Future Volume (vph) | 14 | 1 | 209 | 0 | 0 | 1 | 229 | 747 | 3 | 2 | 515 | 46 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | | 0.85 | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Flt Protected | | 0.96 | 1.00 | | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1644 | 1463 | | | 1624 | 1660 | 1927 | | 1719 | 1846 | |
| Flt Permitted | | 0.74 | 1.00 | | | 1.00 | 0.34 | 1.00 | | 0.35 | 1.00 | |
| Satd. Flow (perm) | | 1271 | 1463 | | | 1624 | 599 | 1927 | | 638 | 1846 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.25 | 0.25 | 0.25 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 16 | 1 | 232 | 0 | 0 | 4 | 254 | 830 | 3 | 2 | 548 | 49 |
| RTOR Reduction (vph) | 0 | 0 | 190 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 17 | 42 | 0 | 0 | 0 | 254 | 833 | 0 | 2 | 596 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | | | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 3.7 | 22.2 | | | 3.7 | 121.9 | 121.9 | | 97.4 | 97.4 | |
| Effective Green, g (s) | | 5.7 | 26.2 | | | 5.7 | 123.9 | 123.9 | | 99.4 | 99.4 | |
| Actuated g/C Ratio | | 0.04 | 0.18 | | | 0.04 | 0.85 | 0.85 | | 0.69 | 0.69 | |
| Clearance Time (s) | | 6.0 | 6.0 | | | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 49 | 264 | | | 63 | 661 | 1646 | | 437 | 1265 | |
| v/s Ratio Prot | | | 0.02 | | | | 0.05 | c0.43 | | | 0.32 | |
| v/s Ratio Perm | | c0.01 | 0.01 | | | 0.00 | 0.27 | | | 0.00 | | |
| v/c Ratio | | 0.35 | 0.16 | | | 0.00 | 0.38 | 0.51 | | 0.00 | 0.47 | |
| Uniform Delay, d1 | | 67.8 | 50.1 | | | 66.9 | 4.5 | 2.7 | | 7.2 | 10.6 | |
| Progression Factor | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 4.2 | 0.3 | | | 0.0 | 0.4 | 1.1 | | 0.0 | 1.3 | |
| Delay (s) | | 72.1 | 50.4 | | | 66.9 | 4.8 | 3.8 | | 7.2 | 11.8 | |
| Level of Service | | E | D | | | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 51.9 | | | 66.9 | | | 4.1 | | | 11.8 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 12.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 62.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

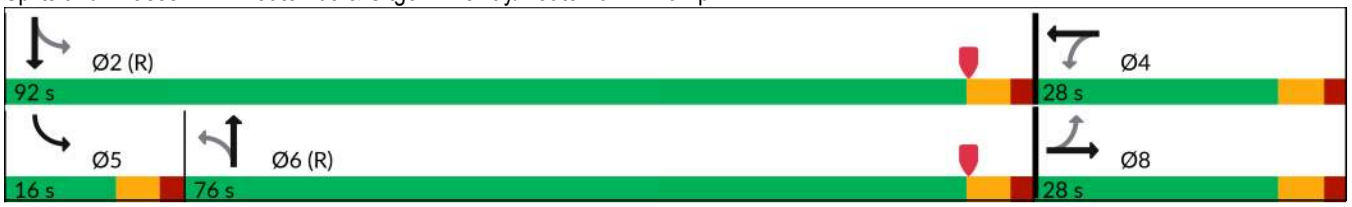
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 88 | 3 | 100 | 1 | 481 | 280 | 122 | 466 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 88 | 3 | 100 | 1 | 481 | 280 | 122 | 466 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.865 | | | 0.929 | | | 0.950 | | | 0.997 | |
| Flt Protected | | | | | 0.977 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1479 | 0 | 0 | 1742 | 0 | 0 | 1710 | 0 | 1719 | 1866 | 0 |
| Flt Permitted | | | | | 0.846 | | | | | 0.287 | | |
| Satd. Flow (perm) | 0 | 1479 | 0 | 0 | 1508 | 0 | 0 | 1710 | 0 | 519 | 1866 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 437 | | | 41 | | | 44 | | | 2 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.67 | 0.67 | 0.67 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Adj. Flow (vph) | 0 | 0 | 13 | 98 | 3 | 111 | 1 | 529 | 308 | 134 | 512 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 13 | 0 | 0 | 212 | 0 | 0 | 838 | 0 | 134 | 522 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 20.1 | | | 20.1 | | | 77.8 | | 91.9 | 91.9 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | | | 0.65 | | 0.77 | 0.77 | |
| v/c Ratio | | 0.02 | | | 0.74 | | | 0.75 | | 0.27 | 0.37 | |
| Control Delay (s/veh) | | 0.1 | | | 53.2 | | | 20.1 | | 5.5 | 5.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 51.0 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 0.1 | | | 53.2 | | | 71.1 | | 5.5 | 5.9 | |
| LOS | | A | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 0.1 | | | 53.2 | | | 71.1 | | | 5.8 | |
| Approach LOS | | A | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.75 | | | |
| Intersection Signal Delay (s/veh): 43.4 | | Intersection LOS: D | |
| Intersection Capacity Utilization 95.4% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 13 | 212 | 838 | 134 | 522 |
| v/c Ratio | 0.02 | 0.74 | 0.75 | 0.27 | 0.37 |
| Control Delay (s/veh) | 0.1 | 53.2 | 20.1 | 5.5 | 5.9 |
| Queue Delay | 0.0 | 0.0 | 51.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 0.1 | 53.2 | 71.1 | 5.5 | 5.9 |
| Queue Length 50th (ft) | 0 | 126 | 399 | 23 | 116 |
| Queue Length 95th (ft) | 0 | 209 | 651 | 44 | 182 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 646 | 335 | 1123 | 517 | 1430 |
| Starvation Cap Reductn | 0 | 0 | 435 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.02 | 0.63 | 1.22 | 0.26 | 0.37 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 88 | 3 | 100 | 1 | 481 | 280 | 122 | 466 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 88 | 3 | 100 | 1 | 481 | 280 | 122 | 466 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.87 | | | 0.93 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1479 | | | 1743 | | | 1710 | | 1719 | 1866 | |
| Flt Permitted | | 1.00 | | | 0.85 | | | 1.00 | | 0.29 | 1.00 | |
| Satd. Flow (perm) | | 1479 | | | 1508 | | | 1710 | | 519 | 1866 | |
| Peak-hour factor, PHF | 0.67 | 0.67 | 0.67 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 0 | 0 | 13 | 98 | 3 | 111 | 1 | 529 | 308 | 134 | 512 | 10 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 34 | 0 | 0 | 15 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2 | 0 | 0 | 178 | 0 | 0 | 823 | 0 | 134 | 522 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 18.1 | | | 18.1 | | | 75.8 | | 89.9 | 89.9 | |
| Effective Green, g (s) | | 20.1 | | | 20.1 | | | 77.8 | | 91.9 | 91.9 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | | | 0.65 | | 0.77 | 0.77 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 247 | | | 252 | | | 1108 | | 498 | 1429 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.02 | c0.28 | |
| v/s Ratio Perm | | | | | c0.12 | | | 0.48 | | 0.18 | | |
| v/c Ratio | | 0.01 | | | 0.71 | | | 0.74 | | 0.27 | 0.36 | |
| Uniform Delay, d1 | | 41.6 | | | 47.2 | | | 14.3 | | 5.8 | 4.6 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 8.7 | | | 4.5 | | 0.3 | 0.7 | |
| Delay (s) | | 41.7 | | | 55.8 | | | 18.8 | | 6.1 | 5.3 | |
| Level of Service | | D | | | E | | | B | | A | A | |
| Approach Delay (s/veh) | | 41.7 | | | 55.8 | | | 18.8 | | | 5.4 | |
| Approach LOS | | D | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 18.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 95.4% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2026 Opening Year No-Build Weekday Evening Peak Hour

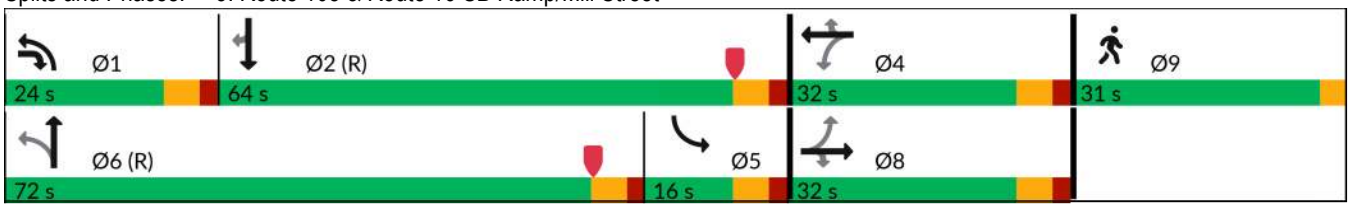
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 188 | 5 | 279 | 3 | 3 | 13 | 48 | 793 | 10 | 8 | 675 | 271 |
| Future Volume (vph) | 188 | 5 | 279 | 3 | 3 | 13 | 48 | 793 | 10 | 8 | 675 | 271 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | | 1.00 | | 1.00 | | |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.976 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1766 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.727 | | | 0.887 | | 0.298 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1345 | 1577 | 0 | 1605 | 1555 | 561 | 1877 | 0 | 1768 | 3541 | 1584 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 313 | | | 130 | | 1 | | | | 298 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.85 | 0.85 | 0.85 | 0.84 | 0.84 | 0.84 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 211 | 6 | 313 | 4 | 4 | 15 | 57 | 944 | 12 | 9 | 742 | 298 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 217 | 313 | 0 | 8 | 15 | 57 | 956 | 0 | 9 | 742 | 298 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 30.8 | 43.5 | | 30.8 | 30.8 | 103.2 | 103.2 | | 8.5 | 92.5 | 92.5 |
| Actuated g/C Ratio | | 0.20 | 0.29 | | 0.20 | 0.20 | 0.68 | 0.68 | | 0.06 | 0.61 | 0.61 |
| v/c Ratio | | 0.79 | 0.46 | | 0.02 | 0.04 | 0.12 | 0.75 | | 0.09 | 0.34 | 0.27 |
| Control Delay (s/veh) | | 77.2 | 5.0 | | 47.0 | 0.2 | 13.2 | 23.2 | | 69.0 | 17.2 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 77.2 | 5.0 | | 47.0 | 0.2 | 13.2 | 23.2 | | 69.0 | 17.2 | 2.9 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 34.5 | | | 16.4 | | | 22.6 | | | 13.6 | |
| Approach LOS | | C | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 21.4 | | Intersection LOS: C | |
| Intersection Capacity Utilization 71.4% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 217 | 313 | 8 | 15 | 57 | 956 | 9 | 742 | 298 |
| v/c Ratio | 0.79 | 0.46 | 0.02 | 0.04 | 0.12 | 0.75 | 0.09 | 0.34 | 0.27 |
| Control Delay (s/veh) | 77.2 | 5.0 | 47.0 | 0.2 | 13.2 | 23.2 | 69.0 | 17.2 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 77.2 | 5.0 | 47.0 | 0.2 | 13.2 | 23.2 | 69.0 | 17.2 | 2.9 |
| Queue Length 50th (ft) | 200 | 0 | 6 | 0 | 15 | 483 | 9 | 166 | 0 |
| Queue Length 95th (ft) | #335 | 46 | 21 | 0 | 56 | #1205 | 29 | 334 | 56 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 282 | 765 | 336 | 429 | 545 | 1282 | 140 | 2169 | 1086 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.41 | 0.02 | 0.03 | 0.10 | 0.75 | 0.06 | 0.34 | 0.27 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 188 | 5 | 279 | 3 | 3 | 13 | 48 | 793 | 10 | 8 | 675 | 271 |
| Future Volume (vph) | 188 | 5 | 279 | 3 | 3 | 13 | 48 | 793 | 10 | 8 | 675 | 271 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1765 | 1577 | | 1765 | 1555 | 1787 | 1877 | | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.73 | 1.00 | | 0.89 | 1.00 | 0.30 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1345 | 1577 | | 1605 | 1555 | 560 | 1877 | | 1771 | 3541 | 1584 |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.85 | 0.85 | 0.85 | 0.84 | 0.84 | 0.84 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 211 | 6 | 313 | 4 | 4 | 15 | 57 | 944 | 12 | 9 | 742 | 298 |
| RTOR Reduction (vph) | 0 | 0 | 230 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 0 | 217 | 83 | 0 | 8 | 3 | 57 | 956 | 0 | 9 | 742 | 178 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 28.8 | 36.2 | | 28.8 | 28.8 | 94.0 | 94.0 | | 1.6 | 88.2 | 88.2 |
| Effective Green, g (s) | | 30.8 | 40.2 | | 30.8 | 30.8 | 96.0 | 96.0 | | 3.6 | 90.2 | 90.2 |
| Actuated g/C Ratio | | 0.20 | 0.27 | | 0.20 | 0.20 | 0.64 | 0.64 | | 0.02 | 0.60 | 0.60 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 274 | 419 | | 327 | 317 | 432 | 1193 | | 42 | 2115 | 946 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.51 | | 0.01 | c0.21 | |
| v/s Ratio Perm | | c0.16 | 0.04 | | 0.00 | 0.00 | 0.08 | | | | | 0.11 |
| v/c Ratio | | 0.79 | 0.20 | | 0.02 | 0.01 | 0.13 | 0.80 | | 0.21 | 0.35 | 0.19 |
| Uniform Delay, d1 | | 57.1 | 42.9 | | 48.1 | 47.9 | 11.4 | 20.4 | | 72.3 | 15.5 | 13.8 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.4 | 0.2 | | 0.0 | 0.0 | 0.1 | 5.7 | | 2.6 | 0.5 | 0.4 |
| Delay (s) | | 71.5 | 43.2 | | 48.1 | 47.9 | 11.5 | 26.1 | | 74.9 | 15.9 | 14.2 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 54.8 | | | 48.0 | | | 25.3 | | | 16.0 | |
| Approach LOS | | D | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 27.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.76 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 71.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

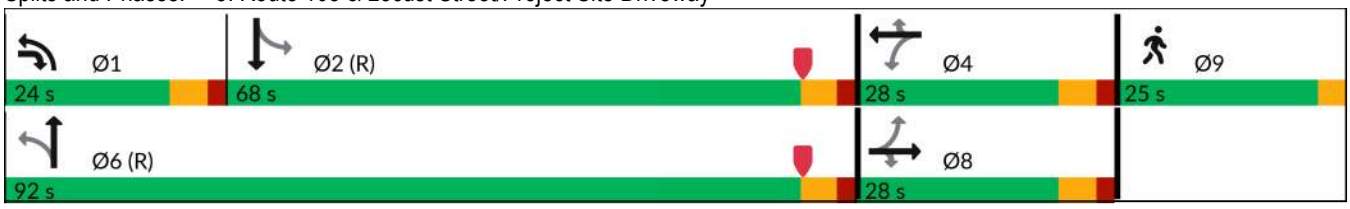
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 1 | 287 | 2 | 3 | 3 | 212 | 771 | 0 | 1 | 669 | 107 |
| Future Volume (vph) | 36 | 1 | 287 | 2 | 3 | 3 | 212 | 771 | 0 | 1 | 669 | 107 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.979 | |
| Flt Protected | | 0.954 | | | 0.981 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1692 | 1507 | 0 | 1874 | 1624 | 1693 | 1966 | 0 | 1736 | 1846 | 0 |
| Flt Permitted | | 0.722 | | | 0.888 | | 0.178 | | | 0.365 | | |
| Satd. Flow (perm) | 0 | 1280 | 1507 | 0 | 1696 | 1624 | 317 | 1966 | 0 | 666 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 305 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.40 | 0.40 | 0.40 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 38 | 1 | 305 | 5 | 8 | 8 | 219 | 795 | 0 | 1 | 743 | 119 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 39 | 305 | 0 | 13 | 8 | 219 | 795 | 0 | 1 | 862 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 11.7 | 33.7 | | 11.7 | 11.7 | 122.6 | 123.4 | | 97.5 | 97.5 | |
| Actuated g/C Ratio | | 0.08 | 0.23 | | 0.08 | 0.08 | 0.85 | 0.85 | | 0.67 | 0.67 | |
| v/c Ratio | | 0.38 | 0.52 | | 0.10 | 0.04 | 0.47 | 0.48 | | 0.00 | 0.69 | |
| Control Delay (s/veh) | | 72.5 | 6.1 | | 61.4 | 0.3 | 7.2 | 6.4 | | 17.0 | 22.6 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.5 | | 0.0 | 51.0 | |
| Total Delay (s/veh) | | 72.5 | 6.1 | | 61.4 | 0.3 | 7.2 | 6.9 | | 17.0 | 73.6 | |
| LOS | | E | A | | E | A | A | A | | B | E | |
| Approach Delay (s/veh) | | 13.7 | | | 38.1 | | | 7.0 | | | 73.5 | |
| Approach LOS | | B | | | D | | | A | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.69 | | | |
| Intersection Signal Delay (s/veh): 33.9 | | Intersection LOS: C | |
| Intersection Capacity Utilization 73.7% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 39 | 305 | 13 | 8 | 219 | 795 | 1 | 862 |
| v/c Ratio | 0.38 | 0.52 | 0.10 | 0.04 | 0.47 | 0.48 | 0.00 | 0.69 |
| Control Delay (s/veh) | 72.5 | 6.1 | 61.4 | 0.3 | 7.2 | 6.4 | 17.0 | 22.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 51.0 |
| Total Delay (s/veh) | 72.5 | 6.1 | 61.4 | 0.3 | 7.2 | 6.9 | 17.0 | 73.6 |
| Queue Length 50th (ft) | 36 | 0 | 12 | 0 | 24 | 127 | 0 | 432 |
| Queue Length 95th (ft) | 74 | 48 | 15 | 0 | 111 | 519 | 4 | #1144 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 211 | 598 | 280 | 343 | 485 | 1672 | 447 | 1243 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 458 | 0 | 508 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.18 | 0.51 | 0.05 | 0.02 | 0.45 | 0.65 | 0.00 | 1.17 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 1 | 287 | 2 | 3 | 3 | 212 | 771 | 0 | 1 | 669 | 107 |
| Future Volume (vph) | 36 | 1 | 287 | 2 | 3 | 3 | 212 | 771 | 0 | 1 | 669 | 107 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1691 | 1507 | | 1874 | 1624 | 1693 | 1966 | | 1735 | 1846 | |
| Flt Permitted | | 0.72 | 1.00 | | 0.89 | 1.00 | 0.18 | 1.00 | | 0.37 | 1.00 | |
| Satd. Flow (perm) | | 1281 | 1507 | | 1696 | 1624 | 318 | 1966 | | 667 | 1846 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.40 | 0.40 | 0.40 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 38 | 1 | 305 | 5 | 8 | 8 | 219 | 795 | 0 | 1 | 743 | 119 |
| RTOR Reduction (vph) | 0 | 0 | 238 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 39 | 67 | 0 | 13 | 1 | 219 | 795 | 0 | 1 | 860 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 8.6 | 27.7 | | 8.6 | 8.6 | 117.0 | 117.0 | | 91.9 | 91.9 | |
| Effective Green, g (s) | | 10.6 | 31.7 | | 10.6 | 10.6 | 119.0 | 119.0 | | 93.9 | 93.9 | |
| Actuated g/C Ratio | | 0.07 | 0.22 | | 0.07 | 0.07 | 0.82 | 0.82 | | 0.65 | 0.65 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 93 | 329 | | 123 | 118 | 461 | 1613 | | 431 | 1195 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.07 | c0.40 | | | c0.47 | |
| v/s Ratio Perm | | c0.03 | 0.01 | | 0.01 | 0.00 | 0.32 | | | 0.00 | | |
| v/c Ratio | | 0.42 | 0.20 | | 0.11 | 0.00 | 0.48 | 0.49 | | 0.00 | 0.72 | |
| Uniform Delay, d1 | | 64.3 | 46.3 | | 62.8 | 62.3 | 14.5 | 3.9 | | 9.0 | 16.9 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.0 | 0.3 | | 0.4 | 0.0 | 0.8 | 1.1 | | 0.0 | 3.7 | |
| Delay (s) | | 67.3 | 46.6 | | 63.2 | 62.3 | 15.3 | 5.0 | | 9.0 | 20.6 | |
| Level of Service | | E | D | | E | E | B | A | | A | C | |
| Approach Delay (s/veh) | | 49.0 | | | 62.8 | | | 7.2 | | | 20.6 | |
| Approach LOS | | D | | | E | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 19.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 73.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

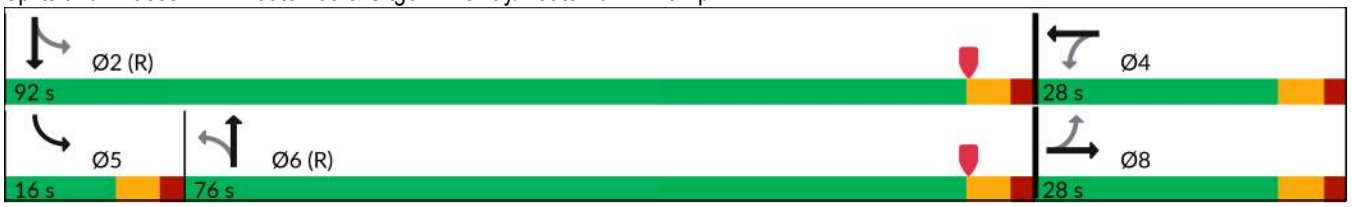
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 188 | 15 | 134 | 1 | 492 | 317 | 172 | 578 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 188 | 15 | 134 | 1 | 492 | 317 | 172 | 578 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.886 | | | 0.946 | | | 0.947 | | | 0.995 | |
| Flt Protected | | | | | 0.973 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1515 | 0 | 0 | 1749 | 0 | 0 | 1755 | 0 | 1771 | 1918 | 0 |
| Flt Permitted | | | | | 0.813 | | | | | 0.237 | | |
| Satd. Flow (perm) | 0 | 1515 | 0 | 0 | 1461 | 0 | 0 | 1755 | 0 | 442 | 1918 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 22 | | | 25 | | | 48 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Peak Hour Factor | 0.50 | 0.50 | 0.50 | 0.79 | 0.79 | 0.79 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 4 | 22 | 238 | 19 | 170 | 1 | 547 | 352 | 191 | 642 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 26 | 0 | 0 | 427 | 0 | 0 | 900 | 0 | 191 | 663 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 27.8 | | | 27.8 | | | 68.9 | | 84.2 | 84.2 | |
| Actuated g/C Ratio | | 0.23 | | | 0.23 | | | 0.57 | | 0.70 | 0.70 | |
| v/c Ratio | | 0.07 | | | 1.19 | | | 0.88 | | 0.44 | 0.49 | |
| Control Delay (s/veh) | | 18.0 | | | 150.2 | | | 31.4 | | 8.8 | 9.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 50.1 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 18.0 | | | 150.2 | | | 81.4 | | 8.8 | 9.2 | |
| LOS | | B | | | F | | | F | | A | A | |
| Approach Delay (s/veh) | | 18.0 | | | 150.2 | | | 81.4 | | | 9.1 | |
| Approach LOS | | B | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 1.19 | | | |
| Intersection Signal Delay (s/veh): 66.0 | | Intersection LOS: E | |
| Intersection Capacity Utilization 112.9% | | ICU Level of Service H | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 26 | 427 | 900 | 191 | 663 |
| v/c Ratio | 0.07 | 1.19 | 0.88 | 0.44 | 0.49 |
| Control Delay (s/veh) | 18.0 | 150.2 | 31.4 | 8.8 | 9.2 |
| Queue Delay | 0.0 | 0.0 | 50.1 | 0.0 | 0.0 |
| Total Delay (s/veh) | 18.0 | 150.2 | 81.4 | 8.8 | 9.2 |
| Queue Length 50th (ft) | 3 | ~417 | 507 | 40 | 186 |
| Queue Length 95th (ft) | 9 | #517 | 729 | 61 | 250 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 368 | 358 | 1072 | 443 | 1407 |
| Starvation Cap Reductn | 0 | 0 | 403 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.07 | 1.19 | 1.35 | 0.43 | 0.47 |

Intersection Summary

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 188 | 15 | 134 | 1 | 492 | 317 | 172 | 578 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 188 | 15 | 134 | 1 | 492 | 317 | 172 | 578 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.89 | | | 0.95 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1515 | | | 1749 | | | 1755 | | 1771 | 1918 | |
| Flt Permitted | | 1.00 | | | 0.81 | | | 1.00 | | 0.24 | 1.00 | |
| Satd. Flow (perm) | | 1515 | | | 1461 | | | 1755 | | 443 | 1918 | |
| Peak-hour factor, PHF | 0.50 | 0.50 | 0.50 | 0.79 | 0.79 | 0.79 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 4 | 22 | 238 | 19 | 170 | 1 | 547 | 352 | 191 | 642 | 21 |
| RTOR Reduction (vph) | 0 | 17 | 0 | 0 | 19 | 0 | 0 | 20 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 0 | 408 | 0 | 0 | 880 | 0 | 191 | 662 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 25.8 | | | 25.8 | | | 66.9 | | 82.2 | 82.2 | |
| Effective Green, g (s) | | 27.8 | | | 27.8 | | | 68.9 | | 84.2 | 84.2 | |
| Actuated g/C Ratio | | 0.23 | | | 0.23 | | | 0.57 | | 0.70 | 0.70 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 350 | | | 338 | | | 1007 | | 435 | 1345 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | 0.04 | c0.35 | |
| v/s Ratio Perm | | | | | c0.28 | | | 0.50 | | 0.27 | | |
| v/c Ratio | | 0.03 | | | 1.21 | | | 0.87 | | 0.44 | 0.49 | |
| Uniform Delay, d1 | | 35.6 | | | 46.1 | | | 21.8 | | 10.1 | 8.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 117.5 | | | 10.4 | | 0.7 | 1.3 | |
| Delay (s) | | 35.7 | | | 163.6 | | | 32.3 | | 10.8 | 9.4 | |
| Level of Service | | D | | | F | | | C | | B | A | |
| Approach Delay (s/veh) | | 35.7 | | | 163.6 | | | 32.3 | | | 9.7 | |
| Approach LOS | | D | | | F | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 49.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.93 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 112.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2026 Opening Year No-Build Saturday Midday Peak Hour

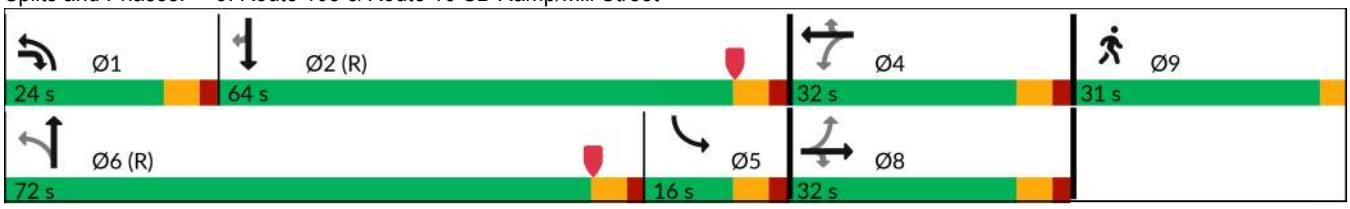
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 684 | 7 | 3 | 501 | 249 |
| Future Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 684 | 7 | 3 | 501 | 249 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | | 0.97 | 1.00 | 1.00 | | 1.00 | | 0.97 |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.962 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1740 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.724 | | | 0.783 | | 0.371 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1333 | 1577 | 0 | 1417 | 1546 | 696 | 1877 | 0 | 1767 | 3541 | 1541 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 192 | | | 130 | | | | | | 293 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.75 | 0.75 | 0.75 | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 190 | 8 | 192 | 12 | 3 | 21 | 56 | 777 | 8 | 4 | 589 | 293 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 198 | 192 | 0 | 15 | 21 | 56 | 785 | 0 | 4 | 589 | 293 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 28.7 | 41.2 | | 28.7 | 28.7 | 105.5 | 105.5 | | 8.1 | 94.8 | 94.8 |
| Actuated g/C Ratio | | 0.19 | 0.27 | | 0.19 | 0.19 | 0.70 | 0.70 | | 0.05 | 0.63 | 0.63 |
| v/c Ratio | | 0.78 | 0.34 | | 0.06 | 0.05 | 0.10 | 0.60 | | 0.04 | 0.27 | 0.27 |
| Control Delay (s/veh) | | 79.1 | 5.0 | | 48.5 | 0.3 | 12.6 | 18.6 | | 68.3 | 15.5 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 79.1 | 5.0 | | 48.5 | 0.3 | 12.6 | 18.6 | | 68.3 | 15.5 | 2.9 |
| LOS | | E | A | | D | A | B | B | | E | B | A |
| Approach Delay (s/veh) | | 42.6 | | | 20.4 | | | 18.2 | | | 11.6 | |
| Approach LOS | | D | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 110 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 19.9 | | Intersection LOS: B | |
| Intersection Capacity Utilization 64.7% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 198 | 192 | 15 | 21 | 56 | 785 | 4 | 589 | 293 |
| v/c Ratio | 0.78 | 0.34 | 0.06 | 0.05 | 0.10 | 0.60 | 0.04 | 0.27 | 0.27 |
| Control Delay (s/veh) | 79.1 | 5.0 | 48.5 | 0.3 | 12.6 | 18.6 | 68.3 | 15.5 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 79.1 | 5.0 | 48.5 | 0.3 | 12.6 | 18.6 | 68.3 | 15.5 | 2.9 |
| Queue Length 50th (ft) | 185 | 0 | 12 | 0 | 13 | 304 | 4 | 116 | 0 |
| Queue Length 95th (ft) | #292 | 39 | 28 | 0 | 58 | #953 | 16 | 241 | 43 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 268 | 667 | 284 | 414 | 630 | 1311 | 140 | 2221 | 1076 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.74 | 0.29 | 0.05 | 0.05 | 0.09 | 0.60 | 0.03 | 0.27 | 0.27 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 684 | 7 | 3 | 501 | 249 |
| Future Volume (vph) | 173 | 7 | 175 | 9 | 2 | 16 | 49 | 684 | 7 | 3 | 501 | 249 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1757 | 1577 | | 1740 | 1547 | 1786 | 1878 | | 1771 | 3541 | 1545 |
| Flt Permitted | | 0.72 | 1.00 | | 0.78 | 1.00 | 0.37 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1333 | 1577 | | 1417 | 1547 | 697 | 1878 | | 1771 | 3541 | 1545 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.75 | 0.75 | 0.75 | 0.88 | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 |
| Adj. Flow (vph) | 190 | 8 | 192 | 12 | 3 | 21 | 56 | 777 | 8 | 4 | 589 | 293 |
| RTOR Reduction (vph) | 0 | 0 | 144 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 114 |
| Lane Group Flow (vph) | 0 | 198 | 48 | 0 | 15 | 4 | 56 | 785 | 0 | 4 | 589 | 179 |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 26.7 | 34.1 | | 26.7 | 26.7 | 96.3 | 96.3 | | 1.4 | 90.3 | 90.3 |
| Effective Green, g (s) | | 28.7 | 38.1 | | 28.7 | 28.7 | 98.3 | 98.3 | | 3.4 | 92.3 | 92.3 |
| Actuated g/C Ratio | | 0.19 | 0.25 | | 0.19 | 0.19 | 0.65 | 0.65 | | 0.02 | 0.61 | 0.61 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 253 | 397 | | 269 | 294 | 521 | 1222 | | 39 | 2164 | 944 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.42 | | 0.00 | c0.17 | |
| v/s Ratio Perm | | c0.15 | 0.02 | | 0.01 | 0.00 | 0.06 | | | | | 0.12 |
| v/c Ratio | | 0.78 | 0.12 | | 0.06 | 0.01 | 0.11 | 0.64 | | 0.10 | 0.27 | 0.19 |
| Uniform Delay, d1 | | 58.2 | 43.5 | | 50.1 | 49.7 | 10.0 | 15.8 | | 72.3 | 13.7 | 12.9 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.5 | 0.1 | | 0.1 | 0.0 | 0.1 | 2.6 | | 1.2 | 0.3 | 0.4 |
| Delay (s) | | 72.7 | 43.7 | | 50.1 | 49.7 | 10.1 | 18.4 | | 73.5 | 14.0 | 13.4 |
| Level of Service | | E | D | | D | D | B | B | | E | B | B |
| Approach Delay (s/veh) | | 58.4 | | | 49.9 | | | 17.9 | | | 14.1 | |
| Approach LOS | | E | | | D | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 24.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 64.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

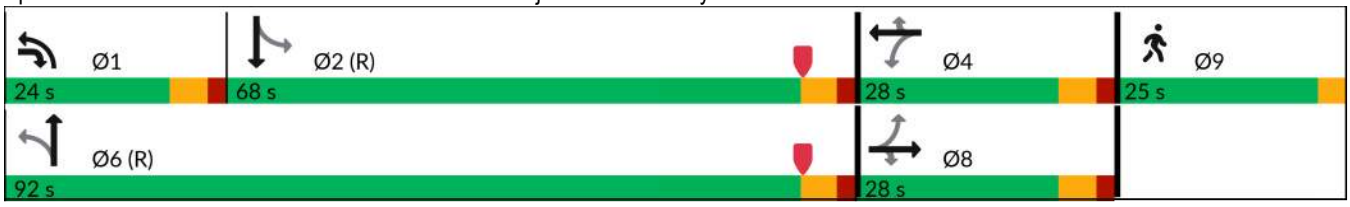
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 0 | 260 | 3 | 1 | 5 | 241 | 611 | 0 | 3 | 446 | 74 |
| Future Volume (vph) | 23 | 0 | 260 | 3 | 1 | 5 | 241 | 611 | 0 | 3 | 446 | 74 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.979 | |
| Flt Protected | | 0.950 | | | 0.962 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1838 | 1624 | 1693 | 1966 | 0 | 1753 | 1863 | 0 |
| Flt Permitted | | 0.754 | | | 0.769 | | 0.355 | | | 0.423 | | |
| Satd. Flow (perm) | 0 | 1333 | 1507 | 0 | 1469 | 1586 | 632 | 1966 | 0 | 780 | 1863 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 292 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.67 | 0.67 | 0.67 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 26 | 0 | 292 | 4 | 1 | 7 | 251 | 636 | 0 | 3 | 490 | 81 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 26 | 292 | 0 | 5 | 7 | 251 | 636 | 0 | 3 | 571 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 10.5 | 27.9 | | 10.2 | 10.2 | 126.4 | 128.0 | | 103.3 | 103.3 | |
| Actuated g/C Ratio | | 0.07 | 0.19 | | 0.07 | 0.07 | 0.87 | 0.88 | | 0.71 | 0.71 | |
| v/c Ratio | | 0.27 | 0.56 | | 0.05 | 0.04 | 0.36 | 0.37 | | 0.01 | 0.43 | |
| Control Delay (s/veh) | | 69.8 | 7.5 | | 62.0 | 0.4 | 4.8 | 4.6 | | 13.3 | 13.5 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.3 | | 0.0 | 8.8 | |
| Total Delay (s/veh) | | 69.8 | 7.5 | | 62.0 | 0.4 | 4.8 | 4.9 | | 13.3 | 22.2 | |
| LOS | | E | A | | E | A | A | A | | B | C | |
| Approach Delay (s/veh) | | 12.6 | | | 26.1 | | | 4.9 | | | 22.2 | |
| Approach LOS | | B | | | C | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.56 | | | |
| Intersection Signal Delay (s/veh): 12.0 | | Intersection LOS: B | |
| Intersection Capacity Utilization 59.3% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 26 | 292 | 5 | 7 | 251 | 636 | 3 | 571 |
| v/c Ratio | 0.27 | 0.56 | 0.05 | 0.04 | 0.36 | 0.37 | 0.01 | 0.43 |
| Control Delay (s/veh) | 69.8 | 7.5 | 62.0 | 0.4 | 4.8 | 4.6 | 13.3 | 13.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 8.8 |
| Total Delay (s/veh) | 69.8 | 7.5 | 62.0 | 0.4 | 4.8 | 4.9 | 13.3 | 22.2 |
| Queue Length 50th (ft) | 24 | 0 | 5 | 0 | 25 | 81 | 1 | 207 |
| Queue Length 95th (ft) | 56 | 51 | 13 | 0 | 122 | 351 | 7 | 497 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 220 | 541 | 243 | 337 | 704 | 1735 | 555 | 1329 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 538 | 0 | 715 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.12 | 0.54 | 0.02 | 0.02 | 0.36 | 0.53 | 0.01 | 0.93 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 0 | 260 | 3 | 1 | 5 | 241 | 611 | 0 | 3 | 446 | 74 |
| Future Volume (vph) | 23 | 0 | 260 | 3 | 1 | 5 | 241 | 611 | 0 | 3 | 446 | 74 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1670 | 1507 | | 1837 | 1577 | 1693 | 1966 | | 1753 | 1863 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.77 | 1.00 | 0.35 | 1.00 | | 0.42 | 1.00 | |
| Satd. Flow (perm) | | 1326 | 1507 | | 1469 | 1577 | 632 | 1966 | | 781 | 1863 | |
| Peak-hour factor, PHF | 0.89 | 0.89 | 0.89 | 0.67 | 0.67 | 0.67 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 26 | 0 | 292 | 4 | 1 | 7 | 251 | 636 | 0 | 3 | 490 | 81 |
| RTOR Reduction (vph) | 0 | 0 | 237 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 26 | 55 | 0 | 5 | 0 | 251 | 636 | 0 | 3 | 569 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 6.0 | 23.1 | | 6.0 | 6.0 | 119.6 | 119.6 | | 96.5 | 96.5 | |
| Effective Green, g (s) | | 8.0 | 27.1 | | 8.0 | 8.0 | 121.6 | 121.6 | | 98.5 | 98.5 | |
| Actuated g/C Ratio | | 0.06 | 0.19 | | 0.06 | 0.06 | 0.84 | 0.84 | | 0.68 | 0.68 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 73 | 281 | | 81 | 87 | 669 | 1648 | | 530 | 1265 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.05 | c0.32 | | | c0.31 | |
| v/s Ratio Perm | | c0.02 | 0.01 | | 0.00 | 0.00 | 0.26 | | | 0.00 | | |
| v/c Ratio | | 0.36 | 0.19 | | 0.06 | 0.00 | 0.38 | 0.39 | | 0.01 | 0.45 | |
| Uniform Delay, d1 | | 66.0 | 49.7 | | 64.9 | 64.7 | 4.6 | 2.8 | | 7.5 | 10.7 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.0 | 0.3 | | 0.3 | 0.0 | 0.4 | 0.7 | | 0.0 | 1.2 | |
| Delay (s) | | 69.0 | 50.1 | | 65.3 | 64.8 | 4.9 | 3.5 | | 7.5 | 11.9 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 51.6 | | | 65.0 | | | 3.9 | | | 11.9 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 15.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 59.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

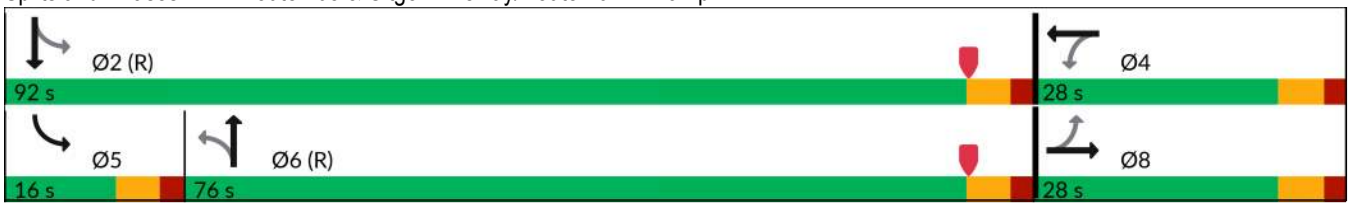
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 82 | 9 | 144 | 2 | 439 | 198 | 145 | 436 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 82 | 9 | 144 | 2 | 439 | 198 | 145 | 436 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.932 | | | 0.917 | | | 0.958 | | | 0.995 | |
| Flt Protected | | | | | 0.983 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1594 | 0 | 0 | 1713 | 0 | 0 | 1793 | 0 | 1771 | 1917 | 0 |
| Flt Permitted | | | | | 0.879 | | | 0.999 | | 0.326 | | |
| Satd. Flow (perm) | 0 | 1594 | 0 | 0 | 1531 | 0 | 0 | 1791 | 0 | 608 | 1917 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 7 | | | 59 | | | 34 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.67 | 0.67 | 0.67 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.83 | 0.83 | 0.83 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 7 | 7 | 90 | 10 | 158 | 2 | 482 | 218 | 175 | 525 | 18 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 14 | 0 | 0 | 258 | 0 | 0 | 702 | 0 | 175 | 543 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 22.3 | | | 22.3 | | | 74.9 | | 89.7 | 89.7 | |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | | 0.62 | | 0.75 | 0.75 | |
| v/c Ratio | | 0.05 | | | 0.78 | | | 0.62 | | 0.31 | 0.38 | |
| Control Delay (s/veh) | | 26.7 | | | 51.3 | | | 17.2 | | 6.3 | 6.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 52.5 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 26.7 | | | 51.3 | | | 69.7 | | 6.3 | 6.7 | |
| LOS | | C | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 26.7 | | | 51.3 | | | 69.7 | | | 6.6 | |
| Approach LOS | | C | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 39.8 | | Intersection LOS: D | |
| Intersection Capacity Utilization 89.7% | | ICU Level of Service E | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 14 | 258 | 702 | 175 | 543 |
| v/c Ratio | 0.05 | 0.78 | 0.62 | 0.31 | 0.38 |
| Control Delay (s/veh) | 26.7 | 51.3 | 17.2 | 6.3 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 52.5 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.7 | 51.3 | 69.7 | 6.3 | 6.7 |
| Queue Length 50th (ft) | 4 | 147 | 309 | 35 | 134 |
| Queue Length 95th (ft) | 16 | 241 | 467 | 55 | 178 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 337 | 365 | 1146 | 571 | 1449 |
| Starvation Cap Reductn | 0 | 0 | 533 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.71 | 1.15 | 0.31 | 0.37 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 82 | 9 | 144 | 2 | 439 | 198 | 145 | 436 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 82 | 9 | 144 | 2 | 439 | 198 | 145 | 436 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.93 | | | 0.92 | | | 0.96 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1595 | | | 1713 | | | 1793 | | 1771 | 1917 | |
| Flt Permitted | | 1.00 | | | 0.88 | | | 1.00 | | 0.33 | 1.00 | |
| Satd. Flow (perm) | | 1595 | | | 1531 | | | 1791 | | 608 | 1917 | |
| Peak-hour factor, PHF | 0.67 | 0.67 | 0.67 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 0 | 7 | 7 | 90 | 10 | 158 | 2 | 482 | 218 | 175 | 525 | 18 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 48 | 0 | 0 | 13 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 0 | 210 | 0 | 0 | 689 | 0 | 175 | 542 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 20.3 | | | 20.3 | | | 72.9 | | 87.7 | 87.7 | |
| Effective Green, g (s) | | 22.3 | | | 22.3 | | | 74.9 | | 89.7 | 89.7 | |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | | 0.62 | | 0.75 | 0.75 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 296 | | | 284 | | | 1117 | | 559 | 1432 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | 0.03 | c0.28 | |
| v/s Ratio Perm | | | | | c0.14 | | | c0.38 | | 0.21 | | |
| v/c Ratio | | 0.03 | | | 0.74 | | | 0.62 | | 0.31 | 0.38 | |
| Uniform Delay, d1 | | 40.0 | | | 46.1 | | | 13.8 | | 6.2 | 5.3 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 9.7 | | | 2.6 | | 0.3 | 0.8 | |
| Delay (s) | | 40.0 | | | 55.8 | | | 16.3 | | 6.6 | 6.1 | |
| Level of Service | | D | | | E | | | B | | A | A | |
| Approach Delay (s/veh) | | 40.0 | | | 55.8 | | | 16.3 | | | 6.2 | |
| Approach LOS | | D | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 18.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 89.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2026 Opening Year Build Weekday Morning Peak Hour

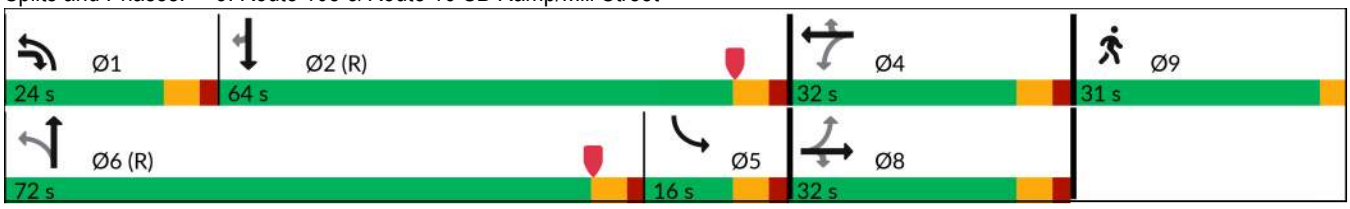
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 193 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 546 | 287 |
| Future Volume (vph) | 193 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 546 | 287 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.955 | | | 0.983 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1754 | 1561 | 0 | 1727 | 1544 | 1752 | 1843 | 0 | 1736 | 3473 | 1554 |
| Flt Permitted | | 0.711 | | | 0.882 | | 0.367 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1303 | 1561 | 0 | 1549 | 1509 | 676 | 1843 | 0 | 1736 | 3473 | 1519 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 417 | | | 130 | | | | | | 302 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 214 | 11 | 417 | 12 | 23 | 8 | 74 | 924 | 8 | 5 | 575 | 302 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 225 | 417 | 0 | 35 | 8 | 74 | 932 | 0 | 5 | 575 | 302 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 33.4 | 47.2 | | 33.4 | 33.4 | 100.7 | 100.7 | | 8.2 | 88.8 | 88.8 |
| Actuated g/C Ratio | | 0.22 | 0.31 | | 0.22 | 0.22 | 0.67 | 0.67 | | 0.05 | 0.59 | 0.59 |
| v/c Ratio | | 0.78 | 0.54 | | 0.10 | 0.02 | 0.14 | 0.76 | | 0.05 | 0.28 | 0.30 |
| Control Delay (s/veh) | | 73.9 | 4.9 | | 47.1 | 0.1 | 13.5 | 24.8 | | 68.6 | 18.1 | 3.2 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 73.9 | 4.9 | | 47.1 | 0.1 | 13.5 | 24.8 | | 68.6 | 18.1 | 3.2 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 29.1 | | | 38.4 | | | 23.9 | | | 13.3 | |
| Approach LOS | | C | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 21.8 | | Intersection LOS: C | |
| Intersection Capacity Utilization 76.3% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 225 | 417 | 35 | 8 | 74 | 932 | 5 | 575 | 302 |
| v/c Ratio | 0.78 | 0.54 | 0.10 | 0.02 | 0.14 | 0.76 | 0.05 | 0.28 | 0.30 |
| Control Delay (s/veh) | 73.9 | 4.9 | 47.1 | 0.1 | 13.5 | 24.8 | 68.6 | 18.1 | 3.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 73.9 | 4.9 | 47.1 | 0.1 | 13.5 | 24.8 | 68.6 | 18.1 | 3.2 |
| Queue Length 50th (ft) | 205 | 0 | 27 | 0 | 21 | 506 | 5 | 131 | 0 |
| Queue Length 95th (ft) | #364 | 51 | 63 | 0 | 74 | #1315 | 20 | 261 | 59 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 289 | 845 | 344 | 436 | 593 | 1229 | 137 | 2043 | 1017 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.78 | 0.49 | 0.10 | 0.02 | 0.12 | 0.76 | 0.04 | 0.28 | 0.30 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 193 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 546 | 287 |
| Future Volume (vph) | 193 | 10 | 375 | 11 | 21 | 7 | 67 | 832 | 7 | 5 | 546 | 287 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1750 | 1561 | | 1727 | 1510 | 1752 | 1842 | | 1736 | 3473 | 1520 |
| Flt Permitted | | 0.71 | 1.00 | | 0.88 | 1.00 | 0.37 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1303 | 1561 | | 1549 | 1510 | 677 | 1842 | | 1736 | 3473 | 1520 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 214 | 11 | 417 | 12 | 23 | 8 | 74 | 924 | 8 | 5 | 575 | 302 |
| RTOR Reduction (vph) | 0 | 0 | 296 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 129 |
| Lane Group Flow (vph) | 0 | 225 | 121 | 0 | 35 | 2 | 74 | 932 | 0 | 5 | 575 | 173 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 31.4 | 39.9 | | 31.4 | 31.4 | 91.6 | 91.6 | | 1.4 | 84.5 | 84.5 |
| Effective Green, g (s) | | 33.4 | 43.9 | | 33.4 | 33.4 | 93.6 | 93.6 | | 3.4 | 86.5 | 86.5 |
| Actuated g/C Ratio | | 0.22 | 0.29 | | 0.22 | 0.22 | 0.62 | 0.62 | | 0.02 | 0.57 | 0.57 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 288 | 453 | | 342 | 334 | 494 | 1141 | | 39 | 1989 | 870 |
| v/s Ratio Prot | | | 0.02 | | | | 0.01 | c0.51 | | 0.00 | c0.17 | |
| v/s Ratio Perm | | c0.17 | 0.06 | | 0.02 | 0.00 | 0.08 | | | | | 0.11 |
| v/c Ratio | | 0.78 | 0.27 | | 0.10 | 0.01 | 0.15 | 0.82 | | 0.13 | 0.29 | 0.20 |
| Uniform Delay, d1 | | 55.4 | 41.2 | | 46.9 | 45.8 | 12.0 | 22.1 | | 72.3 | 16.5 | 15.5 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 12.9 | 0.3 | | 0.1 | 0.0 | 0.1 | 6.5 | | 1.5 | 0.4 | 0.5 |
| Delay (s) | | 68.2 | 41.5 | | 47.0 | 45.9 | 12.2 | 28.6 | | 73.8 | 16.9 | 16.1 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 50.9 | | | 46.8 | | | 27.4 | | | 16.9 | |
| Approach LOS | | D | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 30.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.77 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 76.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

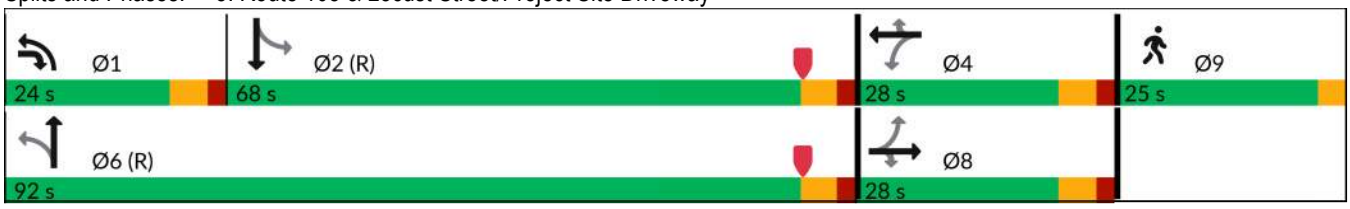
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 0 | 209 | 7 | 0 | 3 | 229 | 747 | 4 | 7 | 515 | 46 |
| Future Volume (vph) | 14 | 0 | 209 | 7 | 0 | 3 | 229 | 747 | 4 | 7 | 515 | 46 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.988 | |
| Flt Protected | | 0.950 | | | 0.950 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1636 | 1463 | 0 | 1815 | 1624 | 1660 | 1926 | 0 | 1719 | 1846 | 0 |
| Flt Permitted | | 0.752 | | | 0.747 | | 0.343 | | | 0.352 | | |
| Satd. Flow (perm) | 0 | 1295 | 1463 | 0 | 1427 | 1624 | 599 | 1926 | 0 | 637 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 232 | | | 90 | | | | | 4 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 16 | 0 | 232 | 8 | 0 | 3 | 254 | 830 | 4 | 7 | 548 | 49 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 16 | 232 | 0 | 8 | 3 | 254 | 834 | 0 | 7 | 597 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 9.5 | 25.8 | | 9.2 | 9.2 | 129.9 | 132.3 | | 105.4 | 105.4 | |
| Actuated g/C Ratio | | 0.07 | 0.18 | | 0.06 | 0.06 | 0.90 | 0.91 | | 0.73 | 0.73 | |
| v/c Ratio | | 0.19 | 0.51 | | 0.09 | 0.02 | 0.37 | 0.47 | | 0.02 | 0.44 | |
| Control Delay (s/veh) | | 68.4 | 7.8 | | 64.7 | 0.0 | 4.4 | 5.0 | | 13.0 | 13.2 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 26.4 | |
| Total Delay (s/veh) | | 68.4 | 7.8 | | 64.7 | 0.0 | 4.4 | 5.1 | | 13.0 | 39.6 | |
| LOS | | E | A | | E | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 11.7 | | | 47.1 | | | 4.9 | | | 39.3 | |
| Approach LOS | | B | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.51 | | | |
| Intersection Signal Delay (s/veh): 16.7 | | Intersection LOS: B | |
| Intersection Capacity Utilization 65.3% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 16 | 232 | 8 | 3 | 254 | 834 | 7 | 597 |
| v/c Ratio | 0.19 | 0.51 | 0.09 | 0.02 | 0.37 | 0.47 | 0.02 | 0.44 |
| Control Delay (s/veh) | 68.4 | 7.8 | 64.7 | 0.0 | 4.4 | 5.0 | 13.0 | 13.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.4 |
| Total Delay (s/veh) | 68.4 | 7.8 | 64.7 | 0.0 | 4.4 | 5.1 | 13.0 | 39.6 |
| Queue Length 50th (ft) | 15 | 0 | 7 | 0 | 0 | 0 | 1 | 147 |
| Queue Length 95th (ft) | 40 | 49 | 25 | 0 | 119 | 526 | 13 | 540 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 214 | 463 | 236 | 343 | 696 | 1757 | 463 | 1342 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 759 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.07 | 0.50 | 0.03 | 0.01 | 0.36 | 0.50 | 0.02 | 1.02 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 0 | 209 | 7 | 0 | 3 | 229 | 747 | 4 | 7 | 515 | 46 |
| Future Volume (vph) | 14 | 0 | 209 | 7 | 0 | 3 | 229 | 747 | 4 | 7 | 515 | 46 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Flt Protected | | 0.95 | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1636 | 1463 | | 1815 | 1624 | 1660 | 1927 | | 1719 | 1846 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.75 | 1.00 | 0.34 | 1.00 | | 0.35 | 1.00 | |
| Satd. Flow (perm) | | 1295 | 1463 | | 1427 | 1624 | 599 | 1927 | | 637 | 1846 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 16 | 0 | 232 | 8 | 0 | 3 | 254 | 830 | 4 | 7 | 548 | 49 |
| RTOR Reduction (vph) | 0 | 0 | 190 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 16 | 42 | 0 | 8 | 0 | 254 | 834 | 0 | 7 | 596 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 3.7 | 22.2 | | 3.7 | 3.7 | 121.9 | 121.9 | | 97.4 | 97.4 | |
| Effective Green, g (s) | | 5.7 | 26.2 | | 5.7 | 5.7 | 123.9 | 123.9 | | 99.4 | 99.4 | |
| Actuated g/C Ratio | | 0.04 | 0.18 | | 0.04 | 0.04 | 0.85 | 0.85 | | 0.69 | 0.69 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 50 | 264 | | 56 | 63 | 661 | 1646 | | 436 | 1265 | |
| v/s Ratio Prot | | | 0.02 | | | | 0.05 | c0.43 | | | 0.32 | |
| v/s Ratio Perm | | c0.01 | 0.01 | | 0.01 | 0.00 | 0.27 | | | 0.01 | | |
| v/c Ratio | | 0.32 | 0.16 | | 0.14 | 0.00 | 0.38 | 0.51 | | 0.02 | 0.47 | |
| Uniform Delay, d1 | | 67.8 | 50.1 | | 67.3 | 66.9 | 4.5 | 2.7 | | 7.3 | 10.6 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.7 | 0.3 | | 1.2 | 0.0 | 0.4 | 1.1 | | 0.1 | 1.3 | |
| Delay (s) | | 71.4 | 50.4 | | 68.5 | 66.9 | 4.8 | 3.8 | | 7.3 | 11.8 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 51.7 | | | 68.0 | | | 4.1 | | | 11.8 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 12.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 65.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

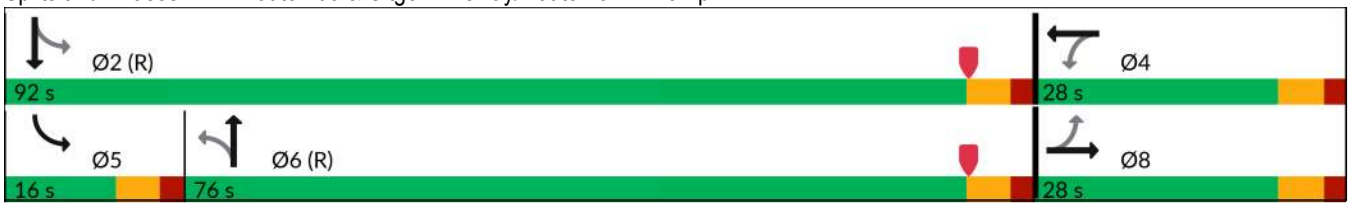
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 94 | 3 | 100 | 1 | 481 | 282 | 122 | 465 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 94 | 3 | 100 | 1 | 481 | 282 | 122 | 465 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.865 | | | 0.931 | | | 0.950 | | | 0.997 | |
| Flt Protected | | | | | 0.977 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1479 | 0 | 0 | 1745 | 0 | 0 | 1710 | 0 | 1719 | 1866 | 0 |
| Flt Permitted | | | | | 0.843 | | | | | 0.285 | | |
| Satd. Flow (perm) | 0 | 1479 | 0 | 0 | 1506 | 0 | 0 | 1710 | 0 | 516 | 1866 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 438 | | | 39 | | | 44 | | | 2 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Adj. Flow (vph) | 0 | 0 | 10 | 104 | 3 | 111 | 1 | 529 | 310 | 134 | 511 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 10 | 0 | 0 | 218 | 0 | 0 | 840 | 0 | 134 | 521 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 20.6 | | | 20.6 | | | 77.3 | | 91.4 | 91.4 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | | | 0.64 | | 0.76 | 0.76 | |
| v/c Ratio | | 0.02 | | | 0.75 | | | 0.75 | | 0.27 | 0.37 | |
| Control Delay (s/veh) | | 0.0 | | | 54.4 | | | 20.6 | | 5.6 | 6.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 51.0 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 0.0 | | | 54.4 | | | 71.6 | | 5.6 | 6.0 | |
| LOS | | A | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | | | | 54.4 | | | 71.6 | | | 5.9 | |
| Approach LOS | | | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.75 | | | |
| Intersection Signal Delay (s/veh): 44.0 | | Intersection LOS: D | |
| Intersection Capacity Utilization 95.8% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 10 | 218 | 840 | 134 | 521 |
| v/c Ratio | 0.02 | 0.75 | 0.75 | 0.27 | 0.37 |
| Control Delay (s/veh) | 0.0 | 54.4 | 20.6 | 5.6 | 6.0 |
| Queue Delay | 0.0 | 0.0 | 51.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 0.0 | 54.4 | 71.6 | 5.6 | 6.0 |
| Queue Length 50th (ft) | 0 | 132 | 410 | 24 | 120 |
| Queue Length 95th (ft) | 0 | 217 | 653 | 44 | 181 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 648 | 335 | 1117 | 513 | 1424 |
| Starvation Cap Reductn | 0 | 0 | 430 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.02 | 0.65 | 1.22 | 0.26 | 0.37 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 94 | 3 | 100 | 1 | 481 | 282 | 122 | 465 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 94 | 3 | 100 | 1 | 481 | 282 | 122 | 465 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.87 | | | 0.93 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1479 | | | 1745 | | | 1710 | | 1719 | 1866 | |
| Flt Permitted | | 1.00 | | | 0.84 | | | 1.00 | | 0.28 | 1.00 | |
| Satd. Flow (perm) | | 1479 | | | 1507 | | | 1709 | | 515 | 1866 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 0 | 0 | 10 | 104 | 3 | 111 | 1 | 529 | 310 | 134 | 511 | 10 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 32 | 0 | 0 | 16 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2 | 0 | 0 | 186 | 0 | 0 | 824 | 0 | 134 | 521 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 18.6 | | | 18.6 | | | 75.3 | | 89.4 | 89.4 | |
| Effective Green, g (s) | | 20.6 | | | 20.6 | | | 77.3 | | 91.4 | 91.4 | |
| Actuated g/C Ratio | | 0.17 | | | 0.17 | | | 0.64 | | 0.76 | 0.76 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 253 | | | 258 | | | 1100 | | 493 | 1421 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.02 | c0.28 | |
| v/s Ratio Perm | | | | | c0.12 | | | c0.48 | | 0.18 | | |
| v/c Ratio | | 0.01 | | | 0.72 | | | 0.75 | | 0.27 | 0.37 | |
| Uniform Delay, d1 | | 41.2 | | | 47.0 | | | 14.7 | | 6.0 | 4.7 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 9.2 | | | 4.7 | | 0.3 | 0.7 | |
| Delay (s) | | 41.2 | | | 56.2 | | | 19.4 | | 6.3 | 5.5 | |
| Level of Service | | D | | | E | | | B | | A | A | |
| Approach Delay (s/veh) | | 41.2 | | | 56.2 | | | 19.4 | | | 5.6 | |
| Approach LOS | | D | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 18.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 95.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2026 Opening Year Build Weekday Evening Peak Hour

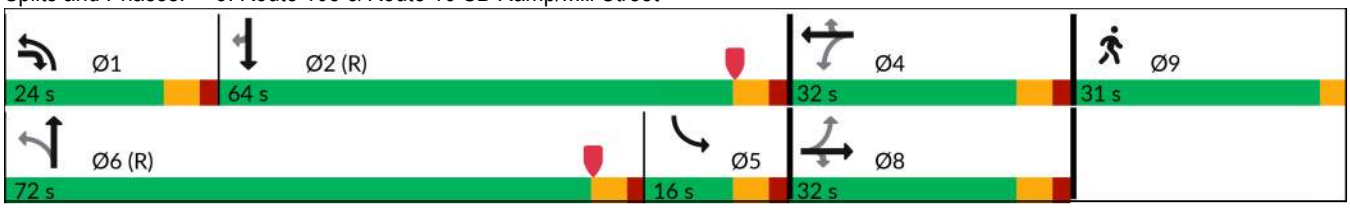
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 191 | 5 | 279 | 3 | 3 | 13 | 48 | 796 | 10 | 8 | 677 | 278 |
| Future Volume (vph) | 191 | 5 | 279 | 3 | 3 | 13 | 48 | 796 | 10 | 8 | 677 | 278 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | | 1.00 | | 1.00 | | |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.976 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1766 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.728 | | | 0.896 | | 0.297 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1347 | 1577 | 0 | 1621 | 1555 | 559 | 1877 | 0 | 1768 | 3541 | 1584 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 310 | | | 130 | | 1 | | | | 305 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 212 | 6 | 310 | 3 | 3 | 14 | 53 | 884 | 11 | 9 | 744 | 305 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 218 | 310 | 0 | 6 | 14 | 53 | 895 | 0 | 9 | 744 | 305 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 30.9 | 43.4 | | 30.9 | 30.9 | 103.1 | 103.1 | | 8.5 | 92.6 | 92.6 |
| Actuated g/C Ratio | | 0.20 | 0.29 | | 0.20 | 0.20 | 0.68 | 0.68 | | 0.06 | 0.61 | 0.61 |
| v/c Ratio | | 0.79 | 0.46 | | 0.02 | 0.03 | 0.12 | 0.70 | | 0.09 | 0.34 | 0.28 |
| Control Delay (s/veh) | | 77.0 | 5.0 | | 46.8 | 0.2 | 13.3 | 21.8 | | 69.0 | 17.2 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 77.0 | 5.0 | | 46.8 | 0.2 | 13.3 | 21.8 | | 69.0 | 17.2 | 2.9 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 34.7 | | | 14.1 | | | 21.3 | | | 13.5 | |
| Approach LOS | | C | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 130 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 20.8 | | Intersection LOS: C | |
| Intersection Capacity Utilization 71.7% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 218 | 310 | 6 | 14 | 53 | 895 | 9 | 744 | 305 |
| v/c Ratio | 0.79 | 0.46 | 0.02 | 0.03 | 0.12 | 0.70 | 0.09 | 0.34 | 0.28 |
| Control Delay (s/veh) | 77.0 | 5.0 | 46.8 | 0.2 | 13.3 | 21.8 | 69.0 | 17.2 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 77.0 | 5.0 | 46.8 | 0.2 | 13.3 | 21.8 | 69.0 | 17.2 | 2.9 |
| Queue Length 50th (ft) | 201 | 0 | 5 | 0 | 14 | 425 | 9 | 167 | 0 |
| Queue Length 95th (ft) | #345 | 48 | 19 | 0 | 57 | #1228 | 29 | 333 | 56 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 282 | 763 | 340 | 429 | 544 | 1281 | 140 | 2170 | 1088 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.41 | 0.02 | 0.03 | 0.10 | 0.70 | 0.06 | 0.34 | 0.28 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 191 | 5 | 279 | 3 | 3 | 13 | 48 | 796 | 10 | 8 | 677 | 278 |
| Future Volume (vph) | 191 | 5 | 279 | 3 | 3 | 13 | 48 | 796 | 10 | 8 | 677 | 278 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1765 | 1577 | | 1765 | 1555 | 1787 | 1877 | | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.73 | 1.00 | | 0.90 | 1.00 | 0.30 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1347 | 1577 | | 1621 | 1555 | 559 | 1877 | | 1771 | 3541 | 1584 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 212 | 6 | 310 | 3 | 3 | 14 | 53 | 884 | 11 | 9 | 744 | 305 |
| RTOR Reduction (vph) | 0 | 0 | 227 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 123 |
| Lane Group Flow (vph) | 0 | 218 | 83 | 0 | 6 | 3 | 53 | 895 | 0 | 9 | 744 | 182 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 28.9 | 36.2 | | 28.9 | 28.9 | 93.9 | 93.9 | | 1.6 | 88.2 | 88.2 |
| Effective Green, g (s) | | 30.9 | 40.2 | | 30.9 | 30.9 | 95.9 | 95.9 | | 3.6 | 90.2 | 90.2 |
| Actuated g/C Ratio | | 0.20 | 0.27 | | 0.20 | 0.20 | 0.64 | 0.64 | | 0.02 | 0.60 | 0.60 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 275 | 419 | | 331 | 318 | 430 | 1192 | | 42 | 2115 | 946 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.48 | | 0.01 | c0.21 | |
| v/s Ratio Perm | | c0.16 | 0.04 | | 0.00 | 0.00 | 0.07 | | | | | 0.11 |
| v/c Ratio | | 0.79 | 0.20 | | 0.02 | 0.01 | 0.12 | 0.75 | | 0.21 | 0.35 | 0.19 |
| Uniform Delay, d1 | | 57.0 | 42.9 | | 47.9 | 47.8 | 11.4 | 19.2 | | 72.3 | 15.5 | 13.8 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.4 | 0.2 | | 0.0 | 0.0 | 0.1 | 4.4 | | 2.6 | 0.5 | 0.5 |
| Delay (s) | | 71.4 | 43.1 | | 48.0 | 47.9 | 11.5 | 23.6 | | 74.9 | 16.0 | 14.3 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 54.8 | | | 47.9 | | | 22.9 | | | 16.0 | |
| Approach LOS | | D | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 26.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 71.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

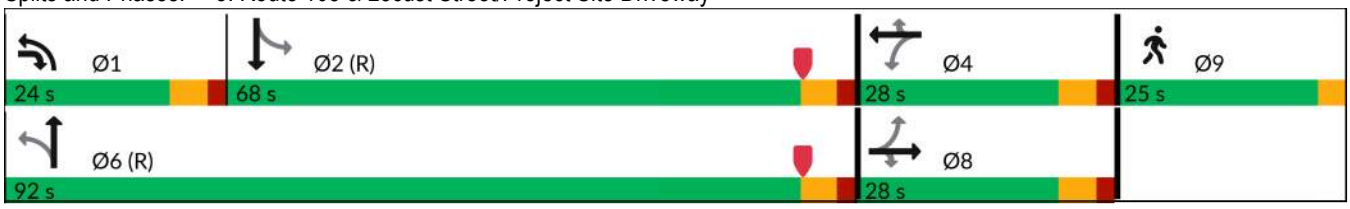
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 0 | 287 | 11 | 0 | 4 | 212 | 771 | 6 | 9 | 669 | 107 |
| Future Volume (vph) | 36 | 0 | 287 | 11 | 0 | 4 | 212 | 771 | 6 | 9 | 669 | 107 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.979 | |
| Flt Protected | | 0.950 | | | 0.950 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1815 | 1624 | 1693 | 1965 | 0 | 1736 | 1846 | 0 |
| Flt Permitted | | 0.750 | | | 0.732 | | 0.179 | | | 0.363 | | |
| Satd. Flow (perm) | 0 | 1330 | 1507 | 0 | 1398 | 1624 | 319 | 1965 | 0 | 663 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 305 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 38 | 0 | 305 | 12 | 0 | 4 | 219 | 795 | 6 | 10 | 743 | 119 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 38 | 305 | 0 | 12 | 4 | 219 | 801 | 0 | 10 | 862 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 11.6 | 33.6 | | 11.6 | 11.6 | 122.7 | 123.5 | | 97.6 | 97.6 | |
| Actuated g/C Ratio | | 0.08 | 0.23 | | 0.08 | 0.08 | 0.85 | 0.85 | | 0.67 | 0.67 | |
| v/c Ratio | | 0.36 | 0.52 | | 0.11 | 0.02 | 0.47 | 0.48 | | 0.02 | 0.69 | |
| Control Delay (s/veh) | | 71.4 | 6.1 | | 62.1 | 0.3 | 7.2 | 6.4 | | 16.0 | 22.5 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.6 | | 0.0 | 51.0 | |
| Total Delay (s/veh) | | 71.4 | 6.1 | | 62.1 | 0.3 | 7.2 | 6.9 | | 16.0 | 73.5 | |
| LOS | | E | A | | E | A | A | A | | B | E | |
| Approach Delay (s/veh) | | 13.4 | | | 46.6 | | | 7.0 | | | 72.9 | |
| Approach LOS | | B | | | D | | | A | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.69 | | | |
| Intersection Signal Delay (s/veh): 33.8 | | Intersection LOS: C | |
| Intersection Capacity Utilization 73.7% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 38 | 305 | 12 | 4 | 219 | 801 | 10 | 862 |
| v/c Ratio | 0.36 | 0.52 | 0.11 | 0.02 | 0.47 | 0.48 | 0.02 | 0.69 |
| Control Delay (s/veh) | 71.4 | 6.1 | 62.1 | 0.3 | 7.2 | 6.4 | 16.0 | 22.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 51.0 |
| Total Delay (s/veh) | 71.4 | 6.1 | 62.1 | 0.3 | 7.2 | 6.9 | 16.0 | 73.5 |
| Queue Length 50th (ft) | 35 | 0 | 11 | 0 | 24 | 128 | 3 | 431 |
| Queue Length 95th (ft) | 73 | 48 | 32 | 0 | 111 | 525 | 18 | #1144 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 220 | 598 | 231 | 343 | 486 | 1673 | 446 | 1244 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 456 | 0 | 508 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.17 | 0.51 | 0.05 | 0.01 | 0.45 | 0.66 | 0.02 | 1.17 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 0 | 287 | 11 | 0 | 4 | 212 | 771 | 6 | 9 | 669 | 107 |
| Future Volume (vph) | 36 | 0 | 287 | 11 | 0 | 4 | 212 | 771 | 6 | 9 | 669 | 107 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1685 | 1507 | | 1815 | 1624 | 1693 | 1964 | | 1735 | 1846 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.73 | 1.00 | 0.18 | 1.00 | | 0.36 | 1.00 | |
| Satd. Flow (perm) | | 1330 | 1507 | | 1399 | 1624 | 319 | 1964 | | 663 | 1846 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 38 | 0 | 305 | 12 | 0 | 4 | 219 | 795 | 6 | 10 | 743 | 119 |
| RTOR Reduction (vph) | 0 | 0 | 239 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 38 | 66 | 0 | 12 | 0 | 219 | 801 | 0 | 10 | 860 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 8.5 | 27.6 | | 8.5 | 8.5 | 117.1 | 117.1 | | 92.0 | 92.0 | |
| Effective Green, g (s) | | 10.5 | 31.6 | | 10.5 | 10.5 | 119.1 | 119.1 | | 94.0 | 94.0 | |
| Actuated g/C Ratio | | 0.07 | 0.22 | | 0.07 | 0.07 | 0.82 | 0.82 | | 0.65 | 0.65 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 96 | 328 | | 101 | 117 | 461 | 1613 | | 429 | 1196 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.07 | c0.41 | | | c0.47 | |
| v/s Ratio Perm | | c0.03 | 0.01 | | 0.01 | 0.00 | 0.32 | | | 0.02 | | |
| v/c Ratio | | 0.40 | 0.20 | | 0.12 | 0.00 | 0.48 | 0.50 | | 0.02 | 0.72 | |
| Uniform Delay, d1 | | 64.2 | 46.4 | | 62.9 | 62.4 | 14.5 | 3.9 | | 9.1 | 16.8 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 2.7 | 0.3 | | 0.5 | 0.0 | 0.8 | 1.1 | | 0.1 | 3.7 | |
| Delay (s) | | 66.9 | 46.7 | | 63.4 | 62.4 | 15.2 | 5.0 | | 9.2 | 20.5 | |
| Level of Service | | E | D | | E | E | B | A | | A | C | |
| Approach Delay (s/veh) | | 48.9 | | | 63.2 | | | 7.2 | | | 20.4 | |
| Approach LOS | | D | | | E | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 19.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 73.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

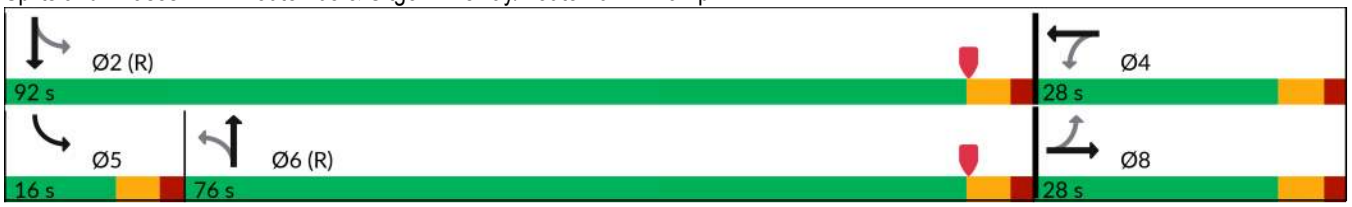
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 196 | 15 | 134 | 1 | 491 | 319 | 172 | 578 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 196 | 15 | 134 | 1 | 491 | 319 | 172 | 578 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.884 | | | 0.948 | | | 0.947 | | | 0.995 | |
| Flt Protected | | | | | 0.972 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1512 | 0 | 0 | 1751 | 0 | 0 | 1755 | 0 | 1771 | 1918 | 0 |
| Flt Permitted | | | | | 0.816 | | | | | 0.237 | | |
| Satd. Flow (perm) | 0 | 1512 | 0 | 0 | 1470 | 0 | 0 | 1755 | 0 | 442 | 1918 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 24 | | | 49 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| 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 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 2 | 12 | 218 | 17 | 149 | 1 | 546 | 354 | 191 | 642 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 14 | 0 | 0 | 384 | 0 | 0 | 901 | 0 | 191 | 663 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 27.8 | | | 27.8 | | | 68.9 | | 84.2 | 84.2 | |
| Actuated g/C Ratio | | 0.23 | | | 0.23 | | | 0.57 | | 0.70 | 0.70 | |
| v/c Ratio | | 0.04 | | | 1.07 | | | 0.88 | | 0.44 | 0.49 | |
| Control Delay (s/veh) | | 20.6 | | | 109.6 | | | 31.4 | | 8.8 | 9.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 50.0 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 20.6 | | | 109.6 | | | 81.4 | | 8.8 | 9.2 | |
| LOS | | C | | | F | | | F | | A | A | |
| Approach Delay (s/veh) | | 20.6 | | | 109.6 | | | 81.4 | | | 9.1 | |
| Approach LOS | | C | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 1.07 | | | |
| Intersection Signal Delay (s/veh): 57.3 | | Intersection LOS: E | |
| Intersection Capacity Utilization 113.5% | | ICU Level of Service H | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 14 | 384 | 901 | 191 | 663 |
| v/c Ratio | 0.04 | 1.07 | 0.88 | 0.44 | 0.49 |
| Control Delay (s/veh) | 20.6 | 109.6 | 31.4 | 8.8 | 9.2 |
| Queue Delay | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 20.6 | 109.6 | 81.4 | 8.8 | 9.2 |
| Queue Length 50th (ft) | 1 | ~347 | 508 | 40 | 186 |
| Queue Length 95th (ft) | 20 | #551 | 730 | 61 | 250 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 359 | 359 | 1072 | 443 | 1407 |
| Starvation Cap Reductn | 0 | 0 | 402 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 1.07 | 1.34 | 0.43 | 0.47 |

Intersection Summary

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 196 | 15 | 134 | 1 | 491 | 319 | 172 | 578 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 196 | 15 | 134 | 1 | 491 | 319 | 172 | 578 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.88 | | | 0.95 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1512 | | | 1751 | | | 1755 | | 1771 | 1918 | |
| Flt Permitted | | 1.00 | | | 0.82 | | | 1.00 | | 0.24 | 1.00 | |
| Satd. Flow (perm) | | 1512 | | | 1470 | | | 1754 | | 442 | 1918 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 2 | 12 | 218 | 17 | 149 | 1 | 546 | 354 | 191 | 642 | 21 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 18 | 0 | 0 | 21 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 5 | 0 | 0 | 366 | 0 | 0 | 880 | 0 | 191 | 662 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 25.8 | | | 25.8 | | | 66.9 | | 82.2 | 82.2 | |
| Effective Green, g (s) | | 27.8 | | | 27.8 | | | 68.9 | | 84.2 | 84.2 | |
| Actuated g/C Ratio | | 0.23 | | | 0.23 | | | 0.57 | | 0.70 | 0.70 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 350 | | | 340 | | | 1007 | | 435 | 1345 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.04 | c0.35 | |
| v/s Ratio Perm | | | | | c0.25 | | | c0.50 | | 0.27 | | |
| v/c Ratio | | 0.01 | | | 1.08 | | | 0.87 | | 0.44 | 0.49 | |
| Uniform Delay, d1 | | 35.5 | | | 46.1 | | | 21.8 | | 10.1 | 8.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 70.3 | | | 10.5 | | 0.7 | 1.3 | |
| Delay (s) | | 35.5 | | | 116.4 | | | 32.3 | | 10.8 | 9.4 | |
| Level of Service | | D | | | F | | | C | | B | A | |
| Approach Delay (s/veh) | | 35.5 | | | 116.4 | | | 32.3 | | | 9.7 | |
| Approach LOS | | D | | | F | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 38.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.89 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 113.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2026 Opening Year Build Saturday Midday Peak Hour

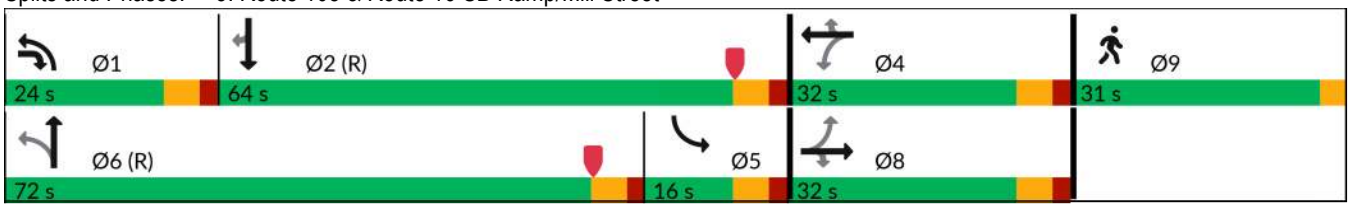
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 176 | 7 | 175 | 9 | 2 | 16 | 49 | 687 | 7 | 3 | 502 | 256 |
| Future Volume (vph) | 176 | 7 | 175 | 9 | 2 | 16 | 49 | 687 | 7 | 3 | 502 | 256 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | | 0.97 | 1.00 | 1.00 | | 1.00 | | 0.97 |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.960 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1737 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.726 | | | 0.789 | | 0.385 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1336 | 1577 | 0 | 1427 | 1546 | 722 | 1877 | 0 | 1767 | 3541 | 1541 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 192 | | | 130 | | | | | | 284 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 193 | 8 | 192 | 10 | 2 | 18 | 54 | 763 | 8 | 3 | 558 | 284 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 201 | 192 | 0 | 12 | 18 | 54 | 771 | 0 | 3 | 558 | 284 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 29.1 | 41.6 | | 29.1 | 29.1 | 105.2 | 105.2 | | 8.0 | 94.4 | 94.4 |
| Actuated g/C Ratio | | 0.19 | 0.28 | | 0.19 | 0.19 | 0.70 | 0.70 | | 0.05 | 0.63 | 0.63 |
| v/c Ratio | | 0.78 | 0.34 | | 0.04 | 0.04 | 0.10 | 0.59 | | 0.03 | 0.25 | 0.27 |
| Control Delay (s/veh) | | 78.4 | 5.0 | | 48.0 | 0.2 | 12.7 | 18.5 | | 68.3 | 15.5 | 2.9 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 78.4 | 5.0 | | 48.0 | 0.2 | 12.7 | 18.5 | | 68.3 | 15.5 | 2.9 |
| LOS | | E | A | | D | A | B | B | | E | B | A |
| Approach Delay (s/veh) | | 42.5 | | | 19.3 | | | 18.1 | | | 11.5 | |
| Approach LOS | | D | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 110 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 20.1 | | Intersection LOS: C | |
| Intersection Capacity Utilization 65.0% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 201 | 192 | 12 | 18 | 54 | 771 | 3 | 558 | 284 |
| v/c Ratio | 0.78 | 0.34 | 0.04 | 0.04 | 0.10 | 0.59 | 0.03 | 0.25 | 0.27 |
| Control Delay (s/veh) | 78.4 | 5.0 | 48.0 | 0.2 | 12.7 | 18.5 | 68.3 | 15.5 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 78.4 | 5.0 | 48.0 | 0.2 | 12.7 | 18.5 | 68.3 | 15.5 | 2.9 |
| Queue Length 50th (ft) | 187 | 0 | 10 | 0 | 13 | 300 | 3 | 111 | 0 |
| Queue Length 95th (ft) | #297 | 39 | 29 | 0 | 58 | #965 | 14 | 245 | 56 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 270 | 671 | 288 | 416 | 643 | 1307 | 140 | 2213 | 1069 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.74 | 0.29 | 0.04 | 0.04 | 0.08 | 0.59 | 0.02 | 0.25 | 0.27 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 176 | 7 | 175 | 9 | 2 | 16 | 49 | 687 | 7 | 3 | 502 | 256 |
| Future Volume (vph) | 176 | 7 | 175 | 9 | 2 | 16 | 49 | 687 | 7 | 3 | 502 | 256 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1757 | 1577 | | 1737 | 1547 | 1786 | 1878 | | 1771 | 3541 | 1545 |
| Flt Permitted | | 0.73 | 1.00 | | 0.79 | 1.00 | 0.39 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1337 | 1577 | | 1428 | 1547 | 725 | 1878 | | 1771 | 3541 | 1545 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 193 | 8 | 192 | 10 | 2 | 18 | 54 | 763 | 8 | 3 | 558 | 284 |
| RTOR Reduction (vph) | 0 | 0 | 143 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 111 |
| Lane Group Flow (vph) | 0 | 201 | 49 | 0 | 12 | 3 | 54 | 771 | 0 | 3 | 558 | 173 |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 27.1 | 34.4 | | 27.1 | 27.1 | 96.0 | 96.0 | | 1.3 | 90.0 | 90.0 |
| Effective Green, g (s) | | 29.1 | 38.4 | | 29.1 | 29.1 | 98.0 | 98.0 | | 3.3 | 92.0 | 92.0 |
| Actuated g/C Ratio | | 0.19 | 0.25 | | 0.19 | 0.19 | 0.65 | 0.65 | | 0.02 | 0.61 | 0.61 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 257 | 401 | | 275 | 298 | 535 | 1218 | | 38 | 2157 | 941 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.41 | | 0.00 | c0.16 | |
| v/s Ratio Perm | | c0.15 | 0.02 | | 0.01 | 0.00 | 0.06 | | | | | 0.11 |
| v/c Ratio | | 0.78 | 0.12 | | 0.04 | 0.01 | 0.10 | 0.63 | | 0.08 | 0.26 | 0.18 |
| Uniform Delay, d1 | | 57.9 | 43.3 | | 49.6 | 49.3 | 10.1 | 15.8 | | 72.4 | 13.7 | 13.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.3 | 0.1 | | 0.1 | 0.0 | 0.1 | 2.5 | | 0.9 | 0.3 | 0.4 |
| Delay (s) | | 72.2 | 43.5 | | 49.7 | 49.3 | 10.1 | 18.3 | | 73.3 | 14.0 | 13.4 |
| Level of Service | | E | D | | D | D | B | B | | E | B | B |
| Approach Delay (s/veh) | | 58.2 | | | 49.5 | | | 17.8 | | | 14.0 | |
| Approach LOS | | E | | | D | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 24.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 65.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

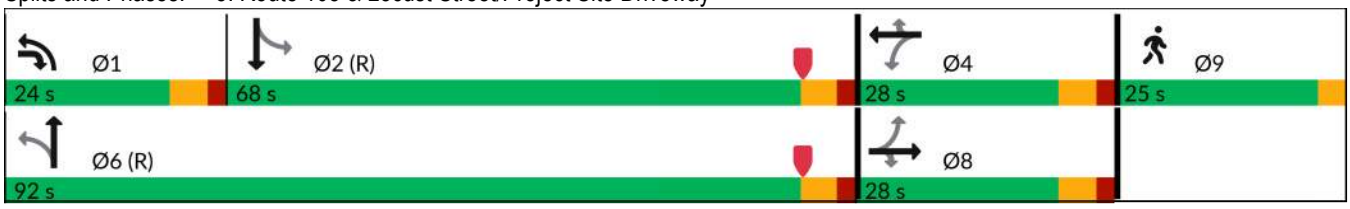
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 0 | 260 | 11 | 0 | 5 | 241 | 611 | 6 | 10 | 446 | 74 |
| Future Volume (vph) | 23 | 0 | 260 | 11 | 0 | 5 | 241 | 611 | 6 | 10 | 446 | 74 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.979 | |
| Flt Protected | | 0.950 | | | 0.950 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1815 | 1624 | 1693 | 1964 | 0 | 1753 | 1863 | 0 |
| Flt Permitted | | 0.750 | | | 0.740 | | 0.355 | | | 0.421 | | |
| Satd. Flow (perm) | 0 | 1326 | 1507 | 0 | 1413 | 1586 | 632 | 1964 | 0 | 777 | 1863 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 289 | | | 90 | | 1 | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 26 | 0 | 289 | 12 | 0 | 6 | 251 | 636 | 6 | 11 | 490 | 81 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 26 | 289 | 0 | 12 | 6 | 251 | 642 | 0 | 11 | 571 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 10.5 | 27.9 | | 10.3 | 10.3 | 126.4 | 128.0 | | 103.3 | 103.3 | |
| Actuated g/C Ratio | | 0.07 | 0.19 | | 0.07 | 0.07 | 0.87 | 0.88 | | 0.71 | 0.71 | |
| v/c Ratio | | 0.27 | 0.55 | | 0.12 | 0.03 | 0.36 | 0.37 | | 0.02 | 0.43 | |
| Control Delay (s/veh) | | 69.8 | 7.5 | | 64.2 | 0.2 | 4.8 | 4.6 | | 12.8 | 13.5 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.3 | | 0.0 | 8.8 | |
| Total Delay (s/veh) | | 69.8 | 7.5 | | 64.2 | 0.2 | 4.8 | 5.0 | | 12.8 | 22.2 | |
| LOS | | E | A | | E | A | A | A | | B | C | |
| Approach Delay (s/veh) | | 12.7 | | | 42.9 | | | 4.9 | | | 22.0 | |
| Approach LOS | | B | | | D | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.55 | | | |
| Intersection Signal Delay (s/veh): 12.2 | | Intersection LOS: B | |
| Intersection Capacity Utilization 59.3% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 26 | 289 | 12 | 6 | 251 | 642 | 11 | 571 |
| v/c Ratio | 0.27 | 0.55 | 0.12 | 0.03 | 0.36 | 0.37 | 0.02 | 0.43 |
| Control Delay (s/veh) | 69.8 | 7.5 | 64.2 | 0.2 | 4.8 | 4.6 | 12.8 | 13.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 8.8 |
| Total Delay (s/veh) | 69.8 | 7.5 | 64.2 | 0.2 | 4.8 | 5.0 | 12.8 | 22.2 |
| Queue Length 50th (ft) | 24 | 0 | 11 | 0 | 25 | 81 | 3 | 207 |
| Queue Length 95th (ft) | 56 | 53 | 32 | 0 | 122 | 355 | 16 | 497 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 219 | 539 | 233 | 337 | 704 | 1734 | 554 | 1329 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 534 | 0 | 715 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.12 | 0.54 | 0.05 | 0.02 | 0.36 | 0.54 | 0.02 | 0.93 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 0 | 260 | 11 | 0 | 5 | 241 | 611 | 6 | 10 | 446 | 74 |
| Future Volume (vph) | 23 | 0 | 260 | 11 | 0 | 5 | 241 | 611 | 6 | 10 | 446 | 74 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1670 | 1507 | | 1815 | 1577 | 1693 | 1963 | | 1753 | 1863 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.74 | 1.00 | 0.35 | 1.00 | | 0.42 | 1.00 | |
| Satd. Flow (perm) | | 1318 | 1507 | | 1414 | 1577 | 632 | 1963 | | 777 | 1863 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 26 | 0 | 289 | 12 | 0 | 6 | 251 | 636 | 6 | 11 | 490 | 81 |
| RTOR Reduction (vph) | 0 | 0 | 235 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 26 | 54 | 0 | 12 | 0 | 251 | 642 | 0 | 11 | 569 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 6.0 | 23.1 | | 6.0 | 6.0 | 119.6 | 119.6 | | 96.5 | 96.5 | |
| Effective Green, g (s) | | 8.0 | 27.1 | | 8.0 | 8.0 | 121.6 | 121.6 | | 98.5 | 98.5 | |
| Actuated g/C Ratio | | 0.06 | 0.19 | | 0.06 | 0.06 | 0.84 | 0.84 | | 0.68 | 0.68 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 72 | 281 | | 78 | 87 | 669 | 1646 | | 527 | 1265 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.05 | c0.33 | | | c0.31 | |
| v/s Ratio Perm | | c0.02 | 0.01 | | 0.01 | 0.00 | 0.26 | | | 0.01 | | |
| v/c Ratio | | 0.36 | 0.19 | | 0.15 | 0.00 | 0.38 | 0.39 | | 0.02 | 0.45 | |
| Uniform Delay, d1 | | 66.0 | 49.7 | | 65.3 | 64.7 | 4.6 | 2.8 | | 7.6 | 10.7 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.1 | 0.3 | | 0.9 | 0.0 | 0.4 | 0.7 | | 0.1 | 1.2 | |
| Delay (s) | | 69.1 | 50.1 | | 66.2 | 64.8 | 4.9 | 3.5 | | 7.6 | 11.9 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 51.6 | | | 65.7 | | | 3.9 | | | 11.8 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 15.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 59.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

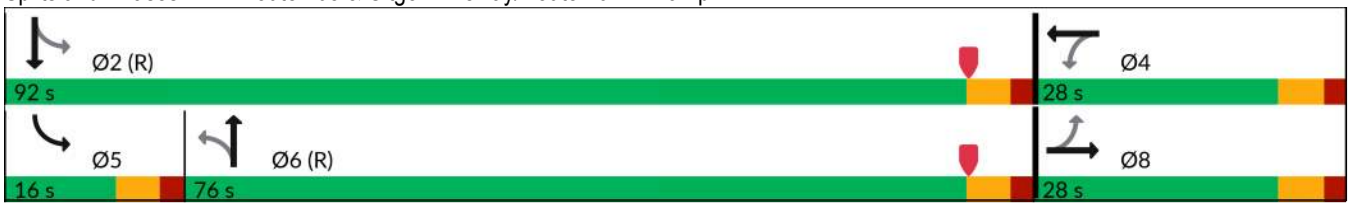
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 90 | 9 | 144 | 2 | 438 | 199 | 145 | 435 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 90 | 9 | 144 | 2 | 438 | 199 | 145 | 435 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.932 | | | 0.920 | | | 0.958 | | | 0.995 | |
| Flt Protected | | | | | 0.982 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1594 | 0 | 0 | 1717 | 0 | 0 | 1793 | 0 | 1771 | 1917 | 0 |
| Flt Permitted | | | | | 0.873 | | | 0.999 | | 0.324 | | |
| Satd. Flow (perm) | 0 | 1594 | 0 | 0 | 1526 | 0 | 0 | 1791 | 0 | 604 | 1917 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 6 | | | 54 | | | 34 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 6 | 6 | 99 | 10 | 158 | 2 | 481 | 219 | 161 | 483 | 17 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 267 | 0 | 0 | 702 | 0 | 161 | 500 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 23.2 | | | 23.2 | | | 74.1 | | 88.8 | 88.8 | |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | | 0.62 | | 0.74 | 0.74 | |
| v/c Ratio | | 0.04 | | | 0.79 | | | 0.63 | | 0.29 | 0.35 | |
| Control Delay (s/veh) | | 27.3 | | | 53.3 | | | 17.6 | | 6.3 | 6.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 52.5 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 27.3 | | | 53.3 | | | 70.1 | | 6.3 | 6.7 | |
| LOS | | C | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 27.3 | | | 53.3 | | | 70.1 | | | 6.6 | |
| Approach LOS | | C | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 41.5 | | Intersection LOS: D | |
| Intersection Capacity Utilization 90.1% | | ICU Level of Service E | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 12 | 267 | 702 | 161 | 500 |
| v/c Ratio | 0.04 | 0.79 | 0.63 | 0.29 | 0.35 |
| Control Delay (s/veh) | 27.3 | 53.3 | 17.6 | 6.3 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 52.5 | 0.0 | 0.0 |
| Total Delay (s/veh) | 27.3 | 53.3 | 70.1 | 6.3 | 6.7 |
| Queue Length 50th (ft) | 4 | 157 | 318 | 33 | 126 |
| Queue Length 95th (ft) | 21 | #278 | 455 | 53 | 173 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 340 | 364 | 1135 | 563 | 1439 |
| Starvation Cap Reductn | 0 | 0 | 528 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.73 | 1.16 | 0.29 | 0.35 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 90 | 9 | 144 | 2 | 438 | 199 | 145 | 435 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 90 | 9 | 144 | 2 | 438 | 199 | 145 | 435 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.93 | | | 0.92 | | | 0.96 | | 1.00 | 0.99 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1595 | | | 1716 | | | 1792 | | 1771 | 1917 | |
| Flt Permitted | | 1.00 | | | 0.87 | | | 1.00 | | 0.32 | 1.00 | |
| Satd. Flow (perm) | | 1595 | | | 1526 | | | 1791 | | 603 | 1917 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 6 | 6 | 99 | 10 | 158 | 2 | 481 | 219 | 161 | 483 | 17 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 44 | 0 | 0 | 13 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 7 | 0 | 0 | 223 | 0 | 0 | 689 | 0 | 161 | 499 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 21.2 | | | 21.2 | | | 72.1 | | 86.8 | 86.8 | |
| Effective Green, g (s) | | 23.2 | | | 23.2 | | | 74.1 | | 88.8 | 88.8 | |
| Actuated g/C Ratio | | 0.19 | | | 0.19 | | | 0.62 | | 0.74 | 0.74 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 308 | | | 295 | | | 1105 | | 550 | 1418 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.03 | c0.26 | |
| v/s Ratio Perm | | | | | c0.15 | | | c0.38 | | 0.19 | | |
| v/c Ratio | | 0.02 | | | 0.76 | | | 0.62 | | 0.29 | 0.35 | |
| Uniform Delay, d1 | | 39.2 | | | 45.7 | | | 14.3 | | 6.5 | 5.5 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 10.6 | | | 2.7 | | 0.3 | 0.7 | |
| Delay (s) | | 39.2 | | | 56.3 | | | 16.9 | | 6.8 | 6.2 | |
| Level of Service | | D | | | E | | | B | | A | A | |
| Approach Delay (s/veh) | | 39.2 | | | 56.3 | | | 16.9 | | | 6.3 | |
| Approach LOS | | D | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 19.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 90.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2036 Design Year No-Build Weekday Morning Peak Hour

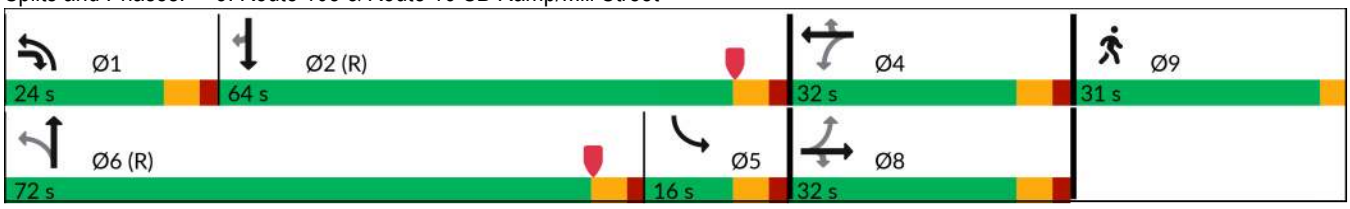
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 212 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 600 | 311 |
| Future Volume (vph) | 212 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 600 | 311 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.983 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1752 | 1561 | 0 | 1727 | 1544 | 1752 | 1843 | 0 | 1736 | 3473 | 1554 |
| Flt Permitted | | 0.710 | | | 0.881 | | 0.327 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1301 | 1561 | 0 | 1547 | 1509 | 603 | 1843 | 0 | 1736 | 3473 | 1519 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 460 | | | 130 | | | | | | 327 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 236 | 11 | 460 | 12 | 23 | 8 | 82 | 1021 | 8 | 5 | 632 | 327 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 247 | 460 | 0 | 35 | 8 | 82 | 1029 | 0 | 5 | 632 | 327 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 38.6 | 52.7 | | 38.6 | 38.6 | 95.6 | 95.6 | | 8.2 | 83.3 | 83.3 |
| Actuated g/C Ratio | | 0.26 | 0.35 | | 0.26 | 0.26 | 0.63 | 0.63 | | 0.05 | 0.55 | 0.55 |
| v/c Ratio | | 0.74 | 0.55 | | 0.09 | 0.02 | 0.18 | 0.88 | | 0.05 | 0.33 | 0.33 |
| Control Delay (s/veh) | | 66.2 | 4.6 | | 44.9 | 0.0 | 14.8 | 34.3 | | 68.6 | 20.9 | 3.4 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 66.2 | 4.6 | | 44.9 | 0.0 | 14.8 | 34.3 | | 68.6 | 20.9 | 3.4 |
| LOS | | E | A | | D | A | B | C | | E | C | A |
| Approach Delay (s/veh) | | 26.1 | | | 36.6 | | | 32.9 | | | 15.2 | |
| Approach LOS | | C | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.88 | | | |
| Intersection Signal Delay (s/veh): 25.2 | | Intersection LOS: C | |
| Intersection Capacity Utilization 81.9% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 247 | 460 | 35 | 8 | 82 | 1029 | 5 | 632 | 327 |
| v/c Ratio | 0.74 | 0.55 | 0.09 | 0.02 | 0.18 | 0.88 | 0.05 | 0.33 | 0.33 |
| Control Delay (s/veh) | 66.2 | 4.6 | 44.9 | 0.0 | 14.8 | 34.3 | 68.6 | 20.9 | 3.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 66.2 | 4.6 | 44.9 | 0.0 | 14.8 | 34.3 | 68.6 | 20.9 | 3.4 |
| Queue Length 50th (ft) | 221 | 0 | 26 | 0 | 26 | 693 | 5 | 160 | 0 |
| Queue Length 95th (ft) | #415 | 52 | 63 | 0 | 81 | #1518 | 20 | 292 | 61 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 332 | 910 | 394 | 482 | 533 | 1166 | 137 | 1915 | 984 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.74 | 0.51 | 0.09 | 0.02 | 0.15 | 0.88 | 0.04 | 0.33 | 0.33 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 212 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 600 | 311 |
| Future Volume (vph) | 212 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 600 | 311 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1750 | 1561 | | 1727 | 1511 | 1752 | 1843 | | 1736 | 3473 | 1520 |
| Flt Permitted | | 0.71 | 1.00 | | 0.88 | 1.00 | 0.33 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1302 | 1561 | | 1548 | 1511 | 604 | 1843 | | 1736 | 3473 | 1520 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 236 | 11 | 460 | 12 | 23 | 8 | 82 | 1021 | 8 | 5 | 632 | 327 |
| RTOR Reduction (vph) | 0 | 0 | 309 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 152 |
| Lane Group Flow (vph) | 0 | 247 | 151 | 0 | 35 | 2 | 82 | 1029 | 0 | 5 | 632 | 175 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 36.6 | 45.6 | | 36.6 | 36.6 | 86.4 | 86.4 | | 1.4 | 78.8 | 78.8 |
| Effective Green, g (s) | | 38.6 | 49.6 | | 38.6 | 38.6 | 88.4 | 88.4 | | 3.4 | 80.8 | 80.8 |
| Actuated g/C Ratio | | 0.26 | 0.33 | | 0.26 | 0.26 | 0.59 | 0.59 | | 0.02 | 0.54 | 0.54 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 332 | 512 | | 395 | 386 | 437 | 1078 | | 39 | 1858 | 813 |
| v/s Ratio Prot | | | 0.02 | | | | 0.01 | c0.56 | | 0.00 | c0.18 | |
| v/s Ratio Perm | | c0.19 | 0.08 | | 0.02 | 0.00 | 0.10 | | | | | 0.12 |
| v/c Ratio | | 0.74 | 0.30 | | 0.09 | 0.01 | 0.19 | 0.95 | | 0.13 | 0.34 | 0.22 |
| Uniform Delay, d1 | | 51.7 | 37.7 | | 42.8 | 41.9 | 14.6 | 29.4 | | 72.3 | 19.9 | 18.4 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 8.7 | 0.3 | | 0.1 | 0.0 | 0.2 | 18.4 | | 1.5 | 0.5 | 0.6 |
| Delay (s) | | 60.4 | 38.0 | | 42.9 | 41.9 | 14.8 | 47.9 | | 73.8 | 20.4 | 19.0 |
| Level of Service | | E | D | | D | D | B | D | | E | C | B |
| Approach Delay (s/veh) | | 45.8 | | | 42.7 | | | 45.4 | | | 20.2 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 36.9 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 81.9% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

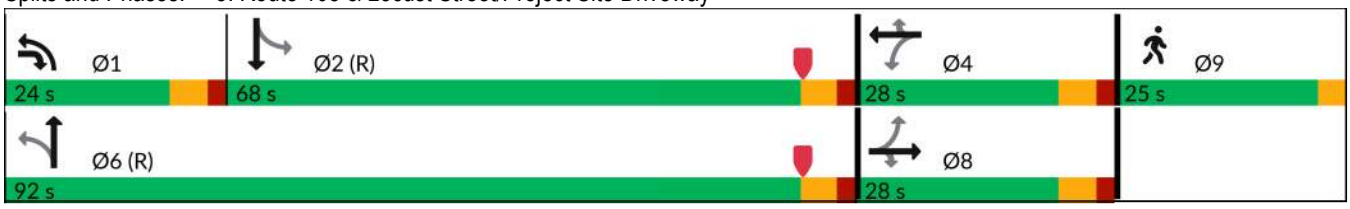
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 16 | 1 | 231 | 0 | 0 | 1 | 253 | 823 | 3 | 2 | 567 | 51 |
| Future Volume (vph) | 16 | 1 | 231 | 0 | 0 | 1 | 253 | 823 | 3 | 2 | 567 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.988 | |
| Flt Protected | | 0.955 | | | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1644 | 1463 | 0 | 1910 | 1624 | 1660 | 1928 | 0 | 1719 | 1846 | 0 |
| Flt Permitted | | 0.737 | | | | | 0.286 | | | 0.326 | | |
| Satd. Flow (perm) | 0 | 1269 | 1463 | 0 | 1910 | 1624 | 500 | 1928 | 0 | 590 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 257 | | | 353 | | | | | 4 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 18 | 1 | 257 | 0 | 0 | 1 | 281 | 914 | 3 | 2 | 603 | 54 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 19 | 257 | 0 | 0 | 1 | 281 | 917 | 0 | 2 | 657 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | | | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 9.7 | 33.8 | | | 9.5 | 127.1 | 128.7 | | 97.4 | 97.4 | |
| Actuated g/C Ratio | | 0.07 | 0.23 | | | 0.07 | 0.88 | 0.89 | | 0.67 | 0.67 | |
| v/c Ratio | | 0.23 | 0.48 | | | 0.00 | 0.44 | 0.54 | | 0.01 | 0.53 | |
| Control Delay (s/veh) | | 69.8 | 6.1 | | | 0.0 | 5.3 | 6.2 | | 17.0 | 18.7 | |
| Queue Delay | | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.6 | | 0.0 | 28.2 | |
| Total Delay (s/veh) | | 69.8 | 6.1 | | | 0.0 | 5.3 | 6.8 | | 17.0 | 46.9 | |
| LOS | | E | A | | | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 10.4 | | | | | | 6.4 | | | 46.8 | |
| Approach LOS | | B | | | | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.54 | | | |
| Intersection Signal Delay (s/veh): 19.4 | | Intersection LOS: B | |
| Intersection Capacity Utilization 66.0% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 19 | 257 | 1 | 281 | 917 | 2 | 657 |
| v/c Ratio | 0.23 | 0.48 | 0.00 | 0.44 | 0.54 | 0.01 | 0.53 |
| Control Delay (s/veh) | 69.8 | 6.1 | 0.0 | 5.3 | 6.2 | 17.0 | 18.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 28.2 |
| Total Delay (s/veh) | 69.8 | 6.1 | 0.0 | 5.3 | 6.8 | 17.0 | 46.9 |
| Queue Length 50th (ft) | 17 | 0 | 0 | 27 | 140 | 1 | 296 |
| Queue Length 95th (ft) | 46 | 45 | 0 | 133 | 628 | 7 | 697 |
| Internal Link Dist (ft) | 540 | | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | 170 | | 85 | |
| Base Capacity (vph) | 210 | 540 | 563 | 646 | 1711 | 396 | 1241 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 402 | 0 | 605 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.09 | 0.48 | 0.00 | 0.43 | 0.70 | 0.01 | 1.03 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 16 | 1 | 231 | 0 | 0 | 1 | 253 | 823 | 3 | 2 | 567 | 51 |
| Future Volume (vph) | 16 | 1 | 231 | 0 | 0 | 1 | 253 | 823 | 3 | 2 | 567 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | | 0.85 | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Flt Protected | | 0.95 | 1.00 | | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1644 | 1463 | | | 1624 | 1660 | 1927 | | 1719 | 1846 | |
| Flt Permitted | | 0.74 | 1.00 | | | 1.00 | 0.29 | 1.00 | | 0.33 | 1.00 | |
| Satd. Flow (perm) | | 1269 | 1463 | | | 1624 | 499 | 1927 | | 589 | 1846 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 18 | 1 | 257 | 0 | 0 | 1 | 281 | 914 | 3 | 2 | 603 | 54 |
| RTOR Reduction (vph) | 0 | 0 | 199 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 19 | 58 | 0 | 0 | 0 | 281 | 917 | 0 | 2 | 656 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | | | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 5.3 | 29.0 | | | 5.3 | 120.3 | 120.3 | | 90.6 | 90.6 | |
| Effective Green, g (s) | | 7.3 | 33.0 | | | 7.3 | 122.3 | 122.3 | | 92.6 | 92.6 | |
| Actuated g/C Ratio | | 0.05 | 0.23 | | | 0.05 | 0.84 | 0.84 | | 0.64 | 0.64 | |
| Clearance Time (s) | | 6.0 | 6.0 | | | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 63 | 332 | | | 81 | 626 | 1625 | | 376 | 1178 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.08 | c0.48 | | | 0.36 | |
| v/s Ratio Perm | | c0.01 | 0.01 | | | 0.00 | 0.30 | | | 0.00 | | |
| v/c Ratio | | 0.30 | 0.18 | | | 0.00 | 0.45 | 0.56 | | 0.01 | 0.56 | |
| Uniform Delay, d1 | | 66.4 | 45.1 | | | 65.4 | 7.2 | 3.4 | | 9.5 | 14.7 | |
| Progression Factor | | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 2.7 | 0.3 | | | 0.0 | 0.5 | 1.4 | | 0.0 | 1.9 | |
| Delay (s) | | 69.1 | 45.3 | | | 65.4 | 7.8 | 4.8 | | 9.5 | 16.6 | |
| Level of Service | | E | D | | | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 47.0 | | | 65.4 | | | 5.5 | | | 16.6 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 14.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 66.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

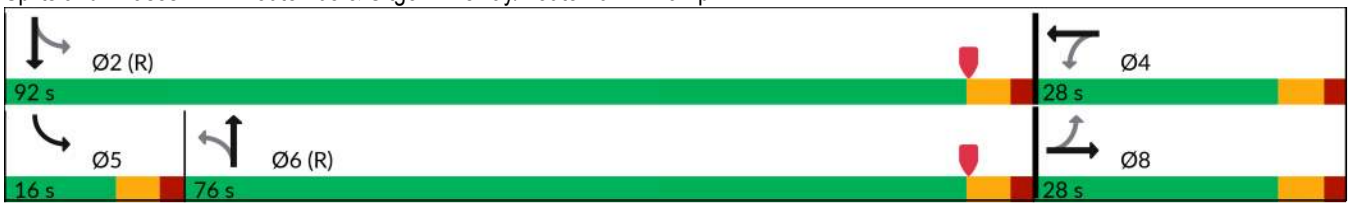
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 97 | 3 | 110 | 1 | 530 | 309 | 135 | 514 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 97 | 3 | 110 | 1 | 530 | 309 | 135 | 514 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.865 | | | 0.929 | | | 0.950 | | | 0.997 | |
| Flt Protected | | | | | 0.977 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1479 | 0 | 0 | 1742 | 0 | 0 | 1710 | 0 | 1719 | 1866 | 0 |
| Flt Permitted | | | | | 0.847 | | | | | 0.257 | | |
| Satd. Flow (perm) | 0 | 1479 | 0 | 0 | 1510 | 0 | 0 | 1710 | 0 | 465 | 1866 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 397 | | | 41 | | | 44 | | | 2 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Adj. Flow (vph) | 0 | 0 | 10 | 108 | 3 | 122 | 1 | 582 | 340 | 148 | 565 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 10 | 0 | 0 | 233 | 0 | 0 | 923 | 0 | 148 | 575 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 21.0 | | | 21.0 | | | 76.6 | | 91.0 | 91.0 | |
| Actuated g/C Ratio | | 0.18 | | | 0.18 | | | 0.64 | | 0.76 | 0.76 | |
| v/c Ratio | | 0.02 | | | 0.78 | | | 0.83 | | 0.32 | 0.41 | |
| Control Delay (s/veh) | | 0.0 | | | 57.0 | | | 25.5 | | 6.2 | 6.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 49.7 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 0.0 | | | 57.0 | | | 75.1 | | 6.2 | 6.4 | |
| LOS | | A | | | E | | | E | | A | A | |
| Approach Delay (s/veh) | | | | | 57.0 | | | 75.1 | | | 6.4 | |
| Approach LOS | | | | | E | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 75 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.83 | | | |
| Intersection Signal Delay (s/veh): 46.2 | | Intersection LOS: D | |
| Intersection Capacity Utilization 103.3% | | ICU Level of Service G | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 10 | 233 | 923 | 148 | 575 |
| v/c Ratio | 0.02 | 0.78 | 0.83 | 0.32 | 0.41 |
| Control Delay (s/veh) | 0.0 | 57.0 | 25.5 | 6.2 | 6.4 |
| Queue Delay | 0.0 | 0.0 | 49.7 | 0.0 | 0.0 |
| Total Delay (s/veh) | 0.0 | 57.0 | 75.1 | 6.2 | 6.4 |
| Queue Length 50th (ft) | 0 | 141 | 520 | 28 | 144 |
| Queue Length 95th (ft) | 0 | 233 | #881 | 48 | 208 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 613 | 334 | 1107 | 478 | 1415 |
| Starvation Cap Reductn | 0 | 0 | 378 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.02 | 0.70 | 1.27 | 0.31 | 0.41 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 97 | 3 | 110 | 1 | 530 | 309 | 135 | 514 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 97 | 3 | 110 | 1 | 530 | 309 | 135 | 514 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.87 | | | 0.93 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1479 | | | 1743 | | | 1710 | | 1719 | 1867 | |
| Flt Permitted | | 1.00 | | | 0.85 | | | 1.00 | | 0.26 | 1.00 | |
| Satd. Flow (perm) | | 1479 | | | 1510 | | | 1710 | | 465 | 1867 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 0 | 0 | 10 | 108 | 3 | 122 | 1 | 582 | 340 | 148 | 565 | 10 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 34 | 0 | 0 | 16 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2 | 0 | 0 | 199 | 0 | 0 | 907 | 0 | 148 | 575 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 19.0 | | | 19.0 | | | 74.6 | | 89.0 | 89.0 | |
| Effective Green, g (s) | | 21.0 | | | 21.0 | | | 76.6 | | 91.0 | 91.0 | |
| Actuated g/C Ratio | | 0.18 | | | 0.18 | | | 0.64 | | 0.76 | 0.76 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 258 | | | 264 | | | 1091 | | 461 | 1415 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.03 | c0.31 | |
| v/s Ratio Perm | | | | | c0.13 | | | 0.53 | | 0.22 | | |
| v/c Ratio | | 0.01 | | | 0.75 | | | 0.83 | | 0.32 | 0.41 | |
| Uniform Delay, d1 | | 40.9 | | | 47.0 | | | 16.7 | | 6.7 | 5.1 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 11.6 | | | 7.4 | | 0.4 | 0.9 | |
| Delay (s) | | 40.9 | | | 58.6 | | | 24.1 | | 7.1 | 5.9 | |
| Level of Service | | D | | | E | | | C | | A | A | |
| Approach Delay (s/veh) | | 40.9 | | | 58.6 | | | 24.1 | | | 6.2 | |
| Approach LOS | | D | | | E | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 21.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 103.3% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2036 Design Year No-Build Weekday Evening Peak Hour

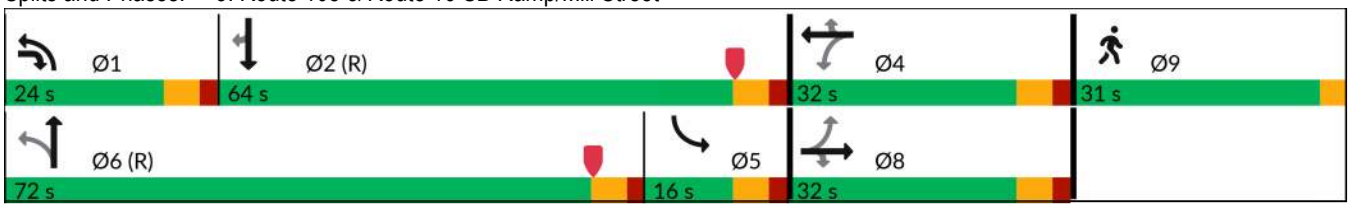
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 208 | 5 | 308 | 3 | 3 | 13 | 54 | 875 | 10 | 8 | 745 | 299 |
| Future Volume (vph) | 208 | 5 | 308 | 3 | 3 | 13 | 54 | 875 | 10 | 8 | 745 | 299 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | | 1.00 | | 1.00 | | |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.976 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1766 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.728 | | | 0.897 | | 0.259 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1347 | 1577 | 0 | 1623 | 1555 | 487 | 1877 | 0 | 1768 | 3541 | 1584 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 342 | | | 130 | | | | | | 329 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 231 | 6 | 342 | 3 | 3 | 14 | 60 | 972 | 11 | 9 | 819 | 329 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 237 | 342 | 0 | 6 | 14 | 60 | 983 | 0 | 9 | 819 | 329 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 34.0 | 47.0 | | 34.0 | 34.0 | 100.0 | 100.0 | | 8.5 | 89.0 | 89.0 |
| Actuated g/C Ratio | | 0.23 | 0.31 | | 0.23 | 0.23 | 0.66 | 0.66 | | 0.06 | 0.59 | 0.59 |
| v/c Ratio | | 0.78 | 0.47 | | 0.02 | 0.03 | 0.15 | 0.79 | | 0.09 | 0.39 | 0.31 |
| Control Delay (s/veh) | | 72.9 | 4.7 | | 45.8 | 0.2 | 14.0 | 26.3 | | 69.0 | 19.4 | 3.0 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 72.9 | 4.7 | | 45.8 | 0.2 | 14.0 | 26.3 | | 69.0 | 19.4 | 3.0 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 32.6 | | | 13.8 | | | 25.6 | | | 15.1 | |
| Approach LOS | | C | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 22.6 | | Intersection LOS: C | |
| Intersection Capacity Utilization 76.8% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 237 | 342 | 6 | 14 | 60 | 983 | 9 | 819 | 329 |
| v/c Ratio | 0.78 | 0.47 | 0.02 | 0.03 | 0.15 | 0.79 | 0.09 | 0.39 | 0.31 |
| Control Delay (s/veh) | 72.9 | 4.7 | 45.8 | 0.2 | 14.0 | 26.3 | 69.0 | 19.4 | 3.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 72.9 | 4.7 | 45.8 | 0.2 | 14.0 | 26.3 | 69.0 | 19.4 | 3.0 |
| Queue Length 50th (ft) | 215 | 0 | 5 | 0 | 17 | 564 | 9 | 204 | 0 |
| Queue Length 95th (ft) | #390 | 49 | 19 | 0 | 63 | #1408 | 29 | 381 | 59 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 303 | 809 | 365 | 450 | 494 | 1243 | 140 | 2086 | 1068 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.78 | 0.42 | 0.02 | 0.03 | 0.12 | 0.79 | 0.06 | 0.39 | 0.31 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 208 | 5 | 308 | 3 | 3 | 13 | 54 | 875 | 10 | 8 | 745 | 299 |
| Future Volume (vph) | 208 | 5 | 308 | 3 | 3 | 13 | 54 | 875 | 10 | 8 | 745 | 299 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1765 | 1577 | | 1765 | 1555 | 1787 | 1878 | | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.73 | 1.00 | | 0.90 | 1.00 | 0.26 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1347 | 1577 | | 1623 | 1555 | 487 | 1878 | | 1771 | 3541 | 1584 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 231 | 6 | 342 | 3 | 3 | 14 | 60 | 972 | 11 | 9 | 819 | 329 |
| RTOR Reduction (vph) | 0 | 0 | 243 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 140 |
| Lane Group Flow (vph) | 0 | 237 | 99 | 0 | 6 | 3 | 60 | 983 | 0 | 9 | 819 | 189 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 32.0 | 39.8 | | 32.0 | 32.0 | 90.8 | 90.8 | | 1.6 | 84.6 | 84.6 |
| Effective Green, g (s) | | 34.0 | 43.8 | | 34.0 | 34.0 | 92.8 | 92.8 | | 3.6 | 86.6 | 86.6 |
| Actuated g/C Ratio | | 0.23 | 0.29 | | 0.23 | 0.23 | 0.61 | 0.61 | | 0.02 | 0.57 | 0.57 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 303 | 457 | | 365 | 350 | 383 | 1154 | | 42 | 2030 | 908 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.52 | | 0.01 | c0.23 | |
| v/s Ratio Perm | | c0.18 | 0.05 | | 0.00 | 0.00 | 0.09 | | | | | 0.12 |
| v/c Ratio | | 0.78 | 0.22 | | 0.02 | 0.01 | 0.16 | 0.85 | | 0.21 | 0.40 | 0.21 |
| Uniform Delay, d1 | | 55.0 | 40.6 | | 45.5 | 45.4 | 13.1 | 23.5 | | 72.3 | 17.9 | 15.6 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 12.4 | 0.2 | | 0.0 | 0.0 | 0.2 | 8.0 | | 2.6 | 0.6 | 0.5 |
| Delay (s) | | 67.4 | 40.8 | | 45.5 | 45.4 | 13.3 | 31.5 | | 74.9 | 18.5 | 16.1 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 51.7 | | | 45.5 | | | 30.5 | | | 18.2 | |
| Approach LOS | | D | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 29.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 76.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

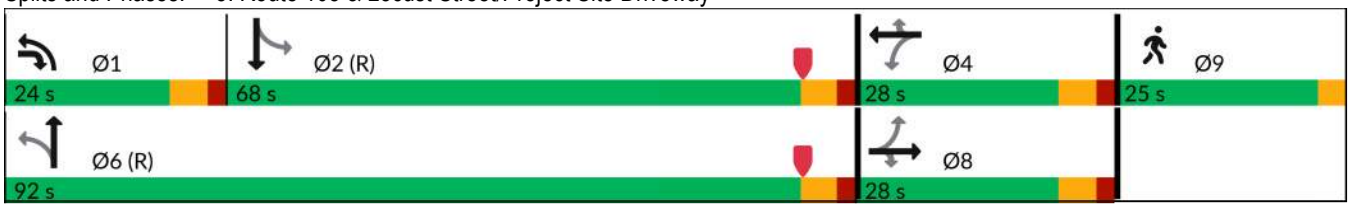
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 1 | 317 | 2 | 3 | 3 | 234 | 851 | 0 | 1 | 738 | 118 |
| Future Volume (vph) | 40 | 1 | 317 | 2 | 3 | 3 | 234 | 851 | 0 | 1 | 738 | 118 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.979 | |
| Flt Protected | | 0.953 | | | 0.980 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1690 | 1507 | 0 | 1872 | 1624 | 1693 | 1966 | 0 | 1736 | 1846 | 0 |
| Flt Permitted | | 0.728 | | | 0.899 | | 0.117 | | | 0.338 | | |
| Satd. Flow (perm) | 0 | 1291 | 1507 | 0 | 1717 | 1624 | 208 | 1966 | 0 | 617 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 337 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 43 | 1 | 337 | 2 | 3 | 3 | 241 | 877 | 0 | 1 | 820 | 131 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 44 | 337 | 0 | 5 | 3 | 241 | 877 | 0 | 1 | 951 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 12.2 | 36.0 | | 12.2 | 12.2 | 122.1 | 122.9 | | 95.2 | 95.2 | |
| Actuated g/C Ratio | | 0.08 | 0.25 | | 0.08 | 0.08 | 0.84 | 0.85 | | 0.66 | 0.66 | |
| v/c Ratio | | 0.41 | 0.54 | | 0.03 | 0.01 | 0.59 | 0.53 | | 0.00 | 0.78 | |
| Control Delay (s/veh) | | 72.9 | 5.9 | | 59.0 | 0.0 | 19.7 | 7.3 | | 17.0 | 26.9 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.7 | | 0.0 | 50.1 | |
| Total Delay (s/veh) | | 72.9 | 5.9 | | 59.0 | 0.0 | 19.7 | 7.9 | | 17.0 | 77.0 | |
| LOS | | E | A | | E | A | B | A | | B | E | |
| Approach Delay (s/veh) | | 13.6 | | | 36.9 | | | 10.5 | | | 77.0 | |
| Approach LOS | | B | | | D | | | B | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 110 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 36.8 | | Intersection LOS: D | |
| Intersection Capacity Utilization 79.8% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 44 | 337 | 5 | 3 | 241 | 877 | 1 | 951 |
| v/c Ratio | 0.41 | 0.54 | 0.03 | 0.01 | 0.59 | 0.53 | 0.00 | 0.78 |
| Control Delay (s/veh) | 72.9 | 5.9 | 59.0 | 0.0 | 19.7 | 7.3 | 17.0 | 26.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 50.1 |
| Total Delay (s/veh) | 72.9 | 5.9 | 59.0 | 0.0 | 19.7 | 7.9 | 17.0 | 77.0 |
| Queue Length 50th (ft) | 40 | 0 | 4 | 0 | 55 | 156 | 0 | 568 |
| Queue Length 95th (ft) | 80 | 50 | 18 | 0 | 197 | 628 | 4 | #1325 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 213 | 634 | 284 | 343 | 419 | 1667 | 405 | 1214 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 419 | 0 | 445 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.21 | 0.53 | 0.02 | 0.01 | 0.58 | 0.70 | 0.00 | 1.24 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 1 | 317 | 2 | 3 | 3 | 234 | 851 | 0 | 1 | 738 | 118 |
| Future Volume (vph) | 40 | 1 | 317 | 2 | 3 | 3 | 234 | 851 | 0 | 1 | 738 | 118 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1691 | 1507 | | 1873 | 1624 | 1693 | 1966 | | 1735 | 1846 | |
| Flt Permitted | | 0.73 | 1.00 | | 0.90 | 1.00 | 0.12 | 1.00 | | 0.34 | 1.00 | |
| Satd. Flow (perm) | | 1291 | 1507 | | 1717 | 1624 | 209 | 1966 | | 618 | 1846 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 43 | 1 | 337 | 2 | 3 | 3 | 241 | 877 | 0 | 1 | 820 | 131 |
| RTOR Reduction (vph) | 0 | 0 | 258 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 |
| Lane Group Flow (vph) | 0 | 44 | 79 | 0 | 5 | 0 | 241 | 877 | 0 | 1 | 948 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 9.1 | 30.1 | | 9.1 | 9.1 | 116.5 | 116.5 | | 89.5 | 89.5 | |
| Effective Green, g (s) | | 11.1 | 34.1 | | 11.1 | 11.1 | 118.5 | 118.5 | | 91.5 | 91.5 | |
| Actuated g/C Ratio | | 0.08 | 0.24 | | 0.08 | 0.08 | 0.82 | 0.82 | | 0.63 | 0.63 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 98 | 354 | | 131 | 124 | 406 | 1606 | | 389 | 1164 | |
| v/s Ratio Prot | | | 0.04 | | | | c0.09 | 0.45 | | | c0.51 | |
| v/s Ratio Perm | | c0.03 | 0.02 | | 0.00 | 0.00 | 0.39 | | | 0.00 | | |
| v/c Ratio | | 0.45 | 0.22 | | 0.04 | 0.00 | 0.59 | 0.55 | | 0.00 | 0.81 | |
| Uniform Delay, d1 | | 64.0 | 44.8 | | 62.0 | 61.8 | 26.9 | 4.4 | | 9.9 | 20.3 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.2 | 0.3 | | 0.1 | 0.0 | 2.3 | 1.3 | | 0.0 | 6.3 | |
| Delay (s) | | 67.3 | 45.1 | | 62.1 | 61.8 | 29.2 | 5.7 | | 9.9 | 26.6 | |
| Level of Service | | E | D | | E | E | C | A | | A | C | |
| Approach Delay (s/veh) | | 47.7 | | | 62.0 | | | 10.8 | | | 26.6 | |
| Approach LOS | | D | | | E | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 22.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 79.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

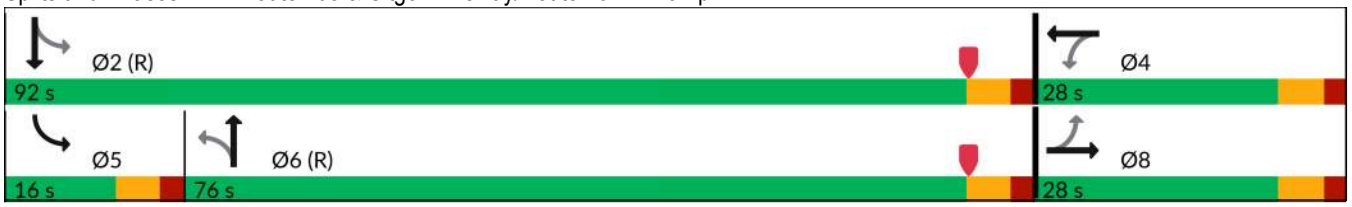
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 207 | 15 | 148 | 1 | 543 | 350 | 190 | 639 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 207 | 15 | 148 | 1 | 543 | 350 | 190 | 639 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.884 | | | 0.946 | | | 0.947 | | | 0.996 | |
| Flt Protected | | | | | 0.973 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1512 | 0 | 0 | 1749 | 0 | 0 | 1755 | 0 | 1771 | 1920 | 0 |
| Flt Permitted | | | | | 0.819 | | | | | 0.219 | | |
| Satd. Flow (perm) | 0 | 1512 | 0 | 0 | 1472 | 0 | 0 | 1755 | 0 | 408 | 1920 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 25 | | | 48 | | | 3 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| 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 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 2 | 12 | 230 | 17 | 164 | 1 | 603 | 389 | 211 | 710 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 14 | 0 | 0 | 411 | 0 | 0 | 993 | 0 | 211 | 731 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 25.6 | | | 25.6 | | | 71.0 | | 86.4 | 86.4 | |
| Actuated g/C Ratio | | 0.21 | | | 0.21 | | | 0.59 | | 0.72 | 0.72 | |
| v/c Ratio | | 0.04 | | | 1.23 | | | 0.94 | | 0.50 | 0.53 | |
| Control Delay (s/veh) | | 20.7 | | | 167.1 | | | 38.4 | | 9.3 | 9.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 46.7 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 20.7 | | | 167.1 | | | 85.1 | | 9.3 | 9.0 | |
| LOS | | C | | | F | | | F | | A | A | |
| Approach Delay (s/veh) | | 20.7 | | | 167.1 | | | 85.1 | | | 9.1 | |
| Approach LOS | | C | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 100 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 1.23 | | | |
| Intersection Signal Delay (s/veh): 68.7 | | Intersection LOS: E | |
| Intersection Capacity Utilization 122.8% | | ICU Level of Service H | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 14 | 411 | 993 | 211 | 731 |
| v/c Ratio | 0.04 | 1.23 | 0.94 | 0.50 | 0.53 |
| Control Delay (s/veh) | 20.7 | 167.1 | 38.4 | 9.3 | 9.0 |
| Queue Delay | 0.0 | 0.0 | 46.7 | 0.0 | 0.0 |
| Total Delay (s/veh) | 20.7 | 167.1 | 85.1 | 9.3 | 9.0 |
| Queue Length 50th (ft) | 1 | ~395 | 630 | 43 | 212 |
| Queue Length 95th (ft) | 20 | #598 | #974 | 67 | 291 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 331 | 333 | 1072 | 430 | 1408 |
| Starvation Cap Reductn | 0 | 0 | 354 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 1.23 | 1.38 | 0.49 | 0.52 |

Intersection Summary

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 207 | 15 | 148 | 1 | 543 | 350 | 190 | 639 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 207 | 15 | 148 | 1 | 543 | 350 | 190 | 639 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.88 | | | 0.95 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1512 | | | 1749 | | | 1755 | | 1771 | 1919 | |
| Flt Permitted | | 1.00 | | | 0.82 | | | 1.00 | | 0.22 | 1.00 | |
| Satd. Flow (perm) | | 1512 | | | 1472 | | | 1754 | | 408 | 1919 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 2 | 12 | 230 | 17 | 164 | 1 | 603 | 389 | 211 | 710 | 21 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 20 | 0 | 0 | 20 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 5 | 0 | 0 | 391 | 0 | 0 | 973 | 0 | 211 | 730 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 23.6 | | | 23.6 | | | 69.0 | | 84.4 | 84.4 | |
| Effective Green, g (s) | | 25.6 | | | 25.6 | | | 71.0 | | 86.4 | 86.4 | |
| Actuated g/C Ratio | | 0.21 | | | 0.21 | | | 0.59 | | 0.72 | 0.72 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 322 | | | 314 | | | 1037 | | 423 | 1381 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.05 | c0.38 | |
| v/s Ratio Perm | | | | | c0.27 | | | c0.55 | | 0.31 | | |
| v/c Ratio | | 0.01 | | | 1.25 | | | 0.94 | | 0.50 | 0.53 | |
| Uniform Delay, d1 | | 37.2 | | | 47.2 | | | 22.5 | | 10.0 | 7.6 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 134.7 | | | 16.6 | | 0.9 | 1.5 | |
| Delay (s) | | 37.3 | | | 181.9 | | | 39.1 | | 11.0 | 9.0 | |
| Level of Service | | D | | | F | | | D | | B | A | |
| Approach Delay (s/veh) | | 37.3 | | | 181.9 | | | 39.1 | | | 9.5 | |
| Approach LOS | | D | | | F | | | D | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 52.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 122.8% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2036 Design Year No-Build Saturday Midday Peak Hour

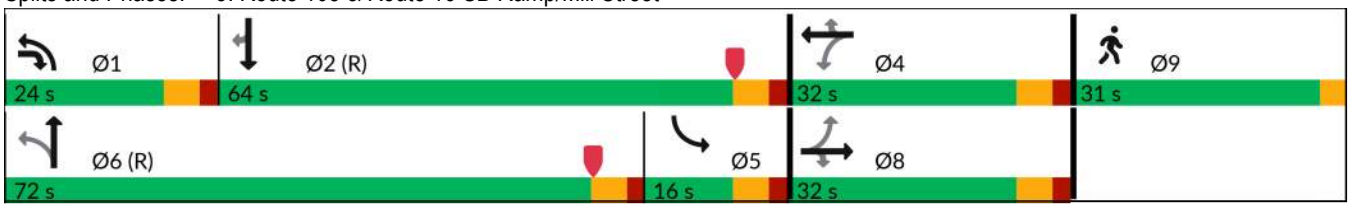
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 191 | 7 | 193 | 9 | 2 | 16 | 55 | 755 | 7 | 3 | 553 | 275 |
| Future Volume (vph) | 191 | 7 | 193 | 9 | 2 | 16 | 55 | 755 | 7 | 3 | 553 | 275 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | | 0.97 | 1.00 | 1.00 | | 1.00 | | 0.97 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.960 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1737 | 1591 | 1787 | 1879 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.725 | | | 0.789 | | 0.354 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1334 | 1577 | 0 | 1427 | 1546 | 664 | 1879 | 0 | 1767 | 3541 | 1541 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 212 | | | 130 | | | | | | 306 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 210 | 8 | 212 | 10 | 2 | 18 | 61 | 839 | 8 | 3 | 614 | 306 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 218 | 212 | 0 | 12 | 18 | 61 | 847 | 0 | 3 | 614 | 306 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 31.4 | 44.2 | | 31.4 | 31.4 | 102.8 | 102.8 | | 8.0 | 91.8 | 91.8 |
| Actuated g/C Ratio | | 0.21 | 0.29 | | 0.21 | 0.21 | 0.68 | 0.68 | | 0.05 | 0.61 | 0.61 |
| v/c Ratio | | 0.79 | 0.35 | | 0.04 | 0.04 | 0.12 | 0.66 | | 0.03 | 0.29 | 0.29 |
| Control Delay (s/veh) | | 76.1 | 4.7 | | 46.7 | 0.2 | 13.1 | 21.0 | | 68.3 | 16.9 | 3.0 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 76.1 | 4.7 | | 46.7 | 0.2 | 13.1 | 21.0 | | 68.3 | 16.9 | 3.0 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 40.9 | | | 18.8 | | | 20.4 | | | 12.5 | |
| Approach LOS | | D | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 120 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 21.0 | | Intersection LOS: C | |
| Intersection Capacity Utilization 70.0% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 218 | 212 | 12 | 18 | 61 | 847 | 3 | 614 | 306 |
| v/c Ratio | 0.79 | 0.35 | 0.04 | 0.04 | 0.12 | 0.66 | 0.03 | 0.29 | 0.29 |
| Control Delay (s/veh) | 76.1 | 4.7 | 46.7 | 0.2 | 13.1 | 21.0 | 68.3 | 16.9 | 3.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 76.1 | 4.7 | 46.7 | 0.2 | 13.1 | 21.0 | 68.3 | 16.9 | 3.0 |
| Queue Length 50th (ft) | 201 | 0 | 9 | 0 | 16 | 388 | 3 | 133 | 0 |
| Queue Length 95th (ft) | #336 | 41 | 29 | 0 | 64 | #1123 | 14 | 274 | 58 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 284 | 705 | 304 | 431 | 600 | 1279 | 140 | 2152 | 1056 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.30 | 0.04 | 0.04 | 0.10 | 0.66 | 0.02 | 0.29 | 0.29 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 191 | 7 | 193 | 9 | 2 | 16 | 55 | 755 | 7 | 3 | 553 | 275 |
| Future Volume (vph) | 191 | 7 | 193 | 9 | 2 | 16 | 55 | 755 | 7 | 3 | 553 | 275 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1758 | 1577 | | 1737 | 1548 | 1786 | 1878 | | 1771 | 3541 | 1545 |
| Flt Permitted | | 0.73 | 1.00 | | 0.79 | 1.00 | 0.35 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1336 | 1577 | | 1427 | 1548 | 665 | 1878 | | 1771 | 3541 | 1545 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 210 | 8 | 212 | 10 | 2 | 18 | 61 | 839 | 8 | 3 | 614 | 306 |
| RTOR Reduction (vph) | 0 | 0 | 154 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 125 |
| Lane Group Flow (vph) | 0 | 218 | 58 | 0 | 12 | 4 | 61 | 847 | 0 | 3 | 614 | 181 |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 29.4 | 37.0 | | 29.4 | 29.4 | 93.7 | 93.7 | | 1.3 | 87.4 | 87.4 |
| Effective Green, g (s) | | 31.4 | 41.0 | | 31.4 | 31.4 | 95.7 | 95.7 | | 3.3 | 89.4 | 89.4 |
| Actuated g/C Ratio | | 0.21 | 0.27 | | 0.21 | 0.21 | 0.63 | 0.63 | | 0.02 | 0.59 | 0.59 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 277 | 428 | | 296 | 321 | 492 | 1190 | | 38 | 2096 | 914 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.45 | | 0.00 | c0.17 | |
| v/s Ratio Perm | | c0.16 | 0.03 | | 0.01 | 0.00 | 0.07 | | | | | 0.12 |
| v/c Ratio | | 0.79 | 0.13 | | 0.04 | 0.01 | 0.12 | 0.71 | | 0.08 | 0.29 | 0.20 |
| Uniform Delay, d1 | | 56.6 | 41.6 | | 47.8 | 47.5 | 11.1 | 18.4 | | 72.4 | 15.2 | 14.2 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 13.7 | 0.1 | | 0.1 | 0.0 | 0.1 | 3.6 | | 0.9 | 0.4 | 0.5 |
| Delay (s) | | 70.3 | 41.7 | | 47.8 | 47.5 | 11.3 | 22.1 | | 73.3 | 15.6 | 14.7 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 56.2 | | | 47.6 | | | 21.4 | | | 15.5 | |
| Approach LOS | | E | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 25.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 70.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

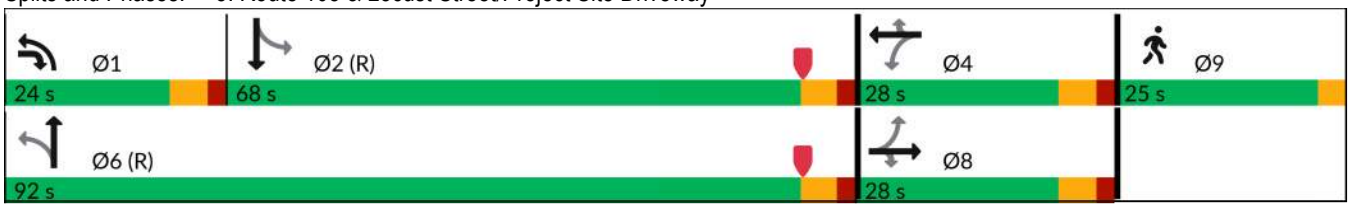
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 26 | 0 | 287 | 3 | 1 | 5 | 267 | 675 | 0 | 3 | 492 | 81 |
| Future Volume (vph) | 26 | 0 | 287 | 3 | 1 | 5 | 267 | 675 | 0 | 3 | 492 | 81 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | | | | 0.979 | |
| Flt Protected | | 0.950 | | | 0.964 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1841 | 1624 | 1693 | 1966 | 0 | 1753 | 1863 | 0 |
| Flt Permitted | | 0.755 | | | 0.788 | | 0.305 | | | 0.398 | | |
| Satd. Flow (perm) | 0 | 1335 | 1507 | 0 | 1505 | 1586 | 543 | 1966 | 0 | 734 | 1863 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 319 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 29 | 0 | 319 | 3 | 1 | 6 | 278 | 703 | 0 | 3 | 541 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 29 | 319 | 0 | 4 | 6 | 278 | 703 | 0 | 3 | 630 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 10.7 | 32.8 | | 10.4 | 10.4 | 126.2 | 127.8 | | 98.4 | 98.4 | |
| Actuated g/C Ratio | | 0.07 | 0.23 | | 0.07 | 0.07 | 0.87 | 0.88 | | 0.68 | 0.68 | |
| v/c Ratio | | 0.30 | 0.54 | | 0.04 | 0.03 | 0.42 | 0.41 | | 0.01 | 0.50 | |
| Control Delay (s/veh) | | 70.2 | 6.3 | | 61.0 | 0.2 | 5.4 | 5.0 | | 16.7 | 17.6 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.4 | | 0.0 | 18.5 | |
| Total Delay (s/veh) | | 70.2 | 6.3 | | 61.0 | 0.2 | 5.4 | 5.4 | | 16.7 | 36.1 | |
| LOS | | E | A | | E | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 11.7 | | | 24.5 | | | 5.4 | | | 36.0 | |
| Approach LOS | | B | | | C | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.54 | | | |
| Intersection Signal Delay (s/veh): 16.4 | | Intersection LOS: B | |
| Intersection Capacity Utilization 63.7% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 29 | 319 | 4 | 6 | 278 | 703 | 3 | 630 |
| v/c Ratio | 0.30 | 0.54 | 0.04 | 0.03 | 0.42 | 0.41 | 0.01 | 0.50 |
| Control Delay (s/veh) | 70.2 | 6.3 | 61.0 | 0.2 | 5.4 | 5.0 | 16.7 | 17.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 18.5 |
| Total Delay (s/veh) | 70.2 | 6.3 | 61.0 | 0.2 | 5.4 | 5.4 | 16.7 | 36.1 |
| Queue Length 50th (ft) | 26 | 0 | 4 | 0 | 29 | 96 | 1 | 268 |
| Queue Length 95th (ft) | 60 | 49 | 16 | 0 | 138 | 411 | 8 | 650 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 220 | 593 | 249 | 337 | 666 | 1732 | 497 | 1266 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 507 | 0 | 634 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.13 | 0.54 | 0.02 | 0.02 | 0.42 | 0.57 | 0.01 | 1.00 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 26 | 0 | 287 | 3 | 1 | 5 | 267 | 675 | 0 | 3 | 492 | 81 |
| Future Volume (vph) | 26 | 0 | 287 | 3 | 1 | 5 | 267 | 675 | 0 | 3 | 492 | 81 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1670 | 1507 | | 1841 | 1577 | 1693 | 1966 | | 1753 | 1863 | |
| Flt Permitted | | 0.76 | 1.00 | | 0.79 | 1.00 | 0.31 | 1.00 | | 0.40 | 1.00 | |
| Satd. Flow (perm) | | 1327 | 1507 | | 1506 | 1577 | 544 | 1966 | | 734 | 1863 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 29 | 0 | 319 | 3 | 1 | 6 | 278 | 703 | 0 | 3 | 541 | 89 |
| RTOR Reduction (vph) | 0 | 0 | 249 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 29 | 70 | 0 | 4 | 0 | 278 | 703 | 0 | 3 | 628 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 6.2 | 28.0 | | 6.2 | 6.2 | 119.4 | 119.4 | | 91.6 | 91.6 | |
| Effective Green, g (s) | | 8.2 | 32.0 | | 8.2 | 8.2 | 121.4 | 121.4 | | 93.6 | 93.6 | |
| Actuated g/C Ratio | | 0.06 | 0.22 | | 0.06 | 0.06 | 0.84 | 0.84 | | 0.65 | 0.65 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 75 | 332 | | 85 | 89 | 644 | 1646 | | 473 | 1202 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.07 | c0.36 | | | c0.34 | |
| v/s Ratio Perm | | c0.02 | 0.01 | | 0.00 | 0.00 | 0.29 | | | 0.00 | | |
| v/c Ratio | | 0.39 | 0.21 | | 0.05 | 0.00 | 0.43 | 0.43 | | 0.01 | 0.52 | |
| Uniform Delay, d1 | | 66.0 | 46.2 | | 64.7 | 64.5 | 6.5 | 3.0 | | 9.1 | 13.7 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.3 | 0.3 | | 0.2 | 0.0 | 0.5 | 0.8 | | 0.0 | 1.6 | |
| Delay (s) | | 69.3 | 46.5 | | 64.9 | 64.6 | 6.9 | 3.8 | | 9.2 | 15.4 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 48.4 | | | 64.7 | | | 4.7 | | | 15.3 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 16.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 63.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

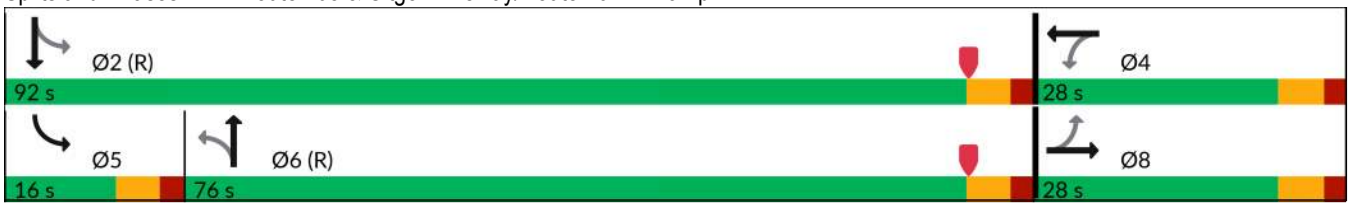
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 90 | 9 | 160 | 2 | 485 | 219 | 161 | 481 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 90 | 9 | 160 | 2 | 485 | 219 | 161 | 481 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.932 | | | 0.917 | | | 0.958 | | | 0.995 | |
| Flt Protected | | | | | 0.983 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1594 | 0 | 0 | 1713 | 0 | 0 | 1793 | 0 | 1771 | 1918 | 0 |
| Flt Permitted | | | | | 0.880 | | | 0.999 | | 0.293 | | |
| Satd. Flow (perm) | 0 | 1594 | 0 | 0 | 1533 | 0 | 0 | 1791 | 0 | 546 | 1918 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 6 | | | 61 | | | 34 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 6 | 6 | 99 | 10 | 176 | 2 | 533 | 241 | 179 | 534 | 17 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 285 | 0 | 0 | 776 | 0 | 179 | 551 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 23.9 | | | 23.9 | | | 73.0 | | 88.1 | 88.1 | |
| Actuated g/C Ratio | | 0.20 | | | 0.20 | | | 0.61 | | 0.73 | 0.73 | |
| v/c Ratio | | 0.04 | | | 0.81 | | | 0.70 | | 0.35 | 0.39 | |
| Control Delay (s/veh) | | 27.2 | | | 53.2 | | | 20.6 | | 7.1 | 7.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 51.8 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 27.2 | | | 53.2 | | | 72.4 | | 7.1 | 7.2 | |
| LOS | | C | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 27.2 | | | 53.2 | | | 72.4 | | | 7.2 | |
| Approach LOS | | C | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.81 | | | |
| Intersection Signal Delay (s/veh): 42.7 | | Intersection LOS: D | |
| Intersection Capacity Utilization 97.2% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 12 | 285 | 776 | 179 | 551 |
| v/c Ratio | 0.04 | 0.81 | 0.70 | 0.35 | 0.39 |
| Control Delay (s/veh) | 27.2 | 53.2 | 20.6 | 7.1 | 7.2 |
| Queue Delay | 0.0 | 0.0 | 51.8 | 0.0 | 0.0 |
| Total Delay (s/veh) | 27.2 | 53.2 | 72.4 | 7.1 | 7.2 |
| Queue Length 50th (ft) | 4 | 165 | 395 | 39 | 151 |
| Queue Length 95th (ft) | 21 | #307 | 533 | 57 | 192 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 345 | 375 | 1128 | 524 | 1434 |
| Starvation Cap Reductn | 0 | 0 | 480 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.03 | 0.76 | 1.20 | 0.34 | 0.38 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 90 | 9 | 160 | 2 | 485 | 219 | 161 | 481 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 90 | 9 | 160 | 2 | 485 | 219 | 161 | 481 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.93 | | | 0.92 | | | 0.96 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1595 | | | 1712 | | | 1793 | | 1771 | 1918 | |
| Flt Permitted | | 1.00 | | | 0.88 | | | 1.00 | | 0.29 | 1.00 | |
| Satd. Flow (perm) | | 1595 | | | 1532 | | | 1792 | | 546 | 1918 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 6 | 6 | 99 | 10 | 176 | 2 | 533 | 241 | 179 | 534 | 17 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 49 | 0 | 0 | 13 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 7 | 0 | 0 | 236 | 0 | 0 | 763 | 0 | 179 | 550 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 21.9 | | | 21.9 | | | 71.1 | | 86.1 | 86.1 | |
| Effective Green, g (s) | | 23.9 | | | 23.9 | | | 73.1 | | 88.1 | 88.1 | |
| Actuated g/C Ratio | | 0.20 | | | 0.20 | | | 0.61 | | 0.73 | 0.73 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 317 | | | 305 | | | 1091 | | 513 | 1408 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.03 | c0.29 | |
| v/s Ratio Perm | | | | | c0.15 | | | c0.43 | | 0.22 | | |
| v/c Ratio | | 0.02 | | | 0.77 | | | 0.70 | | 0.35 | 0.39 | |
| Uniform Delay, d1 | | 38.7 | | | 45.5 | | | 16.0 | | 7.3 | 5.9 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 11.6 | | | 3.7 | | 0.4 | 0.8 | |
| Delay (s) | | 38.7 | | | 57.1 | | | 19.7 | | 7.7 | 6.8 | |
| Level of Service | | D | | | E | | | B | | A | A | |
| Approach Delay (s/veh) | | 38.7 | | | 57.1 | | | 19.7 | | | 7.0 | |
| Approach LOS | | D | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 20.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 97.2% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2036 Design Year Build Weekday Morning Peak Hour

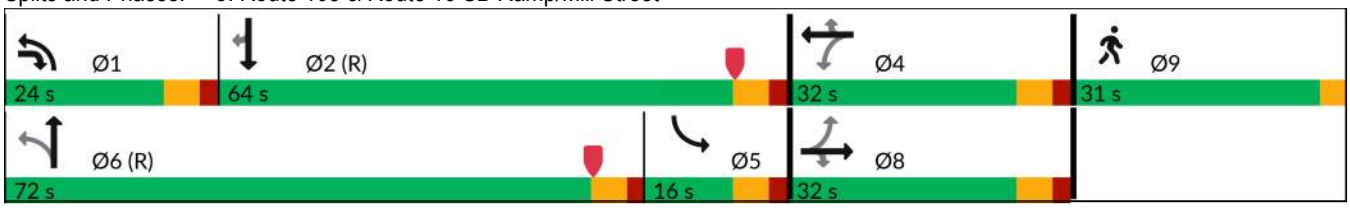
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 213 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 602 | 316 |
| Future Volume (vph) | 213 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 602 | 316 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | | | | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.983 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1752 | 1561 | 0 | 1727 | 1544 | 1752 | 1843 | 0 | 1736 | 3473 | 1554 |
| Flt Permitted | | 0.710 | | | 0.881 | | 0.326 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1301 | 1561 | 0 | 1547 | 1509 | 601 | 1843 | 0 | 1736 | 3473 | 1519 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 460 | | | 130 | | | | | | 333 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 237 | 11 | 460 | 12 | 23 | 8 | 82 | 1021 | 8 | 5 | 634 | 333 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 248 | 460 | 0 | 35 | 8 | 82 | 1029 | 0 | 5 | 634 | 333 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 38.8 | 53.0 | | 38.8 | 38.8 | 95.3 | 95.3 | | 8.2 | 83.0 | 83.0 |
| Actuated g/C Ratio | | 0.26 | 0.35 | | 0.26 | 0.26 | 0.63 | 0.63 | | 0.05 | 0.55 | 0.55 |
| v/c Ratio | | 0.74 | 0.54 | | 0.09 | 0.02 | 0.18 | 0.88 | | 0.05 | 0.33 | 0.34 |
| Control Delay (s/veh) | | 65.8 | 4.5 | | 44.8 | 0.0 | 14.9 | 34.7 | | 68.6 | 21.0 | 3.4 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 65.8 | 4.5 | | 44.8 | 0.0 | 14.9 | 34.7 | | 68.6 | 21.0 | 3.4 |
| LOS | | E | A | | D | A | B | C | | E | C | A |
| Approach Delay (s/veh) | | 26.0 | | | 36.5 | | | 33.2 | | | 15.2 | |
| Approach LOS | | C | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 150 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.88 | | | |
| Intersection Signal Delay (s/veh): 25.3 | | Intersection LOS: C | |
| Intersection Capacity Utilization 82.0% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 248 | 460 | 35 | 8 | 82 | 1029 | 5 | 634 | 333 |
| v/c Ratio | 0.74 | 0.54 | 0.09 | 0.02 | 0.18 | 0.88 | 0.05 | 0.33 | 0.34 |
| Control Delay (s/veh) | 65.8 | 4.5 | 44.8 | 0.0 | 14.9 | 34.7 | 68.6 | 21.0 | 3.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 65.8 | 4.5 | 44.8 | 0.0 | 14.9 | 34.7 | 68.6 | 21.0 | 3.4 |
| Queue Length 50th (ft) | 221 | 0 | 26 | 0 | 26 | 698 | 5 | 162 | 0 |
| Queue Length 95th (ft) | #417 | 52 | 63 | 0 | 81 | #1518 | 20 | 293 | 61 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 334 | 912 | 397 | 484 | 532 | 1163 | 137 | 1909 | 985 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.74 | 0.50 | 0.09 | 0.02 | 0.15 | 0.88 | 0.04 | 0.33 | 0.34 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 213 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 602 | 316 |
| Future Volume (vph) | 213 | 10 | 414 | 11 | 21 | 7 | 74 | 919 | 7 | 5 | 602 | 316 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1750 | 1561 | | 1727 | 1511 | 1752 | 1843 | | 1736 | 3473 | 1520 |
| Flt Permitted | | 0.71 | 1.00 | | 0.88 | 1.00 | 0.33 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1301 | 1561 | | 1548 | 1511 | 601 | 1843 | | 1736 | 3473 | 1520 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 237 | 11 | 460 | 12 | 23 | 8 | 82 | 1021 | 8 | 5 | 634 | 333 |
| RTOR Reduction (vph) | 0 | 0 | 308 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 155 |
| Lane Group Flow (vph) | 0 | 248 | 152 | 0 | 35 | 2 | 82 | 1029 | 0 | 5 | 634 | 178 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 36.8 | 45.8 | | 36.8 | 36.8 | 86.2 | 86.2 | | 1.4 | 78.6 | 78.6 |
| Effective Green, g (s) | | 38.8 | 49.8 | | 38.8 | 38.8 | 88.2 | 88.2 | | 3.4 | 80.6 | 80.6 |
| Actuated g/C Ratio | | 0.26 | 0.33 | | 0.26 | 0.26 | 0.58 | 0.58 | | 0.02 | 0.53 | 0.53 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 334 | 514 | | 397 | 388 | 434 | 1076 | | 39 | 1853 | 811 |
| v/s Ratio Prot | | | 0.02 | | | | 0.01 | c0.56 | | 0.00 | c0.18 | |
| v/s Ratio Perm | | c0.19 | 0.08 | | 0.02 | 0.00 | 0.10 | | | | | 0.12 |
| v/c Ratio | | 0.74 | 0.30 | | 0.09 | 0.01 | 0.19 | 0.96 | | 0.13 | 0.34 | 0.22 |
| Uniform Delay, d1 | | 51.5 | 37.6 | | 42.7 | 41.7 | 14.7 | 29.6 | | 72.3 | 20.1 | 18.6 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 8.6 | 0.3 | | 0.1 | 0.0 | 0.2 | 18.7 | | 1.5 | 0.5 | 0.6 |
| Delay (s) | | 60.1 | 37.9 | | 42.7 | 41.7 | 14.9 | 48.3 | | 73.8 | 20.6 | 19.2 |
| Level of Service | | E | D | | D | D | B | D | | E | C | B |
| Approach Delay (s/veh) | | 45.7 | | | 42.6 | | | 45.9 | | | 20.4 | |
| Approach LOS | | D | | | D | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 37.0 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 82.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

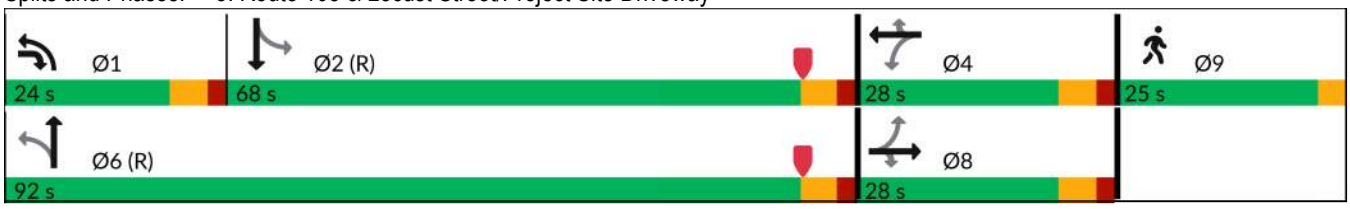
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 16 | 0 | 231 | 7 | 0 | 3 | 253 | 823 | 4 | 7 | 567 | 51 |
| Future Volume (vph) | 16 | 0 | 231 | 7 | 0 | 3 | 253 | 823 | 4 | 7 | 567 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.988 | |
| Flt Protected | | 0.950 | | | 0.950 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1636 | 1463 | 0 | 1815 | 1624 | 1660 | 1926 | 0 | 1719 | 1846 | 0 |
| Flt Permitted | | 0.752 | | | 0.746 | | 0.286 | | | 0.325 | | |
| Satd. Flow (perm) | 0 | 1295 | 1463 | 0 | 1425 | 1624 | 500 | 1926 | 0 | 588 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 257 | | | 90 | | | | | 4 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Adj. Flow (vph) | 18 | 0 | 257 | 8 | 0 | 3 | 281 | 914 | 4 | 7 | 603 | 54 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 18 | 257 | 0 | 8 | 3 | 281 | 918 | 0 | 7 | 657 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 9.7 | 33.8 | | 9.6 | 9.6 | 127.1 | 128.7 | | 97.4 | 97.4 | |
| Actuated g/C Ratio | | 0.07 | 0.23 | | 0.07 | 0.07 | 0.88 | 0.89 | | 0.67 | 0.67 | |
| v/c Ratio | | 0.21 | 0.48 | | 0.09 | 0.02 | 0.44 | 0.54 | | 0.02 | 0.53 | |
| Control Delay (s/veh) | | 68.8 | 6.0 | | 64.1 | 0.0 | 5.3 | 6.3 | | 16.7 | 18.8 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.6 | | 0.0 | 28.2 | |
| Total Delay (s/veh) | | 68.8 | 6.0 | | 64.1 | 0.0 | 5.3 | 6.8 | | 16.7 | 46.9 | |
| LOS | | E | A | | E | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 10.1 | | | 46.6 | | | 6.5 | | | 46.6 | |
| Approach LOS | | B | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.54 | | | |
| Intersection Signal Delay (s/veh): 19.6 | | Intersection LOS: B | |
| Intersection Capacity Utilization 69.4% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 18 | 257 | 8 | 3 | 281 | 918 | 7 | 657 |
| v/c Ratio | 0.21 | 0.48 | 0.09 | 0.02 | 0.44 | 0.54 | 0.02 | 0.53 |
| Control Delay (s/veh) | 68.8 | 6.0 | 64.1 | 0.0 | 5.3 | 6.3 | 16.7 | 18.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 28.2 |
| Total Delay (s/veh) | 68.8 | 6.0 | 64.1 | 0.0 | 5.3 | 6.8 | 16.7 | 46.9 |
| Queue Length 50th (ft) | 16 | 0 | 7 | 0 | 27 | 141 | 2 | 296 |
| Queue Length 95th (ft) | 44 | 45 | 25 | 0 | 134 | 633 | 14 | 699 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 214 | 540 | 235 | 343 | 646 | 1709 | 394 | 1240 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 400 | 0 | 604 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.08 | 0.48 | 0.03 | 0.01 | 0.43 | 0.70 | 0.02 | 1.03 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 16 | 0 | 231 | 7 | 0 | 3 | 253 | 823 | 4 | 7 | 567 | 51 |
| Future Volume (vph) | 16 | 0 | 231 | 7 | 0 | 3 | 253 | 823 | 4 | 7 | 567 | 51 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Flt Protected | | 0.95 | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1636 | 1463 | | 1815 | 1624 | 1660 | 1927 | | 1719 | 1846 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.75 | 1.00 | 0.29 | 1.00 | | 0.33 | 1.00 | |
| Satd. Flow (perm) | | 1295 | 1463 | | 1424 | 1624 | 499 | 1927 | | 589 | 1846 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 18 | 0 | 257 | 8 | 0 | 3 | 281 | 914 | 4 | 7 | 603 | 54 |
| RTOR Reduction (vph) | 0 | 0 | 199 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 18 | 58 | 0 | 8 | 0 | 281 | 918 | 0 | 7 | 656 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 2 | | | | | 2 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 5.3 | 29.0 | | 5.3 | 5.3 | 120.3 | 120.3 | | 90.6 | 90.6 | |
| Effective Green, g (s) | | 7.3 | 33.0 | | 7.3 | 7.3 | 122.3 | 122.3 | | 92.6 | 92.6 | |
| Actuated g/C Ratio | | 0.05 | 0.23 | | 0.05 | 0.05 | 0.84 | 0.84 | | 0.64 | 0.64 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 65 | 332 | | 71 | 81 | 626 | 1625 | | 376 | 1178 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.08 | c0.48 | | | 0.36 | |
| v/s Ratio Perm | | c0.01 | 0.01 | | 0.01 | 0.00 | 0.30 | | | 0.01 | | |
| v/c Ratio | | 0.28 | 0.18 | | 0.11 | 0.00 | 0.45 | 0.56 | | 0.02 | 0.56 | |
| Uniform Delay, d1 | | 66.3 | 45.1 | | 65.8 | 65.4 | 7.2 | 3.4 | | 9.6 | 14.7 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 2.3 | 0.3 | | 0.7 | 0.0 | 0.5 | 1.4 | | 0.1 | 1.9 | |
| Delay (s) | | 68.6 | 45.3 | | 66.5 | 65.4 | 7.8 | 4.8 | | 9.7 | 16.6 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 46.8 | | | 66.2 | | | 5.5 | | | 16.5 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 14.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 69.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

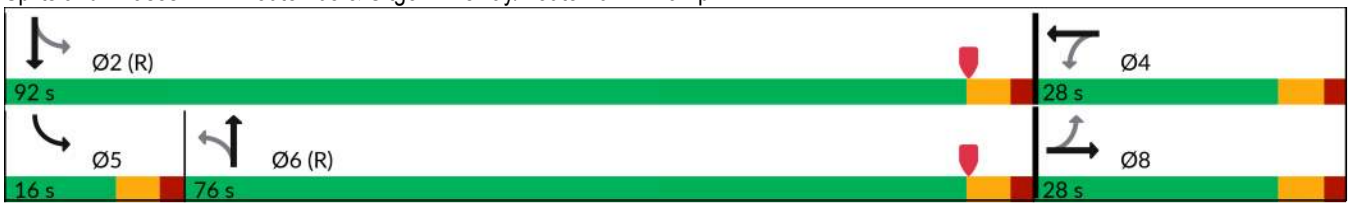
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 103 | 3 | 110 | 1 | 530 | 311 | 135 | 513 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 103 | 3 | 110 | 1 | 530 | 311 | 135 | 513 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.865 | | | 0.931 | | | 0.950 | | | 0.997 | |
| Flt Protected | | | | | 0.977 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1479 | 0 | 0 | 1745 | 0 | 0 | 1710 | 0 | 1719 | 1866 | 0 |
| Flt Permitted | | | | | 0.843 | | | | | 0.255 | | |
| Satd. Flow (perm) | 0 | 1479 | 0 | 0 | 1506 | 0 | 0 | 1710 | 0 | 462 | 1866 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 398 | | | 39 | | | 44 | | | 2 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Adj. Flow (vph) | 0 | 0 | 10 | 114 | 3 | 122 | 1 | 582 | 342 | 148 | 564 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 10 | 0 | 0 | 239 | 0 | 0 | 925 | 0 | 148 | 574 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 21.5 | | | 21.5 | | | 76.2 | | 90.5 | 90.5 | |
| Actuated g/C Ratio | | 0.18 | | | 0.18 | | | 0.64 | | 0.75 | 0.75 | |
| v/c Ratio | | 0.02 | | | 0.79 | | | 0.84 | | 0.32 | 0.41 | |
| Control Delay (s/veh) | | 0.0 | | | 58.3 | | | 26.1 | | 6.3 | 6.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 49.6 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 0.0 | | | 58.3 | | | 75.7 | | 6.3 | 6.6 | |
| LOS | | A | | | E | | | E | | A | A | |
| Approach Delay (s/veh) | | | | | 58.3 | | | 75.7 | | | 6.5 | |
| Approach LOS | | | | | E | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 80 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.84 | | | |
| Intersection Signal Delay (s/veh): 46.8 | | Intersection LOS: D | |
| Intersection Capacity Utilization 103.7% | | ICU Level of Service G | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 10 | 239 | 925 | 148 | 574 |
| v/c Ratio | 0.02 | 0.79 | 0.84 | 0.32 | 0.41 |
| Control Delay (s/veh) | 0.0 | 58.3 | 26.1 | 6.3 | 6.6 |
| Queue Delay | 0.0 | 0.0 | 49.6 | 0.0 | 0.0 |
| Total Delay (s/veh) | 0.0 | 58.3 | 75.7 | 6.3 | 6.6 |
| Queue Length 50th (ft) | 0 | 147 | 534 | 29 | 148 |
| Queue Length 95th (ft) | 0 | #254 | #884 | 48 | 207 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 614 | 332 | 1101 | 474 | 1407 |
| Starvation Cap Reductn | 0 | 0 | 372 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.02 | 0.72 | 1.27 | 0.31 | 0.41 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 9 | 103 | 3 | 110 | 1 | 530 | 311 | 135 | 513 | 9 |
| Future Volume (vph) | 0 | 0 | 9 | 103 | 3 | 110 | 1 | 530 | 311 | 135 | 513 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.87 | | | 0.93 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1479 | | | 1745 | | | 1710 | | 1719 | 1867 | |
| Flt Permitted | | 1.00 | | | 0.84 | | | 1.00 | | 0.25 | 1.00 | |
| Satd. Flow (perm) | | 1479 | | | 1506 | | | 1709 | | 461 | 1867 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 0 | 0 | 10 | 114 | 3 | 122 | 1 | 582 | 342 | 148 | 564 | 10 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 32 | 0 | 0 | 16 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2 | 0 | 0 | 207 | 0 | 0 | 909 | 0 | 148 | 574 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 4% | 4% | 4% | 3% | 3% | 3% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 19.5 | | | 19.5 | | | 74.1 | | 88.5 | 88.5 | |
| Effective Green, g (s) | | 21.5 | | | 21.5 | | | 76.1 | | 90.5 | 90.5 | |
| Actuated g/C Ratio | | 0.18 | | | 0.18 | | | 0.63 | | 0.75 | 0.75 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 264 | | | 269 | | | 1083 | | 456 | 1408 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.03 | c0.31 | |
| v/s Ratio Perm | | | | | c0.14 | | | c0.53 | | 0.22 | | |
| v/c Ratio | | 0.01 | | | 0.77 | | | 0.84 | | 0.32 | 0.41 | |
| Uniform Delay, d1 | | 40.5 | | | 46.9 | | | 17.2 | | 6.9 | 5.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 12.4 | | | 7.8 | | 0.4 | 0.9 | |
| Delay (s) | | 40.5 | | | 59.3 | | | 25.0 | | 7.3 | 6.1 | |
| Level of Service | | D | | | E | | | C | | A | A | |
| Approach Delay (s/veh) | | 40.5 | | | 59.3 | | | 25.0 | | | 6.4 | |
| Approach LOS | | D | | | E | | | C | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 22.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 103.7% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2036 Design Year Build Weekday Evening Peak Hour

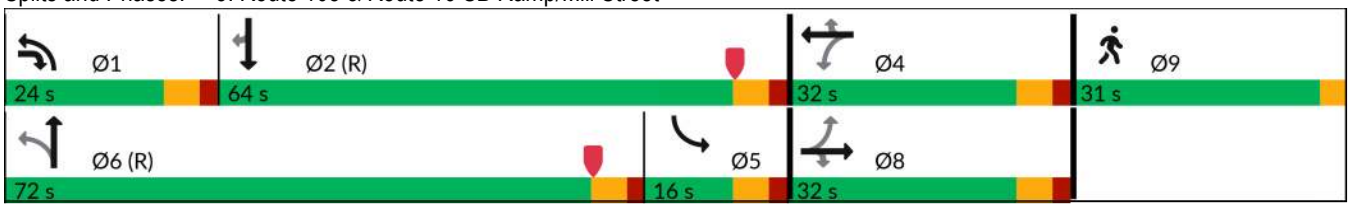
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 211 | 5 | 308 | 3 | 3 | 13 | 54 | 878 | 10 | 8 | 747 | 306 |
| Future Volume (vph) | 211 | 5 | 308 | 3 | 3 | 13 | 54 | 878 | 10 | 8 | 747 | 306 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | | 1.00 | | 1.00 | | |
| Frt | | | 0.850 | | | 0.850 | | 0.998 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.976 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1766 | 1591 | 1787 | 1877 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.728 | | | 0.897 | | 0.257 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1347 | 1577 | 0 | 1623 | 1555 | 483 | 1877 | 0 | 1768 | 3541 | 1584 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 342 | | | 130 | | | | | | 336 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 234 | 6 | 342 | 3 | 3 | 14 | 60 | 976 | 11 | 9 | 821 | 336 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 240 | 342 | 0 | 6 | 14 | 60 | 987 | 0 | 9 | 821 | 336 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 34.7 | 47.7 | | 34.7 | 34.7 | 99.3 | 99.3 | | 8.5 | 88.3 | 88.3 |
| Actuated g/C Ratio | | 0.23 | 0.32 | | 0.23 | 0.23 | 0.66 | 0.66 | | 0.06 | 0.58 | 0.58 |
| v/c Ratio | | 0.78 | 0.47 | | 0.02 | 0.03 | 0.15 | 0.80 | | 0.09 | 0.40 | 0.32 |
| Control Delay (s/veh) | | 71.7 | 4.6 | | 45.6 | 0.2 | 14.1 | 27.0 | | 69.0 | 19.7 | 3.0 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 71.7 | 4.6 | | 45.6 | 0.2 | 14.1 | 27.0 | | 69.0 | 19.7 | 3.0 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 32.3 | | | 13.8 | | | 26.3 | | | 15.3 | |
| Approach LOS | | C | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 140 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.80 | | | |
| Intersection Signal Delay (s/veh): 22.9 | | Intersection LOS: C | |
| Intersection Capacity Utilization 77.1% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 240 | 342 | 6 | 14 | 60 | 987 | 9 | 821 | 336 |
| v/c Ratio | 0.78 | 0.47 | 0.02 | 0.03 | 0.15 | 0.80 | 0.09 | 0.40 | 0.32 |
| Control Delay (s/veh) | 71.7 | 4.6 | 45.6 | 0.2 | 14.1 | 27.0 | 69.0 | 19.7 | 3.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 71.7 | 4.6 | 45.6 | 0.2 | 14.1 | 27.0 | 69.0 | 19.7 | 3.0 |
| Queue Length 50th (ft) | 217 | 0 | 5 | 0 | 17 | 578 | 9 | 207 | 0 |
| Queue Length 95th (ft) | #396 | 49 | 19 | 0 | 63 | #1414 | 29 | 382 | 59 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 309 | 815 | 372 | 457 | 490 | 1234 | 140 | 2070 | 1065 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.78 | 0.42 | 0.02 | 0.03 | 0.12 | 0.80 | 0.06 | 0.40 | 0.32 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 211 | 5 | 308 | 3 | 3 | 13 | 54 | 878 | 10 | 8 | 747 | 306 |
| Future Volume (vph) | 211 | 5 | 308 | 3 | 3 | 13 | 54 | 878 | 10 | 8 | 747 | 306 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.98 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1765 | 1577 | | 1765 | 1556 | 1787 | 1878 | | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.73 | 1.00 | | 0.90 | 1.00 | 0.26 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1347 | 1577 | | 1624 | 1556 | 483 | 1878 | | 1771 | 3541 | 1584 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 234 | 6 | 342 | 3 | 3 | 14 | 60 | 976 | 11 | 9 | 821 | 336 |
| RTOR Reduction (vph) | 0 | 0 | 241 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 145 |
| Lane Group Flow (vph) | 0 | 240 | 101 | 0 | 6 | 3 | 60 | 987 | 0 | 9 | 821 | 191 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | | | 1 | 1 | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 32.7 | 40.5 | | 32.7 | 32.7 | 90.1 | 90.1 | | 1.6 | 83.9 | 83.9 |
| Effective Green, g (s) | | 34.7 | 44.5 | | 34.7 | 34.7 | 92.1 | 92.1 | | 3.6 | 85.9 | 85.9 |
| Actuated g/C Ratio | | 0.23 | 0.29 | | 0.23 | 0.23 | 0.61 | 0.61 | | 0.02 | 0.57 | 0.57 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 309 | 464 | | 373 | 357 | 379 | 1145 | | 42 | 2014 | 901 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.53 | | 0.01 | c0.23 | |
| v/s Ratio Perm | | c0.18 | 0.05 | | 0.00 | 0.00 | 0.09 | | | | | 0.12 |
| v/c Ratio | | 0.78 | 0.22 | | 0.02 | 0.01 | 0.16 | 0.86 | | 0.21 | 0.41 | 0.21 |
| Uniform Delay, d1 | | 54.5 | 40.1 | | 45.0 | 44.9 | 13.4 | 24.2 | | 72.3 | 18.3 | 16.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 11.6 | 0.2 | | 0.0 | 0.0 | 0.2 | 8.6 | | 2.6 | 0.6 | 0.5 |
| Delay (s) | | 66.1 | 40.4 | | 45.0 | 44.9 | 13.6 | 32.8 | | 74.9 | 18.9 | 16.5 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 51.0 | | | 44.9 | | | 31.7 | | | 18.6 | |
| Approach LOS | | D | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 30.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 77.1% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

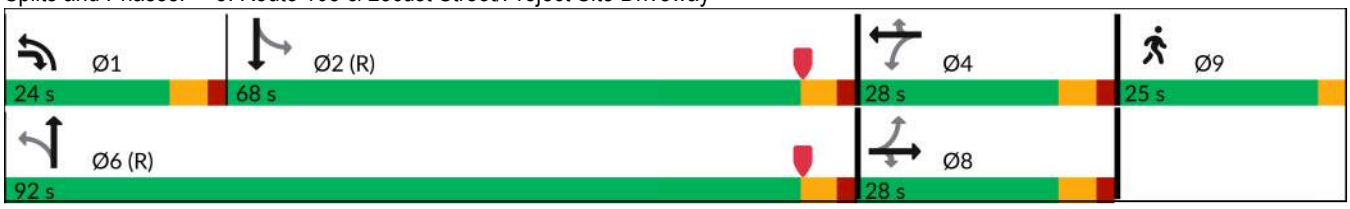
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 0 | 317 | 11 | 0 | 4 | 234 | 851 | 6 | 9 | 738 | 118 |
| Future Volume (vph) | 40 | 0 | 317 | 11 | 0 | 4 | 234 | 851 | 6 | 9 | 738 | 118 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | 1.00 | | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.979 | |
| Flt Protected | | 0.950 | | | 0.950 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1815 | 1624 | 1693 | 1965 | 0 | 1736 | 1846 | 0 |
| Flt Permitted | | 0.750 | | | 0.729 | | 0.118 | | | 0.336 | | |
| Satd. Flow (perm) | 0 | 1330 | 1507 | 0 | 1392 | 1624 | 210 | 1965 | 0 | 614 | 1846 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 337 | | | 90 | | | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 43 | 0 | 337 | 12 | 0 | 4 | 241 | 877 | 6 | 10 | 820 | 131 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 43 | 337 | 0 | 12 | 4 | 241 | 883 | 0 | 10 | 951 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 12.2 | 36.0 | | 12.2 | 12.2 | 122.2 | 123.0 | | 95.2 | 95.2 | |
| Actuated g/C Ratio | | 0.08 | 0.25 | | 0.08 | 0.08 | 0.84 | 0.85 | | 0.66 | 0.66 | |
| v/c Ratio | | 0.39 | 0.54 | | 0.10 | 0.02 | 0.59 | 0.53 | | 0.02 | 0.78 | |
| Control Delay (s/veh) | | 71.7 | 5.9 | | 61.3 | 0.3 | 19.4 | 7.3 | | 16.7 | 26.9 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.7 | | 0.0 | 50.1 | |
| Total Delay (s/veh) | | 71.7 | 5.9 | | 61.3 | 0.3 | 19.4 | 8.0 | | 16.7 | 77.0 | |
| LOS | | E | A | | E | A | B | A | | B | E | |
| Approach Delay (s/veh) | | 13.3 | | | 46.0 | | | 10.5 | | | 76.4 | |
| Approach LOS | | B | | | D | | | B | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 110 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.78 | | | |
| Intersection Signal Delay (s/veh): 36.7 | | Intersection LOS: D | |
| Intersection Capacity Utilization 79.8% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 43 | 337 | 12 | 4 | 241 | 883 | 10 | 951 |
| v/c Ratio | 0.39 | 0.54 | 0.10 | 0.02 | 0.59 | 0.53 | 0.02 | 0.78 |
| Control Delay (s/veh) | 71.7 | 5.9 | 61.3 | 0.3 | 19.4 | 7.3 | 16.7 | 26.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 50.1 |
| Total Delay (s/veh) | 71.7 | 5.9 | 61.3 | 0.3 | 19.4 | 8.0 | 16.7 | 77.0 |
| Queue Length 50th (ft) | 39 | 0 | 11 | 0 | 53 | 159 | 3 | 568 |
| Queue Length 95th (ft) | 79 | 50 | 31 | 0 | 196 | 636 | 18 | #1325 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 220 | 634 | 230 | 343 | 420 | 1666 | 403 | 1214 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 417 | 0 | 445 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.20 | 0.53 | 0.05 | 0.01 | 0.57 | 0.71 | 0.02 | 1.24 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 0 | 317 | 11 | 0 | 4 | 234 | 851 | 6 | 9 | 738 | 118 |
| Future Volume (vph) | 40 | 0 | 317 | 11 | 0 | 4 | 234 | 851 | 6 | 9 | 738 | 118 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1685 | 1507 | | 1815 | 1624 | 1693 | 1964 | | 1735 | 1846 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.73 | 1.00 | 0.12 | 1.00 | | 0.34 | 1.00 | |
| Satd. Flow (perm) | | 1330 | 1507 | | 1393 | 1624 | 210 | 1964 | | 614 | 1846 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.97 | 0.97 | 0.97 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 43 | 0 | 337 | 12 | 0 | 4 | 241 | 877 | 6 | 10 | 820 | 131 |
| RTOR Reduction (vph) | 0 | 0 | 258 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 3 | 0 |
| Lane Group Flow (vph) | 0 | 43 | 79 | 0 | 12 | 0 | 241 | 883 | 0 | 10 | 948 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | | 3 | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 2% | 2% | 2% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 9.0 | 30.0 | | 9.0 | 9.0 | 116.6 | 116.6 | | 89.6 | 89.6 | |
| Effective Green, g (s) | | 11.0 | 34.0 | | 11.0 | 11.0 | 118.6 | 118.6 | | 91.6 | 91.6 | |
| Actuated g/C Ratio | | 0.08 | 0.23 | | 0.08 | 0.08 | 0.82 | 0.82 | | 0.63 | 0.63 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 100 | 353 | | 105 | 123 | 407 | 1606 | | 387 | 1166 | |
| v/s Ratio Prot | | | 0.04 | | | | c0.09 | 0.45 | | | c0.51 | |
| v/s Ratio Perm | | c0.03 | 0.02 | | 0.01 | 0.00 | 0.39 | | | 0.02 | | |
| v/c Ratio | | 0.43 | 0.22 | | 0.11 | 0.00 | 0.59 | 0.55 | | 0.03 | 0.81 | |
| Uniform Delay, d1 | | 64.0 | 44.8 | | 62.5 | 61.9 | 26.7 | 4.4 | | 10.0 | 20.2 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.0 | 0.3 | | 0.5 | 0.0 | 2.3 | 1.4 | | 0.1 | 6.3 | |
| Delay (s) | | 67.0 | 45.2 | | 62.9 | 61.9 | 29.0 | 5.7 | | 10.1 | 26.5 | |
| Level of Service | | E | D | | E | E | C | A | | B | C | |
| Approach Delay (s/veh) | | 47.6 | | | 62.7 | | | 10.7 | | | 26.3 | |
| Approach LOS | | D | | | E | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 22.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 79.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

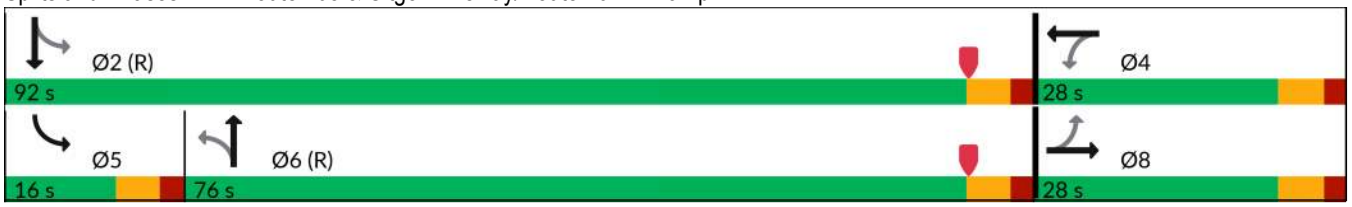
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 215 | 15 | 148 | 1 | 542 | 352 | 190 | 639 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 215 | 15 | 148 | 1 | 542 | 352 | 190 | 639 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.884 | | | 0.947 | | | 0.947 | | | 0.996 | |
| Flt Protected | | | | | 0.972 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1512 | 0 | 0 | 1749 | 0 | 0 | 1755 | 0 | 1771 | 1920 | 0 |
| Flt Permitted | | | | | 0.816 | | | | | 0.219 | | |
| Satd. Flow (perm) | 0 | 1512 | 0 | 0 | 1468 | 0 | 0 | 1755 | 0 | 408 | 1920 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 24 | | | 49 | | | 3 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| 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 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 2 | 12 | 239 | 17 | 164 | 1 | 602 | 391 | 211 | 710 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 14 | 0 | 0 | 420 | 0 | 0 | 994 | 0 | 211 | 731 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 25.5 | | | 25.5 | | | 71.1 | | 86.5 | 86.5 | |
| Actuated g/C Ratio | | 0.21 | | | 0.21 | | | 0.59 | | 0.72 | 0.72 | |
| v/c Ratio | | 0.04 | | | 1.27 | | | 0.94 | | 0.50 | 0.53 | |
| Control Delay (s/veh) | | 20.7 | | | 180.4 | | | 38.4 | | 9.3 | 9.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 46.6 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 20.7 | | | 180.4 | | | 85.1 | | 9.3 | 9.0 | |
| LOS | | C | | | F | | | F | | A | A | |
| Approach Delay (s/veh) | | 20.7 | | | 180.4 | | | 85.1 | | | 9.1 | |
| Approach LOS | | C | | | F | | | F | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 100 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 1.27 | | | |
| Intersection Signal Delay (s/veh): 71.4 | | Intersection LOS: E | |
| Intersection Capacity Utilization 123.3% | | ICU Level of Service H | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 14 | 420 | 994 | 211 | 731 |
| v/c Ratio | 0.04 | 1.27 | 0.94 | 0.50 | 0.53 |
| Control Delay (s/veh) | 20.7 | 180.4 | 38.4 | 9.3 | 9.0 |
| Queue Delay | 0.0 | 0.0 | 46.6 | 0.0 | 0.0 |
| Total Delay (s/veh) | 20.7 | 180.4 | 85.1 | 9.3 | 9.0 |
| Queue Length 50th (ft) | 1 | ~412 | 630 | 43 | 212 |
| Queue Length 95th (ft) | 20 | #617 | #975 | 67 | 291 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 331 | 331 | 1072 | 430 | 1408 |
| Starvation Cap Reductn | 0 | 0 | 353 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 1.27 | 1.38 | 0.49 | 0.52 |

Intersection Summary

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 2 | 11 | 215 | 15 | 148 | 1 | 542 | 352 | 190 | 639 | 19 |
| Future Volume (vph) | 0 | 2 | 11 | 215 | 15 | 148 | 1 | 542 | 352 | 190 | 639 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.88 | | | 0.95 | | | 0.95 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1512 | | | 1750 | | | 1754 | | 1771 | 1919 | |
| Flt Permitted | | 1.00 | | | 0.82 | | | 1.00 | | 0.22 | 1.00 | |
| Satd. Flow (perm) | | 1512 | | | 1469 | | | 1754 | | 408 | 1919 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 2 | 12 | 239 | 17 | 164 | 1 | 602 | 391 | 211 | 710 | 21 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 19 | 0 | 0 | 20 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 5 | 0 | 0 | 401 | 0 | 0 | 974 | 0 | 211 | 730 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 3 | | | | | 3 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 23.5 | | | 23.5 | | | 69.1 | | 84.5 | 84.5 | |
| Effective Green, g (s) | | 25.5 | | | 25.5 | | | 71.1 | | 86.5 | 86.5 | |
| Actuated g/C Ratio | | 0.21 | | | 0.21 | | | 0.59 | | 0.72 | 0.72 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 321 | | | 312 | | | 1039 | | 423 | 1383 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.05 | c0.38 | |
| v/s Ratio Perm | | | | | c0.27 | | | 0.56 | | 0.31 | | |
| v/c Ratio | | 0.01 | | | 1.29 | | | 0.94 | | 0.50 | 0.53 | |
| Uniform Delay, d1 | | 37.3 | | | 47.3 | | | 22.4 | | 10.0 | 7.5 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 150.7 | | | 16.4 | | 0.9 | 1.4 | |
| Delay (s) | | 37.3 | | | 197.9 | | | 38.8 | | 10.9 | 9.0 | |
| Level of Service | | D | | | F | | | D | | B | A | |
| Approach Delay (s/veh) | | 37.3 | | | 197.9 | | | 38.8 | | | 9.4 | |
| Approach LOS | | D | | | F | | | D | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 55.3 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 123.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

2036 Design Year Build Saturday Midday Peak Hour

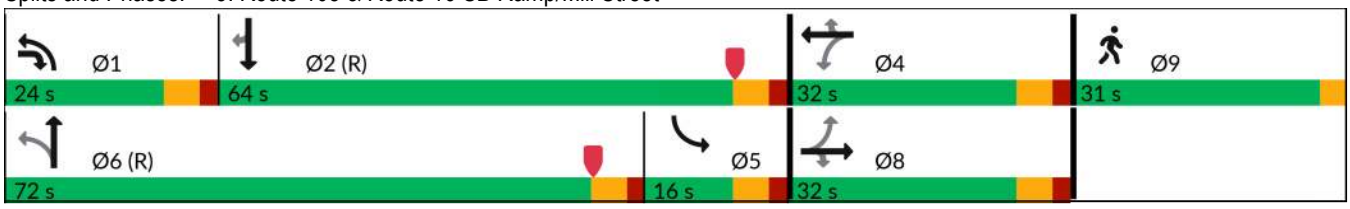
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 194 | 7 | 193 | 9 | 2 | 16 | 55 | 758 | 7 | 3 | 554 | 282 |
| Future Volume (vph) | 194 | 7 | 193 | 9 | 2 | 16 | 55 | 758 | 7 | 3 | 554 | 282 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Storage Length (ft) | 0 | | 280 | 0 | | 150 | 200 | | 0 | 90 | | 170 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | | 0.97 | 1.00 | 1.00 | | 1.00 | | 0.97 |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | | 0.850 |
| Flt Protected | | 0.954 | | | 0.960 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1577 | 0 | 1737 | 1591 | 1787 | 1879 | 0 | 1771 | 3541 | 1584 |
| Flt Permitted | | 0.725 | | | 0.789 | | 0.352 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1334 | 1577 | 0 | 1427 | 1546 | 661 | 1879 | 0 | 1767 | 3541 | 1541 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 212 | | | 130 | | | | | | 313 |
| Link Speed (mph) | | 25 | | | 30 | | | 29 | | | 30 | |
| Link Distance (ft) | | 453 | | | 425 | | | 446 | | | 360 | |
| Travel Time (s) | | 12.4 | | | 9.7 | | | 10.5 | | | 8.2 | |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 213 | 8 | 212 | 10 | 2 | 18 | 61 | 842 | 8 | 3 | 616 | 313 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 221 | 212 | 0 | 12 | 18 | 61 | 850 | 0 | 3 | 616 | 313 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.17 | 1.02 | 1.02 | 1.02 | 1.07 | 1.02 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | 46 |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | -4 |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | 50 |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 5 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 16.0 | 16.0 | 11.0 | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | | 11.0 | 16.0 | 16.0 |
| Total Split (s) | 32.0 | 32.0 | 24.0 | 32.0 | 32.0 | 32.0 | 24.0 | 72.0 | | 16.0 | 64.0 | 64.0 |
| Total Split (%) | 21.2% | 21.2% | 15.9% | 21.2% | 21.2% | 21.2% | 15.9% | 47.7% | | 10.6% | 42.4% | 42.4% |
| Maximum Green (s) | 26.0 | 26.0 | 18.0 | 26.0 | 26.0 | 26.0 | 18.0 | 66.0 | | 10.0 | 58.0 | 58.0 |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | Lead | | | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | None | C-Min | C-Min |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 31.9 | 44.7 | | 31.9 | 31.9 | 102.4 | 102.4 | | 8.0 | 91.3 | 91.3 |
| Actuated g/C Ratio | | 0.21 | 0.30 | | 0.21 | 0.21 | 0.68 | 0.68 | | 0.05 | 0.60 | 0.60 |
| v/c Ratio | | 0.79 | 0.34 | | 0.04 | 0.04 | 0.12 | 0.67 | | 0.03 | 0.29 | 0.30 |
| Control Delay (s/veh) | | 75.6 | 4.6 | | 46.6 | 0.2 | 13.2 | 21.2 | | 68.3 | 17.1 | 3.0 |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | | 75.6 | 4.6 | | 46.6 | 0.2 | 13.2 | 21.2 | | 68.3 | 17.1 | 3.0 |
| LOS | | E | A | | D | A | B | C | | E | B | A |
| Approach Delay (s/veh) | | 40.8 | | | 18.8 | | | 20.7 | | | 12.5 | |
| Approach LOS | | D | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 151 | | | |
| Actuated Cycle Length: 151 | | | |
| Offset: 66 (44%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 120 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay (s/veh): 21.2 | | Intersection LOS: C | |
| Intersection Capacity Utilization 70.2% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 3: Route 108 & Route 16 SB Ramp/Mill Street



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 31.0 |
| Total Split (s) | 31.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 28.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 5.0 |
| Flash Don't Walk (s) | 23.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 221 | 212 | 12 | 18 | 61 | 850 | 3 | 616 | 313 |
| v/c Ratio | 0.79 | 0.34 | 0.04 | 0.04 | 0.12 | 0.67 | 0.03 | 0.29 | 0.30 |
| Control Delay (s/veh) | 75.6 | 4.6 | 46.6 | 0.2 | 13.2 | 21.2 | 68.3 | 17.1 | 3.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 75.6 | 4.6 | 46.6 | 0.2 | 13.2 | 21.2 | 68.3 | 17.1 | 3.0 |
| Queue Length 50th (ft) | 203 | 0 | 9 | 0 | 16 | 397 | 3 | 135 | 0 |
| Queue Length 95th (ft) | #343 | 41 | 29 | 0 | 64 | #1129 | 14 | 275 | 58 |
| Internal Link Dist (ft) | 373 | | 345 | | | 366 | | 280 | |
| Turn Bay Length (ft) | | 280 | | 150 | 200 | | 90 | | 170 |
| Base Capacity (vph) | 287 | 709 | 307 | 434 | 597 | 1274 | 140 | 2141 | 1055 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.30 | 0.04 | 0.04 | 0.10 | 0.67 | 0.02 | 0.29 | 0.30 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 194 | 7 | 193 | 9 | 2 | 16 | 55 | 758 | 7 | 3 | 554 | 282 |
| Future Volume (vph) | 194 | 7 | 193 | 9 | 2 | 16 | 55 | 758 | 7 | 3 | 554 | 282 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 11 | 11 | 12 | 11 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| Grade (%) | | -4% | | | 3% | | | 0% | | | -5% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | | 0.95 | 1.00 | | 0.96 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | | 1758 | 1577 | | 1737 | 1548 | 1786 | 1878 | | 1771 | 3541 | 1545 |
| Flt Permitted | | 0.73 | 1.00 | | 0.79 | 1.00 | 0.35 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | | 1336 | 1577 | | 1427 | 1548 | 661 | 1878 | | 1771 | 3541 | 1545 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 213 | 8 | 212 | 10 | 2 | 18 | 61 | 842 | 8 | 3 | 616 | 313 |
| RTOR Reduction (vph) | 0 | 0 | 154 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 129 |
| Lane Group Flow (vph) | 0 | 221 | 58 | 0 | 12 | 4 | 61 | 850 | 0 | 3 | 616 | 184 |
| Confl. Peds. (#/hr) | 3 | | | | | 3 | 6 | | 1 | 1 | | 6 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Prot | NA | Perm |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | | | 2 |
| Actuated Green, G (s) | | 29.9 | 37.5 | | 29.9 | 29.9 | 93.2 | 93.2 | | 1.3 | 86.9 | 86.9 |
| Effective Green, g (s) | | 31.9 | 41.5 | | 31.9 | 31.9 | 95.2 | 95.2 | | 3.3 | 88.9 | 88.9 |
| Actuated g/C Ratio | | 0.21 | 0.27 | | 0.21 | 0.21 | 0.63 | 0.63 | | 0.02 | 0.59 | 0.59 |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 282 | 433 | | 301 | 327 | 488 | 1184 | | 38 | 2084 | 909 |
| v/s Ratio Prot | | | 0.01 | | | | 0.01 | c0.45 | | 0.00 | c0.17 | |
| v/s Ratio Perm | | c0.17 | 0.03 | | 0.01 | 0.00 | 0.07 | | | | | 0.12 |
| v/c Ratio | | 0.78 | 0.13 | | 0.04 | 0.01 | 0.13 | 0.72 | | 0.08 | 0.30 | 0.20 |
| Uniform Delay, d1 | | 56.3 | 41.2 | | 47.4 | 47.1 | 11.3 | 18.8 | | 72.4 | 15.5 | 14.5 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | | 13.3 | 0.1 | | 0.1 | 0.0 | 0.1 | 3.8 | | 0.9 | 0.4 | 0.5 |
| Delay (s) | | 69.6 | 41.4 | | 47.4 | 47.1 | 11.5 | 22.6 | | 73.3 | 15.8 | 15.0 |
| Level of Service | | E | D | | D | D | B | C | | E | B | B |
| Approach Delay (s/veh) | | 55.8 | | | 47.2 | | | 21.8 | | | 15.7 | |
| Approach LOS | | E | | | D | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 26.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 151.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 70.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

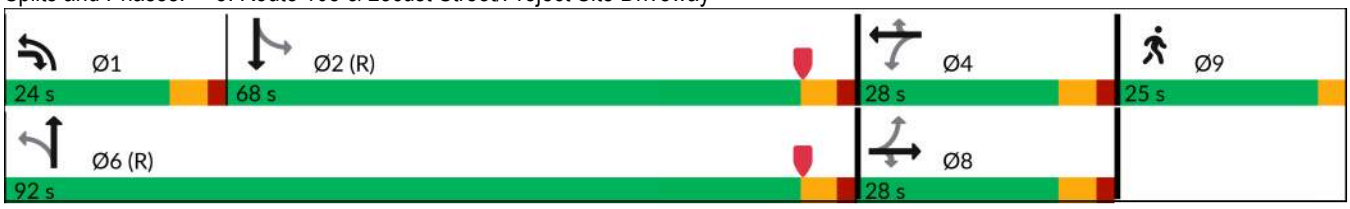
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 26 | 0 | 287 | 11 | 0 | 5 | 267 | 675 | 6 | 10 | 492 | 81 |
| Future Volume (vph) | 26 | 0 | 287 | 11 | 0 | 5 | 267 | 675 | 6 | 10 | 492 | 81 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Storage Length (ft) | 0 | | 275 | 0 | | 0 | 170 | | 0 | 85 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | | 0.98 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | | 0.850 | | | 0.850 | | 0.999 | | | 0.979 | |
| Flt Protected | | 0.950 | | | 0.950 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1685 | 1507 | 0 | 1815 | 1624 | 1693 | 1964 | 0 | 1753 | 1863 | 0 |
| Flt Permitted | | 0.750 | | | 0.738 | | 0.305 | | | 0.396 | | |
| Satd. Flow (perm) | 0 | 1326 | 1507 | 0 | 1410 | 1586 | 543 | 1964 | 0 | 731 | 1863 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 319 | | | 90 | | 1 | | | 7 | |
| Link Speed (mph) | | 30 | | | 25 | | | 29 | | | 30 | |
| Link Distance (ft) | | 620 | | | 242 | | | 495 | | | 213 | |
| Travel Time (s) | | 14.1 | | | 6.6 | | | 11.6 | | | 4.8 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 29 | 0 | 319 | 12 | 0 | 6 | 278 | 703 | 6 | 11 | 541 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 29 | 319 | 0 | 12 | 6 | 278 | 709 | 0 | 11 | 630 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.09 | 1.09 | 0.95 | 0.99 | 0.99 | 1.07 | 0.94 | 1.23 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | |
| Detector Template | | Thru | Right | | Thru | Right | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | 46 | | 46 | 46 | 46 | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | -4 | | -4 | -4 | -4 | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | 50 | | 50 | 50 | 50 | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Detector 1 Position(ft) | |
| Detector 1 Size(ft) | |
| Detector 1 Type | |
| Detector 1 Channel | |
| Detector 1 Extend (s) | |
| Detector 1 Queue (s) | |
| Detector 1 Delay (s) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | 1 | 4 | 4 | 4 | 1 | 6 | | 2 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | 24.0 | 28.0 | 28.0 | 28.0 | 24.0 | 92.0 | | 68.0 | 68.0 | |
| Total Split (%) | 19.3% | 19.3% | 16.6% | 19.3% | 19.3% | 19.3% | 16.6% | 63.4% | | 46.9% | 46.9% | |
| Maximum Green (s) | 22.0 | 22.0 | 18.0 | 22.0 | 22.0 | 22.0 | 18.0 | 86.0 | | 62.0 | 62.0 | |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | -2.0 | | -2.0 | -2.0 | -2.0 | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | Lead | | | | Lead | | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | | | Yes | | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | None | None | None | None | None | C-Min | | C-Min | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Don't Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 10.8 | 32.9 | | 10.5 | 10.5 | 126.2 | 127.8 | | 98.3 | 98.3 | |
| Actuated g/C Ratio | | 0.07 | 0.23 | | 0.07 | 0.07 | 0.87 | 0.88 | | 0.68 | 0.68 | |
| v/c Ratio | | 0.30 | 0.54 | | 0.12 | 0.03 | 0.42 | 0.41 | | 0.02 | 0.50 | |
| Control Delay (s/veh) | | 70.2 | 6.3 | | 63.7 | 0.2 | 5.4 | 5.1 | | 15.9 | 17.7 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.4 | | 0.0 | 18.5 | |
| Total Delay (s/veh) | | 70.2 | 6.3 | | 63.7 | 0.2 | 5.4 | 5.4 | | 15.9 | 36.1 | |
| LOS | | E | A | | E | A | A | A | | B | D | |
| Approach Delay (s/veh) | | 11.6 | | | 42.6 | | | 5.4 | | | 35.8 | |
| Approach LOS | | B | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 145 | | | |
| Actuated Cycle Length: 145 | | | |
| Offset: 86 (59%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.54 | | | |
| Intersection Signal Delay (s/veh): 16.6 | | Intersection LOS: B | |
| Intersection Capacity Utilization 63.7% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 5: Route 108 & Locust Street/Project Site Driveway



| Lane Group | Ø9 |
|---|---|
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 5.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Don't Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay (s/veh) | |
| Queue Delay | |
| Total Delay (s/veh) | |
| LOS | |
| Approach Delay (s/veh) | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBT | EBR | WBT | WBR | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 29 | 319 | 12 | 6 | 278 | 709 | 11 | 630 |
| v/c Ratio | 0.30 | 0.54 | 0.12 | 0.03 | 0.42 | 0.41 | 0.02 | 0.50 |
| Control Delay (s/veh) | 70.2 | 6.3 | 63.7 | 0.2 | 5.4 | 5.1 | 15.9 | 17.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 18.5 |
| Total Delay (s/veh) | 70.2 | 6.3 | 63.7 | 0.2 | 5.4 | 5.4 | 15.9 | 36.1 |
| Queue Length 50th (ft) | 26 | 0 | 11 | 0 | 30 | 98 | 3 | 269 |
| Queue Length 95th (ft) | 60 | 49 | 32 | 0 | 138 | 415 | 19 | 650 |
| Internal Link Dist (ft) | 540 | | 162 | | | 415 | | 133 |
| Turn Bay Length (ft) | | 275 | | | 170 | | 85 | |
| Base Capacity (vph) | 219 | 593 | 233 | 337 | 666 | 1730 | 495 | 1265 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 503 | 0 | 633 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.13 | 0.54 | 0.05 | 0.02 | 0.42 | 0.58 | 0.02 | 1.00 |

Intersection Summary

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 26 | 0 | 287 | 11 | 0 | 5 | 267 | 675 | 6 | 10 | 492 | 81 |
| Future Volume (vph) | 26 | 0 | 287 | 11 | 0 | 5 | 267 | 675 | 6 | 10 | 492 | 81 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 10 | 10 | 12 | 11 | 11 | 11 | 14 | 8 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -8% | | | 4% | | | -3% | |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 0.99 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | 0.85 | | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 0.98 | |
| Flt Protected | | 0.95 | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1670 | 1507 | | 1815 | 1577 | 1693 | 1964 | | 1753 | 1863 | |
| Flt Permitted | | 0.75 | 1.00 | | 0.74 | 1.00 | 0.31 | 1.00 | | 0.40 | 1.00 | |
| Satd. Flow (perm) | | 1318 | 1507 | | 1410 | 1577 | 544 | 1964 | | 730 | 1863 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.96 | 0.96 | 0.96 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 29 | 0 | 319 | 12 | 0 | 6 | 278 | 703 | 6 | 11 | 541 | 89 |
| RTOR Reduction (vph) | 0 | 0 | 249 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 29 | 70 | 0 | 12 | 0 | 278 | 709 | 0 | 11 | 628 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | 1 | 1 | | 2 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Perm | NA | pm+ov | Perm | NA | Perm | pm+pt | NA | | Perm | NA | |
| Protected Phases | | 8 | 1 | | 4 | | 1 | 6 | | | 2 | |
| Permitted Phases | 8 | | 8 | 4 | | 4 | 6 | | | 2 | | |
| Actuated Green, G (s) | | 6.2 | 28.0 | | 6.2 | 6.2 | 119.4 | 119.4 | | 91.6 | 91.6 | |
| Effective Green, g (s) | | 8.2 | 32.0 | | 8.2 | 8.2 | 121.4 | 121.4 | | 93.6 | 93.6 | |
| Actuated g/C Ratio | | 0.06 | 0.22 | | 0.06 | 0.06 | 0.84 | 0.84 | | 0.65 | 0.65 | |
| Clearance Time (s) | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 74 | 332 | | 79 | 89 | 644 | 1644 | | 471 | 1202 | |
| v/s Ratio Prot | | | 0.03 | | | | 0.07 | c0.36 | | | c0.34 | |
| v/s Ratio Perm | | c0.02 | 0.01 | | 0.01 | 0.00 | 0.29 | | | 0.02 | | |
| v/c Ratio | | 0.39 | 0.21 | | 0.15 | 0.00 | 0.43 | 0.43 | | 0.02 | 0.52 | |
| Uniform Delay, d1 | | 66.0 | 46.2 | | 65.1 | 64.5 | 6.5 | 3.0 | | 9.2 | 13.7 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 3.4 | 0.3 | | 0.9 | 0.0 | 0.5 | 0.8 | | 0.1 | 1.6 | |
| Delay (s) | | 69.4 | 46.5 | | 66.0 | 64.6 | 6.9 | 3.8 | | 9.3 | 15.4 | |
| Level of Service | | E | D | | E | E | A | A | | A | B | |
| Approach Delay (s/veh) | | 48.4 | | | 65.5 | | | 4.7 | | | 15.3 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 16.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 145.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 63.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

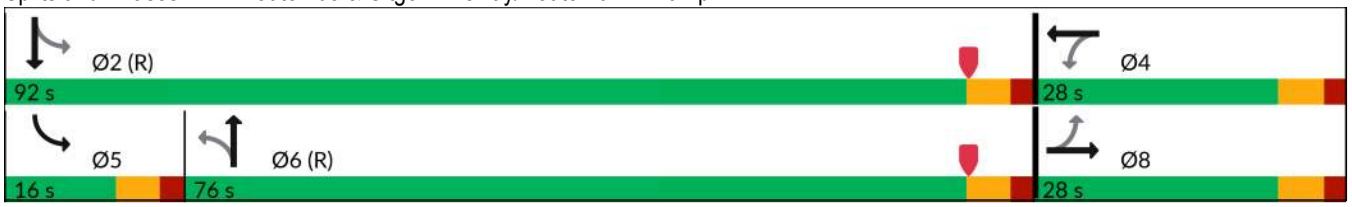
c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 98 | 9 | 160 | 2 | 484 | 220 | 161 | 480 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 98 | 9 | 160 | 2 | 484 | 220 | 161 | 480 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 1.00 | | | 1.00 | |
| Frt | | 0.932 | | | 0.919 | | | 0.958 | | | 0.995 | |
| Flt Protected | | | | | 0.982 | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1594 | 0 | 0 | 1715 | 0 | 0 | 1793 | 0 | 1771 | 1918 | 0 |
| Flt Permitted | | | | | 0.874 | | | 0.999 | | 0.288 | | |
| Satd. Flow (perm) | 0 | 1594 | 0 | 0 | 1526 | 0 | 0 | 1791 | 0 | 537 | 1918 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 6 | | | 56 | | | 34 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 29 | | | 29 | |
| Link Distance (ft) | | 152 | | | 511 | | | 213 | | | 446 | |
| Travel Time (s) | | 4.1 | | | 13.9 | | | 5.0 | | | 10.5 | |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 0 | 6 | 6 | 108 | 10 | 176 | 2 | 532 | 242 | 179 | 533 | 17 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 294 | 0 | 0 | 776 | 0 | 179 | 550 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.20 | 1.14 | 1.20 | 0.97 | 0.97 | 0.97 | 1.22 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | | 1 | | | 1 | | | 1 | | 1 | 1 | |
| Detector Template | | Thru | | | Thru | | | Thru | | Left | Thru | |
| Leading Detector (ft) | | 46 | | | 46 | | | 46 | | 46 | 46 | |
| Trailing Detector (ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Position(ft) | | -4 | | | -4 | | | -4 | | -4 | -4 | |
| Detector 1 Size(ft) | | 50 | | | 50 | | | 50 | | 50 | 50 | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector Phase | 8 | 8 | | 4 | 4 | | 6 | 6 | | 5 | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | | 11.0 | 16.0 | |
| Total Split (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 76.0 | 76.0 | | 16.0 | 92.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 63.3% | 63.3% | | 13.3% | 76.7% | |
| Maximum Green (s) | 22.0 | 22.0 | | 22.0 | 22.0 | | 70.0 | 70.0 | | 10.0 | 86.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -2.0 | | | -2.0 | | | -2.0 | | -2.0 | -2.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Min | C-Min | | None | C-Min | |
| Act Effct Green (s) | | 25.1 | | | 25.1 | | | 71.7 | | 86.9 | 86.9 | |
| Actuated g/C Ratio | | 0.21 | | | 0.21 | | | 0.60 | | 0.72 | 0.72 | |
| v/c Ratio | | 0.04 | | | 0.81 | | | 0.72 | | 0.36 | 0.40 | |
| Control Delay (s/veh) | | 26.8 | | | 53.8 | | | 21.7 | | 7.5 | 7.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 51.7 | | 0.0 | 0.0 | |
| Total Delay (s/veh) | | 26.8 | | | 53.8 | | | 73.4 | | 7.5 | 7.7 | |
| LOS | | C | | | D | | | E | | A | A | |
| Approach Delay (s/veh) | | 26.8 | | | 53.8 | | | 73.4 | | | 7.6 | |
| Approach LOS | | C | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 120 | | | |
| Actuated Cycle Length: 120 | | | |
| Offset: 114 (95%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.81 | | | |
| Intersection Signal Delay (s/veh): 43.5 | | Intersection LOS: D | |
| Intersection Capacity Utilization 97.6% | | ICU Level of Service F | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 7: Route 108 & Citgo Driveway/Route 16 NB Ramp



| Lane Group | EBT | WBT | NBT | SBL | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 12 | 294 | 776 | 179 | 550 |
| v/c Ratio | 0.04 | 0.81 | 0.72 | 0.36 | 0.40 |
| Control Delay (s/veh) | 26.8 | 53.8 | 21.7 | 7.5 | 7.7 |
| Queue Delay | 0.0 | 0.0 | 51.7 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.8 | 53.8 | 73.4 | 7.5 | 7.7 |
| Queue Length 50th (ft) | 4 | 173 | 412 | 41 | 159 |
| Queue Length 95th (ft) | 21 | #332 | 533 | 57 | 191 |
| Internal Link Dist (ft) | 72 | 431 | 133 | | 366 |
| Turn Bay Length (ft) | | | | 150 | |
| Base Capacity (vph) | 353 | 377 | 1118 | 514 | 1425 |
| Starvation Cap Reductn | 0 | 0 | 470 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.03 | 0.78 | 1.20 | 0.35 | 0.39 |

Intersection Summary

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 5 | 98 | 9 | 160 | 2 | 484 | 220 | 161 | 480 | 15 |
| Future Volume (vph) | 0 | 5 | 5 | 98 | 9 | 160 | 2 | 484 | 220 | 161 | 480 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 8 | 9 | 8 | 12 | 12 | 12 | 8 | 12 | 12 | 11 | 12 | 12 |
| Grade (%) | | 0% | | | -4% | | | 3% | | | -3% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.93 | | | 0.92 | | | 0.96 | | 1.00 | 1.00 | |
| Flt Protected | | 1.00 | | | 0.98 | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1595 | | | 1715 | | | 1792 | | 1771 | 1918 | |
| Flt Permitted | | 1.00 | | | 0.87 | | | 1.00 | | 0.29 | 1.00 | |
| Satd. Flow (perm) | | 1595 | | | 1526 | | | 1791 | | 537 | 1918 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 6 | 6 | 108 | 10 | 176 | 2 | 532 | 242 | 179 | 533 | 17 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 44 | 0 | 0 | 14 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 7 | 0 | 0 | 250 | 0 | 0 | 762 | 0 | 179 | 549 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 4 | | | | | 4 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 8 | | | 4 | | | 6 | | 5 | 2 | |
| Permitted Phases | 8 | | | 4 | | | 6 | | | 2 | | |
| Actuated Green, G (s) | | 23.1 | | | 23.1 | | | 69.7 | | 84.9 | 84.9 | |
| Effective Green, g (s) | | 25.1 | | | 25.1 | | | 71.7 | | 86.9 | 86.9 | |
| Actuated g/C Ratio | | 0.21 | | | 0.21 | | | 0.60 | | 0.72 | 0.72 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 333 | | | 319 | | | 1070 | | 504 | 1388 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | 0.03 | c0.29 | |
| v/s Ratio Perm | | | | | c0.16 | | | c0.43 | | 0.22 | | |
| v/c Ratio | | 0.02 | | | 0.78 | | | 0.71 | | 0.36 | 0.40 | |
| Uniform Delay, d1 | | 37.7 | | | 44.9 | | | 16.9 | | 7.8 | 6.4 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 11.8 | | | 4.0 | | 0.4 | 0.8 | |
| Delay (s) | | 37.7 | | | 56.7 | | | 21.0 | | 8.3 | 7.2 | |
| Level of Service | | D | | | E | | | C | | A | A | |
| Approach Delay (s/veh) | | 37.7 | | | 56.7 | | | 21.0 | | | 7.5 | |
| Approach LOS | | D | | | E | | | C | | | A | |

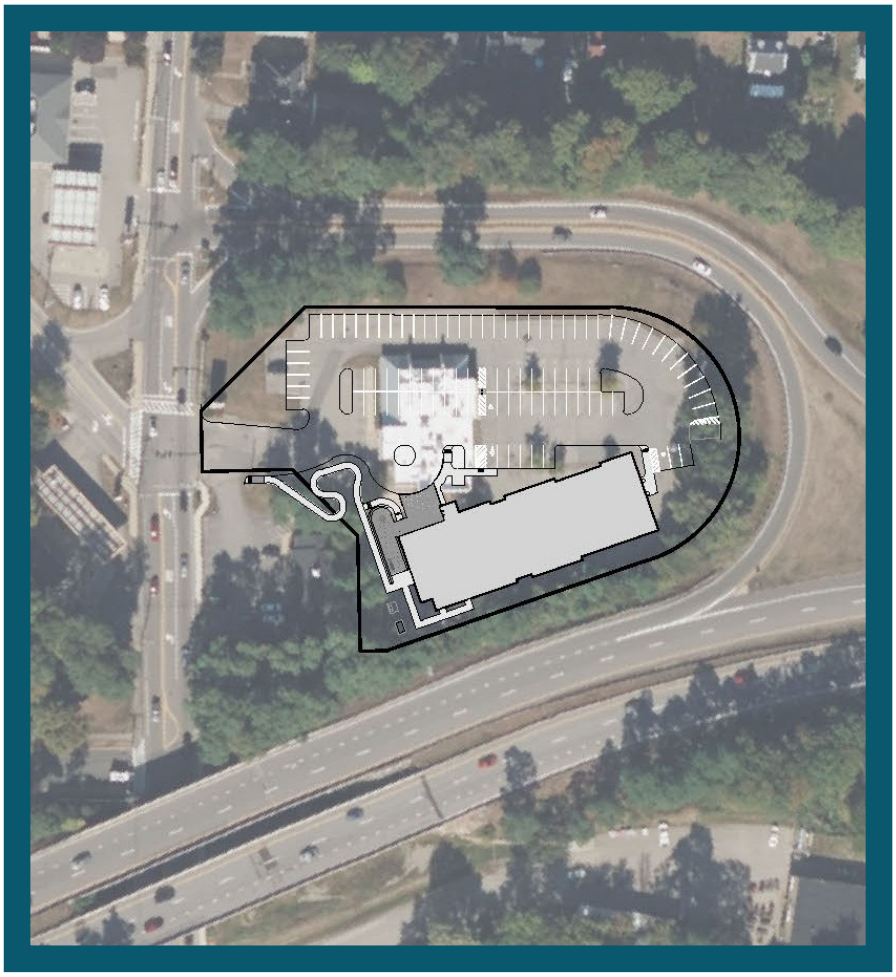
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay (s/veh) | 21.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 97.6% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# DRAINAGE REPORT

ALLEN & MAJOR
ASSOCIATES, INC.

## Townplace Suites by Marriott
## Dover, New Hampshire

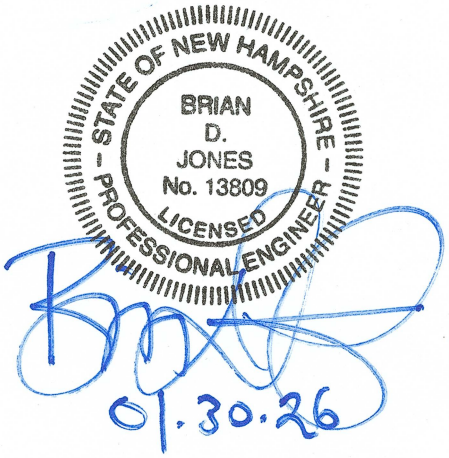



**APPLICANT**:
Lafrance Bowden Hospitality II, LLC
41 Old Bedford Road
Westport, MA 02790

**PREPARED BY**:
Allen & Major Associates, Inc.
400 Harvey Road, Suite D
Manchester, New Hampshire 03103

# DRAINAGE REPORT

Townplace Suites by Marriott
Dover, NH




**APPLICANT:**
Lafrance Bowden Hospitality II, LLC
41 Old Bedford Road
Westport, MA 02790

**PREPARED BY:**
Allen & Major Associates, Inc.
400 Harvey Road, Suite D
Manchester, New Hampshire 03103

**ISSUED:**
January 30, 2026

**A&M PROJECT NO.:**
1173-31

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# SECTION 1.0 -
## OVERVIEW

## Executive Summary

The purpose of this drainage report is to provide a detailed review of the stormwater runoff, both quality and quantity, as it pertains to the existing and proposed developed conditions. This report will show by means of narrative, calculations and exhibits that appropriate best management practices have been implemented into the design to mitigate the impacts from the proposed redevelopment. This report and the following tables demonstrate that there is no increase in the peak rate of runoff and discharge volume from the site for all design storm events.

| **Study Point 1 - Central Ave** | | | | |
|---|---|---|---|---|
| | 2-Year | 10-Year | 25-Year | 50-Year |
| Existing Flow (CFS) | 4.08 | 7.17 | 9.61 | 11.88 |
| Proposed Flow (CFS) | 3.19 | 7.14 | 9.49 | 11.75 |
| **Change (CFS)** | **-0.89** | **-0.03** | **-0.12** | **-0.13** |
| Existing Volume (CF) | 12,653 | 22,540 | 30,618 | 38,305 |
| Proposed Volume (CF) | 10,876 | 20,603 | 28,627 | 36,311 |
| **Change (CF)** | **-1,777** | **-1,937** | **-1,991** | **-1,994** |

| **Study Point 2 - Spaulding Turnpike** | | | | |
|---|---|---|---|---|
| | 2-Year | 10-Year | 25-Year | 50-Year |
| Existing Flow (CFS) | 0.03 | 0.12 | 0.21 | 0.31 |
| Proposed Flow (CFS) | 0.02 | 0.06 | 0.11 | 0.16 |
| **Change (CFS)** | **-0.01** | **-0.06** | **-0.10** | **-0.15** |
| Existing Volume (CF) | 144 | 416 | 686 | 968 |
| Proposed Volume (CF) | 77 | 222 | 366 | 517 |
| **Change (CF)** | **-67** | **-194** | **-320** | **-451** |

| **Study Point 3 - #45 Central Ave** | | | | |
|---|---|---|---|---|
| | 2-Year | 10-Year | 25-Year | 50-Year |
| Existing Flow (CFS) | 0.02 | 0.07 | 0.12 | 0.17 |
| Proposed Flow (CFS) | 0.01 | 0.06 | 0.11 | 0.16 |
| **Change (CFS)** | **-0.01** | **-0.01** | **-0.01** | **-0.01** |
| Existing Volume (CF) | 79 | 228 | 376 | 531 |
| Proposed Volume (CF) | 75 | 215 | 354 | 500 |
| **Change (CF)** | **-4** | **-13** | **-22** | **-31** |

## Site Location and Description

The overall project site is comprised of a single parcel totaling approximately 2.1± acres. The parcel is listed on the City of Dover Assessors Map 17 as Lot 76 and is situated between Route 16 and the Exit 7 northbound on-ramp. The project proposes to redevelop the site into a 94± guestroom hotel with associated utilities and drainage infrastructure.

Historically, the site has been home to a Burger King restaurant. Most of the parcel is developed by the building and surface parking, with some areas of landscaping around the perimeter and interior to the parking lot. Elevations on site range from a high point of 110± on the easterly side of the site, to a low point of 94± on the westerly side of the site where it meets Central Ave.

The underlying soils were identified using the USDA Natural Resources Conservation Service (NRCS) soil survey for Strafford County, which shows that the predominant soil on site is Windsor loamy sand, with a small amount of Windsor loamy fine sand in the northeast corner. Both soils have a Hydrologic Soil Group "A" classification. A copy of the NRCS Soil Report is included in the Appendix of this report.

| Symbol | Map Unit Name | Hydrologic Soil Group |
|---|---|---|
| WdB | Windsor loamy sand | A |
| WfB | Windsor loamy fine sand | A |

Additional investigation into the underlying soils was carried out on January 20, 2026, by Allen & Major Associates, Inc. Four test pits were performed at various locations on the site determine the composition of the underlying soils and depth to seasonal high groundwater. The infiltration system proposed as part of the project is located within Test Pit #4, the soils of which were a fine sandy loam. This soil profile is more representative of a Newfields soil series, which is Hydrologic Soil Group "B", with a Ksat rating of 0.6 inches per hour, as specified by the SSSNNE Special Publication No. 5. A 2X safety factor was applied and a design infiltration rate of 0.3 inches per hour was used. Seasonal high ground water was not encountered in TP-4. Copies of the test pit logs are included on the Grading & Drainage Plan, sheet C-103 in the Site Development Plan Set.

A stormwater analysis has been performed for two situations. The first analysis consists of the existing site conditions and the second consists of the proposed site conditions. There are three (3) study points where the stormwater flows were analyzed. The study points and contributing watersheds are further outlined in the accompanying text and calculations.

Site Data for Stormwater Modeling

**The proposed project will disturb approximately 1.75 acres.** This disturbance includes the demolition of the existing building and construction of the proposed hotel, parking lot, installation of utilities, and drainage infrastructure.

The proposed watershed includes approximately **55,655 square feet** of impervious, which is a decrease of approximately **520 square feet** from the existing conditions. Rainfall data used for modeling the stormwater runoff was derived from the "Extreme Precipitation Tables" from the Northeast Regional Climate Center at Cornell University. The storm events were broken down for the 2, 10, 25, and 50-year storms.

**Existing Site Conditions**

Stormwater runoff was analyzed at three (3) different study point locations to demonstrate that the project does not result in an increase in runoff. The included Existing Watershed Plan (WS-1) outlines the boundaries contributing to the Study Points.

Study Point 1: This study point is the existing drainage infrastructure in Central Avenue. The existing development includes a closed drainage system that connects to the existing Central Avenue infrastructure. Most of the existing site runoff flows to one of the onsite catch basins and discharges to the Central Avenue infrastructure.

Study Point 2: This study point is the Spaulding Turnpike right-of-way. There is a depression adjacent to the southeasterly side of the site that receives runoff from the shoulder of the Spaulding Turnpike. Runoff from the grassy area east of the existing parking lot sheet flows to this depression.

Study Point 3: This study point is the #45 Central Avenue property. Runoff from a small grassy portion of the westerly side of the site sheet flows to the rear of this property.

**Proposed Site Conditions**

The project proposes to redevelop the site into a 94± guestroom hotel with associated utilities and drainage infrastructure. The stormwater runoff will be controlled using a combination of structural and nonstructural best management practices (BMPs). The BMPs utilized in the proposed condition include deep sump catch basins, area drains, an underground infiltration system, and an outlet control structure. The proposed BMPs have been designed to meet the applicable requirements outlined in Section 153-14 of the Dover Site Review Regulations.

Study Point 1: Runoff from the developed portion of the site will continue to flow to the Central Avenue drainage infrastructure. Runoff from the northeasterly side of the site (subcatchments P-7 and P-8) will sheet flow to one of two low point catch basins which discharge to the underground infiltration system. Overflow from the infiltration system, and other portions of the development, will flow to the Central Avenue drainage system using the existing drain line that leaves the site.

Study Point 2: Runoff from a small grassy portion of the southeasterly side of the site will continue to sheet flow to the depression in the Spaulding Turnpike right-of-way.

Study Point 3: Runoff from a small grassy portion on the westerly side of the site will continue to sheet flow to the rear of #45 Central Avenue property.

A hydrologic study of the site was conducted to determine the impact of the proposed redevelopment on the stormwater runoff. The study determined the peak rates and volumes of runoff at the study points will decrease or remain the same. The Proposed Watershed Plan (WS-2), which is included in Section 5 of this report, outlines the boundaries contributing to the Study Points.

# SECTION 2.0 - DISCUSSION

## Methodology

The peak discharge rates were determined using techniques and data found in the following:

1. Urban Hydrology for Small Watersheds – Technical Release 55 by the United States Department of Agriculture Soils Conservation Service, June 1986. Runoff curve numbers and 24-hour precipitation values were obtained from this reference.
2. HydroCAD© Stormwater Modeling System by HydroCAD Software Solutions, LLC, version 10.20-8a. The HydroCAD program was used to generate the runoff hydrographs for the watershed areas, to perform drainage routing, and to combine the results of the runoff hydrographs.

## Peak Discharge Rates

The stormwater runoff analysis of the existing and proposed conditions includes an estimation of the peak discharge rate for various rainfall events. Peak discharge rates were developed using TR-55 Urban Hydrology for Small Watersheds, developed by the United States Department of Commerce, Engineering Division and the HydroCAD 10.20-8a computer program. Further, the analysis has been prepared in accordance with the New Hampshire Stormwater Management Manual, City of Dover Site Plan Review Regulations, and standard engineering practices. The peak discharge rate has been estimated for each watershed during the 2, 10, 25, and 50-year storm events.

The stormwater runoff model shows that the proposed site design results in no increase to the total rate of runoff during all storm events. This is accomplished through the reduction in overall impervious area on site and installation of an underground infiltration system. The table in *Section 1: Overview* provides a summary of the estimated peak discharge rates for each study point during each of the design storm events. The HydroCAD worksheets for the existing and proposed drainage conditions are included within Sections 4 and 5 of this report.

## Performance Standards

Stormwater performance standards have been implemented as part of the overall stormwater management plan for the proposed redevelopment. The goal of these standards is to improve water quality and protect the waters of New Hampshire from adverse impacts due to redevelopment. The performance standards are met by implementing appropriate Best Management Practices (BMPs). BMPs were designed in accordance with the NH Stormwater Management Manual and Env.Wq. 1500.

BMPs implemented in the design include:

- Deep sump catch basins
- Proprietary separators
- Underground infiltration system

- Outlet control structure
- Specific maintenance schedule

## City of Dover Design Standards

The project meets the Minimum Protections and Management Standards of Section 153-14.A.(3) of the City of Dover Site Review Regulations. There are no surface waters or wetlands on or adjacent to the site. Low-impact development (LID) strategies, which are intended to replicate existing hydrology, have been employed. This includes the use of a previously developed site and reduction of impervious cover. The proposed infiltration system is located as close to the runoff source as possible. Opportunities for additional LID strategies were investigated but found to be infeasible due to the significant grade change across the site and seasonal high groundwater encountered towards the rear of the site. BMPs were designed in accordance with the NH Stormwater Management Manual and Env.Wq. 1500 and a site-specific Operation & Maintenance (O&M) Plan was prepared to ensure the site and BMPs are properly maintained. The O&M Plan, Section 3 of this report, includes language pertaining to the storage of waste and deicing products and recommends the use of deicing products to only the extent needed to maintain safe travel throughout the site. Impervious surfaces have been minimized to the extent possible; parking areas and drive aisles are limited to what is necessary to service the site.

In addition to the Minimum Protections and Management Standards described above, the City of Dover Standards for Redevelopment apply to the project for the following reasons:

- It will disturb more than 20,000 square feet
- The existing land has been previously developed for commercial use.
- The existing property exceeds 40% impervious ground cover
  55,086 SF onsite impervious / 77,053 SF property = 72% impervious cover
- The project will result in a reduction of impervious cover.

Based on the criteria outlined above, the project must provide treatment for at least 30% of the existing impervious area and 50% of any newly proposed impervious surfaces. Because the project will reduce the total impervious cover onsite, the proposed design provides treatment for an area that exceeds 30% of the existing impervious ground cover. Treatment is provided by the proposed underground infiltration system.

- Existing onsite impervious area = 55,086 SF
- Impervious area that requires treatment = 55,086 x 0.30 = 16,526 SF
- Impervious area directed to the infiltration system = 23,190 SF > 16,526 SF
- Required 1" Water Quality Volume = 16,526 SF x $(\frac{1\ foot}{12\ inches})$ = 1,377 cubic feet
- Recharge provided by infiltration system = 1,482 cubic feet > 1,377 cubic feet

## Explanation of Drainage System

***References:***

1. **New Hampshire Stormwater Management Manual, Volumes 2 & 3, December 2008 and Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas In New Hampshire**
2. **SCS - TR55** *(Second Ed., 1986) - for runoff curve numbers.*

Runoff is collected from the roadway by the various deep sump catch basins and routed through the closed pipe network to the infiltration system and eventually to the Central Avenue drainage system. The 2, 10, 25, & 50-year storm events were analyzed for existing versus proposed conditions (see Drainage Summary).

**Deep sump catch basin:**
Stormwater structure designed to capture and trap sediment, debris, and pollutants from roadway runoff before discharging to downstream BMPs.

**Roof Drain:**
Roof drains are connected to the building's internal drainage components and tied into the proposed drainage network.

**Infiltration Chambers:**
An infiltration chamber system is proposed on site to infiltrate collected runoff. Runoff will be pretreated by the Isolator Row prior to infiltration.

**Outlet Control Structure:**
Stormwater structure designed to control the flow of stormwater discharging from the infiltration chambers through the installation of a weir which is set at a specific elevation to provide the recharge required to meet the treatment criteria.

# SECTION 3.0 -
# OPERATION AND MAINTENANCE PLAN

## General Information

Allen & Major Associates, Inc. has prepared the following Operation and Maintenance Plan for the redevelopment of 47 Central Avenue in Dover, NH. The plan is broken down into the following major sections. The first section gives general information about ownership and responsibility (General Information). The second section describes the erosion and sediment control measures used during construction (Construction Period). The third section describes the long-term pollution prevention measures (Long Term Pollution Prevention Plan). The final section describes the maintenance requirements for the stormwater management practices (Maintenance Plan).

## Contact Information

**Stormwater Management System Owner:**

Lafrance Bowden Hospitality II, LLC
41 Old Bedford Road
Westport, MA 02790
(508) 676-7888

## Notification Procedures for Change of Responsibility for O&M

The Stormwater Management System (SMS) for this project is owned by Lafrance Bowden Hospitality II, LLC. The owner shall be legally responsible for the long-term operation and maintenance of this SMS as outlined in this Operation and Maintenance (O&M) Plan. Should ownership of the SMS change, the owner will continue to be responsible until the succeeding owner notifies the municipality that the succeeding owner has assumed such responsibility. Upon subsequent transfers, the responsibility shall continue to be that of transferring owner until the transferee owner notifies the municipality of its assumption of responsibility.

In the event the SMS will serve multiple lots/owners, such as the subdivision of the existing parcel, the owner(s) shall establish an association or other legally enforceable arrangements under which the association or a single party shall have legal responsibility for the operation and maintenance of the entire SMS.

**Construction Period**

1. Contact the Public Works Department at least two (2) weeks prior to start of construction.

2. Install the catch basin filters and other erosion control measures as shown on the Site Preparation Plan.

3. Site access shall be achieved only from the designated construction entrances to prevent sediment from entering adjacent roadways.

4. All erosion control measures shall be inspected weekly and after all rainfall events, and shall be maintained, repaired or replaced as required or at the direction of the owner's engineer, or the municipality's engineer.

5. Sediment accumulation up-gradient of erosion control products greater than 6" in depth shall be removed and disposed of in accordance with all applicable regulations.

6. If it appears that sediment is exiting the site, catch basin filters shall be installed in all catch basins adjacent to the site. Sediment accumulation on all adjacent catch basin inlets shall be removed, and the filter shall be replaced if torn or damaged.

7. The contractor shall comply with the General and Erosion Notes listed on the Site Plans.

**Post-Development Activities**

1. Upon completion of all terrain alteration activities that direct stormwater to a particular practice, the responsible party(ies) shall initiate the O&M activities.

2. Paved Areas – Paved areas should be swept as part of the routine site maintenance. Pavement sweeping is an excellent source of control for sedimentation to the drainage system and is typically performed in the spring of each year following the snow melt.

3. Paved Areas – Salt for de-icing on the paved areas during the winter months shall be limited to the minimum amount practicable. Sand containing the minimum amount of calcium chloride (or approved equivalent) needed for handling may be applied as part of the routine winter maintenance activities.

4. All sediments removed from site drainage facilities shall be disposed of properly, and in accordance with applicable local and state regulations.

5. All vegetated areas on the site shall be stabilized and maintained to control erosion. Any disturbed areas shall be re-seeded as soon as practicable.

6. Work within any drainage structures shall be performed in accordance with the latest OSHA regulations, and only by individuals with appropriate OSHA certification.

7. Maintenance Responsibilities **-** All post-construction maintenance activities shall be documented and kept on file and made available to the proper local and state authorities upon request.

8. If ownership of the property is transferred, the new owner(s) shall become the responsible party(ies).

**Long Term Pollution Prevention Plan**

The Long Term Pollution Prevention Plan (LTPPP) has been prepared and incorporated as part of the Operation and Maintenance of the Stormwater Management System. The purpose of the LTPPP is to identify potential sources of pollution that may affect the quality of stormwater discharges, and to describe the implementation of practices to reduce the pollutants in stormwater discharges. The following items describe the source control and proper procedures for the LTPPP.

**Housekeeping**

The proposed site redevelopment has been designed to maintain a high level of water quality treatment for all stormwater discharge and groundwater. An Operation and Maintenance (O&M) plan has been prepared and is included in this section of the report. The Owner (or its designee) is responsible for adherence to the O&M plan in a strict and complete manner.

**Storage of Materials and Waste Products**

There are no proposed exterior (un-covered) storage areas. The trash and waste program for the site includes a dedicated space adjacent to the building for waste & recyclables.

**Vehicle Washing**

Outdoor vehicle washing has the potential to result in high loads of nutrients, metals, and hydrocarbons during dry weather conditions, as the detergent-rich water used to wash

the grime off the vehicle enters the stormwater drainage system. The proposed redevelopment does not have accommodations for outdoor car washing.

**Maintenance of Lawns, Gardens and other Landscaped Areas**

It should be recognized that this is a general guideline towards achieving high quality and well-groomed landscaped areas. The grounds staff / landscape contractor must recognize the shortcomings of a general maintenance plan such as this and modify and/or augment it based on weekly, monthly, and yearly observations. To ensure the highest quality conditions, the staff must also recognize and appreciate the need to be aware of the constantly changing conditions of the landscaping and be able to respond to them on a proactive basis. No trash or landscape debris (including lawn clippings) shall be stored or dumped within the landscaped or naturalized areas. Information regarding the removal of invasive species can be found in the appendix of this report.

***Fertilizer***

Maintenance practices should be aimed at reducing environmental, mechanical and pest stresses to promote healthy and vigorous growth. When necessary, pest outbreaks should be treated with the most sensitive control measures available. Synthetic chemical controls should be used only as a last resort to organic and biological control methods. Fertilizer, synthetic chemical controls and pest management applications (when necessary) shall be performed only by licensed applicators in accordance with the manufacturer's label instructions when environmental conditions are conducive to controlled product application.

Only slow-release organic fertilizers should be used in the landscaped areas to limit the amount of nutrients that could enter downstream resource areas. Fertilization of developed areas on site will be performed within manufacturers labeling instructions and shall not exceed an NPK ratio of 1:1:1 (i.e. Triple 10 fertilizer mix), considered a low nitrogen mixture. Additionally, the fertilizer will include a slow-release element.

***Suggested Aeration program***

In-season aeration of lawn areas is good cultural practice and is recommended whenever feasible. It should be accomplished with a solid thin tine aeration method to reduce disruption to the use of the area. The depth of solid tine aeration is similar to core type but should be performed when the soil is somewhat drier for a greater overall effect.

Depending on the intensity of use, it can be expected that all landscaped lawn areas will need aeration to reduce compaction at least once per year. The first operation should occur in late May following the spring season. Methods of reducing

compaction vary based on the nature of the compaction. Compaction on newly established landscaped areas is generally limited to the top 2-3" and can be alleviated using hollow core or thin tine aeration methods.

***Landscape Maintenance Program Practices:***

- **Lawn**
  1. Mow a minimum of once per week in spring, to a height of 2" to 2 1/2" high. Mowing should be frequent enough so that no more than 1/3 of grass blade is removed at each mowing. The top growth supports the roots; the shorter the grass is cut, the less the roots will grow. Short cutting also dries out the soil and encourages weeds to germinate.
  2. Mow approximately once every two weeks from July 1st to August 15th depending on lawn growth.
  3. Mow on a ten-day cycle in fall, when growth is stimulated by cooler nights and increased moisture.
  4. Do not remove grass clippings after mowing.
  5. Keep mower blades sharp to prevent ragged cuts on grass leaves, which cause a brownish appearance and increase the chance for disease to enter a leaf.
- **Shrubs**
  1. Mulch not more than 3" depth with shredded pine or fir bark.
  2. Hand prune annually, immediately after blooming, to remove 1/3 of the above-ground biomass (older stems). Stem removals are to occur within 6" of the ground to open up shrub and maintain two-year wood (the blooming wood).
  3. Hand-prune evergreen shrubs only as needed to remove dead and damaged wood and to maintain the naturalistic form of the shrub. Never mechanically shear evergreen shrubs.
  4. Fertilize with ½ lb. slow-release fertilizer (see above section on Fertilizer) every second year.
- **Trees**
  1. Provide aftercare of new tree plantings for the first three years.
  2. Do not fertilize trees, it artificially stimulates them (unless tree health warrants).
  3. Water once per week for the first year; twice a month for the second; once a month for the third year.
  4. Prune trees on a four-year cycle.

**Management of Deicing Chemicals and Snow**

Snow shall only be stockpiled on site within the snow storage areas depicted on the Layout & Materials Plan. If the stockpiles of snow do not fit within the designated areas,

then snow will be disposed off-site. It will be the responsibility of the snow removal contractor to properly dispose of transported snow according NHDES. It will be the responsibility of the snow removal contractor to follow these guidelines and all applicable laws and regulations.

The owner (or its designee) will be responsible for the clearing of the sidewalk and building entrances. The Owner may be required to use a de-icing agent such as potassium chloride to maintain a safe walking surface; however, these are to be used at the minimum amount practicable. The de-icing agent for the walkways and building entrances will be kept within the storage rooms located within the buildings. De-icing agents will not be stored outside.

To address the concerns associated with the application of chlorides and other deicing materials, NHDES recommends the development of a Road Salt and Deicing Minimization Plan when a development will create one acre or more of pavement, including parking lots and roadways. A component of the plan should include tracking the use of salt and other deicers for each storm event and compiling salt use data annually.

**Maintenance Plan**

**Documentation**
Maintenance documents shall include a completed maintenance checklist (attached) that will include any applicable notes or other documents as described in this section.

**Pretreatment Practices**

**Deep sump catch basin:**
Deep sump catch basins on site are to be inspected and cleaned to ensure proper function. Inspect for damage to frame and grate, and hoods. Remove sediment and trash when depth exceeds 50% of the sump, typically two feet.

**Street sweeping:**
Street sweeping should be completed by an authorized vehicle to remove sediment, metals, oil, trash, etc. that may be within the roadway and potentially flow to the drainage infrastructure.

**Treatment Practices**

**Chamber Infiltration System:**
Stormtech SC-310 Chamber System:

Inspect the catch basins and drain maholes that inlet to the subsurface infiltration system as recommended to ensure no trash or debris enters the system. JetVac maintenance is recommended if sediment within the isolator row has been collected to an average depth of 3".

**Operation and Maintenance Schedule Summary**

The following is a summary of the maintenance schedule for each of the stormwater BMPs. Note all anomalies, signs of degradation, or corrective actions on the annual Maintenance Checklist.

| BMP | MAINTENANCE ITEM | FREQUENCY |
|---|---|---|
| Pavement Sweeping | Perform sweeping. No Sand. Distribute de-icing agents and inspect according to narrative. | Inspect/sweep twice per year (early spring & late fall). |
| Catch Basins | Inspect for damage to frame and grate, and hoods. Remove sediment and trash when depth exceeds 50% of the sump. | Inspect twice per year (early spring & late fall). |
| Infiltration System | Inspect for sediment accumulation. Remove sediment using a jet-vac and in accordance with the manufacturers' recommendations. | Inspect twice annually, remove sediment as needed. |

The Owner or its designee shall keep records of the maintenance of the Stormwater BMPs on a yearly basis. Maintenance documents shall include a complete maintenance checklist.

**Supplemental Information**

- Operation and Maintenance Plan Schedule
- Operation and Maintenance Log Forms
- Operation and Maintenance Plan Figure
- Anti-Icing Log Form
- Control of Invasive Plants Guide
- Isolator Row Plus O&M Manual

## OPERATION AND MAINTENANCE PLAN SCHEDULE

ALLEN & MAJOR ASSOCIATES, INC.

**Project: Townplace Suites**
**Project Address: 47 Central Ave, Dover, NH**

**Responsible for O&M Plan: Lafrance Bowden Hospitality II, LLC**
**Address: 41 Old Bedford Road, Westport, MA 02790**
**Phone: (508) 676-7888**

*All information within table is derived from New Hampshire Stormwater Manual: Chapter 4, Sections 3 and 4*

| BMP CATEGORY | BMP OR MAINTENANCE ACTIVITY | SCHEDULE/ FREQUENCY | NOTES | INSPECTION PERFORMED | |
|---|---|---|---|---|---|
| | | | | DATE: | BY: |
| PRETREATMENT PRACTICES | DEEP SUMP CATCH BASIN | May require frequent maintenance. It is recommended that catch basins be inspected at least twice annually. | Sediment should be removed when it approaches half the sump depth. If floating hydrocarbons are observed the material should be removed immediately. Damaged hoods should be replaced when noted by inspection. | | |
| TREATMENT PRACTICES | UNDERGROUND INFILTRATION SYSTEMS | Inspect at least twice annually and with any rainfall event exceeding 2.5 inches in a 24-hour period. | Removal of debris from inlet and outlet structures. Removal of accumulated sediment. Inspection and repair of outlet structures and appurtenances. If system does not drain within a 72-hour period following a rainfall event, a professional should assess the facility's condition. | | |

## OPERATION AND MAINTENANCE PLAN SCHEDULE

ALLEN & MAJOR ASSOCIATES, INC.

**Project: Townplace Suites**
**Project Address: 47 Central Ave, Dover, NH**

**Responsible for O&M Plan: Lafrance Bowden Hospitality II, LLC**
**Address: 41 Old Bedford Road, Westport, MA 02790**
**Phone: (508) 676-7888**

| | | | | | |
|---|---|---|---|---|---|
| **OTHER MAINTENANCE** | **SNOW STORAGE** | Clear and remove snow to approved storage locations as necessary to ensure systems are working properly and are protected from meltwater pollutants. | Carefully select snow disposal sites before winter. Avoid dumping removed snow over catch basins, or in detention ponds, sediment forebays, rivers, wetlands, and flood plains. It is also prohibited to dump snow in the bioretention basins or gravel swales. | | |
| | **STREET SWEEPING** | Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. | Sweep, power broom or vacuum paved areas. Submit information that confirms that all street sweepings have been completed in accordance with state and local requirements | | |

# *TOWNPLACE SUITES*
# *47 CENTRAL AVENUE*
# *DOVER, NH*
## MAINTENANCE LOG FORM

INSPECTOR:_____

DATE MAINTENANCE PERFORMED:_____

INSPECTOR'S QUALIFICATIONS:_____

_____

_____

MAINTENANCE LOG

| TYPE OF MAINTENANCE PERFORMED | DATE SINCE LAST MAINTENANCE | STAFF MEMBER OR CONTRACTOR WHO PERFORMED MAINTENANCE | CONDITION | ISSUE RESOLVED (YES/NO) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

FOLLOW-UP REQUIRED:

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

NOTES:

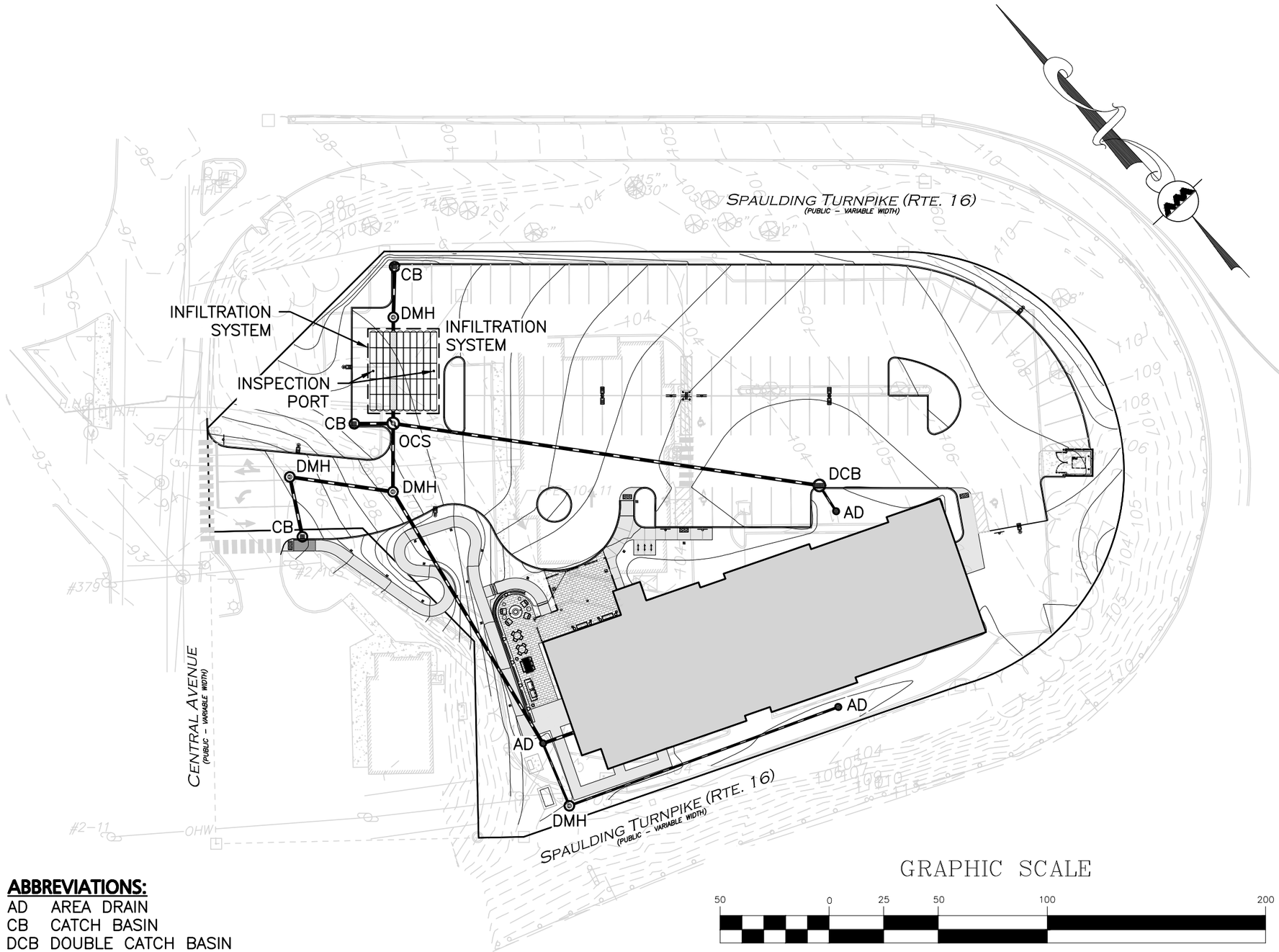
1. Attach copies of maintenance work orders.
2. Owner must keep a minimum of the past 7 years of inspections / operations and maintenance records onsite.

DATE:

MAINTENANCE PERFORMED:

POTENTIAL FUTURE MAINTENANCE REQUIRED:

ADDITIONAL NOTES:




GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )

1 inch = 50 ft.

**ABBREVIATIONS:**

AD AREA DRAIN
CB CATCH BASIN
DCB DOUBLE CATCH BASIN
DMH DRAIN MANHOLE
OCS OUTLET CONTROL STUCTURE

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_GRADING & DRAINAGE.DWG

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

APPLICANT:

LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:

# TOWNPLACE SUITES BY MARRIOTT
# 47 CENTRAL AVE
# DOVER, NH 03820

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 50' | DWG. NAME: | C1173-31-FIGURES |
| DESIGNED BY: | SM | CHECKED BY: | BDJ |

PREPARED BY:


ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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DRAWING TITLE:

## OPERATION & MAINTENANCE FIGURE

SHEET No.

1


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| Anti-icing Route Data Form | | | | |
|---|---|---|---|---|
| Truck Station: | | | | |
| Date: | | | | |
| Air Temperature | Pavement Temperature | Relative Humidity | Dew Point | Sky |
| Reason for applying: | | | | |
| Route: | | | | |
| Chemical: | | | | |
| Application Time: | | | | |
| Application Amount: | | | | |
| Observation (first day): | | | | |
| Observation (after event): | | | | |
| Observation (before next application): | | | | |
| Name: | | | | |

Figure 4-2. Example Documentation Form for Anti-Icing

# CONTROL OF INVASIVE PLANTS

During maintenance activities, check for the presence of invasive plants and remove in a safe manner as described on the following pages. They should be controlled as described on the following pages.

Background:

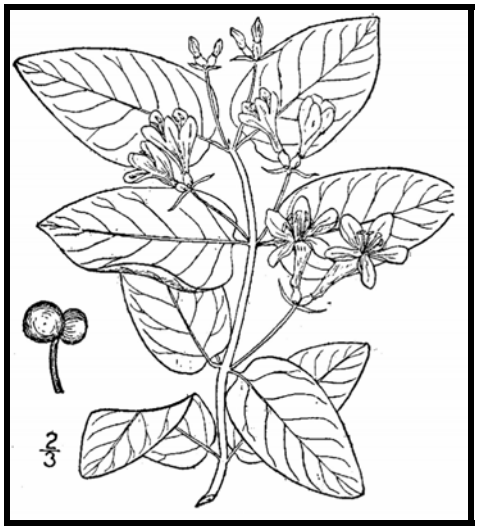
Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- becoming weedy and overgrown;
- killing established shade trees;
- obstructing pipes and drainage systems;
- forming dense beds in water;
- lowering water levels in lakes, streams, and wetlands;
- destroying natural communities;
- promoting erosion on stream banks and hillsides; and
- resisting control except by hazardous chemical.

UNIVERSITY of NEW HAMPSHIRE COOPERATIVE EXTENSION

# Methods for Disposing Non-Native Invasive Plants

*Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.*



**Tatarian honeysuckle**
*Lonicera tatarica*
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces indicates its method of spread and helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit www.nhinvasives.org or contact your UNH Cooperative Extension office.

**New Hampshire Regulations**

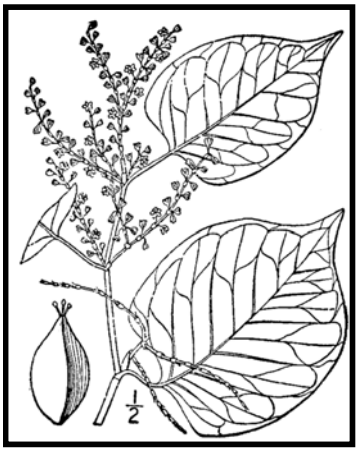
Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr 3802.01)

## How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag "head first" at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

**Burning:** Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can't be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn't be burned as the seeds may disperse by the hot air created by the fire.



**Japanese knotweed**
*Polygonum cuspidatum*
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.

**Bagging (solarization):** Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

**Tarping and Drying:** Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let the material dry for several weeks, or until it is clearly nonviable.

**Chipping:** Use this method for woody plants that don't reproduce vegetatively.

**Burying:** This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

**Drowning:** Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn't used often. Be prepared for an awful stink!

**Composting:** Invasive plants can take root in compost. Don't compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants nonviable before composting. Closely examine the plant before composting and avoid composting seeds.

**Be diligent looking for seedlings for *years* in areas where removal and disposal took place.**

# Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

<table>
<tr><th>Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">Norway maple<br>(Acer platanoides)<br>European barberry<br>(Berberis vulgaris)<br>Japanese barberry<br>(Berberis thunbergii)<br>autumn olive<br>(Elaeagnus umbellata)<br>burning bush<br>(Euonymus alatus)<br>Morrow's honeysuckle<br>(Lonicera morrowii)<br>Tatarian honeysuckle<br>(Lonicera tatarica)<br>showy bush honeysuckle<br>(Lonicera x bella)<br>common buckthorn<br>(Rhamnus cathartica)<br>glossy buckthorn<br>(Frangula alnus)</td><td rowspan="2">Fruit and Seeds<br> </td><td>Prior to fruit/seed ripening<br>Seedlings and small plants<br>▪ Pull or cut and leave on site with roots exposed. No special care needed.<br>Larger plants<br>▪ Use as firewood.<br>▪ Make a brush pile.<br>▪ Chip.<br>▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe<br>Don't remove from site.<br>▪ Burn.<br>▪ Make a covered brush pile.<br>▪ Chip once all fruit has dropped from branches.<br>▪ Leave resulting chips on site and monitor.</td></tr>
<tr><td rowspan="2">oriental bittersweet<br>(Celastrus orbiculatus)<br>multiflora rose<br>(Rosa multiflora)</td><td rowspan="2">Fruits, Seeds, Plant Fragments<br> </td><td>Prior to fruit/seed ripening<br>Seedlings and small plants<br>▪ Pull or cut and leave on site with roots exposed. No special care needed.<br>Larger plants<br>▪ Make a brush pile.<br>▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe<br>Don't remove from site.<br>▪ Burn.<br>▪ Make a covered brush pile.<br>▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.</td></tr>
</table>

<table>
<tr><th>Non-Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">garlic mustard<br>(Alliaria petiolata)<br>spotted knapweed<br>(Centaurea maculosa)<br>▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling.<br>black swallow-wort<br>(Cynanchum nigrum)<br>▪ May cause skin rash. Wear gloves and long sleeves when handling.<br>pale swallow-wort<br>(Cynanchum rossicum)<br>giant hogweed<br>(Heracleum mantegazzianum)<br>▪ Can cause major skin rash. Wear gloves and long sleeves when handling.<br>dame’s rocket<br>(Hesperis matronalis)<br>perennial pepperweed<br>(Lepidium latifolium)<br>purple loosestrife<br>(Lythrum salicaria)<br>Japanese stilt grass<br>(Microstegium vimineum)<br>mile-a-minute weed<br>(Polygonum perfoliatum)</td><td rowspan="2">Fruits and Seeds<br> </td><td>Prior to flowering<br>Depends on scale of infestation<br>Small infestation<br>▪ Pull or cut plant and leave on site with roots exposed.<br><br>Large infestation<br>▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting).<br>▪ Monitor. Remove any re-sprouting material.</td></tr>
<tr><td>During and following flowering<br>Do nothing until the following year or remove flowering heads and bag and let rot.<br><br>Small infestation<br>▪ Pull or cut plant and leave on site with roots exposed.<br><br>Large infestation<br>▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting).<br>▪ Monitor. Remove any re-sprouting material.</td></tr>
<tr><td>common reed<br>(Phragmites australis)<br>Japanese knotweed<br>(Polygonum cuspidatum)<br>Bohemian knotweed<br>(Polygonum x bohemicum)</td><td>Fruits, Seeds, Plant Fragments<br>Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn’t materially influence disposal activities.</td><td>Small infestation<br>▪ Bag all plant material and let rot.<br>▪ Never pile and use resulting material as compost.<br>▪ Burn.<br><br>Large infestation<br>▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile.<br>▪ Monitor and remove any sprouting material.<br>▪ Pile, let dry, and burn.</td></tr>
</table>

January 2010

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# Isolator® Row Plus
## O&M Manual

ADS StormTech™

# The Isolator® Row Plus

### Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS), Total Phosphorus (TP), Total Petroluem Hydrocarbons (TPH) and Total Nitrogen (TN) removal with easy access for inspection and maintenance.

### The Isolator Row Plus

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, SC-310-3, SC-740, DC-780, SC-800, MC-3500, MC-4500 or MC-7200 models, are lined with filter fabric and connected to a closely located manhole for easy access. The fabric lined chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers allow stormwater to flow vertically out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS Isolator Row and Plus fabric are placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting.

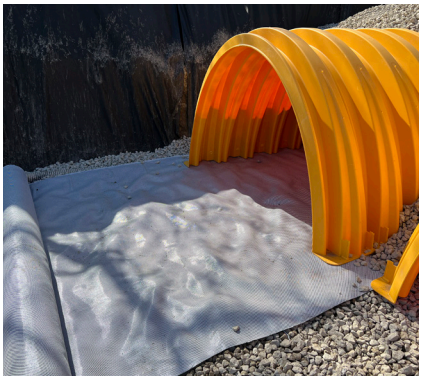
The Isolator Row Plus is designed to capture the “first flush” runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

The Isolator Row Plus Flamp™ is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber's end, or more difficult to remove and require confined space entry into the chamber area. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

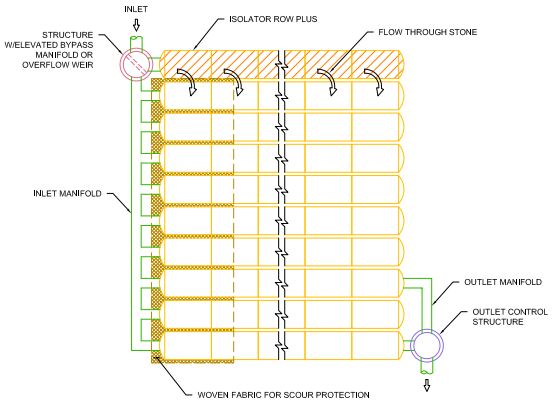
The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

***Note:*** *See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.*

**Looking down the Isolator Row Plus from the manhole opening, ADS Plus Fabric is shown between the chamber and stone base.**



**StormTech Isolator Row Plus with Overflow Structure (not to scale)**



# Isolator Row Plus Inspection/Maintenance

### Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

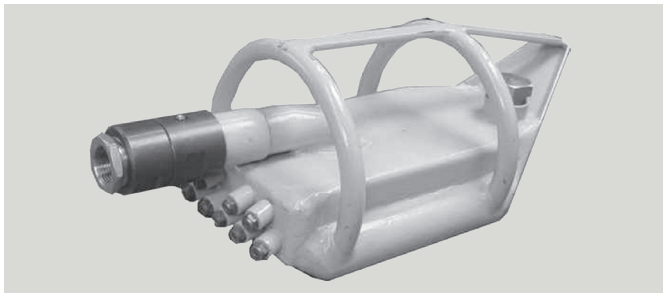
The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3" (75 mm) throughout the length of the Isolator Row Plus, clean-out should be performed.

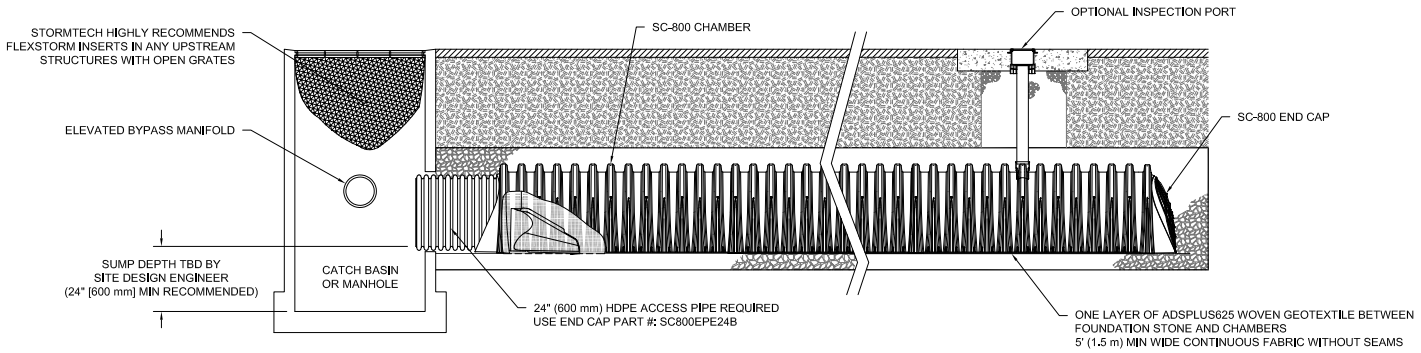
### Maintenance

The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entry.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200' (61 m). **The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.**



**StormTech Isolator Row Plus** (*not to scale*)



# Isolator Row Plus Step By Step Maintenance Procedures

**Step 1**

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
   i. Remove cover from manhole at upstream end of Isolator Row Plus
   ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
   If not, proceed to Step 3.

**Step 2**

Clean out Isolator Row Plus using the JetVac process.

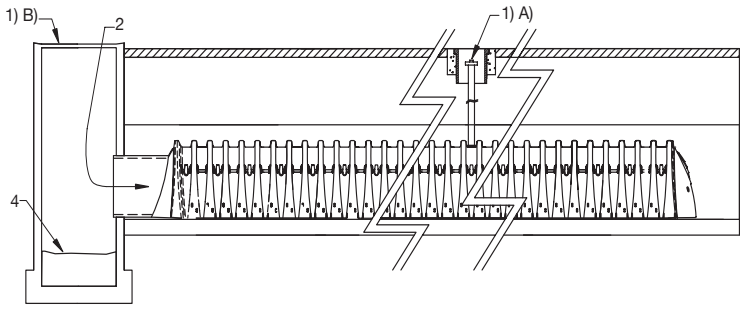
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

**Step 3**

Replace all caps, lids and covers, record observations and actions.

**Step 4**

Inspect & clean catch basins and manholes upstream of the StormTech system.




**Sample Maintenance Log**

| Date | Stadia Rod Readings | | Sediment Depth (1)–(2) | Observations/Actions | Inspector |
|---|---|---|---|---|---|
| | Fixed point to chamber bottom (1) | Fixed point to top of sediment (2) | | | |
| 3/15/11 | 6.3 ft | none | | New installation. Fixed point is CI frame at grade | DJM |
| 9/24/11 | | 6.2 | 0.1 ft | Some grit felt | SM |
| 6/20/13 | | 5.8 | 0.5 ft | Mucky feel, debris visible in manhole and in Isolator Row Plus, maintenance due | NV |
| 7/7/13 | 6.3 ft | | 0 | System jetted and vacuumed | DJM |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800-821-6710



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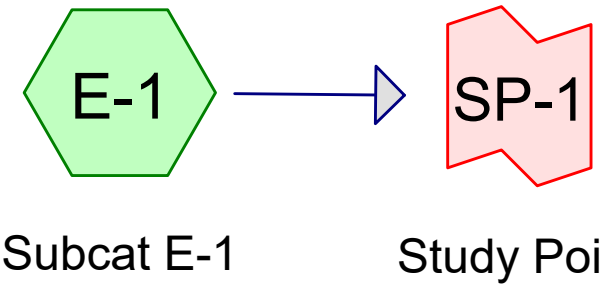
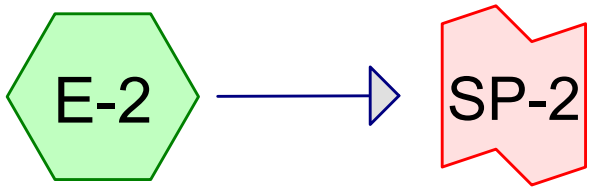
# SECTION 4.0 -
# EXISTING DRAINAGE ANALYSIS

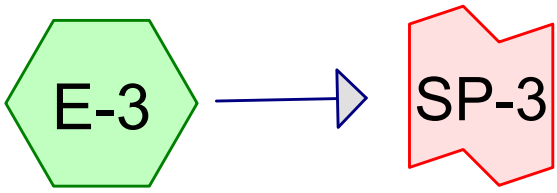
## Existing HydroCAD




Subcat E-1 Study Point




Subcat E-2 Study Point




Subcat E-3 Study Point

Subcat Reach Pond Link

## Rainfall Events Listing

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 2-year | Type III 24-hr | | Default | 24.00 | 1 | 3.15 | 2 |
| 2 | 10-year | Type III 24-hr | | Default | 24.00 | 1 | 4.75 | 2 |
| 3 | 25-year | Type III 24-hr | | Default | 24.00 | 1 | 6.01 | 2 |
| 4 | 50-year | Type III 24-hr | | Default | 24.00 | 1 | 7.19 | 2 |

## Area Listing (all nodes)

| Area (sq-ft) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 31,324 | 61 | >75% Grass cover, Good, HSG B (E-1, E-2, E-3) |
| 49,273 | 98 | Paved parking, HSG B (E-1) |
| 6,902 | 98 | Roofs, HSG B (E-1) |
| **87,499** | **85** | **TOTAL AREA** |

## Soil Listing (all nodes)

| Area (sq-ft) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 0 | HSG A | |
| 87,499 | HSG B | E-1, E-2, E-3 |
| 0 | HSG C | |
| 0 | HSG D | |
| 0 | Other | |
| **87,499** | | **TOTAL AREA** |

## Ground Covers (all nodes)

| HSG-A (sq-ft) | HSG-B (sq-ft) | HSG-C (sq-ft) | HSG-D (sq-ft) | Other (sq-ft) | Total (sq-ft) | Ground Cover | Sub Num |
|---|---|---|---|---|---|---|---|
| 0 | 31,324 | 0 | 0 | 0 | 31,324 | >75% Grass cover, Good | |
| 0 | 49,273 | 0 | 0 | 0 | 49,273 | Paved parking | |
| 0 | 6,902 | 0 | 0 | 0 | 6,902 | Roofs | |
| **0** | **87,499** | **0** | **0** | **0** | **87,499** | **TOTAL AREA** | |

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E-1: Subcat E-1** Runoff Area=81,166 sf 69.21% Impervious Runoff Depth=1.87"
Tc=6.0 min CN=87 Runoff=4.08 cfs 12,653 cf

**Subcatchment E-2: Subcat E-2** Runoff Area=4,090 sf 0.00% Impervious Runoff Depth=0.42"
Tc=6.0 min CN=61 Runoff=0.03 cfs 144 cf

**Subcatchment E-3: Subcat E-3** Runoff Area=2,242 sf 0.00% Impervious Runoff Depth=0.42"
Tc=6.0 min CN=61 Runoff=0.02 cfs 79 cf

**Link SP-1: Study Point** Inflow=4.08 cfs 12,653 cf
Primary=4.08 cfs 12,653 cf

**Link SP-2: Study Point** Inflow=0.03 cfs 144 cf
Primary=0.03 cfs 144 cf

**Link SP-3: Study Point** Inflow=0.02 cfs 79 cf
Primary=0.02 cfs 79 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 12,877 cf Average Runoff Depth = 1.77"**
**35.80% Pervious = 31,324 sf 64.20% Impervious = 56,175 sf**

## Summary for Subcatchment E-1: Subcat E-1

Runoff = 4.08 cfs @ 12.09 hrs, Volume= 12,653 cf, Depth= 1.87"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 24,992 | 61 | >75% Grass cover, Good, HSG B |
| 49,273 | 98 | Paved parking, HSG B |
| 6,902 | 98 | Roofs, HSG B |
| 81,166 | 87 | Weighted Average |
| 24,992 | | 30.79% Pervious Area |
| 56,175 | | 69.21% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.03 cfs @ 12.12 hrs, Volume= 144 cf, Depth= 0.42"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 4,090 | 61 | >75% Grass cover, Good, HSG B |
| 4,090 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-3: Subcat E-3

Runoff = 0.02 cfs @ 12.12 hrs, Volume= 79 cf, Depth= 0.42"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 2,242 | 61 | >75% Grass cover, Good, HSG B |
| 2,242 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Link SP-1: Study Point

Inflow Area = 81,166 sf, 69.21% Impervious, Inflow Depth = 1.87" for 2-year event
Inflow = 4.08 cfs @ 12.09 hrs, Volume= 12,653 cf
Primary = 4.08 cfs @ 12.09 hrs, Volume= 12,653 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 4,090 sf, 0.00% Impervious, Inflow Depth = 0.42" for 2-year event
Inflow = 0.03 cfs @ 12.12 hrs, Volume= 144 cf
Primary = 0.03 cfs @ 12.12 hrs, Volume= 144 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,242 sf, 0.00% Impervious, Inflow Depth = 0.42" for 2-year event
Inflow = 0.02 cfs @ 12.12 hrs, Volume= 79 cf
Primary = 0.02 cfs @ 12.12 hrs, Volume= 79 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E-1: Subcat E-1** Runoff Area=81,166 sf 69.21% Impervious Runoff Depth=3.33"
Tc=6.0 min CN=87 Runoff=7.17 cfs 22,540 cf

**Subcatchment E-2: Subcat E-2** Runoff Area=4,090 sf 0.00% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=61 Runoff=0.12 cfs 416 cf

**Subcatchment E-3: Subcat E-3** Runoff Area=2,242 sf 0.00% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=61 Runoff=0.07 cfs 228 cf

**Link SP-1: Study Point** Inflow=7.17 cfs 22,540 cf
Primary=7.17 cfs 22,540 cf

**Link SP-2: Study Point** Inflow=0.12 cfs 416 cf
Primary=0.12 cfs 416 cf

**Link SP-3: Study Point** Inflow=0.07 cfs 228 cf
Primary=0.07 cfs 228 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 23,185 cf Average Runoff Depth = 3.18"**
**35.80% Pervious = 31,324 sf 64.20% Impervious = 56,175 sf**

## Summary for Subcatchment E-1: Subcat E-1

Runoff = 7.17 cfs @ 12.09 hrs, Volume= 22,540 cf, Depth= 3.33"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 24,992 | 61 | >75% Grass cover, Good, HSG B |
| 49,273 | 98 | Paved parking, HSG B |
| 6,902 | 98 | Roofs, HSG B |
| 81,166 | 87 | Weighted Average |
| 24,992 | | 30.79% Pervious Area |
| 56,175 | | 69.21% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.12 cfs @ 12.10 hrs, Volume= 416 cf, Depth= 1.22"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 4,090 | 61 | >75% Grass cover, Good, HSG B |
| 4,090 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-3: Subcat E-3

Runoff = 0.07 cfs @ 12.10 hrs, Volume= 228 cf, Depth= 1.22"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 2,242 | 61 | >75% Grass cover, Good, HSG B |
| 2,242 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Link SP-1: Study Point

Inflow Area = 81,166 sf, 69.21% Impervious, Inflow Depth = 3.33" for 10-year event
Inflow = 7.17 cfs @ 12.09 hrs, Volume= 22,540 cf
Primary = 7.17 cfs @ 12.09 hrs, Volume= 22,540 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 4,090 sf, 0.00% Impervious, Inflow Depth = 1.22" for 10-year event
Inflow = 0.12 cfs @ 12.10 hrs, Volume= 416 cf
Primary = 0.12 cfs @ 12.10 hrs, Volume= 416 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,242 sf, 0.00% Impervious, Inflow Depth = 1.22" for 10-year event
Inflow = 0.07 cfs @ 12.10 hrs, Volume= 228 cf
Primary = 0.07 cfs @ 12.10 hrs, Volume= 228 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E-1: Subcat E-1** Runoff Area=81,166 sf 69.21% Impervious Runoff Depth=4.53"
Tc=6.0 min CN=87 Runoff=9.61 cfs 30,618 cf

**Subcatchment E-2: Subcat E-2** Runoff Area=4,090 sf 0.00% Impervious Runoff Depth=2.01"
Tc=6.0 min CN=61 Runoff=0.21 cfs 686 cf

**Subcatchment E-3: Subcat E-3** Runoff Area=2,242 sf 0.00% Impervious Runoff Depth=2.01"
Tc=6.0 min CN=61 Runoff=0.12 cfs 376 cf

**Link SP-1: Study Point** Inflow=9.61 cfs 30,618 cf
Primary=9.61 cfs 30,618 cf

**Link SP-2: Study Point** Inflow=0.21 cfs 686 cf
Primary=0.21 cfs 686 cf

**Link SP-3: Study Point** Inflow=0.12 cfs 376 cf
Primary=0.12 cfs 376 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 31,680 cf Average Runoff Depth = 4.34"**
**35.80% Pervious = 31,324 sf 64.20% Impervious = 56,175 sf**

## Summary for Subcatchment E-1: Subcat E-1

Runoff = 9.61 cfs @ 12.09 hrs, Volume= 30,618 cf, Depth= 4.53"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 24,992 | 61 | >75% Grass cover, Good, HSG B |
| 49,273 | 98 | Paved parking, HSG B |
| 6,902 | 98 | Roofs, HSG B |
| 81,166 | 87 | Weighted Average |
| 24,992 | | 30.79% Pervious Area |
| 56,175 | | 69.21% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.21 cfs @ 12.10 hrs, Volume= 686 cf, Depth= 2.01"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 4,090 | 61 | >75% Grass cover, Good, HSG B |
| 4,090 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-3: Subcat E-3

Runoff = 0.12 cfs @ 12.10 hrs, Volume= 376 cf, Depth= 2.01"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 2,242 | 61 | >75% Grass cover, Good, HSG B |
| 2,242 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Link SP-1: Study Point

Inflow Area = 81,166 sf, 69.21% Impervious, Inflow Depth = 4.53" for 25-year event
Inflow = 9.61 cfs @ 12.09 hrs, Volume= 30,618 cf
Primary = 9.61 cfs @ 12.09 hrs, Volume= 30,618 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 4,090 sf, 0.00% Impervious, Inflow Depth = 2.01" for 25-year event
Inflow = 0.21 cfs @ 12.10 hrs, Volume= 686 cf
Primary = 0.21 cfs @ 12.10 hrs, Volume= 686 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,242 sf, 0.00% Impervious, Inflow Depth = 2.01" for 25-year event
Inflow = 0.12 cfs @ 12.10 hrs, Volume= 376 cf
Primary = 0.12 cfs @ 12.10 hrs, Volume= 376 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment E-1: Subcat E-1** Runoff Area=81,166 sf 69.21% Impervious Runoff Depth=5.66"
Tc=6.0 min CN=87 Runoff=11.88 cfs 38,305 cf

**Subcatchment E-2: Subcat E-2** Runoff Area=4,090 sf 0.00% Impervious Runoff Depth=2.84"
Tc=6.0 min CN=61 Runoff=0.31 cfs 968 cf

**Subcatchment E-3: Subcat E-3** Runoff Area=2,242 sf 0.00% Impervious Runoff Depth=2.84"
Tc=6.0 min CN=61 Runoff=0.17 cfs 531 cf

**Link SP-1: Study Point** Inflow=11.88 cfs 38,305 cf
Primary=11.88 cfs 38,305 cf

**Link SP-2: Study Point** Inflow=0.31 cfs 968 cf
Primary=0.31 cfs 968 cf

**Link SP-3: Study Point** Inflow=0.17 cfs 531 cf
Primary=0.17 cfs 531 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 39,804 cf Average Runoff Depth = 5.46"**
**35.80% Pervious = 31,324 sf 64.20% Impervious = 56,175 sf**

## Summary for Subcatchment E-1: Subcat E-1

Runoff = 11.88 cfs @ 12.08 hrs, Volume= 38,305 cf, Depth= 5.66"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 24,992 | 61 | >75% Grass cover, Good, HSG B |
| 49,273 | 98 | Paved parking, HSG B |
| 6,902 | 98 | Roofs, HSG B |
| 81,166 | 87 | Weighted Average |
| 24,992 | | 30.79% Pervious Area |
| 56,175 | | 69.21% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.31 cfs @ 12.09 hrs, Volume= 968 cf, Depth= 2.84"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 4,090 | 61 | >75% Grass cover, Good, HSG B |
| 4,090 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment E-3: Subcat E-3

Runoff = 0.17 cfs @ 12.09 hrs, Volume= 531 cf, Depth= 2.84"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 2,242 | 61 | >75% Grass cover, Good, HSG B |
| 2,242 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Link SP-1: Study Point

Inflow Area = 81,166 sf, 69.21% Impervious, Inflow Depth = 5.66" for 50-year event
Inflow = 11.88 cfs @ 12.08 hrs, Volume= 38,305 cf
Primary = 11.88 cfs @ 12.08 hrs, Volume= 38,305 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 4,090 sf, 0.00% Impervious, Inflow Depth = 2.84" for 50-year event
Inflow = 0.31 cfs @ 12.09 hrs, Volume= 968 cf
Primary = 0.31 cfs @ 12.09 hrs, Volume= 968 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,242 sf, 0.00% Impervious, Inflow Depth = 2.84" for 50-year event
Inflow = 0.17 cfs @ 12.09 hrs, Volume= 531 cf
Primary = 0.17 cfs @ 12.09 hrs, Volume= 531 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

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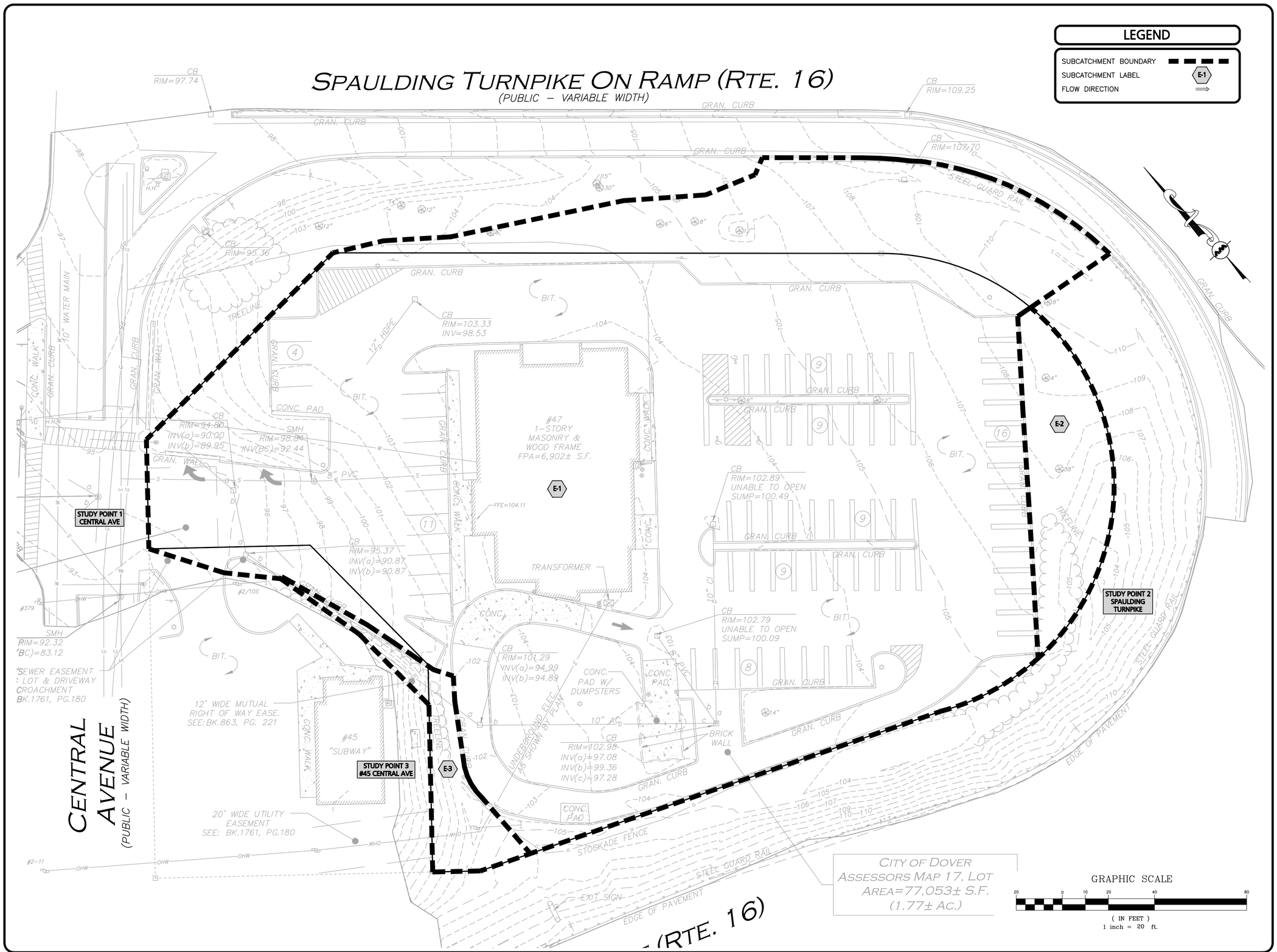
## Existing Watershed Plan




R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_WATERSHED-EXISTING.DWG

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

**OWNER:**

ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

**APPLICANT:**

LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

**PROJECT:**

TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |


PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501

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| DRAWING TITLE: | SHEET No. |
|---|---|
| EXISTING WATERSHED PLAN | WS-1 |


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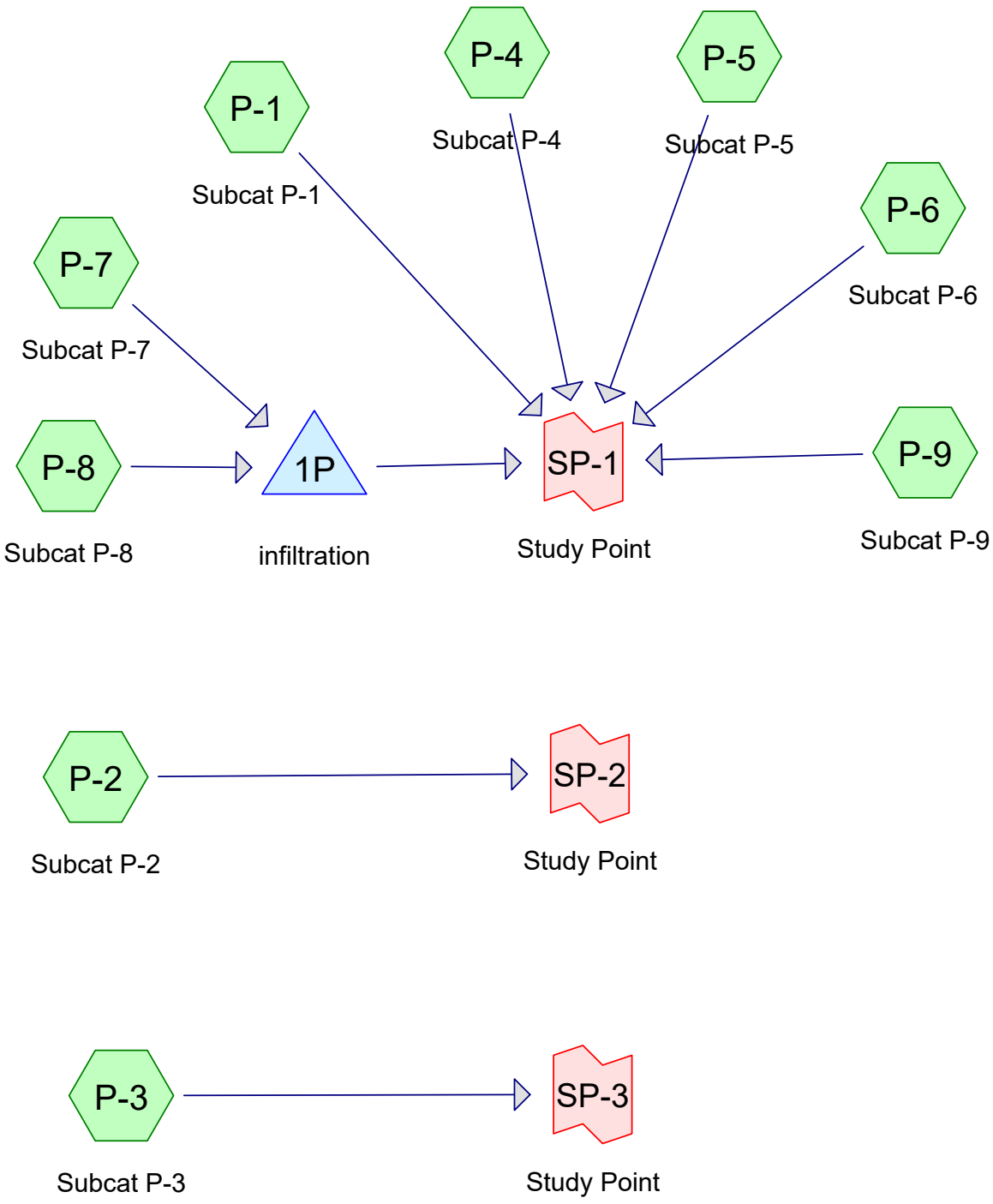
# SECTION 5.0 -
## PROPOSED DRAINAGE ANALYSIS

## Proposed HydroCAD




**Routing Diagram for 1173-31_Proposed HydroCAD**
Prepared by Allen & Major Associates, Inc, Printed 1/27/2026
HydroCAD® 10.20-8a s/n 02881 © 2025 HydroCAD Software Solutions LLC

## Rainfall Events Listing

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 2-year | Type III 24-hr | | Default | 24.00 | 1 | 3.15 | 2 |
| 2 | 10-year | Type III 24-hr | | Default | 24.00 | 1 | 4.75 | 2 |
| 3 | 25-year | Type III 24-hr | | Default | 24.00 | 1 | 6.01 | 2 |
| 4 | 50-year | Type III 24-hr | | Default | 24.00 | 1 | 7.19 | 2 |

## Area Listing (all nodes)

| Area (sq-ft) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 31,844 | 61 | >75% Grass cover, Good, HSG B (P-2, P-3, P-4, P-5, P-6, P-7, P-8, P-9) |
| 43,038 | 98 | Paved parking, HSG B (P-3, P-4, P-5, P-6, P-7, P-8, P-9) |
| 12,617 | 98 | Roofs, HSG B (P-1) |
| **87,499** | **85** | **TOTAL AREA** |

## Soil Listing (all nodes)

| Area (sq-ft) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 0 | HSG A | |
| 87,499 | HSG B | P-1, P-2, P-3, P-4, P-5, P-6, P-7, P-8, P-9 |
| 0 | HSG C | |
| 0 | HSG D | |
| 0 | Other | |
| **87,499** | | **TOTAL AREA** |

## Ground Covers (all nodes)

| HSG-A (sq-ft) | HSG-B (sq-ft) | HSG-C (sq-ft) | HSG-D (sq-ft) | Other (sq-ft) | Total (sq-ft) | Ground Cover | Sub Num |
|---|---|---|---|---|---|---|---|
| 0 | 31,844 | 0 | 0 | 0 | 31,844 | >75% Grass cover, Good | |
| 0 | 43,038 | 0 | 0 | 0 | 43,038 | Paved parking | |
| 0 | 12,617 | 0 | 0 | 0 | 12,617 | Roofs | |
| **0** | **87,499** | **0** | **0** | **0** | **87,499** | **TOTAL AREA** | |

## Pipe Listing (all nodes)

| Line# | Node Number | In-Invert (feet) | Out-Invert (feet) | Length (feet) | Slope (ft/ft) | n | Width (inches) | Diam/Height (inches) | Inside-Fill (inches) | Node Name |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1P | 94.20 | 92.00 | 52.0 | 0.0423 | 0.013 | 0.0 | 12.0 | 0.0 | |

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment P-1: Subcat P-1** Runoff Area=12,617 sf 100.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=98 Runoff=0.89 cfs 3,068 cf

**Subcatchment P-2: Subcat P-2** Runoff Area=2,183 sf 0.00% Impervious Runoff Depth=0.42"
Tc=6.0 min CN=61 Runoff=0.02 cfs 77 cf

**Subcatchment P-3: Subcat P-3** Runoff Area=2,113 sf 0.00% Impervious Runoff Depth=0.42"
Tc=6.0 min CN=61 Runoff=0.01 cfs 75 cf

**Subcatchment P-4: Subcat P-4** Runoff Area=11,269 sf 71.99% Impervious Runoff Depth=1.95"
Tc=6.0 min CN=88 Runoff=0.59 cfs 1,833 cf

**Subcatchment P-5: Subcat P-5** Runoff Area=8,854 sf 70.06% Impervious Runoff Depth=1.87"
Tc=6.0 min CN=87 Runoff=0.45 cfs 1,380 cf

**Subcatchment P-6: Subcat P-6** Runoff Area=5,880 sf 83.02% Impervious Runoff Depth=2.30"
Tc=6.0 min CN=92 Runoff=0.36 cfs 1,129 cf

**Subcatchment P-7: Subcat P-7** Runoff Area=17,940 sf 46.42% Impervious Runoff Depth=1.24"
Tc=6.0 min CN=78 Runoff=0.58 cfs 1,849 cf

**Subcatchment P-8: Subcat P-8** Runoff Area=19,962 sf 74.46% Impervious Runoff Depth=2.04"
Tc=6.0 min CN=89 Runoff=1.09 cfs 3,387 cf

**Subcatchment P-9: Subcat P-9** Runoff Area=6,680 sf 9.73% Impervious Runoff Depth=0.58"
Tc=6.0 min CN=65 Runoff=0.08 cfs 321 cf

**Pond 1P: infiltration** Peak Elev=97.22' Storage=1,595 cf Inflow=1.67 cfs 5,236 cf
Discarded=0.01 cfs 2,090 cf Primary=1.30 cfs 3,146 cf Outflow=1.31 cfs 5,236 cf

**Link SP-1: Study Point** Inflow=3.19 cfs 10,876 cf
Primary=3.19 cfs 10,876 cf

**Link SP-2: Study Point** Inflow=0.02 cfs 77 cf
Primary=0.02 cfs 77 cf

**Link SP-3: Study Point** Inflow=0.01 cfs 75 cf
Primary=0.01 cfs 75 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 13,118 cf Average Runoff Depth = 1.80"**
**36.39% Pervious = 31,844 sf 63.61% Impervious = 55,655 sf**

## Summary for Subcatchment P-1: Subcat P-1

Runoff = 0.89 cfs @ 12.08 hrs, Volume= 3,068 cf, Depth= 2.92"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 12,617 | 98 | Roofs, HSG B |
| 12,617 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.02 cfs @ 12.12 hrs, Volume= 77 cf, Depth= 0.42"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 2,183 | 61 | >75% Grass cover, Good, HSG B |
| 2,183 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.01 cfs @ 12.12 hrs, Volume= 75 cf, Depth= 0.42"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 0 | 98 | Paved parking, HSG B |
| 2,113 | 61 | >75% Grass cover, Good, HSG B |
| 2,113 | 61 | Weighted Average |
| 2,113 | | 100.00% Pervious Area |
| 0 | | 0.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-4: Subcat P-4

Runoff = 0.59 cfs @ 12.09 hrs, Volume= 1,833 cf, Depth= 1.95"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 3,156 | 61 | >75% Grass cover, Good, HSG B |
| 8,112 | 98 | Paved parking, HSG B |
| 11,269 | 88 | Weighted Average |
| 3,156 | | 28.01% Pervious Area |
| 8,112 | | 71.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-5: Subcat P-5

Runoff = 0.45 cfs @ 12.09 hrs, Volume= 1,380 cf, Depth= 1.87"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 2,651 | 61 | >75% Grass cover, Good, HSG B |
| 6,203 | 98 | Paved parking, HSG B |
| 8,854 | 87 | Weighted Average |
| 2,651 | | 29.94% Pervious Area |
| 6,203 | | 70.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.36 cfs @ 12.09 hrs, Volume= 1,129 cf, Depth= 2.30"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 4,882 | 98 | Paved parking, HSG B |
| 999 | 61 | >75% Grass cover, Good, HSG B |
| 5,880 | 92 | Weighted Average |
| 999 | | 16.98% Pervious Area |
| 4,882 | | 83.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-7: Subcat P-7

Runoff = 0.58 cfs @ 12.09 hrs, Volume= 1,849 cf, Depth= 1.24"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 8,327 | 98 | Paved parking, HSG B |
| 9,613 | 61 | >75% Grass cover, Good, HSG B |
| 17,940 | 78 | Weighted Average |
| 9,613 | | 53.58% Pervious Area |
| 8,327 | | 46.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-8: Subcat P-8

Runoff = 1.09 cfs @ 12.09 hrs, Volume= 3,387 cf, Depth= 2.04"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 5,099 | 61 | >75% Grass cover, Good, HSG B |
| 14,863 | 98 | Paved parking, HSG B |
| 19,962 | 89 | Weighted Average |
| 5,099 | | 25.54% Pervious Area |
| 14,863 | | 74.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-9: Subcat P-9

Runoff = 0.08 cfs @ 12.11 hrs, Volume= 321 cf, Depth= 0.58"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 6,030 | 61 | >75% Grass cover, Good, HSG B |
| 650 | 98 | Paved parking, HSG B |
| 6,680 | 65 | Weighted Average |
| 6,030 | | 90.27% Pervious Area |
| 650 | | 9.73% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Pond 1P: infiltration

Inflow Area = 37,902 sf, 61.19% Impervious, Inflow Depth = 1.66" for 2-year event
Inflow = 1.67 cfs @ 12.09 hrs, Volume= 5,236 cf
Outflow = 1.31 cfs @ 12.15 hrs, Volume= 5,236 cf, Atten= 22%, Lag= 3.9 min
Discarded = 0.01 cfs @ 12.15 hrs, Volume= 2,090 cf
Primary = 1.30 cfs @ 12.15 hrs, Volume= 3,146 cf
Routed to Link SP-1 : Study Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 97.22' @ 12.15 hrs Surf.Area= 1,264 sf Storage= 1,595 cf
Flood Elev= 97.00' Surf.Area= 1,264 sf Storage= 1,482 cf

Plug-Flow detention time= 561.7 min calculated for 5,235 cf (100% of inflow)
Center-of-Mass det. time= 562.0 min ( 1,387.3 - 825.2 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 95.00' | 885 cf | **32.58'W x 38.80'L x 2.33'H Field A**<br>2,950 cf Overall - 737 cf Embedded = 2,213 cf x 40.0% Voids |
| #2A | 95.50' | 737 cf | **ADS_StormTech SC-310 +Cap** x 50 Inside #1<br>Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf<br>Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap<br>50 Chambers in 10 Rows |
| #3 | 95.58' | 75 cf | **5.00'D x 3.83'H OCS**-Impervious |
| | | 1,697 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 95.00' | **0.300 in/hr Exfiltration over Wetted area** Phase-In= 0.01' |
| #2 | Primary | 94.20' | **12.0" Round Culvert** L= 52.0' Ke= 0.500<br>Inlet / Outlet Invert= 94.20' / 92.00' S= 0.0423 '/' Cc= 0.900 |

| | | | |
|---|---|---|---|
| | | | n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #3 | Device 2 | 97.00' | **4.0' long x 2.60' rise Sharp-Crested Rectangular Weir** |
| | | | 2 End Contraction(s) |

**Discarded OutFlow** Max=0.01 cfs @ 12.15 hrs HW=97.22' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

**Primary OutFlow** Max=1.29 cfs @ 12.15 hrs HW=97.22' TW=0.00' (Dynamic Tailwater)
↑**2=Culvert** (Passes 1.29 cfs of 6.00 cfs potential flow)
↑**3=Sharp-Crested Rectangular Weir** (Weir Controls 1.29 cfs @ 1.52 fps)

## Summary for Link SP-1: Study Point

Inflow Area = 83,203 sf, 66.89% Impervious, Inflow Depth = 1.57" for 2-year event
Inflow = 3.19 cfs @ 12.14 hrs, Volume= 10,876 cf
Primary = 3.19 cfs @ 12.14 hrs, Volume= 10,876 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 2,183 sf, 0.00% Impervious, Inflow Depth = 0.42" for 2-year event
Inflow = 0.02 cfs @ 12.12 hrs, Volume= 77 cf
Primary = 0.02 cfs @ 12.12 hrs, Volume= 77 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,113 sf, 0.00% Impervious, Inflow Depth = 0.42" for 2-year event
Inflow = 0.01 cfs @ 12.12 hrs, Volume= 75 cf
Primary = 0.01 cfs @ 12.12 hrs, Volume= 75 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment P-1: Subcat P-1** Runoff Area=12,617 sf 100.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=98 Runoff=1.35 cfs 4,746 cf

**Subcatchment P-2: Subcat P-2** Runoff Area=2,183 sf 0.00% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=61 Runoff=0.06 cfs 222 cf

**Subcatchment P-3: Subcat P-3** Runoff Area=2,113 sf 0.00% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=61 Runoff=0.06 cfs 215 cf

**Subcatchment P-4: Subcat P-4** Runoff Area=11,269 sf 71.99% Impervious Runoff Depth=3.43"
Tc=6.0 min CN=88 Runoff=1.02 cfs 3,223 cf

**Subcatchment P-5: Subcat P-5** Runoff Area=8,854 sf 70.06% Impervious Runoff Depth=3.33"
Tc=6.0 min CN=87 Runoff=0.78 cfs 2,459 cf

**Subcatchment P-6: Subcat P-6** Runoff Area=5,880 sf 83.02% Impervious Runoff Depth=3.85"
Tc=6.0 min CN=92 Runoff=0.58 cfs 1,884 cf

**Subcatchment P-7: Subcat P-7** Runoff Area=17,940 sf 46.42% Impervious Runoff Depth=2.50"
Tc=6.0 min CN=78 Runoff=1.21 cfs 3,739 cf

**Subcatchment P-8: Subcat P-8** Runoff Area=19,962 sf 74.46% Impervious Runoff Depth=3.53"
Tc=6.0 min CN=89 Runoff=1.85 cfs 5,877 cf

**Subcatchment P-9: Subcat P-9** Runoff Area=6,680 sf 9.73% Impervious Runoff Depth=1.49"
Tc=6.0 min CN=65 Runoff=0.25 cfs 829 cf

**Pond 1P: infiltration** Peak Elev=97.39' Storage=1,658 cf Inflow=3.06 cfs 9,616 cf
Discarded=0.01 cfs 2,154 cf Primary=3.17 cfs 7,462 cf Outflow=3.18 cfs 9,616 cf

**Link SP-1: Study Point** Inflow=7.14 cfs 20,603 cf
Primary=7.14 cfs 20,603 cf

**Link SP-2: Study Point** Inflow=0.06 cfs 222 cf
Primary=0.06 cfs 222 cf

**Link SP-3: Study Point** Inflow=0.06 cfs 215 cf
Primary=0.06 cfs 215 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 23,194 cf Average Runoff Depth = 3.18"**
**36.39% Pervious = 31,844 sf 63.61% Impervious = 55,655 sf**

## Summary for Subcatchment P-1: Subcat P-1

Runoff = 1.35 cfs @ 12.08 hrs, Volume= 4,746 cf, Depth= 4.51"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 12,617 | 98 | Roofs, HSG B |
| 12,617 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.06 cfs @ 12.10 hrs, Volume= 222 cf, Depth= 1.22"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 2,183 | 61 | >75% Grass cover, Good, HSG B |
| 2,183 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.06 cfs @ 12.10 hrs, Volume= 215 cf, Depth= 1.22"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 0 | 98 | Paved parking, HSG B |
| 2,113 | 61 | >75% Grass cover, Good, HSG B |
| 2,113 | 61 | Weighted Average |
| 2,113 | | 100.00% Pervious Area |
| 0 | | 0.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-4: Subcat P-4

Runoff = 1.02 cfs @ 12.09 hrs, Volume= 3,223 cf, Depth= 3.43"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 3,156 | 61 | >75% Grass cover, Good, HSG B |
| 8,112 | 98 | Paved parking, HSG B |
| 11,269 | 88 | Weighted Average |
| 3,156 | | 28.01% Pervious Area |
| 8,112 | | 71.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-5: Subcat P-5

Runoff = 0.78 cfs @ 12.09 hrs, Volume= 2,459 cf, Depth= 3.33"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 2,651 | 61 | >75% Grass cover, Good, HSG B |
| 6,203 | 98 | Paved parking, HSG B |
| 8,854 | 87 | Weighted Average |
| 2,651 | | 29.94% Pervious Area |
| 6,203 | | 70.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.58 cfs @ 12.08 hrs, Volume= 1,884 cf, Depth= 3.85"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 4,882 | 98 | Paved parking, HSG B |
| 999 | 61 | >75% Grass cover, Good, HSG B |
| 5,880 | 92 | Weighted Average |
| 999 | | 16.98% Pervious Area |
| 4,882 | | 83.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-7: Subcat P-7

Runoff = 1.21 cfs @ 12.09 hrs, Volume= 3,739 cf, Depth= 2.50"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 8,327 | 98 | Paved parking, HSG B |
| 9,613 | 61 | >75% Grass cover, Good, HSG B |
| 17,940 | 78 | Weighted Average |
| 9,613 | | 53.58% Pervious Area |
| 8,327 | | 46.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-8: Subcat P-8

Runoff = 1.85 cfs @ 12.09 hrs, Volume= 5,877 cf, Depth= 3.53"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 5,099 | 61 | >75% Grass cover, Good, HSG B |
| 14,863 | 98 | Paved parking, HSG B |
| 19,962 | 89 | Weighted Average |
| 5,099 | | 25.54% Pervious Area |
| 14,863 | | 74.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-9: Subcat P-9

Runoff = 0.25 cfs @ 12.10 hrs, Volume= 829 cf, Depth= 1.49"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.75"

| Area (sf) | CN | Description |
|---|---|---|
| 6,030 | 61 | >75% Grass cover, Good, HSG B |
| 650 | 98 | Paved parking, HSG B |
| 6,680 | 65 | Weighted Average |
| 6,030 | | 90.27% Pervious Area |
| 650 | | 9.73% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Pond 1P: infiltration

Inflow Area = 37,902 sf, 61.19% Impervious, Inflow Depth = 3.04" for 10-year event
Inflow = 3.06 cfs @ 12.09 hrs, Volume= 9,616 cf
Outflow = 3.18 cfs @ 12.08 hrs, Volume= 9,616 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.01 cfs @ 12.05 hrs, Volume= 2,154 cf
Primary = 3.17 cfs @ 12.08 hrs, Volume= 7,462 cf
Routed to Link SP-1 : Study Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 97.39' @ 12.08 hrs Surf.Area= 1,264 sf Storage= 1,658 cf
Flood Elev= 97.00' Surf.Area= 1,264 sf Storage= 1,482 cf

Plug-Flow detention time= 314.5 min calculated for 9,615 cf (100% of inflow)
Center-of-Mass det. time= 314.8 min ( 1,123.9 - 809.1 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 95.00' | 885 cf | **32.58'W x 38.80'L x 2.33'H Field A**<br>2,950 cf Overall - 737 cf Embedded = 2,213 cf x 40.0% Voids |
| #2A | 95.50' | 737 cf | **ADS_StormTech SC-310 +Cap** x 50 Inside #1<br>Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf<br>Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap<br>50 Chambers in 10 Rows |
| #3 | 95.58' | 75 cf | **5.00'D x 3.83'H OCS**-Impervious |
| | | 1,697 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 95.00' | **0.300 in/hr Exfiltration over Wetted area** Phase-In= 0.01' |
| #2 | Primary | 94.20' | **12.0" Round Culvert** L= 52.0' Ke= 0.500<br>Inlet / Outlet Invert= 94.20' / 92.00' S= 0.0423 '/' Cc= 0.900 |

| | | | |
|---|---|---|---|
| | | | n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #3 | Device 2 | 97.00' | **4.0' long x 2.60' rise Sharp-Crested Rectangular Weir** |
| | | | 2 End Contraction(s) |

**Discarded OutFlow** Max=0.01 cfs @ 12.05 hrs HW=97.33' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

**Primary OutFlow** Max=3.14 cfs @ 12.08 hrs HW=97.39' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Passes 3.14 cfs of 6.20 cfs potential flow)
↑—**3=Sharp-Crested Rectangular Weir** (Weir Controls 3.14 cfs @ 2.05 fps)

## Summary for Link SP-1: Study Point

Inflow Area = 83,203 sf, 66.89% Impervious, Inflow Depth = 2.97" for 10-year event
Inflow = 7.14 cfs @ 12.08 hrs, Volume= 20,603 cf
Primary = 7.14 cfs @ 12.08 hrs, Volume= 20,603 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 2,183 sf, 0.00% Impervious, Inflow Depth = 1.22" for 10-year event
Inflow = 0.06 cfs @ 12.10 hrs, Volume= 222 cf
Primary = 0.06 cfs @ 12.10 hrs, Volume= 222 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,113 sf, 0.00% Impervious, Inflow Depth = 1.22" for 10-year event
Inflow = 0.06 cfs @ 12.10 hrs, Volume= 215 cf
Primary = 0.06 cfs @ 12.10 hrs, Volume= 215 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment P-1: Subcat P-1** Runoff Area=12,617 sf 100.00% Impervious Runoff Depth=5.77"
Tc=6.0 min CN=98 Runoff=1.71 cfs 6,069 cf

**Subcatchment P-2: Subcat P-2** Runoff Area=2,183 sf 0.00% Impervious Runoff Depth=2.01"
Tc=6.0 min CN=61 Runoff=0.11 cfs 366 cf

**Subcatchment P-3: Subcat P-3** Runoff Area=2,113 sf 0.00% Impervious Runoff Depth=2.01"
Tc=6.0 min CN=61 Runoff=0.11 cfs 354 cf

**Subcatchment P-4: Subcat P-4** Runoff Area=11,269 sf 71.99% Impervious Runoff Depth=4.64"
Tc=6.0 min CN=88 Runoff=1.36 cfs 4,353 cf

**Subcatchment P-5: Subcat P-5** Runoff Area=8,854 sf 70.06% Impervious Runoff Depth=4.53"
Tc=6.0 min CN=87 Runoff=1.05 cfs 3,340 cf

**Subcatchment P-6: Subcat P-6** Runoff Area=5,880 sf 83.02% Impervious Runoff Depth=5.08"
Tc=6.0 min CN=92 Runoff=0.75 cfs 2,489 cf

**Subcatchment P-7: Subcat P-7** Runoff Area=17,940 sf 46.42% Impervious Runoff Depth=3.59"
Tc=6.0 min CN=78 Runoff=1.73 cfs 5,364 cf

**Subcatchment P-8: Subcat P-8** Runoff Area=19,962 sf 74.46% Impervious Runoff Depth=4.75"
Tc=6.0 min CN=89 Runoff=2.45 cfs 7,894 cf

**Subcatchment P-9: Subcat P-9** Runoff Area=6,680 sf 9.73% Impervious Runoff Depth=2.36"
Tc=6.0 min CN=65 Runoff=0.41 cfs 1,313 cf

**Pond 1P: infiltration** Peak Elev=97.48' Storage=1,659 cf Inflow=4.18 cfs 13,257 cf
Discarded=0.01 cfs 2,194 cf Primary=4.22 cfs 11,064 cf Outflow=4.23 cfs 13,257 cf

**Link SP-1: Study Point** Inflow=9.49 cfs 28,627 cf
Primary=9.49 cfs 28,627 cf

**Link SP-2: Study Point** Inflow=0.11 cfs 366 cf
Primary=0.11 cfs 366 cf

**Link SP-3: Study Point** Inflow=0.11 cfs 354 cf
Primary=0.11 cfs 354 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 31,541 cf Average Runoff Depth = 4.33"**
**36.39% Pervious = 31,844 sf 63.61% Impervious = 55,655 sf**

## Summary for Subcatchment P-1: Subcat P-1

Runoff = 1.71 cfs @ 12.08 hrs, Volume= 6,069 cf, Depth= 5.77"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 12,617 | 98 | Roofs, HSG B |
| 12,617 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.11 cfs @ 12.10 hrs, Volume= 366 cf, Depth= 2.01"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 2,183 | 61 | >75% Grass cover, Good, HSG B |
| 2,183 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.11 cfs @ 12.10 hrs, Volume= 354 cf, Depth= 2.01"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 0 | 98 | Paved parking, HSG B |
| 2,113 | 61 | >75% Grass cover, Good, HSG B |
| 2,113 | 61 | Weighted Average |
| 2,113 | | 100.00% Pervious Area |
| 0 | | 0.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-4: Subcat P-4

Runoff = 1.36 cfs @ 12.09 hrs, Volume= 4,353 cf, Depth= 4.64"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 3,156 | 61 | >75% Grass cover, Good, HSG B |
| 8,112 | 98 | Paved parking, HSG B |
| 11,269 | 88 | Weighted Average |
| 3,156 | | 28.01% Pervious Area |
| 8,112 | | 71.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-5: Subcat P-5

Runoff = 1.05 cfs @ 12.09 hrs, Volume= 3,340 cf, Depth= 4.53"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 2,651 | 61 | >75% Grass cover, Good, HSG B |
| 6,203 | 98 | Paved parking, HSG B |
| 8,854 | 87 | Weighted Average |
| 2,651 | | 29.94% Pervious Area |
| 6,203 | | 70.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.75 cfs @ 12.08 hrs, Volume= 2,489 cf, Depth= 5.08"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 4,882 | 98 | Paved parking, HSG B |
| 999 | 61 | >75% Grass cover, Good, HSG B |
| 5,880 | 92 | Weighted Average |
| 999 | | 16.98% Pervious Area |
| 4,882 | | 83.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-7: Subcat P-7

Runoff = 1.73 cfs @ 12.09 hrs, Volume= 5,364 cf, Depth= 3.59"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 8,327 | 98 | Paved parking, HSG B |
| 9,613 | 61 | >75% Grass cover, Good, HSG B |
| 17,940 | 78 | Weighted Average |
| 9,613 | | 53.58% Pervious Area |
| 8,327 | | 46.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-8: Subcat P-8

Runoff = 2.45 cfs @ 12.08 hrs, Volume= 7,894 cf, Depth= 4.75"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 5,099 | 61 | >75% Grass cover, Good, HSG B |
| 14,863 | 98 | Paved parking, HSG B |
| 19,962 | 89 | Weighted Average |
| 5,099 | | 25.54% Pervious Area |
| 14,863 | | 74.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-9: Subcat P-9

Runoff = 0.41 cfs @ 12.09 hrs, Volume= 1,313 cf, Depth= 2.36"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=6.01"

| Area (sf) | CN | Description |
|---|---|---|
| 6,030 | 61 | >75% Grass cover, Good, HSG B |
| 650 | 98 | Paved parking, HSG B |
| 6,680 | 65 | Weighted Average |
| 6,030 | | 90.27% Pervious Area |
| 650 | | 9.73% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Pond 1P: infiltration

Inflow Area = 37,902 sf, 61.19% Impervious, Inflow Depth = 4.20" for 25-year event
Inflow = 4.18 cfs @ 12.09 hrs, Volume= 13,257 cf
Outflow = 4.23 cfs @ 12.08 hrs, Volume= 13,257 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.01 cfs @ 12.02 hrs, Volume= 2,194 cf
Primary = 4.22 cfs @ 12.08 hrs, Volume= 11,064 cf
Routed to Link SP-1 : Study Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 97.48' @ 12.08 hrs Surf.Area= 1,264 sf Storage= 1,659 cf
Flood Elev= 97.00' Surf.Area= 1,264 sf Storage= 1,482 cf

Plug-Flow detention time= 233.6 min calculated for 13,255 cf (100% of inflow)
Center-of-Mass det. time= 234.0 min ( 1,034.6 - 800.6 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 95.00' | 885 cf | **32.58'W x 38.80'L x 2.33'H Field A**<br>2,950 cf Overall - 737 cf Embedded = 2,213 cf x 40.0% Voids |
| #2A | 95.50' | 737 cf | **ADS_StormTech SC-310 +Cap** x 50 Inside #1<br>Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf<br>Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap<br>50 Chambers in 10 Rows |
| #3 | 95.58' | 75 cf | **5.00'D x 3.83'H OCS**-Impervious |
| | | 1,697 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 95.00' | **0.300 in/hr Exfiltration over Wetted area** Phase-In= 0.01' |
| #2 | Primary | 94.20' | **12.0" Round Culvert** L= 52.0' Ke= 0.500<br>Inlet / Outlet Invert= 94.20' / 92.00' S= 0.0423 '/' Cc= 0.900 |

n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3 Device 2 97.00' **4.0' long x 2.60' rise Sharp-Crested Rectangular Weir**
2 End Contraction(s)

**Discarded OutFlow** Max=0.01 cfs @ 12.02 hrs HW=97.39' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

**Primary OutFlow** Max=4.20 cfs @ 12.08 hrs HW=97.48' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 4.20 cfs of 6.30 cfs potential flow)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 4.20 cfs @ 2.26 fps)

## Summary for Link SP-1: Study Point

Inflow Area = 83,203 sf, 66.89% Impervious, Inflow Depth = 4.13" for 25-year event
Inflow = 9.49 cfs @ 12.08 hrs, Volume= 28,627 cf
Primary = 9.49 cfs @ 12.08 hrs, Volume= 28,627 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 2,183 sf, 0.00% Impervious, Inflow Depth = 2.01" for 25-year event
Inflow = 0.11 cfs @ 12.10 hrs, Volume= 366 cf
Primary = 0.11 cfs @ 12.10 hrs, Volume= 366 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,113 sf, 0.00% Impervious, Inflow Depth = 2.01" for 25-year event
Inflow = 0.11 cfs @ 12.10 hrs, Volume= 354 cf
Primary = 0.11 cfs @ 12.10 hrs, Volume= 354 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment P-1: Subcat P-1** Runoff Area=12,617 sf 100.00% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=98 Runoff=2.04 cfs 7,308 cf

**Subcatchment P-2: Subcat P-2** Runoff Area=2,183 sf 0.00% Impervious Runoff Depth=2.84"
Tc=6.0 min CN=61 Runoff=0.16 cfs 517 cf

**Subcatchment P-3: Subcat P-3** Runoff Area=2,113 sf 0.00% Impervious Runoff Depth=2.84"
Tc=6.0 min CN=61 Runoff=0.16 cfs 500 cf

**Subcatchment P-4: Subcat P-4** Runoff Area=11,269 sf 71.99% Impervious Runoff Depth=5.78"
Tc=6.0 min CN=88 Runoff=1.67 cfs 5,426 cf

**Subcatchment P-5: Subcat P-5** Runoff Area=8,854 sf 70.06% Impervious Runoff Depth=5.66"
Tc=6.0 min CN=87 Runoff=1.30 cfs 4,179 cf

**Subcatchment P-6: Subcat P-6** Runoff Area=5,880 sf 83.02% Impervious Runoff Depth=6.24"
Tc=6.0 min CN=92 Runoff=0.92 cfs 3,059 cf

**Subcatchment P-7: Subcat P-7** Runoff Area=17,940 sf 46.42% Impervious Runoff Depth=4.65"
Tc=6.0 min CN=78 Runoff=2.23 cfs 6,948 cf

**Subcatchment P-8: Subcat P-8** Runoff Area=19,962 sf 74.46% Impervious Runoff Depth=5.89"
Tc=6.0 min CN=89 Runoff=3.00 cfs 9,804 cf

**Subcatchment P-9: Subcat P-9** Runoff Area=6,680 sf 9.73% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=65 Runoff=0.58 cfs 1,809 cf

**Pond 1P: infiltration** Peak Elev=97.55' Storage=1,661 cf Inflow=5.23 cfs 16,752 cf
Discarded=0.01 cfs 2,222 cf Primary=5.25 cfs 14,530 cf Outflow=5.26 cfs 16,752 cf

**Link SP-1: Study Point** Inflow=11.75 cfs 36,311 cf
Primary=11.75 cfs 36,311 cf

**Link SP-2: Study Point** Inflow=0.16 cfs 517 cf
Primary=0.16 cfs 517 cf

**Link SP-3: Study Point** Inflow=0.16 cfs 500 cf
Primary=0.16 cfs 500 cf

**Total Runoff Area = 87,499 sf Runoff Volume = 39,550 cf Average Runoff Depth = 5.42"**
**36.39% Pervious = 31,844 sf 63.61% Impervious = 55,655 sf**

## Summary for Subcatchment P-1: Subcat P-1

Runoff = 2.04 cfs @ 12.08 hrs, Volume= 7,308 cf, Depth= 6.95"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 12,617 | 98 | Roofs, HSG B |
| 12,617 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.16 cfs @ 12.09 hrs, Volume= 517 cf, Depth= 2.84"
Routed to Link SP-2 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 2,183 | 61 | >75% Grass cover, Good, HSG B |
| 2,183 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.16 cfs @ 12.09 hrs, Volume= 500 cf, Depth= 2.84"
Routed to Link SP-3 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 0 | 98 | Paved parking, HSG B |
| 2,113 | 61 | >75% Grass cover, Good, HSG B |
| 2,113 | 61 | Weighted Average |
| 2,113 | | 100.00% Pervious Area |
| 0 | | 0.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-4: Subcat P-4

Runoff = 1.67 cfs @ 12.08 hrs, Volume= 5,426 cf, Depth= 5.78"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 3,156 | 61 | >75% Grass cover, Good, HSG B |
| 8,112 | 98 | Paved parking, HSG B |
| 11,269 | 88 | Weighted Average |
| 3,156 | | 28.01% Pervious Area |
| 8,112 | | 71.99% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-5: Subcat P-5

Runoff = 1.30 cfs @ 12.08 hrs, Volume= 4,179 cf, Depth= 5.66"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 2,651 | 61 | >75% Grass cover, Good, HSG B |
| 6,203 | 98 | Paved parking, HSG B |
| 8,854 | 87 | Weighted Average |
| 2,651 | | 29.94% Pervious Area |
| 6,203 | | 70.06% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.92 cfs @ 12.08 hrs, Volume= 3,059 cf, Depth= 6.24"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 4,882 | 98 | Paved parking, HSG B |
| 999 | 61 | >75% Grass cover, Good, HSG B |
| 5,880 | 92 | Weighted Average |
| 999 | | 16.98% Pervious Area |
| 4,882 | | 83.02% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-7: Subcat P-7

Runoff = 2.23 cfs @ 12.09 hrs, Volume= 6,948 cf, Depth= 4.65"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 8,327 | 98 | Paved parking, HSG B |
| 9,613 | 61 | >75% Grass cover, Good, HSG B |
| 17,940 | 78 | Weighted Average |
| 9,613 | | 53.58% Pervious Area |
| 8,327 | | 46.42% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-8: Subcat P-8

Runoff = 3.00 cfs @ 12.08 hrs, Volume= 9,804 cf, Depth= 5.89"
Routed to Pond 1P : infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 5,099 | 61 | >75% Grass cover, Good, HSG B |
| 14,863 | 98 | Paved parking, HSG B |
| 19,962 | 89 | Weighted Average |
| 5,099 | | 25.54% Pervious Area |
| 14,863 | | 74.46% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Subcatchment P-9: Subcat P-9

Runoff = 0.58 cfs @ 12.09 hrs, Volume= 1,809 cf, Depth= 3.25"
Routed to Link SP-1 : Study Point

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-year Rainfall=7.19"

| Area (sf) | CN | Description |
|---|---|---|
| 6,030 | 61 | >75% Grass cover, Good, HSG B |
| 650 | 98 | Paved parking, HSG B |
| 6,680 | 65 | Weighted Average |
| 6,030 | | 90.27% Pervious Area |
| 650 | | 9.73% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, TR-55 Min** |

## Summary for Pond 1P: infiltration

Inflow Area = 37,902 sf, 61.19% Impervious, Inflow Depth = 5.30" for 50-year event
Inflow = 5.23 cfs @ 12.09 hrs, Volume= 16,752 cf
Outflow = 5.26 cfs @ 12.09 hrs, Volume= 16,752 cf, Atten= 0%, Lag= 0.2 min
Discarded = 0.01 cfs @ 11.99 hrs, Volume= 2,222 cf
Primary = 5.25 cfs @ 12.09 hrs, Volume= 14,530 cf
Routed to Link SP-1 : Study Point

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 97.55' @ 12.09 hrs Surf.Area= 1,264 sf Storage= 1,661 cf
Flood Elev= 97.00' Surf.Area= 1,264 sf Storage= 1,482 cf

Plug-Flow detention time= 188.8 min calculated for 16,750 cf (100% of inflow)
Center-of-Mass det. time= 189.1 min ( 983.6 - 794.5 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 95.00' | 885 cf | **32.58'W x 38.80'L x 2.33'H Field A**<br>2,950 cf Overall - 737 cf Embedded = 2,213 cf x 40.0% Voids |
| #2A | 95.50' | 737 cf | **ADS_StormTech SC-310 +Cap** x 50 Inside #1<br>Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf<br>Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap<br>50 Chambers in 10 Rows |
| #3 | 95.58' | 75 cf | **5.00'D x 3.83'H OCS**-Impervious |
| | | 1,697 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 95.00' | **0.300 in/hr Exfiltration over Wetted area** Phase-In= 0.01' |
| #2 | Primary | 94.20' | **12.0" Round Culvert** L= 52.0' Ke= 0.500<br>Inlet / Outlet Invert= 94.20' / 92.00' S= 0.0423 '/' Cc= 0.900 |

| | | | |
|---|---|---|---|
| | | | n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |
| #3 | Device 2 | 97.00' | **4.0' long x 2.60' rise Sharp-Crested Rectangular Weir** |
| | | | 2 End Contraction(s) |

**Discarded OutFlow** Max=0.01 cfs @ 11.99 hrs HW=97.38' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

**Primary OutFlow** Max=5.24 cfs @ 12.09 hrs HW=97.55' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Passes 5.24 cfs of 6.39 cfs potential flow)
↑—**3=Sharp-Crested Rectangular Weir** (Weir Controls 5.24 cfs @ 2.43 fps)

## Summary for Link SP-1: Study Point

Inflow Area = 83,203 sf, 66.89% Impervious, Inflow Depth = 5.24" for 50-year event
Inflow = 11.75 cfs @ 12.09 hrs, Volume= 36,311 cf
Primary = 11.75 cfs @ 12.09 hrs, Volume= 36,311 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-2: Study Point

Inflow Area = 2,183 sf, 0.00% Impervious, Inflow Depth = 2.84" for 50-year event
Inflow = 0.16 cfs @ 12.09 hrs, Volume= 517 cf
Primary = 0.16 cfs @ 12.09 hrs, Volume= 517 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Link SP-3: Study Point

Inflow Area = 2,113 sf, 0.00% Impervious, Inflow Depth = 2.84" for 50-year event
Inflow = 0.16 cfs @ 12.09 hrs, Volume= 500 cf
Primary = 0.16 cfs @ 12.09 hrs, Volume= 500 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

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## Proposed Watershed Plan

## LEGEND

SUBCATCHMENT BOUNDARY

SUBCATCHMENT LABEL (P-1)

FLOW DIRECTION

SPAULDING TURNPIKE (RTE. 16)
(PUBLIC – VARIABLE WIDTH)

CENTRAL AVENUE
(PUBLIC – VARIABLE WIDTH)

SPAULDING TURNPIKE (RTE. 16)
(PUBLIC – VARIABLE WIDTH)

PROPOSED 4-STORY HOTEL
94 GUESTROOMS
GFA=50,120 S.F.
P-1
FFE=105.50

STUDY POINT 1
CENTRAL AVE

STUDY POINT 2
SPAULDING
TURNPIKE

STUDY POINT 3
#45 CENTRAL AVE

P-2 P-3 P-4 P-5 P-6 P-7 P-8 P-9

TP-1 TP-2 TP-3 TP-4

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:

ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:

LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:

TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:


ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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DRAWING TITLE:

PROPOSED WATERSHED PLAN

SHEET No.

WS-2


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# SECTION 6.0 -
## APPENDIX

## Extreme Precipitation Tables

# Extreme Precipitation Tables

## Northeast Regional Climate Center

***Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.***

| Metadata for Point | |
|---|---|
| **Smoothing** | Yes |
| **State** | |
| **Location** | |
| **Latitude** | 43.182 degrees North |
| **Longitude** | 70.875 degrees West |
| **Elevation** | 20 feet |
| **Date/Time** | Mon Dec 22 2025 11:32:27 GMT-0500 (Eastern Standard Time) |

## Extreme Precipitation Estimates

| | 5min | 10min | 15min | 30min | 60min | 120min | | 1hr | 2hr | 3hr | 6hr | 12hr | 24hr | 48hr | | 1day | 2day | 4day | 7day | 10day | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1yr** | 0.26 | 0.40 | 0.50 | 0.65 | 0.81 | 1.03 | **1yr** | 0.70 | 0.98 | 1.20 | 1.55 | 2.00 | 2.61 | 2.86 | **1yr** | 2.31 | 2.75 | 3.15 | 3.88 | 4.45 | **1yr** |
| **2yr** | 0.32 | 0.49 | 0.61 | 0.81 | 1.01 | 1.29 | **2yr** | 0.88 | 1.17 | 1.50 | 1.91 | 2.45 | 3.15 | 3.50 | **2yr** | 2.79 | 3.37 | 3.86 | 4.59 | 5.23 | **2yr** |
| **5yr** | 0.37 | 0.57 | 0.72 | 0.96 | 1.23 | 1.58 | **5yr** | 1.06 | 1.44 | 1.85 | 2.39 | 3.08 | 3.98 | 4.49 | **5yr** | 3.52 | 4.31 | 4.93 | 5.81 | 6.57 | **5yr** |
| **10yr** | 0.40 | 0.63 | 0.80 | 1.09 | 1.42 | 1.85 | **10yr** | 1.22 | 1.69 | 2.18 | 2.83 | 3.66 | 4.75 | 5.41 | **10yr** | 4.21 | 5.21 | 5.94 | 6.93 | 7.80 | **10yr** |
| **25yr** | 0.46 | 0.74 | 0.94 | 1.30 | 1.72 | 2.27 | **25yr** | 1.49 | 2.09 | 2.70 | 3.53 | 4.61 | 6.01 | 6.95 | **25yr** | 5.32 | 6.68 | 7.60 | 8.77 | 9.80 | **25yr** |
| **50yr** | 0.52 | 0.83 | 1.06 | 1.48 | 2.00 | 2.66 | **50yr** | 1.73 | 2.46 | 3.18 | 4.19 | 5.50 | 7.19 | 8.39 | **50yr** | 6.36 | 8.07 | 9.16 | 10.49 | 11.66 | **50yr** |
| **100yr** | 0.58 | 0.94 | 1.21 | 1.71 | 2.32 | 3.12 | **100yr** | 2.00 | 2.89 | 3.75 | 4.96 | 6.54 | 8.59 | 10.14 | **100yr** | 7.61 | 9.75 | 11.04 | 12.54 | 13.88 | **100yr** |
| **200yr** | 0.64 | 1.05 | 1.36 | 1.95 | 2.70 | 3.67 | **200yr** | 2.33 | 3.40 | 4.42 | 5.89 | 7.80 | 10.28 | 12.26 | **200yr** | 9.10 | 11.79 | 13.32 | 15.00 | 16.52 | **200yr** |
| **500yr** | 0.75 | 1.24 | 1.62 | 2.35 | 3.30 | 4.53 | **500yr** | 2.84 | 4.22 | 5.50 | 7.38 | 9.83 | 13.03 | 15.75 | **500yr** | 11.54 | 15.15 | 17.06 | 19.02 | 20.81 | **500yr** |

## Lower Confidence Limits

| | 5min | 10min | 15min | 30min | 60min | 120min | | 1hr | 2hr | 3hr | 6hr | 12hr | 24hr | 48hr | | 1day | 2day | 4day | 7day | 10day | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1yr** | 0.24 | 0.37 | 0.45 | 0.60 | 0.74 | 0.90 | **1yr** | 0.64 | 0.88 | 0.92 | 1.26 | 1.58 | 2.12 | 2.46 | **1yr** | 1.88 | 2.37 | 2.88 | 3.33 | 4.02 | **1yr** |
| **2yr** | 0.31 | 0.49 | 0.60 | 0.81 | 1.00 | 1.18 | **2yr** | 0.86 | 1.16 | 1.36 | 1.83 | 2.36 | 3.04 | 3.40 | **2yr** | 2.69 | 3.27 | 3.75 | 4.47 | 5.05 | **2yr** |
| **5yr** | 0.35 | 0.54 | 0.67 | 0.91 | 1.16 | 1.40 | **5yr** | 1.00 | 1.37 | 1.61 | 2.15 | 2.78 | 3.71 | 4.12 | **5yr** | 3.29 | 3.97 | 4.61 | 5.41 | 6.12 | **5yr** |
| **10yr** | 0.38 | 0.59 | 0.73 | 1.02 | 1.31 | 1.60 | **10yr** | 1.13 | 1.56 | 1.81 | 2.44 | 3.13 | 4.27 | 4.78 | **10yr** | 3.78 | 4.60 | 5.32 | 6.25 | 7.02 | **10yr** |
| **25yr** | 0.44 | 0.66 | 0.82 | 1.18 | 1.55 | 1.91 | **25yr** | 1.34 | 1.87 | 2.11 | 2.84 | 3.65 | 4.93 | 5.79 | **25yr** | 4.37 | 5.57 | 6.49 | 7.56 | 8.44 | **25yr** |
| **50yr** | 0.48 | 0.73 | 0.91 | 1.31 | 1.76 | 2.18 | **50yr** | 1.52 | 2.13 | 2.35 | 3.19 | 4.09 | 5.63 | 6.69 | **50yr** | 4.98 | 6.43 | 7.53 | 8.74 | 9.69 | **50yr** |
| **100yr** | 0.54 | 0.81 | 1.01 | 1.46 | 2.01 | 2.50 | **100yr** | 1.73 | 2.45 | 2.63 | 3.57 | 4.57 | 6.41 | 7.71 | **100yr** | 5.67 | 7.41 | 8.75 | 10.09 | 11.10 | **100yr** |
| **200yr** | 0.59 | 0.89 | 1.13 | 1.64 | 2.28 | 2.86 | **200yr** | 1.97 | 2.80 | 2.93 | 4.00 | 5.10 | 7.29 | 8.89 | **200yr** | 6.45 | 8.55 | 10.15 | 11.65 | 12.75 | **200yr** |
| **500yr** | 0.69 | 1.03 | 1.32 | 1.92 | 2.73 | 3.44 | **500yr** | 2.36 | 3.36 | 3.40 | 4.63 | 5.91 | 8.62 | 10.72 | **500yr** | 7.63 | 10.31 | 12.35 | 14.13 | 15.25 | **500yr** |

## Upper Confidence Limits

| | 5min | 10min | 15min | 30min | 60min | 120min | | 1hr | 2hr | 3hr | 6hr | 12hr | 24hr | 48hr | | 1day | 2day | 4day | 7day | 10day | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1yr** | 0.28 | 0.43 | 0.53 | 0.71 | 0.87 | 1.08 | **1yr** | 0.75 | 1.05 | 1.24 | 1.74 | 2.22 | 2.88 | 3.08 | **1yr** | 2.55 | 2.96 | 3.43 | 4.22 | 4.82 | **1yr** |
| **2yr** | 0.33 | 0.51 | 0.62 | 0.85 | 1.04 | 1.25 | **2yr** | 0.90 | 1.22 | 1.47 | 1.96 | 2.51 | 3.29 | 3.62 | **2yr** | 2.91 | 3.48 | 3.99 | 4.74 | 5.45 | **2yr** |
| **5yr** | 0.39 | 0.61 | 0.75 | 1.03 | 1.31 | 1.58 | **5yr** | 1.13 | 1.55 | 1.86 | 2.50 | 3.20 | 4.24 | 4.85 | **5yr** | 3.75 | 4.66 | 5.27 | 6.22 | 6.99 | **5yr** |
| **10yr** | 0.46 | 0.70 | 0.87 | 1.22 | 1.57 | 1.92 | **10yr** | 1.36 | 1.88 | 2.24 | 3.05 | 3.86 | 5.22 | 6.05 | **10yr** | 4.62 | 5.82 | 6.64 | 7.64 | 8.53 | **10yr** |
| **25yr** | 0.56 | 0.84 | 1.05 | 1.50 | 1.97 | 2.48 | **25yr** | 1.70 | 2.42 | 2.88 | 3.97 | 4.97 | 7.10 | 8.12 | **25yr** | 6.28 | 7.81 | 8.88 | 10.06 | 11.11 | **25yr** |
| **50yr** | 0.64 | 0.98 | 1.22 | 1.75 | 2.35 | 3.00 | **50yr** | 2.03 | 2.93 | 3.50 | 4.84 | 6.03 | 8.78 | 10.18 | **50yr** | 7.77 | 9.79 | 11.08 | 12.37 | 13.59 | **50yr** |
| **100yr** | 0.75 | 1.13 | 1.41 | 2.04 | 2.80 | 3.62 | **100yr** | 2.42 | 3.54 | 4.24 | 5.93 | 7.34 | 10.86 | 12.75 | **100yr** | 9.61 | 12.26 | 13.82 | 15.24 | 16.63 | **100yr** |
| **200yr** | 0.87 | 1.30 | 1.65 | 2.39 | 3.34 | 4.39 | **200yr** | 2.88 | 4.30 | 5.16 | 7.26 | 8.92 | 13.47 | 15.99 | **200yr** | 11.92 | 15.37 | 17.26 | 18.76 | 20.38 | **200yr** |
| **500yr** | 1.06 | 1.58 | 2.03 | 2.95 | 4.19 | 5.65 | **500yr** | 3.62 | 5.52 | 6.67 | 9.50 | 11.56 | 17.92 | 21.57 | **500yr** | 15.86 | 20.74 | 23.17 | 24.73 | 26.67 | **500yr** |

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Northeast Regional Climate Center

## NRCS Web Soil Survey

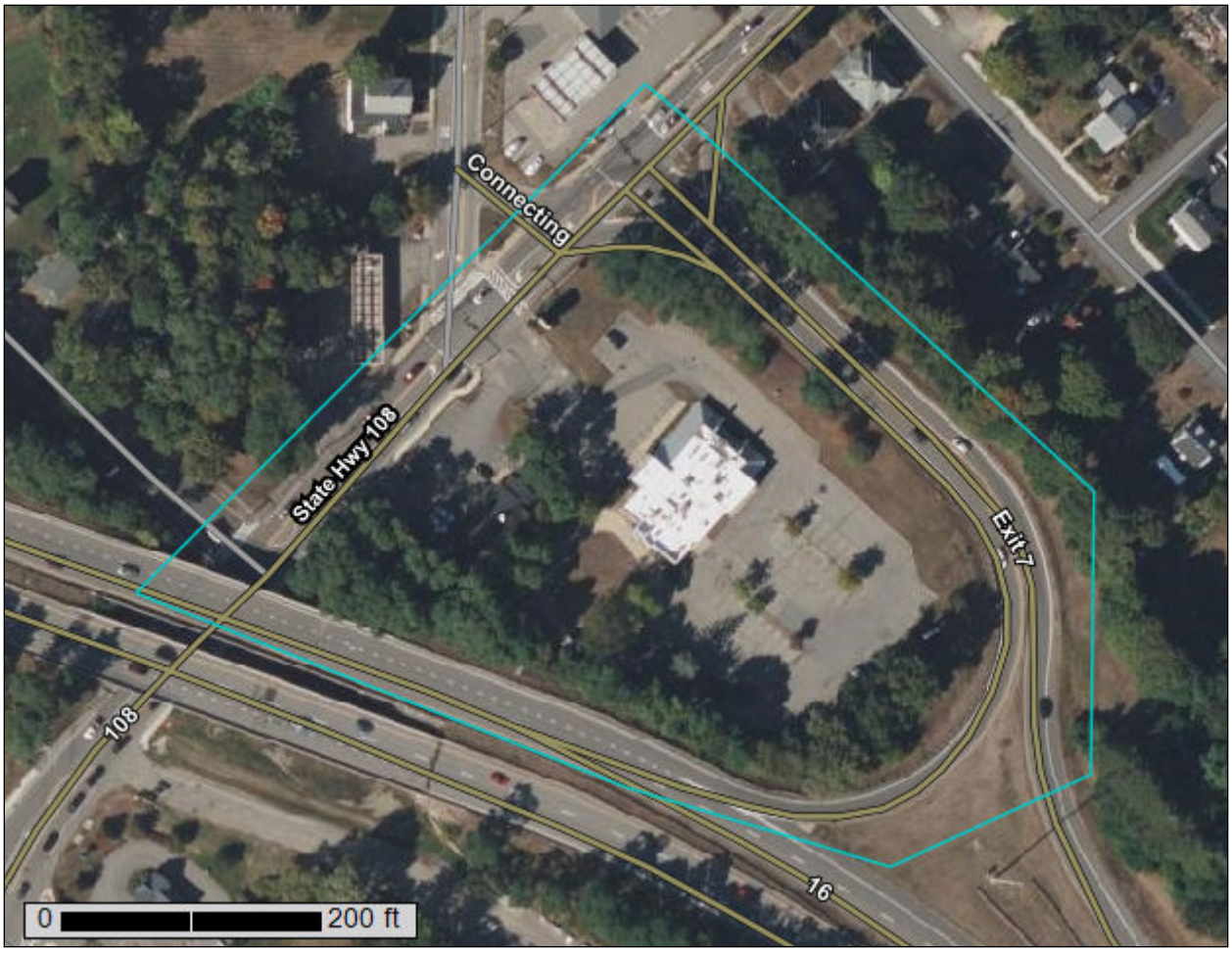
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Strafford County, New Hampshire




December 22, 2025

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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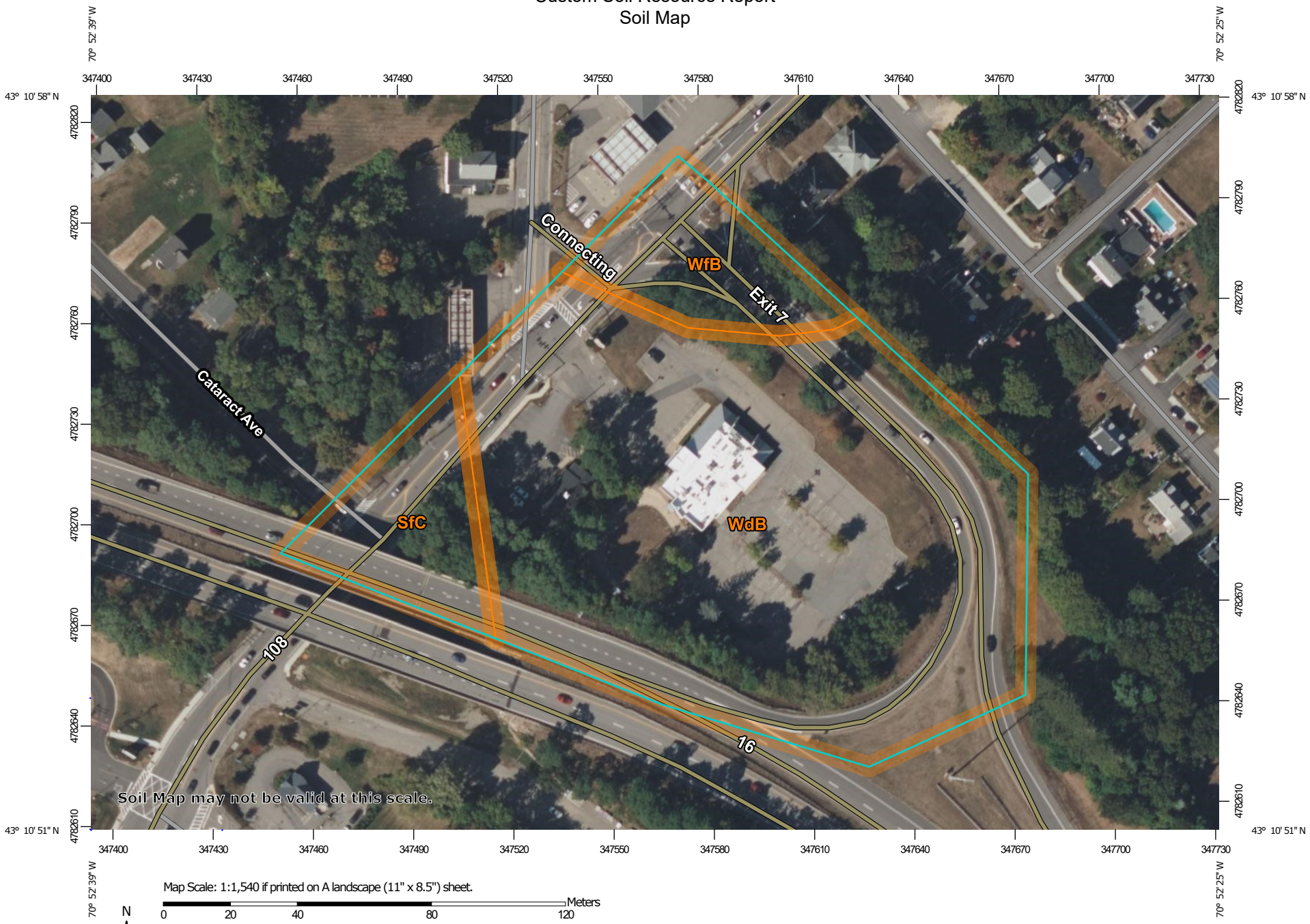
# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:1,540 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 26, Sep 9, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| SfC | Suffield silt loam, 8 to 15 percent slopes | 0.6 | 10.4% |
| WdB | Windsor loamy sand, 3 to 8 percent slopes | 4.5 | 79.2% |
| WfB | Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes | 0.6 | 10.4% |
| **Totals for Area of Interest** | | **5.7** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Strafford County, New Hampshire

## SfC—Suffield silt loam, 8 to 15 percent slopes

### Map Unit Setting

*National map unit symbol:* 9d8v
*Elevation:* 0 to 250 feet
*Mean annual precipitation:* 36 to 71 inches
*Mean annual air temperature:* 39 to 55 degrees F
*Frost-free period:* 140 to 240 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Suffield and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Suffield

#### Typical profile

*H1 - 0 to 19 inches:* silt loam
*H2 - 19 to 28 inches:* silt loam
*H3 - 28 to 41 inches:* silty clay

#### Properties and qualities

*Slope:* 8 to 15 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately high (0.00 to 0.20 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Moderate (about 7.4 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3e
*Hydrologic Soil Group:* C
*Ecological site:* F144AY017NH - Well Drained Lake Plain
*Hydric soil rating:* No

### Minor Components

#### Not named

*Percent of map unit:* 9 percent
*Hydric soil rating:* No

#### Buxton

*Percent of map unit:* 5 percent
*Hydric soil rating:* No

#### Rock outcrop

*Percent of map unit:* 1 percent
*Hydric soil rating:* No

## WdB—Windsor loamy sand, 3 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 2svkf
*Elevation:* 0 to 1,210 feet
*Mean annual precipitation:* 36 to 71 inches
*Mean annual air temperature:* 39 to 55 degrees F
*Frost-free period:* 140 to 250 days
*Farmland classification:* Farmland of local importance

### Map Unit Composition

*Windsor and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Windsor

#### Setting

*Landform:* Outwash terraces
*Landform position (three-dimensional):* Tread
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Loose sandy glaciofluvial deposits derived from granite and/or schist and/or gneiss

#### Typical profile

*Oe - 0 to 1 inches:* moderately decomposed plant material
*A - 1 to 3 inches:* loamy sand
*Bw - 3 to 25 inches:* loamy sand
*C - 25 to 65 inches:* sand

#### Properties and qualities

*Slope:* 3 to 8 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Excessively drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (1.42 to 99.90 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Low (about 4.5 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 2s
*Hydrologic Soil Group:* A
*Ecological site:* F145XY008MA - Dry Outwash
*Hydric soil rating:* No

**Minor Components**

**Hinckley**

*Percent of map unit:* 10 percent
*Landform:* Eskers
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Ecological site:* F145XY008MA - Dry Outwash
*Hydric soil rating:* No

**Deerfield, loamy sand**

*Percent of map unit:* 5 percent
*Landform:* Terraces
*Landform position (three-dimensional):* Tread
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F144AY027MA - Moist Sandy Outwash
*Hydric soil rating:* No

## WfB—Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes

**Map Unit Setting**

*National map unit symbol:* 9d9b
*Elevation:* 0 to 280 feet
*Mean annual precipitation:* 36 to 71 inches
*Mean annual air temperature:* 39 to 55 degrees F
*Frost-free period:* 140 to 240 days
*Farmland classification:* All areas are prime farmland

**Map Unit Composition**

*Windsor variant and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Windsor Variant**

**Typical profile**

*H1 - 0 to 26 inches:* loamy fine sand
*H2 - 26 to 30 inches:* loamy sand
*H3 - 30 to 42 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 8 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Low
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* About 24 to 36 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Low (about 5.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3s
*Hydrologic Soil Group:* A
*Ecological site:* F144AY022MA - Dry Outwash
*Hydric soil rating:* No

**Minor Components**

**Not named**

*Percent of map unit:* 15 percent
*Hydric soil rating:* No

# Soil Information for All Uses

## Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

## Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

### Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

# Custom Soil Resource Report
## Map—Hydrologic Soil Group

Map Scale: 1:1,540 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Soil Rating Lines**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Soil Rating Points**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 26, Sep 9, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

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## Table—Hydrologic Soil Group

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| SfC | Suffield silt loam, 8 to 15 percent slopes | C | 0.6 | 10.4% |
| WdB | Windsor loamy sand, 3 to 8 percent slopes | A | 4.5 | 79.2% |
| WfB | Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes | A | 0.6 | 10.4% |
| **Totals for Area of Interest** | | | **5.7** | **100.0%** |

## Rating Options—Hydrologic Soil Group

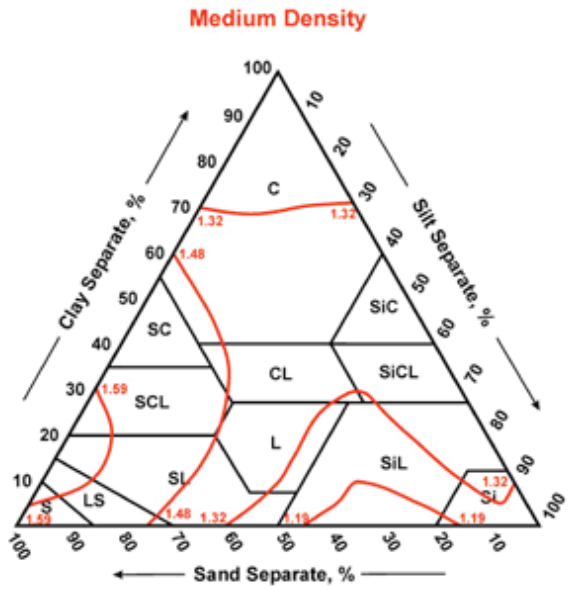
*Aggregation Method:* Dominant Condition

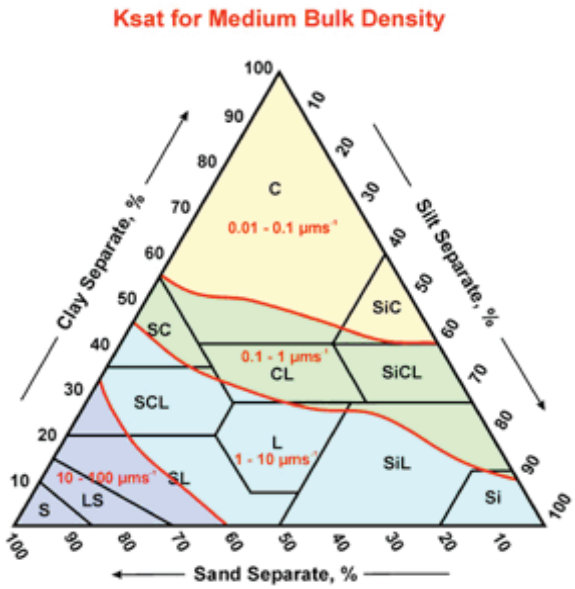
*Component Percent Cutoff: None Specified*

*Tie-break Rule:* Higher

## Ksat Values for New Hampshire Soils

# $K_{sat}$ VALUES
# FOR
# NEW HAMPSHIRE SOILS
### (Including Hydrologic and DES Soil Lot Sizing Groups)




From: **Guide for Estimating Ksat from Soil Properties** (**Exhibit 618-9**). (http://soils.usda.gov/technical/handbook/contents/part618ex.html)


**Sponsored by the Society of Soil Scientists of Northern New England**
**SSSNNE Special Publication No. 5**
**September, 2009**

| Soil Series | legend number | Ksat low - B in/hr | Ksat high - B in/hr | Ksat low - C in/hr | Ksat high - C in/hr | Hyd. Grp. | Group | Land Form | Temp. | Soil Textures | Spodosol ? | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mundal | 610 | 0.6 | 2.0 | 0.06 | 0.6 | C | 3 | Firm, platy, loamy till | frigid | loamy | yes | gravelly sandy loam in Cd |
| Natchaug | 496 | | | 0.20 | 2.0 | D | 6 | Organic Materials - Freshwater | mesic | loamy | no | organic over loam |
| Naumburg | 214 | 6.0 | 20.0 | 6.00 | 20.0 | C | 5 | Outwash and Stream Terraces | frigid | sandy | yes | |
| Newfields | 444 | 0.6 | 2.0 | 0.60 | 2.0 | B | 3 | Loose till, sandy textures | mesic | loamy over sandy | no | sandy or sandy-skeletal |
| Nicholville | 632 | 0.6 | 2.0 | 0.60 | 2.0 | C | 3 | Terraces and glacial lake plains | frigid | silty | yes | very fine sandy loam |
| Ninigret | 513 | 0.6 | 6.0 | 6.00 | 20.0 | B | 3 | Outwash and Stream Terraces | mesic | loamy over sandy | no | sandy or sandy-skeletal |
| Occum | 1 | 0.6 | 2.0 | 6.00 | 20.0 | B | 2 | Flood Plain (Bottom Land) | mesic | loamy | no | loamy over loamy sand |
| Ondawa | 101 | 0.6 | 6.0 | 6.00 | 20.0 | B | 2 | Flood Plain (Bottom Land) | frigid | loamy | no | loamy over loamy sand |
| Ondawa | 201 | 0.6 | 6.0 | 6.00 | 20.0 | B | 2 | Flood Plain (Bottom Land) | frigid | loamy | no | occ flood, loamy over l. sand |
| Ossipee | 495 | | | 0.20 | 2.0 | D | 6 | Organic Materials - Freshwater | frigid | loamy | no | organic over loam |
| Pawcatuck | 497 | | | 20.00 | 100.0 | D | 6 | Tidal Flat | mesic | sandy or sandy-skeletal | no | organic over sand |
| Paxton | 66 | 0.6 | 2.0 | 0.00 | 0.2 | C | 3 | Firm, platy, loamy till | mesic | loamy | no | |
| Peacham | 549 | 0.6 | 2.0 | 0.00 | 0.2 | D | 6 | Firm, platy, silty till, schist & phylitte | frigid | loamy | no | organic over loam |
| Pemi | 633 | 0.6 | 2.0 | 0.06 | 0.6 | C | 5 | Terraces and glacial lake plains | frigid | silty | no | |
| Pennichuck | 460 | 0.6 | 2.0 | 0.60 | 2.0 | B | 4 | Friable till, silty, schist & phyllite | mesic | loamy-skeletal | no | 20 to 40 in. deep |
| Peru | 78 | 0.6 | 2.0 | 0.06 | 0.6 | C | 3 | Firm, platy, loamy till | frigid | loamy | yes | |
| Pillsbury | 646 | 0.6 | 2.0 | 0.06 | 0.2 | C | 5 | Firm, platy, loamy till | frigid | silty | no | |
| Pipestone | 314 | | | | | B | 5 | Outwash and Stream Terraces | mesic | sandy | yes | |
| Pittstown | 334 | 0.6 | 2.0 | 0.06 | 0.2 | C | 3 | Firm, platy, silty till, schist & phyllite | mesic | loamy | no | channery silt loam in Cd |
| Plaisted | 563 | 0.6 | 2.0 | 0.06 | 0.6 | C | 3 | Firm, platy, silty till, schist & phyllite | frigid | loamy | yes | channery silt loam in Cd |
| Podunk | 104 | 0.6 | 6.0 | 6.00 | 20.0 | B | 3 | Flood Plain (Bottom Land) | frigid | loamy | no | loamy to coarse sand in C |
| Pondicherry | 992 | | | 6.00 | 20.0 | D | 6 | Organic Materials - Freshwater | frigid | sandy or sandy-skeletal | no | organic over sand |
| Poocham | 230 | 0.6 | 2.0 | 0.20 | 2.0 | B | 3 | Terraces and glacial lake plains | mesic | silty | no | silt loam in C |
| Pootatuck | 4 | 0.6 | 6.0 | 6.00 | 20.0 | B | 3 | Flood Plain (Bottom Land) | mesic | loamy | no | single grain in C |
| Quonset | 310 | 2.0 | 20.0 | 20.00 | 100.0 | A | 1 | Outwash and Stream Terraces | mesic | sandy-skeletal | no | shale |
| Rawsonville | 98 | 0.6 | 6.0 | 0.60 | 6.0 | C | 4 | Loose till, bedrock | frigid | loamy | yes | 20 to 40 in. deep |
| Raynham | 533 | 0.2 | 2.0 | 0.06 | 0.2 | C | 5 | Terraces and glacial lake plains | mesic | silty | no | |
| Raypol | 540 | 0.6 | 2.0 | 6.00 | 100.0 | D | 5 | Outwash and Stream Terraces | mesic | co. loamy over sandy (skeletal) | no | |
| Redstone | 665 | 2.0 | 6.0 | 6.00 | 20.0 | A | 1 | Weathered Bedrock Till | frigid | fragmental | yes | loamy cap |
| Ricker | 674 | 2.0 | 6.0 | 2.00 | 6.0 | A | 4 | rganic over bedrock (up to 4" of miner | cryic | fibric to hemic | no | well drained, less than 20 in. deep |
| Ridgebury | 656 | 0.6 | 6.0 | 0.00 | 0.2 | C | 5 | Firm, platy, loamy till | mesic | loamy | no | |
| Rippowam | 5 | 0.6 | 6.0 | 6.00 | 20.0 | C | 5 | Flood Plain (Bottom Land) | mesic | loamy | no | |
| Roundabout | 333 | 0.2 | 2.0 | 0.06 | 0.6 | C | 5 | Terraces and glacial lake plains | frigid | silty | no | silt loam in the C |
| Rumney | 105 | 0.6 | 6.0 | 6.00 | 20.0 | C | 5 | Flood Plain (Bottom Land) | frigid | loamy | no | |
| Saco | 6 | 0.6 | 2.0 | 6.00 | 20.0 | D | 6 | Flood Plain (Bottom Land) | mesic | silty | no | strata |
| Saddleback | 673 | 0.6 | 2.0 | 0.60 | 2.0 | C/D | 4 | Loose till, bedrock | cryic | loamy | yes | less than 20 in. deep |
| Salmon | 630 | 0.6 | 2.0 | 0.60 | 2.0 | B | 2 | Terraces and glacial lake plains | frigid | silty | yes | very fine sandy loam |
| Saugatuck | 16 | 0.06 | 0.2 | 6.00 | 20.0 | C | 5 | Outwash and Stream Terraces | mesic | sandy | yes | ortstein |
| Scantic | 233 | 0.0 | 0.2 | 0.00 | 0.2 | D | 5 | Silt and Clay Deposits | frigid | fine | no | |
| Scarboro | 115 | 6.0 | 20.0 | 6.00 | 20.0 | D | 6 | Outwash and Stream Terraces | mesic | sandy | no | organic over sand, non stony |
| Scio | 531 | 0.6 | 2.0 | 0.60 | 2.0 | B | 3 | Terraces and glacial lake plains | mesic | silty | no | gravelly sand in 2C |
| Scitico | 33 | 0.0 | 0.2 | 0.00 | 0.2 | C | 5 | Silt and Clay Deposits | mesic | fine | no | |
| Scituate | 448 | 0.6 | 2.0 | 0.06 | 0.2 | C | 3 | Firm, platy, sandy till | mesic | loamy | no | loamy sand in Cd |
| Searsport | 15 | 6.0 | 20.0 | 6.00 | 20.0 | D | 6 | Outwash and Stream Terraces | frigid | sandy | no | organic over sand |
| Shaker | 439 | 2.0 | 6.0 | 0.00 | 0.2 | C | 5 | Sandy/loamy over silt/clay | mesic | co. loamy over clayey | no | |
| Shapleigh | 136 | | | | | C/D | 4 | Sandy Till | mesic | sandy | yes | less than 20 in. deep |
| Sheepscot | 14 | 6.0 | 20.0 | 6.00 | 20.0 | B | 3 | Outwash and Stream Terraces | frigid | sandy-skeletal | yes | gravelly coarse sand |
| Sisk | 667 | 0.6 | 2.0 | 0.00 | 0.6 | C | 3 | Firm, platy, loamy till | cryic | loamy | yes | sandy loam in Cd |
| Skerry | 558 | 0.6 | 2.0 | 0.06 | 0.6 | C | 3 | Firm, platy, sandy till | frigid | loamy | yes | loamy sand in Cd |
| Squamscott | 538 | 6.0 | 20.0 | 0.06 | 0.6 | C | 5 | Sandy/loamy over silt/clay | mesic | sandy over loamy | yes | |
| Stetson | 523 | 0.6 | 6.0 | 6.00 | 20.0 | B | 2 | Outwash and Stream Terraces | frigid | sandy-skeletal | yes | loamy over gravelly |
| Stissing | 340 | 0.6 | 2.0 | 0.06 | 0.2 | C | 5 | Firm, platy, silty till, schist & phyllite | mesic | loamy | no | |
| Success | 154 | 2.0 | 6.0 | 6.00 | 20.0 | A | 1 | Sandy Till | frigid | sandy-skeletal | yes | cemented |
| Sudbury | 118 | 2.0 | 6.0 | 2.00 | 20.0 | B | 3 | Outwash and Stream Terraces | mesic | sandy | no | loam over gravelly sand |

EVERSOURCE ENERGY

1700 Lafayette Road
Portsmouth, NH 03801

**Trevor S Emmons**
**603-332-7515**
**Trevor.emmons@eversource.com**

February 2, 2026

Barry Stowe, Civil Design Manager
Opechee Construction Corporation
11 Corporate Drive
Belmont, NH 03220

Dear Mr. Stowe:

I am responding to your request to confirm the availability of electric service for the proposed hotel project being constructed by Opechee Construction Corporation.

The proposed project consists of the redevelopment of the existing former Burger King at 47 Central Avenue into a 4-story hotel building with 94-units. The proposed development will be constructed with its primary frontage on Central Avenue and will be sited along the Spaulding Turnpike.

The developer will be responsible for the installation of all underground/overhead facilities and infrastructure required to service the new building. The proposed building service will be fed from an existing utility easement across the 45 Central Avenue property in a final manner to be determined by Eversource Engineering. The developer will work with Eversource to obtain all necessary easements and licenses for the proposed underground/overhead facilities listed above.

This letter serves as confirmation that Eversource has sufficient capacity in the area to provide service to this proposed development. The cost of extending service to the aforementioned location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled "Site Concept 47 Central Dover" dated January 7, 2026, shows proposed transformer locations to service your proposed project.

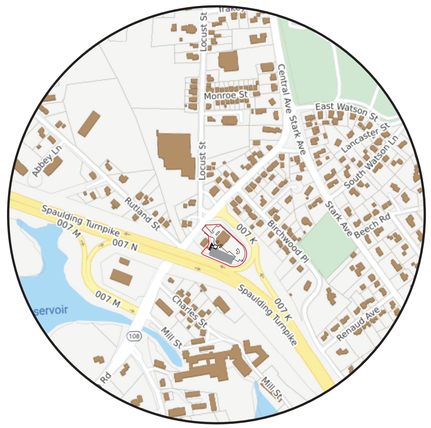
All final installations of the service shall meet all clearances, physical protection, and access requirements as outlined in Eversource's "Requirements for Electric Service Connections • Information and Requirements for Electric Supply" *(https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2)*

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-332-7515

Respectfully.

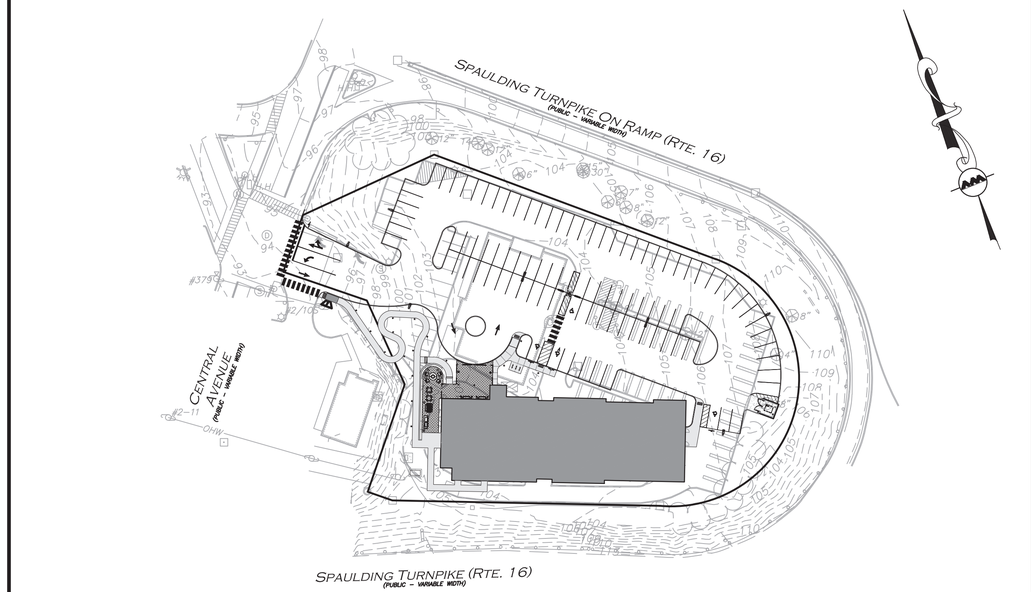
Trevor Emmons
NH Eastern Regional Engineer, Eversource

cc: (via e-mail)
Thomas Boulter, Eastern Region Operations Manager, Eversource
Nickolai Kosko, Field Supervisor, Electric Design, Eversource




**LOCUS MAP**
**SCALE: 1" = 600'**

# SITE DEVELOPMENT PLANS FOR
# TOWNPLACE SUITES BY MARRIOTT
## 47 CENTRAL AVE
## (MAP 17, LOT 76)
## DOVER, NEW HAMPSHIRE 03820




GRAPHIC SCALE
60 0 30 60 120 240
( IN FEET )
1 inch = 60 ft.

| LIST OF DRAWINGS | | | | | |
|---|---|---|---|---|---|
| DRAWING TITLE | SHEET NO. | ISSUED | REV 1 | REV 2 | REV 3 |
| EXISTING CONDITIONS | V-101 | 01-30-26 | - | - | - |
| SITE PREPARATION PLAN | C-101 | 01-30-26 | - | - | - |
| LAYOUT & MATERIALS PLAN | C-102 | 01-30-26 | - | - | - |
| GRADING & DRAINAGE | C-103 | 01-30-26 | - | - | - |
| UTILITIES PLAN | C-104 | 01-30-26 | - | - | - |
| SITE LIGHTING PLAN | C-105 | 01-30-26 | - | - | - |
| NEIGHBORHOOD PLAN | C-106 | 01-30-26 | - | - | - |
| TRUCK TURNING PLAN | C-107 | 01-30-26 | - | - | - |
| SEWER PLAN & PROFILE | C-201 | 01-30-26 | - | - | - |
| DETAILS | C-501 | 01-30-26 | - | - | - |
| DETAILS | C-502 | 01-30-26 | - | - | - |
| DETAILS | C-503 | 01-30-26 | - | - | - |
| DETAILS | C-504 | 01-30-26 | - | - | - |
| CITY OF DOVER STANDARD DETAILS | C-505 | 01-30-26 | - | - | - |
| CITY OF DOVER STANDARD DETAILS | C-506 | 01-30-26 | - | - | - |
| SEWER SPECIFICATIONS | C-507 | 01-30-26 | - | - | - |
| LANDSCAPING PLAN | L-101 | 01-30-26 | - | - | - |
| LANDSCAPING DETAILS | L-501 | 01-30-26 | - | - | - |
| LANDSCAPING NOTES | L-502 | 01-30-26 | - | - | - |
| EXTERIOR ELEVATIONS | A3.01 | 01-30-26 | - | - | - |
| EXTERIOR ELEVATIONS | A3.02 | 01-30-26 | - | - | - |
| EXTERIOR RENDERING | A3.03 | 01-30-26 | - | - | - |


OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130
PHONE:

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

DESIGN-BUILD FIRM/ARCHITECT:
OPECHEE CONSTRUCTION CORPORATION
11 CORPORATE DRIVE
BELMONT, NH 03220
PHONE: (603) 527-9090

CIVIL ENGINEER / SURVEYOR / LANDSCAPE ARCHITECT:
ALLEN & MAJOR ASSOCIATES, INC.
400 HARVEY ROAD
MANCHESTER, NH 03103
PHONE: 603.627.5500

TRAFFIC ENGINEER:
VANASSE ASSOCIATES, INC.
35 NEW ENGLAND BUSINESS CENTER DRIVE, SUITE 140
ANDOVER, MA 01810


| PERMITS/APPROVALS | PERMIT NUMBER | APPROVED DATE | EXPIR. DATE |
|---|---|---|---|
| CITY OF DOVER SITE PLAN REVIEW | TBD | TBD | TBD |
| CITY OF DOVER CONDITIONAL USE PERMIT | TBD | TBD | TBD |
| NH DES SEWER CONNECTION PERMIT | TBD | TBD | TBD |
| | | | |
| | | | |
| | | | |
| | | | |

STATE OF NEW HAMPSHIRE
BRIAN D. JONES
No. 13809
LICENSED PROFESSIONAL ENGINEER
01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

OWNER'S SIGNATURE DATE


ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501

WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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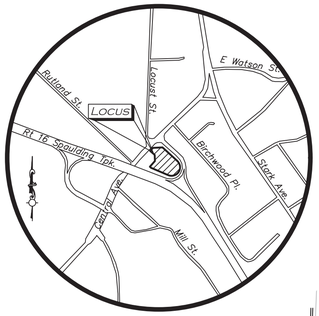
**ISSUED FOR CITY OF DOVER T.R.C. REVIEW: JANUARY 30, 2026**

PLANNING BOARD FILE NUMBER: TBD

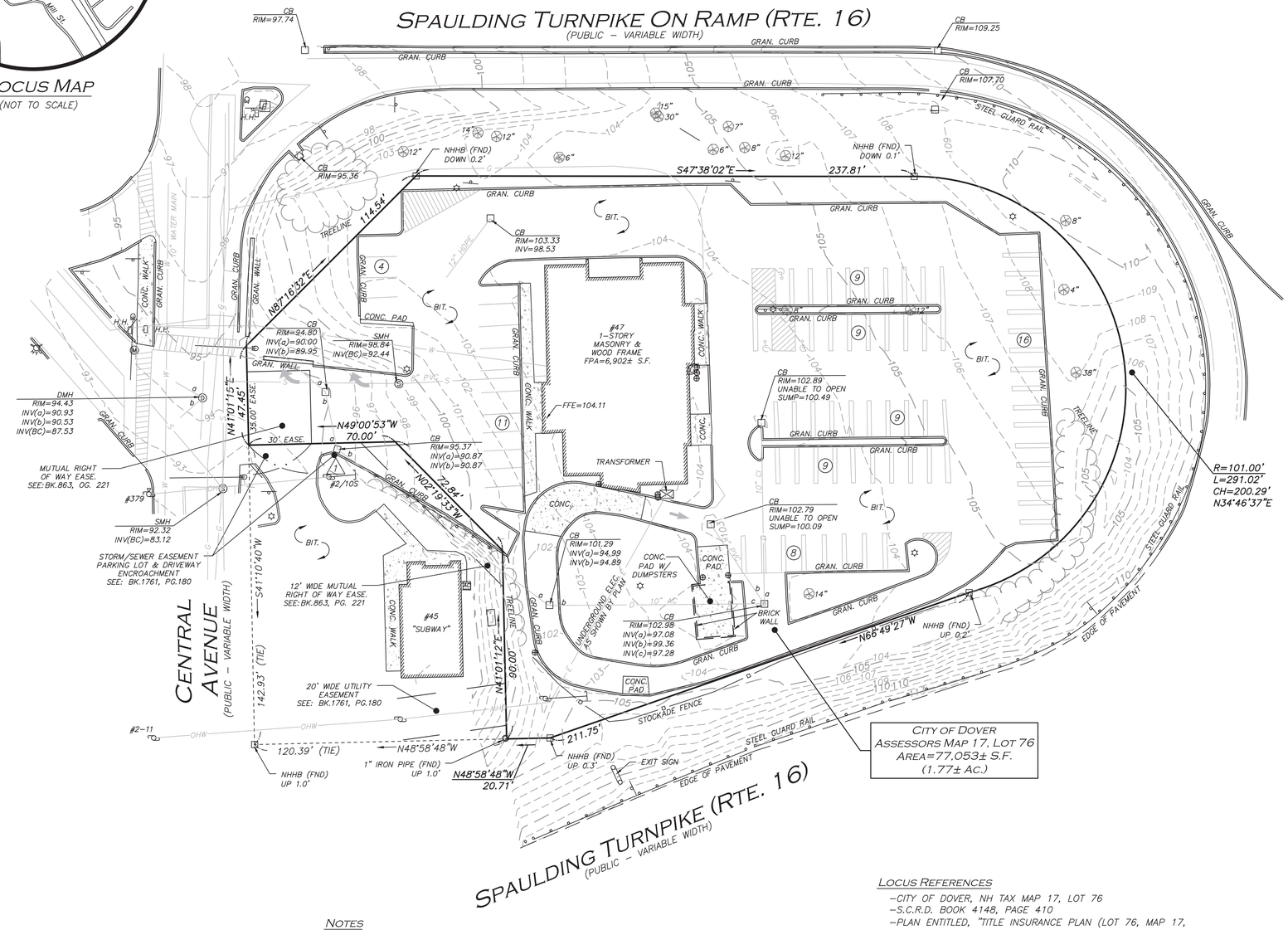
R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_COVER.DWG

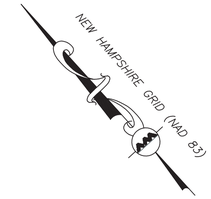



LOCUS MAP
(NOT TO SCALE)

| PARKING SUMMARY | |
|---|---|
| STANDARD STALLS | 72 |
| HANDICAPPED STALLS | 3 |
| TOTAL STALLS | 75 |

| BENCHMARK SUMMARY | | |
|---|---|---|
| TBM # | DESCRIPTION | ELEV. |
| 1 | SPIKE IN UTILITY POLE #2/10S | 95.63 |




## LEGEND

| | |
|---|---|
| CONCRETE BOUND (CB) | ⊡ |
| IRON PIPE (IP) | ○ |
| IRON ROD (IR) | ◦ |
| DRAIN MANHOLE (DMH) | Ⓓ |
| SEWER MANHOLE (SMH) | Ⓢ |
| MISC. MANHOLE (MH) | Ⓜ |
| CATCH BASIN (CB) | □ |
| ROUND CATCH BASIN (RCB) | ⊞ |
| UTILITY POLE | |
| UTILITY POLE W/LIGHT | |
| GUY WIRE | |
| FIRE HYDRANT | |
| WATER GATE | |
| GAS GATE | |
| BOLLARD | |
| TREE | |
| BUSH / SHRUB | |
| SIGN | |
| MAILBOX | MB |
| TRANSFORMER | ⊠ |
| HAND HOLE | H.H. |
| AIR CONDITIONER | AC |
| HANDICAPPED PARKING SPACE | |
| TRAFFIC MAST | |
| PAINTED ARROW | |
| PARKING SPACE COUNT | 16 |
| CONCRETE | |
| BUILDING | |
| BUFFER ZONE | |
| EASEMENT LINE | |
| 1' CONTOUR | 53 |
| 5' CONTOUR | 55 |
| PROPERTY LINE | |
| ABUTTERS LINE | |
| STONE RETAINING WALL | |
| TREE LINE | |
| EDGE OF PAVEMENT | |
| CURB | |
| CHAIN LINK FENCE | x |
| STOCKADE FENCE | |
| GUARDRAIL | |
| WATER LINE | W |
| SEWER LINE | S |
| DRAIN LINE | D |
| OVERHEAD WIRES | OHW |
| FINISHED FLOOR ELEVATION | FFE |
| BITUMINOUS | BIT. |
| CONCRETE | CONC. |
| FOUND | FND |
| NOW OR FORMERLY | N/F |
| BOOK | BK. |
| PAGE | PG. |

### UTILITY STATEMENT

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

### NOTES

1. NORTH ARROW IS BASED ON NEW HAMPSHIRE GRID COORDINATE SYSTEM (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM THE STRAFFORD COUNTY REGISTRY OF DEEDS IN DOVER, NH
3. VERTICAL DATUM IS NAVD 88 ESTABLISHED USING RTK GPS OBSERVATION.
4. CONTOUR INTERVAL IS ONE FOOT (1').
5. SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (COMMUNITY PANEL NUMBER 33017C0320E, EFFECTIVE DATE, 9/30/2015
6. PER WETLAND DELINEATION REPORT PREPARED BY STONEY RIDGE ENVIRONMENTAL, LLC DATED DECEMBER 29, 2025, THERE ARE NOT WETLANDS ON THE PROPERTY. FIELD EVALUATION PERFORMED BY CYNTHIA M. BALCIUS, CSS 061.

### LOCUS REFERENCES

–CITY OF DOVER, NH TAX MAP 17, LOT 76
–S.C.R.D. BOOK 4148, PAGE 410
–PLAN ENTITLED, "TITLE INSURANCE PLAN (LOT 76, MAP 17, CENTRAL AVENUE DOVER, NEW HAMPSHIRE PREPARED FOR BURGER KING CORPORATION", SCALE: 1"=20', DATED: JUNE 04, 1990, PREPARED BY: ALLAN H. SWANSON, INC., AND ON FILE AT THE S.C.R.D. AS PLAN BK. 38A, PG. 3.

### PLAN REFERENCES

–PLAN ENTITLED, "PLAN OF LOTS DOVER, NEW HAMPSHIRE FOR: PAUL H. & LILLIAN S. DANTOS & C. JEANNINE LORD", SCALE: 1"=20', DATED: APRIL, 1984, PREPARED BY: JOHN W. DURGIN ASSOCIATES, INC., AND ON FILE AT THE S.C.R.D. AS PLAN NO. 24A–21.

GRAPHIC SCALE

30 0 15 30 60 120
( IN FEET )
1 inch = 30 ft.

R:\PROJECTS\1173–31\SURVEY\DRAWINGS\CURRENT\S–1173–31–EC.DWG
FB# ???? PG. ???

THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN DECEMBER 18, 2025 AND DECEMBER 22. 2025 AND HAD AN ERROR OF CLOSURE OF NO GREATER THAN 1/10,000.

ALLEN & MAJOR ASSOCIATES, INC.

STATE OF NEW HAMPSHIRE — No. 908 JAMES P. SMITH — LAND SURVEYOR — SIGNATURE

JAMES P. SMITH NH LLS #908 — 1-22-2026 DATE

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

APPLICANT\OWNER:

OPEECHEE CONSTRUCTION
11 CORPORATE DRIVE
BELMONT, NH 03220

PROJECT:

TAX MAP 17 LOT 76
47 CENTRAL AVE, DOVER, NH

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-22-2026 |
| SCALE: | 1" = 30' | DWG. NAME: | S-1173-31-EC |
| DRAFTED BY: | SRP/CTP | CHECKED BY: | JPS |

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:

EXISTING CONDITIONS PLAN

SHEET No.

V-101

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## EROSION CONTROL AND SEDIMENT CONTROL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PROPOSED EROSION CONTROL MEASURES AND THE WORK REQUIRED TO PREPARE THE SITE FOR CONSTRUCTION.

2. AS CONSTRUCTION DISTURBANCE IS GREATER THAN 1 ACRE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT NOI, AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL NEED TO BE SUBMITTED TO THE EPA NEW ENGLAND. THE NPDES PERMIT FOR STORM WATER DISCHARGE, & CONSTRUCTION GENERAL PERMIT NOI IS REQUIRED TO BE SUBMITTED AT LEAST 14 DAYS PRIOR TO COMMENCING CONSTRUCTION.

3. OWNER AND CONTRACTOR ARE RESPONSIBLE FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT NOI. COPIES OF ALL SWPPP REPORTS SHALL BE PROVIDED TO THE CITY OF DOVER WITHIN 3 DAYS OF EACH INSPECTION.

4. APPLICABLE WORK AND MATERIALS SHALL COMPLY WITH ALL CITY OF DOVER, NH DES, NH REGULATIONS AND CODES AND O.S.H.A. STANDARDS. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE SITE PLAN REGULATIONS FROM THE CITY OF DOVER, NH PLANNING BOARD, AND THE PUBLIC WORKS DEPARTMENT SPECIFICATIONS, USDA SOIL CONSERVATION SERVICE VEGETATIVE PRACTICES IN SITE DEVELOPMENT.

5. AREAS WITH OVER 3:1 SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SC150BN).

6. SILT CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS TO SILT CONTROLS SHOWN ON THE APPROVED PLANS AS A RESULT OF ACTUAL FIELD CONDITIONS OR CONSTRUCTION PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH B.M.P. (BEST MANAGEMENT PRACTICES) PER THE E.P.A. 1992 "STORMWATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES" MANUAL. ANY SUCH MODIFICATIONS SHALL BE INSTALLED AS APPROVED BY THE ENGINEER.

7. AREAS OF EXPOSED SOIL UNDERGOING CONSTRUCTION THAT WILL NOT BE COVERED AND OR FINISHED GRADED WITHIN 7 DAYS OF EXPOSURE SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL MEASURES WITHIN 7 DAYS OF DISTURBANCE. TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE EROSION CONTROL MESH, NETTING OR MULCH AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND SHOWN ON THE DESIGN PLANS. IF HAY OR STRAW MULCH IS USED IT SHALL BE APPLIED AT THE RATE OF 1.5 TO 2 TONS PER ACRE OR 70 TO 90 LBS. PER 1,000 S.F. APPLICATION AREA SHALL BE SUFFICIENTLY COVERED WITH MULCH TO AVOID ANY VISIBLE SOIL EXPOSURE. MULCH SHALL BE KEPT MOIST TO AVOID LOSS DUE TO WIND. MULCH AND NETTING SHALL BE APPLIED IN THE BASE OF ALL GRASSED WATERWAYS AND IN VEGETATIVE SLOPES WHICH EXCEED 15% AND DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS.

8. IF DISTURBED AREAS DO NOT RECEIVE FINAL SEEDING BY SEPTEMBER 15 OF THE CONSTRUCTION YEAR, THEN ALL DISTURBED AREAS SHALL BE SEEDED WITH A WINTER COVER CROP AT THE RATE OF 2 LBS PER 1,000 SQUARE FEET. WINTER SEEDING SHALL BE COVERED WITH EROSION CONTROL MESH (MULCH AND NETTING). HEAVY GRADE MATS SHALL BE USED IN THE BASE OF ALL GRASSED WATERWAYS, ON VEGETATED SLOPES IN EXCESS OF 15%, AND ANY DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS. MULCH AND NETTING SHALL ALSO BE PROVIDED FOR ADDITIONAL WINTER PROTECTION.

9. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH HAY AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDED WITH WINTER RYE (FOR FALL SEEDING AT 3LB/1,000 SF) OR OATS (FOR SUMMER SEEDING AT 2LB/1,000 SF) AND THEN COVERED WITH HAY MULCH (AT 100LB/1,000 SF) OR AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL. LOAM SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE OWNER AND ENGINEER.

10. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED ACCORDING TO THE STORMWATER POLLUTION PREVENTION PLANS. THESE SHALL BE MAINTAINED DURING CONSTRUCTION TO REMOVE SEDIMENT FROM RUNOFF WATER. ALL THE FILTER BARRIERS AND EROSION CONTROL BERMS SHALL BE INSPECTED AFTER ANY RAINFALL OR RUNOFF EVENT, MAINTAINED AND CLEANED UNTIL ALL AREAS HAVE AT LEAST 85–90% VIGOROUS PERENNIAL COVER OF GRASSES.

11. A WATERING TRUCK SHALL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AND AS REQUIRED IN ACCORDANCE WITH ENV–A1000.

12. THE CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID ALLOWING SEDIMENTS TO ENTER THE STORM DRAIN SYSTEM DURING CONSTRUCTION. CATCH BASIN INLETS SHALL ALSO BE PROTECTED DURING CONSTRUCTION BY THE USE OF STONE INLET PROTECTION AROUND EACH INLET. INLET PROTECTION MAY BE REMOVED ONLY AFTER FINISHED AREAS ARE PAVED AND THE VEGETATED SLOPES ARE ESTABLISHED WITH AT LEAST 85–90% OF VIGOROUS PERENNIAL GROWTH.

13. REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON THE COMPLETION OF CONSTRUCTION. FOLLOWING SEED BED PREPARATION ALL AREAS NOT NOTED TO RECEIVE COVER SHALL BE LOAM AND SEEDED. AREAS SEEDED BETWEEN MAY 15 TO AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15TH. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE OR 70 TO 90 LBS. PER 1,000 S.F.

14. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS FOR TEMPORARY SEEDED AREAS MAY BE APPLIED AS FOLLOWS:
    - 10–10–10 FERTILIZER (N–P205–K20 OR EQUAL)-APPLICATION RATE= 25 LBS/1,000 S.F.
    - GROUND LIMESTONE (85% OF TOTAL CARBONATES, LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT 50% WILL PASS A 100 MESH SIEVE AND 90% WILL PASS THROUGH A 20 MESH SIEVE. APPLICATION RATE= 100 LB/1,000 S.F.
    - WHEN FERTILIZER IS APPLIED WITHIN 100' OF ANY RIVER, STREAM, POND, OR LAKE IT SHALL BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER.

15. AT THE OWNER'S DISCRETION ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED TO MAINTAIN STABILITY OF EARTHWORKS AND FINISHED GRADED AREAS. THE CONTRACTOR, AT HIS EXPENSE, WILL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ADDITIONAL MEASURES AS SPECIFIED BY THE OWNER. THIS INCLUDES BUT IS NOT LIMITED TO REQUESTS BY NH DES AND THE MUNICIPALITY, AS AUTHORIZED BY THE OWNER.

16. INSPECTIONS AND MONITORING MAINTENANCE MEASURES SHALL BE APPLIED DURING THE ENTIRE CONSTRUCTION CYCLE. WEEKLY INSPECTIONS SHALL BE HELD THROUGH THE DURATION OF CONSTRUCTION ACTIVITY. WEEKLY INSPECTION REPORTS SHALL BE MAINTAINED IN THE CONTRACTORS FIELD OFFICE. IN ADDITION TO THE NORMAL WEEKLY INSPECTIONS, THE CONTRACTOR SHALL PERFORM AN INSPECTION OF ALL EROSION CONTROL MEASURES AFTER EACH RAINFALL AT A MINIMUM OF (1/4" OR GREATER OF RAINFALL) OR RUNOFF EVENT, AND PERFORM THE NECESSARY REPAIRS. THE INSPECTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE SITE'S DOWN STREAM DISCHARGE POINTS. THE CONTRACTOR SHALL MAINTAIN A LOG IN ACCORDANCE WITH THE PLANS, NHDES, AND CITY OF DOVER, NH.

17. IF ANY EVIDENCE OF SEDIMENTATION IS OBSERVED IN THE INLETS, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE A PLAN TO THE ENGINEER TO REMOVE ANY ACCUMULATED SEDIMENT IN THESE AREAS. THE CONTRACTOR SHALL ALSO IMMEDIATELY PROVIDE ADDITIONAL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT FURTHER DEGRADATION OF THE AREA.

18. FOLLOWING THE TEMPORARY OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA BIMONTHLY TO ENSURE THE AREAS HAVE A MINIMUM OF 85–90% VEGETATED VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW UP INSPECTIONS IN THE EVEN OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

19. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT–OF–WAY MUST BE REMOVED IMMEDIATELY.

20. STOCKPILES SHALL BE SURROUNDED ON THEIR PERIMETERS WITH STAKED HAYBALES AND/OR SILTATION FENCES TO PREVENT AND/OR CONTROL SILTATION AND EROSION.

21. ALL EXISTING & PROPOSED CATCH BASINS SUBJECT TO STORMWATER RUNOFF DURING CONSTRUCTION SHALL HAVE STONE INLET PROTECTION AND SILT SACKS INSTALLED OR AS DIRECTED BY THE OWNER/ENGINEER. NO SEDIMENTATION SHALL ENTER THE ON–SITE OR OFF–SITE DRAINAGE SYSTEMS AT ANY TIME.

22. CONTRACTOR TO CONTROL FUGITIVE DUST IN ACCORDANCE WITH ENV–A 1002. CONTRACTOR TO PREVENT, ABATE, AND CONTROL THE EMISSION OF FUGITIVE DUST, INCLUDING BUT NOT LIMITED TO THE FOLLOWING METHODS: WETTING, COVERING, SHIELDING OR VACUUMING.

23. IF DEWATERING IS NECESSARY IT SHALL ONLY BE COMPLETED AS FOLLOWS: THE DISCHARGE SHALL BE STOPPED IMMEDIATELY IF THE RECEIVING AREA SHOWS ANY SIGN OF INSTABILITY OR EROSION. ALL CHANNELS, SWALES, AND DITCHES DUG FOR DISCHARGING WATER FROM THE EXCAVATED AREA SHALL BE STABLE PRIOR TO DIRECTING DISCHARGE TO THEM. IF A CONSTRUCTION EQUIPMENT BUCKET IS USED, IT SHALL EMPTY THE MATERIAL TO A STABLE AREA. NO DEWATERING SHALL OCCUR DURING PERIODS OF INTENSE, HEAVY RAIN. FLOW TO THE SEDIMENT REMOVAL STRUCTURE SHALL NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR ITS VOLUME CAPACITY. WHENEVER POSSIBLE, THE DISCHARGE FROM THE SEDIMENT REMOVAL STRUCTURE SHALL DRAIN TO A WELL–VEGETATED BUFFER BY SHEET FLOW WHILE MAXIMIZING THE DISTANCE TO THE NEAREST WATER RESOURCE AND MINIMIZING THE SLOPE OF THE BUFFER AREA. THERE SHALL BE NO DIRECT DISCHARGE TO EXISTING WETLANDS OR STREAMS. ALL DISCHARGE SHALL BE IN COMPLIANCE WITH STATE, LOCAL, AND FEDERAL REQUIREMENTS.

## GENERAL NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

2. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

3. IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE, THE PROPERTY OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE CITY.

4. GRADING / DEMOLITION OUTSIDE OF THE PROJECT BOUNDARIES (IF ANY) REQUIRES A TEMPORARY CONSTRUCTION/GRADING EASEMENT FROM THE LANDOWNER (BY OTHERS).

5. ALTHOUGH CERTAIN ITEMS HAVE BEEN NOTED ON THIS DRAWING FOR DEMOLITION, NO ATTEMPT HAS BEEN MADE TO DELINEATE EACH AND EVERY ITEM THAT REQUIRES DEMOLITION FOR THE COMPLETION OF THE PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL NECESSARY DEMOLITION WORK TO COMPLETE THE PROJECT. ALLEN & MAJOR ASSOCIATES, INC. IS NOT RESPONSIBLE FOR SITE DEMOLITION ITEMS NOT SHOWN ON THE SURVEY, OR SPECIFICALLY NOTED. THE DEMOLITION NOTES AND ARROWS ON THIS PLAN ARE TYPICAL AND DO NOT REFLECT QUANTITY.

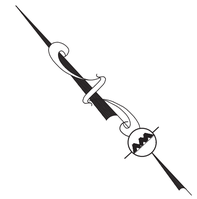
6. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.

7. A PRE–CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

8. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY–FRIDAY 7 AM TO 6PM, SATURDAY AND SUNDAY 9AM TO 4PM. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON THE SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR, SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR PLANNING DIRECTOR.

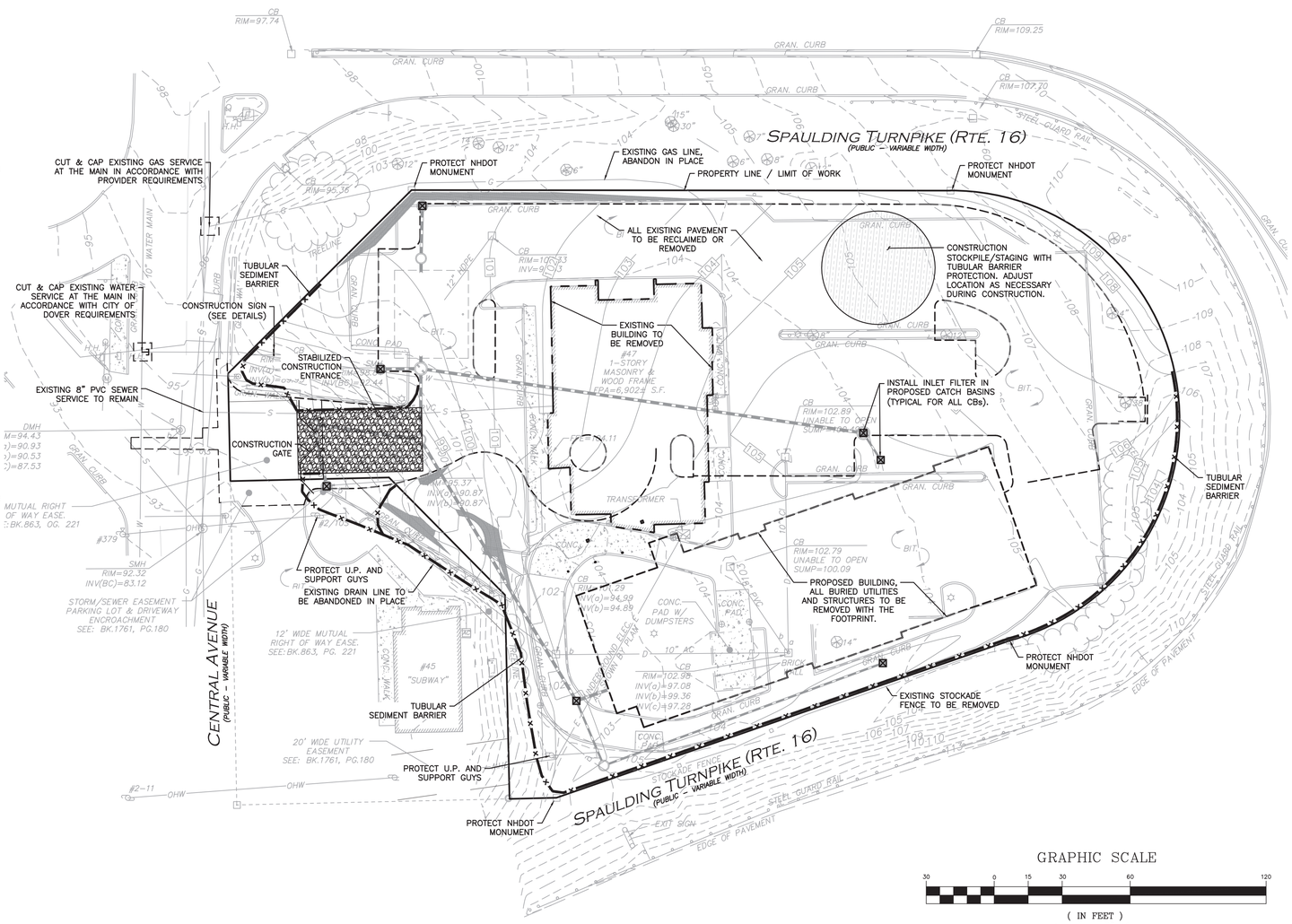
9. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

10. THE APPLICANT (OR ASSIGNEE) SHALL COMPLETE THE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.
https://www.unk.edu/unhsc/ptapp



## LEGEND

- LIMIT OF DISTURBANCE
- LIMIT OF 'CLEAR AND GRUB'
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- UTILITY CUT AND CAP
- TEMPORARY FENCE




GRAPHIC SCALE

30 0 15 30 60 120

( IN FEET )
1 inch = 30 ft.

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R: \PROJECTS\1173–31\CIVIL\DRAWINGS\CURRENT\C–1173–31_SITE–PREP.DWG

STATE OF NEW HAMPSHIRE – BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER

01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:

ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:

LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:

TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 30' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:


ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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DRAWING TITLE:

SITE PREPARATION PLAN

SHEET No.

C-101


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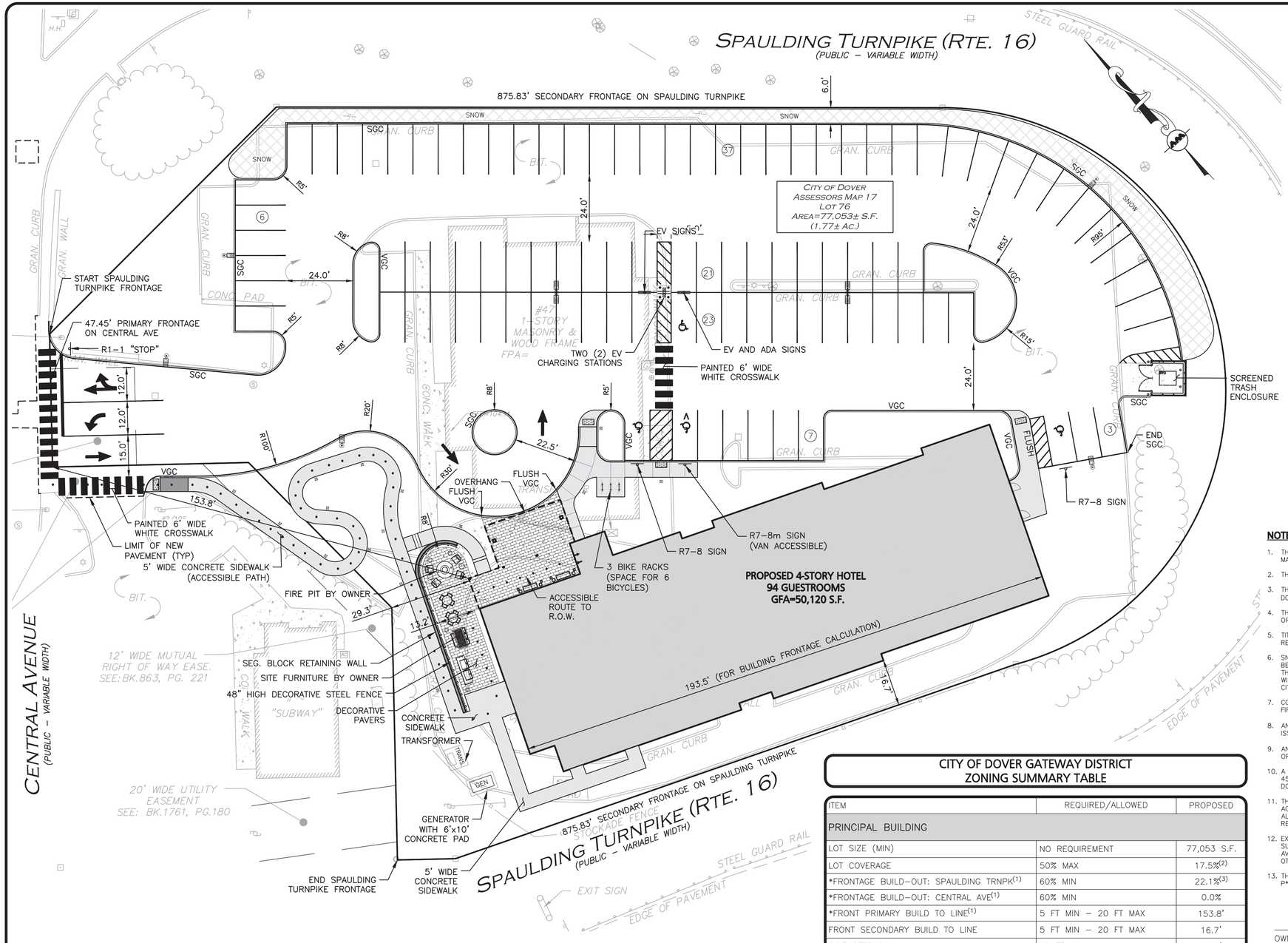


## LEGEND

| | |
|---|---|
| PROPERTY LINE | |
| SIGN | |
| BOLLARD | |
| BUILDING | |
| BUILDING ARCHITECTURE | |
| CURB | |
| PARKING STRIPING | |
| ROADWAY STRIPING | |
| TRAFFIC ARROWS | |
| CONCRETE PAD | |
| CONCRETE SIDEWALK | |
| DECORATIVE PAVERS | |
| ADA ACCESSIBLE RAMP | |
| ADA DET. WARNING SURFACE | |
| SNOW STORAGE | |
| SETBACK LINE | |
| SAW-CUT LINE | |
| PARKING COUNT | (10) |
| STEEL GUARDRAIL | |
| WOOD FENCE | |
| TRANSFORMER | T |
| GENERATOR | GEN |
| BOLLARD LIGHT | |
| POLE LIGHT | |
| ACCESSIBLE ROUTE | |
| VERTICAL GRANITE CURB | VGC |
| SLOPED GRANITE CURB | SGC |

**NOTES:**

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE SITE LAYOUT AND MATERIALS AND PROVIDE A PARKING AND ZONING SUMMARY TABLE.
2. THE PROPOSED USE OF THE STRUCTURE IS A HOTEL.
3. THE PARCEL IS SHOWN AS LOT NO. 76, MAP 17 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.
4. THE SUBJECT PARCEL CONTAINS 1.77 ACRES OR 77,053 SQ. FT. AREA OF LAND.
5. TITLE REFERENCE FOR THE PROJECT PARCEL IS STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO. 4148, PAGE 410.
6. SNOW SHALL BE TAKEN OFF-SITE ONCE SNOW STORAGE AREAS ON SITE BECOME INADEQUATE, AND BEGINS TO BLOCK ACCESS TO AND FROM THE SITE OR BLOCKS THE USE OF ON-SITE PARKING. ANY EXCESS WILL BE BE TRUCKED OFF-SITE & DISPOSED OF IN ACCORDANCE WITH CITY OF DOVER AND NHDES GUIDELINES.
7. CONTRACTOR TO PROVIDE ALL-WEATHER ACCESS FOR CITY OF DOVER FIRST RESPONDERS DURING CONSTRUCTION.
8. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTIONAL SERVICES.
9. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTIONAL SERVICES.
10. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.
11. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL BE ALSO DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
12. EXISTING CONDITIONS WERE COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES AS WELL AS AVAILABLE RECORD PLANS OBTAINED FROM THE CITY OF DOVER AND OTHER SOURCES.
13. THIS PLAN REFERENCES SITE PLAN APPROVAL P**-** AND CUPs P**-** AND P**-**.

## CITY OF DOVER GATEWAY DISTRICT ZONING SUMMARY TABLE

| ITEM | REQUIRED/ALLOWED | PROPOSED |
|---|---|---|
| **PRINCIPAL BUILDING** | | |
| LOT SIZE (MIN) | NO REQUIREMENT | 77,053 S.F. |
| LOT COVERAGE | 50% MAX | 17.5%(2) |
| *FRONTAGE BUILD-OUT: SPAULDING TRNPK(1) | 60% MIN | 22.1%(3) |
| *FRONTAGE BUILD-OUT: CENTRAL AVE(1) | 60% MIN | 0.0% |
| *FRONT PRIMARY BUILD TO LINE(1) | 5 FT MIN – 20 FT MAX | 153.8' |
| FRONT SECONDARY BUILD TO LINE | 5 FT MIN – 20 FT MAX | 16.7' |
| SIDE SETBACK | 10 FT MIN | 29.3' |
| REAR SETBACK | 15 FT MIN | N/A |
| **HEIGHT OF BUILDING** | | |
| PRINCIPAL BUILDING | 4 STORY MAX, 2 STORY MIN | 4 STORIES |
| **USE** | | |
| *LODGING(1) | 13 OR MORE ROOMS ARE PERMITTED WITH C.U.P. | 94 |

TABLE NOTES:

1. "*" INDICATES DIMENSIONAL CONDITIONAL USE PERMIT REQUIRED.
2. LOT COVERAGE: (13,506 S.F. FOOTPRINT INCLUDING OVERHANG/77,053 S.F. LOT)=17.5%
3. FRONTAGE BUILD-OUT FOR SPAULDING TURNPIKE (875.83' OF FRONTAGE) (193.5' OF BUILDING LENGTH ON SPAULDING TURNPIKE)/(875.83' FRONTAGE) = 22.1%

## OFF-STREET PARKING SUMMARY

| USE | MAX ALLOWED CALCULATION | MAX ALLOWED | TOTAL(1) PROVIDED |
|---|---|---|---|
| LODGING (NON CBD-G) | 1.0 SPACE/UNIT+1.0 SPACE/EMPLOYEE (1.0x94 GUESTROOMS)+(1.0x13 EMPLOYEES) | 104 | 97 |

TABLE NOTES:

1. NUMBER OF TOTAL EMPLOYEES = 20
2. NUMBER OF EMPLOYEES DURING MAXIMUM SHIFT = 13
3. NUMBER OF OVERNIGHT EMPLOYEES DURING PEAK PARKING DEMAND = MAX. 2
4. FOR 76-100 SPACES, 4 SHALL BE ACCESSIBLE, ONE SHALL BE VAN ACCESSIBLE.
5. 6 BICYCLE SPACES PROVIDED (REQUIRED: 5% OF TOTAL PARKING OF 97 = 4.9)

OWNER'S SIGNATURE DATE

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

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R: \PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_LAYOUT & MATERIALS.DWG

STATE OF NEW HAMPSHIRE – BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER

01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

**OWNER:**

ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

**APPLICANT:**

LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

**PROJECT:**

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| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:


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**DRAWING TITLE:** LAYOUT & MATERIALS PLAN

**SHEET No.** C-102


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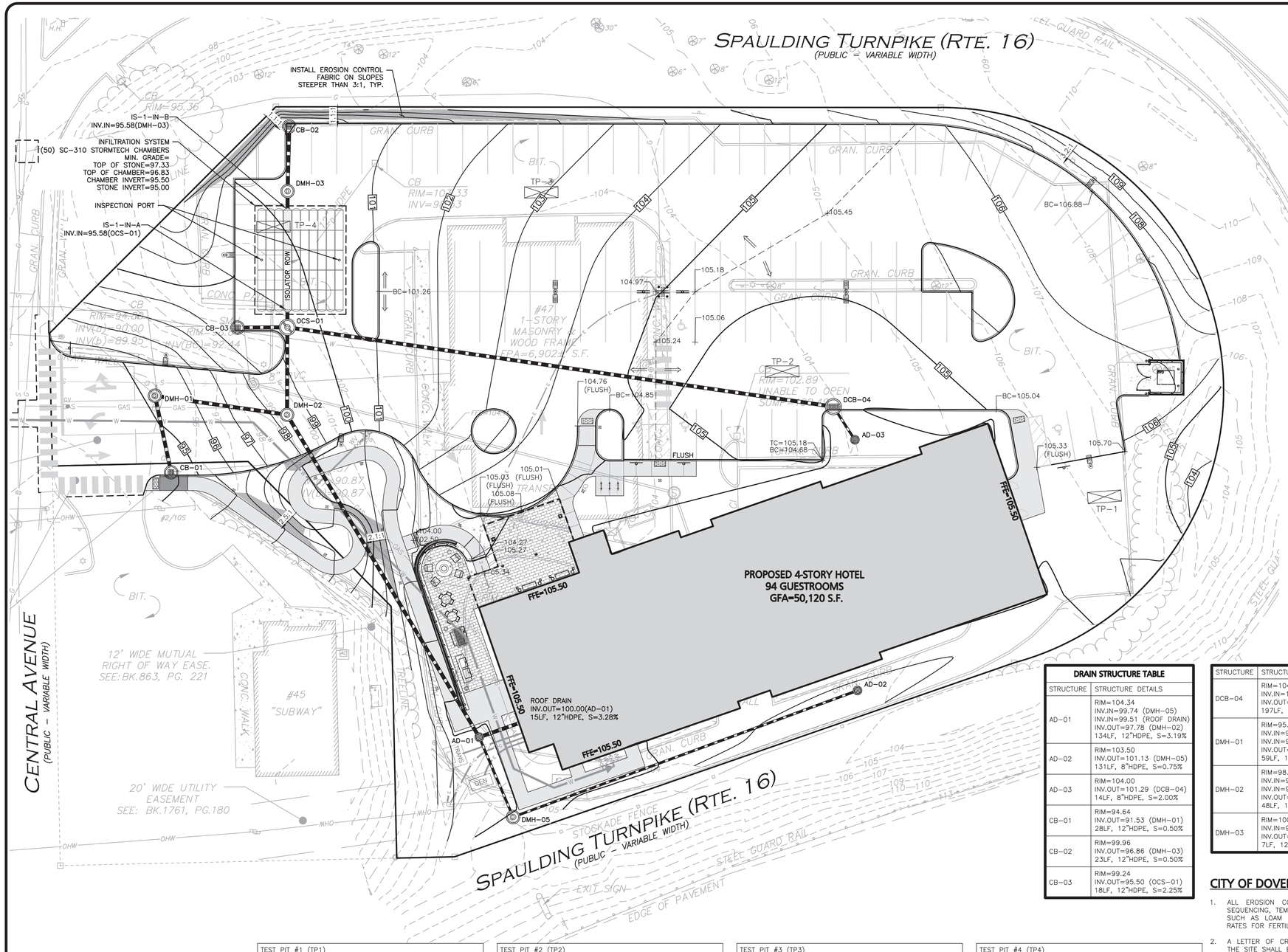


## LEGEND

- DRAIN MANHOLE (DMH)
- CATCH BASIN (CB)
- CATCH BASIN – DOUBLE GRATE
- OUTLET CONTROL STRUCTURE (OCS)
- AREA DRAIN (AD)
- DRAIN LINE
- EROSION CONTROL FABRIC
- 5' CONTOUR (60)
- 1' CONTOUR (53)
- SPOT GRADE ×55.50
- INFILTRATION SYSTEM
- INFILTRATION CHAMBER
- ISOLATOR ROW
- FLOW DIRECTION

**DRAIN STRUCTURE TABLE**

| STRUCTURE | STRUCTURE DETAILS |
|---|---|
| AD–01 | RIM=104.34<br>INV.IN=99.74 (DMH–05)<br>INV.IN=99.51 (ROOF DRAIN)<br>INV.OUT=97.78 (DMH–02)<br>134LF, 12"HDPE, S=3.19% |
| AD–02 | RIM=103.50<br>INV.OUT=101.13 (DMH–05)<br>131LF, 8"HDPE, S=0.75% |
| AD–03 | RIM=104.00<br>INV.OUT=101.29 (DCB–04)<br>14LF, 8"HDPE, S=2.00% |
| CB–01 | RIM=94.64<br>INV.OUT=91.53 (DMH–01)<br>28LF, 12"HDPE, S=0.50% |
| CB–02 | RIM=99.96<br>INV.OUT=96.86 (DMH–03)<br>23LF, 12"HDPE, S=0.50% |
| CB–03 | RIM=99.24<br>INV.OUT=95.50 (OCS–01)<br>18LF, 12"HDPE, S=2.25% |

| STRUCTURE | STRUCTURE DETAILS |
|---|---|
| DCB–04 | RIM=104.39<br>INV.IN=101.00 (AD–03)<br>INV.OUT=100.90 (OCS–01)<br>197LF, 12"HDPE, S=2.33% |
| DMH–01 | RIM=95.19<br>INV.IN=91.39 (CB–01)<br>INV.IN=90.10 (DMH–02)<br>INV.OUT=90.00 (EX)<br>59LF, 12"EXISTING, S=3.42% |
| DMH–02 | RIM=98.35<br>INV.IN=94.75 (OCS–01)<br>INV.IN=93.50 (AD–01)<br>INV.OUT=92.40 (DMH–01)<br>48LF, 12"HDPE, S=4.82% |
| DMH–03 | RIM=100.18<br>INV.IN=96.74 (CB–02)<br>INV.OUT=95.70 (IS–1–IN–B)<br>7LF, 12"HDPE, S=1.89% |

| STRUCTURE | STRUCTURE DETAILS |
|---|---|
| DMH–05 | RIM=105.25<br>INV.IN=100.15 (AD–02)<br>INV.OUT=100.05 (AD–01)<br>31LF, 8"HDPE, S=1.00% |
| OCS–01 | RIM=99.41<br>INV.IN=96.30 (DCB–04)<br>INV.IN=95.10 (CB–03)<br>INV.OUT=95.70 (IS–1–IN–A)<br>6LF, 12"HDPE, S=2.00%<br>INV.OUT=95.00 (DMH–02)<br>31LF, 12"HDPE, S=0.80% |

## CITY OF DOVER NOTES:

1. ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.
2. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
3. A PRE–CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
4. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTIONAL SERVICES.

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

TEST PIT #1 (TP1)
EXISTING GROUND ELEVATION: 106.2
PERFORMED BY: BRIAN D. JONES, PE
DATE: 01–20–2026

| HORIZON | DEPTH | TEXTURE | COLOR | STRUCTURE | NOTES |
|---|---|---|---|---|---|
| HTM | 0–3" | – | – | – | BIT. PAVEMENT |
| HTM | 3–12" | – | – | – | GRAVEL BASE |
| C | 12–100" | LOAM | 10YR 4/2 | SUBANGULAR BLOCKY | REDOX. 10YR 3/6 RED. 2.5YR 4/8 OX. |

HTM: HUMAN TRANSPORTED MATERIAL
ESHGW: 68" (ELEV.=100.5)
WEEP: NONE
GROUNDWATER: NONE
REFUSAL: NONE

TEST PIT #2 (TP2)
EXISTING GROUND ELEVATION: 104.8
PERFORMED BY: BRIAN D. JONES, PE
DATE: 01–20–2026

| HORIZON | DEPTH | TEXTURE | COLOR | STRUCTURE | NOTES |
|---|---|---|---|---|---|
| HTM | 0–6" | – | – | – | BIT. PAVEMENT |
| HTM | 6–12" | – | – | – | GRAVEL BASE |
| C | 12–60" | LOAM | 10YR 4/2 | SUBANGULAR BLOCKY | |

HTM: HUMAN TRANSPORTED MATERIAL
ESHGW: NONE
WEEP: NONE
GROUNDWATER: NONE
REFUSAL: 60" (APPEARED TO BE LARGE FRACTURED BOULDER)

TEST PIT #3 (TP3)
EXISTING GROUND ELEVATION: 103.9
PERFORMED BY: BRIAN D. JONES, PE
DATE: 01–20–2026

| HORIZON | DEPTH | TEXTURE | COLOR | STRUCTURE | NOTES |
|---|---|---|---|---|---|
| HTM | 0–8" | – | – | – | BIT. PAVEMENT |
| HTM | 8–18" | – | – | – | GRAVEL BASE |
| HTM | 18–84" | SAND | 10YR 6/6 | SINGLE GRAIN, LOOSE | CLEAN FILL |
| C | 84–88" | LOAM | 10YR 4/2 | SUBANGULAR BLOCKY | – |

HTM: HUMAN TRANSPORTED MATERIAL
ESHGW: NONE
WEEP: NONE
GROUNDWATER: NONE
REFUSAL: NONE

TEST PIT #4 (TP4)
EXISTING GROUND ELEVATION: 103.2
PERFORMED BY: BRIAN D. JONES, PE
DATE: 01–20–2026

| HORIZON | DEPTH | TEXTURE | COLOR | STRUCTURE | NOTES |
|---|---|---|---|---|---|
| HTM | 0–8" | – | – | – | BIT. PAVEMENT |
| HTM | 8–12" | – | – | – | GRAVEL BASE |
| $C_1$ | 12–48" | LOAM | 10YR 4/2 | SUBANGULAR BLOCKY | – |
| $C_2$ | 48–96" | FINE SANDY LOAM | 10YR 6/6 | SUBANGULAR BLOCKY | – |

HTM: HUMAN TRANSPORTED MATERIAL
ESHGW: NONE
WEEP: NONE
GROUNDWATER: NONE
REFUSAL: NONE

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PREPARED BY:
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DRAWING TITLE:
GRADING & DRAINAGE PLAN

SHEET No.
C-103

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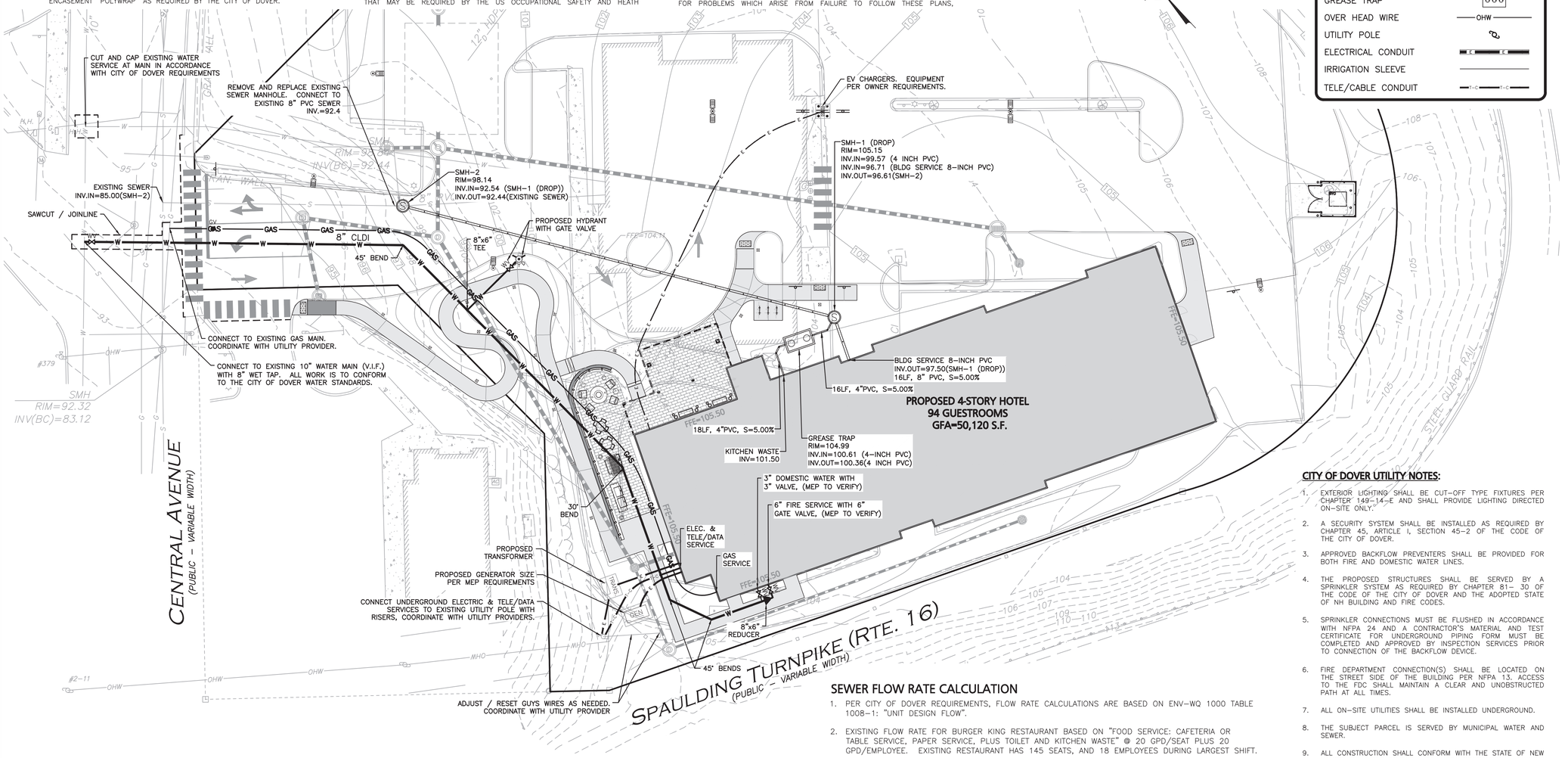
## NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PROPOSED SITE UTILITIES AND PROVIDE INFORMATION REGARDING THEIR INSTALLATION.
2. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER MAINS AND/OR STORM DRAINS. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE DIFFERENCE IN ELEVATION BETWEEN THE WATER MAIN AND THE SEWER MAIN SHALL BE AT LEAST 18 INCHES.
3. IN THE CASE THAT WATER MAINS CROSS SANITARY SEWER MAINS AND ARE SEPARATED BY LESS THAT 18" OF VERTICAL CLEARANCE, THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR THE ENTIRE WIDTH OF THE TRENCH AND FOR A DISTANCE OF 8 LINEAR FEET CENTERED ON THE CROSSING.
4. THE LATEST STANDARDS OF THE CITY OF DOVER "CHAPTER 147 – SEWERS" SHALL BE FOLLOWED WHEN PERFORMING ANY SANITARY SEWER WORK. SEWER WORK WILL BE INSPECTED BY CITY OF DOVER PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE LATEST STANDARDS OF THE CITY OF DOVER "CHAPTER 148 – WATER SYSTEMS" SHALL BE FOLLOWED WHEN PERFORMING ANY WATER DISTRIBUTION WORK. WATER WORK WILL BE INSPECTED BY CITY OF DOVER PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. ALL DUCTILE IRON MAINS SHALL BE PROVIDED WITH POLYETHYLENE ENCASEMENT "POLYWRAP" AS REQUIRED BY THE CITY OF DOVER.
7. THE CONTRACTOR SHALL REFER TO ARCHITECTS PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL ROOF DRAIN LATERALS AND UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRIC, TELEPHONE, AND GAS SERVICE. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND COORDINATE WITH THE PROPER AGENCY THE LOCATION AND SCHEDULING OF CONNECTIONS WITH THEIR FACILITIES.
8. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION. THE ENGINEER WILL THEN PROVIDE RESOLUTION TO UTILITY CONFLICTS WITHOUT DELAY.
9. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING THE CITY OF DOVER, NHDOT, NHDES, MUTCD, AND AASHTO.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS OF THE SITE. THESE PLANS PREPARED BY ALLEN & MAJOR ASSOCIATES, INC., DO NOT EXTEND TO, NOR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THE EMPLOYEES, AGENTS OF REPRESENTATIVES IN PERFORMANCE OF THE WORK. THE SEAL OF THE ARCHITECT OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OF OBTAIN THE APPROPRIATE SAFETY SYSTEMS THAT MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEATH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
11. ALL ELEVATIONS REFER TO NAVD 88.
12. PIPE DIMENSIONS ARE MEASURED FROM THE INSIDE FACE OF THE STRUCTURE.
13. LOCATION OF PROPOSED ELECTRICAL/COMMUNICATION SERVICE IS SCHEMATIC IN NATURE AND FOR COORDINATION PURPOSES ONLY. SPECIFIC ALIGNMENTS ARE TO BE DESIGNED BY OTHERS AND REVIEWED BY THE UTILITY PROVIDING SERVICE. PROPOSED ELECTRICAL SERVICE TO BE BURIED IN ACCORDANCE WITH THE CITY OF DOVER REGULATIONS AND ELECTRIC COMPANY.
14. LOCATION OF PROPOSED GAS MAIN IS SCHEMATIC IN NATURE AND FOR COORDINATION PURPOSES ONLY. SPECIFIC ALIGNMENTS ARE TO BE DESIGNED BY OTHERS AND REVIEWED BY THE UTILITY PROVIDING SERVICE.
15. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE START OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DRAWINGS, SPECIFICATIONS, OR RELATIVE CODES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT PRIOR TO START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AND/OR DESIGN INTENT OF THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
16. THE DESIGN ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE GUIDANCE OF THE DESIGN ENGINEER WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS WHICH ARE DISCOVERED OR ALLEGED.
17. POWER FEEDS AND INTERCONNECTIONS FOR SITE LIGHTING TO BE COORDINATED WITH THE ELECTRICAL ENGINEER.
18. EXISTING UTILITY STUBS WHICH WILL NOT BE USED SHALL BE SHUT OFF AND DISCONNECTED AS APPROPRIATE.

## LEGEND

- SEWER MANHOLE
- SEWER CLEANOUT
- SEWER VENT
- SEWER LINE
- CONCRETE PIPE ENCASEMENT
- WATER LINE
- WATER VALVE
- HYDRANT
- WATER LINE REDUCER
- GAS LINE
- GAS VALVE
- GREASE TRAP
- OVER HEAD WIRE
- UTILITY POLE
- ELECTRICAL CONDUIT
- IRRIGATION SLEEVE
- TELE/CABLE CONDUIT

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## SEWER PIPE CAPACITY CALCULATION

1. PROPOSED HOTEL FLOW RATE = 18,930 GPD (SEE SEWER FLOW RATE CALCULATION HEREON).
2. INFLOW AND INFILTRATION (I/I) CALCULATION: PER ENV-WQ 704.03(f)(2), THE I/I IS 300 GAL./INCH DIA. PER MILE PER DAY: ((172'/5280')(8")*300=78 GPD
3. TOTAL FLOW RATE = 18,930 GPD + 78 GPD = 19,008 GPD
4. PEAK FLOW RATE IS CALCULATED USING A 6x PEAKING FACTOR
   = (19,008 GPD/24 HOURS/60 MINUTES/60 SECONDS)*6x PEAKING FACTOR + (78 I/I GPD/24/60/60)
   = 1.32 GALLONS PER SECOND = 0.2 CUBIC FEET PER SECOND.
1. THE FINAL SECTION OF 8" SEWER PIPE (LENGTH OF 82 FEET, SLOPE OF 9%) CAPACITY AT 60% DEPTH IS 1.9 CFS, WHICH EXCEEDS THE PEAK FLOW RATE OF 0.2 CFS.

## SEWER FLOW RATE CALCULATION

1. PER CITY OF DOVER REQUIREMENTS, FLOW RATE CALCULATIONS ARE BASED ON ENV-WQ 1000 TABLE 1008-1: "UNIT DESIGN FLOW".
2. EXISTING FLOW RATE FOR BURGER KING RESTAURANT BASED ON "FOOD SERVICE: CAFETERIA OR TABLE SERVICE, PAPER SERVICE, PLUS TOILET AND KITCHEN WASTE" @ 20 GPD/SEAT PLUS 20 GPD/EMPLOYEE. EXISTING RESTAURANT HAS 145 SEATS, AND 18 EMPLOYEES DURING LARGEST SHIFT.

   EXISTING FLOW RATE = (20 GPD/SEAT)*(145 SEATS) + (20 GPD/EMPLOYEE)*(18 EMPLOYEES)
   = 2,900 GPD + 360 GPD
   = 3,260 GPD
3. PROPOSED FLOW RATE FOR HOTEL BASED ON "HOTELS AND MOTELS" @ 200 GPD/ROOM PLUS 10 GPD/EMPLOYEE. PROPOSED HOTEL HAS 94 ROOMS AND 13 EMPLOYEES DURING THE MAXIMUM SHIFT.

   PROPOSED FLOW RATE = (200 GPD/ROOM)*(94 ROOMS) + (10 GPD/EMPLOYEE)*(13 EMPLOYEES)
   = 18,800 GPD + 130 GPD
   = 18,930 GPD
4. TOTAL INCREASE IN SEWER FLOW RATE FOR THE PROPOSED PROJECT

   = (PROPOSED HOTEL FLOW OF 18,930 GPD) – (EXISTING BK RESTAURANT FLOW OF 3,260 GPD)

**= 15,670 GPD INCREASE**

## CITY OF DOVER UTILITY NOTES:

1. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 149-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
2. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.
3. APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
4. THE PROPOSED STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED BY CHAPTER 81- 30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES.
5. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.
6. FIRE DEPARTMENT CONNECTION(S) SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.
7. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
8. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
9. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE CITY OF DOVER COMMUNITY SERVICE REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_UTILITIES.DWG

STATE OF NEW HAMPSHIRE - BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER

01.30.26

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

**OWNER:**
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

**APPLICANT:**
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

**PROJECT:**
TOWNEPLACE SUITES BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:


ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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**DRAWING TITLE:** UTILITIES PLAN

**SHEET No.** C-104


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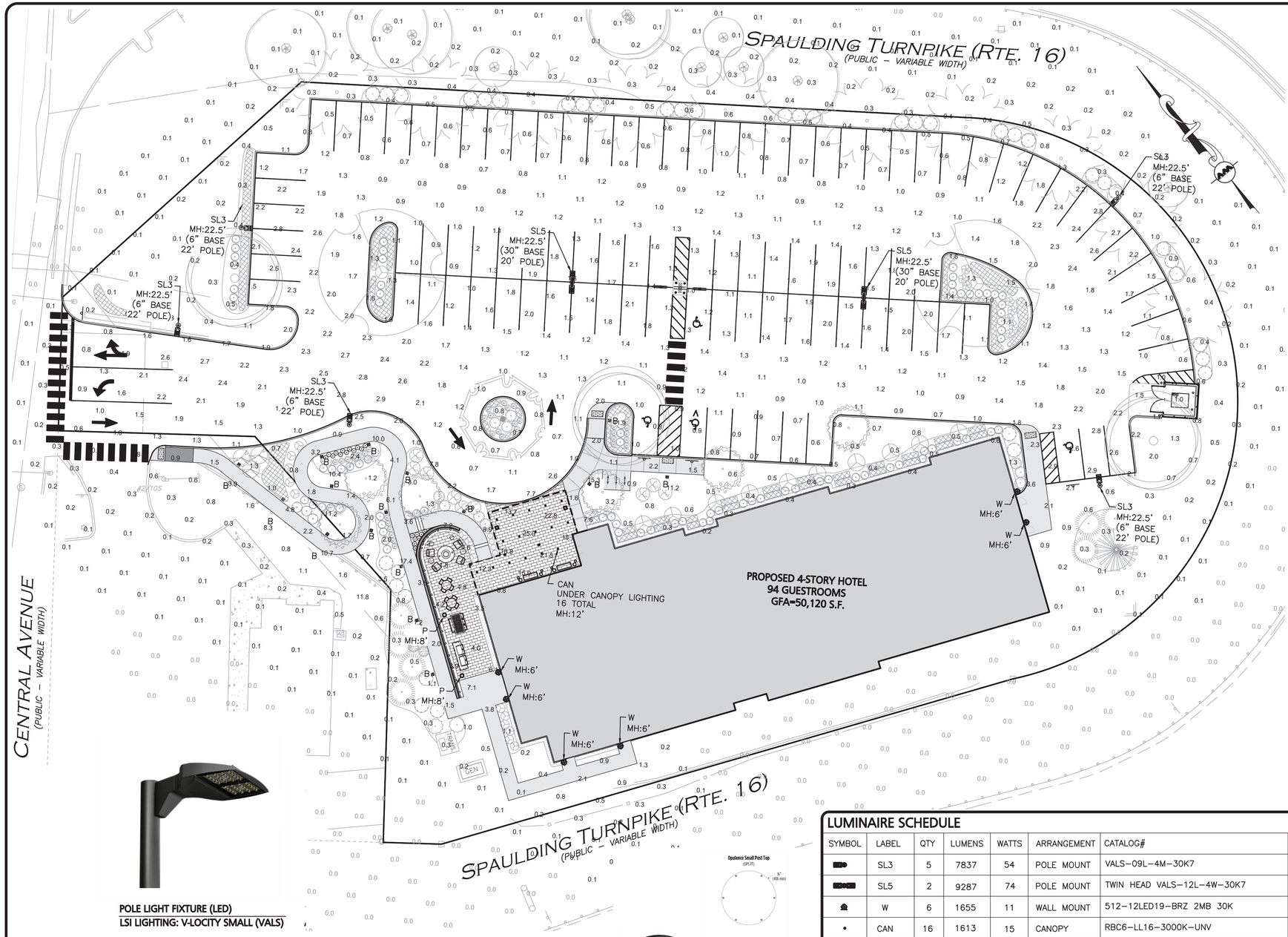



## LEGEND

| | |
|---|---|
| SINGLE POLE LIGHT | |
| DOUBLE POLE LIGHT | |
| BOLLARD LIGHT | |
| CANOPY LIGHT | |
| WALL SCONCE | |
| LIGHTING LEVELS GIVEN IN FOOT CANDLES | 0.0 0.1 0.2 0.4 0.6 |

## NOTES:

1. THE PURPOSE OF THIS PLAN IS DEPICT THE PROPOSED SITE LIGHTING FIXTURES AND PROVIDE THE PHOTOMETRIC LIGHTING LEVELS.
2. LIGHTING VENDOR INFORMATION:
   EXPOSURE LIGHTING
   CONTACT: CHRIS PECHALK
   Cpechalk@exposure2lighting.com
   603-540-7345
3. BUILDING MOUNTED LIGHTS AND LIGHTS WITHIN THE PARKING AREA SHALL OPERATE ON A PROGRAMMABLE TIMER. CONTROLS, OPTIONS, AND ACCESSORIES SHALL BE SELECTED BY THE OWNER.
4. CONTROLS FOR ALL EXTERIOR BUILDING MOUNTED LIGHTING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
5. WIRING FOR ALL BUILDING MOUNTED FIXTURES SHALL BE PROVIDED BY THE BUILDING ELECTRICAL CONTRACTOR.
6. SIZING AND LAYOUT OF THE WIRING OF THE SITE LIGHTING FIXTURES SHALL BE PROVIDED BY THE SITE ELECTRICAL CONTRACTOR.
7. LIGHT POLES ADJACENT TO PARKING SHALL HAVE THE 3'-0" REVEAL FOOTING. LIGHT POLES ADJACENT TO SIDEWALKS SHALL HAVE FOOTING IN A FLUSH CONDITION.
8. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL ALSO CONTACT THE CITY DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF LOCAL UTILITIES.
9. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
10. NO SUBSTITUTIONS, ADDITIONS, OR CHANGES MAY BE MADE WITHOUT PRIOR APPROVAL BY THE OWNER/ARCHITECT.
11. EXACT MOUNTING DETAILS TO BE DETERMINED AT THE JOBSITE BY ELECTRICAL CONTRACTOR.
12. ALL PROPOSED LIGHTING FIXTURES SHALL BE DARK SKY COMPLIANT.
13. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL LIGHTING INFORMATION AND COORDINATION WITH BUILDING ELECTRICAL.
14. FOOT CANDLE VALUES SHOWN ON THE PLAN ARE PRODUCED UTILIZING DESIGN MASTER PHOTOMETRICS SOFTWARE AND ASSOCIATED IES FILES BY THE MANUFACTURER FOR THE PROPOSED LIGHT FIXTURE.
15. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
16. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.

## LUMINAIRE SCHEDULE

| SYMBOL | LABEL | QTY | LUMENS | WATTS | ARRANGEMENT | CATALOG# | HEIGHT | MANUFACTURER |
|---|---|---|---|---|---|---|---|---|
| | SL3 | 5 | 7837 | 54 | POLE MOUNT | VALS-09L-4M-30K7 | 22'-6" | LSI INDUSTRIES |
| | SL5 | 2 | 9287 | 74 | POLE MOUNT | TWIN HEAD VALS-12L-4W-30K7 | 22'-6" | LSI INDUSTRIES |
| | W | 6 | 1655 | 11 | WALL MOUNT | 512-12LED19-BRZ 2MB 30K | 6'-0" | INDESSA LIGHTING |
| • | CAN | 16 | 1613 | 15 | CANOPY | RBC6-LL16-3000K-UNV | 12'-0" | RAYON LIGHTING |
| ■ | B | 16 | 1745 | 14 | SIDEWALK BOLLARD | BL2A-24(14W)-SC-000K-33-XX-UD-P | 3'-6" | ADVANTAGE LIGHTING SOLUTIONS |
| | P | 2 | 2773 | 20 | PATIO LIGHT | OPS-PT-03L-3W-UNV-30K8-BLK | 8'-0" | LSI INDUSTRIES |

## LIGHTING LEVEL SUMMARY

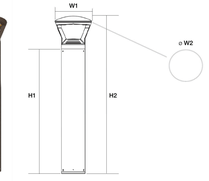
| AREA | UNITS | AVERAGE | MAX. | MIN. | AVG/MIN | MAX/MIN |
|---|---|---|---|---|---|---|
| SITE WIDE | Fc | 1.0 | 25.0 | 0.0 | N.A. | N.A. |
| PARKING | Fc | 1.4 | 2.9 | 0.5 | 2.7 | 5.8 |
| PATIO | Fc | 4.6 | 7.2 | 1.8 | 2.5 | 4.0 |
| UNDER CANOPY | Fc | 16.9 | 25.0 | 6.8 | 2.5 | 3.7 |

GRAPHIC SCALE
20 0 10 20 40 80
( IN FEET )
1 inch = 20 ft.

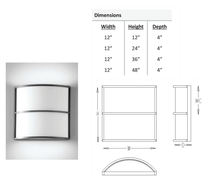


POLE LIGHT FIXTURE (LED)
LSI LIGHTING: V-LOCITY SMALL (VALS)

PATIO LIGHT FIXTURE (LED)
LSI LIGHTING: OPULANCE SMALL




SIDEWALK BOLLARD FIXTURE (LED)
ADVANTAGE LIGHTING SOLUTIONS




WALL MOUNT FIXTURE (LED)
INDESSA LIGHTING: 512

UNDER CANOPY (LED)
RAYON LIGHTING: RBC6-FN

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1-888-344-7233

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STATE OF NEW HAMPSHIRE
BRIAN D. JONES
No. 13809
LICENSED PROFESSIONAL ENGINEER
01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:
LIGHTING PLAN

SHEET No.
C-105

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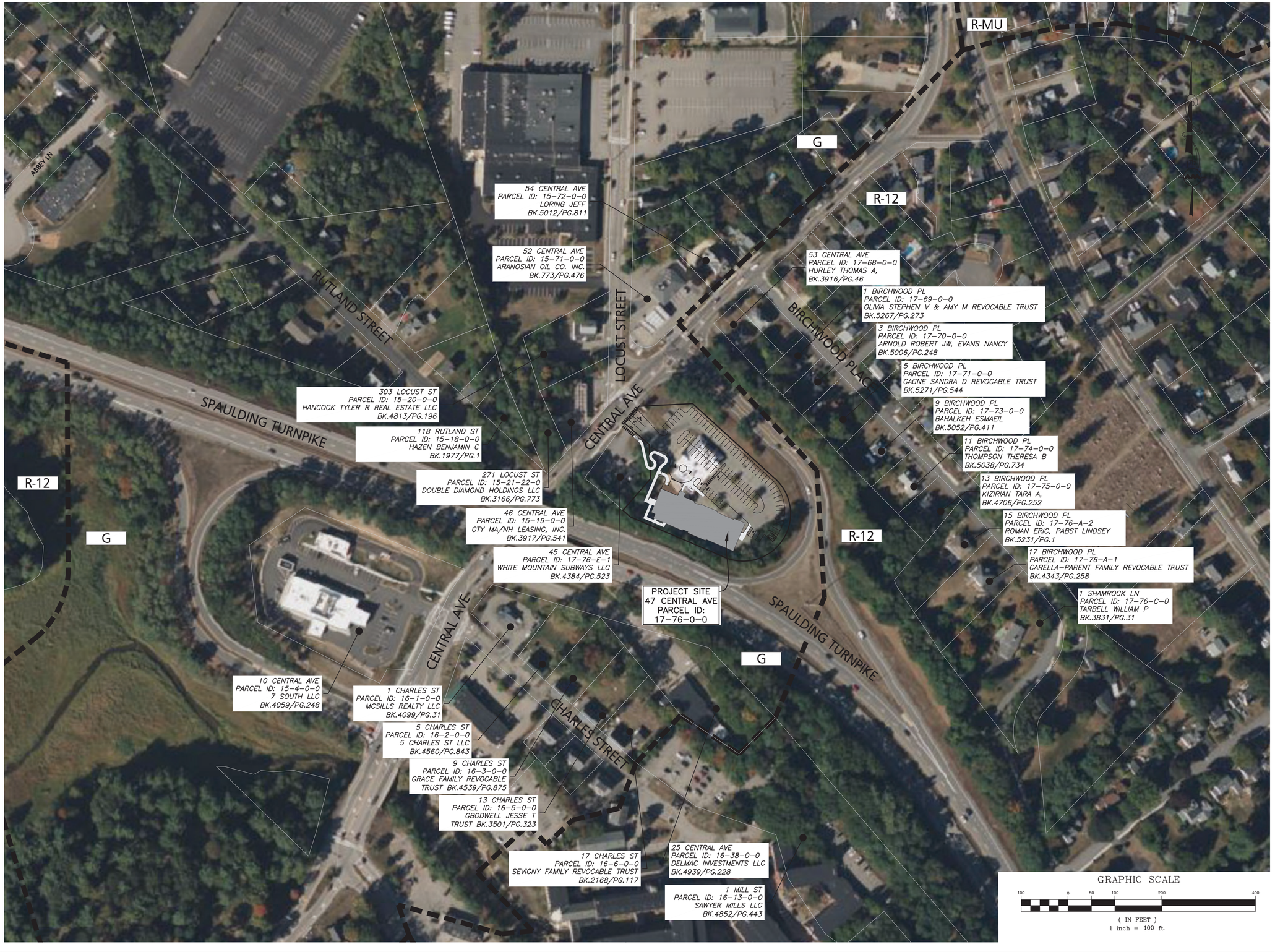


GRAPHIC SCALE

100 0 50 100 200 400

( IN FEET )
1 inch = 100 ft.

R: \PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_NEIGHBORHOOD PLAN.DWG

STATE OF NEW HAMPSHIRE
BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER
01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

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DRAWING TITLE:
NEIGHBORHOOD PLAN

SHEET No.
C-106

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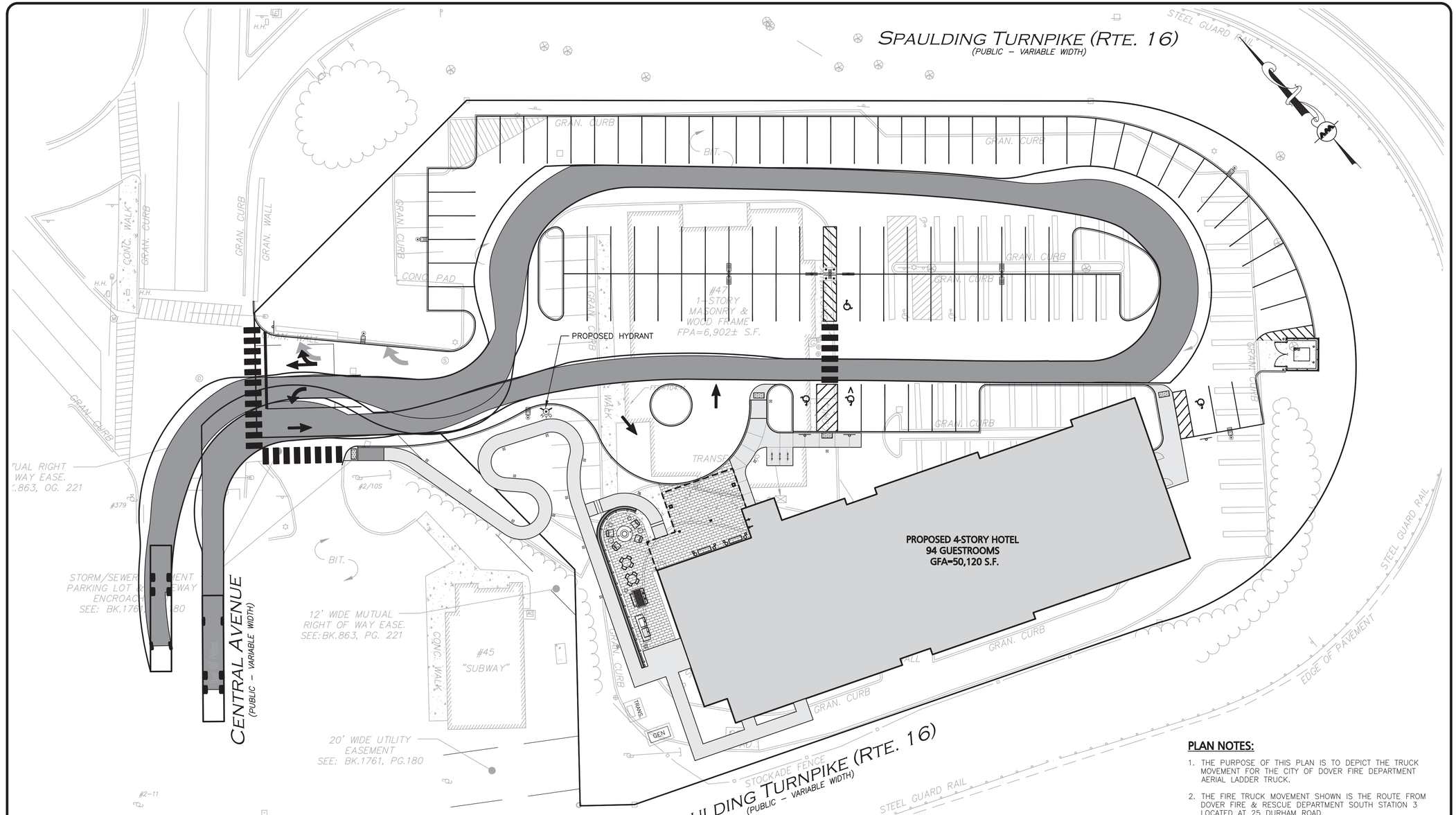


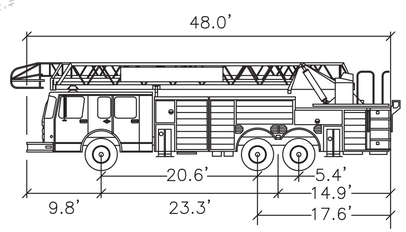


DOVER, NH (100' PLATFORM)

| | | |
|---|---|---|
| WIDTH | : | 8.0' |
| TRACK | : | 8.0' |
| LOCK TO LOCK TIME | : | 6.0' |
| STEERING ANGLE | : | 40.3' |

## PLAN NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE TRUCK MOVEMENT FOR THE CITY OF DOVER FIRE DEPARTMENT AERIAL LADDER TRUCK.
2. THE FIRE TRUCK MOVEMENT SHOWN IS THE ROUTE FROM DOVER FIRE & RESCUE DEPARTMENT SOUTH STATION 3 LOCATED AT 25 DURHAM ROAD.
3. EXISTING CONDITIONS ARE FROM AN ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES AS WELL AS AVAILABLE RECORD PLANS OBTAINED FROM THE CITY OF DOVER AND OTHER SOURCES.
4. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

DIG SAFE

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1-888-344-7233

R: \PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_TRUCK TURNING.DWG

BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE –
01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
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|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:
TRUCK TURNING PLAN

SHEET No.
C-107

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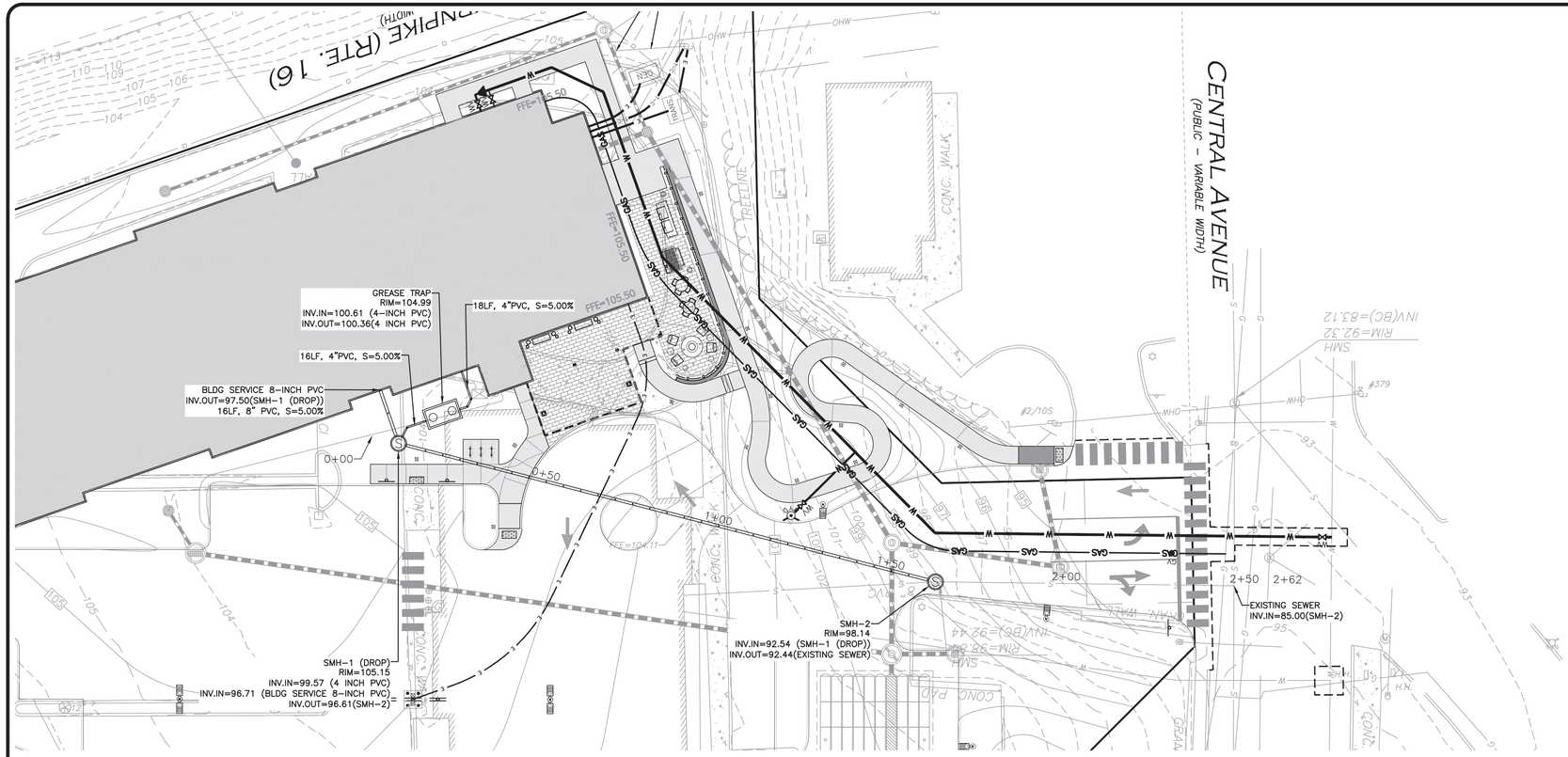
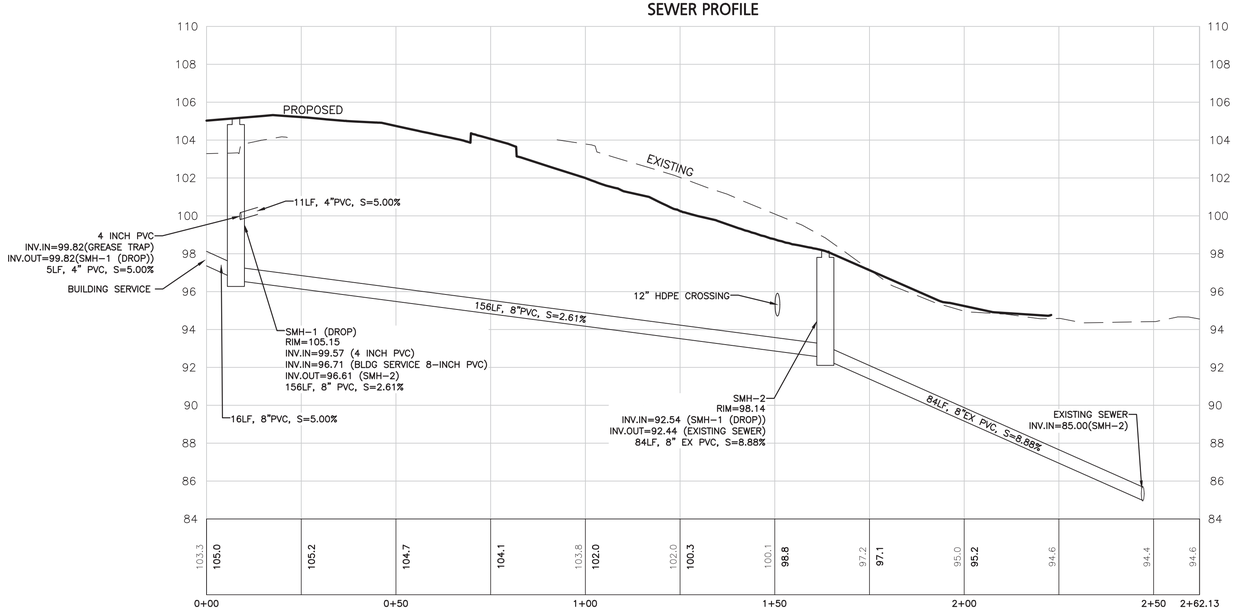



## LEGEND

| | |
|---|---|
| SEWER MANHOLE | S |
| SEWER CLEANOUT | |
| SEWER VENT | V |
| SEWER LINE | |
| CONCRETE PIPE ENCASEMENT | |
| WATER LINE | W |
| WATER VALVE | WV |
| HYDRANT | |
| WATER LINE REDUCER | |
| GAS LINE | GAS |
| GAS VALVE | GV |
| GREASE TRAP | |
| OVER HEAD WIRE | OHW |
| UTILITY POLE | |
| ELECTRICAL CONDUIT | E |
| IRRIGATION SLEEVE | |
| TELE/CABLE CONDUIT | T/C |

## SEWER PROFILE



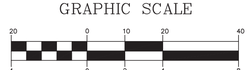

DIG SAFE

BEFORE YOU DIG
CALL 811 OR
1-888-DIG-SAFE
1-888-344-7233

**PLAN NOTES:**

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE SEWER PROFILE AND PROVIDE INFORMATION REGARDING THE SEWER STRUCTURES AND PIPES.
2. EXISTING CONDITIONS WERE COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES AS WELL AS AVAILABLE RECORD PLANS OBTAINED FROM THE CITY OF DOVER AND OTHER SOURCES.
3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL ALSO CONTACT THE CITY DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF LOCAL UTILITIES.
5. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

GRAPHIC SCALE




Horizontal: 1 inch = 20 ft.
Vertical: 1 inch = 4 ft.

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_UTILITIES.DWG

BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE -
01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

**OWNER:**
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

**APPLICANT:**
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

**PROJECT:**
TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY: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| DRAWING TITLE: | SHEET No. |
|---|---|
| SEWER PLAN & PROFILE | C-201 |


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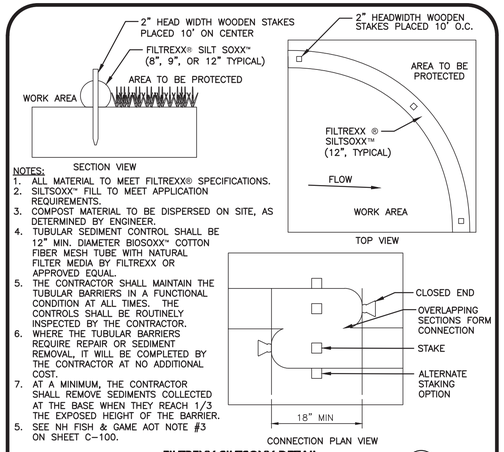
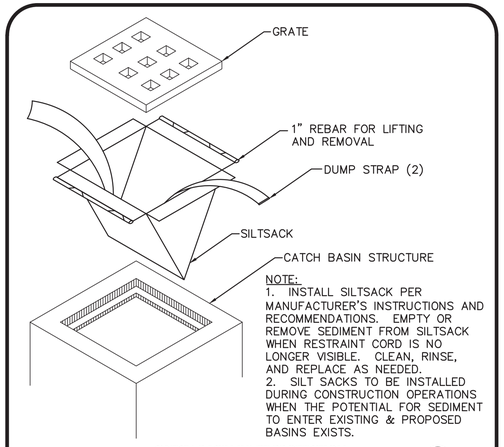


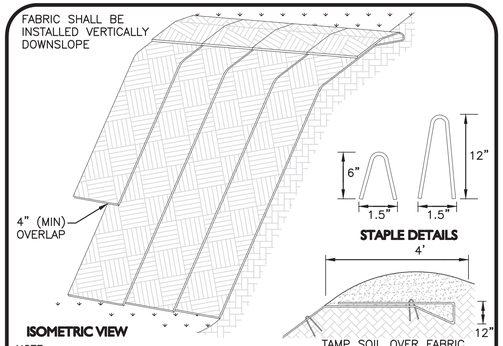

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILTSOXX™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. TUBULAR SEDIMENT CONTROL SHALL BE 12" MIN. DIAMETER BIOSOXX™ COTTON FIBER MESH TUBE WITH NATURAL FILTER MEDIA BY FILTREXX OR APPROVED EQUAL.
5. THE CONTRACTOR SHALL MAINTAIN THE TUBULAR BARRIERS IN A FUNCTIONAL CONDITION AT ALL TIMES. THE CONTROLS SHALL BE ROUTINELY INSPECTED BY THE CONTRACTOR.
6. WHERE THE TUBULAR BARRIERS REQUIRE REPAIR OR SEDIMENT REMOVAL, IT WILL BE COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. AT A MINIMUM, THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE WHEN THEY REACH 1/3 THE EXPOSED HEIGHT OF THE BARRIER.
5. SEE NH FISH & GAME AOT NOTE #3 ON SHEET C-100.

**FILTREXX SILTSOXX DETAIL**
NOT TO SCALE — 1



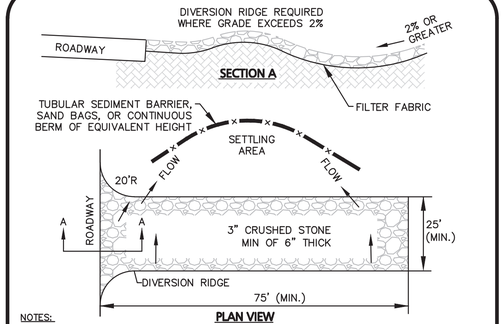

NOTE:
1. INSTALL SILTSACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM SILTSACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
2. SILT SACKS TO BE INSTALLED DURING CONSTRUCTION OPERATIONS WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

**CATCH BASIN INLET PROTECTION**
NOT TO SCALE — 2



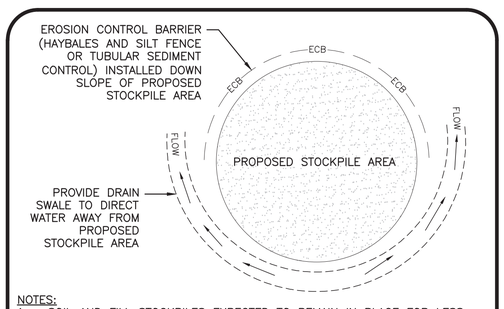

NOTE:
1. FABRIC SHALL BE NORTH AMERICAN GREEN SC150BN OR AN APPROVED ORGANIC MATERIAL EQUAL.
2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS.
3. APPLY PERMANENT SEEDING BEFORE PLACING FABRIC.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
5. SEE NH FISH & GAME AOT NOTE #3 ON SHEET C-100.

**EROSION CONTROL FABRIC**
NOT TO SCALE — 3




NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

**STABILIZED CONSTRUCTION ENTRANCE**
NOT TO SCALE — 4




NOTES:
1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH HAY AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDED WITH WINTER RYE (FOR FALL SEEDING AT 3LB/1,000 SF) OR OATS (FOR SUMMER SEEDING AT 2LB/1,000 SF) AND THEN COVERED WITH HAY MULCH (AT 100LB/1,000 SF) OR AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

**STOCKPILE PROTECTION**
NOT TO SCALE — 5

1. MINIMUM LETTER HEIGHT SHALL BE 2".
2. SIGN SHALL HAVE BLACK LETTERS ON A WHITE BACKGROUND.
3. SIGN SHALL BE WEATHER RESISTANT AND SECURED TO THE GROUND.
4. HOURS OF THE SIGN SHALL COMPLY WITH ALL PLANNING BOARD CONDITIONS OF APPROVAL.

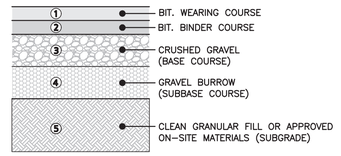
**CONSTRUCTION SIGN**
NOT TO SCALE — 6

**FLEXIBLE PAVEMENT DESIGN SECTION**

| LAYER NUMBER | LAYER DESCRIPTION | LAYER THICKNESS (INCHES) |
|---|---|---|
| 1 | BITUMINOUS WEARING COURSE (¾" AGGREGATE – NHDOT PRE-APPROVED MIX DESIGN) | 1.5" |
| 2 | BITUMINOUS BINDER COURSE (¾" AGGREGATE – NHDOT PRE-APPROVED MIX DESIGN) | 2.0" |
| 3 | CRUSHED GRAVEL (BASE COURSE) (NHDOT ITEM 304.3) | 6" |
| 4 | GRAVEL BORROW (SUBBASE COURSE) (NHDOT ITEM 304.2) | 12" |
| 5 | CLEAN GRANULAR FILL MATERIAL OR APPROVED ON-SITE MATERIALS (SUBGRADE) | AS NECESSARY |

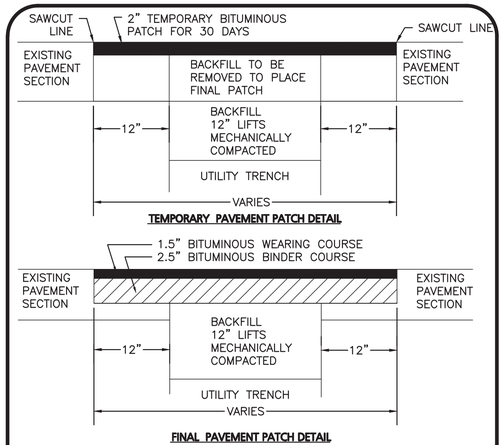
**TABLE 304-1: NHDOT GRADATION SPECIFICATIONS**

| SIEVE SIZE | PERCENT PASSING BY WEIGHT | | |
|---|---|---|---|
| | BASE COURSE | SUBBASE COURSE | SELECT GRANULAR FILL |
| 3" | 100 | – | 70–100 |
| 2" | 95–100 | – | – |
| 1½" | – | – | – |
| ¾" | 55–85 | – | – |
| No. 4 | 27–52 | 25–70 | 25–80 |
| No. 200 | 0–12 | 0–12 | 0–12 |

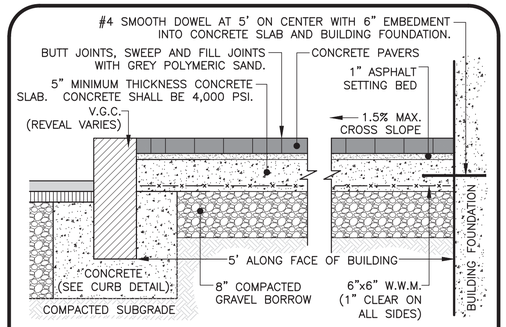



NOTES:
1. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ANY RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER.
2. TOPSOIL SHALL BE REMOVED BENEATH ALL PAVEMENT AREAS TO EXPOSE THE NATURALLY-OCCURRING SOILS OR ACCEPTABLE ON-SITE FILL MATERIALS.
3. THE SUBGRADE SHOULD BE PROOFROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER USING AT LEAST 4 PASSES OF A 10-TON VIBRATORY ROLLER. AREAS OF THE SUBGRADE THAT 'WEAVE' OR 'ROLL' EXCESSIVELY SHOULD BE OVEREXCAVATED AND REPLACED WITH DRIER CLEAN GRANULAR FILL MATERIAL.
4. THE PAVEMENT SUBGRADE CONSISTING OF THE SPECIFIED CLEAN GRANULAR FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM DESIGNATION D-1557.

**PAVEMENT SECTION**
NOT TO SCALE — 7

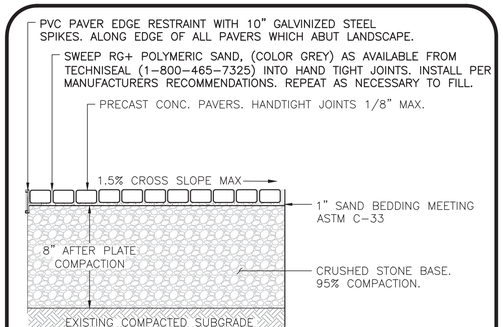



**PAVEMENT TRENCH PATCH DETAIL**
NOT TO SCALE — 8



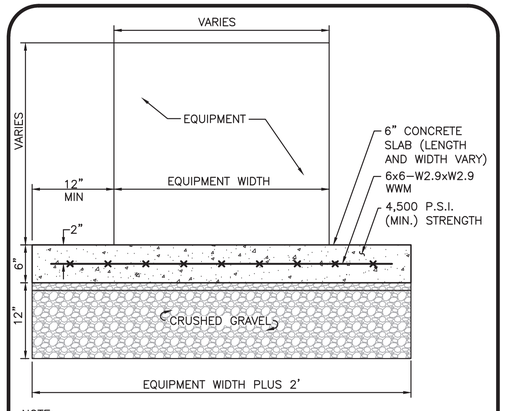

NOTES:
1. UNLOCK PRECAST CONCRETE PAVER MODEL: HOLLANDSTONE (4" X 8" X 2 3/8") OR SIMILAR. HAND-TIGHT JOINTS 1/8" MAX. COLOR TO BE SELECTED BY OWNER. PROVIDE SAMPLES AND SHOP DRAWINGS OF PAVERS TO OWNER FOR APPROVAL PRIOR TO ORDERING.
2. SUBMIT SAMPLES & SHOP DRAWING OF PAVERS AND COLOR CHART FOR APPROVAL PRIOR TO ORDERING.
3. SUBMIT SHOP DRAWING FOR APPROVAL OF SAND & CRUSHER RUN SIEVE ANALYSIS PRIOR TO ORDERING.

**CONCRETE PAVERS SIDEWALK AREA**
NOT TO SCALE — 9




NOTES:
1. PAVERS TO BE UNILOCK ARTLINE OR EQUAL,
2. SUBMIT SAMPLES & SHOP DRAWING OF PAVERS AND COLOR CHART FOR APPROVAL PRIOR TO ORDERING.
3. SUBMIT SHOP DRAWING FOR APPROVAL OF SAND & CRUSHER RUN SIEVE ANALYSIS PRIOR TO ORDERING.

**CONCRETE PAVERS AT PATIO AREA**
NOT TO SCALE — 10




NOTE:
1. CONFIRM DIMENSIONS WITH GENEROTOR SUPPLIER PRIOR TO CONSTRUCTION.
2. REFER TO MEP DRAWINGS FOR ANY PIPE, CONDUIT AND GROUND WIRE LOCATIONS

**GENERATOR PAD**
NOT TO SCALE — 11

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_DETAILS.DWG

STATE OF NEW HAMPSHIRE – BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER
01.30.26

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | AS SHOWN | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |


PREPARED BY:
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civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
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DRAWING TITLE: DETAILS

SHEET No. C-501


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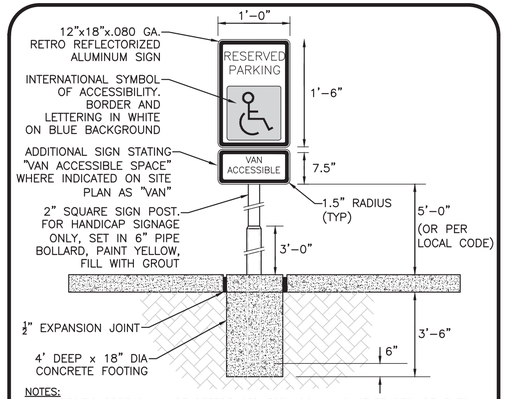
| MUTCD NUMBER | SIGN | SIZE (MIN) | MOUNTING HEIGHT | DESCRIPTION | RETRO-FLECTIVE |
|---|---|---|---|---|---|
| R1-1 | STOP | 30"x30" | 7' - 0" | WHITE ON RED | YES |
| R7-8(M) (MODIFIED) | HANDICAPPED PARKING / VAN ACCESSIBLE | 12"x24" | 7' - 0" | RED ON WHITE | YES |
| R7-8 | HANDICAPPED PARKING | 12"x18" | 7' - 0" | GREEN & BLUE ON WHITE | YES |
| | | | | | |
| | | | | | |

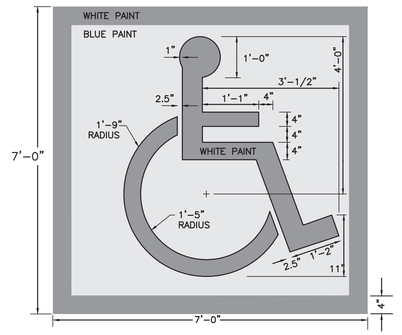
NOTES:
1. TRAFFIC AND SAFETY SIGNAGE SHALL COMPLY WITH MUTCD STANDARDS.
2. WHERE APPLICABLE THE SIGN SUPPORT SHALL COMPLY WITH THE BREAKAWAY REQUIREMENTS OF THE LATEST EDITION OF AASHTO'S "SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRIES, AND TRAFFIC SIGNALS".

**SIGN TABLE** (1)
NOT TO SCALE



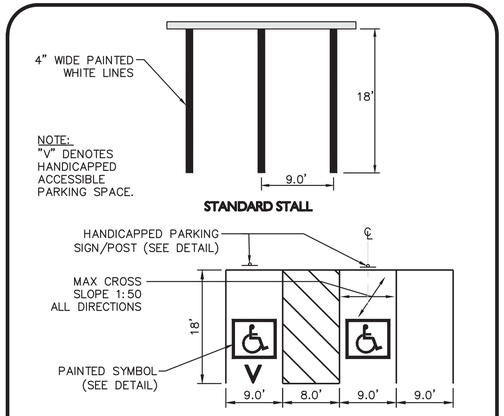

NOTES:
1. SPECIFIC CODE SHALL BE REFERENCED FOR LOCAL AND STATE REQUIREMENTS.
2. PROVIDE (1) SIGN PER HANDICAP SPACE. SEE SITE PLAN FOR EXACT LOCATION.
3. EXPANSION JOINT MATERIAL NOT REQUIRED WITH FLEXIBLE PAVEMENT.

**ACCESSIBLE PARKING SIGN POST** (2)
NOT TO SCALE




SYMBOL TO BE CENTERED ON WIDTH OF PARKING STALL. SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND. USE WHITE ON BLUE (COLOR #105090 IN FEDERAL STANDARD 5952) DOUBLE COAT.

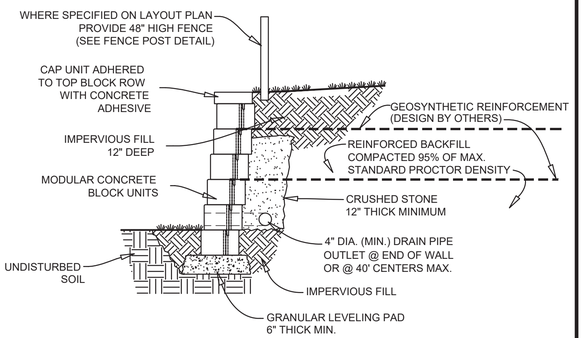
**ACCESSIBLE PARKING STALL PAVEMENT MARKING** (3)
NOT TO SCALE



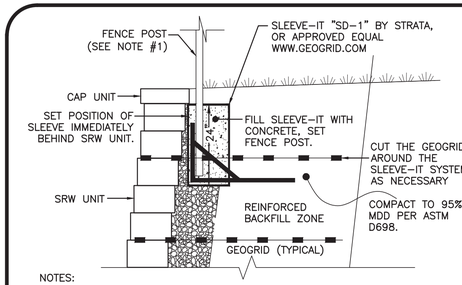

**HANDICAP & STANDARD PARKING STRIPING** (4)
NOT TO SCALE

NOTES:

1. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE STRUCTURAL DESIGN OF THE MODULAR BLOCK RETAINING WALLS. REFER TO GEOTECHNICALREPORT FOR SOIL DESIGN PARAMETERS
2. WALLS THREE FEET OR GREATER IN HEIGHT SHALL BE DESIGNED BY A NEW HAMPSHIRE REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.
3. STAMPED WALLS DESIGNS SHALL BE PROVIDED FOR REVIEW AND APPROVAL BY THE CITY OF DOVER BUILDING DEPARTMENT.
4. WALL DESIGNS AND CALCULATIONS SHALL BE PROVIDED TO THE PROJECT GEOTECHNICAL ENGINEER TO CONFIRM THAT GEOTECHNICAL RECOMENDATIONS HAVE BEEN PROPERLY INCLUDED.
5. WALL DESIGNS AND CALCULATIONS SHALL BE PROVIDED TO THE PROJECT CIVIL ENGINEER TO CONFIRM ELEVATIONS AND ALIGNMENT HAVE BEEN PROPERLY INCLUDED.
6. SMALL BLOCK UNITS SHALL BE THE SQUARE FOOT PRODUCT BY VERSA-LOK OR APPROVED EQUAL.
7. WALL HEIGHT WITHOUT REINFORCEMENT SHALL BE LIMITED TO 3' EXPOSED FACE.
8. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. REFER TO GEOTECHNICAL ENGINEER'S REPORT FOR SUBGRADE PREPARATION CRITERIA.



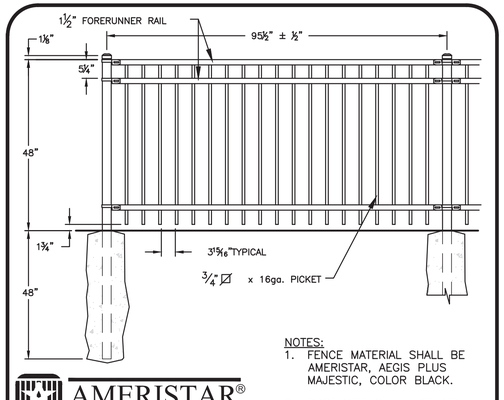

**TYPICAL "SMALL BLOCK" RETAINING WALL** (5)
NOT TO SCALE




NOTES:

1. FENCE POSTS SHALL BE FOR A 48" HIGH, BLACK VINYL COATED CHAIN LINK FENCE.
2. INSTALL SLEEVE-IT DURING THE CONSTRUCTION OF THE SEGMENTAL BLOCK RETAINING WALL.
3. GEO-GRID SHALL ONLY BE CUT AS ALLOWED BY THE STRUCTURAL ENGINEER FOR THE SEGMENTAL BLOCK RETAINING WALL.
4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

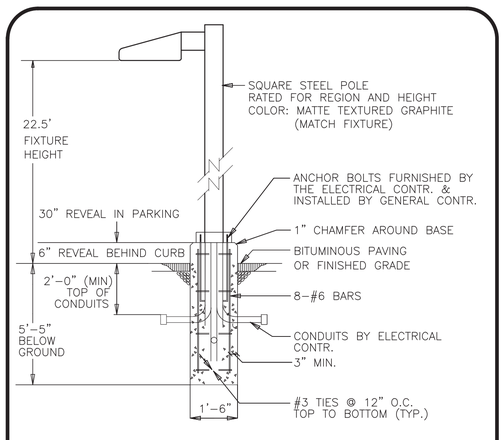
**FENCE POST AT TOP OF BLOCK RETAINING WALL** (6)
NOT TO SCALE



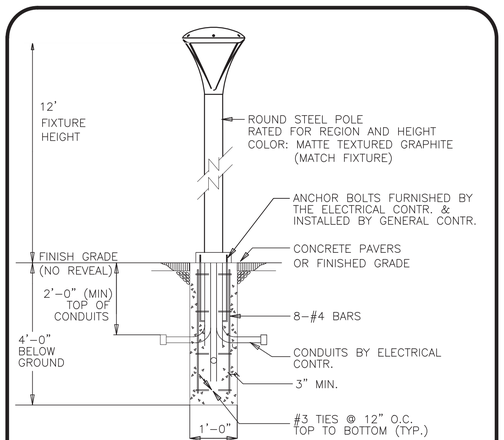

AMERISTAR®
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422

NOTES:
1. FENCE MATERIAL SHALL BE AMERISTAR, AEGIS PLUS MAJESTIC, COLOR BLACK.
2. POST SIZE SHALL BE PER AEGIS PLUS SIZING CHART

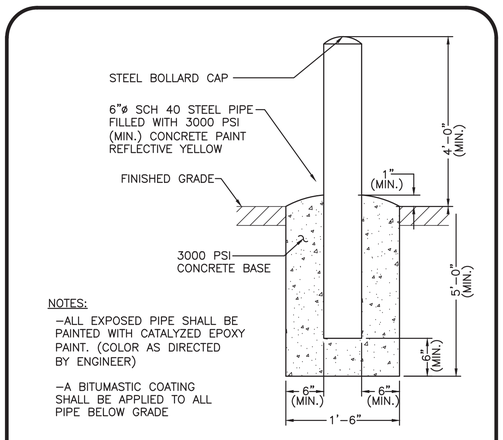
**48" HIGH DECORATIVE STEEL FENCE** (7)
NOT TO SCALE




**PRE-CAST LIGHT POLE BASE - 22.5' FIXTURE HEIGHT** (8)
NOT TO SCALE

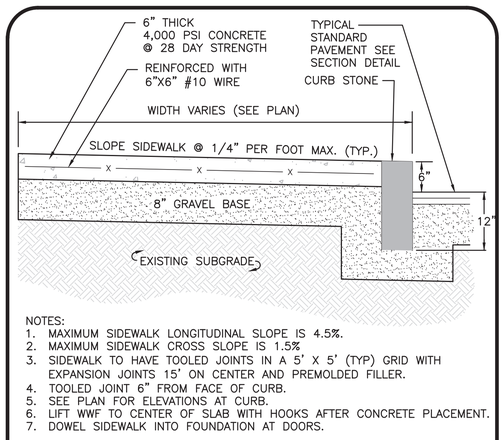



**PRE-CAST LIGHT POLE BASE - 12' FIXTURE HEIGHT** (9)
NOT TO SCALE




NOTES:
-ALL EXPOSED PIPE SHALL BE PAINTED WITH CATALYZED EPOXY PAINT. (COLOR AS DIRECTED BY ENGINEER)
-A BITUMASTIC COATING SHALL BE APPLIED TO ALL PIPE BELOW GRADE

**FIXED PIPE BOLLARD** (11)
NOT TO SCALE




NOTES:
1. MAXIMUM SIDEWALK LONGITUDINAL SLOPE IS 4.5%.
2. MAXIMUM SIDEWALK CROSS SLOPE IS 1.5%
3. SIDEWALK TO HAVE TOOLED JOINTS IN A 5' X 5' (TYP) GRID WITH EXPANSION JOINTS 15' ON CENTER AND PREMOLDED FILLER.
4. TOOLED JOINT 6" FROM FACE OF CURB.
5. SEE PLAN FOR ELEVATIONS AT CURB.
6. LIFT WWF TO CENTER OF SLAB WITH HOOKS AFTER CONCRETE PLACEMENT.
7. DOWEL SIDEWALK INTO FOUNDATION AT DOORS.

**CONCRETE SIDEWALK WITH VERTICAL GRANITE CURB** (12)
NOT TO SCALE

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_DETAILS.DWG

STATE OF NEW HAMPSHIRE
BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER
01.30.26

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | AS SHOWN | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: DETAILS
SHEET No. C-502

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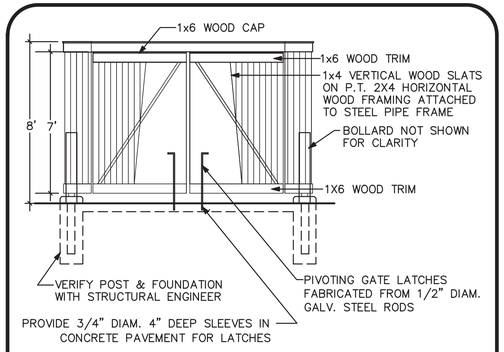
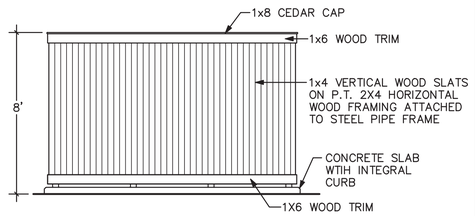



NOTES:
1. THIS DETAIL HAS BEEN PROVIDED BY TOWNEPLACE SUITES BY MARRIOT DESIGN GUIDLINES AND IS PROTOTYPICAL.
2. ALL WOOD TO BE FINISHED PER ARCHITECT/OWNER REQUIREMENTS.

**TRASH ENCLOSURE GATE** (1)
NOT TO SCALE

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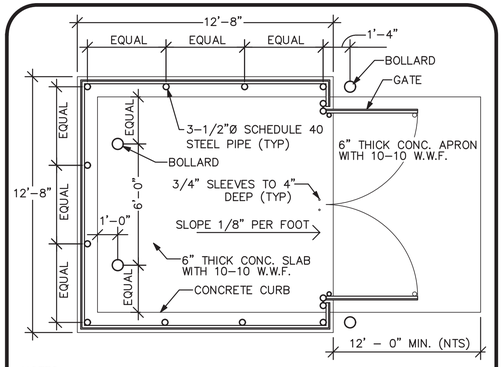
**TRASH ENCLOSURE ELEVATION** (2)
NOT TO SCALE

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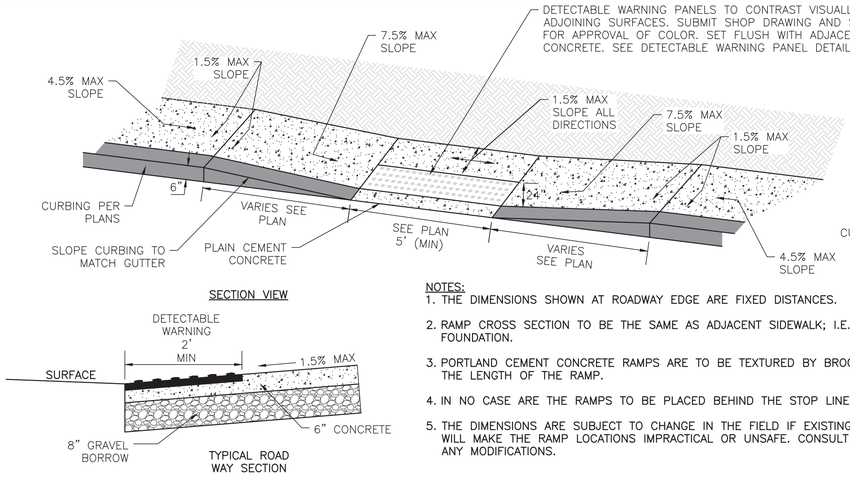
**TRASH ENCLOSURE PLAN VIEW** (3)
NOT TO SCALE

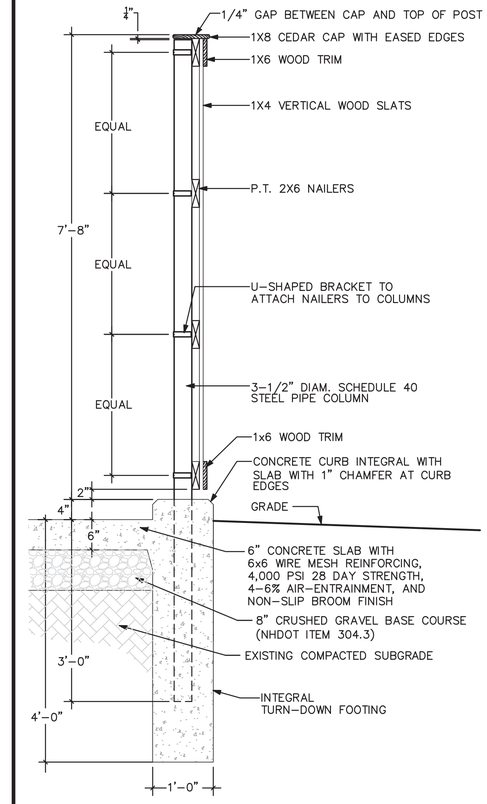



SECTION VIEW




NOTES:
1. THE DIMENSIONS SHOWN AT ROADWAY EDGE ARE FIXED DISTANCES.
2. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
3. PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
4. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
5. THE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IF EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE. CONSULT CIVIL ENGINEER PRIOR TO MAKING ANY MODIFICATIONS.

**ADA ACCESSIBLE CURB CUT AND TRANSITION** (4)
NOT TO SCALE




NOTES:
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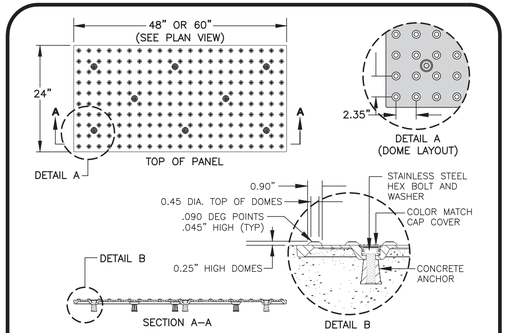
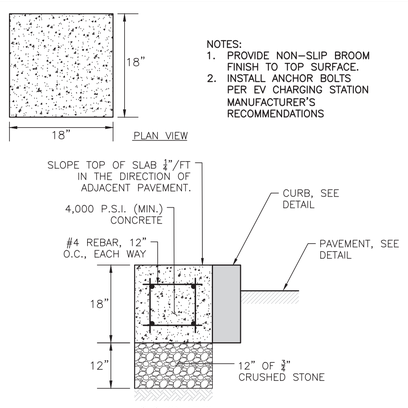
**TRASH ENCLOSURE SECTION** (5)
NOT TO SCALE



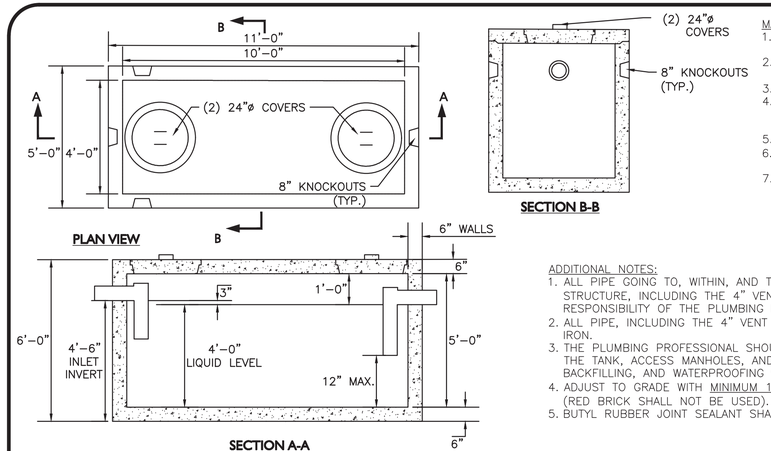

NOTES:
1. VENDOR INFORMATION: "ADATILE" WET SET ADA REPLACEABLE TACTILE (OR APPROVED EQUAL) AS MANUFACTURED BY ADATILE, PHONE: 1-800-372-0519, WWW.ADATILE.COM, EMAIL: INFO@ADATILE.COM
2. COLOR SHALL BE BLACK.
3. INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES.

**WET SET ADA REPLACEABLE TACTILE PANEL** (6)
NOT TO SCALE




NOTES:
1. PROVIDE NON-SLIP BROOM FINISH TO TOP SURFACE.
2. INSTALL ANCHOR BOLTS PER EV CHARGING STATION MANUFACTURER'S RECOMMENDATIONS

**CONCRETE PAD FOR EV CHARGING STATION** (7)
NOT TO SCALE




MANUFACTURER'S NOTES:
1. CONCRETE: 5,000 PSI MINIMUM STRENGTH @ 28 DAYS.
2. STEEL REINFORCING-ASTM A-615, GRADE 60.
3. COVER TO STEEL-1" MINIMUM.
4. TANKS ARE DESIGNED TO MEET ASTM C858 AND ACI 318 WITH ASHHTO HS-20 LOADING.
5. EARTH COVER: 1 TO 5 FEET MAX.
6. CONSTRUCTION JOINT SEALED WITH 1" DIA. BUTYL RUBBER OR EQUIVILENT.
7. APPROX. WEIGHTS: TOP SLAB = 2.3 TONS; BOTTOM SECTION = 8.5 TONS.

ADDITIONAL NOTES:
1. ALL PIPE GOING TO, WITHIN, AND TO 10 FEET BEYOND THE CONCRETE STRUCTURE, INCLUDING THE 4" VENT PIPE, SHALL BE THE RESPONSIBILITY OF THE PLUMBING PROFESSIONAL.
2. ALL PIPE, INCLUDING THE 4" VENT PIPE TO THE ROOF, SHALL BE CAST IRON.
3. THE PLUMBING PROFESSIONAL SHOULD COORDINATE INSTALLATION OF THE TANK, ACCESS MANHOLES, AND DETAILS OF EXCAVATION, BACKFILLING, AND WATERPROOFING WITH THE CIVIL ENGINEER.
4. ADJUST TO GRADE WITH MINIMUM 12" OF CONCRETE BRICK AND MORTAR (RED BRICK SHALL NOT BE USED).
5. BUTYL RUBBER JOINT SEALANT SHALL BE USED AT ALL JOINTS.

**GREASE TRAP (1,000 GAL)** (8)
NOT TO SCALE

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_DETAILS.DWG

BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
01.30.26

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
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**OWNER:**
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

**APPLICANT:**
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

**PROJECT:**
TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
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| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
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**DRAWING TITLE:** DETAILS
**SHEET No.** C-503

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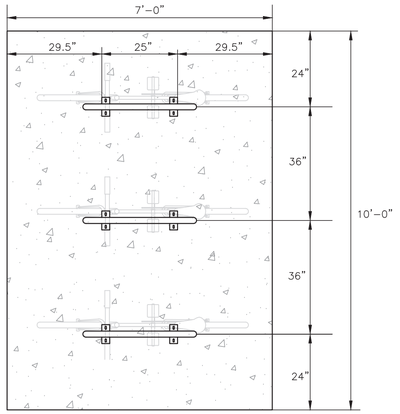
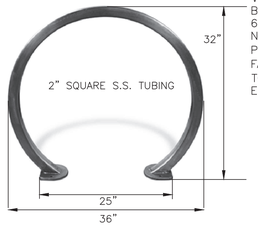



PLAN VIEW

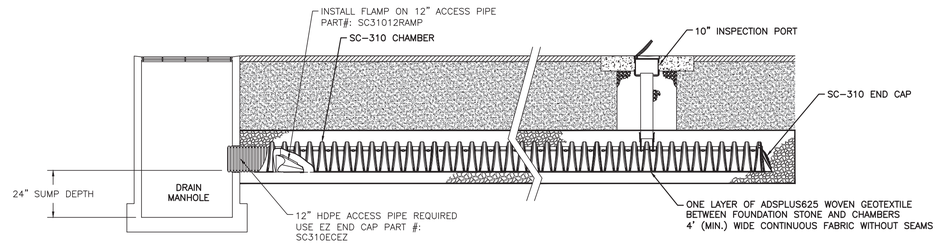



VENDOR INFORMATION:
BELSON OUTDOORS, LLC
627 AMERSALE DRIVE
NAPERVILLE, IL 60563
PHONE:(630) 897-8489
FAX:(630) 897-0573
TOLL FREE:(800) 323-5664
EMAIL: SALES@BELSON.COM

NOTES:

1. MODEL: CBBR-2CS-SS
2. THREE (3) RINGS TOTAL
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. SPACE RINGS 36" ON CENTER.

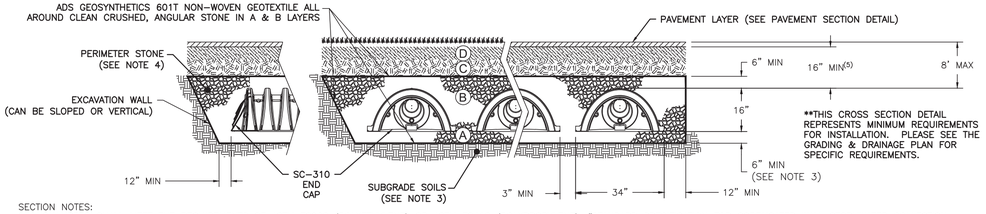
**BICYCLE RACK** (1)
NOT TO SCALE




**STORMTECH SC-310 ISOLATOR PLUS ROW** (2)
NOT TO SCALE

| | MATERIAL LOCATION | DESCRIPTION | AASHTO CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|---|---|---|---|---|
| D | FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. | SEE PAVEMENT SECTION DETAIL FOR REQUIREMENTS. | 3.25 | DRY DENSITY OF AT LEAST 95 PERCENT AS DETERMINED BY ASTM DESIGNATION D-1557 (SEE PAVEMENT SECTION DETAIL FOR ADDITIONAL INFORMATION) |
| C | INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 16" (400 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | BEGIN COMPACTIONS AFTER 12" OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs. DYNAMIC FORCE NOT TO EXCEED 20,000 lbs. |
| B | EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | CLEAN, CRUSHED, ANGULAR STONE | AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57 | NO COMPACTION REQUIRED. |
| A | FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | CLEAN, CRUSHED, ANGULAR STONE | AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2][3] |

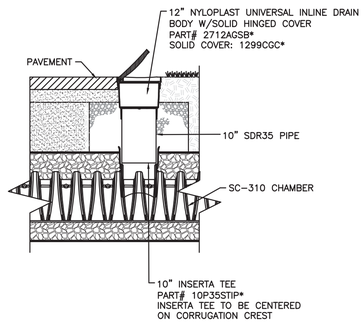
TABLE NOTES:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.




SECTION NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER SHALL BE NOTIFIED WHEN A "BOTTOM BED" INSPECTION IS READY. THE FABRIC, STONE, AND CHAMBERS AND CHAMBERS SHALL NOT BE PLACED WITHOUT THE APPROVAL OF THE DESIGN ENGINEER.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 22"

NOTES FOR CONSTRUCTION EQUIPMENT:
1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 CHAMBERS IS LIMITED:
   A. NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   B. NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
   C. WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH INSTALLATION GUIDE SC-310/DC-780/SC-800".
3. FULL 36" OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
4. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
5. CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

**STORMTECH SC-310 CROSS SECTION** (3)
NOT TO SCALE




NOTE: THE PART# 2712AG10IPKIT CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

**STORMTECH SC-310 10" INSPECTION PORT** (4)
NOT TO SCALE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
   A. INSPECTION PORTS (IF PRESENT)
      A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
      A.2. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
      A.3. IF SEDIMENT IS AT, OR ABOVE, 3" PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
   B. ALL ISOLATOR PLUS ROWS
      B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
      B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
         i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
         ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
      B.3. IF SEDIMENT IS AT, OR ABOVE, 3" PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
   A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° OR MORE IS PREFERRED
   B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
   C. VACUUM STRUCTURE SUMP AS REQUIRED

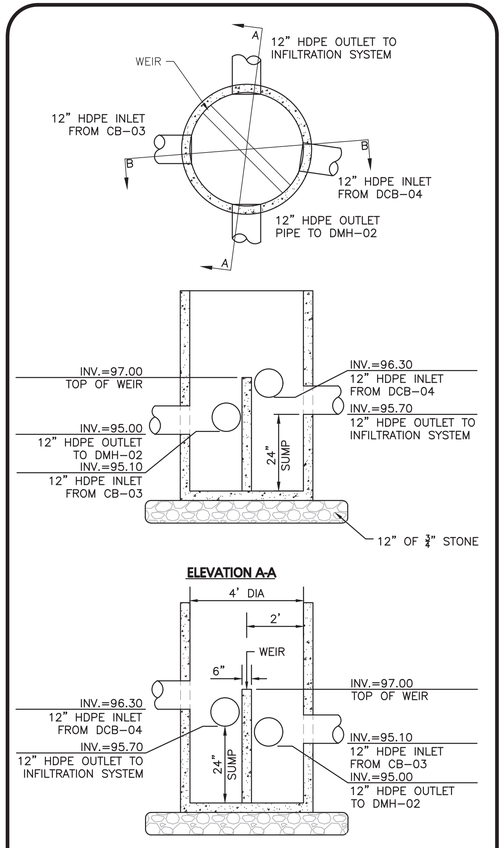
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

**STORMTECH SC-310 INSPECTION AND MAINTENANCE** (5)
NOT TO SCALE




**ELEVATION A-A**




**ELEVATION B-B**

NOTES:
SEE CITY OF DOVER DRAIN MANHOLE DETAIL FOR ADDITIONAL INFORMAITON.

**4' DIAMETER OUTLET CONTROL STRUCTURE** (6)
NOT TO SCALE

R:\PROJECTS\1173-31\CIVIL\DRAWINGS\CURRENT\C-1173-31_DETAILS.DWG

BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
01.30.26

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | AS SHOWN | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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DRAWING TITLE: DETAILS

SHEET No. C-504


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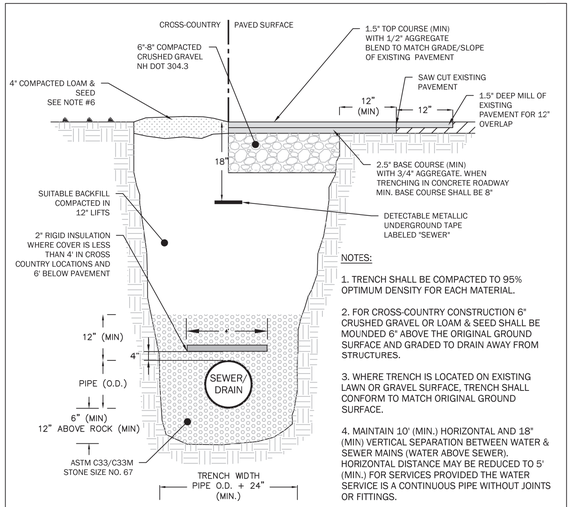
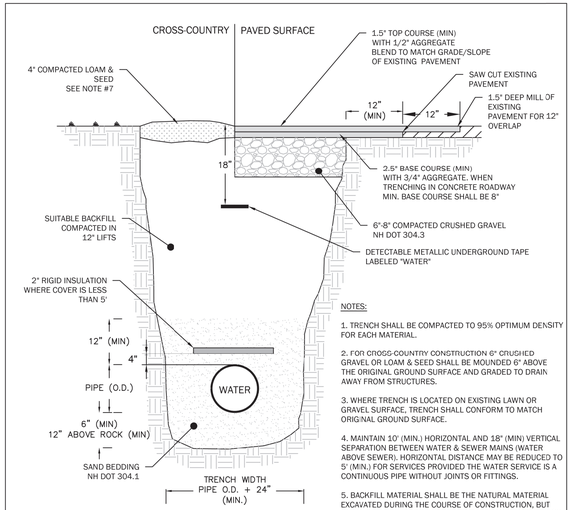



NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE AND GRADED TO DRAIN AWAY FROM STRUCTURES.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
6. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

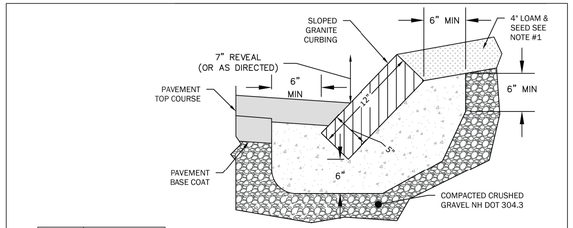
| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D-3 | SEWER/DRAIN TRENCH | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6453 |
| REVISED: April 2025 | | |




NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE AND GRADED TO DRAIN AWAY FROM STRUCTURES.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT, AND ROCKS OVER 6" IN LARGEST DIMENSION
6. PROVIDE MINIMUM 5' OF COVER. ENGINEERING APPROVAL REQUIRED FOR LESS THAN 5' OF COVER.
7. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D-4 | WATER TRENCH | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6453 |
| REVISED: April 2025 | | |

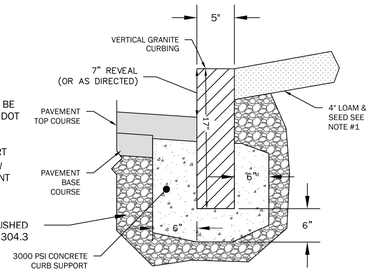



SLOPED GRANITE CURB

| RADIUS | MAX LENGTH |
|---|---|
| < 21' | USE CURVED CURB |
| 12' | 3' |
| 22' - 28' | 4' |
| 29' - 35' | 5' |
| 36' - 42' | 6' |
| 43' - 49' | 7' |
| 50' - 56' | 8' |
| 57' - 60' | 9' |
| OVER 60' | 10' |

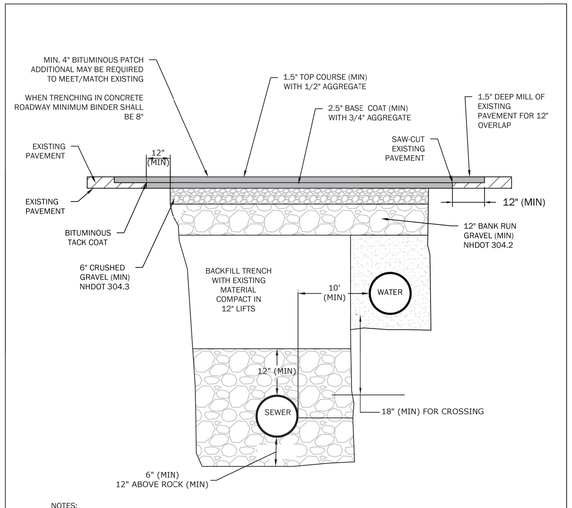
NOTES:

1. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.
2. CONCRETE CURB SUPPORT SHOULD BE SET ¾" BELOW THE TOP OF THE PAVEMENT BASE COURSE.




VERTICAL GRANITE CURB

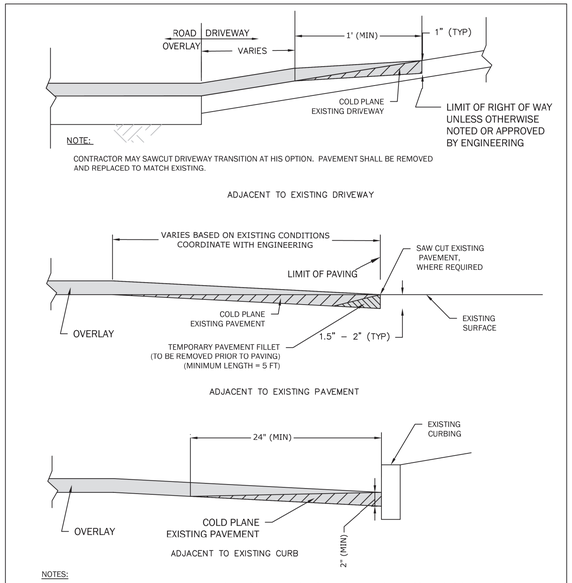
| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D-8 | GRANITE CURB | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6453 |
| REVISED: April 2025 | | |




NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
2. ALL WORK SHALL COMPLY WITH THE CITY OF DOVER CONSTRUCTION GUIDELINES AND PROCEDURES
3. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.

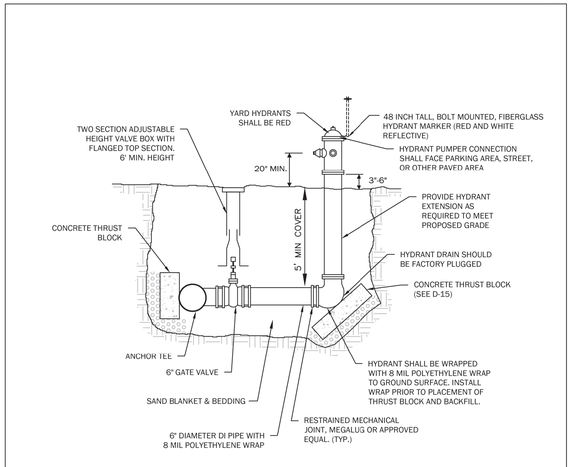
| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D-10 | TYPICAL TRENCH | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6453 |
| REVISED: April 2025 | | |




NOTES:

1. THE LENGTH OF THE TAPER MAY BE ADJUSTED AS ORDERED TO PROVIDE FOR VARYING FIELD CONDITIONS OR CHANGES IN SINGLE COURSE DEPTH.

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D-12 | PAVEMENT OVERLAY | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6453 |
| REVISED: April 2025 | | |




NOTES:

1. FIRE HYDRANTS SHALL BE FACTORY SEALED EDDY STYLE 2641.
2. HYDRANT SHALL BE PAINTED RED WITH EPOXY PAINT AS RECOMMENDED BY THE HYDRANT MANUFACTURER.
3. HYDRANT SHALL OPEN LEFT.
4. HYDRANT MARKER TO BE 3/8" FIBERGLASS RODS BY E-ZGUIDE PRODUCTS OR APPROVED EQUAL.
5. PIPE BEDDING AND BLANKET SHALL MEET THE STANDARD WATER TRENCH DETAIL D-4.

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D-14 | FIRE HYDRANT | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6453 |
| REVISED: April 2025 | | |

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BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

01.30.26

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

**OWNER:**

ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

**APPLICANT:**

LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

**PROJECT:**

TOWNEPLACE SUITES BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | AS SHOWN | DWG. NAME: | C-1173-31 |
| DESIGNED BY: | BDJ | CHECKED BY: | BDJ |

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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**DRAWING TITLE:**

CITY OF DOVER STANDARD DETAILS

**SHEET No.**

C-505

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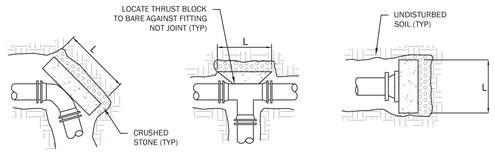
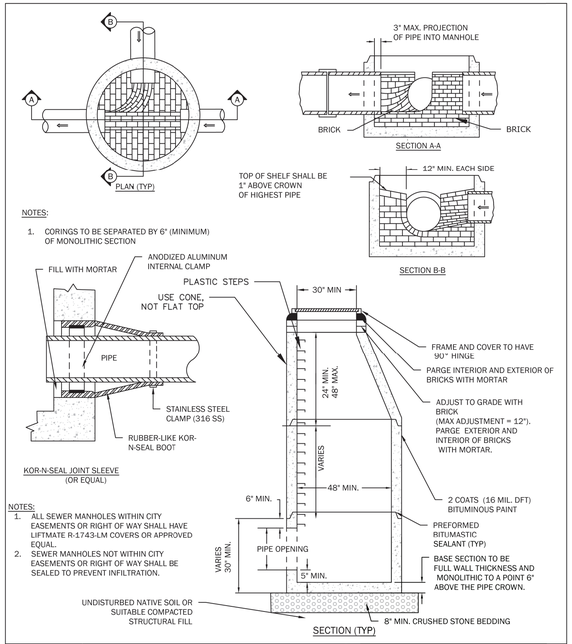



THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

| Nominal Dia. (in) | PIPE SIZE 4 | 6 | 8 | 10 | 12 | 16 |
|---|---|---|---|---|---|---|
| Pipe Fittings | * | * | 5.18 | 7.96 | 11.43 | 20.29 |
| 90 Degree Bends | * | 4.11 | 7.33 | 11.26 | 16.17 | 28.69 |
| 45 Degree Bends | * | * | * | 6.10 | 8.75 | 15.53 |
| 22-1/2 Degree Bends | * | * | * | * | 4.46 | 7.92 |
| 11-1/4 Degree Bends | * | * | * | * | * | * |
| *SEE NOTE 2 | SYSTEM PRESSURE: 125 PSI<br>SAFETY FACTOR: 1.5<br>SOIL BEARING CAPACITY: 2,000 PSF | | | | | |

NOTES:
1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
3. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
6. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
7. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
8. USE OF THRUST BLOCKS DOES NOT ELIMINATE THE REQUIREMENT OF OTHER RESTRAINTS OR VICE VERSA.

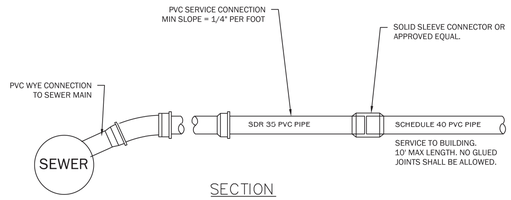
| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D–15 | CONCRETE THRUST BLOCK | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6483 |
| REVISED: April 2025 | | |




NOTES:
1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

NOTES:
1. ALL SEWER MANHOLES WITHIN CITY EASEMENTS OR RIGHT OF WAY SHALL HAVE LIFTMATE R-1743-LM COVERS OR APPROVED EQUAL.
2. SEWER MANHOLES NOT WITHIN CITY EASEMENTS OR RIGHT OF WAY SHALL BE SEALED TO PREVENT INFILTRATION.

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D–16 | SEWER MANHOLE | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6483 |
| REVISED: April 2025 | | |




NOTES:
1. TRENCHING AND BEDDING REQUIREMENTS PER CITY SEWER TRENCH DETAIL (D-3).
2. SERVICE LATERAL DIAMETER VARIES PER APPLICATION. REVIEW SIZE WITH CITY ENGINEER PRIOR TO INSTALLATION.
3. SDR 35 SHALL NOT EXTEND INTO THE BUILDING

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D–17 | SEWER SERVICE | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6483 |
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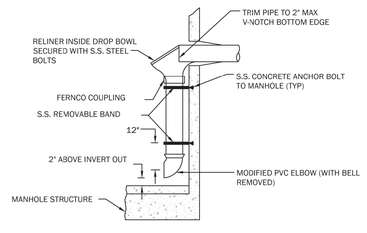



NOTES:

1. INTERNAL DROPS ARE PROHIBITED UNLESS APPROVED BY THE CITY ENGINEER.

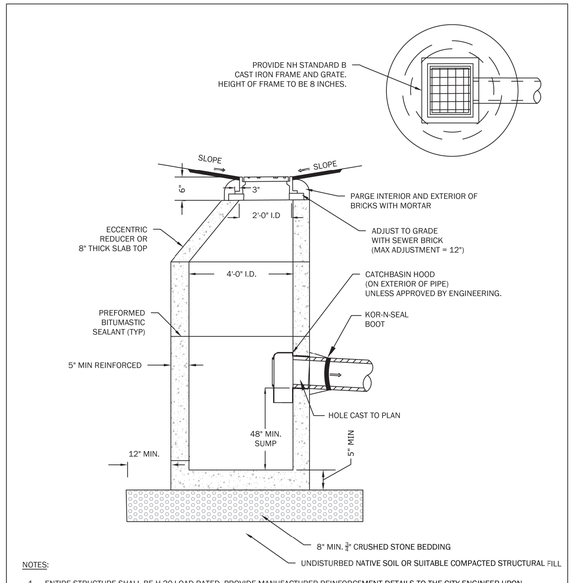
2. A MINIMUM 5 FT DIAMETER MANHOLE IS REQUIRED FOR AN INTERNAL DROP.

3. IF A DROP IS PROPOSED FOR AN EXISTING MANHOLE, THE BRICK SHELF SHALL BE REWORKED TO FORM A NEW CHANNEL FOR NEW DROP CONNECTIONS. IF STRUCTURE IS LESS THAN 5 FT IN DIAMETER, A NEW PRECAST MANHOLE SHALL BE INSTALLED.

3. BRICK INVERT NOT SHOWN ON DETAIL.

4. EXTERNAL DROPS ARE NOT PERMITTED UNLESSED AUTHORIZED IN WRITING BY COMMUNITY SERVICES.

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D–18 | MANHOLE DROP INLET | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6483 |
| REVISED: April 2025 | | |




NOTES:

1. ENTIRE STRUCTURE SHALL BE H-20 LOAD RATED. PROVIDE MANUFACTURER REINFORCEMENT DETAILS TO THE CITY ENGINEER UPON REQUEST.
2. CONTRACTOR SHALL HAVE OPTION TO USE 6" OR 8" PRECAST GRADE RINGS TO ADJUST GRADE.

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D–19 | CATCHBASIN | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6483 |
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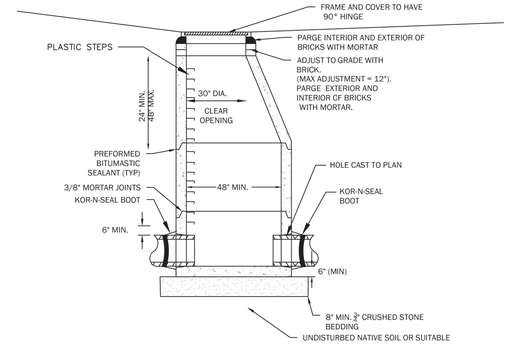


NOTES:

1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

| SHEET NO. | STANDARD DETAILS NOT TO SCALE | CITY OF DOVER, NH |
|---|---|---|
| D–20 | DRAIN MANHOLE | COMMUNITY SERVICES ENGINEERING DIVISION<br>288 CENTRAL AVENUE<br>DOVER, NEW HAMPSHIRE 03820<br>TELEPHONE: (603) 516-6450<br>FAX: (603) 516-6483 |
| REVISED: April 2025 | | |

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STATE OF NEW HAMPSHIRE – BRIAN D. JONES No. 13809 LICENSED PROFESSIONAL ENGINEER

01.30.26

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES BY MARRIOTT
47 CENTRAL AVE
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(MAP 17, LOT 76)

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PREPARED BY:
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civil engineering ◆ land surveying
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400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:
CITY OF DOVER STANDARD DETAILS

SHEET No.
C-506

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## SECTION 33 36 00 - SANITARY SEWER SYSTEMS

PART 1 GENERAL

1.01 PRODUCTS

A. GENERAL: MATERIALS SHALL BE AS SPECIFIED HEREIN, EXCEPT THAT CONSIDERATION SHALL BE GIVEN TO OTHER PRODUCTS THAT MEET OR EXCEED THOSE SPECIFIED IF REQUESTED TEN (10) DAYS PRIOR TO DATE OF BID OPENING, IN ACCORDANCE WITH THE GENERAL CONDITIONS.

1.02 DESCRIPTION:

A. THE WORK UNDER THIS SECTION SHALL INCLUDE THE FURNISHING OF ALL MATERIAL, LABOR, EQUIPMENT AND SUPPLIES AND THE PERFORMANCE OF ALL OPERATIONS TO PROVIDE A COMPLETE WORKING SYSTEM AS REQUIRED BY THE DRAWINGS AND DETAILS AND AS SPECIFIED HEREIN, IN GENERAL, TO INCLUDE THE FOLLOWING ITEMS:

1. SANITARY SEWER SYSTEM FROM 5 FEET OUTSIDE THE BUILDING TO POINT OF TERMINATION AS SHOWN ON THE DRAWINGS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE LOCAL DEPARTMENT OF PUBLIC WORKS AND NHDES.

1.03 RELATED WORK:

A. SECTION 31 23 00 – EARTHWORK.

B. SECTION 15401 – PLUMBING.

1.04 RELATED DOCUMENTS:

A. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE MUNICIPALITY.

B. ALL WORK FOR ITEMS NOT OTHERWISE COVERED BY 1.03.A ABOVE SHALL CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION (LATEST EDITION).

C. ALL WORK SHALL CONFORM TO THE PERMITS ISSUED BY THE STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.

1.05 PROJECT CONDITIONS:

A. KNOWN UNDERGROUND AND SURFACE UTILITY LINES ARE INDICATED ON THE DRAWINGS. INFORMATION ON THE DRAWINGS RELATING TO EXISTING UTILITY LINES AND SERVICES IS FROM THE BEST SOURCE PRESENTLY AVAILABLE. ALL SUCH INFORMATION IS FURNISHED ONLY FOR INFORMATION AND IS NOT GUARANTEED. COORDINATE WITH UTILITY COMPANIES, DIG SAFE AND THEIR CONTRACTORS, AND EXCAVATE TEST PITS AS REQUIRED TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.

B. TEST BORINGS HAVE BEEN PERFORMED BY OWNER'S SEPARATE CONTRACTOR. LOCATIONS OF TEST BORINGS ARE SHOWN ON THE DRAWINGS. NEITHER THE OWNER NOR THE ENGINEERS MAKE WARRANTY, EITHER EXPRESSED OR IMPLIED, OF ACCURACY OF BORING DATA AS A REPRESENTATION OF TYPICAL CONDITIONS. THE CONTRACTOR SHALL MAKE HIS/HER OWN INVESTIGATION OF SUBSURFACE CONDITIONS AND SATISFY HER/HIMSELF AS TO CONDITION THEREOF AND SHALL BASE HIS/HER BID IN SOLE RELIANCE THEREON. SUCH INVESTIGATION MAY INCLUDE, BUT IS NOT NECESSARILY LIMITED TO: ADDITIONAL TEST PITS, BORINGS. NO ALLOWANCE WILL BE MADE FOR THE CONTRACTOR'S FAILURE TO PERFORM INVESTIGATION NECESSARY TO FULLY IDENTIFY AND SATISFY HIM/HERSELF AS TO SUBSURFACE CONDITIONS WHICH COULD AFFECT THE WORK.

C. PROTECT EXCAVATIONS BY SHORING, BRACING, SHEETING, UNDERPINNING, OR OTHER METHODS, AS REQUIRED TO PREVENT CAVE-INS OR LOOSE DIRT FROM ENTERING EXCAVATIONS. BARRICADE OPEN EXCAVATIONS AND POST WARNING LIGHTS AT WORK ADJACENT TO PUBLIC STREETS AND WALKS.

D. UNDERPIN ADJACENT STRUCTURE(S), INCLUDING UTILITY SERVICE LINES, WHICH MAY BE DAMAGED BY EXCAVATION OPERATIONS.

E. PROMPTLY REPAIR DAMAGE TO ADJACENT FACILITIES CAUSED BY SITE SEWER AND DRAINAGE OPERATIONS.

F. PROMPTLY NOTIFY THE OWNER OF UNEXPECTED SUB-SURFACE CONDITION

1.06 QUALITY ASSURANCE:

A. STANDARDS: COMPLY WITH STANDARDS SPECIFIED IN THIS SECTION. PROVIDE SHOP DRAWINGS TO THE OWNER OR OWNER'S REPRESENTATIVE.

B. QUALIFICATIONS OF INSTALLERS: USE ADEQUATE NUMBERS OF SKILLED WORKERS WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS FOR PROPER PERFORMANCE OF THE WORK OF THIS SECTION.

C. OBTAIN OWNER OR OWNER'S REPRESENTATIVE'S ACCEPTANCE OF INSTALLED AND TESTED SITE DRAINAGE SYSTEM PRIOR TO BACKFILLING.

1.07 SUBMITTALS:

A. PRODUCT DATA:

1. COMPLETE MATERIALS LIST OF ALL ITEMS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION.
2. MANUFACTURER'S SPECIFICATIONS AND OTHER DATA REQUIRED TO DEMONSTRATE COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.
3. MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.

B. TESTING AND INSPECTION REPORTS.

C. PROVIDE SITE SEWER AND DRAINAGE RECORD DRAWINGS:

1. LEGIBLY MARK DRAWINGS TO RECORD ACTUAL CONSTRUCTION.
2. INDICATE HORIZONTAL AND VERTICAL LOCATIONS REFERENCED TO PERMANENT SURFACE IMPROVEMENTS.
3. IDENTIFY FIELD CHANGES OF DIMENSIONS AND DETAILS AND CHANGES MADE BY CHANGE ORDER.

1.08 COOPERATION AND COORDINATION WITH OTHER TRADES:

A. THE WORK SHALL BE SO PERFORMED THAT THE PROGRESS OF THE ENTIRE PROJECT CONSTRUCTION, INCLUDING ALL OTHER TRADES, SHALL NOT BE DELAYED AND NOT INTERFERED WITH. MATERIALS AND APPARATUS SHALL BE INSTALLED AS FAST AS CONDITIONS WILL PERMIT AND MUST BE INSTALLED PROMPTLY WHEN AND AS DIRECTED.

B. ALL WORK SHALL BE COORDINATED WITH OTHERS TRADES. THE WORK IN THIS SECTION SHALL AT NO TIME INTERRUPT THE NORMAL OPERATIONS OF EXISTING BUILDINGS.

PART 2 PRODUCTS

2.01 POLYVINYL CHLORIDE PIPE (PVC):

A. PVC PIPE SHALL BE MADE FROM VIRGIN PLASTIC AND SHALL CONFORM TO ASTM D1784. SOLID PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM D3034 SDR 35.

B. STANDARD NOMINAL LENGTHS OF PIPE SHALL BE A MINIMUM OF 10 FEET.

C. THE PIPE FITTINGS SHALL BE AS UNIFORM AS COMMERCIALLY PRACTICAL IN COLOR, OPACITY, DENSITY AND OTHER PHYSICAL PROPERTIES.

D. PIPE SHALL BE TESTED IN ACCORDANCE WITH SECTION 10 OF ASTM D2412 STANDARD METHOD OF "TEST FOR EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL-PLATE LOADING". THE MINIMUM VALUE OF PIPE STIFFNESS AT 5% DEFLECTION COMPUTED FROM DATA OBTAINED FROM THE ABOVE TESTING PROCEDURE SHALL BE IN ACCORDANCE WITH ASTM D2412.

E. EACH PIPE AND ALL COUPLINGS AND FITTINGS SHALL BE CLEARLY MARKED ON THE OUTSIDE SURFACE WITH THE NAME OF THE MANUFACTURER, ASTM DESIGNATION WITH TYPE AND GRADE, AND NOMINAL DIAMETER.

2.02 DUCTILE IRON (D.I.) SEWER PIPE:

A. ANSI/AWWA C151/ A21.51 CLASS 52 WITH CEMENT LINING CONFORMING TO ANSI A21.4. PRESSURE CLASS SHALL BE ANSI PRESSURE CLASS 350. PROTECTIVE COATING ON EXTERIOR SHALL BE APPROVED BITUMASTIC OR COAL TAR ENAMEL CONFORMING TO ANSI A21.4 AND A21.10

B. FITTINGS FOR DUCTILE IRON PIPE SHALL BE DUCTILE IRON SHORT BODY FITTINGS CONFORMING TO ANSI A21.1 WITH CEMENT LINING CONFORMING TO ANSI A21.4. THICKNESS CLASS SHALL BE ANSI PRESSURE CLASS 350.

C. LENGTH AND JOINTS – DUCTILE IRON PIPE LENGTHS SHALL GENERALLY BE AS LONG AS POSSIBLE BUT SHALL HAVE A BELL-AND-SPIGOT OR SHALL HAVE FURNISHED WITH IT A SEPARATE JOINTING SLEEVE OR COUPLING WITH RUBBER RINGS COMPRESSED INTO PLACE TO MAKE A WATERTIGHT CLOSURE. JOINTS SHALL BE SEALED WITH A RUBBER RING GASKET AND SHALL BE OF A COMPOSITION AND TEXTURE WHICH WILL ENDURE PERMANENTLY UNDER THE CONDITIONS LIKELY TO BE IMPOSED BY THIS USE, AND SHALL CONFORM TO ASTM SPECIFICATIONS C-361 AMENDED TO DATE. JOINTS SHALL BE "PUSH-ON" TYPE COMPLYING WITH ANSI A21.1.

2.04 CAST IRON SOIL PIPE:

A. CAST IRON SOIL PIPE SHALL BE ASTM A 74, EXTRA HEAVY TYPE, INSIDE NOMINAL DIAMETER AS SPECIFIED ON CONSTRUCTION DRAWINGS, BELL AND SPIGOT END. JOINTS SHALL BE IN CONFORMANCE WITH AWWA C111, RUBBER GASKET JOINT DEVICES.

2.05 PIPE JOINTS AND FITTINGS:

A. DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINTS. ALL FITTINGS SHALL BE RESTRAINED OR RODDED.

B. DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI 21.10 AND 21.11 (AWWA C110 AND AWWA C111).

C. HDPE AND PVC FITTINGS SHALL BE WATERTIGHT. STRUCTURAL INTEGRITY AND JOINT CONFIGURATION SHALL BE IDENTICAL TO THAT OF PIPE.

2.06 SEWER MANHOLES:

A. PRECAST CONCRETE MANHOLE BASE SECTIONS, RISER SECTIONS AND CONE SECTIONS SHALL BE CONSTRUCTED OF A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, AIR ENTRAINED CONCRETE WITH HOOP REINFORCING AND LIFTING HOLES. SECTIONS SHALL BE FURNISHED WITH "O" RING RUBBER GASKETS. LIFTING HOLES IN ALL SECTIONS SHALL BE FILLED WITH NONSHRINK MORTAR AFTER SECTIONS ARE IN PLACE.

B. CLASS "A" CONCRETE: ASTM C94. ALL CONCRETE SHALL BE CLASS A UNLESS STATED OTHERWISE.

1. STRENGTH : 3000 PSI @ 28 DAYS
2. CEMENT CONTENT : TYPE II, 6.5 SACKS/CY (MIN)
3. W/C RATIO : 0.464 (MAX)
4. FINE AGGREGATE : ASTM C33
5. COARSE AGGREGATE : ASTM C33 SIZE #67

C. CLASS "B" CONCRETE:

1. STRENGTH : 3000 PSI @ 28 DAYS
2. CEMENT CONTENT : TYPE II, 6.0 SACKS/CY (MIN)
3. W/C RATIO : 0.488 (MAX)
4. FINE AGGREGATE : ASTM C33
5. COARSE AGGREGATE : ASTM C33 SIZE #67

D. REINFORCING STEEL: ASTM A615, A616, OR A185.

E. PRECAST CONCRETE: ASTM C478 EXCEPT AS SPECIFIED OTHERWISE.

F. TABLES AND INVERTS SHALL BE CONSTRUCTED OF BRICK, SHALL HAVE THE SAME SHAPE OF THE PIPE THAT ARE CONNECTED AND ANY CHANGE IN SIZE OR DIRECTION SHALL BE GRADUAL AND EVEN.

G. PRECAST STRUCTURES SHALL BE ABLE TO WITHSTAND H-20 LOADING.

H. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.

I. PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:

1. ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES;
2. CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS;\
3. ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING.
4. PIPE TO MANHOLE JOINTS SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:
   a. KOR – N – SEAL
   b. LOCK JOINT
   c. PRESS WEDGE II

2.07 BRICK MASONRY:

A. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C 150-05, TYPE H.

B. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207-06 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES".

C. SAND SHALL BE CLEAN, HARD, DURABLE PARTICLES AND WITH NOT MORE THAN 5% IN VOLUME OF MICA, CLAY AND OTHER DELETERIOUS MATERIALS. THE SAND SHALL BE GRADED FROM FINE TO COURSE SO THAT WHEN TESTED DRY, IT WILL CONFORM TO THE LIMITS OF ASTM C33-03 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".

D. MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION;

1. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
   a. 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR
   b. 4.5 PARTS SAND, ONE PART CEMENT AND 0.5 PART HYDRATED LIME

E. WATER SHALL BE FREE FROM OILS, ACIDS, ALKALIS OR ORGANIC MATTER, AND SHALL BE CLEAN AND FRESH.

F. BRICK SHALL BE SOUND, HARD AND UNIFORMLY BURNED, REGULAR AND UNIFORM IN SHAPE AND SIZE, OF COMPACT TEXTURE AND SATISFACTORY TO THE OWNER OR OWNER'S REPRESENTATIVE. BRICKS SHALL COMPLY WITH ASTM C32, GRADE SS. ONLY WHOLE BRICK SHALL BE USED UNLESS OTHERWISE PERMITTED.

2.08 MANHOLE STEPS: PLASTIC STEPS ARE REQUIRED BY THE CITY OF DOVER.

2.09 MANHOLE FRAMES AND COVERS:

A. CASTINGS SHALL BE OF GOOD QUALITY, STRONG, TOUGH EVENLY GRAINED, SMOOTH CAST IRON, FREE FROM SCALE, LUMPS, BLISTERS, SAND HOLES, AND DEFECTS OF ANY KIND. CASTINGS SHALL BE THOROUGHLY CLEANED AND ALL FINISHED SURFACES SHALL BE MACHINED TO A TRUE PLANED SURFACE AND SHALL SEAT AT ALL POINTS WITHOUT ROCKING.

B. CASTINGS SHALL NOT BE ACCEPTABLE IF THE ACTUAL WEIGHT IS LESS THAN 95% OF THE THEORETICAL WEIGHT OF THE CASTINGS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL FURNISH INVOICES TO THE OWNER SHOWING TRUE WEIGHTS, CERTIFIED BY THE SUPPLIER.

C. CAST IRON SHALL CONFORM TO ASTM A48, CLASS 30 AND FRAMES, COVERS AND GRATES SHALL BE ABLE TO WITHSTAND HS-20 LOADING.

D. PROVIDE A 30 INCH DIAMETER CLEAR OPENING. SEWER MANHOLE COVERS SHALL HAVE THE WORD "SEWER" IN 3" LETTERS CAST INTO THE TOP SURFACE.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS:

A. OBTAIN DETAILED INFORMATION FROM THE MANUFACTURERS OF APPARATUS AS TO THE PROPER METHOD OF INSTALLING AND CONNECTING SAME.

B. CAREFULLY STORE MATERIALS AND EQUIPMENT WHICH ARE NOT IMMEDIATELY INSTALLED AFTER DELIVERY. CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUG DURING CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.

C. ANY DEFECTIVE PIPE, FITTING OR DRAIN APPARATUS THAT IS DISCOVERED AFTER IT HAS BEEN INSTALLED OR HAS BEEN INSTALLED IMPROPERLY, SHALL BE REMOVED AND REPLACED WITH NON-DEFECTIVE PARTS TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

D. TRENCHES SHALL BE KEPT FREE OF WATER AND AS DRY AS POSSIBLE DURING THE INSTALLATION OF THE BEDDING MATERIAL, PIPE AND JOINTING FOR AS LONG A PERIOD AS REQUIRED. PIPE SHALL NOT BE LAID IN WATER OR WHEN TRENCH CONDITIONS ARE UNSUITABLE FOR THE WORK.

E. PROVIDE ALL INSPECTION AGENTS AT LEAST 24 HOURS NOTICE PRIOR TO WORK BEGINNING. INSPECTOR SHALL BE ON-SITE DURING ANY/ALL EXCAVATION, INSTALLATION, BACKFILL, AND TESTING OF ALL SEWERAGE PIPES, MANHOLES, AND APPURTENANCES.

F. NO BACKFILLING SHALL TAKE PLACE, UNLESS OTHERWISE ORDERED BY THE OWNER OR OWNER'S REPRESENTATIVE, UNTIL THE INSPECTION HAS BEEN COMPLETED.

G. EXCAVATION, BACKFILL AND PIPE BEDDING MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 31 23 00, EARTHWORK.

3.02 LAYING PIPE:

A. THIS WORK SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF DRAIN LINES IN ACCORDANCE WITH THESE SPECIFICATIONS, THE MUNICIPALITY AND OTHER AUTHORITIES HAVING JURISDICTION.

B. ALL PIPE SHALL BE SOUND AND CLEAN BEFORE INSTALLING. WHEN LAYING OF PIPE IS NOT IN PROGRESS, INCLUDING LUNCH TIME, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY WATERTIGHT PLUGS OR OTHER APPROVED MEANS.

C. THE FULL LENGTH OF PIPE SHALL REST SOLIDLY ON THE UNDISTURBED TRENCH BOTTOM, WITH RECESSES EXCAVATED TO ACCOMMODATE BELLS, COUPLINGS AND JOINTS. BLOCKING WILL NOT BE PERMITTED.

D. PIPE SHALL BE LAID TRUE TO THE SPECIFIED LINES AND GRADES. THE BELL END SHALL BE TOWARD THE RISING GRADE AND EACH SECTION OF PIPE SHALL HAVE A FIRM BEARING THROUGHOUT ITS LENGTH. MATERIAL PLACED AROUND AND UNDER THE PIPE SHALL BE FREE OF STONES. ROCKS SHALL NOT BE ROLLED INTO TRENCHES AND ALLOWED TO DROP ONTO PIPES. PIPE SHALL BE BEDDED IN ¾" STONE TO SPRING LINE OF PIPE AND THEN BURIED IN CLEAN SAND FREE OF STONES. STONE AND SAND SHALL BE IN ACCORDANCE WITH ENV-WQ 704.11(a) AND (b).

E. WHEN PIPE CUTTING IS REQUIRED AND APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE PIPE MATERIAL SHALL BE CUT BY USING A SAW OR MILLING PROCESS, APPROVED BY THE PIPE MANUFACTURER AND NOT BY ANY IMPACT DEVICE, SUCH AS A HAMMER AND CHISEL, TO BREAK THE PIPE. THE PIPE SHALL BE CUT, NOT BROKEN. THE CUT END OF THE PIPE SHALL BE SQUARE TO THE AXIS OF THE PIPE AND ANY ROUGH EDGES GROUND SMOOTH.

F. INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPE SHALL BE IN ACCORDANCE WITH ASTM D2321 AND AS RECOMMENDED BY THE PIPE MANUFACTURER. BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 31 23 00, EARTHWORK. BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 95% MINIMUM DENSITY AS PER AASHTO T99. CARE SHOULD BE TAKEN TO AVOID ANY USE OF FRACTURED STONE IN BACKFILL EXCEEDING TWO INCHES (2").

G. THE CONTRACTOR MAY USE A LASER BEAM TO ASSIST IN SETTING THE PIPE, PROVIDED HE CAN DEMONSTRATE SATISFACTORY SKILL IN ITS USE. THE USE OF STRING LEVELS, HAND LEVELS, CARPENTERS LEVELS OR OTHER RELATIVELY CRUDE DEVICES FOR TRANSFERRING GRADE OR SETTING PIPE WILL NOT BE PERMITTED.

H. WHEN LAYING REINFORCED CONCRETE PIPE, BEDDING SHALL CONSIST OF CAREFULLY PREPARING AND SHAPING A BED OF FINE GRANULAR MATERIAL TO FIT THE LOWER 15 PERCENT OF THE EXTERNAL HEIGHT OF THE PIPE WITH A MINIMUM OF 4 IN. UNDER THE BOTTOM OF THE PIPE. RECESS SHALL BE EXCAVATED FOR THE BELLS OF THE PIPE. AS SOON AS THE EXCAVATION IS COMPLETED AND THE SPECIFIED PIPE BEDDING PROVIDED, THE CONTRACTOR SHALL FIRMLY BED THE PIPE TO CONFORM ACCURATELY TO THE LINE AND GRADE INDICATED ON THE PLANS. NO BLOCKING WILL BE PERMITTED UNDER THE PIPE. AS SOON AS THE PIPE IS IN PLACE, FINE GRANULAR MATERIAL SHALL BE PLACED AND COMPACTED TO THE MID-DIAMETER OF THE PIPE. THE REMAINING BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 31 23 00, EARTHWORK. BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 95% MINIMUM DENSITY AS PER AASHTO T99.

3.03 SEWER MANHOLES:

A. SEWER MANHOLES, DRAIN MANHOLES, CATCH BASINS AND INSPECTION MANHOLES SHALL BE BUILT TO THE LINES, GRADES, DIMENSIONS AND DESIGN SHOWN ON THE PLANS WITH THE NECESSARY FRAMES, COVERS AND GRATES.

B. MANHOLE AND CATCH BASIN BASES SHALL BE PLACED ON 6 INCHES OF COMPACTED BEDDING MATERIAL.

C. PRECAST SECTIONS SHALL BE SET SO AS TO BE VERTICAL AND IN TRUE ALIGNMENT WITH A 1/4 INCH MAXIMUM TOLERANCE TO BE ALLOWED. THE PRECAST SECTIONS SHALL BE INSTALLED IN A MANNER THAT WILL RESULT IN A WATERTIGHT JOINT.

D. WHERE HOLES MUST BE CUT IN THE PRECAST SECTIONS TO ACCOMMODATE PIPES, CUTTING SHALL BE DONE PRIOR TO SETTING THEM IN PLACE TO PREVENT ANY SUBSEQUENT JARRING WHICH MAY LOOSEN THE JOINTS.

3.04 BRICKWORK:

A. MORTAR SHALL BE MIXED ONLY IN SUCH QUANTITY AS MAY BE REQUIRED FOR IMMEDIATE USE AND USED BEFORE THE INITIAL SET HAS TAKEN PLACE. MORTAR SHALL NOT BE RETAINED FOR MORE THAN ONE HOUR AND SHALL BE CONSISTENTLY WORKED OVER WITH A SHOVEL OR HOE UNTIL USED.

B. BRICK MASONRY SHALL BE PROTECTED FROM TOO RAPID DRYING BY APPROVED MEANS AND SHALL BE PROTECTED FROM WEATHER AND FROST AS REQUIRED.

C. BRICKS SHALL BE CLEANED AND THOROUGHLY WETTED SHORTLY BEFORE THEY ARE PUT INTO THE WORK, AND EACH BRICK SHALL BE LAID IN A FULL BED OF MORTAR WITHOUT REQUIRING SUBSEQUENT GROUTING OR FILLING. JOINTS BETWEEN BRICKS SHALL NOT EXCEED 1/2 INCH AND SHALL BE POINTED.

3.05 FRAMES AND COVERS:

A. MANHOLE FRAMES – SHALL BE SET WITH THE TOPS CONFORMING ACCURATELY TO THE GRADE OF THE PAVEMENT OR FINISHED GROUND SURFACE OR AS INDICATED ON THE DRAWINGS. FRAMES SHALL BE SET CONCENTRIC WITH THE TOP OF THE MASONRY AND IN A FULL BED OF MORTAR SO THAT THE SPACE BETWEEN THE TOP OF THE MANHOLE MASONRY AND THE BOTTOM FLANGE OF THE FRAME SHALL BE COMPLETELY FILLED AND MADE WATERTIGHT. A THICK RING OF MORTAR EXTENDING TO THE OUTER EDGE OF THE MASONRY SHALL BE PLACED ALL AROUND AND ON THE TOP OF THE BOTTOM FLANGE. THE MORTAR SHALL BE SMOOTHLY FINISHED AND HAVE A SLIGHT SLOPE TO SHED WATER AWAY FROM THE FRAME.

B. MANHOLE COVERS SHALL BE LEFT IN PLACE IN THE FRAMES ON COMPLETION OF OTHER WORK AT THE MANHOLES.

C. A MAXIMUM OF 12" OF BRICK AND MORTAR SHALL BE ALLOWED FOR GRADE ADJUSTMENT.

D. COVERS AND GRATES SHALL BE SET IN THE FRAMES, SEATING BEING CLEANED BEFORE COVERS AND GRATES ARE SET.

3.06 SEWER SERVICE CONNECTIONS:

A. THE MINIMUM SIZE FOR THE BUILDING SEWER SERVICE CONNECTION SHALL BE 6".

B. THE MINIMUM SLOPE FOR THE BUILDING SEWER SERVICE SHALL BE 1/4" PER, FOOT, UNLESS OTHERWISE APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE.

C. BEFORE BACKFILLING, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR SO THAT HE CAN MAKE THE NECESSARY MEASUREMENTS TO LOCATE THE OPENING LATER. IN ADDITION, AN APPROVED FERROUS ROD OR PIPE SHALL BE PLACED OVER THE PLUGGED OPENING AT THE PROPERTY LINE, EXTENDING TO WITHIN 2 INCHES OF THE FINAL GROUND SURFACE.

1. PROXIMITY TO WATER LINES:
   a. THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND A SEWER OR SEWER APPURTENANCE WHICH WOULD PERMIT THE PASSAGE OF SEWAGE OR POLLUTED WATER INTO THE POTABLE SUPPLY. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE.
      1) NO SEWER SHALL BE LOCATED WITHIN THE WELL PROTECTIVE RADII ESTABLISHED IN ENV-WS 300 FOR ANY PUBLIC WATER SUPPLY WELLS OR WITHIN 100 FEET OF ANY PRIVATE WATER SUPPLY WELL.
      2) SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
      3) A DEVIATION FROM THE SEPARATION REQUIREMENTS OF (1) OR (2) ABOVE SHALL BE ALLOWED WHERE NECESSARY TO AVOID CONFLICT WITH SUBSURFACE STRUCTURES, UTILITY CHAMBERS, AND BUILDING FOUNDATIONS, PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE FORCE MAIN CONSTRUCTION REQUIREMENTS SPECIFIED IN ENV-WQ 704.08.
   b. WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
   c. VERTICAL SEPARATION OF THE SEWER AND WATER MAIN SHALL BE NOT LESS THAN 18 INCHES, WITH WATER ABOVE SEWER; AND
   d. SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.
   e. HOWEVER, SHOULD CONSTRUCTION OPERATIONS REVEAL OR EXPOSE A WATERLINE MAIN OR SERVICE RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FEET HORIZONTALLY FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICABLE TO RELOCATE THE SEWER, THE FOLLOWING METHODS OF PROTECTION MUST BE EMPLOYED:
      1) IF THE ABOVE SEPARATION CANNOT BE ACHIEVED, THE SEWER SHALL BE DUCTILE IRON PIPE OF THE SAME SIZE SHALL BE UTILIZED. APPROPRIATE MANUFACTURED FITTINGS SHALL BE EMPLOYED TO ADAPT THE IRON PIPE TO THE CONTRACT SEWER PIPE.
      2) WHENEVER THE WATERLINE CROSSES OVER THE NEW SEWER WITH LESS THAN 18 INCHES OF SEPARATION, THE SEWER PIPE FOR A DISTANCE OF 6 FEET ON EACH SIDE OF THE WATERLINE SHALL BE CLASS 52 DUCTILE IRON PIPE. APPROPRIATE MANUFACTURED FITTINGS SHALL BE EMPLOYED TO ADAPT THE IRON PIPE TO THE CONTRACT SEWER PIPE. AS AN ALTERNATIVE, THE WATERLINE MAY BE RAISED, IF FEASIBLE, TO ACHIEVE THE REQUIRED SEPARATION.
      3) SHOULD THE WATERLINE IN EITHER SITUATION BE AT OR BELOW THE SEWER ELEVATION, THE WATERLINE OR THE SEWER MUST BE RELOCATED TO ACHIEVE 10 FT. SEPARATION OR THE WATERLINE RAISED.

3.07 GRAVITY SEWER PIPE TESTING:

A. ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS.

B. LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH:

1. ASTM F1417-92(2005) "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR"; OR
2. UNI-BELL PVC PIPE ASSOCIATION UNI-B-6, "LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (1998).

C. ALL NEW GRAVITY SEWERS SHALL BE:

1. CLEANED AND VISUALLY INSPECTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER; AND
2. TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.

D. ALL PLASTIC SEWER PIPE SHALL BE VISUALLY INSPECTED AND DEFLECTION TESTED NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING INSTALLATION.

E. THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% OF AVERAGE INSIDE DIAMETER. A RIGID BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.

F. INSPECTION AND TESTING: – UPON COMPLETION OF THE INSTALLATION AND BACKFILLING PORTIONS OF THE SANITARY SEWER, THE PIPE SHALL BE INSPECTED BY THE VISUAL AND AIR TEST METHODS SUBSEQUENTLY DESCRIBED, OR AS REQUIRED BY THE TOWN DPW AND THE NHDES. THIS INSPECTION AND TESTING SHALL BE UNDERTAKEN AS THE WORK PROGRESSES. THE ENGINEER SHALL BE NOTIFIED IN ADVANCE OF SUCH INSPECTION AND TESTING AND THE CONTRACTOR SHALL PROVIDE ALL FACILITIES, MATERIALS, EQUIPMENT AND LABOR REQUIRED FOR SUCH TESTING. SUCH INSPECTION AND TESTING SHALL BE A PREREQUISITE FOR ACCEPTANCE OF ALL WORK.

1. VISUAL INSPECTION: – AN INSPECTION OF THE INTERIOR OF THE COMPLETED SANITARY SEWER PIPE BY DIRECT VISUAL INSPECTION SHALL BE MADE FOR ALL PIPE INSTALLED FROM MANHOLE TO MANHOLE AND FOR SERVICE LATERALS. ANY LIGHTS, EQUIPMENT OR LABOR NECESSARY FOR SUCH INSPECTION SHALL BE PROVIDED BY THE CONTRACTOR. CAMERA WORK TO BE PERFORMED BY NASSCO CERTIFIED CONTRACTOR.

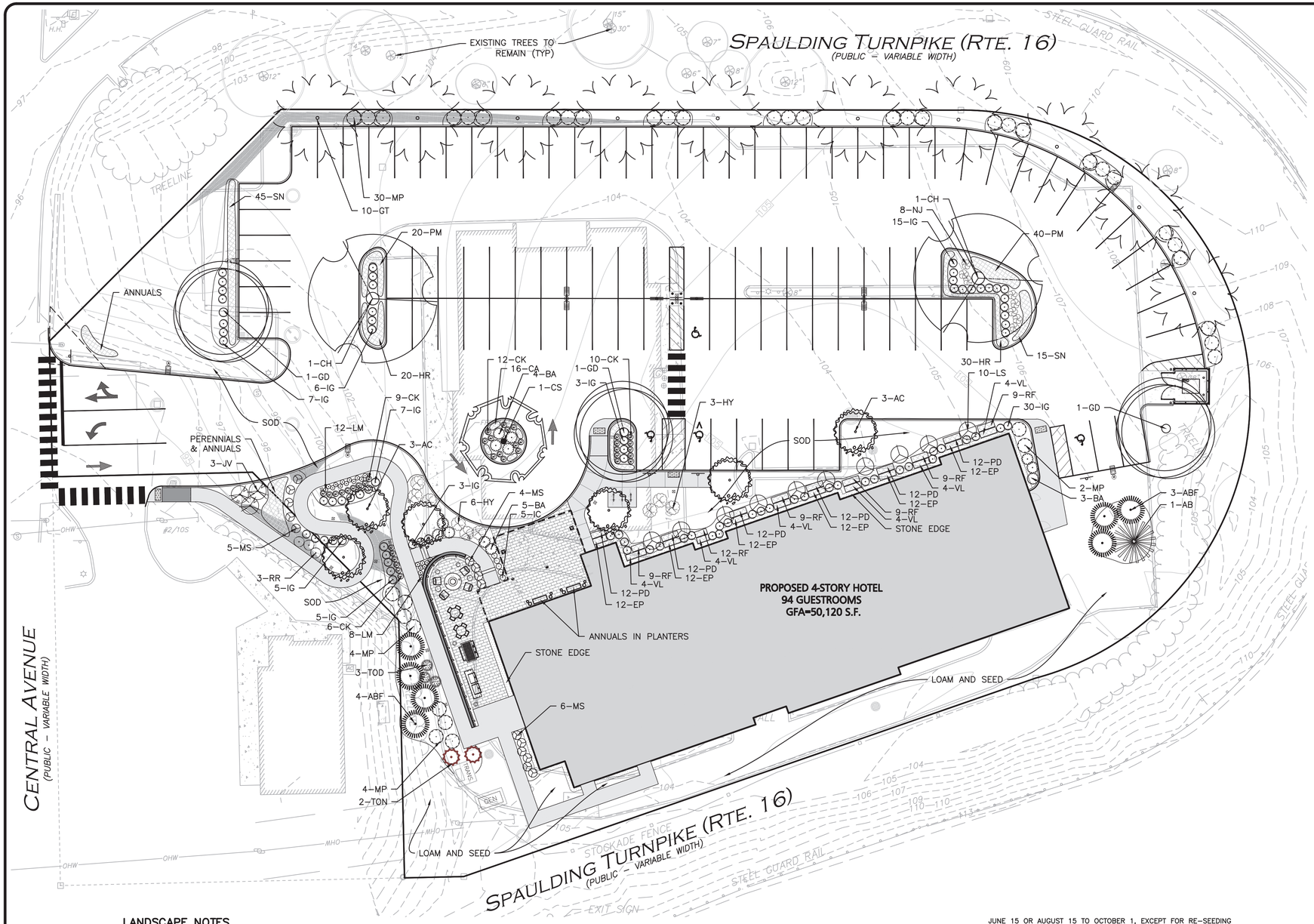
   ANY FOREIGN MATERIAL FOUND IN THE INTERIOR OF THE SEWER, ANY DIRT, DEBRIS OR OTHER OBJECTS SHALL BE REMOVED BY THE CONTRACTOR. VISIBLE DEFECTS SUCH AS BROKEN PIPE SECTIONS, IMPROPERLY INSTALLED GASKETS, PROJECTING CONNECTIONS, CRACKS, VISIBLE LEAKS OR OTHER DEFECTS SHALL BE NOTED, CORRECTED AND THE PIPE RE-INSPECTED.

2. AIR TESTING OF MAIN LINE GRAVITY SEWERS:

   METHOD: ASTM F1417-92(2005)

   PROCEDURE:

   a. PLUG PIPE OUTLETS WITH SUITABLE TEST PLUGS. BRACE EACH PLUG SECURELY.
   b. PIPE AIR SUPPLY TO PIPELINE TO BE TESTED IN SUCH MANNER THAT AIR SUPPLY MAY BE SHUT OFF, PRESSURE OBSERVED, AND AIR PRESSURE RELEASED FROM PIPE WITHOUT WORKMEN ENTERING MANHOLE.
   c. ADD AIR SLOWLY TO PORTION OF PIPE UNDER TEST UNTIL INTERNAL PRESSURE OF LINE IS RAISED TO APPROXIMATELY 4 PSIG, BUT LESS THAN 5 PSIG.
   d. SHUT AIR SUPPLY OFF AND ALLOW AT LEAST 2 MINUTES FOR AIR PRESSURE TO STABILIZE.
   e. WHEN PRESSURE HAS STABILIZED AND IS AT




## LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- FLOWERING TREE
- SHRUBS
- MULCH BED
- PERENNIALS/GROUNDCOVER
- STONE EDGE

## GENERAL NOTES:

1. SNOW SHALL BE TAKEN OFF–SITE ONCE SNOW STORAGE AREAS ON SITE BECOME INADEQUATE AND BEGINS TO BLOCK ACCESS TO AND FROM THE SITE OR BLOCKS THE USE OF ON–SITE PARKING. ANY EXCESS WILL BE BE TRUCKED OFF–SITE & DISPOSED OF IN ACCORDANCE WITH CITY OF DOVER AND NHDES GUIDELINES.
2. CONTRACTOR TO PROVIDE ALL–WEATHER ACCESS FOR CITY OF DOVER FIRST RESPONDERS DURING CONSTRUCTION.

## PLAN NOTES:

1. THE PURPOSED OF THIS PLAN IS TO DEPICT THE PROPOSED LANDSCAPE PLANTINGS AND PROVIDE INFORMATION REGARDING THE INSTALLATION.
2. EXISTING CONDITIONS WERE COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES AS WELL AS AVAILABLE RECORD PLANS OBTAINED FROM THE CITY OF DOVER AND OTHER SOURCES.
3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL ALSO CONTACT THE CITY DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF LOCAL UTILITIES.
5. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

## LANDSCAPE NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF DOVER, NH.
2. PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING AGENCIES, AND "DIG–SAFE" (1–888–344–7233) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF NAY CONFLICTS IN WRITING.
4. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
5. ANY TREES NOTED AS "SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.
6. ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
7. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.
8. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
9. ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY AMERICANHORT (LATEST EDITION).
10. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE. ANY PLANT MATERIALS WHICH DIE WITHIN THE ONE YEAR PLANT GUARANTEE PERIOD WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR. OWNERS TO COORDINATE DIRECTLY WITH THE LANDSCAPE CONTRACTOR FOR REPLACEMENT PLANTINGS.
11. ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 6" OF SUITABLE LOAM & SEED.
12. LAWNS WITH 3:1 OR GREATER SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.
13. ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING.
14. TREES SHALL HAVE A MINIMUM CALIPER (DBH) AS INDICATED ON THE PLANTING SCHEDULE TAKEN FOUR FEET ABOVE THE ROOT CROWN.
15. ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH. GROUNDCOVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH.
16. ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.
17. ALL TREE STAKES SHALL BE STAINED DARK BROWN.
18. CONTRACTOR RESPONSIBLE FOR WATERING AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.
19. ALL PARKING ISLANDS PLANTED WITH SHRUBS SHALL HAVE 24" OF TOP SOIL. FINISH GRADE SHALL BE SLOPED TO SIX INCHES (6") ABOVE THE TOP OF CURB.
20. SOIL SAMPLES, TESTS, AND SHOP DRAWINGS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
21. SLOPES AT 2:1 SHOULD HAVE 6" LOAM & SEED. SEEDING OF 2:1 SLOPES SHALL OCCUR IN THE DRY & AFTER SLOPES ARE COMPACTED.
22. ALL LANDSCAPED AREAS WITH SHRUBS, TREES, AND PERENNIALS TO HAVE 2 FEET MINIMUM DEPTH OF TOPSOIL. TWO FEET OF TOPSOIL AROUND TREES AND SHRUBS DOES NOT INCLUDE AMENDED PLANTING SOIL WITHIN TREE / SHRUB PIT FOR FULL DEPTH OF ROOTBALLS. SEE PLANTING DETAILS FOR PLANTING DEPTH AT SHRUBS AND TREES. ALL AREAS OF LOAM AND SEED TO HAVE 6" MINIMUM DEPTH OF TOPSOIL. TOPSOIL TO BE TESTED BY CONTRACTOR, AND APPROVED BY A&M PRIOR TO PURCHASE AND OR PLACEMENT. GENERAL DEMOLITION, AND LANDSCAPE CONTRACTORS TO COORDINATE PROPER DEPTH OF EXISTING MATERIAL REMOVAL ACROSS SITE SO THAT 2 FEET MINIMUM AND 6" MINIMUM DEPTHS OF PROPOSED TOPSOIL NOTED ABOVE ARE MET. SEE TOPSOIL DETAIL.
23. PRIOR TO LAYING TOPSOIL, ALL SUBSOIL (BELOW PROPOSED TOPSOIL) TO BE TILLED TO A DEPTH OF AT LEAST 18" TO REMOVE CONSTRUCTION COMPACTION AND ALLOW FOR PROPER DRAINAGE OF TOPSOILS.
24. ALL SEEDING TO BE COMPLETED "IN SEASON" BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 1, EXCEPT FOR RE–SEEDING OF BARE SPOTS. AT ALL SLOPED AREAS CONTRACTOR TO INSTALL COCONUT FIBER JUTE MESH NETTING ON ALL SLOPES 3:1 AND GREATER, HYDROSEED ALL EXPOSED AREAS. ADD SOIL STABILIZER "FLEXTERRA HP–FGM" AS MANUFACTURED BY "PROFILE" TO HYDROSEED (AT RATE OF 3,000 LBS PER ACRE). CONTRACTOR TO ALSO BE RESPONSIBLE FOR RE–GRADING AND RE–SEEDING ALL DISTURBED, ERODED, OR BARE SPOTS & UNTIL SLOPES ARE FULLY STABLE. CONTRACTOR RESPONSIBLE FOR ALL MAINTENANCE UNTIL FINAL ACCEPTANCE OF LAWN AREAS INCLUDING: WATERING, ADDING FERTILIZERS AND LIME AND MOWING.
25. AFTER SEEDING, ALL AREAS TO BE LIGHTLY MULCHED WITH WEED FREE STRAW & CONTINUALLY WATERED EVERY DAY SO THAT SEED IS KEPT MOIST UNTIL SEED IS ESTABLISHED & APPROVED BY A&M LANDSCAPE ARCHITECT (USE NO HAY).
26. IF THERE IS NO PROPOSED IRRIGATION SYSTEM AFTER PLANTINGS & LAWNS & SEEDED AREAS HAVE BEEN INSTALLED, LANDSCAPE CONTRACTOR RESPONSIBLE TO TEMPORARILY WATER ALL INSTALLED PLANTINGS, SEEDED AREAS, & LAWN AREAS MIN. 2 TIMES A WEEK DURING INITIAL ESTABLISHMENT PERIOD OF 6 MONTHS AFTER ALL LANDSCAPING IS INSTALLED.
27. AFTER PROVISIONAL ACCEPTANCE THE CONTRACTOR WILL WATER THE PLANTINGS AT A MINIMUM ONCE PER WEEK DURING THE MONTHS OF JUNE 30TH, TO SEPTEMBER 1ST, PLANTINGS WILL BE WATERED ON A BIWEEKLY SCHEDULE FOR THE TIME PERIOD MARCH 1ST TO JUNE 30TH AND SEPTEMBER 1ST TO THE FIRST FROST, REGARDLESS OF PLANTING DATE. IN LIEU OF WATERING ON A WEEKLY/BI–WEEKLY SCHEDULE THE CONTRACTOR CAN USE A GATOR BAG. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REFILL THE GATOR BAG AS NECESSARY. THE GATOR BAG WILL BE REMOVED BY THE CONTRACTOR AT THE TIME OF THE FIRST FORECASTED FROST.

DIG SAFE

BEFORE YOU DIG
CALL 811 OR
1–888–DIG–SAFE
1–888–344–7233

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

LICENSED LANDSCAPE ARCHITECT
JACQUELINE B. TRAINER
00169
STATE OF NEW HAMPSHIRE

01/30/2026

PROFESSIONAL LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | 1" = 20' | DWG. NAME: | L-1173-31 |
| DESIGNED BY: | JBT | CHECKED BY: | BDJ |

PREPARED BY:


ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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DRAWING TITLE: LANDSCAPE PLAN

SHEET No. L-101


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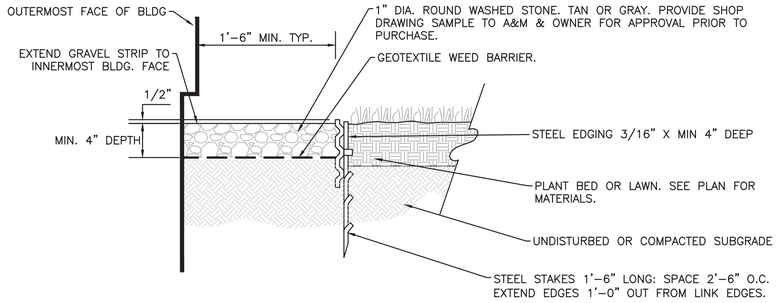
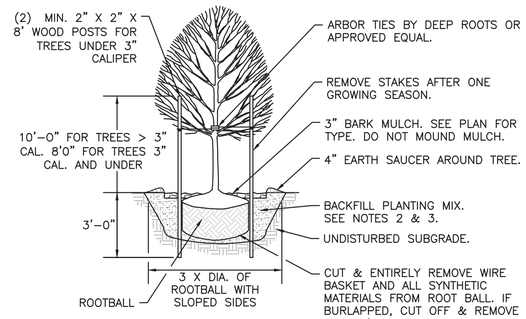
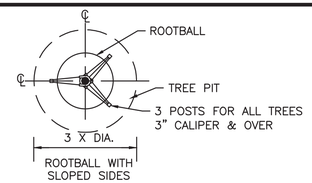



NOTES:
1. STONE STRIP IS TO BE INSTALLED CONTINUOUS ADJACENT TO THE ENTIRE FACE OF BUILDINGS EXCEPT WHERE OTHER HARD SURFACING MATERIALS ARE SPECIFIED OR IF SHOWN OTHERWISE ON PLAN.
2. STONE STRIP TO BE INSTALLED UNDER ALL BUILDING OVERHANGS.
3. COORDINATE INSTALLATION OF STONE STRIP WITH INSTALLATION OF FOUNDATION DRAIN & TO BE LOCATED BEYOND ROOF OVERHANG.

**STONE DRIP STRIP** 7
NOT TO SCALE




SECTION VIEW



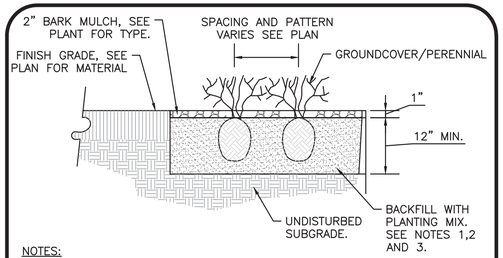

PLAN VIEW

NOTES:
1. ALL TREES SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL ROOTBALL AREA.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% BLENDED AND GROUND COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH OR TOXIC MATERIALS) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

**DECIDUOUS TREE** 6
NOT TO SCALE

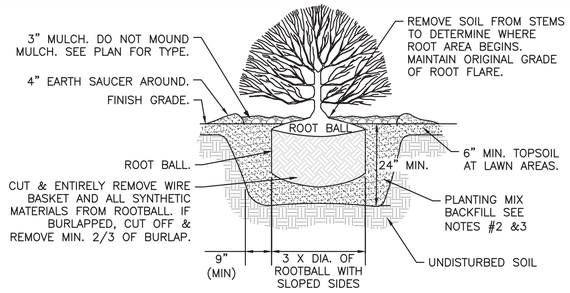
NOTES:
1. ANNUALS TO BE "NEPTUNE" MIX BY PROVEN WINNERS
2. PROVIDE SHOP DRAWING FOR APPROVAL PRIOR TO PURCHASE.

**ANNUALS** 5
NOT TO SCALE



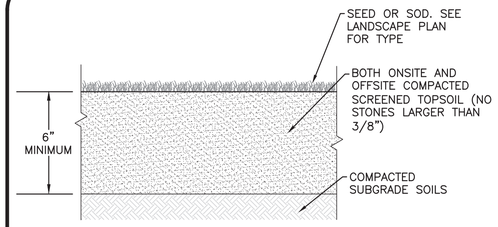

NOTES:
1. ALL GROUNDCOVER/PERENNIALS SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM STEM OF GROUND COVER/ PERENNIAL TO DETERMINE ACTUAL ROOTBALL AREA.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% BLENDED AND GROUND COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH OR TOXIC MATERIALS) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

**GROUNDCOVER/PERENNIAL PLANTING** 4
NOT TO SCALE




NOTES:
1. ALL SHRUBS ROOT FLARE SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED. WATER THOROUGHLY AT COMPLETION.
4. SHRUB BEDS TO HAVE 24" MIN. OF CONTINUOUS PLANTING SOIL.

**SHRUB** 3
NOT TO SCALE

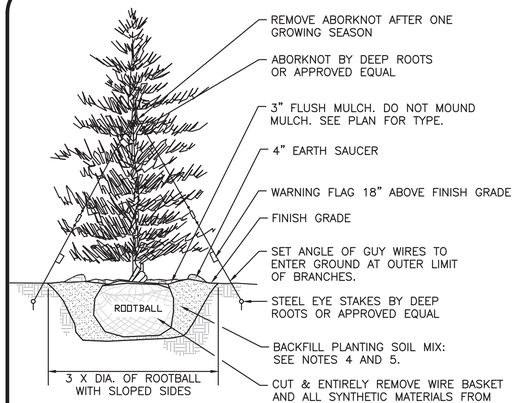


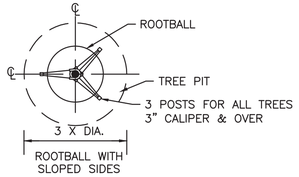

| TEXTURE CLASS | % OF TOTAL WEIGHT |
|---|---|
| SAND | 45% – 65% |
| SILT | 15% – 35% |
| CLAY | 5% – 20% |

| SIEVE | % PASSING |
|---|---|
| 3/8" | 100 |
| NO. 4 | 85–100 |
| NO. 40 | 60–85 |
| NO. 100 | 38–60 |
| NO. 200 | 28–40 |

NOTES:
1. TOP OF LOAM (TOPSOIL) IS FINISH GRADE.
2. ALL TOPSOIL (BOTH ONSITE AND OFFSITE SOURCES) SHALL BE COMPOSED OF A NATURAL, FERTILE, FRIABLE SOIL TYPICAL OF CULTIVATED TOPSOILS OF THE LOCALITY. SOIL SHALL BE SUITABLE FOR THE GERMINATION OF SEEDS AND SUPPORT OF VEGETATIVE GROWTH, WITH ADDITIVES, IF REQUIRED, TO ACHIEVE PARTICLE DISTRIBUTION AND ORGANIC CONTENT BELOW. TOPSOIL SHALL BE TAKEN FROM A WELL–DRAINED, ARIABLE SITE, FREE OF SUBSOIL, LARGE STONES, EARTH CLODS, STICKS, TRASH, STUMPS, CLAY LUMPS, ROOTS, OTHER OBJECTIONABLE, EXTRANEOUS MATTER OR DEBRIS NOR CONTAIN TOXIC SUBSTANCES.
3. THE CONTRACTOR SHALL PROVIDE THE OWNER / LANDSCAPE ARCHITECT WITH TOPSOIL TEST RESULTS (RECOMMEND UMASS AMHERST SOIL TESTING LAB) FOR APPROVAL PRIOR TO OBTAINING AND PLACING THE SOIL. IF THE PLANTING SOIL (BOTH ONSITE AND OFFSITE SOURCES) DOES NOT FALL WITHIN THE REQUIRED SIEVE ANALYSIS, TEXTURAL CLASS, ORGANIC CONTENT, OR PH RANGE, IT SHALL BE ADJUSTED TO MEET THE SPECIFICATIONS THROUGH THE ADDITION OF SAND, COMPOST, LIMESTONE, OR ALUMINUM SULFATE TO BRING IT WITHIN THE SPECIFIED LIMITS.
4. TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.5 AND 6.5. TOPSOIL SHALL CONTAIN BETWEEN 4% AND 8% ORGANIC MATTER OF TOTAL DRY WEIGHT AND SHALL CONFORM TO THE FOLLOWING GRADATION AND TEXTURE CLASS ABOVE.

**TOPSOIL** 2
NOT TO SCALE




PLAN VIEW

NOTES
1. TREES SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO NURSERY OR FIELD GRADE. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL TOP OF ROOTBALL AREA.
2. ATTACH GUY WIRES AT 2/3 HEIGHT OF TREE.
3. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% BLENDED AND GROUND COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH OR TOXIC MATERIALS) 20% PEAT MOSS, 10% SAND.
4. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

**EVERGREEN TREE** 1
NOT TO SCALE

R: \PROJECTS \1173–31 \CIVIL \DRAWINGS \CURRENT \L–1173–31_LANDSCAPE.DWG

LICENSED LANDSCAPE ARCHITECT
JACQUELINE B. TRAINER
00169
STATE OF NEW HAMPSHIRE
01/30/2026

PROFESSIONAL LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|---|---|---|

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | AS SHOWN | DWG. NAME: | L-1173-31 |
| DESIGNED BY: | JBT | CHECKED BY: | BDJ |

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:
LANDSCAPE DETAILS

SHEET No.
L-501

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## EROSION CONTROL/RESTORATION DRY SEED MIX:

NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES
(BY NEW ENGLAND WETLAND PLANTS INC. – NEWP.COM)
APPLICATION RATE: 35LBS/ACRE | 1250 SQ FT/LB

| ITEM | BOTANICAL NAME | COMMON NAME | INDICATOR |
|---|---|---|---|
| 1. | ELYMUS RIPARIUS | RIVERBANK WILD RYE | FACW |
| 2. | ELYMUS CANADENSIS | CANADA WILD RYE | FACU+ |
| 3. | FESTUCA RUBRA | RED FESCUE | FACU |
| 4. | LOLIUM MULTIFLORUM | ANNUAL RYEGRASS | |
| 5. | LOLIUM PERENNE | PERRENIAL RYEGRASS | |
| 6. | PANICUM VIRGATUM | SWITCH GRASS | FAC |
| 7. | SORGHASTRUM NUTANS | INDIAN GRASS | UPL |
| 8. | SCHIZACHYRIUM SCOPARIUM | LITTLE BLUESTEM | FACU |
| 9. | AGROSTIS PERENNANS | UPLAND BENTGRASS | FACU |

THE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES PROVIDES AN APPROPRIATE SELECTION OF NATIVE AND NATURALIZED GRASSES TO ENSURE THAT DRY AND RECENTLY DISTURBED SITES WILL BE QUICKLY REVEGETATED AND THE SOIL SURFACE STABILIZED. IT IS AN APPROPRIATE SEED MIX FOR ROAD CUTS, PIPELINES, STEEPER SLOPES, AND AREAS REQUIRING QUICK COVER DURING THE ECOLOGICAL RESTORATION PROCESS. THE MIX MAY BE APPLIED BY HYDRO–SEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND. LIGHTLY RAKE, OR ROLL TO ENSURE PROPER SOIL–SEED CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING OR LATE SUMMER SEEDING. LATE SPRING THROUGH MID–SUMMER SEEDING WILL BENEFIT FROM A LIGHT MULCHING OF WEED–FREE STRAW TO CONSERVE MOISTURE. IF CONDITIONS ARE DRIER THAN USUAL, WATERING WILL BE REQUIRED. FERTILIZATION IS NOT REQUIRED UNLESS THE SOILS ARE PARTICULARLY INFERTILE. PREPARATION OF A CLEAN WEED FREE SEED BED IS NECESSARY FOR OPTIMAL RESULTS.

**SEED MIX** 4
NOT TO SCALE

## LANDSCAPE MANAGEMENT NOTES:

LANDSCAPE MANAGEMENT PLAN
IT SHOULD BE RECOGNIZED THAT THIS IS A GENERAL GUIDELINE TOWARDS ACHIEVING HIGH QUALITY AND WELL GROOMED LANDSCAPED AREAS. THE GROUNDS STAFF / LANDSCAPE CONTRACTOR MUST RECOGNIZE THE SHORTCOMINGS OF A GENERAL MAINTENANCE PROGRAM SUCH AS THIS, AND MODIFY AND/OR AUGMENT IT BASED ON WEEKLY, MONTHLY, AND YEARLY OBSERVATIONS. IN ORDER TO ASSURE THE HIGHEST QUALITY CONDITIONS, THE STAFF MUST ALSO RECOGNIZE AND APPRECIATE THE NEED TO BE AWARE OF THE CONSTANTLY CHANGING CONDITIONS OF THE LANDSCAPING AND BE ABLE TO RESPOND TO THEM ON A PROACTIVE BASIS.
FERTILIZER
- MAINTENANCE PRACTICES SHOULD BE AIMED AT REDUCING ENVIRONMENTAL, MECHANICAL AND PEST STRESSES TO PROMOTE HEALTHY AND VIGOROUS GROWTH. WHEN NECESSARY, PEST OUTBREAKS SHOULD BE TREATED WITH THE MOST SENSITIVE CONTROL MEASURE AVAILABLE. SYNTHETIC CHEMICAL CONTROLS SHOULD BE USED ONLY AS A LAST RESORT TO ORGANIC AND BIOLOGICAL CONTROL METHODS. FERTILIZER, SYNTHETIC CHEMICAL CONTROLS AND PEST MANAGEMENT APPLICATIONS (WHEN NECESSARY) SHOULD BE PERFORMED ONLY BY LICENSED APPLICATORS IN ACCORDANCE WITH THE MANUFACTURER'S LABEL INSTRUCTIONS WHEN ENVIRONMENTAL CONDITIONS ARE CONDUCIVE TO CONTROLLED PRODUCT APPLICATION.
- ONLY SLOW–RELEASE ORGANIC FERTILIZERS SHOULD BE USED IN THE LANDSCAPED AREAS TO LIMIT THE AMOUNT OF NUTRIENTS THAT COULD ENTER DOWNSTREAM RESOURCE AREAS. FERTILIZATION OF DEVELOPED AREAS ON SITE WILL BE PERFORMED WITHIN MANUFACTURERS LABELING INSTRUCTIONS AND SHALL NOT EXCEED AN NPK RATIO OF 1:1:1 (I.E. TRIPLE 10 FERTILIZER MIX), CONSIDERED A LOW NITROGEN MIXTURE. ADDITIONALLY, THE FERTILIZER WILL INCLUDE A SLOW RELEASE ELEMENT.

LANDSCAPE MAINTENANCE PROGRAM PRACTICES:
SHRUBS
- MULCH NOT MORE THAN 3" DEPTH WITH SHREDDED PINE OR FIR BARK.
- HAND PRUNE ANNUALLY, IMMEDIATELY AFTER BLOOMING, TO REMOVE 1/3 OF THE ABOVE–GROUND BIOMASS (OLDER STEMS). STEM REMOVALS TO OCCUR WITHIN 6" OF THE GROUND TO OPEN UP SHRUB AND MAINTAIN TWO–YEAR WOOD (THE BLOOMING WOOD).
- FERTILIZE WITH 1/2 LB. SLOW–RELEASE FERTILIZER (SEE ABOVE SECTION ON FERTILIZER) EVERY SECOND YEAR.
- HAND PRUNE EVERGREEN SHRUBS ONLY AS NEEDED TO REMOVE DEAD AND DAMAGED WOOD AND TO MAINTAIN THE NATURALISTIC FORM OF THE SHRUB. NEVER MECHANICALLY SHEAR EVERGREEN SHRUBS.

TREES
- PROVIDE AFTERCARE FOR NEW TREE PLANTINGS FOR THE FIRST THREE YEARS.
- DO NOT FERTILIZE TREES, IT ARTIFICIALLY STIMULATES THEM (UNLESS TREE HEALTH WARRANTS).
- WATER ONCE A WEEK FOR THE FIRST YEAR; TWICE A MONTH THE SECOND, ONCE A MONTH THE THIRD YEAR.
- PRUNE TREES ON A FOUR–YEAR CYCLE.

ORNAMENTAL GRASSES/PERENNIALS
- APPLY LOW– NITROGEN 10–10–10 FERTILIZER AS GROWTH RESUMES IN THE SPRING.
- WATER THOROUGHLY.
- GRASSES/PERENNIALS DO NOT NEED TO BE CUT DOWN BEFORE WINTER. IN FACT, THEY ARE ATTRACTIVE WHEN LEFT STANDING AND THE FOLIAGE HELPS TO INSULATE THE CROWN OF THE PLANT.
- CUT BACK THE FOLIAGE TO ABOUT 4–6 INCHES IN THE SPRING BEFORE GROWTH RESUMES. WHEN FOLIAGE IS REMOVED, SPRING GROWTH WILL BEGIN EARLIER. OLD FOLIAGE LEFT ON THE PLANT CAN DELAY THE CROWN'S WARMING AND SUBSEQUENT GROWTH BY AS MUCH AS 3 WEEKS.

WATERING
- WATERING TREES, SHRUBS AND PERENNIALS SHOULD BE DONE WEEKLY UPON ESTABLISHMENT FOR 6 MONTHS.

**LANDSCAPE MAINTENANCE NOTES** 3
NOT TO SCALE

## PLANTING SCHEDULE -TREES, SHRUBS, PERENNIALS, & GRASSES

| | KEY | QTY | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | COMMENTS |
|---|---|---|---|---|---|---|---|
| DECIDUOUS SHADE AND FLOWERING TREES | | | | | | | |
| * ~ ^ | CS | 1 | CATALPA SPECIOSA | NORTHERN CATALPA | 3" CAL. | AS SHOWN | B&B, SPECIMEN |
| * ~ ^ | CH | 2 | CELTIS OCCIDENTALIS | COMMON HACKBERRY | 3" CAL. | AS SHOWN | B&B |
| * ~ ^ | GT | 10 | GLEDITSIA TRIACANTHOS F. INERMIS 'SHADEMASTER' | SHADEMASTER HONEY LOCUST | 3" CAL. | AS SHOWN | B&B |
| * ~ ^ | GD | 3 | GYMNOCLADUS DIOICUS 'ESPRESSO–JFS' | ESPRESSO KENTUCKY COFFEETREE | 3" CAL. | AS SHOWN | B&B |
| * ~ ^ | LS | 10 | LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE' | 'SLENDER SILHOUETTE' SWEETGUM | 3" CAL. | AS SHOWN | B&B |
| ORNAMENTAL TREES | | | | | | | |
| *~^ | AC | 6 | AMELANCHIER CANADENSIS | SHADBLOW SERVICEBERRY | 6–7' HT. | AS SHOWN | B&B |
| EVERGREEN TREES | | | | | | | |
| * | AB | 1 | ABIES BALSAMEA | BALSAM FIR | #10 | 15' O.C. | POT |
| * | ABF | 7 | ABIES FRASERI | FRASER FIR | 7–8' HT. | 10' O.C. | B&B |
| * ^ | TON | 2 | THUJA OCCIDENTALIS 'NIGRA' | AMERICAN ARBORVITAE | 7–8' HT. | 5' O.C. | B&B |
| * ^ | TOD | 3 | THUJA OCCIDENTALIS 'DEGROOT'S SPIRE' | DEGROOT'S SPIRE ARBORVITAE | 7–8' HT. | 4' O.C. | B&B |
| SHRUBS | | | | | | | |
| * ~ ^ | NJ | 8 | CEANOTHUS AMERICANUS | NEW JERSEY TEA | #3, 24" HT. MIN | 36" O.C. | POT |
| * ~ ^ | RR | 3 | CLETHRA ALNIFOLIA 'RUBY RED' | RUBY SPICE SUMMERSWEET | #5, 24" HT. MIN. | 48" O.C. | POT |
| ^ | HY | 9 | HYDRANGEA PANICULATA 'LITTLE LIME' | LITTLE LIME PANICLE HYDRANGEA | #5, 24" HT. MIN. | 5' O.C. | POT |
| ~ | IC | 5 | ILEX CRENATA 'SKY PENCIL' | SKY PENCIL HOLLY | #5, 24" HT. MIN. | 24" O.C. | POT |
| * ~ ^ | IG | 81 | ILEX GLABRA 'SHAMROCK' | SHAMROCK INKBERRY | #7, 24" HT. MIN. | 36" O.C. | POT |
| * ~ ^ | JV | 3 | JUNIPERUS VIRGINIANA 'BAR HARBOR' | BAR HARBOR JUNIPER | #3, 24" HT. MIN. | 6' O.C. | POT |
| * ~ ^ | MP | 40 | MYRICA PENSYLVANICA | NORTHERN BAYBERRY | #5, 24" HT. MIN. | 5' O.C. | POT |
| PERENNIALS/GRASSES | | | | | | | |
| * ~ ^ | BA | 12 | BAPTISIA AUSTRALIS | BLUE FALSE INDIGO | #1 | 48" O.C. | STAGGERED |
| ~ ^ | CK | 37 | CALAMAGROSTIS 'KARL FOERSTER' | KARL FOERSTER FEATHER REED GRASS | #2 | 24" O.C | STAGGERED |
| * ~ ^ | CA | 16 | CAREX AMPHIBOLA | CREEK SEDGE | #1 | 18" O.C. | STAGGERED |
| ~ ^ | PM | 60 | HEMEROCALLIS 'PARDON ME' | PARDON ME DAYLILY | #1 | 18" O.C. | STAGGERED |
| ~ ^ | HR | 50 | HEMEROCALLIS 'ROSY RETURNS' | ROSY RETURNS DAYLILY | #1 | 18" O.C. | STAGGERED |
| ~ ^ | LM | 20 | LIRIOPE MUSCARI 'BIG BLUE' | BIG BLUE LIRIOPE | 2 GAL. | 18" O.C. | STAGGERED |
| * ^ | EP | 72 | ECHINACEA PURPUREA 'CHEYENNE SPIRIT' | CHEYENNE SPIRIT CONEFLOWER | #1 | 12" O.C. | STAGGERED |
| ~ ^ | MS | 15 | MISCANTHUS SINENSIS 'MORNING LIGHT' | SILVER VARIEGATED MAIDEN GRASS | #2 | 36" O.C. | STAGGERED |
| * ^ | PD | 72 | PHLOX DIVARICATA 'BLUE MOON' | BLUE MOON PHLOX | #1 | 12" O.C. | STAGGERED |
| * ~ ^ | RF | 57 | RUDBECKIA FULGIDA VAR. SPECIOSA 'VIETTE'S LITTLE SUZY' | VIETTE'S LITTLE SUZY BLACK EYED SUSAN | #1 | 12" O.C. | STAGGERED |
| * ~ ^ | SN | 60 | SYMPHYOTRICHUM NOVAE–ANGLIAE | NEW ENGLAND ASTER | #1 | 24" O.C. | STAGGERED |
| * ~ ^ | VL | 24 | VERNONIA LETTERMANNII | IRON BUTTERFLY | #1 | 24" O.C. | STAGGERED |
| ANNUALS | | | | | | | |
| | | TBD SF | ASSUMING A SPRING PLANTING, UTILIZE "PROVEN WINNERS" ANNUALS – "NEPTUNE MIX" #1 POTS, SUPERBENA® STORMBURST VERBENA, SUPERBELLS® YELLOW CHIFFON™ CALIBRACHOA, LAGUNA® SKY BLUE™ LOBELIA | | | | |
| * | DENOTES NATIVE SPECIES OR NATIVE CULTIVAR | | | | | | |

**PLANT SCHEDULE** 2
NOT TO SCALE

## DOVER ZONING SUMMARY - LANDSCAPE

| REGULATION | ITEM | REQUIRED / ALLOWED | PROPOSED |
|---|---|---|---|
| §153–14.G(1)(C) | SHRUBS AND HEDGES SHALL BE A MINIMUM OF 24 INCHES IN HEIGHT WHEN MEASURED IMMEDIATELY AFTER PLANTING. GROUND COVERS AND PERENNIALS MAY BE LESS. | SHRUBS MINIMUM 24" HT. | SEE PLANT SCHEDULE |
| §153–14.G(1)(H) | A MAINTENANCE PLAN SHALL BE PROVIDED WITH THE SITE PLAN APPLICATION. ALL LANDSCAPED AREAS SHALL RECEIVE REGULAR MAINTENANCE AND UPKEEP. SEVERELY INJURED, DISEASED, OR DEAD PLANT MATERIAL SHALL BE REPLACED IN KIND IN PERPETUITY (AVOID REPLACING LANDSCAPE MATERIALS IN THE PERIOD FROM NOVEMBER TO MARCH). BEST PRACTICES TO MINIMIZE ENVIRONMENTAL IMPACTS, SUCH AS THE USE OF LOW–PHOSPHORUS FERTILIZER AND SLOW–RELEASE NITROGEN, SHALL BE INCLUDED IN THE MANAGEMENT PLAN. IF OWNERSHIP OF A SITE IS CONVEYED TO A NEW PROPERTY OWNER, THE NEW OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING IN ACCORDANCE WITH THE APPROVED FINAL LANDSCAPING PLAN. | OPERATION AND MAINTENANCE PLAN | SEE SHEET L–502 |
| §153–14.G(2)(A) | MINIMUM INTERIOR PARKING LOT LANDSCAPING REQUIREMENTS. | FOR 51–200 PARKING SPACES, THERE SHALL BE 8% MINIMUM OF INTERIOR LANDSCAPING | 35,993 SF PARKING LOT / 3,099 LANDSCAPE = 8.6% LANDSCAPE AREA PROVIDED |
| §153–14.G(2)(C) | ISLANDS AT THE END OF A ROW OF PARKING SPACES ARE ENCOURAGED TO PROTECT PARKED VEHICLES, INCREASE SAFETY IN PARKING LOTS, AND PROVIDE SPACE FOR LANDSCAPING. THE MINIMUM SIZE FOR LANDSCAPED ISLANDS SHALL BE 250 SQUARE FEET IN TOTAL AREA AND SHOULD INCLUDE TREES WITH SHRUBS, PERENNIALS, AND GROUND COVERS PLANTED EN MASSE AMONG THE TREES. | PARKING ISLANDS MIN. 250 SF LANDSCAPED | 875± SF LANDSCAPE ISLANDS |
| §153–14.G(3)(A) | ALONG THE PERIMETER OF PARKING LOTS WITH 10 OR MORE SPACES, DECIDUOUS AND/OR EVERGREEN SHADE TREES SHALL BE PLANTED AT 35 FEET ON CENTER WITHIN THE BUFFER AREA REQUIRED BY § 153–17C. TREES SHALL BE SPECIES TOLERANT TO THE CLIMATIC CONDITIONS OF DOVER AND SHALL BE A MINIMUM CALIPER OF 3 INCHES (MEASURED AT FOUR FEET ABOVE GRADE LEVEL). WITHIN THE PERIMETER BUFFER, SHRUBS SHALL BE PLANTED BETWEEN THE TREES AT FIVE FEET ON CENTER. THE SHRUBS SHALL BE A MIX OF DECIDUOUS AND EVERGREEN SPECIES, TOLERANT TO THE CLIMATIC CONDITIONS OF DOVER AND SHALL BE A MINIMUM HEIGHT OF TWO FEET AT THE TIME OF PLANTING. ALL TREES, SHRUBS AND LANDSCAPING MATERIALS SHALL BE MAINTAINED IN GOOD CONDITION SO AS TO PRESENT A HEALTHY, NEAT, AND ORDERLY APPEARANCE. | SHADE TREES ALONG PERIMETER OF PARKING LOT 35' O.C. AND 3" MIN. DBH, SHRUBS MIN. 5' O.C AND MIN. HT OF 24" | SEE PLAN AND PLANT SCHEDULE |
| §153–14.G(3)(B) | TREES SHALL BE SALT–AND DROUGHT –TOLERANT, NATIVE OR NONINVASIVE SPECIES, AND HAVE A STRUCTURE AND GROWTH FORM WHICH PREVENTS THEM FROM OBSTRUCTING SIDEWALKS AND WALKWAYS. | TREES SHALL BE SALT–AND DROUGHT –TOLERANT, NATIVE OR NONINVASIVE SPECIES, | SEE PLANT SCHEDULE |

**ZONING SUMMARY** 1
NOT TO SCALE


LICENSED LANDSCAPE ARCHITECT
JACQUELINE B. TRAINER
00169
STATE OF NEW HAMPSHIRE
01/30/2026
PROFESSIONAL LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.


| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

OWNER:
ARC CAFEUSA001 LLC
11995 EL CAMINO REAL
SAN DIEGO, CA 92130

APPLICANT:
LAFRANCE BOWDEN HOSPITALITY II, LLC
41 OLD BEDFORD ROAD
WESTPORT, MA 02790

PROJECT:
TOWNEPLACE SUITES
BY MARRIOTT
47 CENTRAL AVE
DOVER, NH 03820
(MAP 17, LOT 76)

| | | | |
|---|---|---|---|
| PROJECT NO. | 1173-31 | DATE: | 01-30-26 |
| SCALE: | AS SHOWN | DWG. NAME: | L-1173-31 |
| DESIGNED BY: | JBT | CHECKED BY: | BDJ |


PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH



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DRAWING TITLE: LANDSCAPE NOTES
SHEET No. L-502


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## MATERIAL LEGEND

| TAG | HATCH | MATERIAL | TYPE & COLOR |
|---|---|---|---|
| EF-1 | | EIFS | FINE FINISH COLOR: TO MATCH BEN MOORE "MANOR BLUE 1627" |
| EF-2 | | EIFS | FINE FINISH COLOR: TO MATCH BM "NOVEMBER RAIN 2142-60" |
| SP-1 | | FIBER CEMENT SIDING PANEL | NICHIHA : ILLUMINATION SERIES "BAY BLUE" |
| SP-2 | | FIBER CEMENT SIDING PANEL | NICHIHA : ROUGH SAWN SERIES "SMOKE" |
| M-01 | | PAINTED METAL (FACTORY FINISH) | GALVANIZED PAINT. SHERWIN WILLIAMS EXTRA WHITE SW 7005 |

| TAG | HATCH | MATERIAL | TYPE & COLOR |
|---|---|---|---|
| TR-1 | | PRE-PRIMED 1x12 FIBER CEMENT TRIM | PAINT: SHERWIN WILLIAMS EXTRA WHITE SW 7005 |
| TR-2 | | PRE-PRIMED 1x8 & 1x12 FIBER CEMENT TRIM | PAINT: SHERWIN WILLIAMS EXTRA WHITE SW 7005 |
| TR-3 | | PRE-PRIMED 1x10 & 1x12 FIBER CEMENT TRIM | PAINT: SHERWIN WILLIAMS EXTRA WHITE SW 7005 |
| A-1 | | ALUMINUM COPING | COLOR TO MATCH ADJACENT SURFACE |

1 NORTH ELEVATION
1/8" = 1'-0"

2 SOUTH ELEVATION
1/8" = 1'-0"

OPECHEE CONSTRUCTION CORPORATION
11 CORPORATE DRIVE ▪ BELMONT ▪ NH 03220
PHONE (603) 527-9090 ▪ WWW.OPECHEE.COM

LICENSED ARCHITECT
DAVID L SHERBORNE
No. 04114
01-30-26
STATE OF NEW HAMPSHIRE
[stamp]

# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

REVISION:

ISSUED:

Project Architect: DLS
Drawn by: RTC
Revised by:

EXTERIOR ELEVATIONS

sheet number:

A3.01

1/27/2026 3:20:25 PM

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|---|---|---|---|
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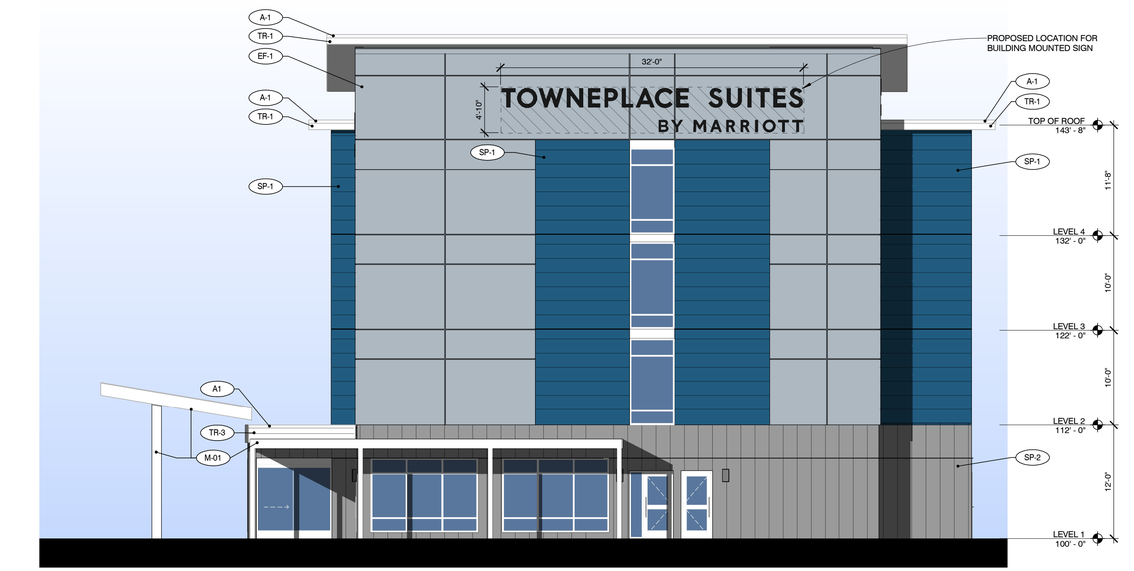
| A-1 | | ALUMINUM COPING | COLOR TO MATCH ADJACENT SURFACE |

1 EAST ELEVATION
1/8" = 1'-0"




2 WEST ELEVATION
1/8" = 1'-0"

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11 CORPORATE DRIVE ▪ BELMONT ▪ NH 03220
PHONE (603) 527-9090 ▪ WWW.OPECHEE.COM

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DAVID L SHERBORNE
No. 04114
01-30-26
STATE OF NEW HAMPSHIRE
[stamp]

# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

REVISION:

ISSUED:

Project Architect: DLS
Drawn by: RTC
Revised by:

EXTERIOR ELEVATIONS

sheet number:

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1 CENTRAL AVENUE PERSPECTIVE
1 1/2" = 1'-0"

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CONSTRUCTION CORPORATION
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PHONE (603) 527-9090 ▪ WWW.OPECHEE.COM

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DAVID L. SHERBORNE
No. 04114
01-30-26
STATE OF NEW HAMPSHIRE
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# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

REVISION:

ISSUED:

Project Architect: DLS
Drawn by: RTC
Revised by:

EXTERIOR RENDERING

sheet number:

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1 CENTRAL AVENUE PERSPECTIVE
1 1/2" = 1'-0"

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DAVID L. SHERBORNE
No. 04114
01-30-26
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# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

REVISION:

ISSUED:
01-30-26 SITE PLAN APPLICATION

Project Architect: DLS
Drawn by: RTC
Revised by:

EXTERIOR RENDERING

sheet number:
A3.03

1/28/2026 9:29:01 AM

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## MATERIAL LEGEND

| TAG | HATCH | MATERIAL | TYPE & COLOR |
|---|---|---|---|
| EF-1 | | EIFS | FINE FINISH COLOR: TO MATCH BEN MOORE "MANOR BLUE 1627" |
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| A-1 | | ALUMINUM COPING | COLOR TO MATCH ADJACENT SURFACE |

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LICENSED ARCHITECT
DAVID L SHERBORNE
No. 04114
01-30-26
STATE OF NEW HAMPSHIRE
[stamp]

# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

REVISION:

ISSUED:
01-30-26 SITE PLAN APPLICATION

Project Architect: DLS
Drawn by: RTC
Revised by:

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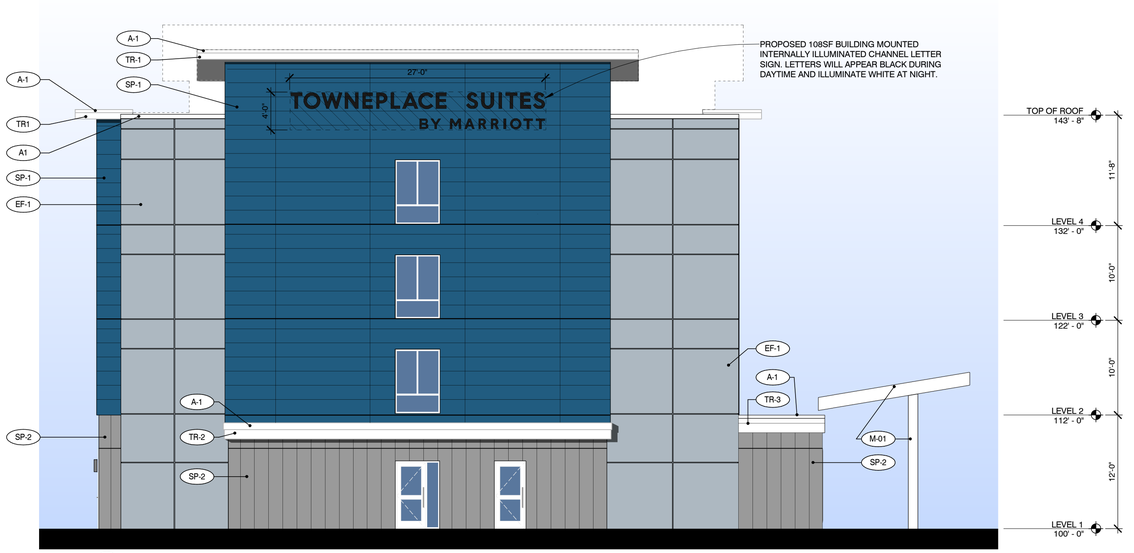
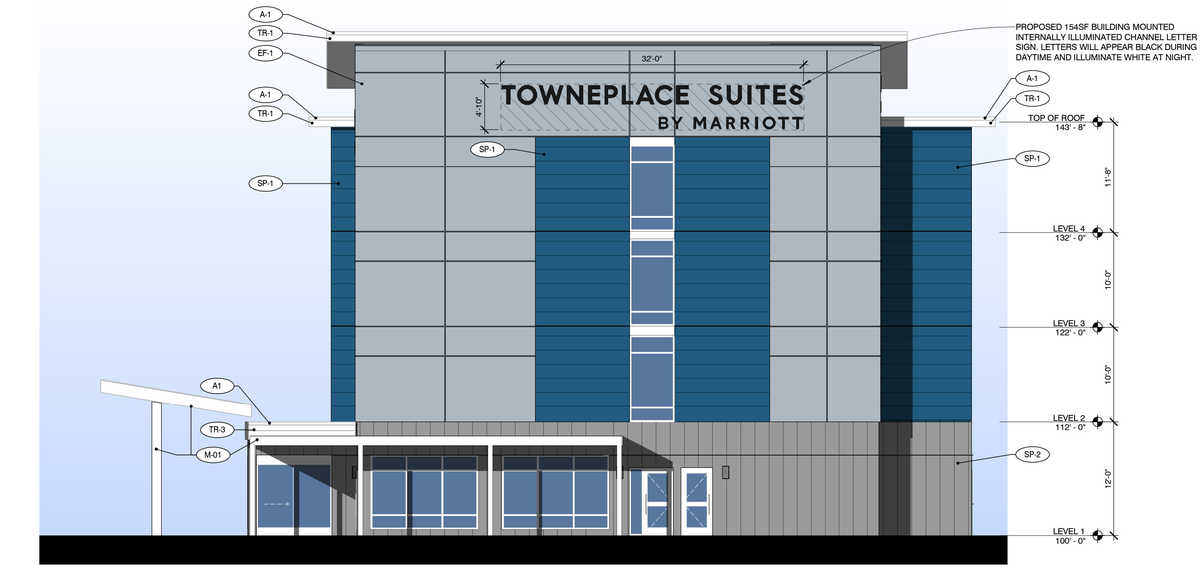
| TAG | HATCH | MATERIAL | TYPE & COLOR |
|---|---|---|---|
| TR-1 | | PRE-PRIMED 1x12 FIBER CEMENT TRIM | PAINT: SHERWIN WILLIAMS EXTRA WHITE SW 7005 |
| TR-2 | | PRE-PRIMED 1x8 & 1x12 FIBER CEMENT TRIM | PAINT: SHERWIN WILLIAMS EXTRA WHITE SW 7005 |
| TR-3 | | PRE-PRIMED 1x10 & 1x12 FIBER CEMENT TRIM | PAINT: SHERWIN WILLIAMS EXTRA WHITE SW 7005 |
| A-1 | | ALUMINUM COPING | COLOR TO MATCH ADJACENT SURFACE |




1 EAST ELEVATION
1/8" = 1'-0"




2 WEST ELEVATION
1/8" = 1'-0"

OPECHEE CONSTRUCTION CORPORATION
11 CORPORATE DRIVE ▪ BELMONT ▪ NH 03220
PHONE (603) 527-9090 ▪ WWW.OPECHEE.COM

LICENSED ARCHITECT
DAVID L SHERBORNE
No. 04114
01-30-26
STATE OF NEW HAMPSHIRE
[stamp]

# PROPOSED TOWNEPLACE SUITES BY MARRIOTT

47 Central Ave Dover, NH

REVISION:

ISSUED: 01-30-26 SITE PLAN APPLICATION

Project Architect: DLS
Drawn by: RTC
Revised by:

EXTERIOR ELEVATIONS

sheet number:

A3.02

1/28/2026 9:27:50 AM

# PERMIT SNAPSHOT REPORT COND-2026-0005
# FOR CITY OF DOVER, N.H.

| | | | | | |
|---|---|---|---|---|---|
| **Permit Type** | Conditional Use | **Project:** | | **App Date:** | 02/03/2026 |
| **Work Class:** | Non-Environmental | **District:** | None | **Exp Date:** | NOT AVAILABLE |
| **Status:** | Fees Due | **Square Feet:** | 0.00 | **Completed:** | NOT COMPLETED |
| **Valuation:** | $0.00 | **Assigned To:** | Blonigen, Rachel | **Approval Expire Date:** | |

**Description:** Proposing to develop the site with a 4-unit building.

| | | | | | |
|---|---|---|---|---|---|
| **Parcel:** | 24034-000000 Main | **Address:** | 24 Winter St<br>Dover, NH Main | **Zone:** | RM-U(Residential - Urban Density)<br>CBD-R(Central Business District - Reside |

| Plan Preparer | Applicant | Owner |
|---|---|---|
| Berry Surveying & Engineering | Berry Surveying & Engineering | William Goldstein |
| 335 Second Crown Point Road | 335 Second Crown Point Road | Home: (603) 742-5300 |
| Barrington, NH 03825 | Barrington, NH 03825 | Mobile: (603) 531-8158 |
| Business: (603) 332-2863 | Business: (603) 332-2863 | |
| Mobile: (603) 781-3403 | Mobile: (603) 781-3403 | |

**Permit Custom Fields**

| | | | | | |
|---|---|---|---|---|---|
| Select Permit Type | Central Business District - Residential | General Purpose | New Construction | Project Zone | Residential |
| What is the parcel zoned? | CBD-R | New Change in Impervious/Paved Area (sq ft) | 1258 | Work | New Building with less coverage than required, within the front build-to, within the side setback and within the rear setback. |
| permitstatefed | none | | | | |

| Attachment File Name | Added On | Added By | Attachment Group | Notes |
|---|---|---|---|---|
| Signature_Chris_Berry_2/3/2026.jpg | 02/03/2026 10:13 | Berry, Chris | | Uploaded via CSS |
| Permit Snapshot Report.pdf | 02/03/2026 10:14 | Service, EnerGov | | Attached by IO - ATTACH: Initial Permit Snapshot |

| Invoice No. | Fee | Fee Amount | Amount Paid |
|---|---|---|---|
| INV-2026000450 | Planning Impervious Paved Area Fee | $88.06 | $0.00 |
| | Planning General Application Fee | $200.00 | $0.00 |
| | **Total for Invoice INV-2026000450** | **$288.06** | **$0.00** |
| | **Grand Total for Permit** | **$288.06** | **$0.00** |

| Workflow Step / Action Name | Action Type | Start Date | End Date |
|---|---|---|---|
| **Review v.1** | | | 02/03/2026 11:03 |
| Confirm application complete v.1 | Generic Action | | 02/03/2026 11:03 |
| ~~Conditional Use Review v.1~~ | Receive Submittal | | 02/03/2026 11:03 |
| **Planning Board v.1** | | 02/03/2026 11:04 | |
| Planning Board Agenda v.1 | Task | 02/03/2026 11:04 | |
| Invoice for Notices v.1 | Task | | |
| Send Notices v.1 | Task | | |
| Planner Creates Staff Recommendations v.1 | Permit Activity | | |
| Distribute Planning Board Materials v.1 | Task | | |
| Planning Board Hearing v.1 | Hold Hearing | | |
| Planning Board Decision v.1 | Permit Activity | | |
| NOD Sent to Applicant v.1 | Create Report | | |
| **Issue Permit v.1** | | | |

| | |
|---|---|
| Verify Fees Prior to Permit v.1 | Generic Action |
| Issue and Review Permit v.1 | Generic Action |
| Print and Email Permit v.1 | Generic Action |
| Plans uploaded to Treeno v.1 | Generic Action |
| Internal Notification of Plan Completion v.1 | Generic Action |
| Recording v.1 | Task |

**BERRY SURVEYING & ENGINEERING**
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com
January 5, 2026

City of Dover Planning Board
Attention: Donna Benton, Director of Planning and Community Development
288 Central Ave
Dover, NH 03820

Re: Conditional Use Permits Request
Lot Redevelopment
Equinox Properties LLC
24 Winter Street
Tax Map 25, Lots 34

Chairperson & Members of the Dover Planning Board:

Pursuant to Zoning Regulations (Chapter 170-20 B,) Berry Surveying & Engineering (BS&E), on behalf of Equinox Properties LLC respectfully requests the City of Dover Planning Board approve the following Conditional Use Permits on the existing lot of record at the end of Winter Street.

| | | |
|---|---|---|
| • Minimum Lot Coverage less than 40% | Existing 7.25% | Proposed 13% |
| • 8-15' Front Build-To | Existing 6.3' | Proposed 6.6' to Structure (5.6' cantilever) |
| • 10' Side Setback | Existing 2.9' | Proposed 5.6' |
| • 15' Rear Setback | Existing 9.9' | Proposed 5.1' to Deck, 10' to Structure |

**Background:**

The existing parcel contains a single-family home at the end of Winter Street which is located in the CBD-Residential Sub-District. With the exception of abutting rail line, the entire area contains multi-family residential uses which are permitted uses in the underlying zone. The site contains a small gravel parking area with an unknown number of spaces. Public utilities are available at the site. Much of the site is unusable due to the man-made fill slope to the ravine at the rear of the site.

## 1. Identification of Conditional Use Permits

The proposal is to remove the existing single-family home onsite and construct a four-unit townhouse style structure each with a dedicated garages. A small overflow / visitor parking area is proposed in the area of the existing gravel parking area. The redevelopment is being proposed in the most reasonable way possible in that in some instances CBD requirements cannot be met due to lot constraints while others are more nearly conforming to the requirements.

**Minimum Lot Coverage:** The minimum lot coverage requirement is not met the existing or proposed condition, however the proposed condition proposes a larger increase in coverage. Though the parcel is "large" it is the remnant parcel of subdivisions conducted prior to the turn

of the last century and contains steep slopes, largely man-made. Making the building larger to comply with the minimum would result in an imbalance in the ratio of building to parking and the lot dimensions are unsuitable for subsurface parking.

**Front Build-To:** The existing building face is non-compliant with the front build-to requirement and the proposed structure face is set in approximately the same place.

**Side Setback:** The existing structure side setback to the western boundary line is non-complaint. The proposed building becomes more compliant however does not meet the 10' side setback.

**Rear Setback:** The existing structure is 9.9' from the rear boundary line where 15' is required. The proposed structure is 10' from the rear boundary line however there are deck structures that sit within 5' of the rear line.

Below we show the project's compliance with the standards required to grant a Conditional Use Permit, and we provide justification for its approval.

**2. Compliance with the following standards**

a) That both public and private buildings and landscaping shall contribute to the physical definition of rights of way as civic spaces.

- **The proposed structure constitutes a redevelopment that provides additional street definition along more of the frontage of the site. This is done with a longer mass, with modern building design, in addition to a logical and operationally useful layout, while reducing congestion on the adjacent Winter Street.**

b) That development shall adequately accommodate automobiles, while respecting the pedestrian and the spatial form of public areas.

- **The site proposes adequate parking onsite while reducing the on-street demand currenting found on Winter Street. This increases walkability as well as municipal operation.**

c) That the design of streets and buildings shall reinforce safe environments.

- **The design of the modern building has superior neighborhood optics when compared to the existing housing stock. This provides for a warmer invitation for residents.**

**d)** That architecture and landscape design shall grow from local climate, topography, history, and building practice.

- **The proposed development is located in a neighborhood that contains varying New England building and roof styles as well as varying window styles. The proposed structure proposes a gable roof with conventional mullion layout.**

e) That buildings shall provide their inhabitants with a clear sense of geography and climate through energy efficient methods.

- **The new structures will be built to the current building codes keeping energy efficiency in mind. The design of the building offers amenities not found on the rest of the street.**

f) That civic buildings and public gathering places shall be provided as locations that reinforce community identity and activity.
   - **While the building is not Civic in nature or use, the potential for connection in a micro community is developed through the use of open common spaces while offering distinctly separate personal use areas within the building.**

g) That civic buildings shall be distinctive and appropriate to a role more important than the other buildings that constitute the fabric of the city.
   - **This is not a civic building but provides a new construction infill density in an area of the city that contains a residential neighborhood with aged and underutilized housing stock.**

h) That the preservation and renewal of historic buildings shall be facilitated.
   - **There are no historic buildings as part of the application.**

i) That the harmonious and orderly evolution of urban areas shall be secured through the adoption of these regulations.
   - **A harmonious and orderly evolution of the urban area is secured in the redevelopment of the project site in the manner in which it is presented. Three additional residential units are provided on an underutilized parcel of land that provides a modern use and design while becoming more compliant with some of the requirements of the Zone.**

**3. Justification for approval of Conditional Use Permits**

Redevelopment of the subdistrict is what the ordinance aims to do. Based on the site's constraints in size, width, and usable area, the proposed building is the most reasonable use of the property.

Thank you for your time and attention to this matter, and we hope you look favorably upon the requests.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING

Christopher R. Berry, LLS
Principal, President

**BERRY SURVEYING & ENGINEERING**
335 Second Crown Pt. Rd., Barrington, NH 03825
(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

# CITY OF DOVER, NEW HAMPSHIRE
# PLANNING APPLICATION OWNER AUTHORIZATION

## OWNER AUTHORIZATION

I/We hereby submit this application to the City of Dover / City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Property Owner Name: WILLIAM GOLDSTEIN

Signature(s) of Property Owner(s): _____ Date: 2-3-26

Signature of Applicant: _____ Date: _____
*if different from owner*

## AUTHORIZATION TO ENTER SUBJECT PROPERTY

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity..

Property Owner Name: WILLIAM GOLDSTEIN

Signature(s) of Property Owner(s): _____ Date: 2-3-26

Signature of Applicant: _____ Date: _____
*if different from owner*

## IF SIGN PERMIT, SIGN PERMIT APPLICATION INFORMATION

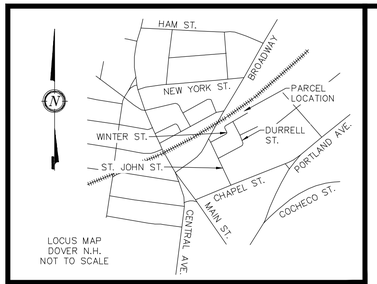
If the sign permit applicant is not the property owner, this form must be completed and included as part of application submission.

I have read this application and state that, to the best of my knowledge, the information provided is true and that the proposed sign(s) will comply with all applicable regulations in Section 170-32 of the Zoning Ordinance of the City of Dover and shall conform to the submitted materials and designs. Furthermore, after 90 days, any application still waiting information will be denied.

Address of Sign Location: _____

Sign Permit Application Type: (check one)

- ☐ Permanent Sign
- ☐ Temporary Sign
- ☐ Community Sign




LOCUS MAP
DOVER N.H.
NOT TO SCALE

*WETLAND NOTES:*

WETLANDS WERE DELINEATED BY JOHN P. HAYES, III. IN JUNE 2024 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND ON SITE.

STATE OF NEW HAMPSHIRE · JOHN P. HAYES, III · CWS 18 · CERTIFIED WETLAND SCIENTIST

JOHN P. HAYES, III CWS #18

"DOWNEASTER" TRACK LINE

BOSTON & MAINE RAILROAD

N/F BOSTON AND MAINE R.R.
500 WATER STREET, J-910
JACKSONVILLE, FL 32202
*TAX MAP 24, LOT 2*

N/F FRUDA 21, LLC
28 VILLAGE GREEN DRIVE
OGUNQUIT, ME 03907
*TAX MAP 24, LOT 35*
S.C.R.D. BOOK 5074, PAGE 739

N/F VALDEZ, CHARLI G.
241 CLINTON STREET
PORTSMOUTH, NH 03801
*TAX MAP 24, LOT 23*
S.C.R.D. BOOK 4675, PAGE 229

N/F 1-3 FOREST STREET, LLC
P.O. BOX 372
GREENLAND, NH 03840
*TAX MAP 24, LOT 61*
S.C.R.D. BOOK 4659, PAGE 874

N/F FRUDA 21, LLC
28 VILLAGE GREEN DRIVE
OGUNQUIT, ME 03907
*TAX MAP 24, LOT 32*
S.C.R.D. BOOK 4997, PAGE 379

N/F SMITHNECK CAPITAL LLC
7 1/2 HORTON STREET
NEWBURYPORT, MA 01950
*TAX MAP 24, LOT 33*
S.C.R.D. BOOK 5102, PAGE 341

*TAX MAP 24, LOT 34*
TOTAL LOT AREA:
11,564 Sq.Ft.
0.27 Ac.
BUILDABLE AREA:
5,747 Sq.Ft.
0.13 Ac.

WINTER STREET
(PAVED 18'±)
(PUBLIC)

EXISTING CONCRETE PAD
EXISTING SINGLE FAMILY HOUSE
ADDRESS: 24 WINTER STREET
EXISTING GRAVEL DRIVEWAY
EXISTING HOUSE
EXISTING GRAVEL DRIVEWAY
EXISTING HOUSE
EXISTING GRAVEL DRIVEWAY
EXISTING HOUSE

CONCRETE STEPS & SIDEWALK
GAS METER W/BOLLARDS
WOODEN RETAINING WALL
WOODEN RETAINING WALL
RAIL ROAD TIES
20" LOCUST TREE
ELECTRIC METER
CONCRETE STEPS & SIDEWALK
APPROXIMATE LOCATION OF EXISTING WATERLINE
SMH RIM ELEV. 70.89
DMH RIM ELEV. 71.10
7" BIRCH TREE T.B.R.
TOP OF STEEP SLOPE > 2,000 Sq.Ft. CONSERVATION DISTRICT
EXISTING TREELINE
BUILDING SETBACK LINE (TYP)
OPEN
WOODED
EXISTING GRAVEL DRIVEWAY
UP 6 CO3S TBM SPIKE IN POLE N:256277.51 E:1196279.08 ELEV. 70.01
GUY WIRES
UP NET 66/3S
GUARDRAIL
EXISTING TREELINE (TYP)
EXISTING DRAINAGE EASEMENT TO CITY OF DOVER S.C.R.D. PLAN #114-88 & #115-48
CONCRETE DRAINAGE STRUCTURE
EASEMENT BY PRESCRIPTION
5' GRANITE CULVERT STRUCTURE
3/4" REBAR W/ID CAP ~TBS~ (TYP)
9"x8" STONE BOUND ~FND~ (FLUSH)

S 80°03'39" E 34.62'
N 87°53'23" E 34.32'
N 82°30'56" E 21.17'
S 68°38'23" E 6.80'
S 39°54'44" E 30.00'
N 54°39'15" E 49.21'
N 59°15'49" E 21.64'
R=203.00' L=41.25
N 57°26'21" E 25.97'
S 79°44'21" W 139.47'
S 15°42'18" W 50.96'
N 74°54'42" E 40.46'
N 74°54'42" E 33.11'

*LEGEND:*

- 3/4" REBAR W/ID CAP (TBS)
- IRON BOUND/IRON ROD (FND)
- STONE BOUND (FND)
- UTILITY POLE W/GUY WIRE
- ABUTTING PROPERTY LINE
- OHU — OVERHEAD UTILITIES
- ESL — EXISTING SEWER LINE
- EXISTING DRAINAGE EASEMENT
- GUARD RAIL
- 69 — MINOR CONTOUR LINE
- 70 — MAJOR CONTOUR LINE
- BUILDING SETBACK LINE
- TOP OF STEEP SLOPES
- EXISTING TREE LINE
- TEMPORARY BENCHMARK (TBM)
- SEWER MANHOLE (SMH)
- DRAIN MANHOLE (DMH)

| | |
|---|---|
| FND | FOUND |
| TYP | TYPICAL |
| TBS | TO BE SET |
| E.O.P. | EDGE OF PAVEMENT |
| E.O.G. | EDGE OF GRAVEL |
| T.B.R. | TO BE REMOVED |
| S.C.R.D. | STRAFFORD COUNTY REGISTRY OF DEEDS |

GRAVEL AREA
20% OR GREATER SLOPES

*UTILITY NOTE:*

THE UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR NOR THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

*SOILS:*

*SfE* – SUFFIELD, SILT LOAM, 15 TO 35 PERCENT SLOPES

SEE: USDA/NRCS WEBSOIL

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW WAYS ARE SHOWN.

2-3-26

CHRISTOPHER R. BERRY L.L.S. 1624 DATE

GRAPHIC SCALE

10 0 5 10 20 40

( IN FEET )
1 inch = 10 ft.

16°±

N

N AD83 NH STATE PLANE

MAGNETIC

*NOTES:*

1.) OWNER: EQUINOX PROPERTIES, LLC
8 GROVE STREET, SUITE 100
DOVER, NH 03820

2.) TAX MAP 24, LOT 34

3.) LOT AREA: 11,564 Sq. Ft., 0.27 Ac.

4.) S.C.R.D. BOOK 4869, PAGE 221

5.) ZONING: CBD-RESIDENTIAL SUB-DISTRICT
CONSERVATION DISTRICT
SETBACKS:
FRONT PRIMARY BUILD TO ~ 8-15'
FRONT SECONDARY BUILD TO ~ 8-10'
SIDE ~ 10'
REAR ~ 15'
MIN. LOT SIZE: N/A
MIN. LOT COVERAGE: 40%
MIN. LOT FRONTAGE: 75'
FRONTAGE BUILD-OUT: 40% MIN.
BUILDING HEIGHT: 3 STORY MAX., 2 STORY MIN.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP 24, LOT 34 AS OF THE DATE OF THE SURVEY.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN. FLOOD HAZARD REF: FEMA, COMMUNITY #330145, MAP 33017C0310E, DATED: SEPTEMBER 30, 2015.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN AUGUST, 2024 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) ON-SITE TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN AUGUST, 2024. OFF-SITE TOPOGRAPHY IS SHOWN USING NH COASTAL 2019 DEM.

11.) THIS SITE IS SERVICED BY MUNICIPAL SEWER AND WATER.

CITY OF DOVER PLANNING DEPARTMENT FILE #

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

EXISTING CONDITIONS PLAN
LAND OF
EQUINOX PROPERTIES LLC
24 WINTER STREET
DOVER, N.H.
*TAX MAP 24, LOT 34*

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 10 FT.
DATE : JANUARY 5, 2026
FILE NO. : DB 2024 – 067

STATE OF NEW HAMPSHIRE · No. 1624 · LICENSED LAND SURVEYOR · CHRISTOPHER R. BERRY · SIGNATURE

*WETLAND NOTES:*

WETLANDS WERE DELINEATED BY JOHN P. HAYES, III. IN JUNE 2024 UTILIZING THE FOLLOWING STANDARDS:

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STATE OF NEW HAMPSHIRE · JOHN P. HAYES, III · CERTIFIED WETLAND SCIENTIST · MAR 18

JOHN P. HAYES, III CWS #18

"DOWNEASTER" TRACK LINE

BOSTON & MAINE RAILROAD

N/F BOSTON AND MAINE R.R.
500 WATER STREET, J-910
JACKSONVILLE, FL 32202
*TAX MAP 24, LOT 2*

EXISTING DRAINAGE EASEMENT TO CITY OF DOVER S.C.R.D. PLAN #114-88 & #115-48

CONCRETE DRAINAGE STRUCTURE

N/F VALDEZ, CHARLI G.
241 CLINTON STREET
PORTSMOUTH, NH 03801
*TAX MAP 24, LOT 23*
S.C.R.D. BOOK 4675, PAGE 229

2' GRAVEL SHOULDER

TOP OF STEEP SLOPE > 2,000 Sq.Ft. CONSERVATION DISTRICT

PROPOSED 6' WHITE VINYL FENCE 100 LF

PROPOSED TREELINE

5'x10' DECK MAIN AND UPPER FLOORS

5' AT GRADE SIDEWALK

ROOF OVERHANG

PROPOSED 4 UNIT BUILDING
716 Sq.Ft. PER UNIT
W/ 4-CAR GARAGE BELOW

ELECTRIC METER

RAIL ROAD TIES

N/F FRUDA 21, LLC
28 VILLAGE GREEN DRIVE
OGUNQUIT, ME 03907
*TAX MAP 24, LOT 35*
S.C.R.D. BOOK 5074, PAGE 739

20" LOCUST TREE

EXISTING GRAVEL DRIVEWAY

PROPOSED DRIVEWAY

EXISTING DUPLEX

PROPOSED TREELINE (TYP)

START PROPOSED GUARD RAIL @ END OF EXISTING GUARD RAIL

GUY WIRES

UP 6 CCI3S TRM SPIKE IN POLE ELEV. 70.01

UP NET 66/3S

EXISTING TREELINE (TYP)

N/F 1-3 FOREST STREET, LLC
P.O. BOX 372
GREENLAND, NH 03840
*TAX MAP 24, LOT 61*
S.C.R.D. BOOK 4659, PAGE 874

5' GRANITE CULVERT STRUCTURE

PROPOSED DRIVEWAY

9"x8" STONE BOUND ~FND~ (FLUSH)

GUARDRAIL

FDC

APPROXIMATE LOCATION OF EXISTING WATERLINE

5' AT GRADE SIDEWALK

PROPOSED WATER SERVICE

PROPOSED 6" PVC SEWER SERVICE

EXISTING SMH RIM ELEV. 70.89

DMH RIM ELEV. 71.10

WINTER STREET

EXISTING DUPLEX

EXISTING GRAVEL DRIVEWAY

N/F SMITHNECK CAPITAL LLC
7 1/2 HORTON STREET
NEWBURYPORT, MA 01950
*TAX MAP 24, LOT 33*
S.C.R.D. BOOK 5102, PAGE 341

N/F FRUDA 21, LLC
28 VILLAGE GREEN DRIVE
OGUNQUIT, ME 03907
*TAX MAP 24, LOT 32*
S.C.R.D. BOOK 4997, PAGE 379

EXISTING DUPLEX

EXISTING GRAVEL DRIVEWAY

16"±

N

NAD83 NH STATE PLANE

MAGNETIC

*NOTES:*

1.) OWNER: EQUINOX PROPERTIES, LLC
8 GROVE STREET, SUITE 100
DOVER, NH 03820

2.) TAX MAP 24, LOT 34

3.) LOT AREA: 11,564 Sq. Ft., 0.27 Ac.

4.) S.C.R.D. BOOK 4869, PAGE 221

5.) ZONING: CBD-RESIDENTIAL SUB-DISTRICT
CONSERVATION DISTRICT
SETBACKS:
FRONT BUILD TO ~ 8-15'
SIDE ~ 10'
REAR ~ 15'
MIN. LOT SIZE: N/A
MIN. LOT COVERAGE: 40%
MIN. LOT FRONTAGE: 75'
FRONTAGE BUILD-OUT: 40% MIN.
BUILDING HEIGHT: 3 STORY MAX., 2 STORY MIN.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE DETAILS NEEDED IN THE PRESENTATION OF A CONDITIONAL USE PERMIT REQUEST ON TAX MAP 24, LOT 34.

GRAPHIC SCALE

10 0 5 10 20 40

( IN FEET )
1 inch = 10 ft.

CITY OF DOVER PLANNING DEPARTMENT FILE #

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| | | |

CONDITIONAL USE LAYOUT PLAN
LAND OF
EQUINOX PROPERTIES LLC
24 WINTER STREET
DOVER, N.H.
*TAX MAP 24, LOT 34*


BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863


SCALE : 1 IN. EQUALS 10 FT.
DATE : JANUARY 5, 2026
FILE NO. : DB 2024 - 067

# 4 UNITS

# APARTMENT BUILDING

# 24 WINTER STREET

# DOVER, NEW HAMPSHIRE

**CODE SUMMARY**

Project: 3-Story Residential Building
Location: Dover, New Hampshire
Date: September 2025
Prepared By: Nick Isaak, AIA

**Applicable Codes & Standards (NH Adoptions)**

2021 IBC – International Building Code (with New Hampshire amendments)

2021 IRC – International Residential Code (with New Hampshire amendments)

NFPA 101 (2018) – Life Safety Code

NFPA 13R – Sprinkler Systems in Low-Rise Residential Occupancies

NFPA 72 – Fire Alarm Code

2023 NEC – National Electrical Code

2018 IECC – International Energy Conservation Code (per NH adoption)

ASCE 7-16 – Structural Loads

**Building Description**

Stories: 3

Floor Area: 1,450 SF per floor (4,350 SF total)

Construction Type: Type V-B (unprotected wood frame)

Sprinklers: NFPA 13R throughout

**Occupancy (IBC):**

First floor garage → Group S-2

Second & third floors → Two 1-BR apartments each → Group R-2 (4 units total)

Occupancy (NFPA 101):

Apartments → Residential, Apartment Occupancy (Ch. 30)

Garage → Storage, Low Hazard (Ch. 42)

**Height & Area**

Allowable (V-B, R-2, sprinklered): 4 stories / 60 ft (IBC Table 504.4)

Proposed: 3 stories / ~35 ft → Complies

Allowable area: >7,000 SF per story (Table 506.2)

Proposed: 1,450 SF → Complies

**Fire Protection**

NFPA 13R sprinklers provided (IBC §903.3.1.2; NFPA 101 §30.3.5)

Dwelling unit separations: 1-hr walls/floors (IBC §420; NFPA 101 §30.3.3)

Garage separation: 1-hr horizontal assembly (IBC §508.4; NFPA 101 §30.3.3.2)

Smoke alarms: NFPA 72 (IBC §907.2.11; NFPA 101 §30.3.4.5)

CO detection: Required with garage (IBC §915; NFPA 101 §9.8.1.4)

**Means of Egress**

Occupant Load: ~8 occupants per floor (IBC Table 1004.1.2; NFPA 101 §7.3.1.2)

Number of Exits: 1

IBC: Single exit permitted ≤4 units/story in sprinklered R-2 (§1006.3.4(2))

NFPA 101: Single exit permitted ≤4 units/story with direct access (§30.2.4.1)

Travel Distance: ≤125 ft permitted (IBC Table 1017.2; NFPA 101 §30.2.6.2)

Stairs: Min. 36 in clear width, 1-hr shaft (IBC §1011, §1023; NFPA 101 §7.2.2)

Corridors: Rating not required for ≤10 occ. in sprinklered bldg (IBC §1020.1 Ex.; NFPA 101 §30.3.6.1)

**Accessibility**

One accessible entrance required (IBC §1105; NFPA 101 §30.2.2.3)

Upper floors exempt without elevator

**Structural & Energy**
**Per IBC Ch. 16 & ASCE 7-16 (snow, wind, seismic) – stamped by NH PE**

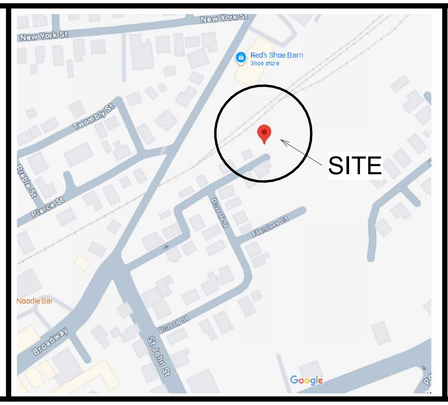
**IECC 2018 compliance required for building envelope & MEP**

**Summary**

✓ Height/area compliant
✓ NFPA 13R sprinklers provided
✓ 1-hr separations (units, garage/dwelling)
✓ Single exit per story permitted (IBC §1006.3.4(2); NFPA 101 §30.2.4.1)
✓ Smoke/CO detection required
✓ Structural design per ASCE 7

1 3D View 1

LOCUS PLAN




KEY PLAN

PROJECT SUMMARY:

THE PROPOSED PROJECT IS A NEW 3 STORY APARTMENT BUILDING. THE BUILDING FOOTPRINT IS 1,450 SF AND THE TOTAL BUILDING AREA IS 4,350 SF. THE UPPER TWO FLOORS ARE PROPOSED AS RESIDENTIAL APARTMENTS (**R-2**) USE AND THE FIRST FLOOR IS GARAGE. THE BUILDING IS DESIGNED TO **TYPE VB** CONSTRUCTION. THE STRUCTURE IS A WOOD FRAME AND THE FLOORS ARE WOOD. THE BUILDING IS SPRINKLERED. THE PROJECT WILL ALSO INCLUDE ALL NECESSARY LANDSCAPE AND SITE IMPROVEMENTS.

SURVEY INFORMATION:

ALL REFERENCES TO EASEMENTS, PROPERTY LINES, WET LANDS, EXISTING CONDITIONS, BUILDING LOCATION, ETC. WERE OBTAINED FROM CIVIL DRAWINGS PROVIDED BY BERRY ENGINEERING

DRAWING LIST

| SHEET NUMBER | SHEET NAME |
|---|---|
| CS1 | COVER SHEET |
| CS2 | CODE, ABBREV. & LEGENDS |
| CS3 | SPECIFICATIONS |
| A0.01 | FLOOR, CEILING, ROOF ASSEMBLIES |
| A0.02 | WALL TYPES |
| A0.03 | ASSEMBLY DETAILS |
| A0.04 | FIRE PENETRATION SCHEDULE |
| A0.05 | UNIT PLANS (ANSI) |
| A0.06 | FOUNDATION DETAILS |
| A0.07 | FRAMING DETAILS |
| A0.08 | FRAMING PLANS |
| A0.09 | SITE PLAN |
| A1.00 | BASEMENT - FLOORPLAN |
| A1.01 | LEVEL 1 - FLOORPLAN |
| A1.02 | LEVEL 2 - FLOORPLAN |
| A1.03 | ROOF PLAN |
| A2.01 | ELEVATIONS |
| A3.01 | SECTIONS |
| A6.25 | WINDOW FLASHING SEQUENCE WRB |
| A7.00 | INTERIOR DETAILS |

## OWNER/DEVELOPER

KAB REALTY MANAGEMENT
8 GROVE STREET
DOVER, NH
CONTACT: BILL GOLDSTEIN
PHONE: 603.742.5300

## ARCHITECT

ISAAK DESIGN, PLLC
35 OYSTER RIVER RD.
DURHAM, NH 03824
CONTACT: NICK ISAAK, AIA
PHONE: 603.969.6711

## CIVIL

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT RD.
BARRINGTON, NH 03825
CONTACT: CHRIS BERRY, P.E.
PHONE: 603.332.2863

PERMIT SET


ISAAK DESIGN, PLLC
ARCHITECTURE & URBAN DESIGN
(603) 969-6711
NICK@ISAAKDESIGN.COM

www.isaakdesign.com


LICENSED ARCHITECT
NICHOLAS ISAAK III
No. 3202
THE STATE OF NEW HAMPSHIRE


ARCHITECT
Nick Isaak, AIA, LEED AP
35 Oyster River Rd.
Durham, NH 03824
Phone: 603-969-6711
nick@isaakdesign.com


Consultant
Address
Address
Phone
Fax
e-mail

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| No. | Description | Date |
|---|---|---|

24 WINTER STREET
DOVER, NH

COVER SHEET

| | |
|---|---|
| Project number | 2442 |
| Date | 9/18/25 |
| Drawn by | NI |
| Checked by | NI |

CS1

Scale 1/4" = 1'-0"

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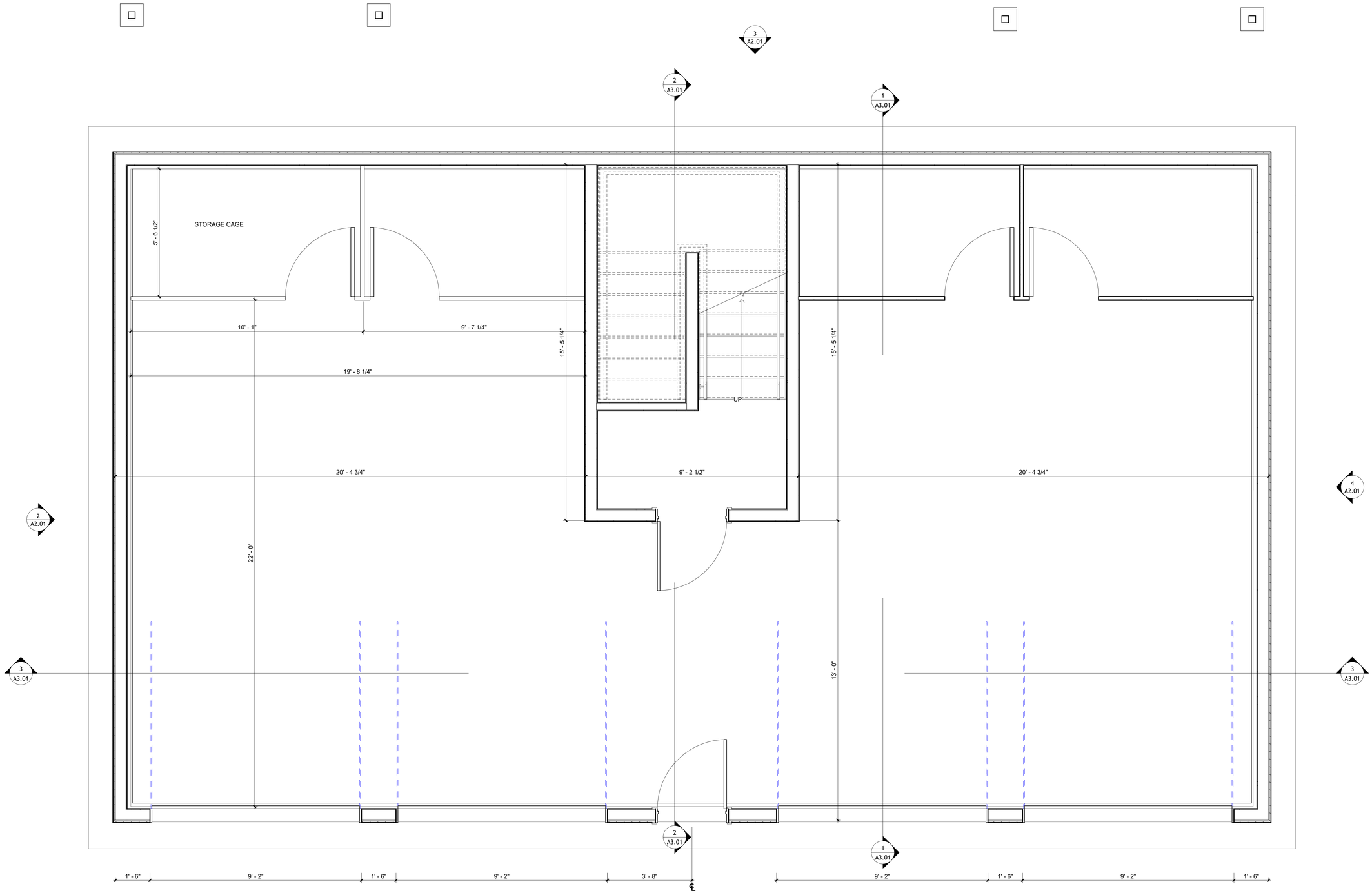


1 BASEMENT - FLOORPLAN
1/2" = 1'-0"

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**ISAAK DESIGN, PLLC**
ARCHITECTURE &
URBAN DESIGN
(603) 969-6711
NICK@ISAAKDESIGN.COM

**www.isaakdesign.com**

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NICHOLAS ISAAK III
No. 3202
THE STATE OF NEW HAMPSHIRE

ARCHITECT
Nick Isaak, AIA, LEED AP
35 Oyster River Rd.
Durham, NH 03824
Phone: 603-969-6711
nick@isaakdesign.com

Consultant
Address
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24 WINTER STREET
DOVER, NH

BASEMENT - FLOORPLAN

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|---|---|
| Project number | 2442 |
| Date | 9/18/25 |
| Drawn by | Author |
| Checked by | Checker |

A1.00

Scale 1/2" = 1'-0"

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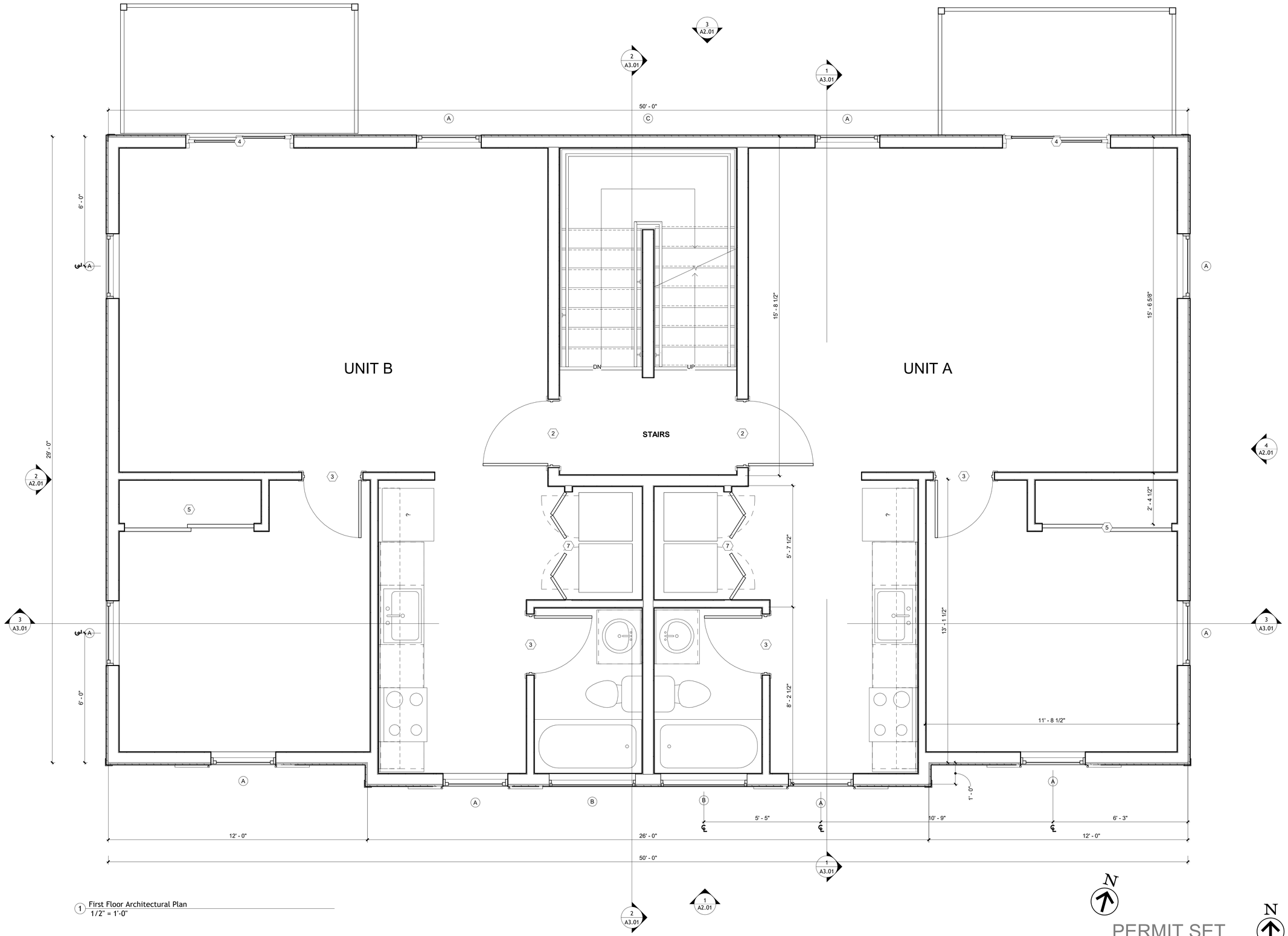


1 First Floor Architectural Plan
1/2" = 1'-0"

PERMIT SET


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URBAN DESIGN
(603) 969-6711
NICK@ISAAKDESIGN.COM

**www.isaakdesign.com**

LICENSED ARCHITECT
NICHOLAS ISAAK III
No. 3202
THE STATE OF NEW HAMPSHIRE

ARCHITECT
Nick Isaak, AIA, LEED AP
35 Oyster River Rd.
Durham, NH 03824
Phone: 603-969-6711
nick@isaakdesign.com

Consultant
Address
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| No. | Description | Date |
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24 WINTER STREET
DOVER, NH

LEVEL 1 - FLOORPLAN

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| Project number | 2442 |
| Date | 9/18/25 |
| Drawn by | Author |
| Checked by | Checker |

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Scale 1/2" = 1'-0"

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1 Second Floor Architectural Plan
1/2" = 1'-0"

PERMIT SET


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ARCHITECTURE &
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(603) 969-6711
NICK@ISAAKDESIGN.COM

**www.isaakdesign.com**

LICENSED ARCHITECT
NICHOLAS ISAAK III
No. 3202
THE STATE OF NEW HAMPSHIRE

ARCHITECT
Nick Isaak, AIA, LEED AP
35 Oyster River Rd.
Durham, NH 03824
Phone: 603-969-6711
nick@isaakdesign.com

Consultant
Address
Address
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e-mail

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| No. | Description | Date |
|---|---|---|
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24 WINTER STREET
DOVER, NH

LEVEL 2 - FLOORPLAN

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| Project number | 2442 |
| Date | 9/18/25 |
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| Checked by | Checker |
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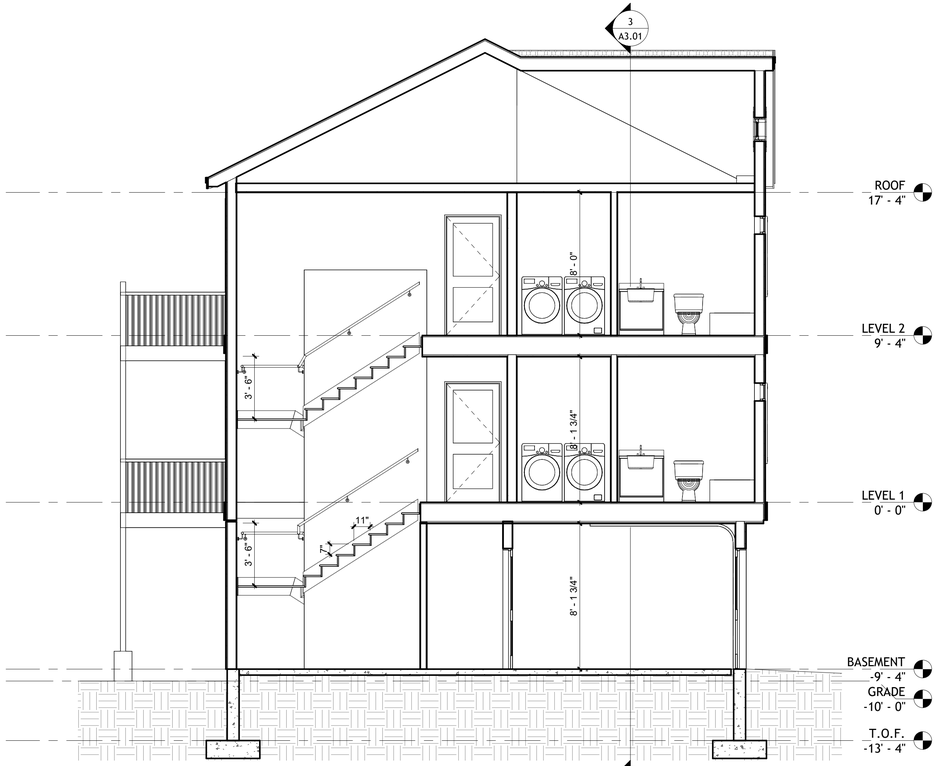
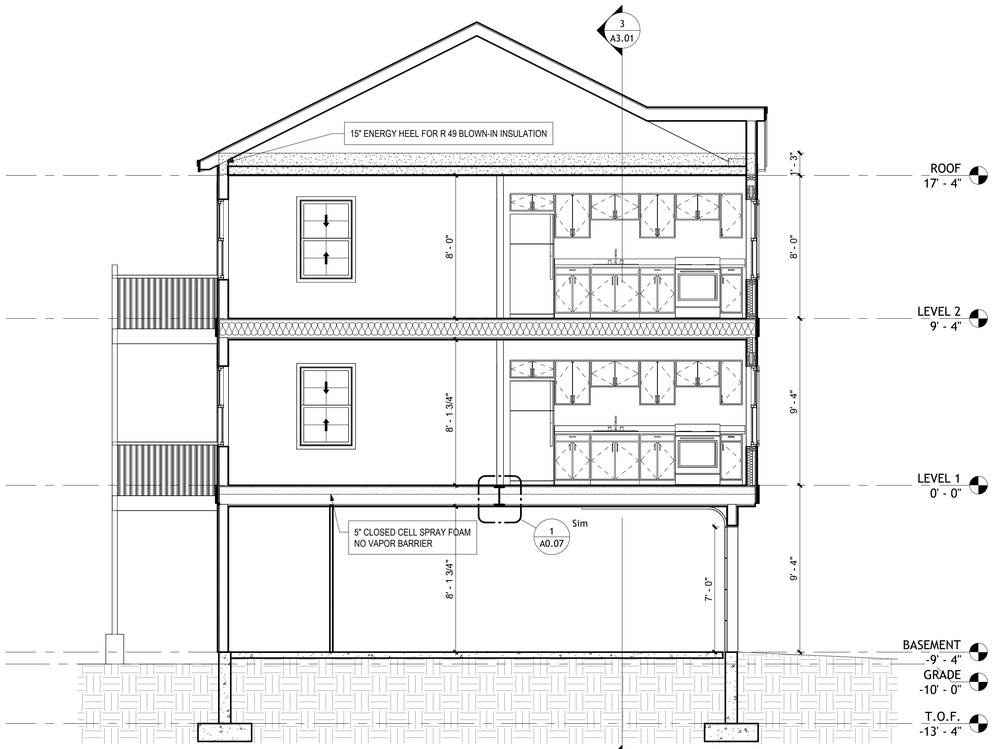



2 Section 2
1/4" = 1'-0"




1 Section 1
1/4" = 1'-0"

3 Section 3
1/4" = 1'-0"

PERMIT SET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NICHOLAS ISAAK III
No. 3202
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ARCHITECT
Nick Isaak, AIA, LEED AP
35 Oyster River Rd.
Durham, NH 03824
Phone: 603-969-6711
nick@isaakdesign.com

Consultant
Address
Address
Phone
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| No. | Description | Date |
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24 WINTER STREET
DOVER, NH

SECTIONS

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| Project number | 2442 |
| Date | 9/18/25 |
| Drawn by | NI |
| Checked by | Checker |

A3.01

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