

P0595-007
August 23, 2021

Ms. Juliet Walker, Planning Director
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

**Re: Site Review Permit Application
Proposed Mixed Use Development, Raynes Avenue, Portsmouth, NH**

Dear Juliet:

On behalf of One Raynes Ave, LLC, 31 Raynes Ave, LLC & 203 Maplewood Ave, LLC (owners), and North Mill Pond Holdings, LLC (applicant), we are pleased to submit one (1) set of hard copies of the following information to support a request for a Site Review Permit for the above referenced project:

- One (1) full size & one (1) half size copy of the Site Plan Set, last revised August 23, 2021;
- TAC Comment Response Report, dated August 23, 2021;
- Parking Conditional Use Permit Request, last revised August 23, 2021;
- Drainage Analysis, last revised May 19, 2021;
- Long-Term Operation & Maintenance Plan, dated May 19, 2021;
- Grade Plane Exhibit, last revised August 23, 2021;
- Building Height Exhibit, dated May 3, 2021;
- Front Lot Line Buildout Exhibit, dated August 23, 2021;
- Colored Landscape Plan, last revised May 25, 2021;
- Landscape Precedent Images Plan, last revised July 21, 2021;
- Wetland and Buffer Report, dated January 6, 2020;
- Wetland Buffer Impervious Surface Exhibit, last revised August 23, 2021;
- Community Space Exhibit, last revised August 23, 2021;
- Truck Turning Exhibit, last revised August 23, 2021;
- Impervious Surface Reduction Exhibit, dated March 22, 2021;
- Traffic Impact Study, last revised August 2, 2021;
- Unitil Will Service Letter, dated February 22, 2021;
- Green Building Statement, dated March 16, 2021;
- Site Review Checklist, last revised May 19, 2021;
- Parking Management Letter, dated May 20, 2021;
- Mitigation of Subsurface Environmental Conditions Memo by McPhail Associates, LLC, dated April 30, 2021;
- Conceptual Pier Plan, Sections & Details, July 21, 2021



The proposed project is located at 1 Raynes Avenue, 31 Raynes Avenue & 203 Maplewood Avenue on properties identified as Map 123 Lots 10, 12, 13 & 14 on the City of Portsmouth Tax Maps. The existing parcels are bound by Raynes Avenue to south, Maplewood Avenue to the west, North Mill Pond to the north and the municipal land to the east, which is the future site of the North Mill Pond community park.

The project will include a voluntary merger of Map 123 Lots 10, 12, 13 & 14 as shown in the enclosed Site Plan. The proposed voluntary merger will create a single development lot with an area of 2.53 acres. The project is also currently under review by the Historic District Commission (HDC).

The proposed project will include the construction of two (2) 5-story buildings. The first is a mixed-use residential building that has a first-floor residential lobby and two (2) commercial spaces, and 60 upper floor residential units. The second is a hotel building with 128 rooms at the intersection of Raynes Ave and Vaughan Street. The project will include associated site improvements such as paving, utilities, lighting, landscaping and community space. The proposed project is providing 27,352 SF of community spaces (24.8% of the total lot area) which meets the 20% of total lot area required to receive the incentive bonus for one additional story (10 ft) above the maximum height requirement on the buildings, with the 5th story on the mixed-use building stepped back 50ft from the street. The community space calculation is depicted in the enclosed Community Space Exhibit. A Conditional Use Permit for Wetland Buffer Impact will be required for the project.

To date the applicant has attending the following meetings with the local land-use boards related to the Site Plan:

- December 8, 2020 – Technical Advisory Committee Work Session
- December 9, 2020 – Conservation Commission Work Session
- December 17, 2020 – Planning Board Conceptual Consultation
- March 25, 2021 – Planning Board Design Review
- April 6, 2021 - Technical Advisory Committee Meeting
- April 12, 2021 – Conservation Commission Site Walk
- April 14, 2021 – Conservation Commission Regular Meeting
- May 4, 2021 - Technical Advisory Committee Meeting
- May 12, 2021 – Conservation Commission Regular Meeting
- June 1, 2021 - Technical Advisory Committee Meeting
- June 9, 2021 – Conservation Commission Regular Meeting
- August 3, 2021 – Technical Advisory Committee Meeting

The enclosed revised plans and supplemental materials have been provided to address comments received from the Technical Advisory Committee (TAC) in correspondence dated August 3, 2021 and at their meeting held on August 3, 2021.

We respectfully request to be placed on the TAC meeting agenda for September 7, 2021. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,

TIGHE & BOND, INC.



Patrick M. Crimmins, PE
Senior Project Manager



Neil A. Hansen, PE
Project Engineer

Cc: North Mill Pond Holdings, LLC (via e-mail)

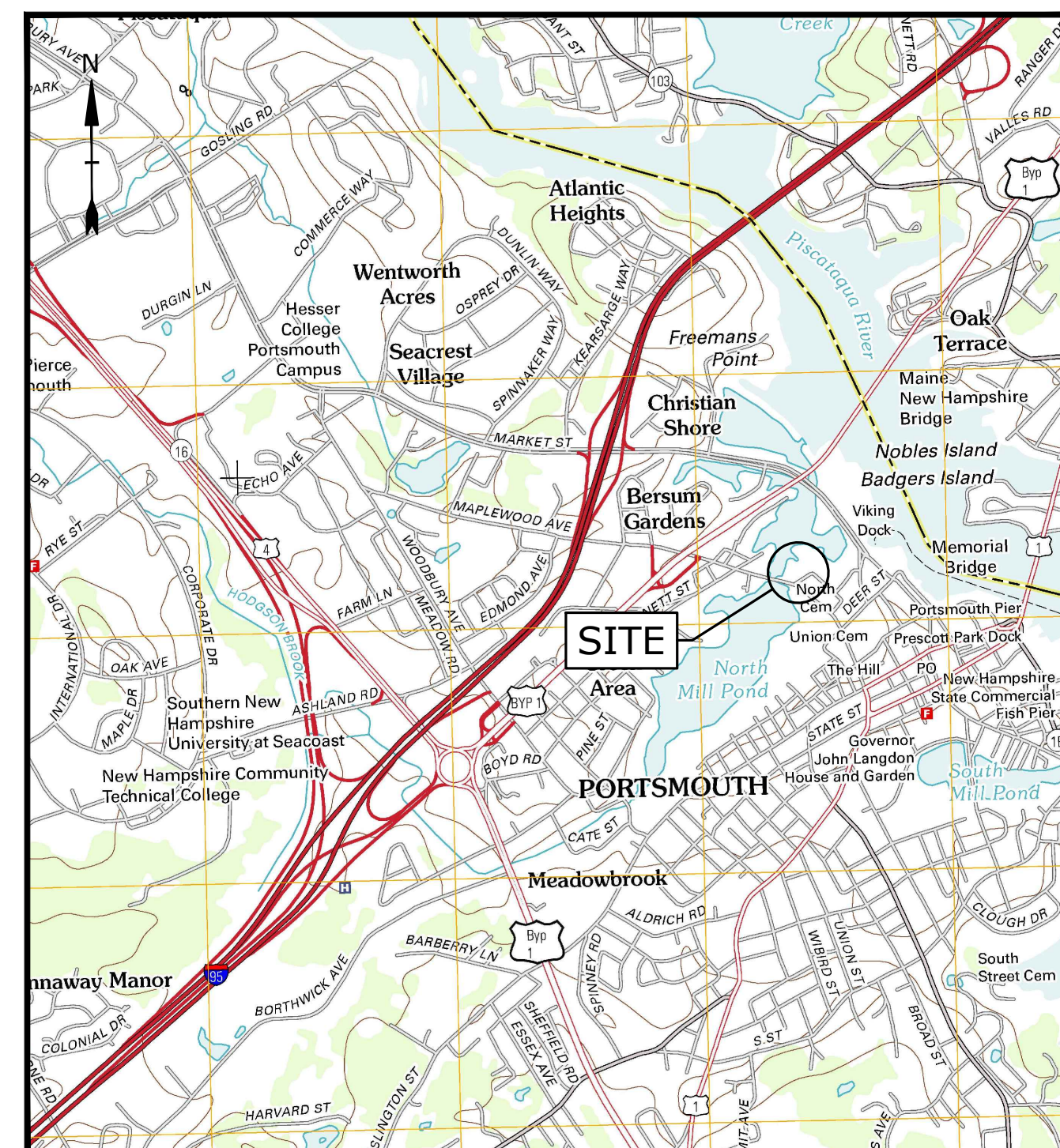
PROPOSED MIXED USE DEVELOPMENT

RAYNES AVENUE PORTSMOUTH, NEW HAMPSHIRE

MARCH 22, 2021

LAST REVISED: AUGUST 23, 2021

| LIST OF DRAWINGS | | |
|------------------|--|--------------|
| SHEET NO. | SHEET TITLE | LAST REVISED |
| | COVER SHEET | 8/23/2021 |
| G-100 | GENERAL NOTES AND LEGEND | 8/23/2021 |
| 1 OF 3 | EXISTING CONDITIONS PLAN | 5/17/2021 |
| 2 OF 3 | EXISTING CONDITIONS PLAN | 5/17/2021 |
| 3 OF 3 | EXISTING CONDITIONS PLAN | 5/17/2021 |
| C-101 | DEMOLITION PLAN | 7/21/2021 |
| C-102 | OVERALL SITE PLAN | 8/23/2021 |
| C-102.1 | SITE PLAN | 8/23/2021 |
| C-102.2 | NEIGHBORHOOD SIGNAGE PLAN | 7/21/2021 |
| C-103 | GRADING, DRAINAGE AND EROSION CONTROL PLAN | 8/23/2021 |
| C-104 | UTILITIES PLAN | 8/23/2021 |
| C-201 | EASEMENT PLAN | 8/23/2021 |
| L-100 | LANDSCAPE MATERIAL PLAN LEGEND AND NOTES | 5/26/2021 |
| L-101 | LANDSCAPE PLANTING PLAN | 8/23/2021 |
| L-102 | LANDSCAPE DETAILS | 5/26/2021 |
| C-501 | EROSION CONTROL NOTES AND DETAILS SHEET | 5/19/2021 |
| C-502 | DETAILS SHEET | 8/23/2021 |
| C-503 | DETAILS SHEET | 7/21/2021 |
| C-504 | DETAILS SHEET | 5/19/2021 |
| C-505 | DETAILS SHEET | 5/19/2021 |
| C-506 | DETAILS SHEET | 5/19/2021 |
| C-507 | DETAILS SHEET | 5/19/2021 |
| C-508 | DETAILS SHEET | 5/19/2021 |
| A3.00 | EXTERIOR ELEVATIONS | 5/3/2021 |
| 1 of 1 | LIGHTING PLAN | 4/21/2021 |



LOCATION MAP
SCALE: 1" = 2,000'

PREPARED BY:
Tighe & Bond
177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
603-433-8818

APPLICANT:
NORTH MILL POND HOLDINGS LLC
1359 HOOKSETT ROAD
HOOKSETT, NEW HAMPSHIRE 03106

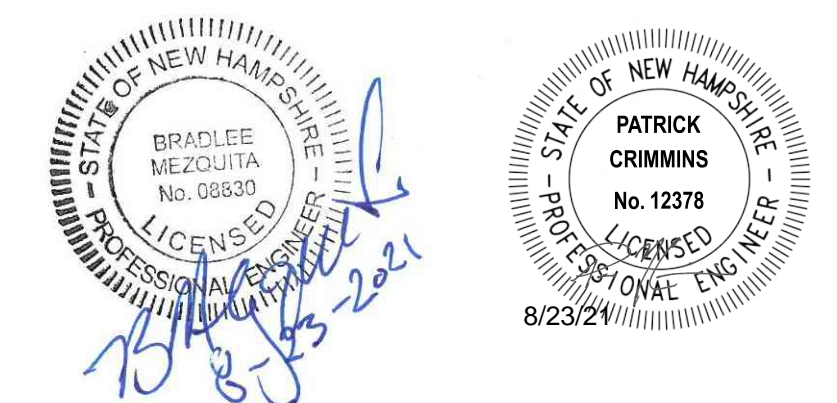
OWNERS:
TAX MAP 123, LOT 10 & 13
31 RAYNES LLC C/O
PORTSMOUTH CHEVROLET
549 ROUTE 1 BYPASS
PORTSMOUTH, NEW HAMPSHIRE 03801

SURVEYOR:
DOUCET SURVEY, LLC
102 KENT PLACE
NEWMARKET, NH 03857

TAX MAP 123, LOT 12
203 MAPLEWOOD AVENUE LLC
549 HIGHWAY 1 BYPASS
PORTSMOUTH, NH 03801

TAX MAP 123, LOT 14
ONE RAYNES AVE LLC
1359 HOOKSETT RD
HOOKSETT, NEW HAMPSHIRE 03106

| LIST OF PERMITS | | |
|--|--------|------|
| LOCAL | STATUS | DATE |
| SITE PLAN REVIEW PERMIT | | |
| CONDITIONAL USE PERMIT- WETLAND BUFFER | | |
| CONDITIONAL USE PERMIT- PARKING | | |
| STATE | | |
| NHDES - ALTERATION OF TERRAIN PERMIT | | |
| NHDES - WETLAND PERMIT | | |
| NHDES - SEWER CONNECTION PERMIT | | |



**TAC RESUBMISSION
COMPLETE SET 25 SHEETS**

NOTES:

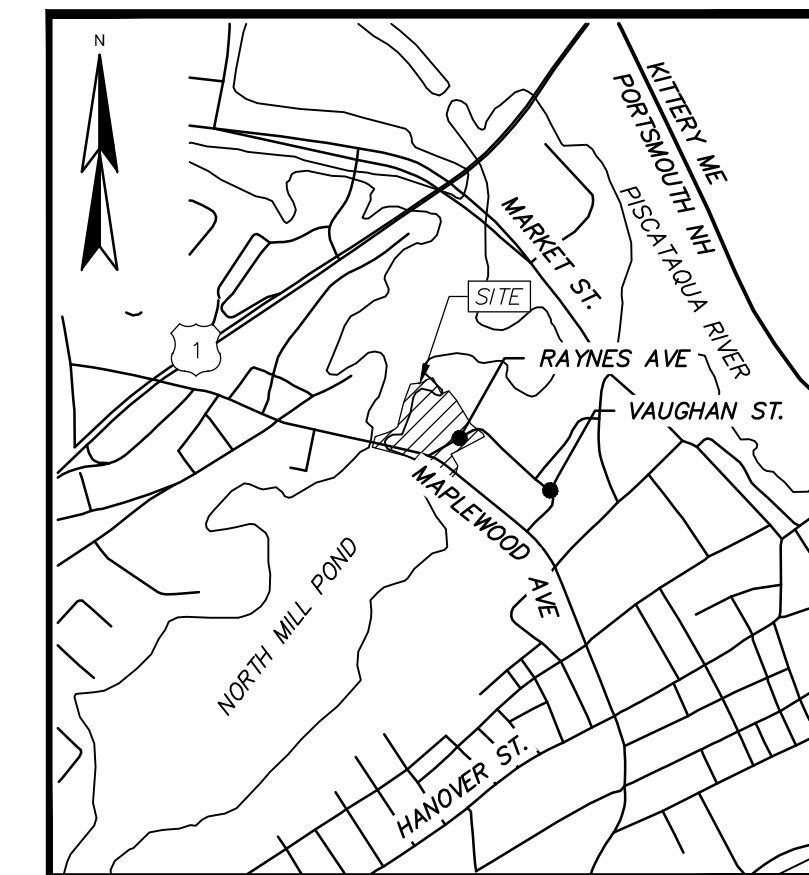
- 1. REFERENCE: TAX MAP 123, LOT 10... 2. TOTAL PARCEL AREA: 71,149 SQ. FT. OR 1.633 AC. (COMBINED LOTS 10, 12 & 13)... 3. OWNER OF RECORD: TAX MAP 123, LOTS 10 & 13... 4. ZONE: CD4 OVERLAY DISTRICTS... 5. ZONING DISTRICTS BASED ON THE CITY OF PORTSMOUTH ZONING MAP DATED 11/12/15 AS AVAILABLE ON THE CITY WEBSITE ON 11/18/19... 6. FIELD SURVEY PERFORMED BY D.C.B. & K.J.L. DURING NOVEMBER 2019 & BY G.M.E. & J.P.E. DURING JUNE 2020 USING A TRIMBLE S7 TOTAL STATION AND A TRIMBLE R8 SURVEY GRADE GPS... 7. JURISDICTIONAL WETLANDS DELINEATED BY TIGHE & BOND, DURING OCTOBER 2019 IN ACCORDANCE WITH 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 AND THE INTERIM REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION (OCTOBER, 2009)... 8. VERTICAL DATUM IS BASED ON NGVD29 PER DISK B2 1923... 9. HORIZONTAL DATUM BASED ON NEW HAMPSHIRE STATE PLANE(2800) NAD83(2011) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KEYNET GPS VRS NETWORK... 10. PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY, INC. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER... 11. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVABLE PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE... 12. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING: THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC... 13. WATER BOUNDARIES ARE DYNAMIC IN NATURE AND ARE SUBJECT TO CHANGE DUE TO NATURAL CAUSES SUCH AS EROSION OR ACCRETION... 14. MEAN HIGH WATER (EL. 3.0' NGVD1929) AND HIGHEST OBSERVABLE TIDE (EL. 4.3' NGVD1929) ELEVATIONS PER "MAPLEWOOD AVENUE CULVERT REPLACEMENT AND NORTH MILL POND RESTORATION, WATERFRONT/STRUCTURAL BASIS OF DESIGN, BY WATERFRONT ENGINEERS, LLC, DATED DECEMBER 30, 2009", PROVIDED BY TIGHE & BOND ON 11-30-15... 15. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE... 16. DUE TO THE COMPLEXITY OF RESEARCHING ROAD RECORDS AS A RESULT OF INCOMPLETE, UNORGANIZED, INCONCLUSIVE, OBLITERATED, OR LOST DOCUMENTS, THERE IS AN INHERENT UNCERTAINTY INVOLVED WHEN ATTEMPTING TO DETERMINE THE LOCATION AND WIDTH OF A ROADWAY RIGHT OF WAY. THE EXTENT OF GREEN STREET AS DEPICTED HEREON IS/ARE BASED ON RESEARCH CONDUCTED AT THE CITY OF PORTSMOUTH CITY HALL, THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS & THE ROCKINGHAM COUNTY REGISTRY OF DEEDS. EDGE OF RIGHT OF WAY BASED ON HOLDING 52 FOOT WIDE RIGHT OF WAY ALONG RAYNES AVENUE PER REFERENCE PLANS #10 & #11. THE GEOMETRY FROM REFERENCE PLAN #11 WAS THEN ALIGNED TO THE REBAR SHOWN ON THE NORTHERLY SIDE OF MAPLEWOOD AVENUE... 17. ALL UNDERGROUND UTILITIES (ELECTRIC, GAS, TEL. WATER, SEWER DRAIN SERVICES) ARE SHOWN IN SCHEMATIC FASHION. THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE... 18. TAX MAP 123, LOTS 10, 12, 13 & 14 IS/ARE EITHER SUBJECT TO OR IN BENEFIT OF, BUT NOT LIMITED TO, THE FOLLOWING EASEMENTS/RIGHTS OF RECORD: A) 12' WIDE RIGHT OF WAY, SEE R.C.R.D. BOOK 4676, PAGE 657 AND REFERENCE PLAN #11. B) RIGHT OF WAY, SEE R.C.R.D. BOOK 4676, PAGE 657 & BOOK 5621, PAGE 420. C) SEWER RIGHTS, SEE R.C.R.D. BOOK 4676, PAGE 657 (LOCATION UNKNOWN). D) 15' WIDE WALKWAY & LANDSCAPE EASEMENT, SEE R.C.R.D. BOOK 4676, PAGE 657. E) ELECTRIC EASEMENT, SEE R.C.R.D. BOOK 3205, PAGE 1449. F) TAX MAP 123, LOT 14 IS SUBJECT TO LEASEHOLD RIGHTS AS LISTED IN R.C.R.D. BOOK 6088, PAGE 1267.

REFERENCE PLANS:

- 1. "STANDARD BOUNDARY SURVEY, TAX MAP 123 - LOT 15 & TAX MAP 124 LOT 10" DATED JULY 2008, REVISED 4/25/13 BY AMBIT ENGINEERING, INC. R.C.R.D. PLAN #D-37722. 2. "PROPERTY STAKEOUT SKETCH, PORTSMOUTH PROPERTY TRUST, PE SPAULDING REVOCABLE TRUST", BY AMBIT ENGINEERING, INC., DATED JANUARY 30, 2007, NOT RECORDED. 3. "VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R-10 PORTSMOUTH, NH, CONDEMNATION MAP", BY ANDERSON-NICHOLS & CO., INC., DATED FEBRUARY 1971, R.C.R.D. PLAN D-2425. 4. "STANDARD BOUNDARY SURVEY, TAX MAP 123, LOTS 10 & 13 FOR RAYNES, LLC", BY AMBIT ENGINEERING, INC., NOT RECORDED. 5. "EASEMENT PLAN, EGRESS EASEMENT TO 319 VAUGHAN STREET CENTER, LLC, TAX MAP 124, LOT 9 & TAX MAP 123, LOT 15, PROPERTY OF 299 VAUGHAN STREET, LLC C/O CATHARTES PRIVATE INVESTMENTS", BY AMBIT ENGINEERING, INC., DATED MARCH 2014, R.C.R.D. PLAN #D-38358. 6. "EASEMENT PLAN SIDEWALK EASEMENT TO CITY OF PORTSMOUTH, TAX MAP 124, LOT 9 PROPERTY OF 319 VAUGHAN STREET CENTER, LLC", BY AMBIT ENGINEERING, INC., DATED FEBRUARY 2014, R.C.R.D. PLAN #D-38315. 7. "PLAN OF LAND PORTSMOUTH, NH FOR WILLIAM A. HYDER", BY JOHN W. DURGIN, DATED JUNE 1955, ON FILE AT JAMES VERRA & ASSOCIATES. 8. "STANDARD PROPERTY SURVEY FOR PROPERTY AT 111 MAPLEWOOD AVENUE", BY EASTERLY SURVEYING, INC., DATED 1/31/06, R.C.R.D. PLAN #D-33786. 9. "VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R-10 PORTSMOUTH, NH, DISPOSITION PLAN PARCEL 3", BY ANDERSON-NICHOLS & CO., INC., DATED JUNE 1973, R.C.R.D. PLAN D-4019. 10. "VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R-10 PORTSMOUTH, NH, DISPOSITION MAP", BY ANDERSON-NICHOLS & CO., INC., DATED NOVEMBER 1969, R.C.R.D. PLAN D-2408. 11. "LAND OF HEIRS OF JOHN AUGUST HETT", BY JOHN W. DURGIN, DATED APRIL 1938, ON FILE AT JAMES VERRA AND ASSOCIATES. 12. "LAND IN PORTSMOUTH, NH OWNED BY ARMOUR & CO.", BY JOHN W. DURGIN DATED OCTOBER 1938, ON FILE AT JAMES VERRA AND ASSOCIATES. 13. "LAND ON VAUGHAN STREET PORTSMOUTH, NH ESTATE OF CARRIE HAM TO LAWRENCE V. REGAN", BY JOHN W. DURGIN, DATED AUGUST 1937, ON FILE AT JAMES VERRA AND ASSOCIATES. 14. "SKETCH TO RALPH SPINNEY", DATED APRIL 23, 1936, ON FILE AT JAMES VERRA AND ASSOCIATES. 15. "PLOT PLAN OF LAND PORTSMOUTH, NH FOR JOHN R. AND WINFIELD R. WELCH", BY JOHN W. DURGIN, DATED APRIL 1973, ON FILE AT JAMES VERRA AND ASSOCIATES. 16. "PLAN OF PROPERTY IN PORTSMOUTH, NH OWNED BY R.I. SUGDEN", BY WM A. GROVER, DATED APRIL 15, 1919, ON FILE AT JAMES VERRA AND ASSOCIATES. 17. "PLAN OF LAND PORTSMOUTH, NH FOR WILLIAM A. HYDER", BY JOHN W. DURGIN, DATED JUNE 1955, ON FILE AT JAMES VERRA AND ASSOCIATES. 18. "PROPERTY OF ELDRED V. AND BARBARA J. STRAW", BY C.R.E. LAWSON, DATED JUNE 1971, R.C.R.D. PLAN C-3277. 19. "SUBDIVISION PLAN OF TAX MAP 123, LOT 15 FOR 299 VAUGHAN STREET, LLC", BY DOUCET SURVEY, INC., DATED MAY 19, 2017, R.C.R.D. PLAN D-40759. 20. "LICENSE, EASEMENT & LAND TRANSFER PLAN FOR 299 VAUGHAN STREET, LLC & VAUGHAN STREET HOTEL, LLC", BY DOUCET SURVEY INC., DATED AUGUST 2017, R.C.R.D. PLAN D-40760.

LEGEND

- APPROXIMATE ABUTTERS LOT LINE
CHAIN LINK FENCE
SEWER LINE
DRAIN LINE
GAS LINE
UNDERGROUND ELECTRIC LINE
MAJOR CONTOUR LINE
MINOR CONTOUR LINE
OVERHEAD WIRE
TREE LINE
SHRUB LINE
GUARDRAIL
EDGE OF WETLAND AREA (SEE NOTE #7)
CONCRETE
RIP RAP
LANDSCAPED AREA
UTILITY POLE & GUY WIRE
LIGHT POLE W/ARM
SIGN
BOUND FOUND
IRON PIPE/ROD FOUND
POST
FIRE HYDRANT
WATER GATE VALVE
WATER SHUTOFF VALVE
GAS GATE VALVE
PAD MOUNTED TRANSFORMER
AIR CONDITIONING UNIT
CATCH BASIN
DRAIN MANHOLE
MANHOLE
ELECTRIC MANHOLE
SEWER MANHOLE
HAND HOLE
CONIFEROUS TREE
DECIDUOUS TREE
MONITORING WELL LOCATION
ROCK/BOULDER
SPOT GRADE
BOUND FOUND
CONC.
EPP
VCC
VCC
SWL
EM
GM
PM
CONC.
EDGE OF PAVEMENT
VERTICAL GRANITE CURB
VERTICAL CONCRETE CURB
SINGLE WHITE LINE
ELECTRIC METER
GAS METER
PARKING METER
5/8" REBAR W/ID CAP TO BE SET

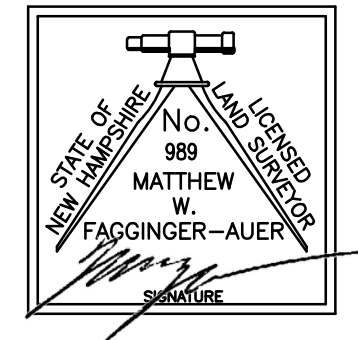


LOCATION MAP (n.t.s.)

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE (NHRSA TITLE LXIV) 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. I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

Signature of Matthew Fagginger-Auer, L.L.S. #989
5/17/21 DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.



EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
LAND OF
31 RAYNES LLC
(TAX MAP 123, LOTS 10 & 13)
203 MAPLEWOOD AVENUE LLC
(TAX MAP 123, LOT 12)
&
ONE RAYNES AVENUE LLC
(TAX MAP 123, LOT 14)
MAPLEWOOD AVENUE & RAYNES AVENUE
PORTSMOUTH, NEW HAMPSHIRE

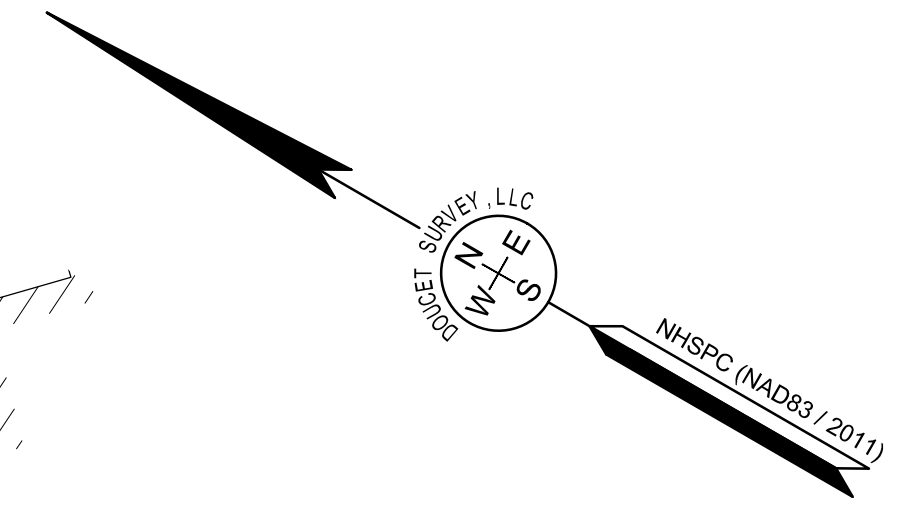
Table with columns for DRAINAGE STRUCTURES and SEWER STRUCTURES. It lists details for various manholes (DMH) and sewer manholes (SMH), including their elevations and dimensions.

Table with columns: NO., DATE, DESCRIPTION, BY. It is currently empty.

Table with columns: DRAWN BY (E.D.P.), DATE (JUNE 17, 2020), CHECKED BY (M.W.F.), DRAWING NO. (6082B), JOB NO. (6082), SHEET (1) OF (3).

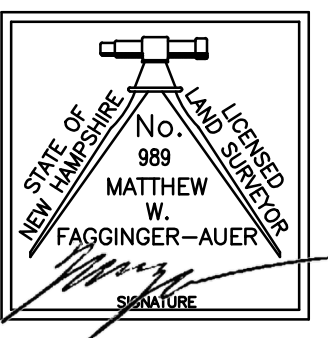
DOUCET SURVEY logo and contact information: Serving Your Professional Surveying & Mapping Needs, 102 Kent Place, Newmarket, NH 03857 (603) 659-6560.

- LEGEND**
- APPROXIMATE ABUTTERS LOT LINE
 - CHAIN LINK FENCE
 - SS SEWER LINE
 - SD DRAIN LINE
 - G GAS LINE
 - E UNDERGROUND ELECTRIC LINE
 - 100- MAJOR CONTOUR LINE
 - 98- MINOR CONTOUR LINE
 - OHW OVERHEAD WIRE
 - ~ TREE LINE
 - ~ SHRUB LINE
 - GUARDRAIL
 - EDGE OF WETLAND AREA (SEE NOTE #7)
 - CONCRETE
 - RIP RAP
 - LANDSCAPED AREA
 - UTILITY POLE & GUY WIRE
 - LIGHT POLE W/ARM
 - SIGN
 - BOUND FOUND
 - IRON PIPE/ROD FOUND
 - POST
 - FIRE HYDRANT
 - WATER GATE VALVE
 - WATER SHUTOFF VALVE
 - GAS GATE VALVE
 - PAD MOUNTED TRANSFORMER
 - AIR CONDITIONING UNIT
 - CATCH BASIN
 - DRAIN MANHOLE
 - MANHOLE
 - ELECTRIC MANHOLE
 - SEWER MANHOLE
 - HAND HOLE
 - CONIFEROUS TREE
 - DECIDUOUS TREE
 - MONITORING WELL LOCATION
 - ROCK/BOULDER
 - SPOT GRADE
 - BOUND FOUND
 - CONC.
 - EP EDGE OF PAVEMENT
 - VCC VERTICAL GRANITE CURB
 - VCC VERTICAL CONCRETE CURB
 - SWL SINGLE WHITE LINE
 - EM ELECTRIC METER
 - GM GAS METER
 - PM PARKING METER
 - 5/8" REBAR W/ID CAP TO BE SET



TAX MAP 123, LOT 15
CITY OF PORTSMOUTH
1 JUNKINS AVE
PORTSMOUTH, NH, 03801
R.C.R.D. BOOK 5904 PAGE 2777

TAX MAP 124, LOT 9
319 VAUGHAN STREET CENTER LLC
104 GRAFTON DRIVE
PORTSMOUTH, NH 03801
R.C.R.D. BOOK 5506, PAGE 427

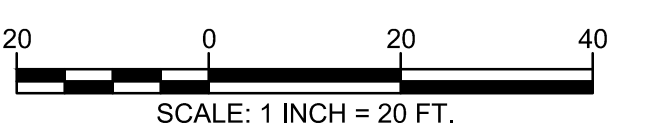


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Matthew W. Fagginger-Auer
L.L.S. #989
5/17/21 DATE

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| LINE TABLE | | |
|------------|-------------|----------|
| LINE | BEARING | DISTANCE |
| L1 | N45°28'14"W | 18.36' |
| L2 | S59°09'46"W | 74.62' |

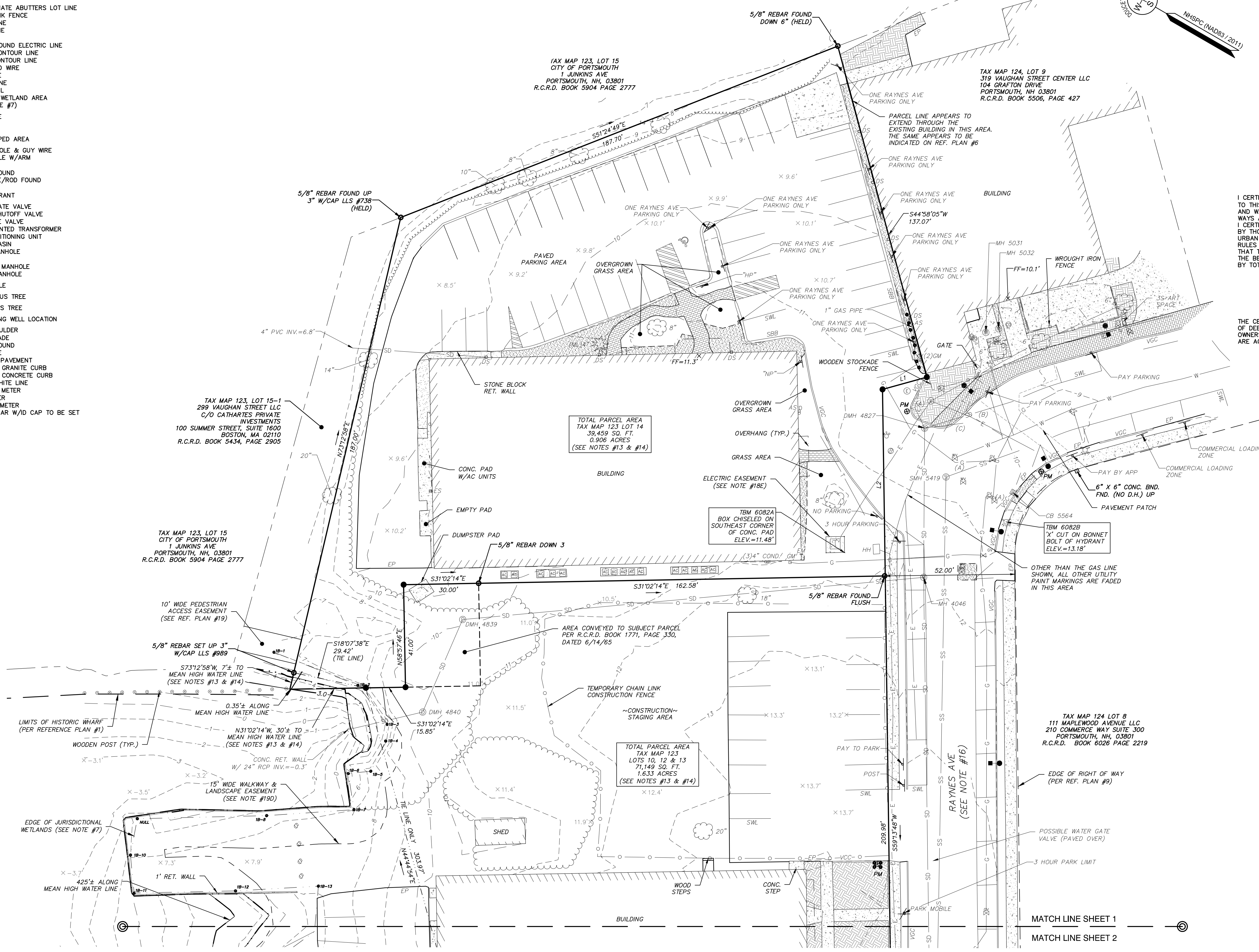


EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
LAND OF
31 RAYNES LLC
(TAX MAP 123, LOTS 10 & 13)
203 MAPLEWOOD AVENUE LLC
(TAX MAP 123, LOT 12)
&
ONE RAYNES AVENUE LLC
(TAX MAP 123, LOT 14)
MAPLEWOOD AVENUE & RAYNES AVENUE
PORTSMOUTH, NEW HAMPSHIRE

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| | | | |
| | | | |
| | | | |

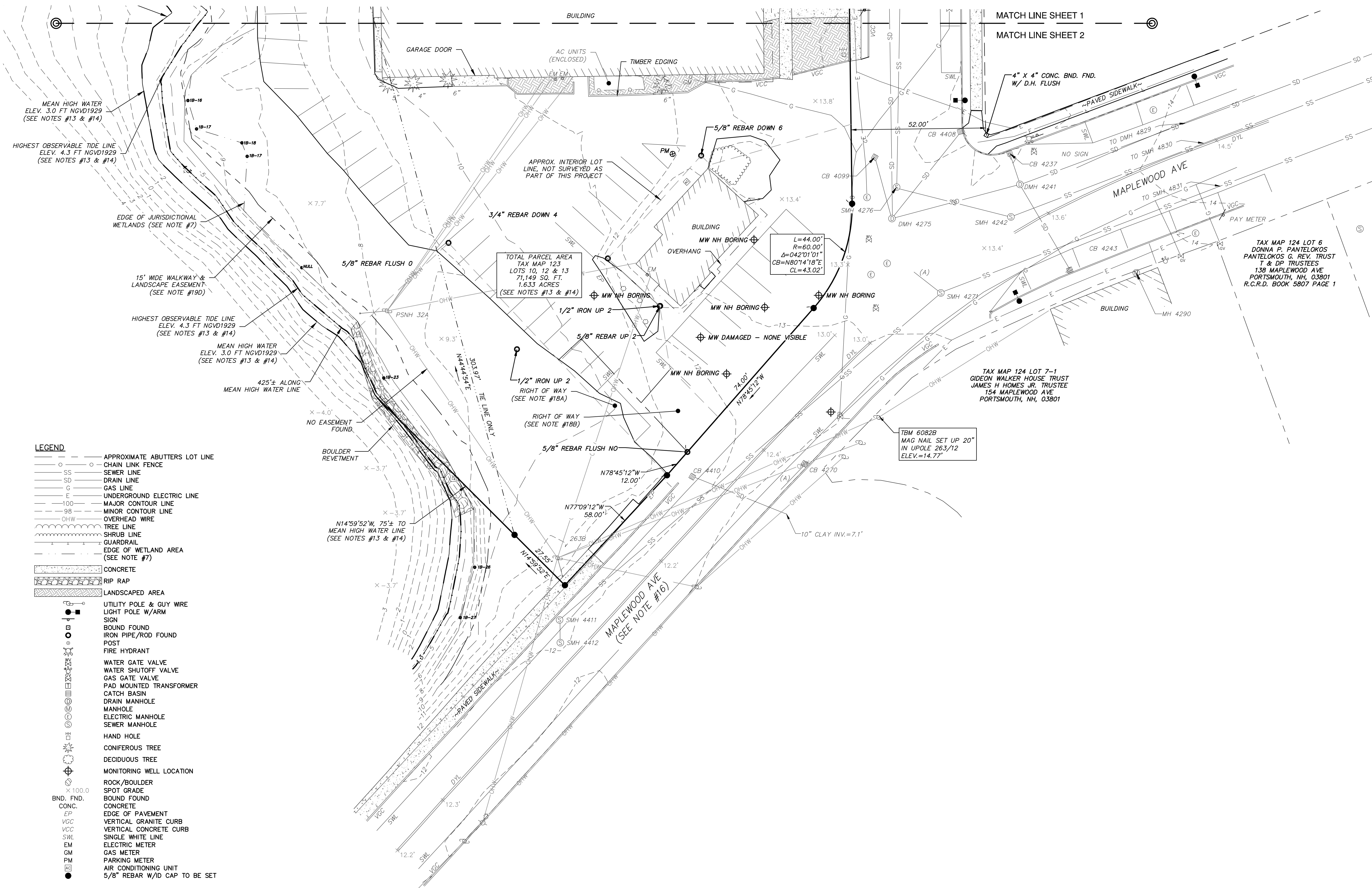
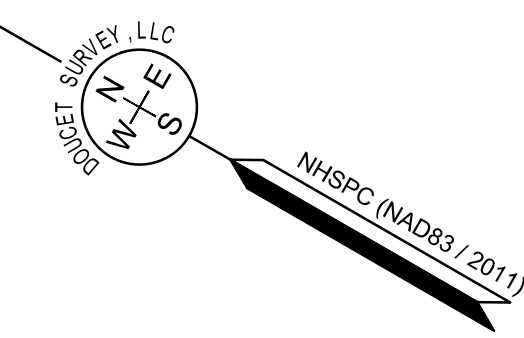
| | | | |
|-------------|--------|--------------|---------------|
| DRAWN BY: | E.D.P. | DATE: | JUNE 17, 2020 |
| CHECKED BY: | M.W.F. | DRAWING NO.: | 6082B |
| JOB NO.: | 6082 | SHEET | 2 OF 3 |

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Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
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MATCH LINE SHEET 1
MATCH LINE SHEET 2

FILE NAME: Y:\PROJECTS\6082 COMMERCE WAY\6082 LAYOUT NAME: TDMP PLAN (D) PLOTTED: Monday, May 17, 2021 11:45:00 AM

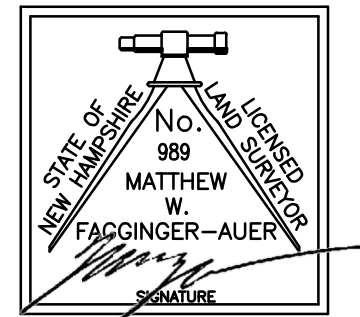


- LEGEND**
- APPROXIMATE ABUTTERS LOT LINE
 - CHAIN LINK FENCE
 - SS SEWER LINE
 - SD DRAIN LINE
 - G GAS LINE
 - E UNDERGROUND ELECTRIC LINE
 - 100 MAJOR CONTOUR LINE
 - 93 MINOR CONTOUR LINE
 - OHW OVERHEAD WIRE
 - ~ TREE LINE
 - ~ SHRUB LINE
 - ~ GUARDRAIL
 - EDGE OF WETLAND AREA (SEE NOTE #7)
 - CONCRETE
 - RIPP RAP
 - LANDSCAPED AREA
 - UTILITY POLE & GUY WIRE
 - SIGN
 - BOUND FOUND
 - IRON PIPE/ROD FOUND
 - POST
 - FIRE HYDRANT
 - WATER GATE VALVE
 - WATER SHUTOFF VALVE
 - GAS GATE VALVE
 - PAD MOUNTED TRANSFORMER
 - CATCH BASIN
 - DRAIN MANHOLE
 - MANHOLE
 - ELECTRIC MANHOLE
 - SEWER MANHOLE
 - HAND HOLE
 - CONIFEROUS TREE
 - DECIDUOUS TREE
 - MONITORING WELL LOCATION
 - ROCK/BOULDER
 - SPOT GRADE
 - BOUND FOUND
 - CONCRETE
 - EP EDGE OF PAVEMENT
 - VCC VERTICAL GRANITE CURB
 - SWL SINGLE WHITE LINE
 - EM ELECTRIC METER
 - GM GAS METER
 - PM PARKING METER
 - AIR CONDITIONING UNIT
 - 5/8" REBAR W/ID CAP TO BE SET

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE (NH RSA TITLE LXIV) 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. I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

Matthew W. Faginger-Auer
L.L.S. #989
5/27/21 DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

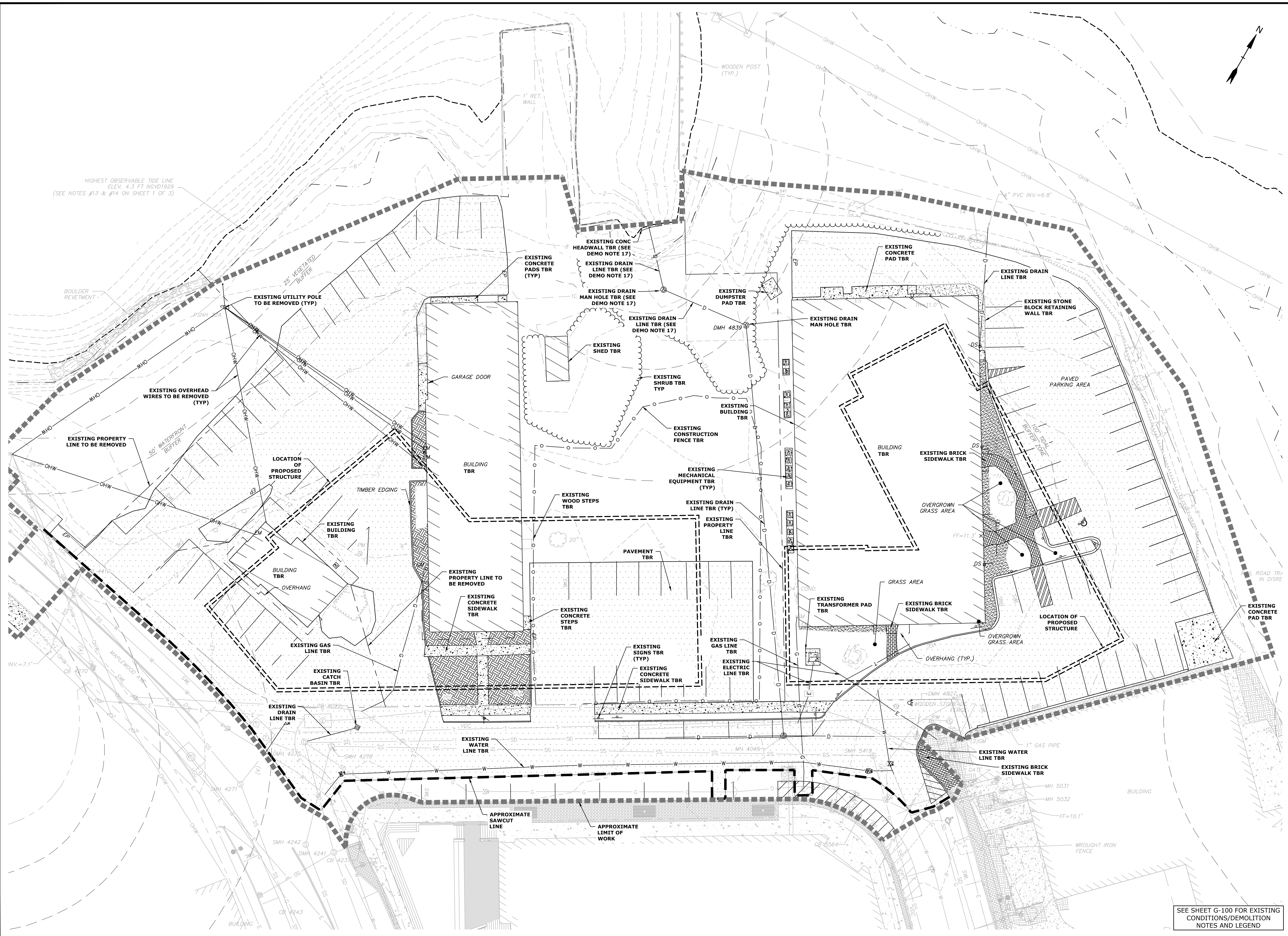
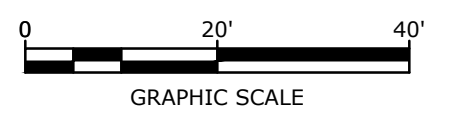
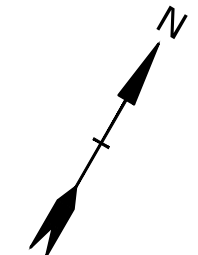


EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
LAND OF
31 RAYNES LLC
(TAX MAP 123, LOTS 10 & 13)
203 MAPLEWOOD AVENUE LLC
(TAX MAP 123, LOT 12)
&
ONE RAYNES AVENUE LLC
(TAX MAP 123, LOT 14)
MAPLEWOOD AVENUE & RAYNES AVENUE
PORTSMOUTH, NEW HAMPSHIRE

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| | | | |
| | | | |
| | | | |
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| | | | |
|-------------|--------|--------------|---------------|
| DRAWN BY: | E.D.P. | DATE: | JUNE 17, 2020 |
| CHECKED BY: | M.W.F. | DRAWING NO.: | 6082B |
| JOB NO.: | 6082 | SHEET: | 3 OF 3 |

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Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| | | |
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| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
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| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |
| MARK | DATE | DESCRIPTION |

| | |
|--------------|-----------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-C-DSGN.DWG |
| DRAWN BY: | CIK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

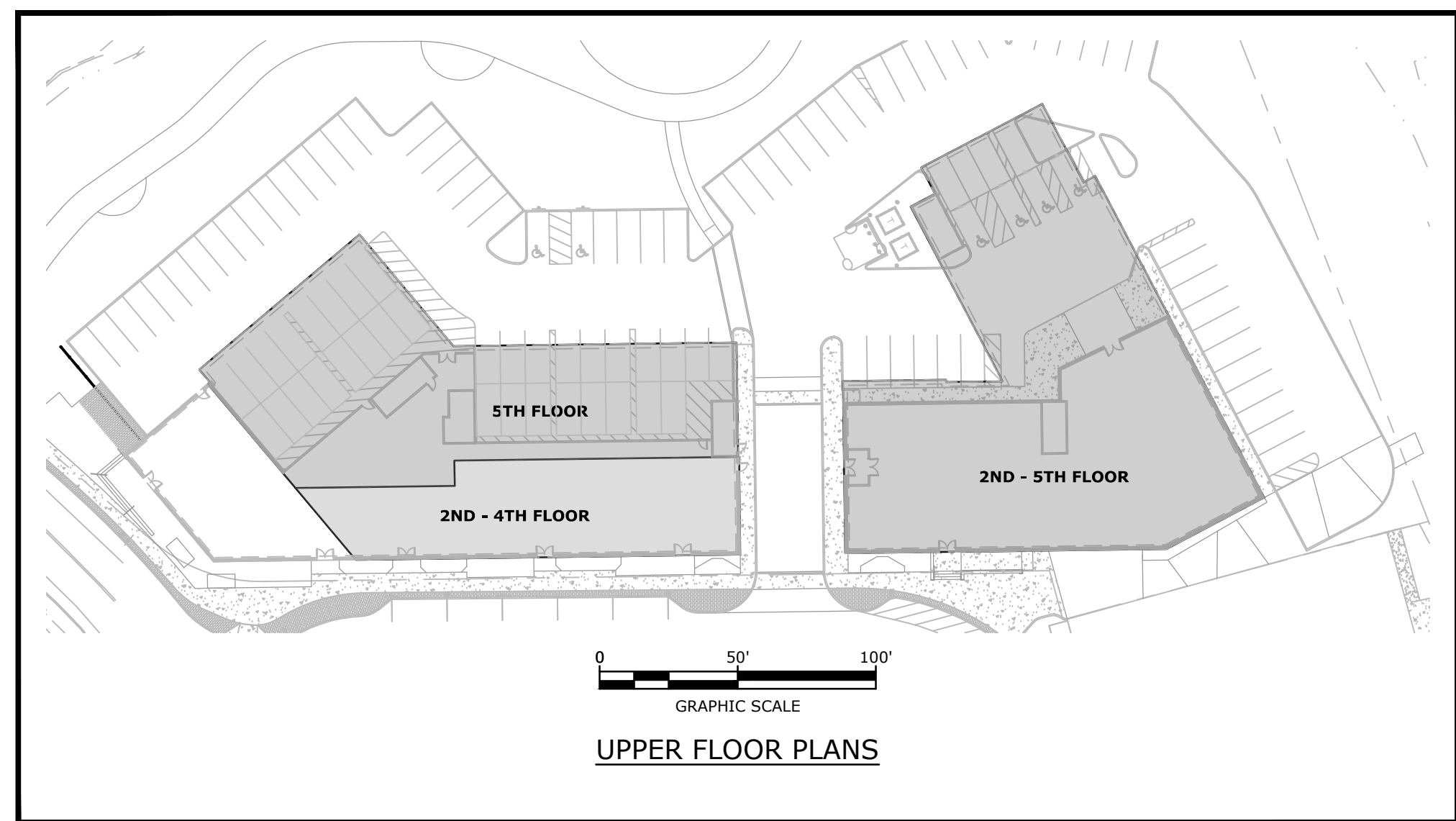
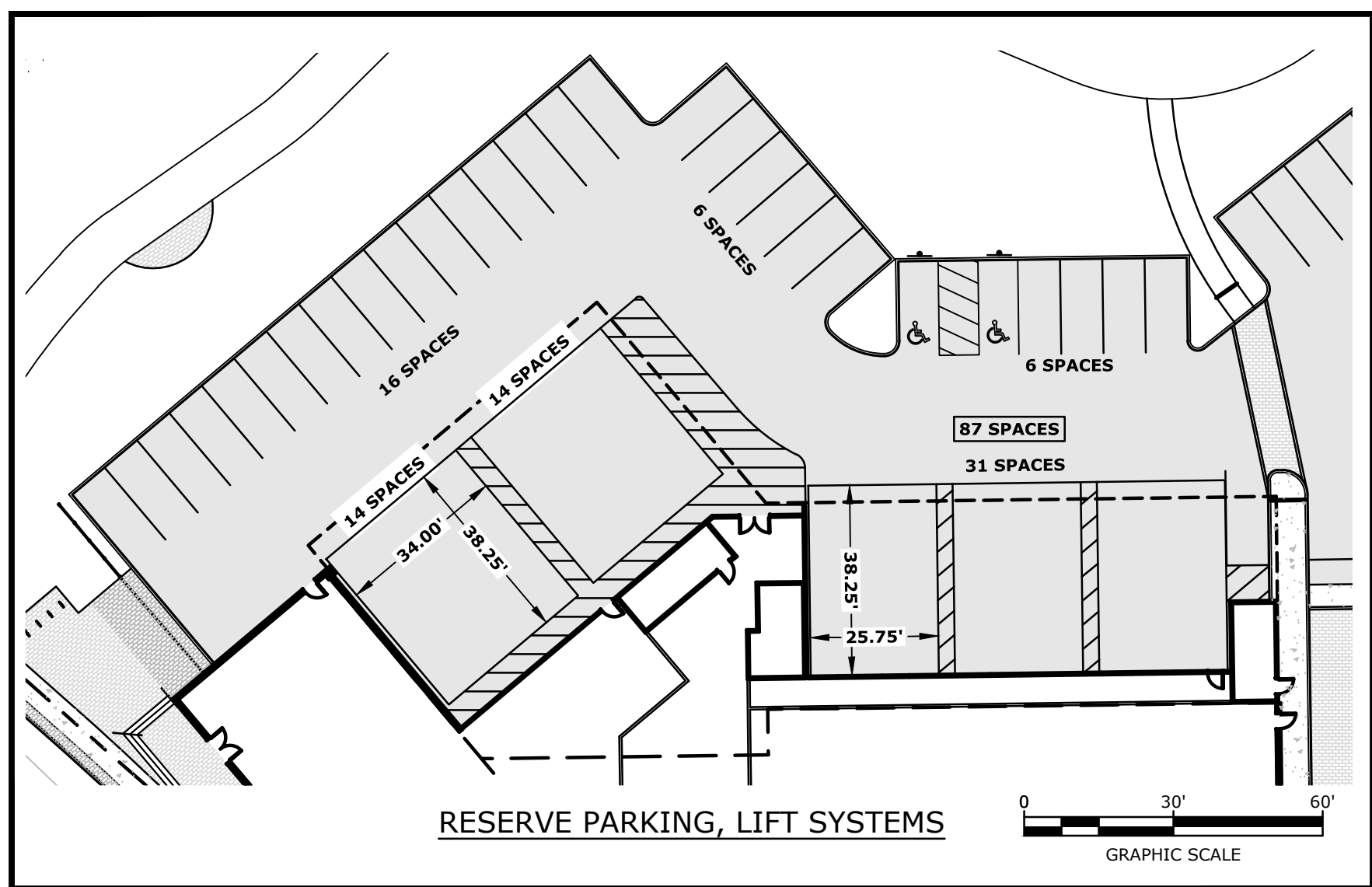
DEMOLITION PLAN

SCALE: AS SHOWN

C-101

Last Saved: 7/20/2021 1:46pm By: NAHansen
 Project: 0311.01.0002020595 - Pro. Con. General. Proposals P0595-007
 Figure & Detail: 210 P0595 - Pro. Con. General. Proposals P0595-007
 Figures/AuxCAD/Drawings: Figures/AuxCAD/Sheet/P-0595-007-C-DSGN.dwg

SEE SHEET G-100 FOR EXISTING CONDITIONS/DEMOLITION NOTES AND LEGEND



SITE DATA:

LOCATION: TAX MAP 123, LOT 10
 TAX MAP 123, LOT 12
 TAX MAP 123, LOT 13
 TAX MAP 123, LOT 14
 TAX MAP 123, LOT 12
 RAYNES AVENUE

ZONING DISTRICT: CHARACTER DISTRICT 4 (CD4)
 DOWNTOWN OVERLAY DISTRICT
 NORTH END INCENTIVE OVERLAY DISTRICT
 HISTORIC DISTRICT

PROPOSED USE: MULTI FAMILY DWELLING
 HOTEL
 RETAIL/RESTAURANT

PROPOSED LOT SIZE: ±2.53 ACRES (±110,415 SF)

DEVELOPMENT STANDARDS

| BUILDING PLACEMENT (PRINCIPAL BUILDING): | REQUIRED | PROPOSED BUILDING A | PROPOSED BUILDING B |
|--|----------|---------------------|---------------------|
| MAXIMUM PRINCIPAL FRONT YARD: | 15 FT | ±16 FT (1) | 7.4 FT |
| MAXIMUM SECONDARY FRONT YARD: | 12 FT | N/A | N/A |
| SIDE YARD: | NR | NR | NR |
| MINIMUM REAR YARD: | 5 FT | N/A | N/A |
| MINIMUM FRONT LOT LINE BUILDOUT: | 50% | 78.4% | 78.4% |

(1) - INCREASE ABOVE THE MAXIMUM ALLOWED PER 10.5A42.12

| BUILDING AND LOT OCCUPATION: | REQUIRED | PROPOSED BUILDING A | PROPOSED BUILDING B |
|-------------------------------------|---------------|---------------------|---------------------|
| MAXIMUM BUILDING BLOCK LENGTH: | 200 FT | 191 FT | 116 FT |
| MAXIMUM FACADE MODULATION LENGTH: | 80 FT | <80 FT | <80 FT |
| MAXIMUM ENTRANCE SPACING: | 50 FT | <50 FT | <50 FT |
| MAXIMUM BUILDING COVERAGE: | 90% | ±47.0% | ±47.0% |
| MAXIMUM BUILDING FOOTPRINT: | 30,000 SF (2) | 17,383 SF | 14,628 SF |
| MINIMUM LOT AREA: | NR | NR | NR |
| MINIMUM LOT AREA PER DWELLING UNIT: | NR | 35.4% | 9,000 SF |
| MINIMUM OPEN SPACE: | 10% | 10% | 10% |
| MAXIMUM GROUND FLOOR GFA PER USE: | 15,000 SF | 8,100 SF | 9,000 SF |

(2) - INCREASE ABOVE 15,000 SF ALLOWED PER 10.5A46.10

| BUILDING FORM (PRINCIPAL BUILDING): | REQUIRED | PROPOSED BUILDING A | PROPOSED BUILDING B |
|--|------------------------------------|---------------------|---------------------|
| BUILDING HEIGHT: | 200 FT (3) | 59.77 FT | 57.90 FT |
| MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE: | 36 IN | <36" | <36" |
| MINIMUM GROUND STORY HEIGHT: | 12 FT | 15 FT | 15 FT |
| MINIMUM SECOND STORY HEIGHT: | 10 FT | 10.5 FT | 10.5 FT |
| FACADE GLAZING: | 70% | 70% | 70% |
| ALLOWED ROOF TYPES: | FLAT, GABLE, HIP, GAMBREL, MANSARD | FLAT | FLAT |

(3) - ADDITIONAL 1 STORY UP TO 10FT ALLOWED FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE AS ALLOWED PER 10.5A46.10.

| COMMUNITY SPACE: | REQUIRED | PROPOSED |
|------------------|------------------|--------------------|
| | 21,274 SF 20% | 27,352 SF 24.8% |

OFF-STREET PARKING REQUIREMENTS

| PARKING SPACES REQUIRED: | REQUIRED | PROPOSED |
|---|----------|------------|
| DWELLING UNITS: | 17 UNITS | 8.5 SPACES |
| 0 SF TO 500 SF, 0.5 SPACES PER UNIT | 33 UNITS | 33 SPACES |
| 500 SF TO 750 SF, 1.0 SPACES PER UNIT | 10 UNITS | 13 SPACES |
| OVER 750 SF, 1.3 SPACES PER UNIT | | |
| TOTAL MINIMUM RESIDENTIAL SPACES REQUIRED = | | 55 SPACES |

VISITORS:
 1 SPACES PER 5 DWELLING UNITS = 60 UNITS = 12 SPACES

HOTEL:
 0.75 SPACES PER GUEST ROOM = 128 ROOMS = 96 SPACES

DOWNTOWN OVERLAY DISTRICT = - 4 SPACES

TOTAL MINIMUM PARKING SPACES REQUIRED = 159 SPACES

TOTAL PARKING SPACES PROVIDED:
 RESERVE SPACES, LIFT SYSTEM = 25 SPACES
 SHARED PARKING ON SEPARATE LOT (4) = 25 SPACES
 SURFACE PARKING SPACES = 93 SPACES
 TOTAL PARKING SPACES PROVIDED = 143 SPACES (5)

VALET SPACES = 16 SPACES
 TOTAL PARKING SPACES PROVIDED, INCLUDING VALET = 159 SPACES

SIX (6) ADA ACCESSIBLE SPACES REQUIRED

(4) - CONDITIONAL USE PERMIT REQUIRED FOR SHARED PARKING ON SEPARATE LOT.
 (5) - CONDITIONAL USE PERMIT REQUIRED FOR REDUCTION IN SPACES.

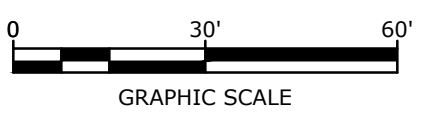
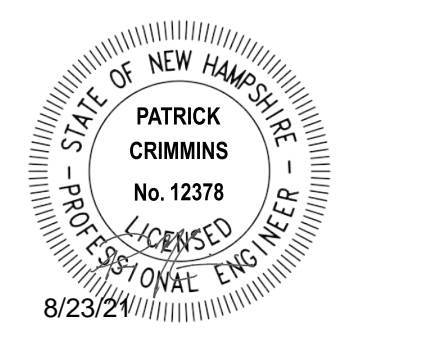
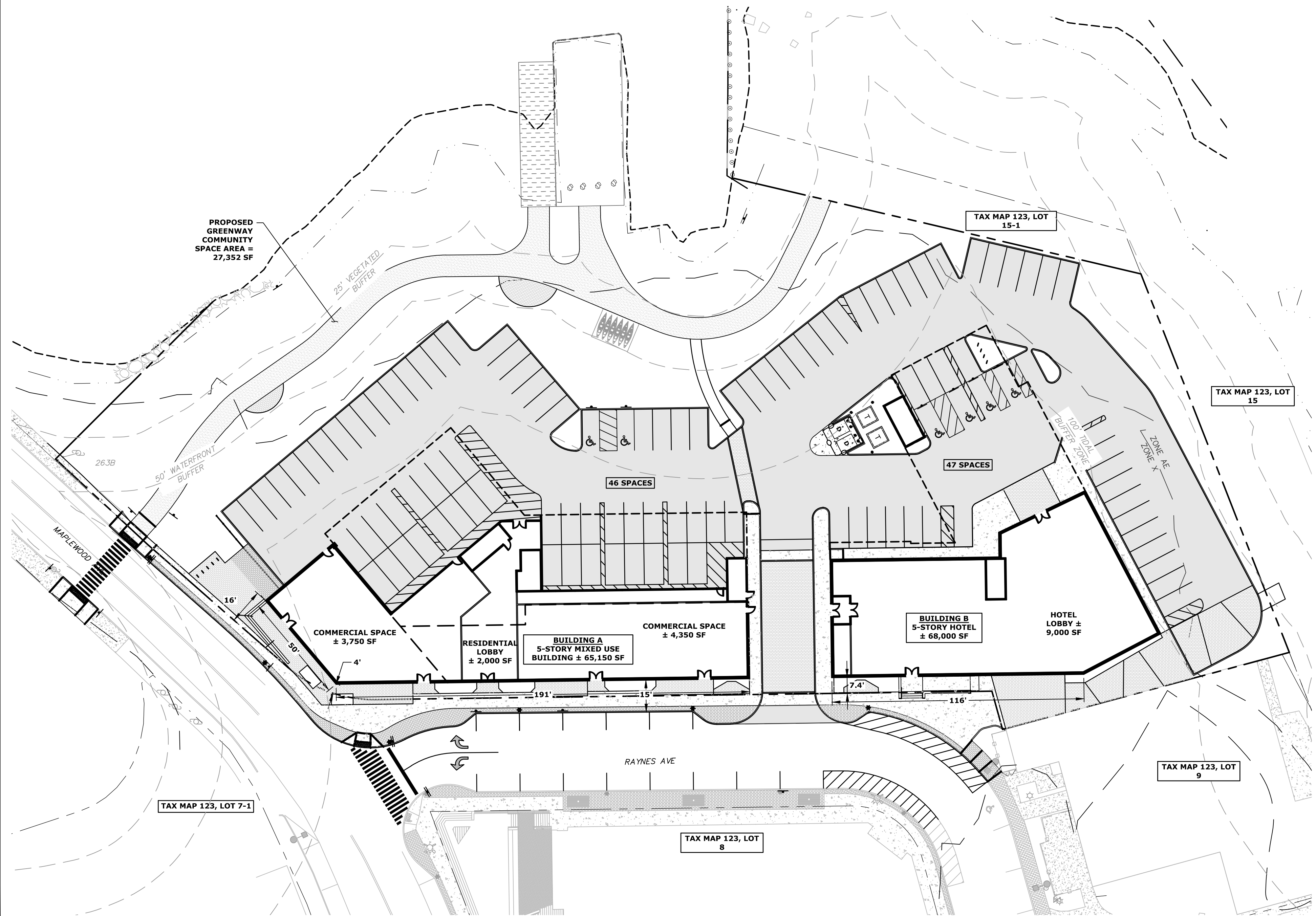
| PARKING STALL SIZE: | REQUIRED | PROVIDED |
|----------------------------|------------|------------|
| TANDEN PARKING STALL SIZE: | 8.5' X 19' | 8.5' X 19' |
| DRIVE AISLE: | 9' X 38' | 9' X 38' |
| | 24' | 24' |

BIKE SPACES REQUIRED:
 1 BIKE SPACE / 10 PARKING SPACES = 16 SPACES = 16 SPACES

| PROPOSED MIXED USE GROSS FLOOR AREA | | | | PROPOSED HOTEL GROSS FLOOR AREA | | | |
|-------------------------------------|-----------------|------------|-----------------------|---------------------------------|------------|-------|-----------------------|
| FLOOR | COMMERCIAL (SF) | LOBBY (SF) | TOTAL FLOOR AREA (SF) | FLOOR | LOBBY (SF) | UNITS | TOTAL FLOOR AREA (SF) |
| FIRST | 8,100 | 2,000 | 10,100 | FIRST | 9,000 | 0 | 9,000 |
| SECOND | 0 | 0 | 14,800 | SECOND | 0 | 32 | 14,750 |
| THIRD | 0 | 0 | 14,800 | THIRD | 0 | 32 | 14,750 |
| FOURTH | 0 | 0 | 14,800 | FOURTH | 0 | 32 | 14,750 |
| FIFTH | 0 | 0 | 10,000 | FIFTH | 0 | 32 | 14,750 |
| TOTAL | 8,100 | 2,000 | 65,150 | TOTAL | 9,000 | 128 | 68,000 |

SITE RECORDING NOTES:

- THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
- ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
- THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

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| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-C-DSGN.DWG |
| DRAWN BY: | CLK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

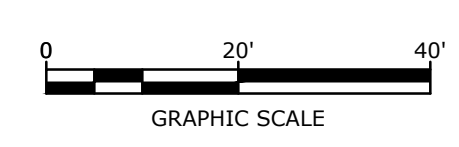
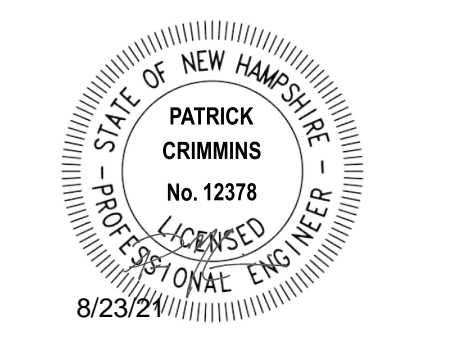
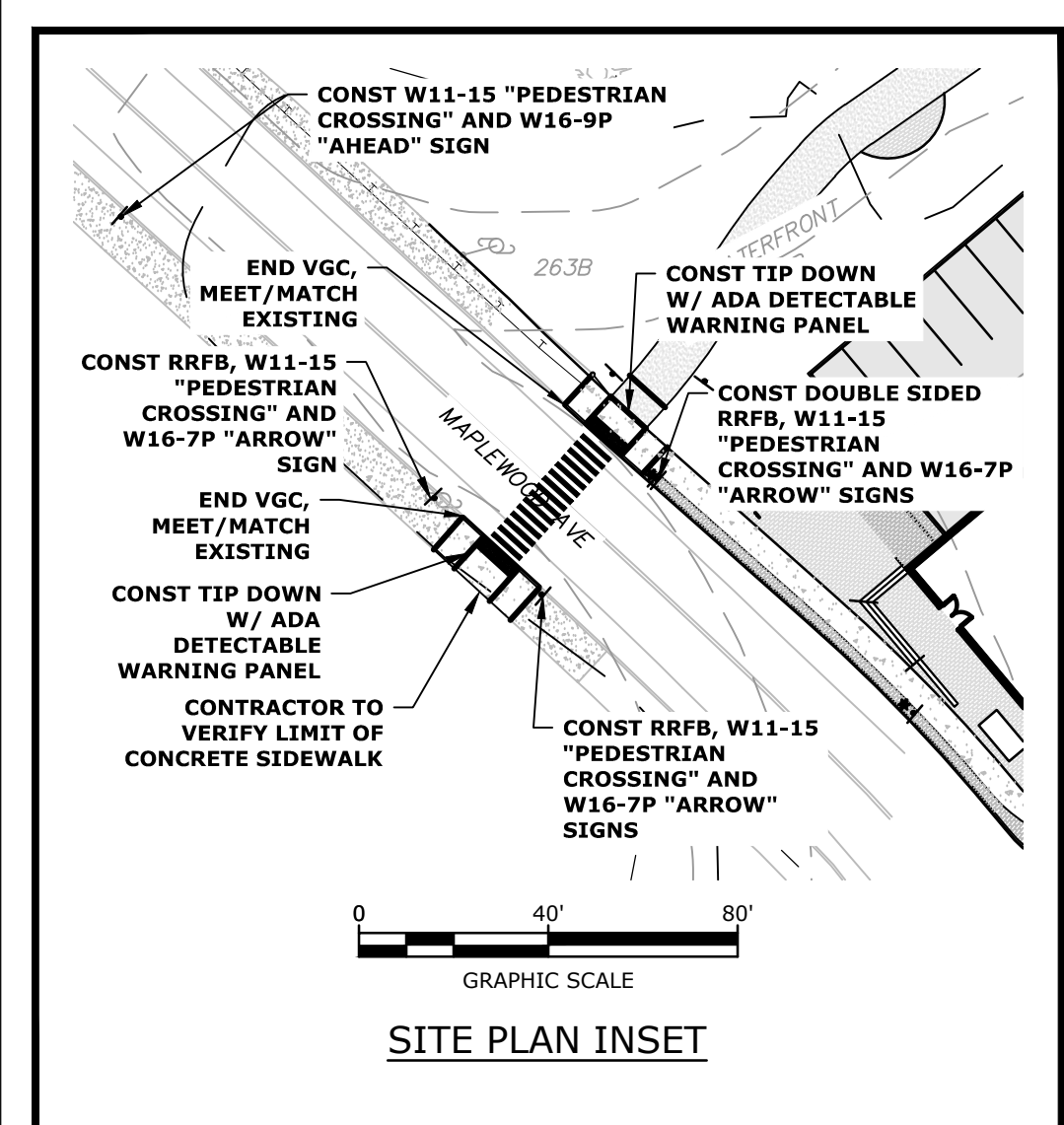
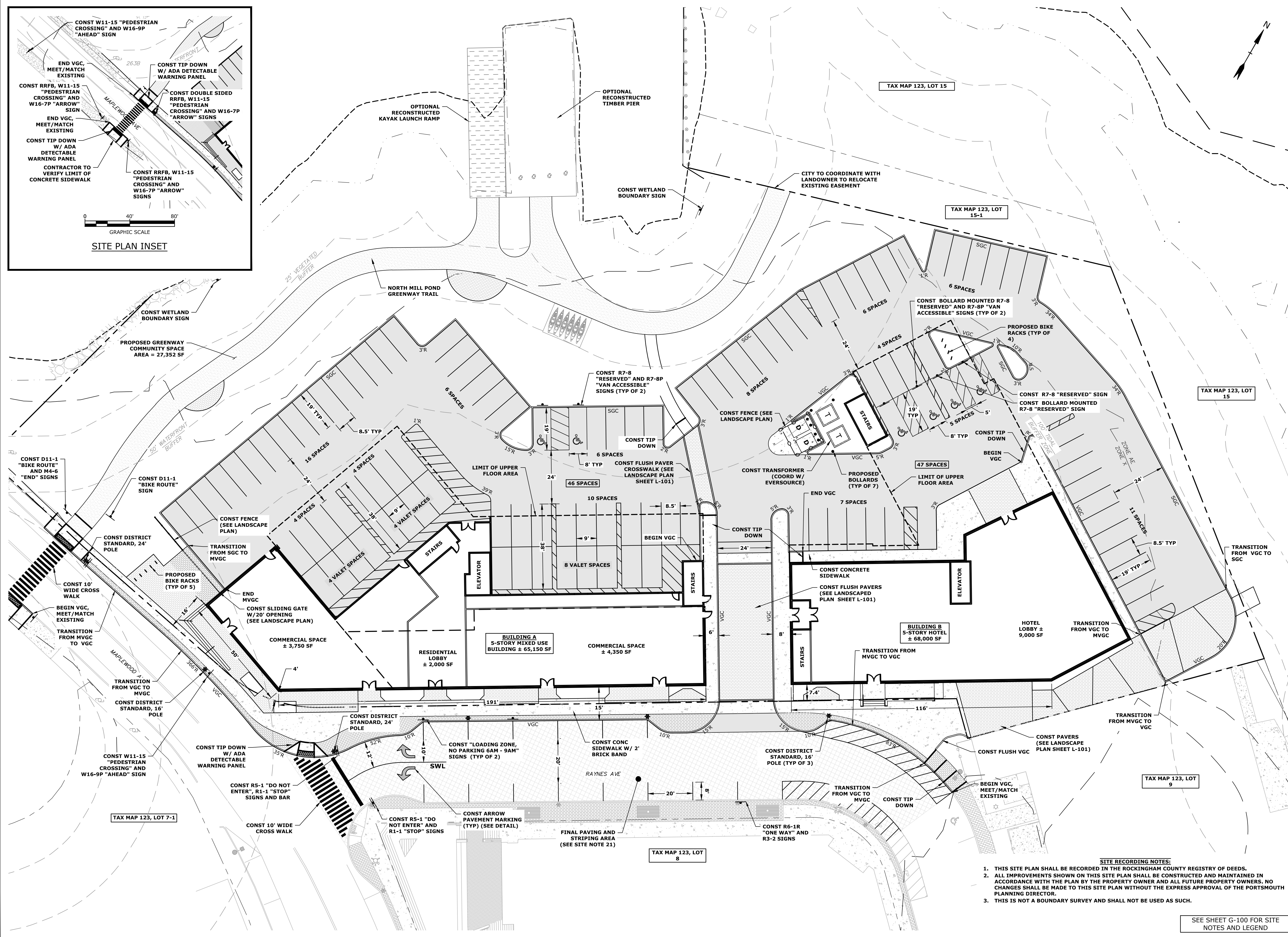
SITE PLAN

SCALE: AS SHOWN

C-102

SEE SHEET G-100 FOR SITE NOTES AND LEGEND

Last Saved: 8/23/2021 11:53am By: M.Hansen
 Plotted On: Aug 23, 2021 11:53am
 Tighe & Bond 21 W P0595 Pro Con General Proposals P0595-007 Raynes Ave Hotel Drawings - Figures\AutoCAD\Sheet\P-0595-007_C-DSGN.dwg



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

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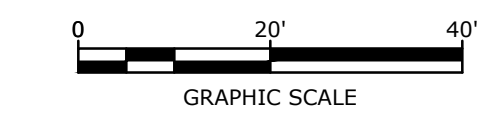
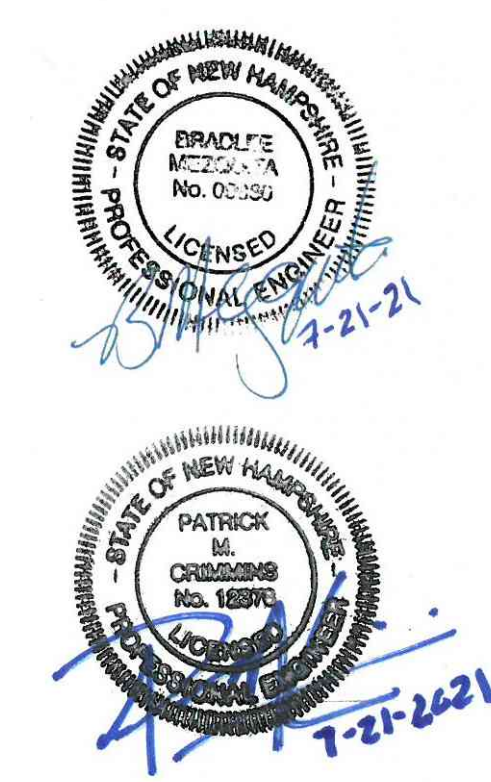
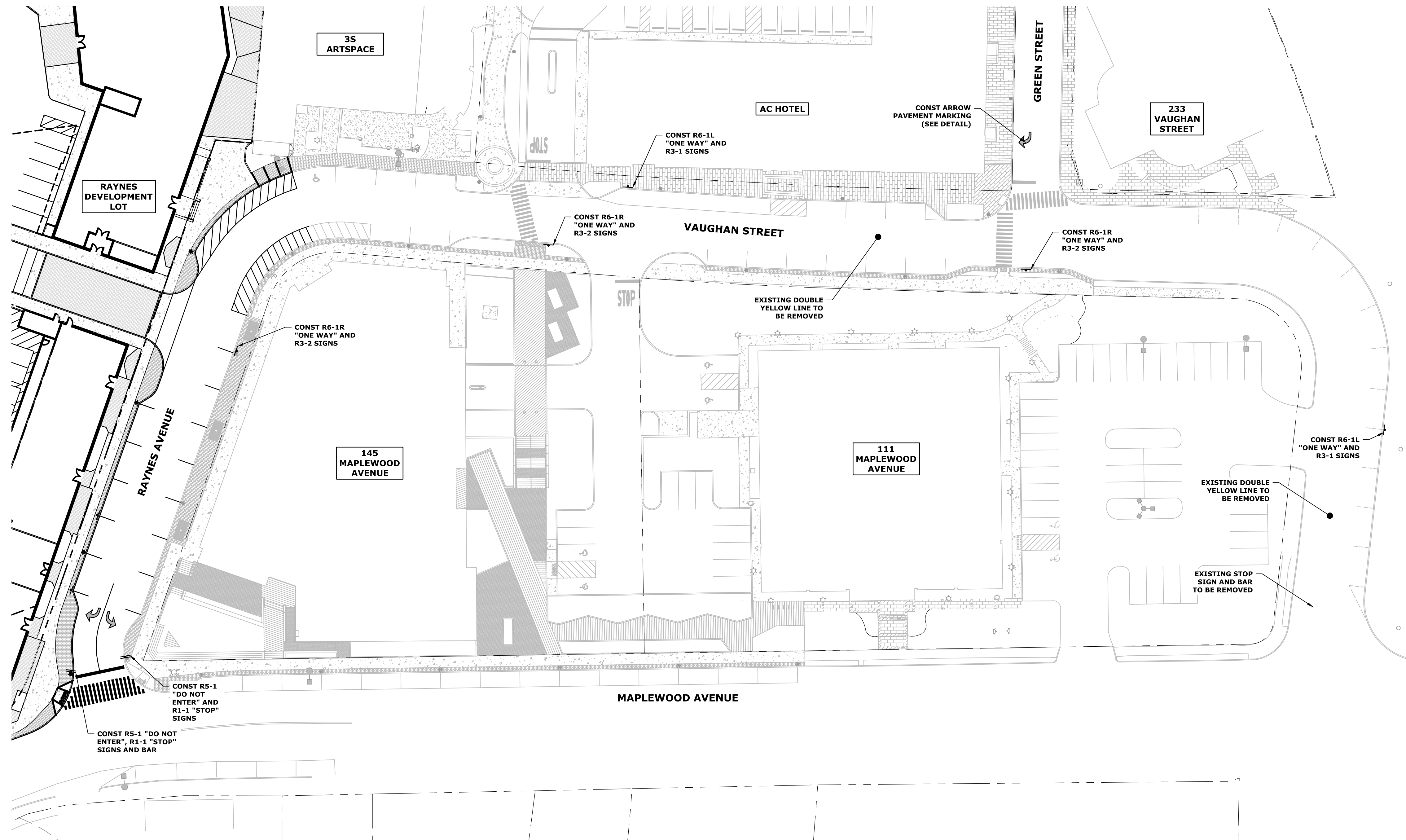
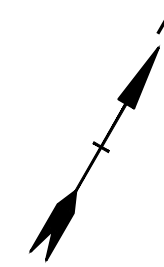
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| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-C-DSGN.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

SITE PLAN
SCALE: AS SHOWN
C-102.1

- SITE RECORDING NOTES:**
1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
 2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
 3. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.

SEE SHEET G-100 FOR SITE NOTES AND LEGEND

Last Saved: 8/23/2021 10:49:30am By: M.Hansen
 Plotted On: Aug 23, 2021 10:49:30am
 Title & Content: P-0595-007 Pro. Con. General Proposals P0595-007
 Figures: A:\ucd\Drawings - Figures\Aucd\Sheet\P-0595-007_C-DSGN.dwg



Proposed Mixed Use Development

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Portsmouth, New Hampshire

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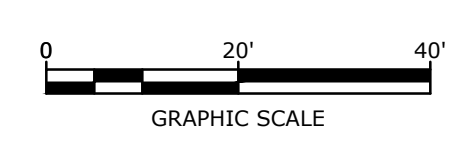
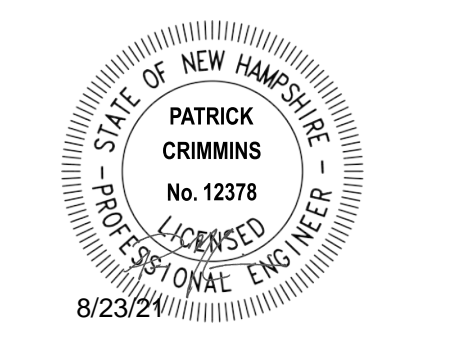
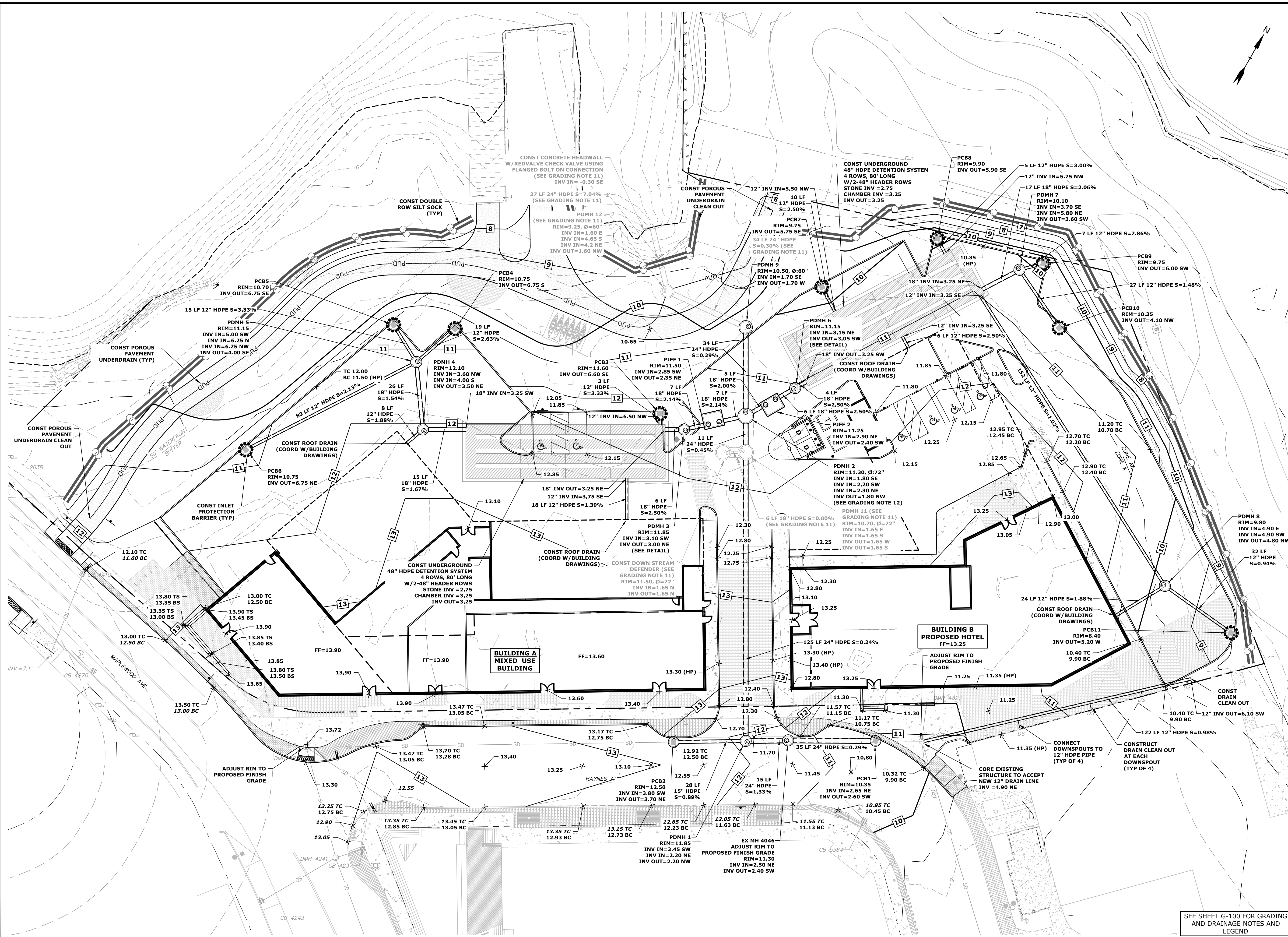
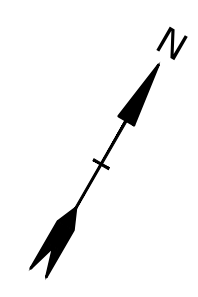
NEIGHBORHOOD SIGNAGE PLAN

SCALE: AS SHOWN

SEE SHEET G-100 FOR SITE NOTES AND LEGEND

C-102.2

Last Saved: 7/20/2021 1:46pm By: M.Hansen
 Plotted On: Jul 20 2021 10:52 AM
 Title & Content: 210 P0595 Proj Con General Proposals P0595-007 Raynes Ave Hotel Drawings Figures/AutoCAD/Sheet/P-0595-007-C-DSGN.dwg



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| APPROVED BY: | BLM |

GRADING, DRAINAGE AND EROSION CONTROL PLAN

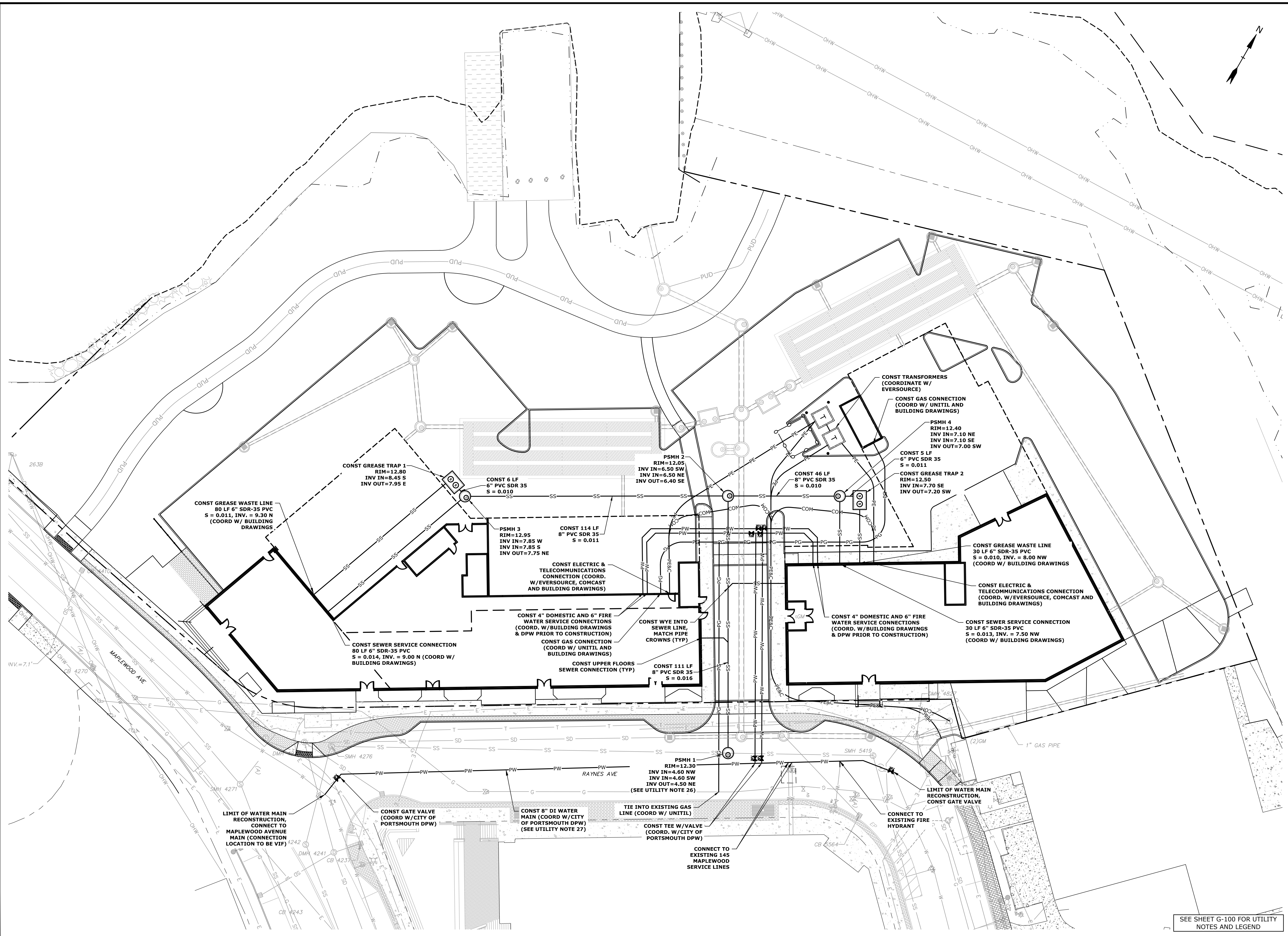
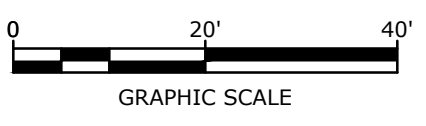
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 Plotted On: Aug 23, 2021 10:48am
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SEE SHEET G-100 FOR GRADING AND DRAINAGE NOTES AND LEGEND

STATE OF NEW HAMPSHIRE
BRADLEE MEZQUITA
No. 08830
PROFESSIONAL ENGINEER
10/3/2021

STATE OF NEW HAMPSHIRE
PATRICK CRIMMINS
No. 12378
PROFESSIONAL ENGINEER
8/23/24



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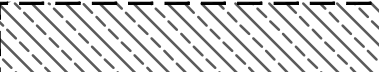


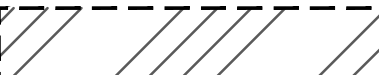

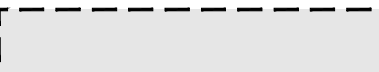
UTILITIES PLAN

SCALE: AS SHOWN

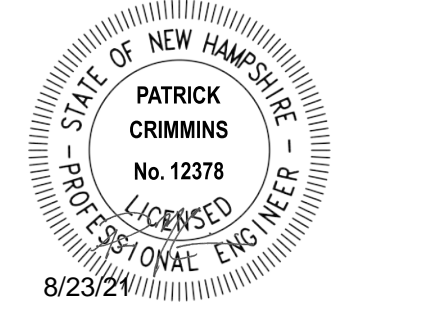
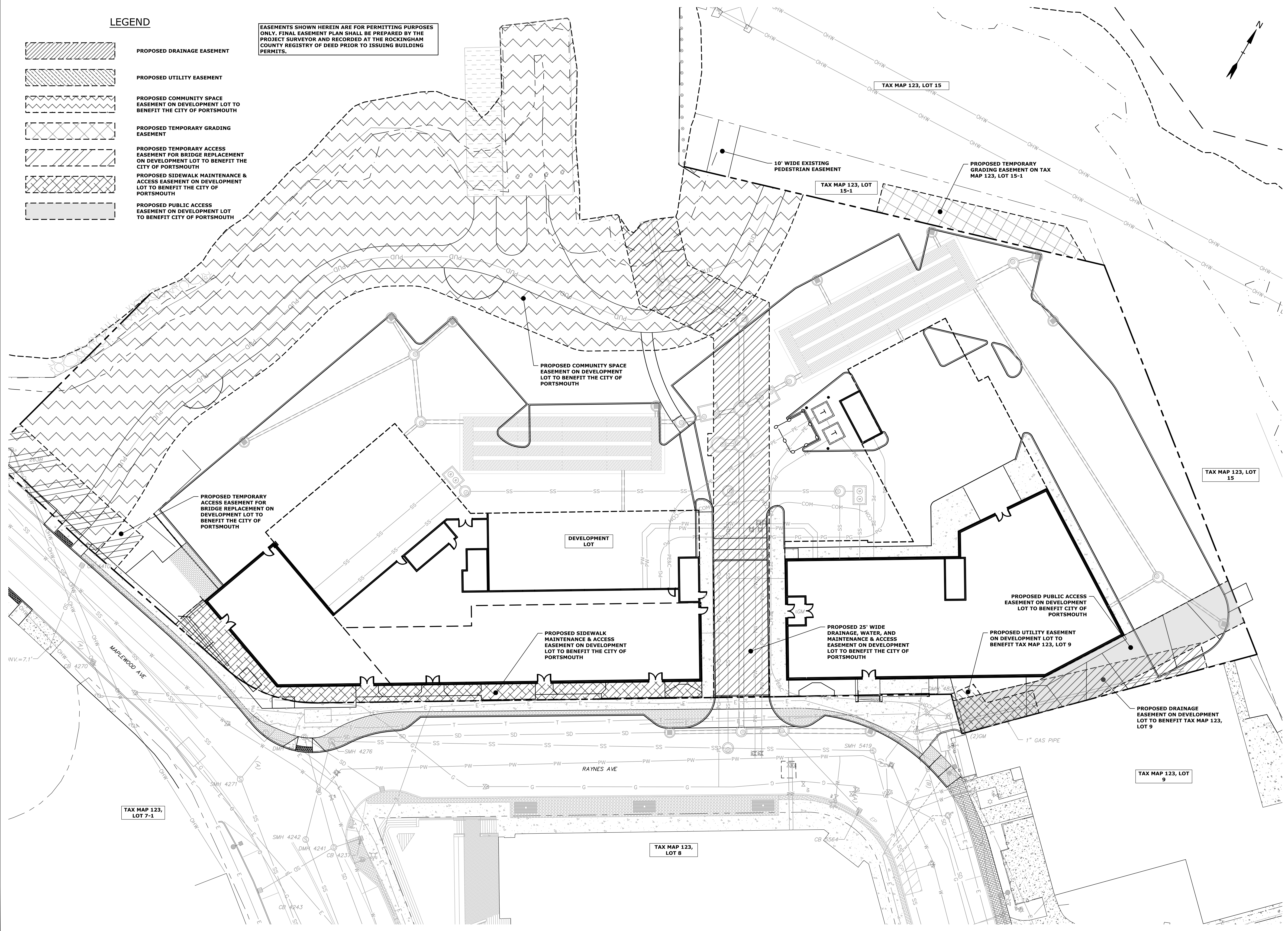
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Plotted On: Aug 23, 2021 10:51 AM
Title & Scale: P-0595 Pro Con General Proposals P0595-007 Baynes Ave Hotel Drawings Figures/AutoCAD/Sheet/P-0595-007-C-DSGN.dwg

SEE SHEET G-100 FOR UTILITY NOTES AND LEGEND

LEGEND

-  PROPOSED DRAINAGE EASEMENT
-  PROPOSED UTILITY EASEMENT
-  PROPOSED COMMUNITY SPACE EASEMENT ON DEVELOPMENT LOT TO BENEFIT THE CITY OF PORTSMOUTH
-  PROPOSED TEMPORARY GRADING EASEMENT
-  PROPOSED TEMPORARY ACCESS EASEMENT FOR BRIDGE REPLACEMENT ON DEVELOPMENT LOT TO BENEFIT THE CITY OF PORTSMOUTH
-  PROPOSED SIDEWALK MAINTENANCE & ACCESS EASEMENT ON DEVELOPMENT LOT TO BENEFIT THE CITY OF PORTSMOUTH
-  PROPOSED PUBLIC ACCESS EASEMENT ON DEVELOPMENT LOT TO BENEFIT CITY OF PORTSMOUTH

EASEMENTS SHOWN HEREIN ARE FOR PERMITTING PURPOSES ONLY. FINAL EASEMENT PLAN SHALL BE PREPARED BY THE PROJECT SURVEYOR AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEED PRIOR TO ISSUING BUILDING PERMITS.



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| I | 8/23/2021 | TAC Resubmission |
| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

PROJECT NO: P-0595-007
 DATE: December 22, 2020
 FILE: P-0595-007-C-DSGN.DWG
 DRAWN BY: CJK
 CHECKED BY: NAH/PMC
 APPROVED BY: BLM

EASEMENT PLAN

SCALE: AS SHOWN

C-201

Last Saved: 8/23/2021 10:52am By: M.Hansen
 Plotted On: Aug 23, 2021 10:52am
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PLANT SCHEDULE

Table with 6 columns: Symbol, Quantity, Botanical Name, Common Name, Size, Spacing, Notes. Categories include TREES, SHRUBS, PERENNIALS, ORNAMENTAL GRASSES, and SEED MIXES.

PLANTING NOTES

- 1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL SHALL CONFORM TO "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. NO SUBSTITUTIONS OF PLANT SPECIES WITHOUT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT...
5. LOCATE AND VERIFY UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH...
7. NO PLANTING TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR...
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE.
10. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT...
11. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
12. REPAIR DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION
14. BUFFER SEED MIX AREA TO BE WATERED AND MONITORED DURING ESTABLISHMENT TO ENSURE SEED COVERAGE...
15. MOWING OF THE BUFFER SEED MIX AREA FOLLOWING ESTABLISHED AND ACCEPTANCE SHALL OCCUR TWICE A YEAR...
16. MOWING HEIGHT TO BE NOT LESS THAN 3".

ZONING NOTES

Tables for 10.5A44.40 PARKING LOT LANDSCAPE and 10.1130 LANDSCAPING AND SCREENING. Includes details on tree counts, screening requirements, and fence substitution.

RESTORATION PLANTING NOTES

- 1. INVASIVE PLANT MATERIAL WILL BE REMOVED USING MECHANICAL, WHOLE PLANT REMOVAL STRATEGIES AND CHIPPED AND COMPOSTED AT AN APPROPRIATE FACILITY OR BURNED ON SITE ACCORDING TO LOCAL FIRE DEPARTMENT RULES AND REGULATIONS.
2. DISTURBED SOILS WILL BE AUGMENTED AS NEED WITH A CUSTOM BLENDED SOIL OF ONE PART LOAM, ONE PART COMPOST AND ONE PART CLEAN SAND.
3. SEEDED AREAS ARE TO BE COVERED WITH SALT MARSH HAY TO RETAIN SOIL MOISTURE AND PROTECT AGAINST SEED PREDATION BY BIRDS AND SMALL MAMMALS.
4. NATIVE PLANT MATERIAL WILL BE LAID OUT AND INSTALLED BY AN ECOLOGICAL RESTORATION SPECIALIST OR PERSONS TRAINED IN HORTICULTURAL PRACTICES. EXACT PLANT LOCATIONS WILL BE DETERMINED IN THE FIELD BASED ON SITE-SPECIFIC PLANTING CONDITIONS AND MICRO-TOPOGRAPHY.
5. THE NEW PLANTINGS WILL BE IRRIGATED FOR ONE FULL GROWING SEASON OR UNTIL THE SEED AND PLANT MATERIAL IS ESTABLISHED.
6. MONTHLY INSPECTIONS WILL BE CONDUCTED FOR THE FIRST GROWING SEASON AND TREATMENT/REMOVAL OF INVASIVE SPECIES WILL BE IMPLEMENTED AS NEEDED DURING THE ESTABLISHED PERIOD.
7. CARE IS TO BE TAKEN IN REMOVING ANY NEW COLONIZING INVASIVE PLANT MATERIAL TO MINIMIZE DISTURBANCE TO ESTABLISHING NATIVE PLANT SPECIES.
8. PRACTICES IN ASSOCIATION WITH FERTILIZERS AND PESTICIDES WILL COMPLY WITH ORDINANCES 10.1018.24 AND 10.1018.25.

Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

File & Print Date: 5/25/2021 9:58am By: OS/asin

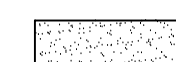

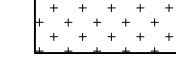
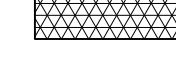


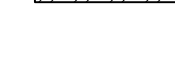


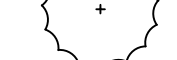

Revision log table with columns: MARK, DATE, DESCRIPTION. Shows various submission and design review dates.

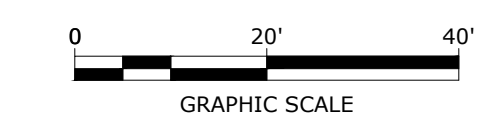
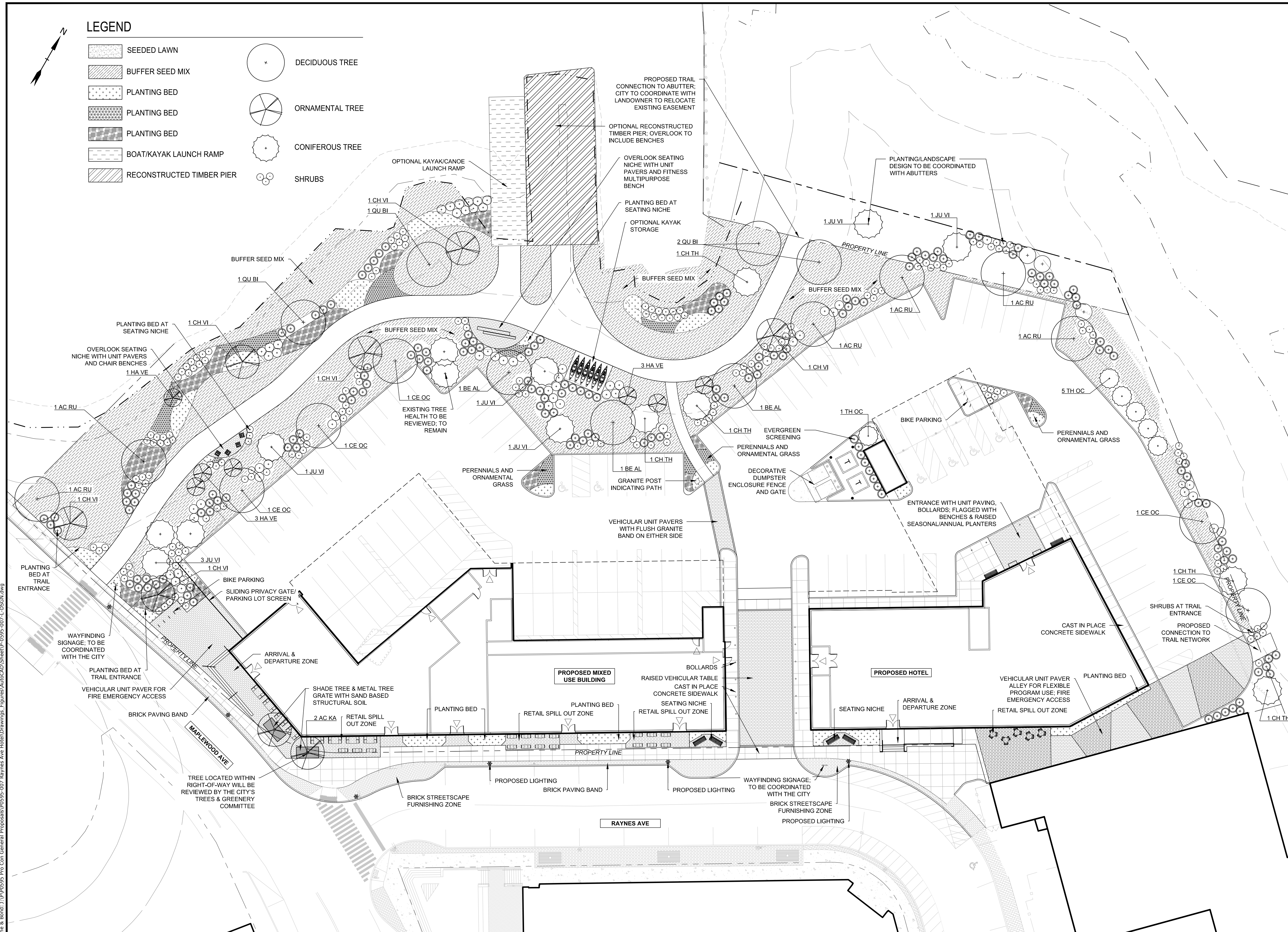
PROJECT NO: P-0595-007
DATE: December 22, 2020
FILE: P-0595-007-L-DSGN.DWG
DRAWN BY: OS
CHECKED BY: RU/PMC
APPROVED BY: BLM

LANDSCAPE MATERIAL PLAN, LEGEND AND NOTES

SCALE: AS SHOWN

LEGEND

-  SEEDED LAWN
-  BUFFER SEED MIX
-  PLANTING BED
-  PLANTING BED
-  PLANTING BED
-  BOAT/KAYAK LAUNCH RAMP
-  RECONSTRUCTED TIMBER PIER
-  DECIDUOUS TREE
-  ORNAMENTAL TREE
-  CONIFEROUS TREE
-  SHRUBS



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| APPROVED BY: | BLM |

LANDSCAPE PLANTING PLAN

SCALE: AS SHOWN

Last Saved: 7/20/2021 10:22am By: M.Hansen
 Plotted On: Aug 23, 2021 10:22am By: M.Hansen
 Title & Number: P-0595-007 Landscaping - Figures/AcCAD/Sheet/P-0595-007-L-DSGN.dwg

CITY OF PORTSMOUTH TREE PLANTING REQUIREMENTS

THE BASE OF THE CITY OF PORTSMOUTH TREE PLANTING REQUIREMENTS IS THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPLANTING. ANSI A300 PART 6 LAYS OUT TERMS AND BASIC STANDARDS AS SET FORTH BY INDUSTRY BUT IT IS NOT THE 'END ALL' FOR THE CITY OF PORTSMOUTH. THE FOLLOWING ARE THE CITY OF PORTSMOUTH, NH TREE PLANTING REQUIREMENTS THAT IN ADDITION TO OR THAT GO BEYOND THE ANSI A300 PART 6.

- ALL PLANTING HOLES SHALL BE DUG BY HAND- NO MACHINES. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE NEW PLANTING PITS, PLANTING BEDS WITH GRANITE CURBING, AND PLANTING SITES WITH SILVA CELLS ARE BEING CREATED. IF A MACHINES USED TO DIG ANY OF THESE SITUATIONS AND PLANTING DEPTH NEEDS TO BE RAISED THE MATERIAL IN THE BOTTOM OF THE PLANTING HOLE MUST BE FIRMED WITH MACHINE TO PREVENT SINKING OF THE ROOT BALL.
- ALL WIRE AND BURLAP SHALL BE REMOVED FROM THE ROOT BALL AND PLANTING HOLE.
- THE ROOT BALL OF THE TREE SHALL BE WORKED SO THAT THE ROOT COLLAR OF THE TREE IS VISIBLE AND NO GIRDLING ROOTS ARE PRESENT.

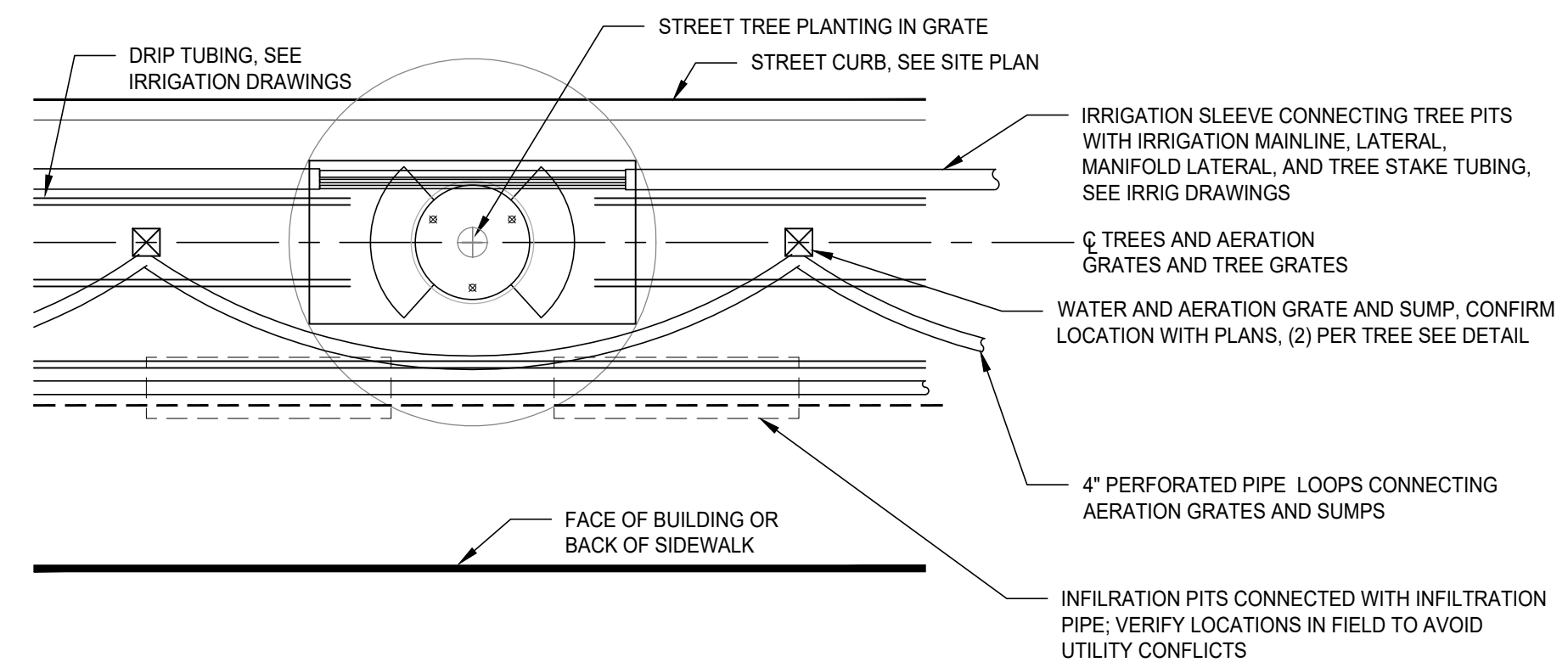
- THE ROOT COLLAR OF THE TREE SHALL BE 2"-3" ABOVE GRADE OF PLANTING HOLE FOR FINISHED DEPTH.
- ALL PLANTINGS SHALL BE BACKFILLED WITH SOIL FROM THE SITE AND AMENDED NO MORE THAN 20% WITH ORGANIC COMPOST. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE ENGINEERED SOIL IS BEING USED IN CONJUNCTION WITH SILVA CELLS AND WHERE NEW PLANTING BEDS ARE BEING CREATED.
- ALL PLANTINGS SHALL BE BACKFILLED IN THREE LIFTS AND ALL LIFTS SHALL BE WATERED SO THE PLANTING WILL BE SET AND FREE OF AIR POCKETS- NO EXCEPTIONS.
- AN EARTH BERM SHALL BE PLACED AROUND THE PERIMETER OF THE PLANTING HOLE EXCEPT WHERE CURBED PLANTING BEDS OR PITS ARE BEING USED.
- 2"-3" OF MULCH SHALL BE PLACED OVER THE PLANTING AREA.
- AT THE TIME THE PLANTING IS COMPLETE THE PLANTING SHALL RECEIVE ADDITIONAL WATER TO ENSURE COMPLETE HYDRATION OF THE ROOTS, BACKFILL MATERIAL AND MULCH LAYER.

SAND BASED STRUCTURAL SOIL PLANTING MEDIUM NOTES

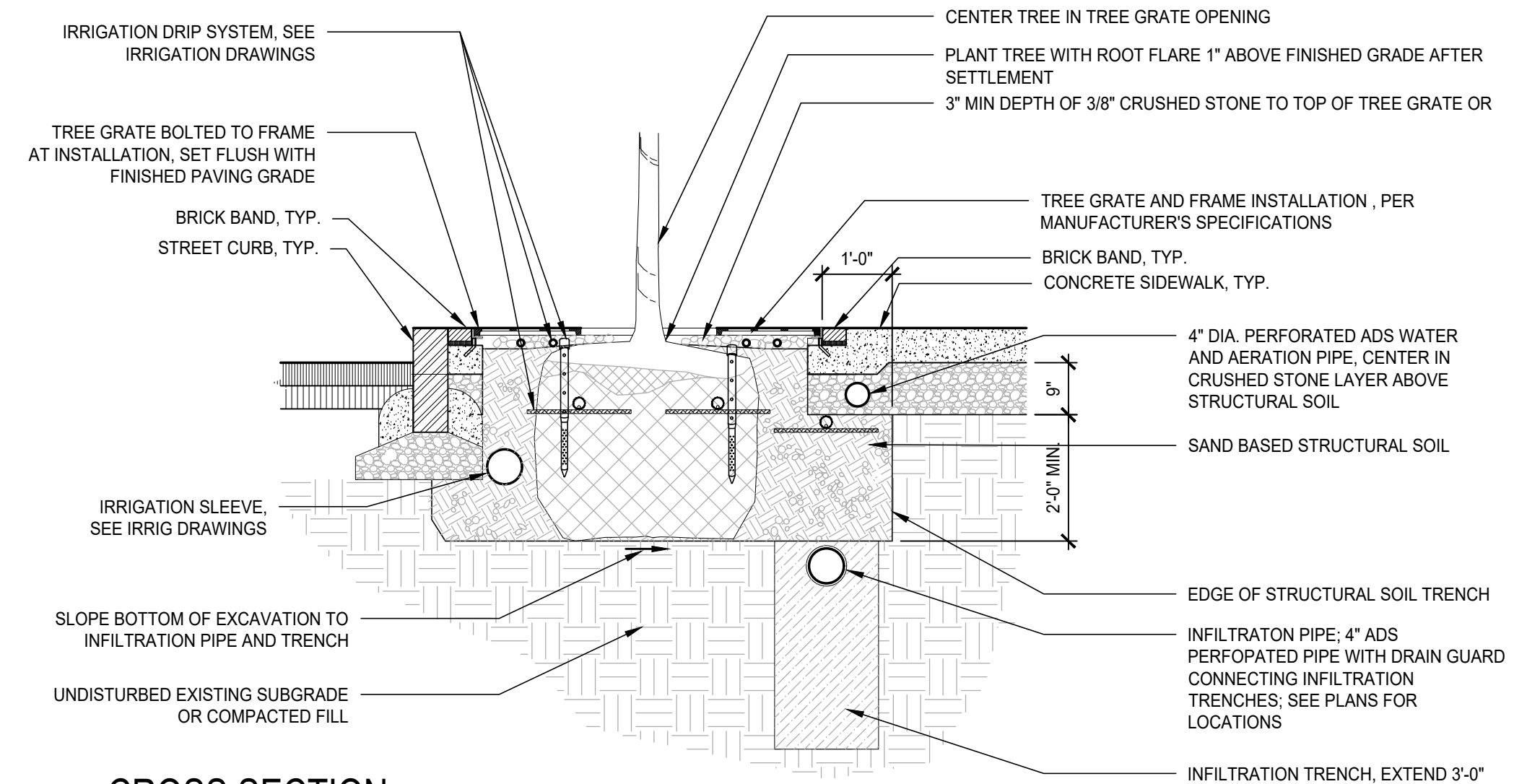
- THE SAND-BASED STRUCTURAL SOIL PLANTING MEDIUM SHALL CONSIST OF A BLEND OF ONE PART COARSE SAND, ONE PART LOAM AND ONE PART ORGANIC AMENDMENT. BLENDING OF THE COMPONENTS SHALL BE CARRIED OUT WITH EARTH MOVING EQUIPMENT PRIOR TO PLACEMENT. THE COMPONENTS SHALL BE BLENDED TO CREATE A UNIFORM MIXTURE.
- PROVIDE A SHOP DRAWING OF SAND BASED STRUCTURAL SOIL PLANTING MEDIUM (SIEVE, PH, ORGANIC CONTENT, SAND/LOAM/ORGANIC AMENDMENT PERCENTAGES) TO A&M FOR APPROVAL PRIOR TO PURCHASE & INSTALLATION.
- THE FINAL BLENDED SAND-BASED STRUCTURAL SOIL PLANTING MEDIUM SHALL CONFORM TO THE FOLLOWING GRAIN SIZE DISTRIBUTION FOR MATERIAL PASSING THE #10 SIEVE:

| SIEVE NO. U.S. | %PASSING BY WEIGHT | |
|----------------|--------------------|------|
| | MIN. | MAX. |
| 10 | 100 | ---- |
| 18 | 68 | 90 |
| 35 | 38 | 63 |
| 60 | 18 | 39 |
| 140 | 10 | 18 |
| 270 | 6 | 9 |
| 0.002MM | 1 | 2 |

- MAXIMUM SIZE SHALL BE ONE INCH LARGEST DIMENSION. THE MAXIMUM RETAINED ON THE #10 SIEVE SHALL BE 15% BY WEIGHT OF THE TOTAL SAMPLE.
- THE RATIO OF THE PARTICLE SIZE FOR 70% PASSING (D70) TO THE PARTICLE SIZE FOR 20% PASSING (D20) SHALL BE 3.5 OR LESS (D70/D20 < 3.5). TESTS SHALL BE BY COMBINED HYDROMETER AND WET SIEVING IN COMPLIANCE WITH ASTM D422 AFTER DESTRUCTION OF ORGANIC MATTER BY IRRIGATION.
- ORGANIC CONTENT SHALL BE BETWEEN 2.0 AND 3.0 PERCENT. PH SHALL BE 6.0 TO 7.0.



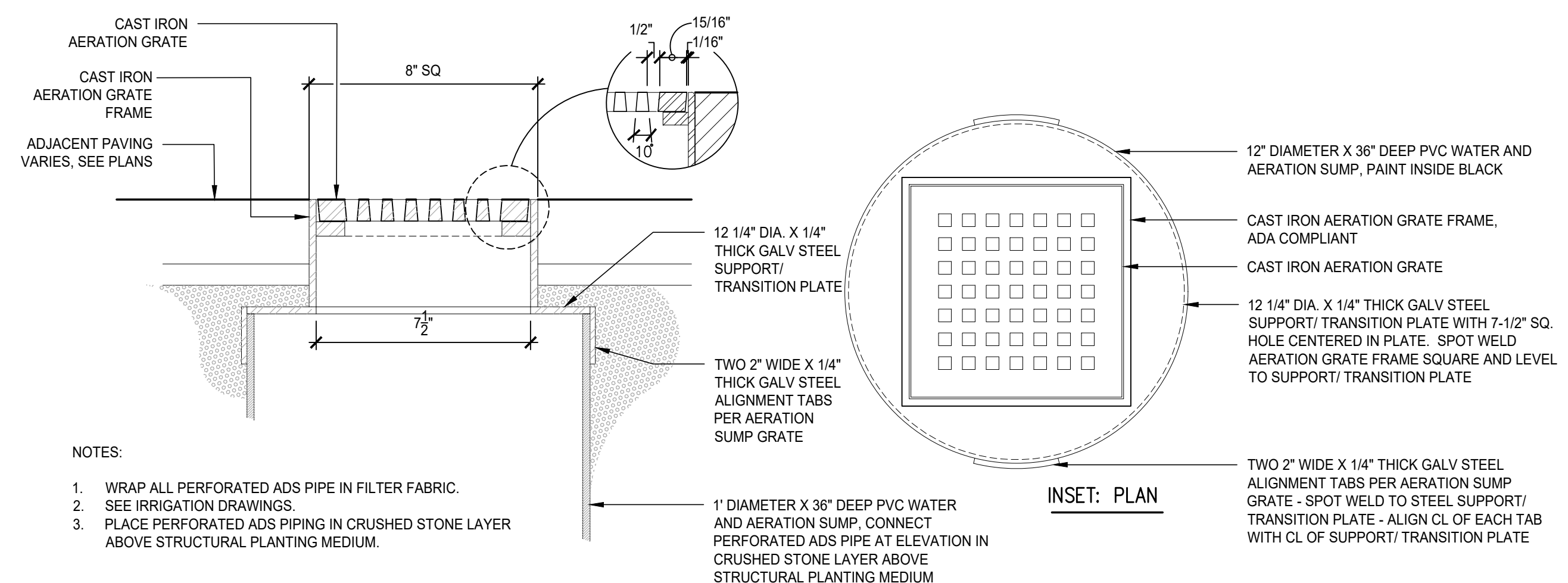
PLAN: WATER AND AERATION SYSTEM IN STREETScape LAYOUT



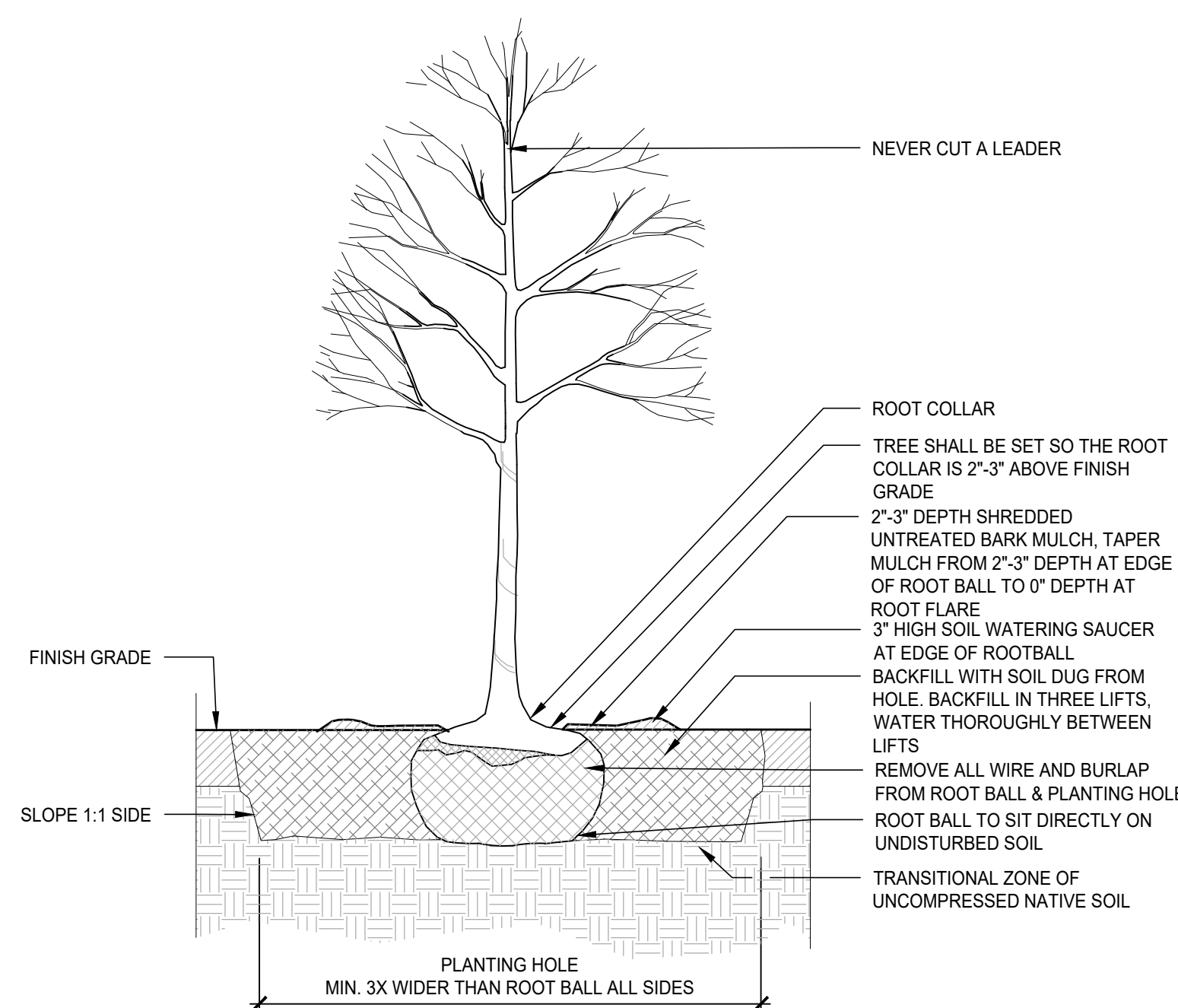
CROSS SECTION

- NOTES:
- PLANTING DETAILS ARE INTENDED TO INDICATE CONSTRUCTION RELATED TO VARIOUS STREETScape ELEMENTS. ACTUAL LOCATIONS OF STREETScape ELEMENTS MAY VARY FROM THOSE SHOWN. SEE PLANS.
 - FINISHED GRADE OF TREE GRATES AND FRAMES SHALL BE FLUSH WITH SURROUNDING PAVEMENT.
 - PROVIDE AUTOMATIC IRRIGATION SYSTEM TO IRRIGATE EACH TREE EXTENDED FROM CENTRAL CONTROLS SYSTEM. IRRIGATION SLEEVING TO CONNECT ALL TREE LOCATIONS BACK TO POINT OF CONNECTION.
 - LIMB BRANCHES TO PROVIDE CLEAR PEDESTRIAN ZONE TO 7'-0" ABOVE FINISH GRADE.
 - SCARIFY ALL SOIL MARGINS TO DEPTH OF 6".
 - SEE IRRIGATION PLANS AND DETAILS.

2 TREE PLANTING IN TREE GRATE OVER SAND-BASED STRUCTURAL SOIL
SCALE: 1/2"=1'-0"



3 WATER AND AERATION SUMP WITH GRATE AND FRAME
SCALE: 3"=1'-0"



1 TREE PLANTING DETAIL
SCALE: 3/8"=1'-0"

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Portsmouth, New Hampshire

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| G | 5/26/2021 | CC Resubmission |
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| DATE: | December 22, 2020 |
| FILE: | P-0595-007-L-DSGN.DWG |
| DRAWN BY: | OS |
| CHECKED BY: | RU/PMC |
| APPROVED BY: | BLM |

LANDSCAPE DETAILS

SCALE: AS SHOWN

GENERAL PROJECT INFORMATION

PROJECT APPLICANT: NORTH MILL POND HOLDINGS, LLC
1359 HOOKSETT ROAD
HOOKSETT, NH 03106
PROJECT NAME: PROPOSED MIXED USE DEVELOPMENT
PROJECT MAP / LOT: MAP 123 / LOTS 10, 12, 13 & 14
PROJECT ADDRESS: 1 RAYNES AVENUE PORTSMOUTH, NH 03801
PROJECT LATITUDE: 42°-04'-48" N
PROJECT LONGITUDE: 70°-45'-50" W

PROJECT DESCRIPTION
THE PROPOSED PROJECT INCLUDES TWO BUILDINGS, A 5 STORY MIXED USE BUILDING AND A 5 STORY 128 ROOM HOTEL. THE PROJECT WILL ALSO CONSIST OF ASSOCIATED SITE IMPROVEMENTS SUCH AS PAVING, STORMWATER MANAGEMENT, UTILITIES AND LIGHTING.

DISTURBED AREA
THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 2.40 ACRES.

SOIL CHARACTERISTICS
BASED ON THE USCS SITE SPECIFIC SOIL SURVEY CONDUCTED BY LEONARD LORD, PHD, CSS, CWS OF TIGHE & BOND, INC. THE SOIL SURVEY IDENTIFIES MOSTLY HYDROLOGIC SOIL GROUP C SOILS AND SOME PORTIONS OF HYDROLOGIC SOIL GROUP A SOILS. MUCH OF THE SITE IS COMPRISED OF UDORTHENTS WITH TWO DRAINAGE CLASSIFICATIONS, MODERATELY POORLY DRAINED SOILS AND PORTIONS OF WELL DRAINED SOILS.

NAME OF RECEIVING WATERS
THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA A CLOSED DRAINAGE SYSTEM ULTIMATELY FLOWS TO NORTH MILL POND THEN TO THE PISCATAQUA RIVER.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

- 1. CUT AND CLEAR TREES.
- 2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
 - NEW CONSTRUCTION
 - CONTROL OF DUST
 - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
 - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
- 3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPs PRIOR TO DIRECTING RUNOFF TO THEM.
- 4. CLEAR AND DISPOSE OF DEBRIS.
- 5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
- 6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
- 9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
- 10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
- 11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
- 12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

- 1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
- 2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:

- 1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
- 2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
- 3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
- 4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
- 5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
- 6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
- 7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
- 8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
- 9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

- 1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
 - A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
 - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
 - E. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.
- 2. WINTER STABILIZATION PRACTICES:
 - A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
 - B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
 - C. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
- 3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
 - A. TEMPORARY SEEDING;
 - B. MULCHING.
- 4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- 5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
- 6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE

FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
- 2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
- 3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

- 1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
- 2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
- 3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
- 4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

- 1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

- 1. TEMPORARY GRASS COVER:
 - A. SEEDBED PREPARATION:
 - a. SEE LANDSCAPE PLAN FOR SEEDBED PREPARATION REQUIREMENTS;
 - B. SEEDING:
 - a. SEE LANDSCAPE PLAN FOR SEEDING REQUIREMENTS;
 - C. MAINTENANCE:
 - a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
- 2. VEGETATIVE PRACTICE:
 - A. SEE LANDSCAPE PLAN FOR PERMANENT MEASURES AND PLANTINGS:
 - a. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
 - b. IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
 - B. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
 - A. FOLLOW PERMANENT MEASURES REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

- 1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
 - A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
 - B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
 - C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
 - D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

- 1. FIRE-FIGHTING ACTIVITIES;
- 2. FIRE HYDRANT FLUSHING;
- 3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
- 4. WATER USED TO CONTROL DUST;
- 5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
- 6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
- 7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
- 8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
- 9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
- 10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
- 11. UNCONTAMINATED EXCAVATION DEWATERING;
- 12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

- 1. WASTE MATERIAL:
 - A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
 - B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
 - C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
- 2. HAZARDOUS WASTE:
 - A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
 - B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
- 3. SANITARY WASTE:
 - A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

- 1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
- 2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
 - A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
 - a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
 - b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
 - c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
 - d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
 - e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
 - f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
 - g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
 - B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
 - a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
 - b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
 - c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
 - C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:

PETROLEUM PRODUCTS:

- i. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
- ii. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- iii. SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
- iv. INSPECT FUEL STORAGE AREAS WEEKLY;
- v. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS;
- vi. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
- vii. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
- viii. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
 - (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
 - (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
 - (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
 - (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES;
 - (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
- ix. FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT. [HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF](https://www.des.nh.gov/organization/commissioner/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF)

FERTILIZERS:

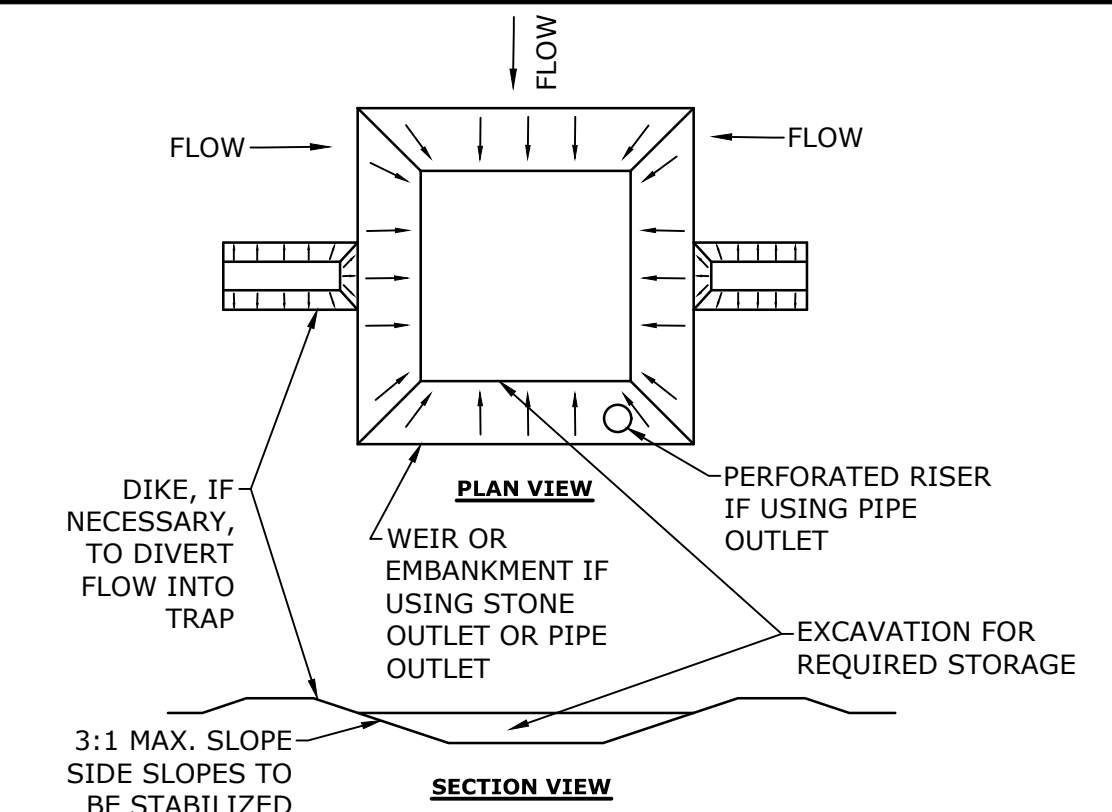
- i. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
- ii. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
- iii. STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
- c. PAINTS:
 - i. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
 - ii. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
 - iii. EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

- a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
 - b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
 - c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
 - d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
 - e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
 - f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
- E. VEHICLE FUELING AND MAINTENANCE PRACTICE:**
- a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
 - b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
 - c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
 - d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
 - e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
 - f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

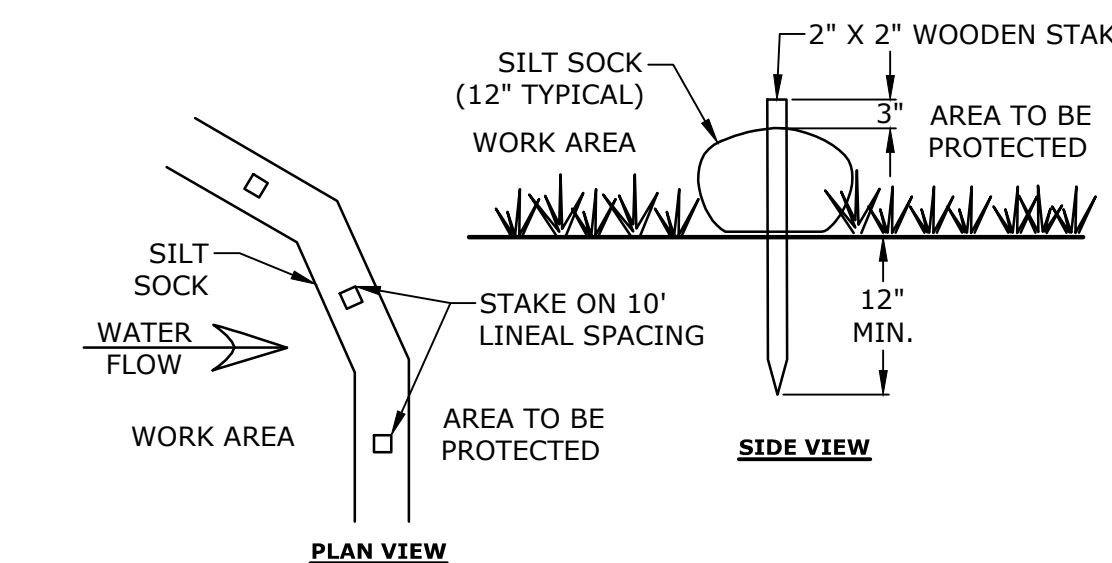
- 1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
- 2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:
 - A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
 - B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
 - C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
 - D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.



NOTES:

- 1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
- 2. THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES.
- 3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
- 4. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
- 5. TRAP SHALL DISCHARGE TO A STABILIZED AREA.
- 6. TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
- 7. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
- 8. SEDIMENT TRAPS MUST BE USED AS NEEDED TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

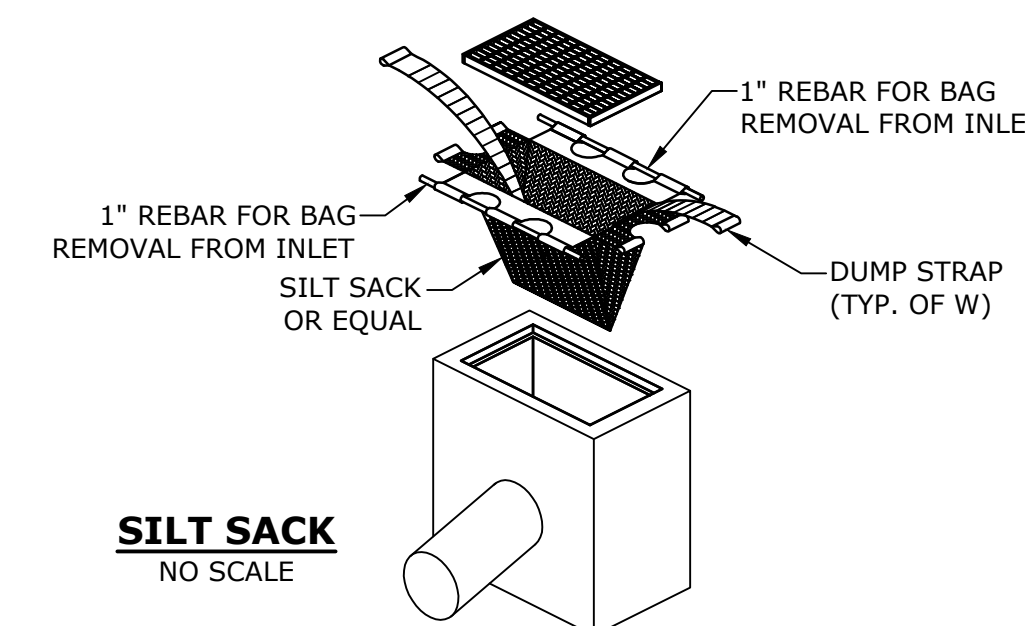
SEDIMENT TRAP
NO SCALE



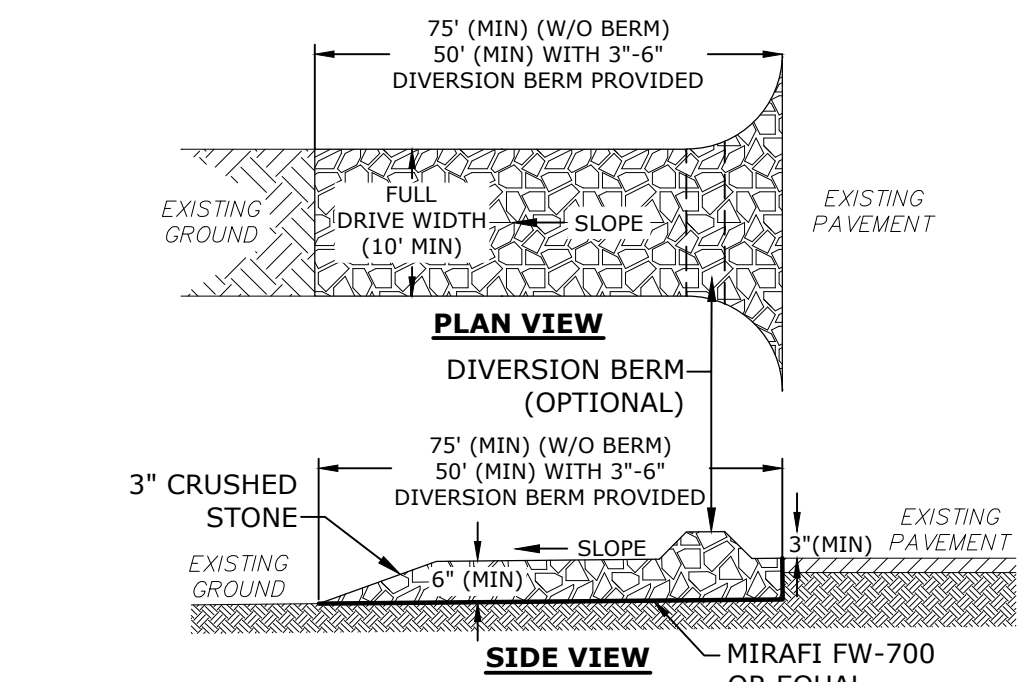
NOTES:

- 1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL
- 2. INSTALL SILT SOCK IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS

SILT SOCK
NO SCALE



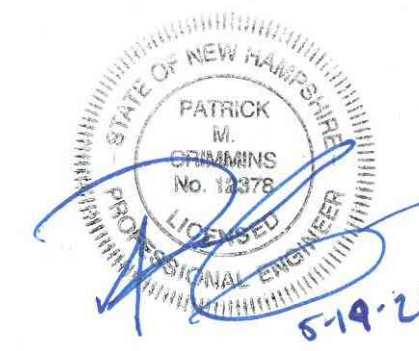
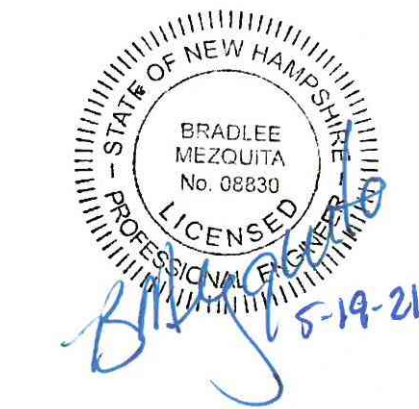
SILT SACK
NO SCALE



NOTES:

- 1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT
NO SCALE



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

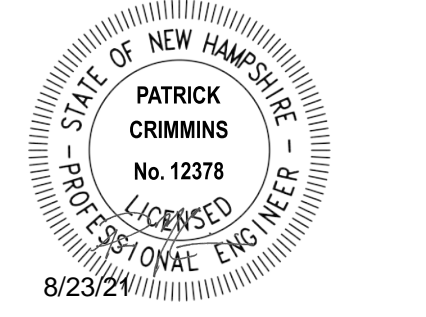
Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

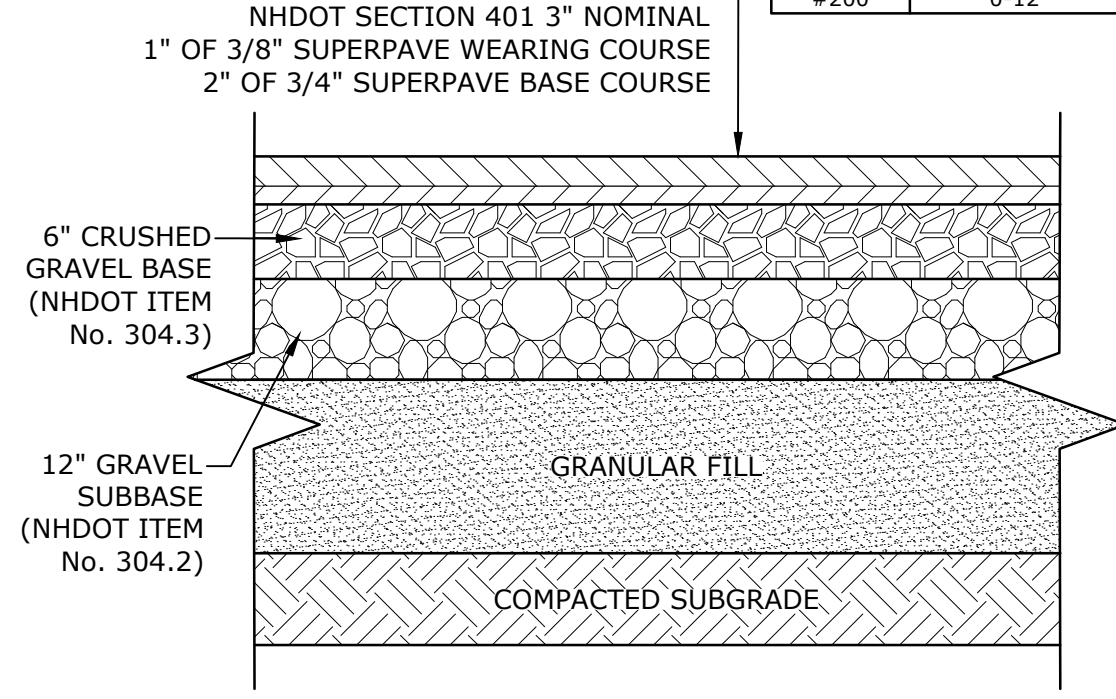
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|--------------|---------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-DTLS.DWG |
| DRAWN BY: | CLK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN



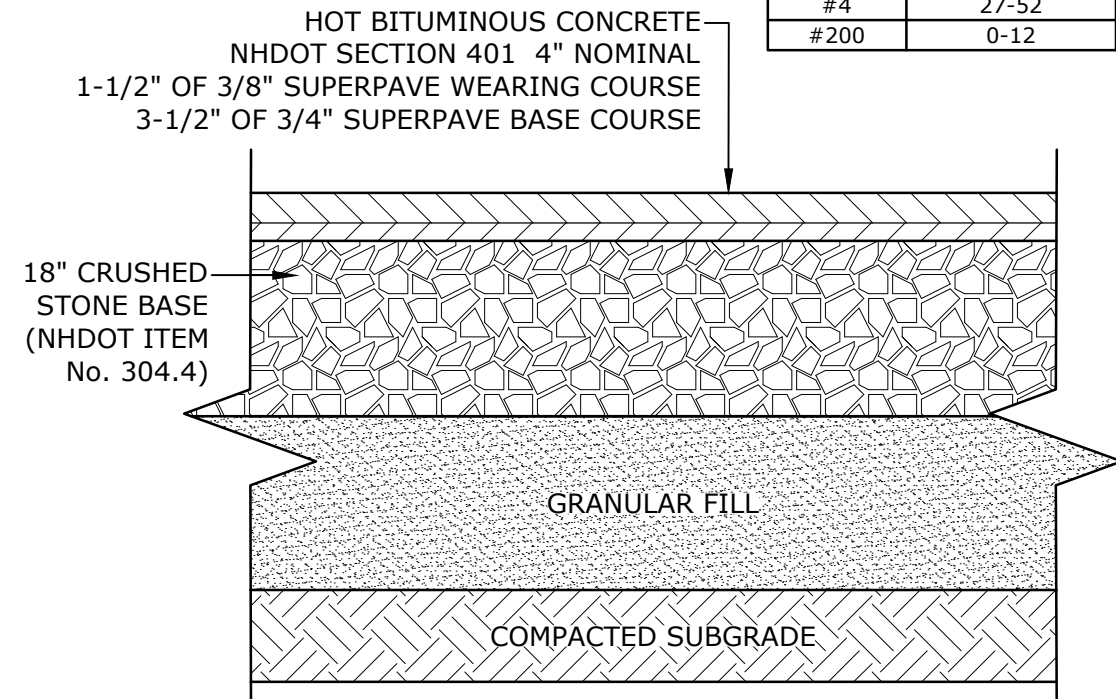
| NHDOT ITEM No. 304.2 (GRAVEL) | | NHDOT ITEM No. 304.3 (CRUSHED GRAVEL) | |
|-------------------------------|-----------|---------------------------------------|-----------|
| SIEVE SIZE | % PASSING | SIEVE SIZE | % PASSING |
| 6" | 100 | 3" | 100 |
| #4 | 25-70 | 2" | 95-100 |
| #200 | 0-12 | 1" | 55-85 |
| | | #4 | 27-52 |
| | | #200 | 0-12 |



- NOTES:
- SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 - SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 - A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
 - REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.
 - FINAL PAVEMENT DESIGN TO BE DETERMINED BY GEOTECHNICAL ENGINEER.

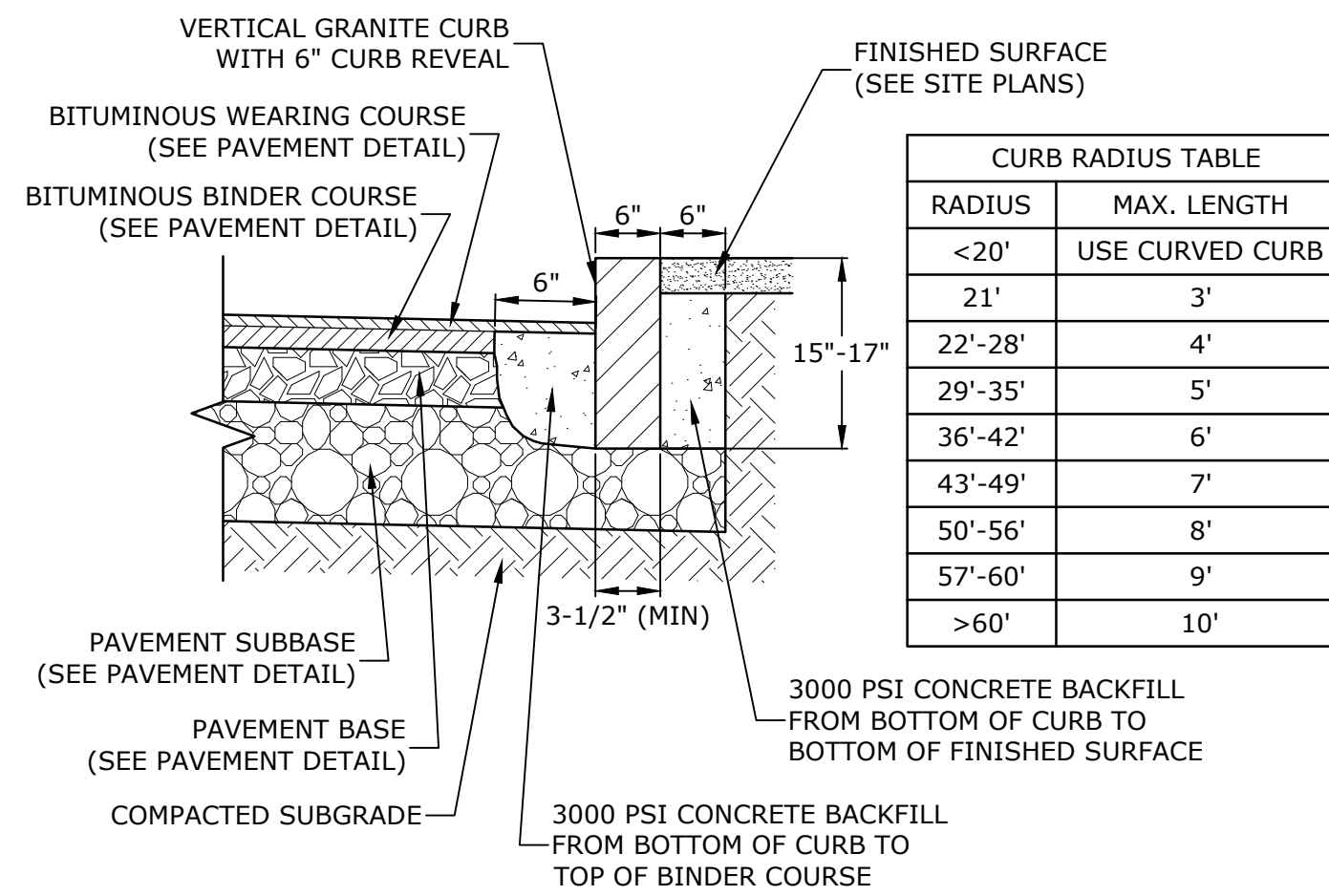
ON-SITE PAVEMENT SECTION
NO SCALE

| NHDOT ITEM No. 304.2 (GRAVEL) | | NHDOT ITEM No. 304.3 (CRUSHED GRAVEL) | |
|-------------------------------|-----------|---------------------------------------|-----------|
| SIEVE SIZE | % PASSING | SIEVE SIZE | % PASSING |
| 6" | 100 | 3" | 100 |
| #4 | 25-70 | 2" | 95-100 |
| #200 | 0-12 | 1" | 55-85 |
| | | #4 | 27-52 |
| | | #200 | 0-12 |



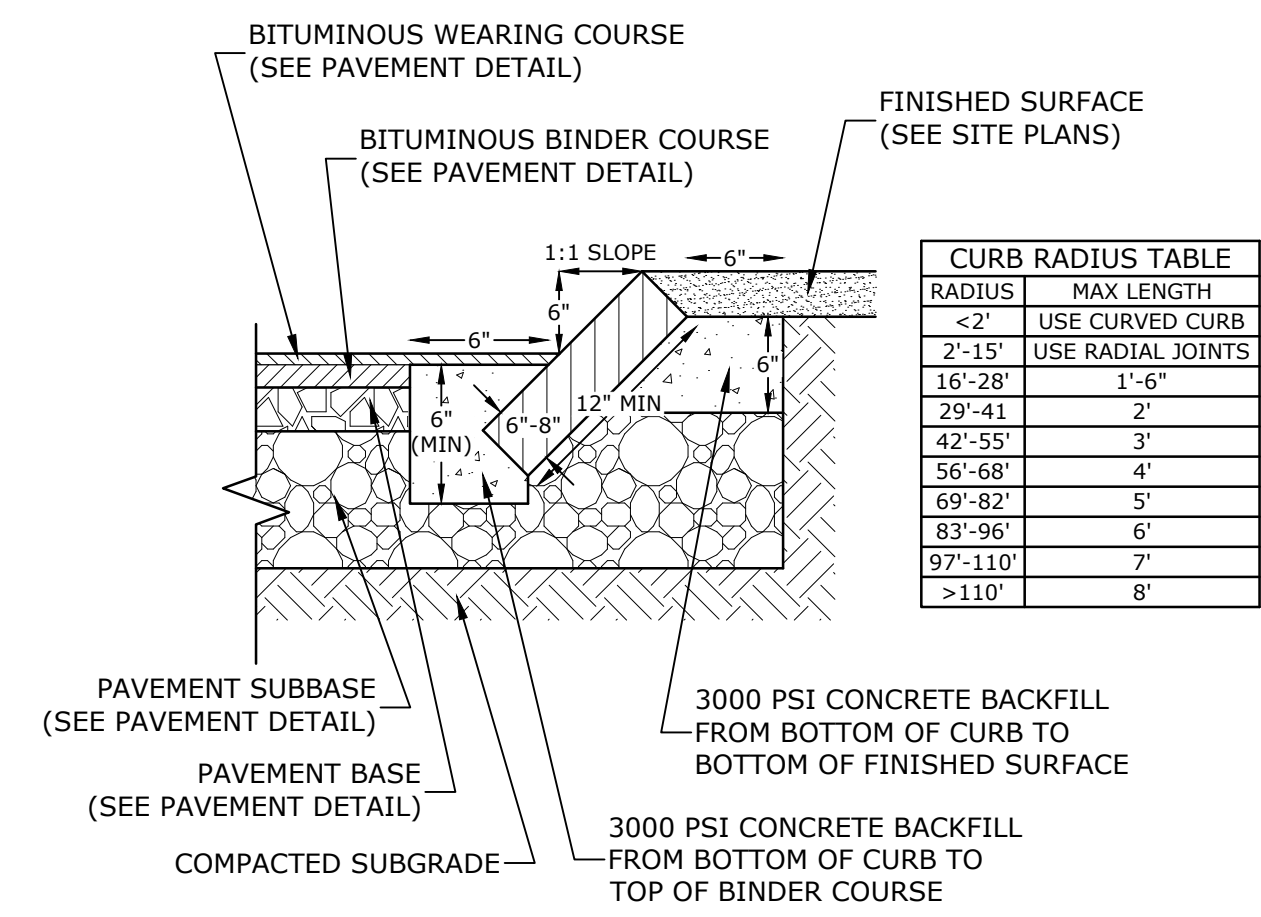
- NOTES:
- SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 - SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 - A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
 - REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.

CITY RIGHT-OF-WAY PAVEMENT SECTION
NO SCALE



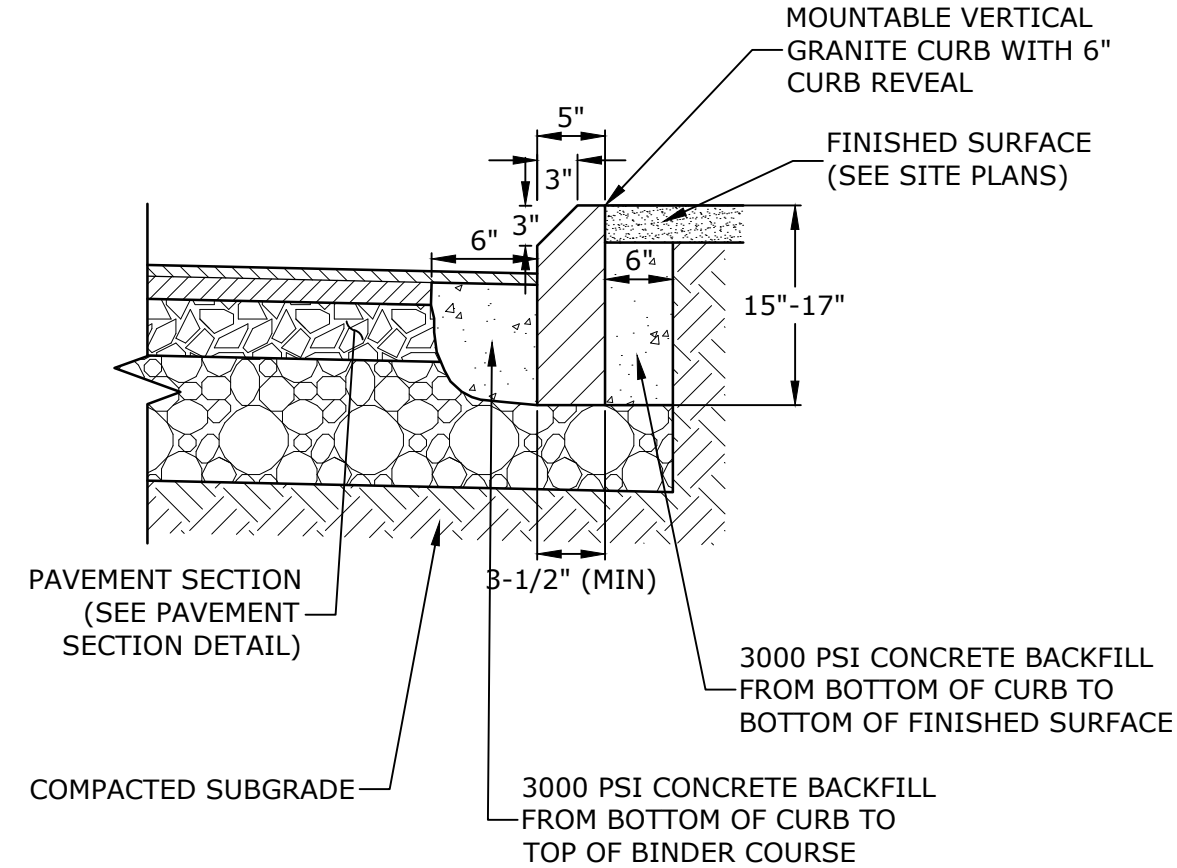
- NOTES:
- SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
 - ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 - MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
 - ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
 - JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE



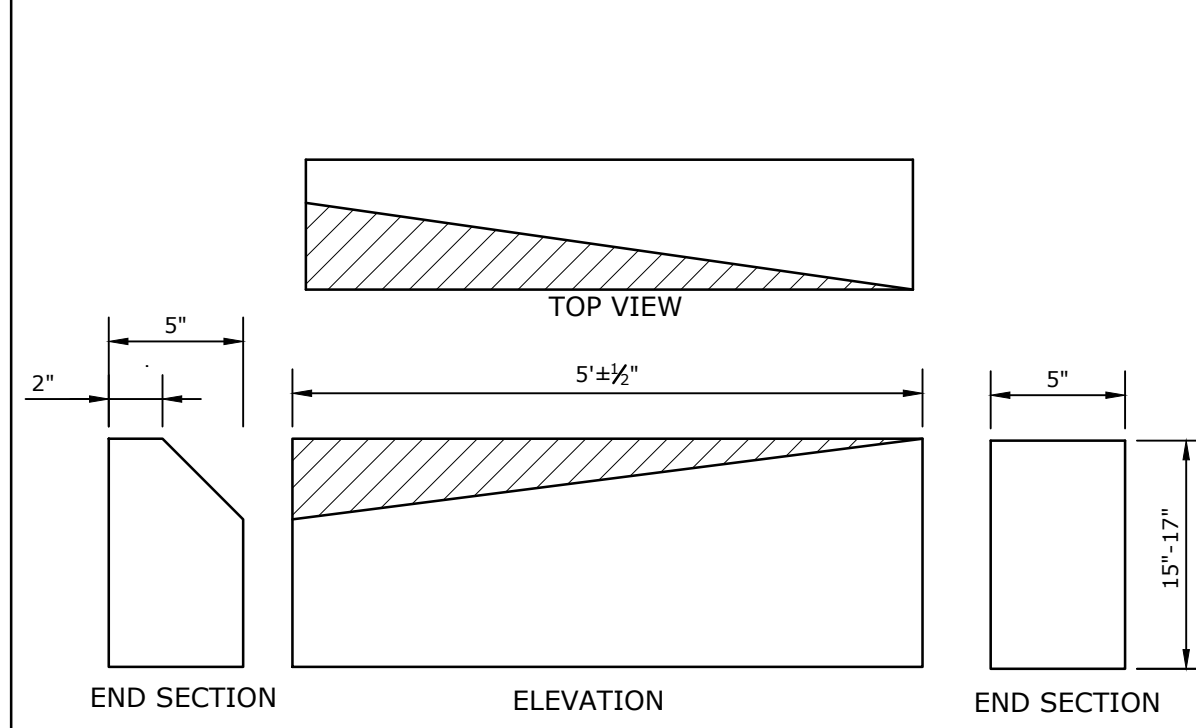
- NOTES:
- SEE SITE PLAN(S) FOR LIMITS OF SLOPED GRANITE CURB (SGC).
 - ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 - MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
 - JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

SLOPED GRANITE CURB
NO SCALE



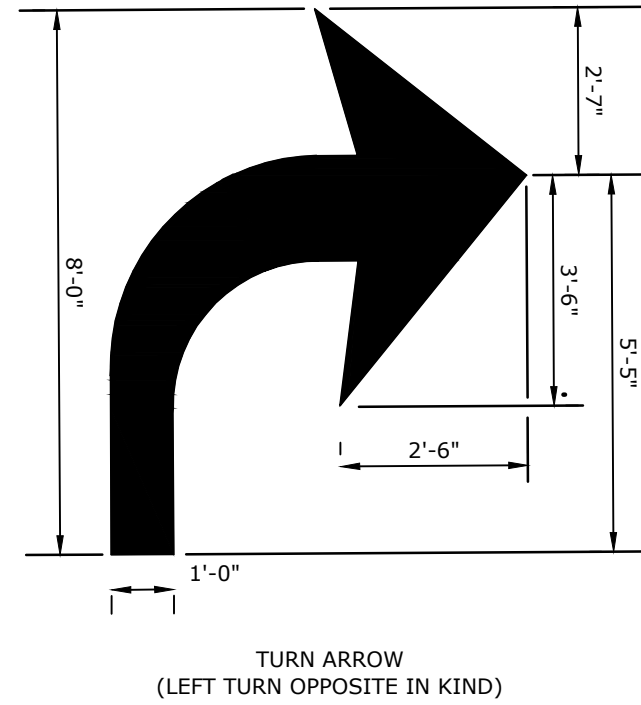
- NOTES:
- SEE SITE PLAN(S) FOR LIMITS OF MOUNTABLE VERTICAL GRANITE CURB (MVGC).
 - ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 - MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
 - ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
 - JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

MOUNTABLE VERTICAL GRANITE CURB
NO SCALE



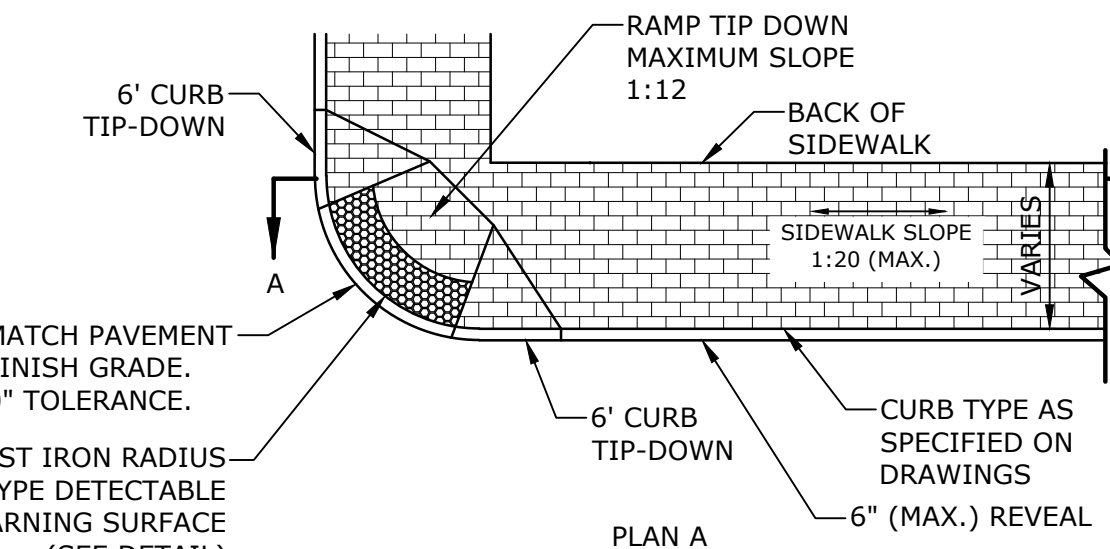
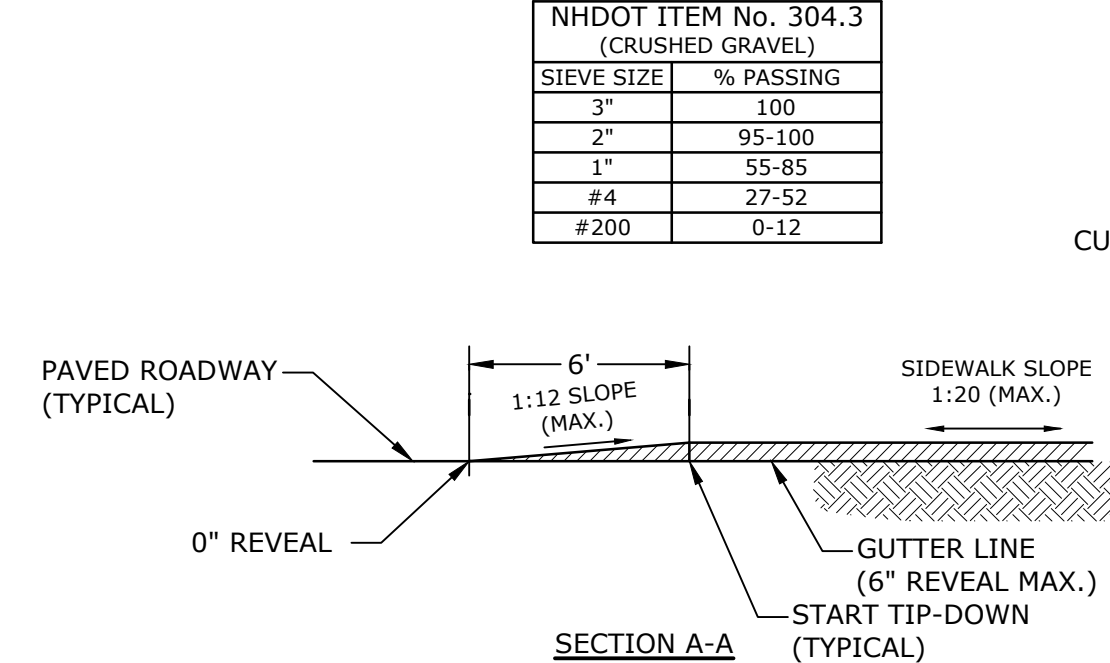
- NOTES:
- THE INTENT OF THIS ITEM IS TO PROVIDE A SMOOTH TRANSITION BETWEEN VERTICAL GRANITE CURB AND MOUNTABLE VERTICAL GRANITE CURB WITHOUT REQUIRING FIELD CHIPPING DURING INSTALLATION. THE MOUNTABLE VERTICAL GRANITE CURB MAY REQUIRE ADJUSTMENTS TO MEET THE TRANSITION PIECE HEIGHT. TRANSITION SLOPE CURB TO STANDARD REVEAL AS QUICKLY AS POSSIBLE TO PROVIDE FOR THIS SMOOTH TRANSITION.

CURB TRANSITION
NO SCALE



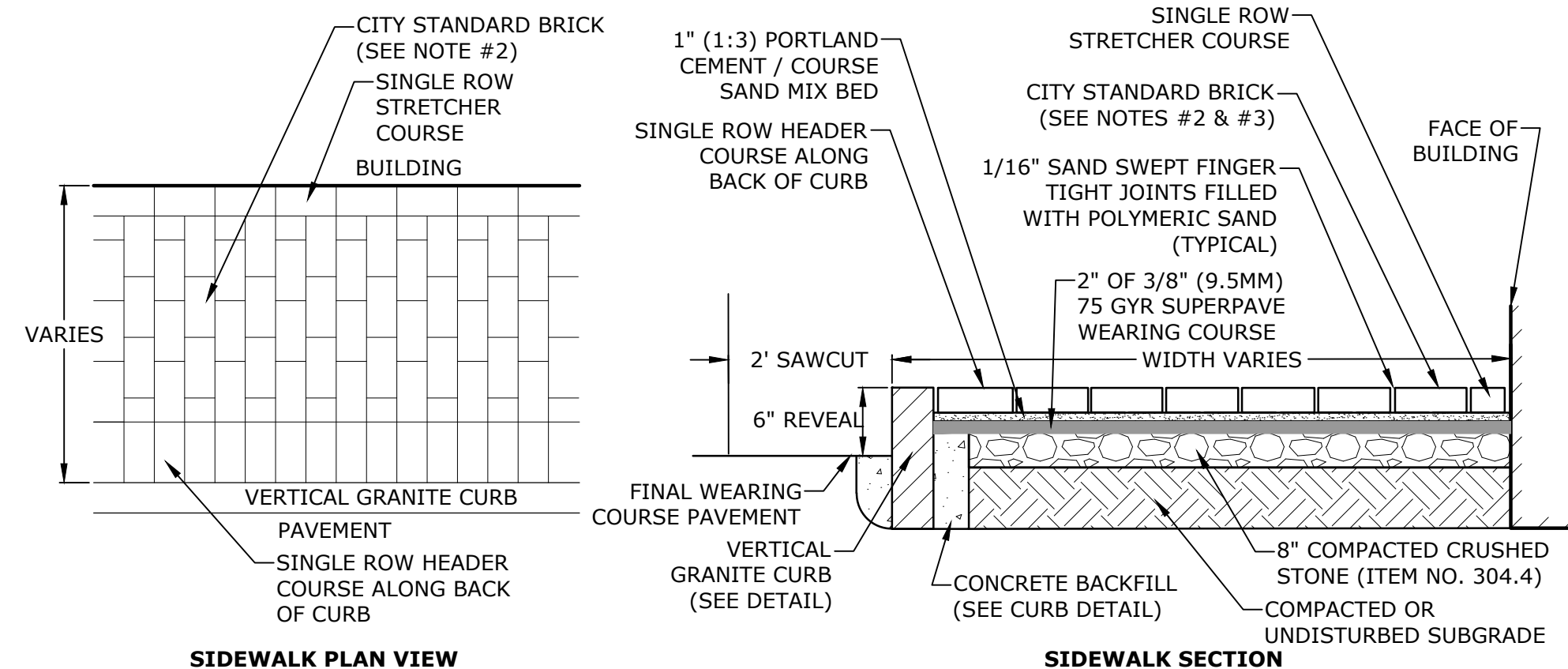
- NOTES:
- SYMBOLS SHALL BE RETROREFLECTIVE WHITE AND SHALL CONFORM TO THE LATEST VERSION OF THE MUTCD.
 - PREFORMED WORDS AND SYMBOLS SHALL BE PRE-CUT BY THE MANUFACTURER.
 - ALL STOP BARS, WORDS, SYMBOLS AND ARROW SHALL BE THERMOPLASTIC.

TURN ARROW
NO SCALE



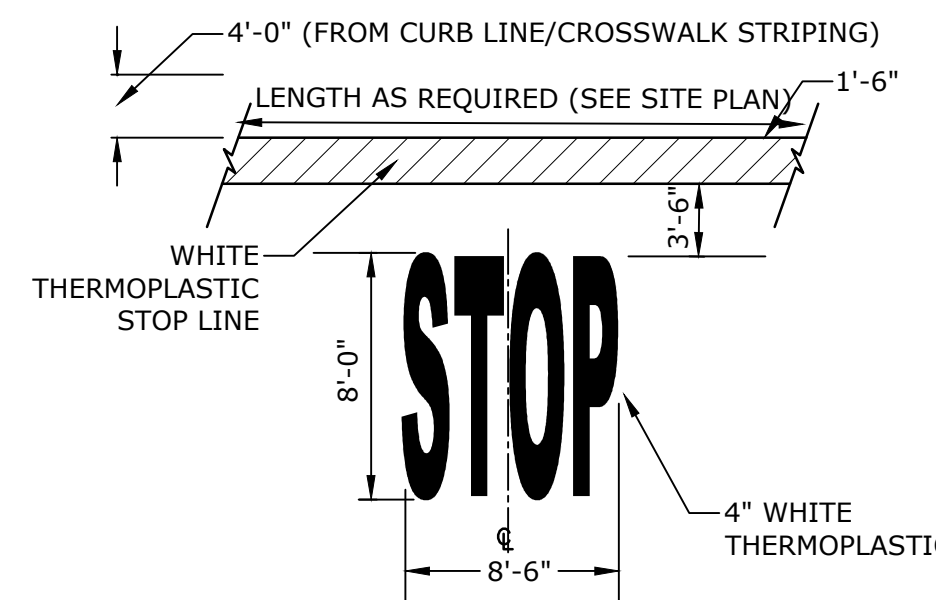
- NOTES:
- RAMP SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
 - A 6" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
 - DETECTABLE WARNING PANEL SHALL BE CAST IRON SET IN CONCRETE (SEE DETAIL.)
 - PROVIDE DETECTABLE WARNING SURFACES ANYTIME THAT A CURB RAMP, BLENDED TRANSITION, OR LANDING CONNECTS TO A STREET.
 - LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB ALONG THE EDGE OF THE LANDING.
 - THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1, THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
 - TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURBLINE.
 - THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
 - DETECTABLE WARNING PANELS SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
 - THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST VISUALLY WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT).

CONCRETE TIP DOWN RAMP
NO SCALE



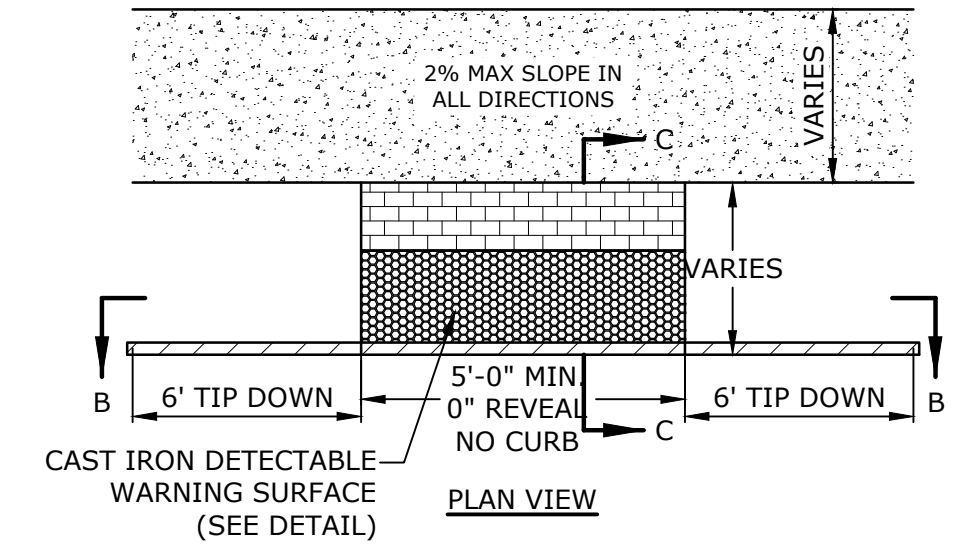
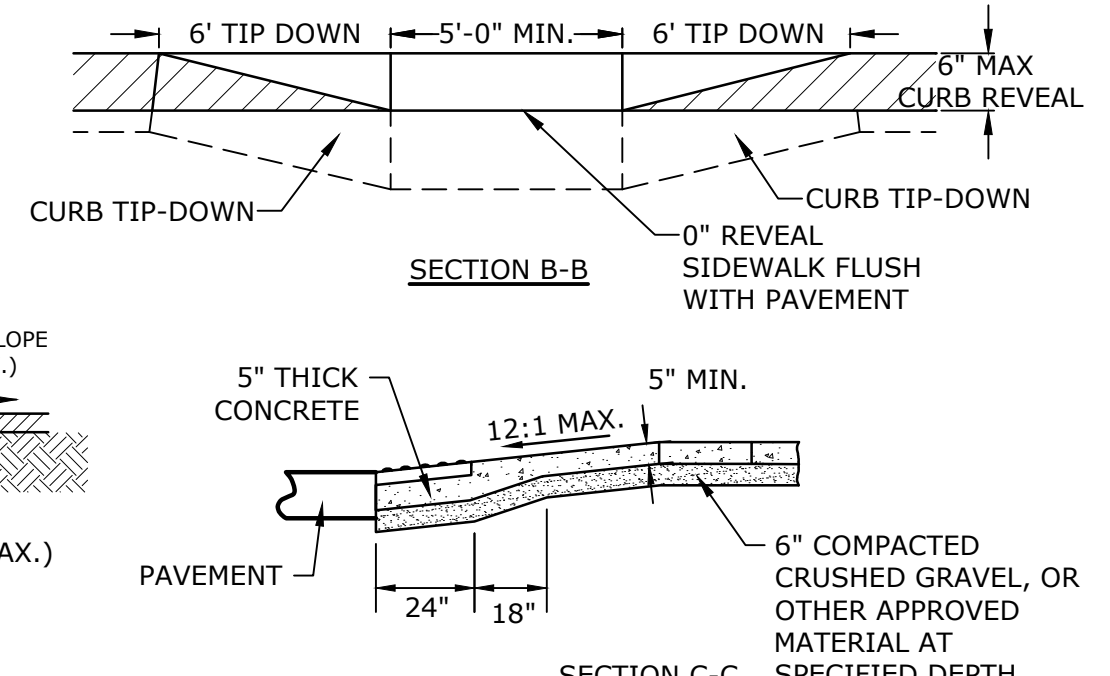
- NOTES:
- BRICK SIDEWALK SHALL BE INSTALLED AS DETAILED AND PER CITY OF PORTSMOUTH REQUIREMENTS/SPECIFICATIONS AND SHALL INCLUDE A CONTINUOUS APPROVED PAVER EDGE RESTRAINT SYSTEM AT ALL LOCATIONS NOT ADJACENT TO CURB OR BUILDINGS.
 - CITY STANDARD BRICK SHALL BE TRADITIONAL EDGE, PATHWAY, FULL RANGE 2.25"x4"x8" PAVES, BY PINE HALL BRICK, INC. BRICK MATERIAL SAMPLES SHALL BE PROVIDED TO DPW PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL.
 - 80 MILLIMETER PINEHALL BRICK SHALL BE USED FOR THE FIRE ACCESS AREA UNIT PAVES ALONG MAPLEWOOD AVE.
 - BEDDING MATERIAL SHALL BE A PORTLAND CEMENT / COURSE SAND MIX THAT IS 1 PART PORTLAND CEMENT AND 3 PARTS COURSE SAND. SAND SHALL CONFORM WITH ASTM C-33 AND CEMENT SHALL BE PORTLAND CEMENT TYPE I/TYPE II.

BRICK SIDEWALK
NO SCALE



- NOTE:
- PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
 - STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTORIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR AND LEGEND
NO SCALE



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

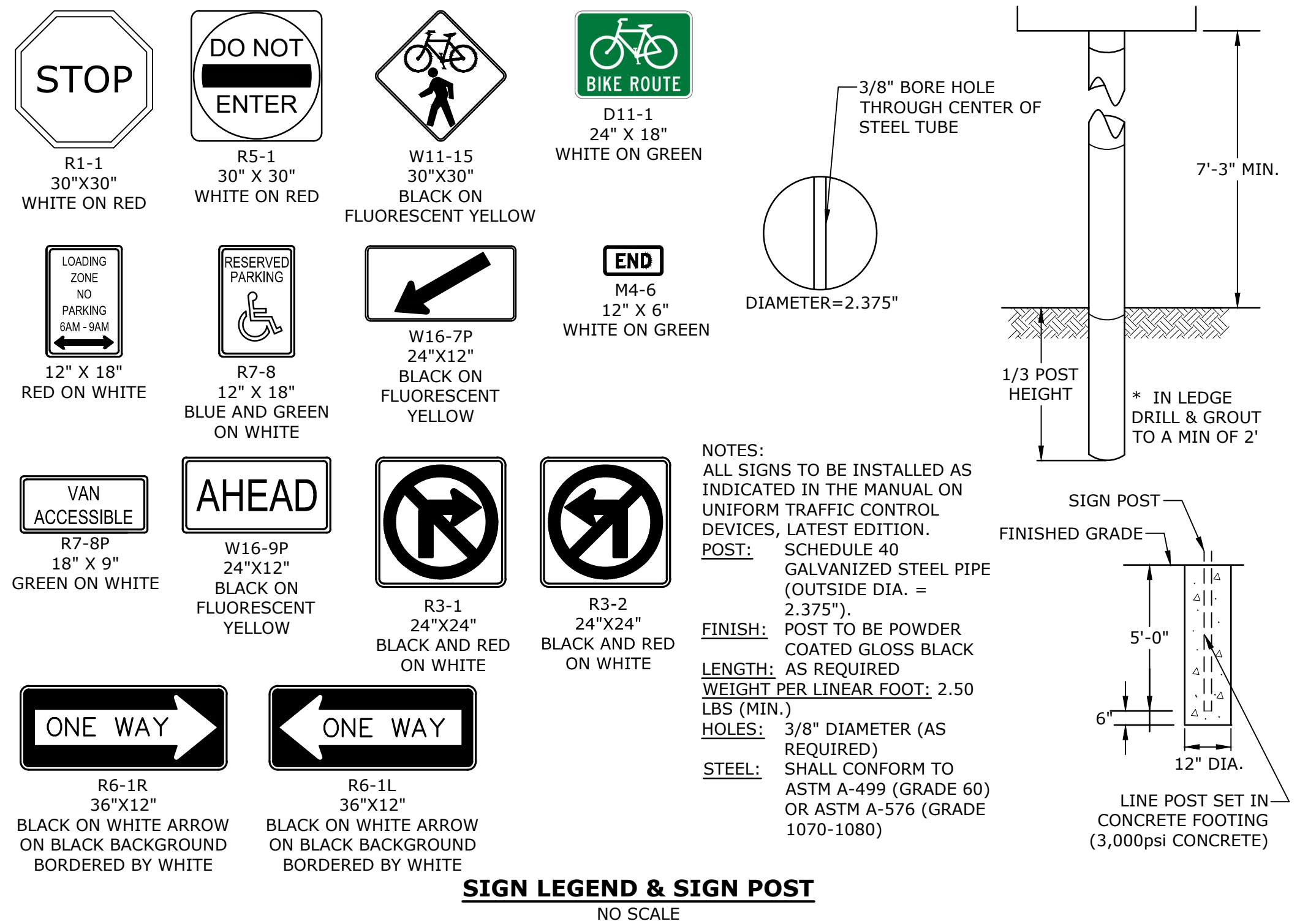
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| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

| | |
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| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-DTLS.DWG |
| DRAWN BY: | CIK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

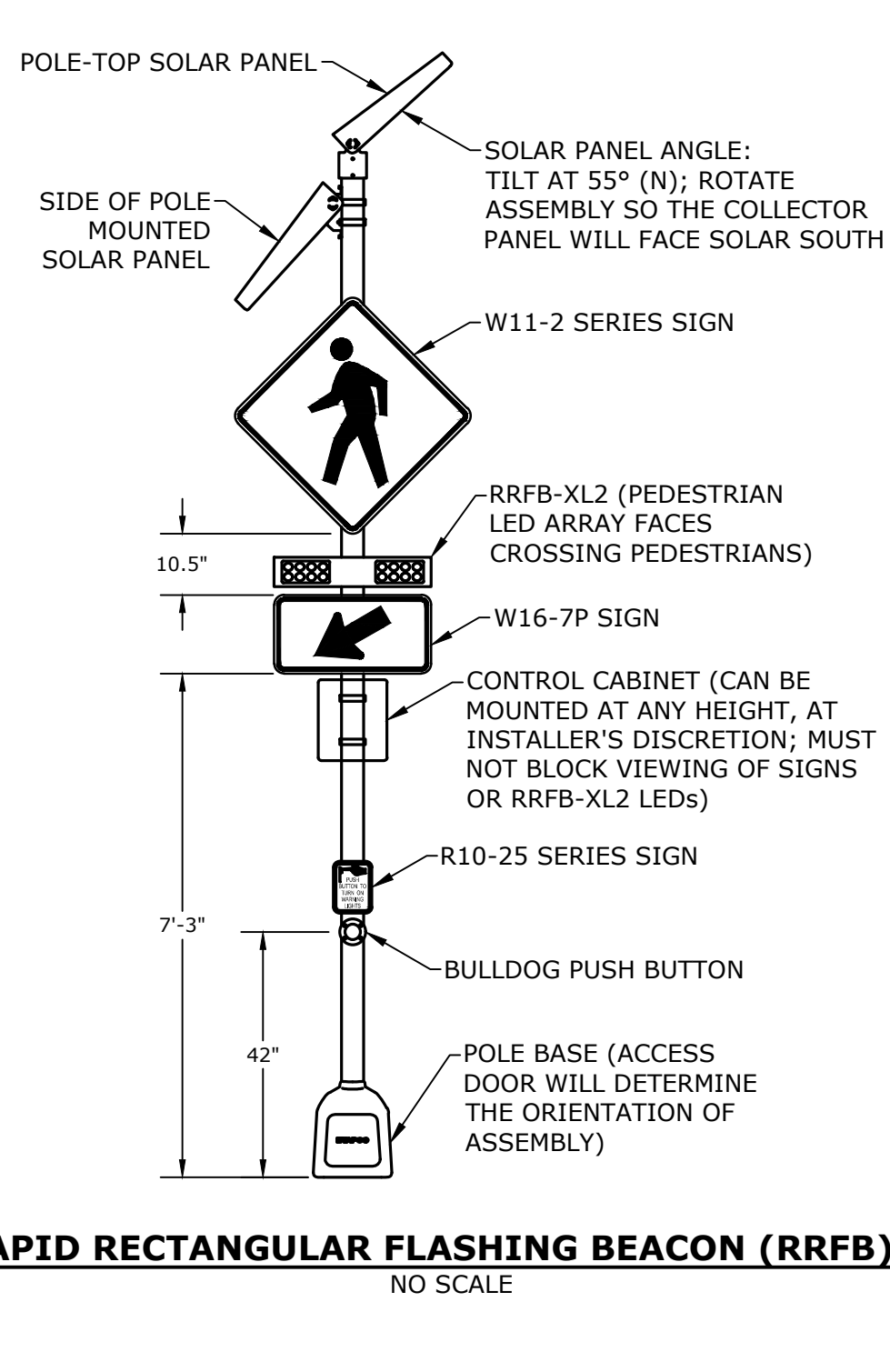
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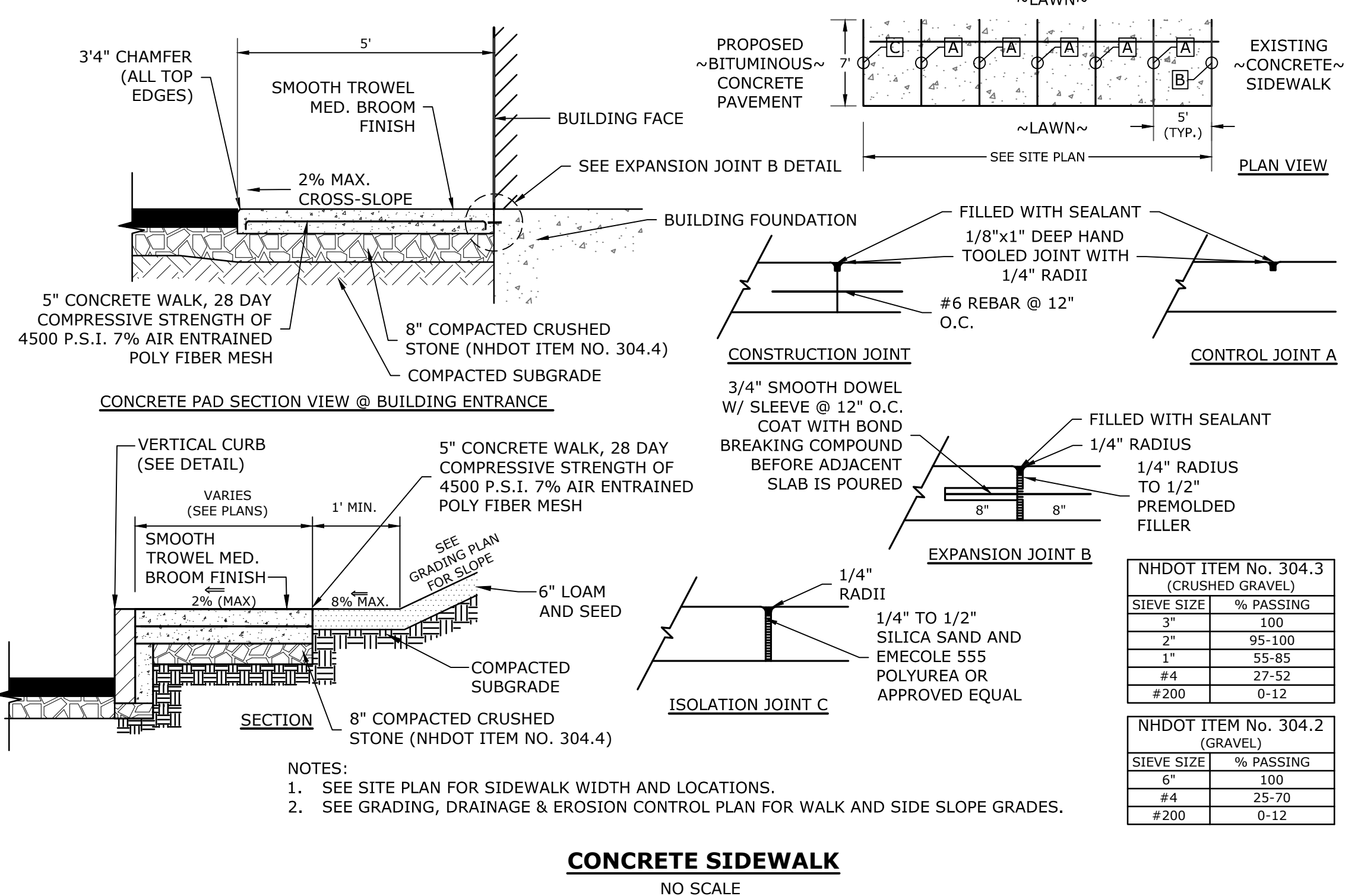
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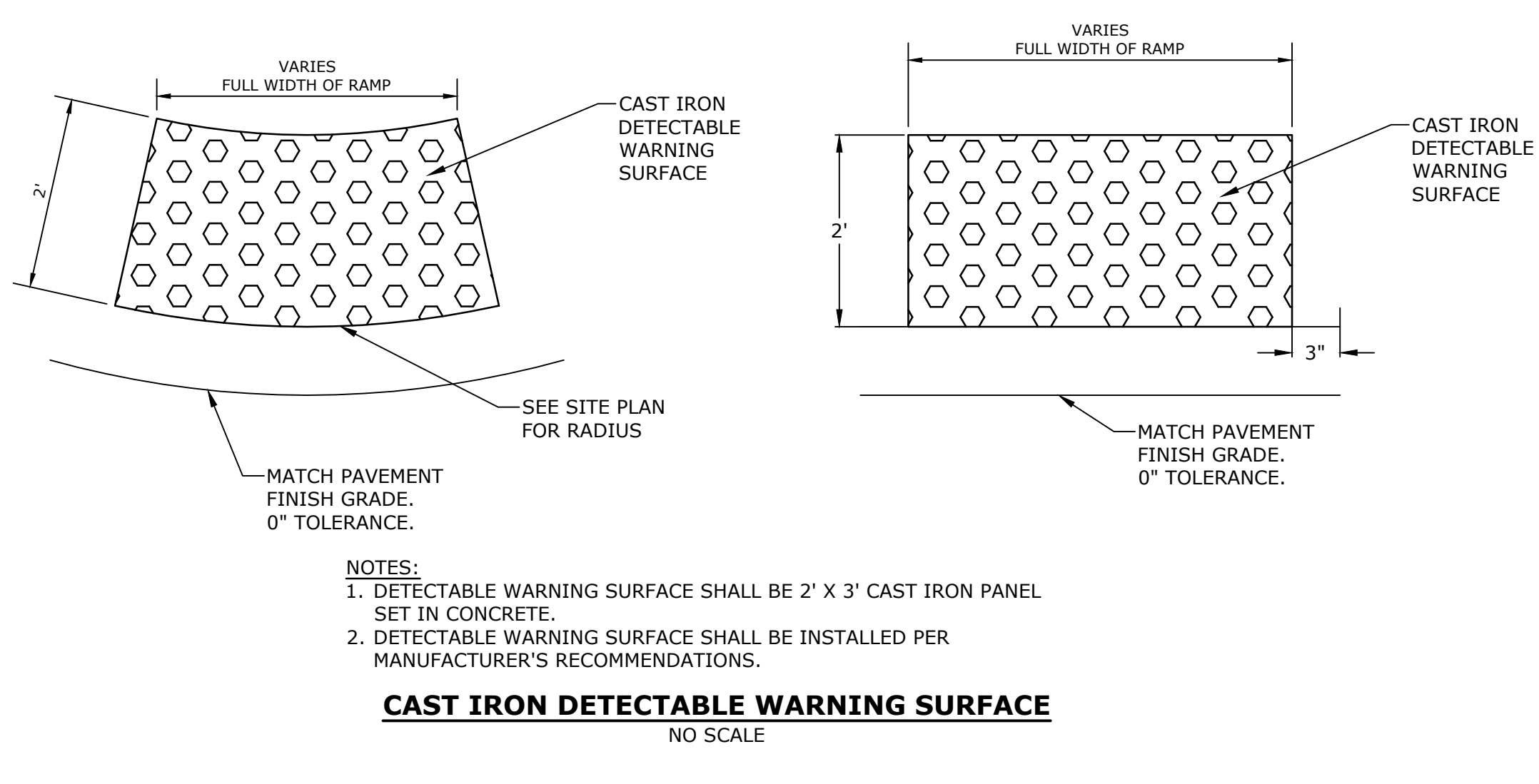
SIGN LEGEND & SIGN POST
NO SCALE



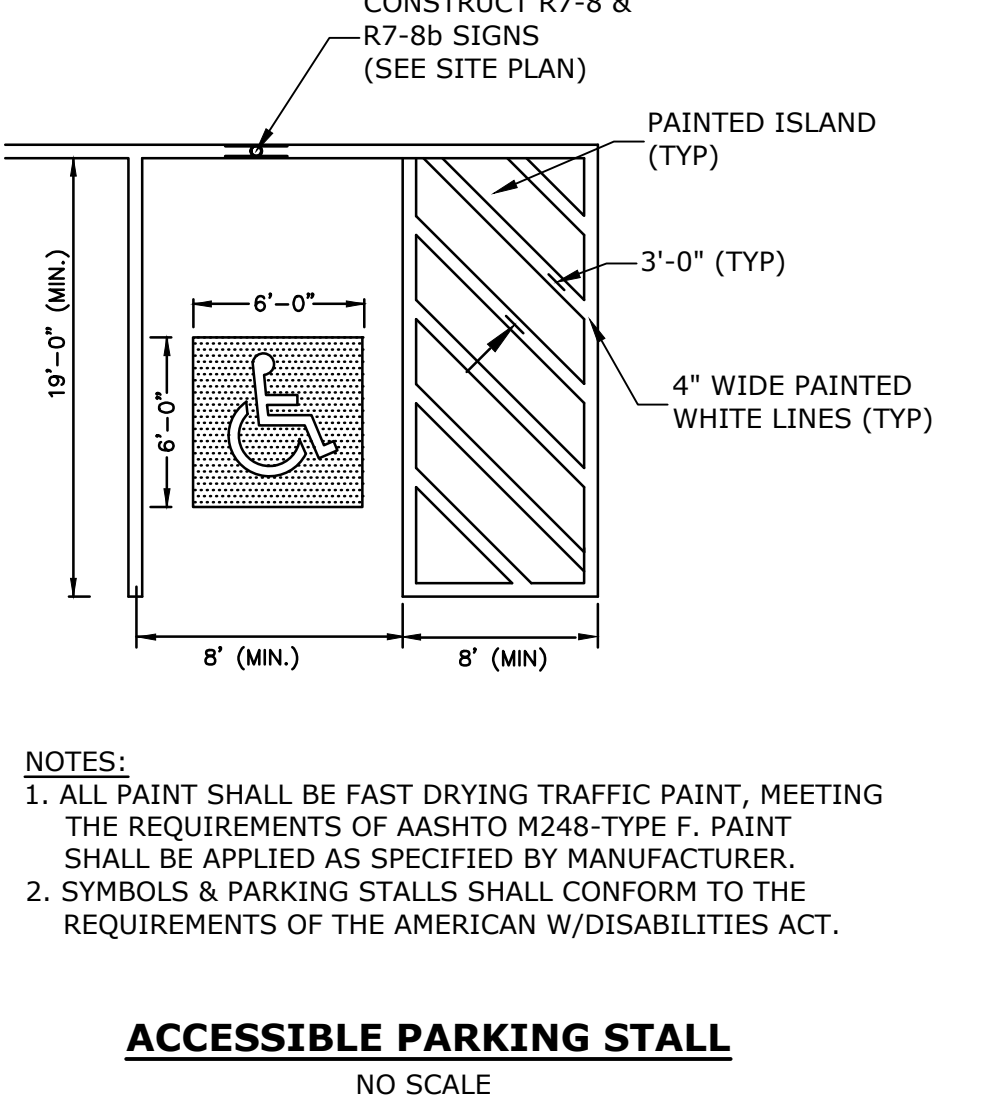
RAPID RECTANGULAR FLASHING BEACON (RRFB)
NO SCALE



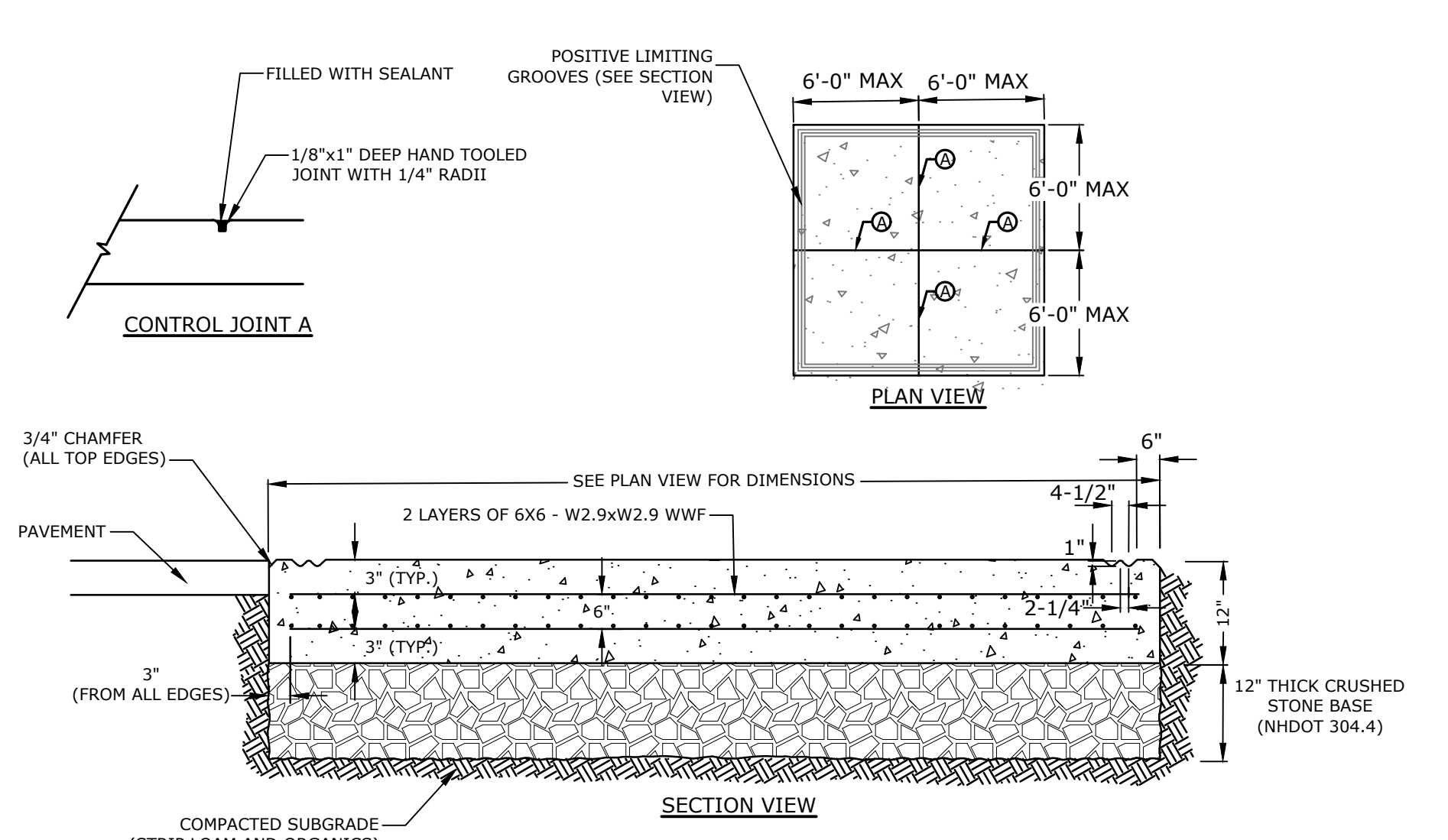
CONCRETE SIDEWALK
NO SCALE



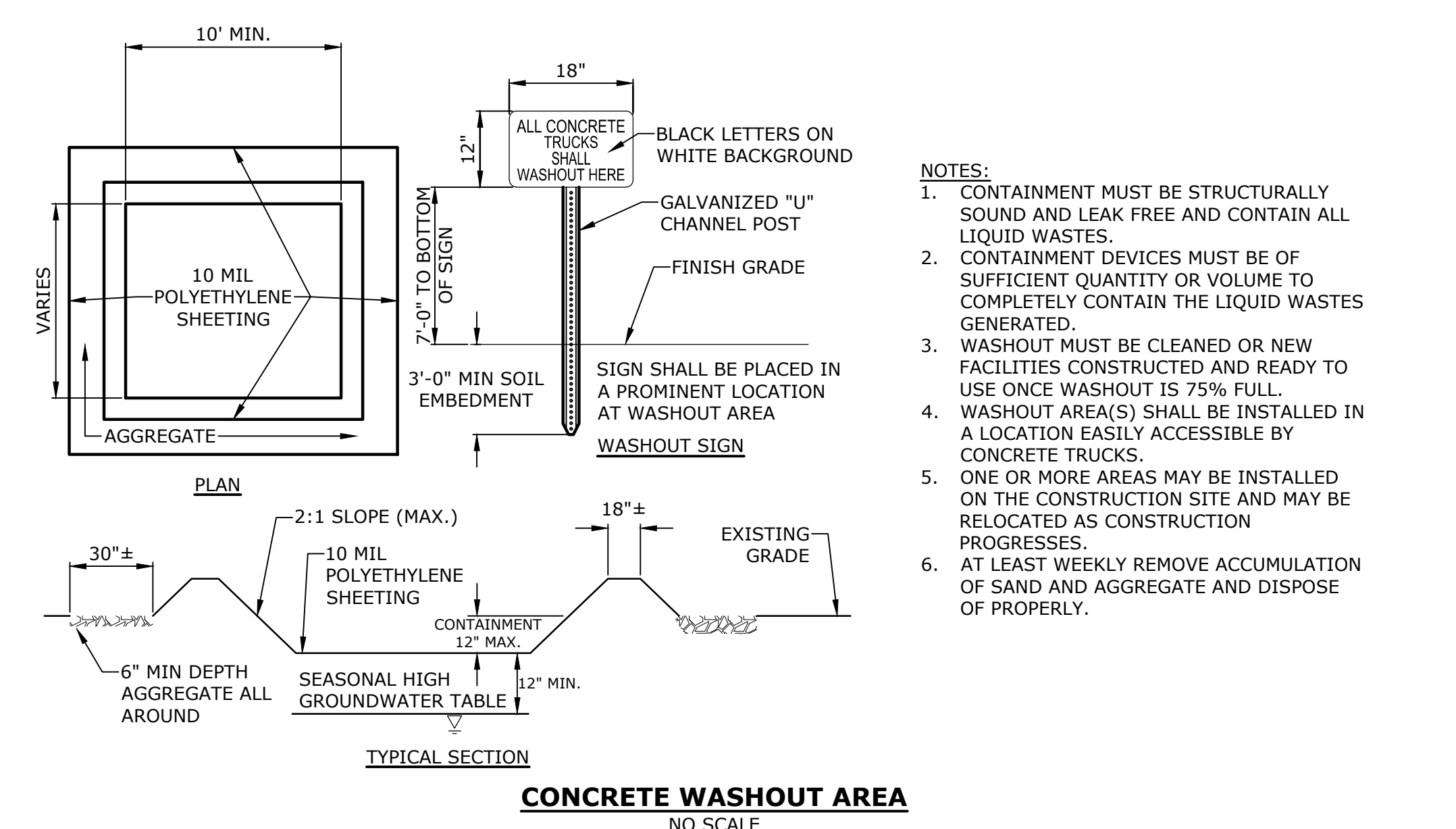
CAST IRON DETECTABLE WARNING SURFACE
NO SCALE



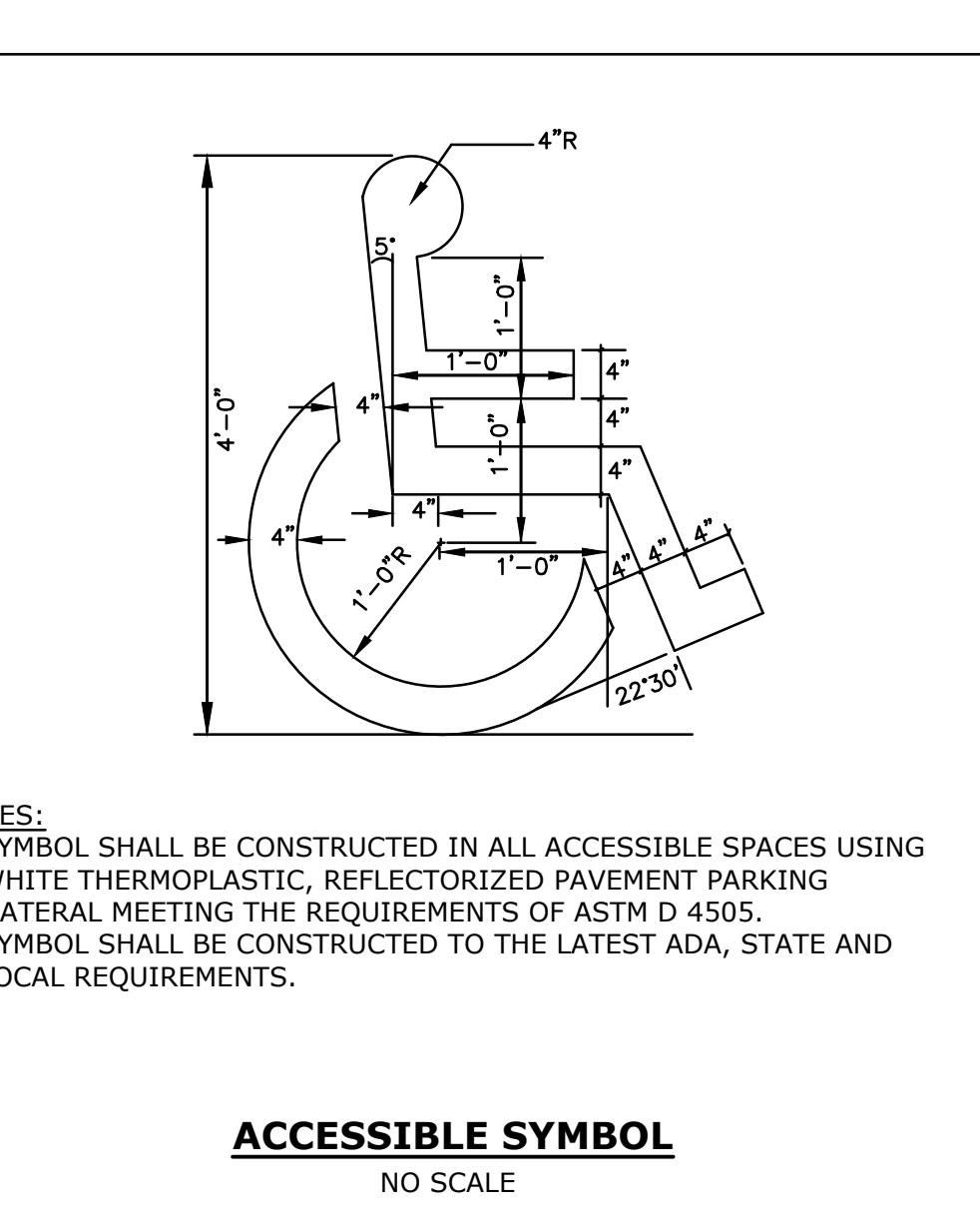
ACCESSIBLE PARKING STALL
NO SCALE



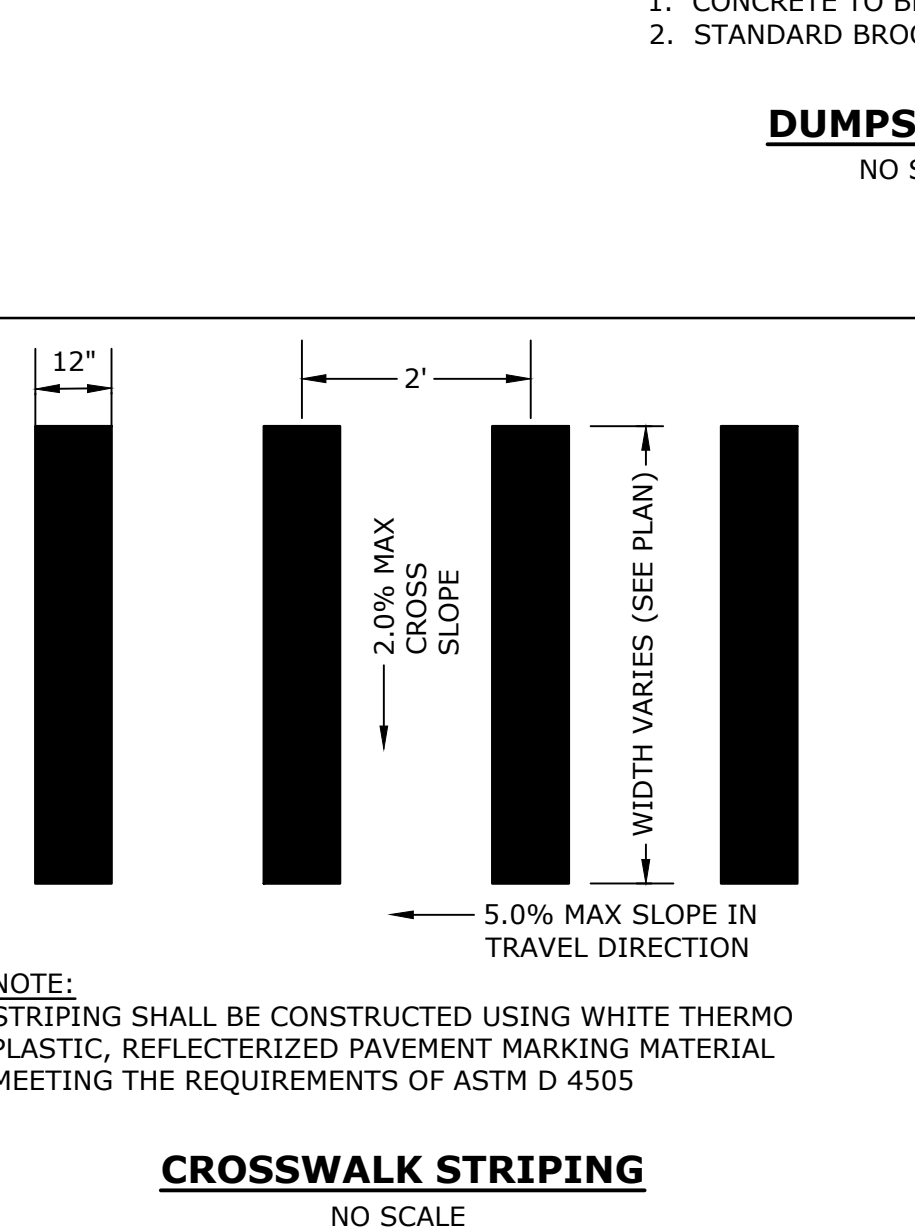
DUMPSTER PAD
NO SCALE



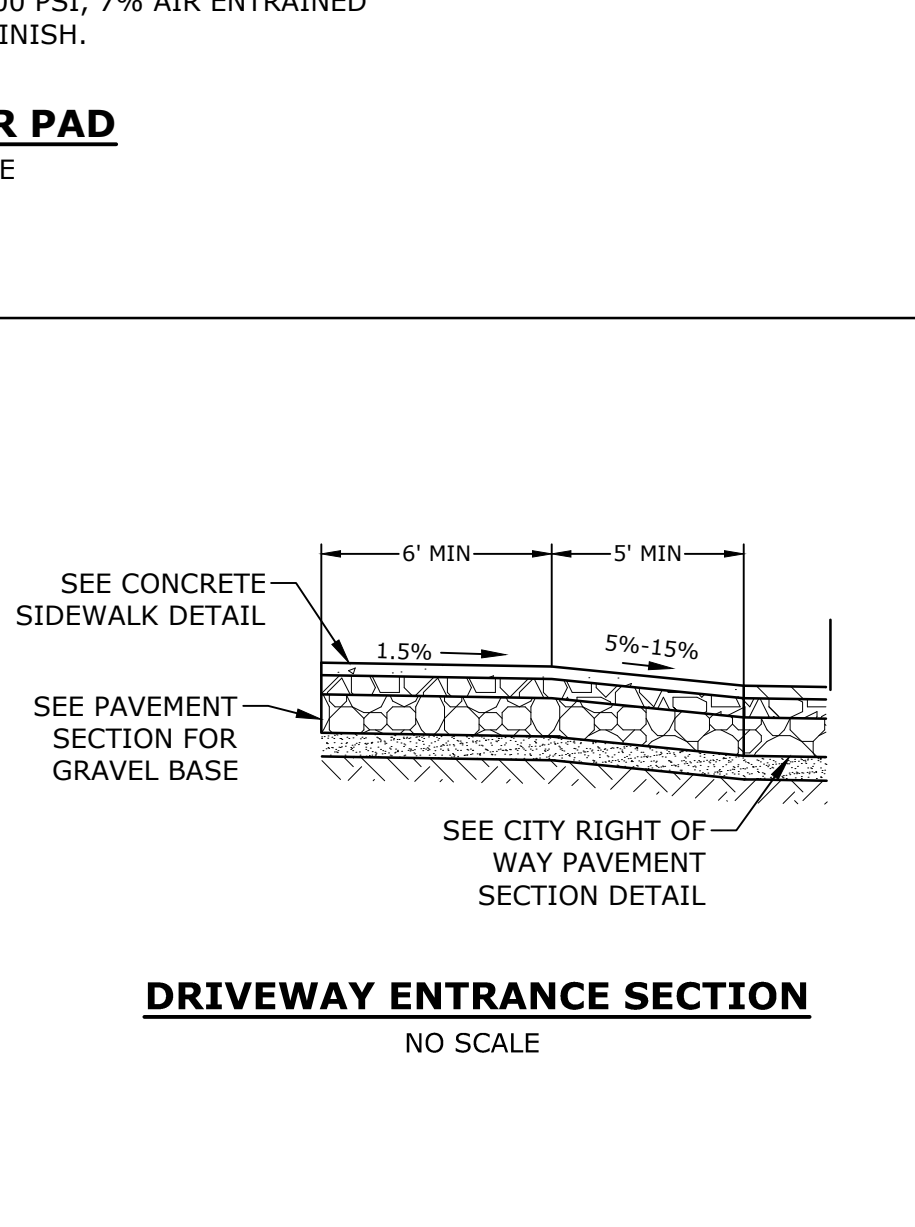
CONCRETE WASHOUT AREA
NO SCALE



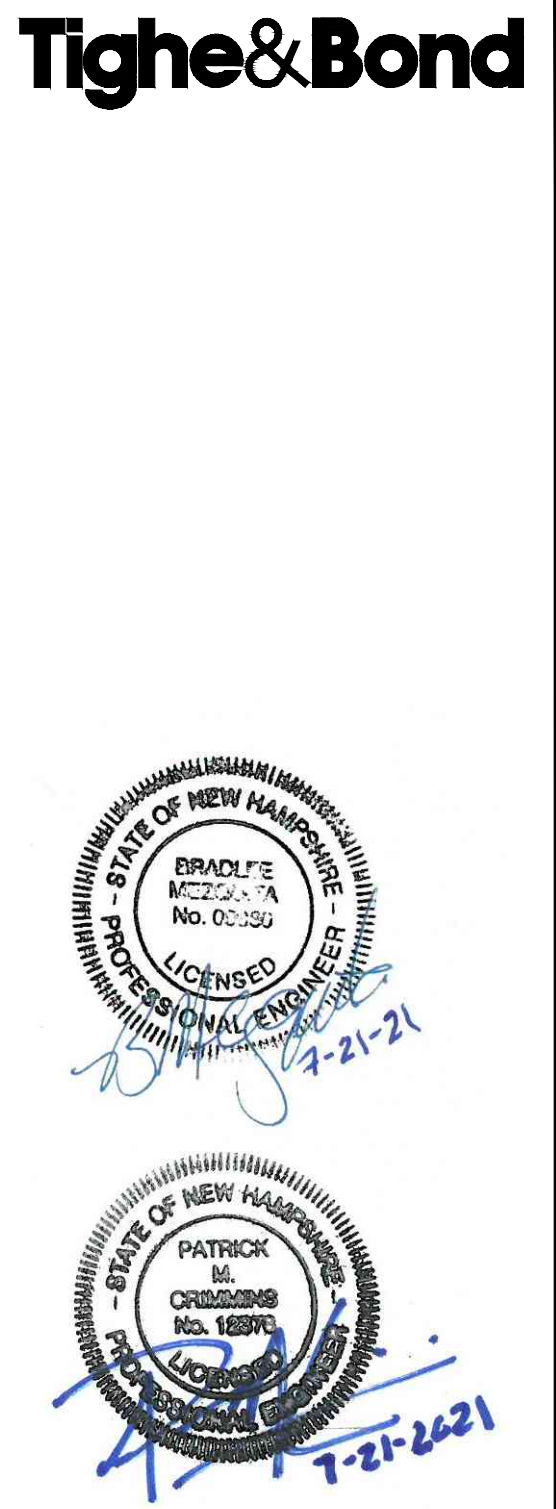
ACCESSIBLE SYMBOL
NO SCALE



CROSSWALK STRIPING
NO SCALE



DRIVEWAY ENTRANCE SECTION
NO SCALE



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
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| B | 3/10/2021 | Design Review Resubmission |
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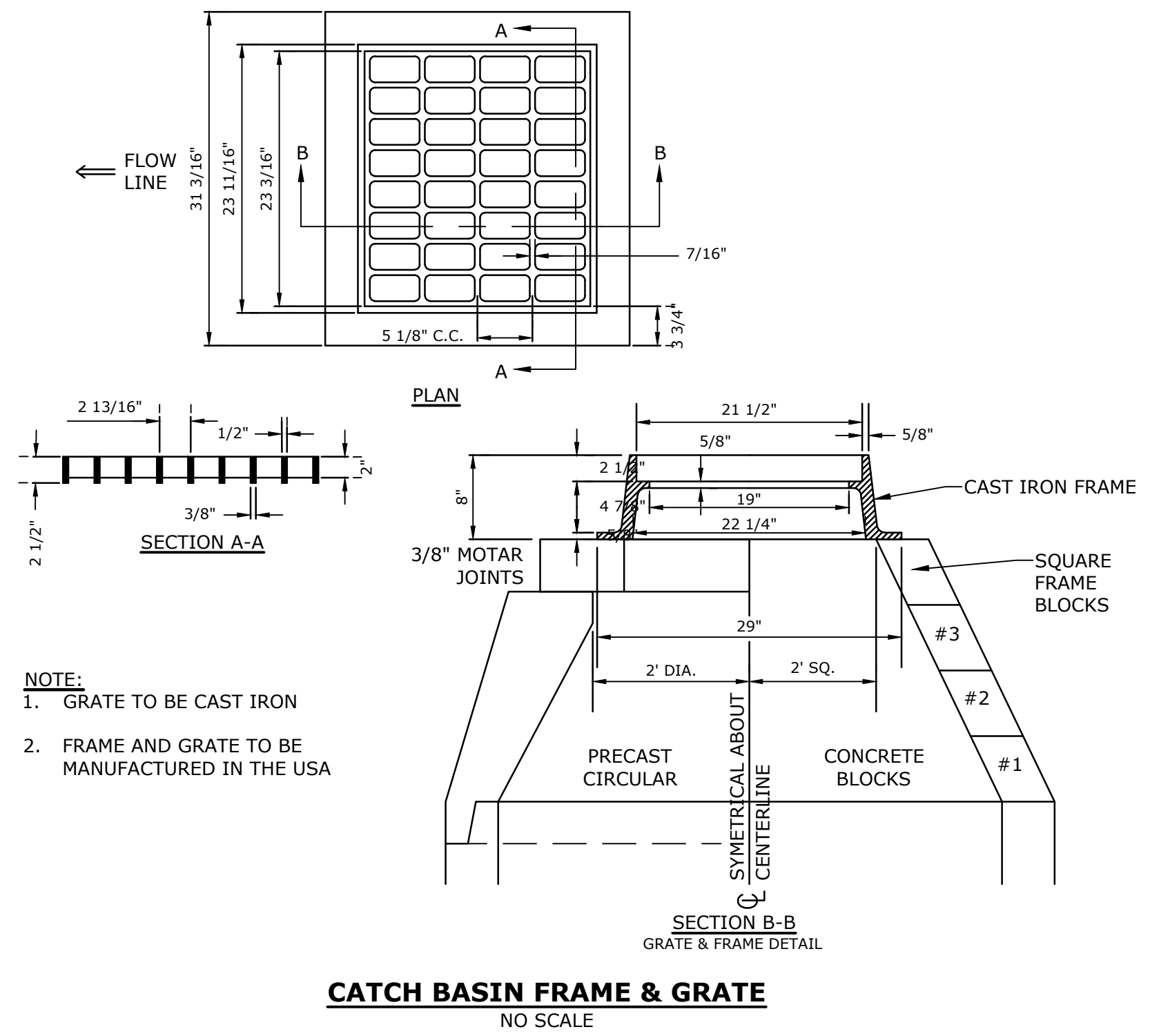
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DATE: December 22, 2020
FILE: P-0595-007-DTLS.DWG
DRAWN BY: CJK
CHECKED BY: NAH/PMC
APPROVED BY: BLM

DETAILS SHEET

SCALE: AS SHOWN

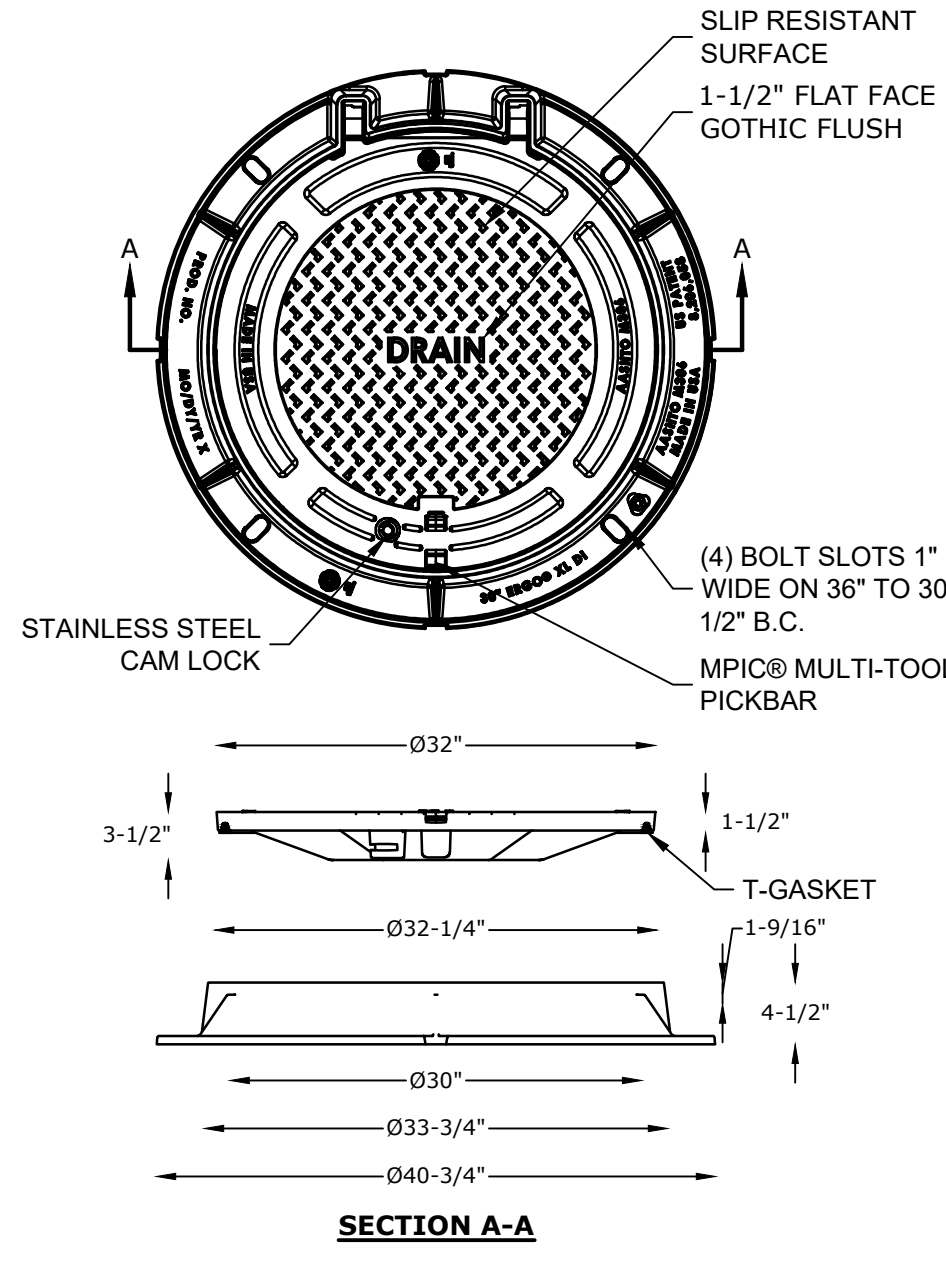
C-503

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Project: 0595-007-Proposed Mixed Use Development
Figure: 0595-007-DTLS.dwg
Tighe & Bond



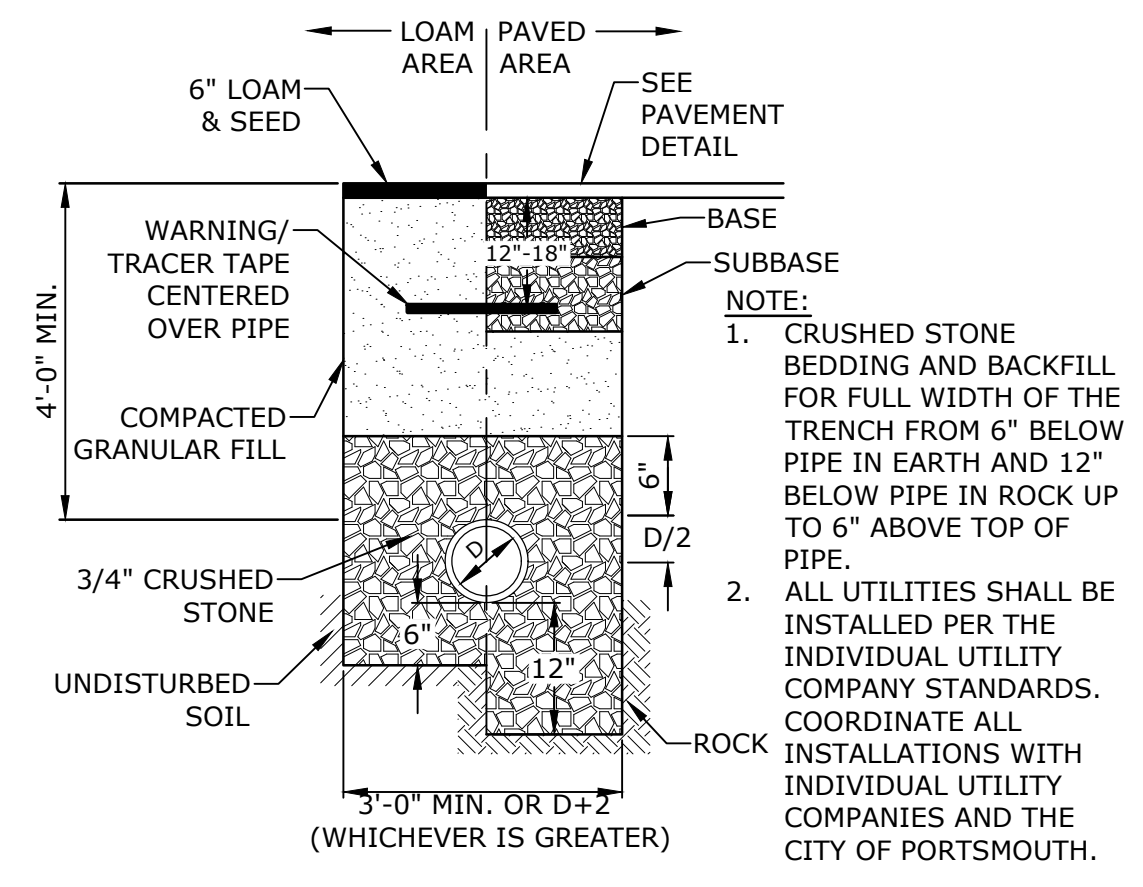
- NOTE:
 1. GRATE TO BE CAST IRON
 2. FRAME AND GRATE TO BE MANUFACTURED IN THE USA

CATCH BASIN FRAME & GRATE
NO SCALE



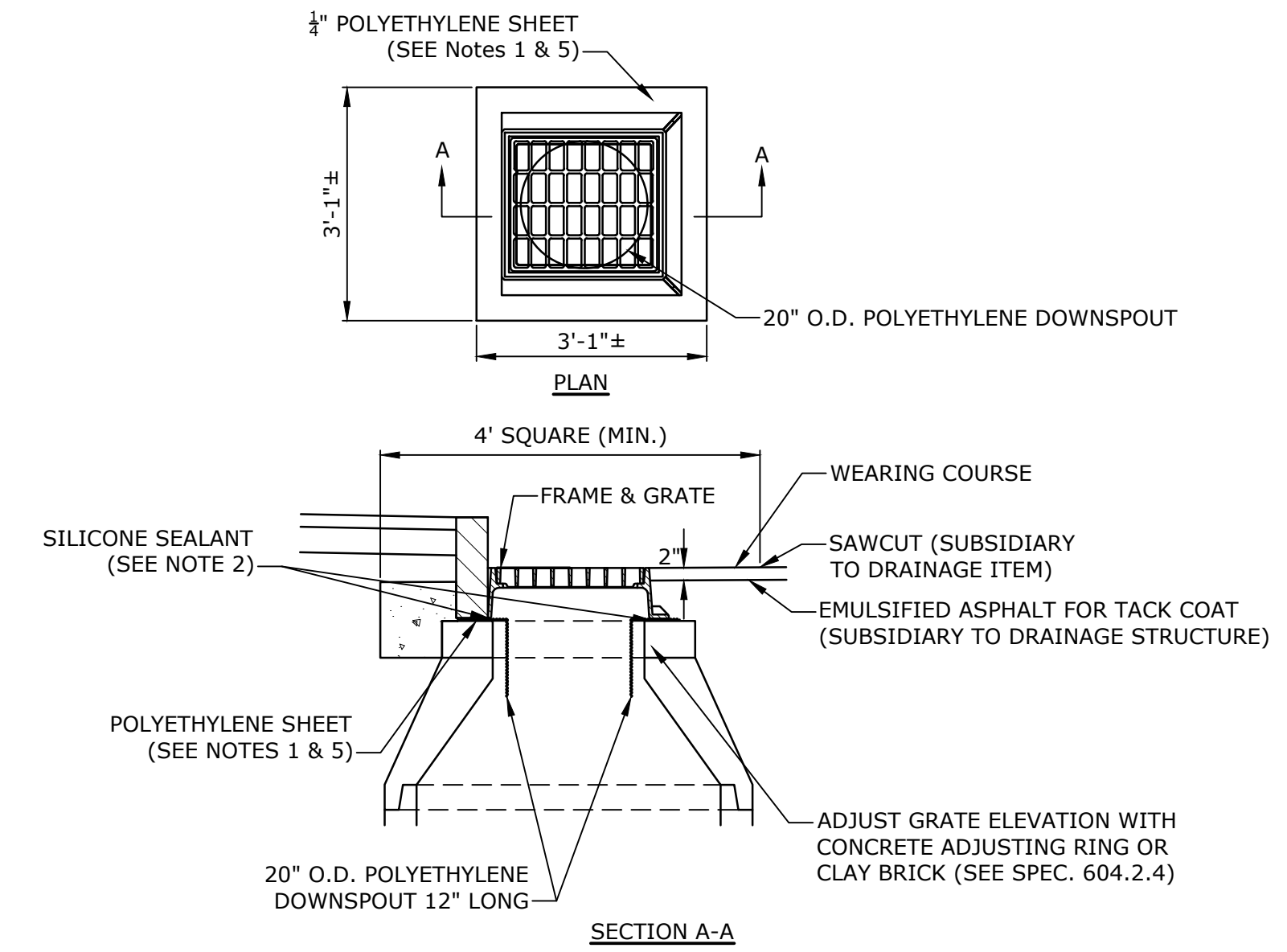
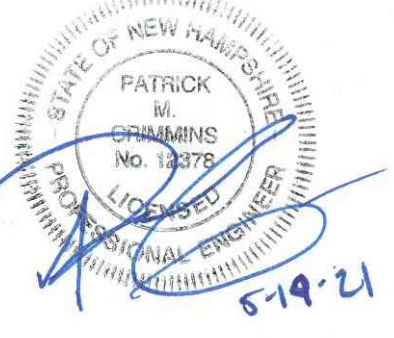
- NOTES:
 1. MANHOLE FRAME AND COVER SHALL BE 32" HINGED ERGO XL BY EJ CO.
 2. ALL DIMENSIONS ARE NOMINAL. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
 A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
 B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
 C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
 4. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN THE CENTER OF THE COVER.

DRAIN MANHOLE FRAME & COVER
NO SCALE



- NOTE:
 1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
 2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

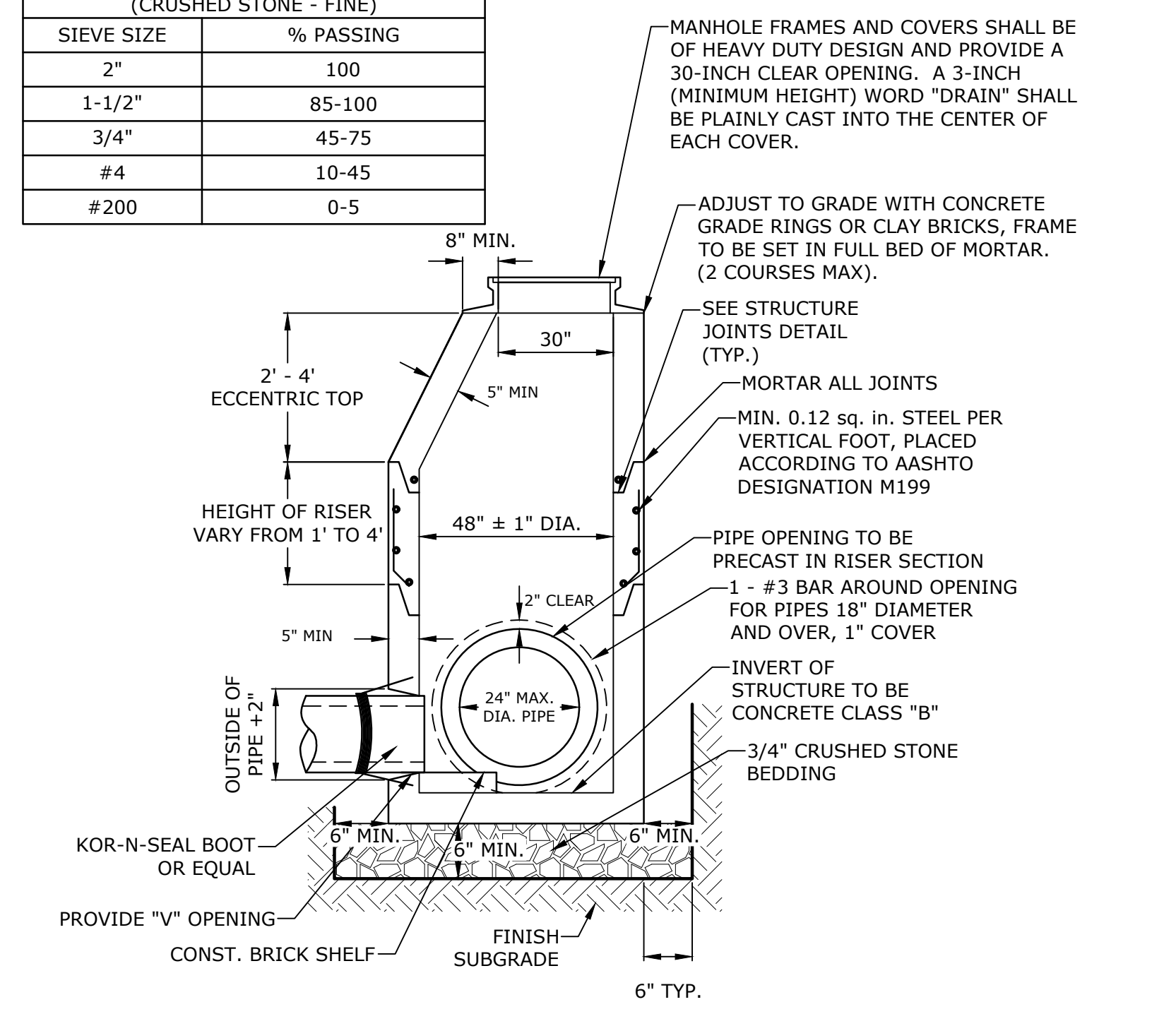
STORM DRAIN TRENCH
NO SCALE



- NOTES:
 1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
 2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
 3. PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF THE GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
 4. USE ON DRAINAGE STRUCTURES 4" MIN. DIAMETER ONLY.
 5. TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH 3-FLANGE FRAME AND CURB).
 6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 6" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
 7. PLACED ONLY IN DRAINAGE STRUCTURES IN PAVEMENT.
 8. SEE NHDOT DR-04, "DI-DB, UNDERDRAIN FLUSHING BASIN AND POLYETHYLENE LINER DETAILS", FOR ADDITIONAL INFORMATION.
 9. CATCHBASINS WITHIN CITY RIGHT OF WAY SHALL HAVE A POLYETHYLENE LINER

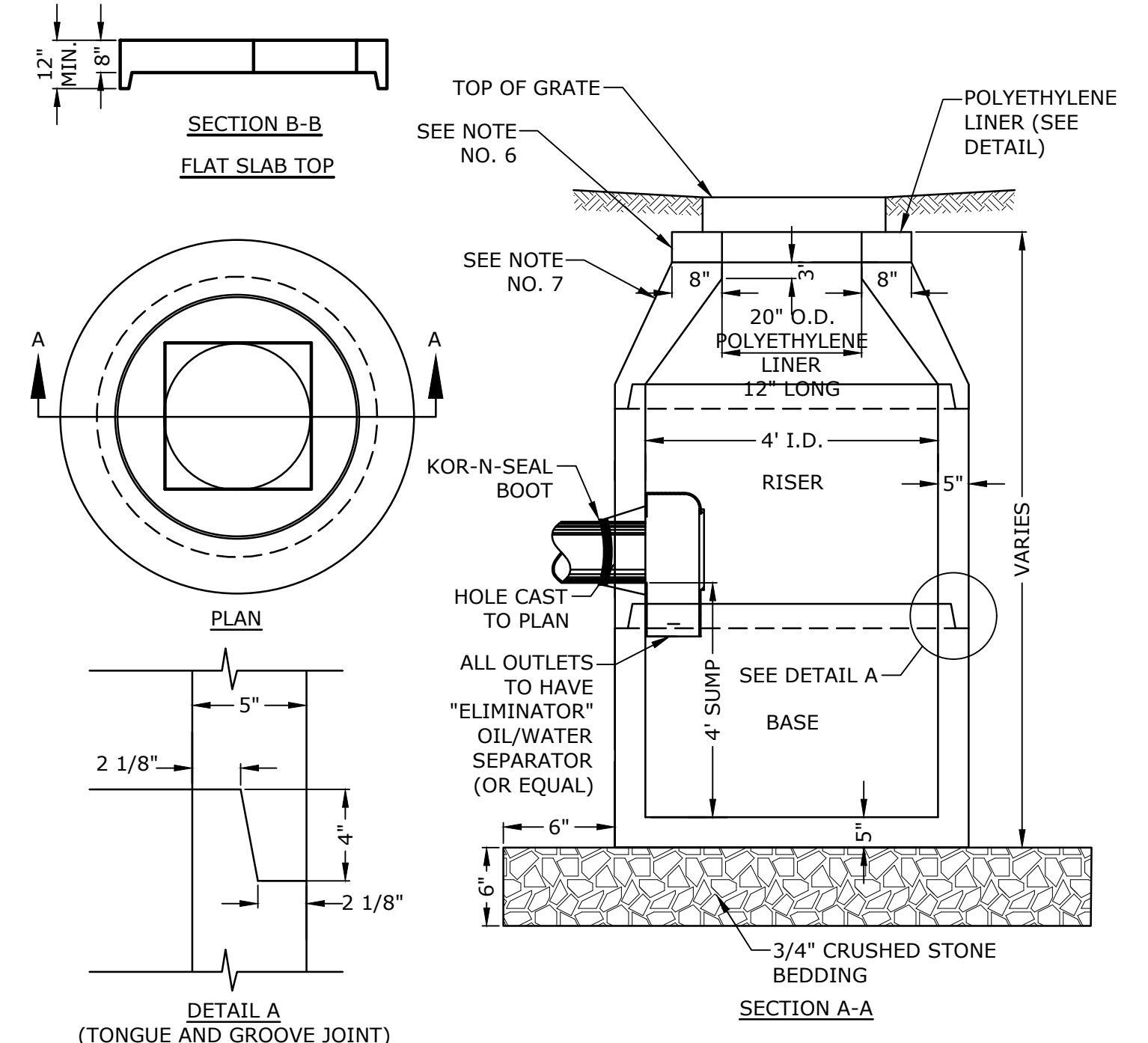
POLYETHYLENE LINER
NO SCALE

| NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE) | |
|---|-----------|
| SIEVE SIZE | % PASSING |
| 2" | 100 |
| 1-1/2" | 85-100 |
| 3/4" | 45-75 |
| #4 | 10-45 |
| #200 | 0-5 |



- NOTES:
 1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
 4. THE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
 5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
 6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
 7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
 8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
 10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

4' DIAMETER DRAIN MANHOLE
NO SCALE



- NOTES:
 1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 PSI).
 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
 4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
 5. THE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
 6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
 7. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
 8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
 9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
 10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
 11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
 12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

4' DIAMETER CATCHBASIN
NO SCALE

Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

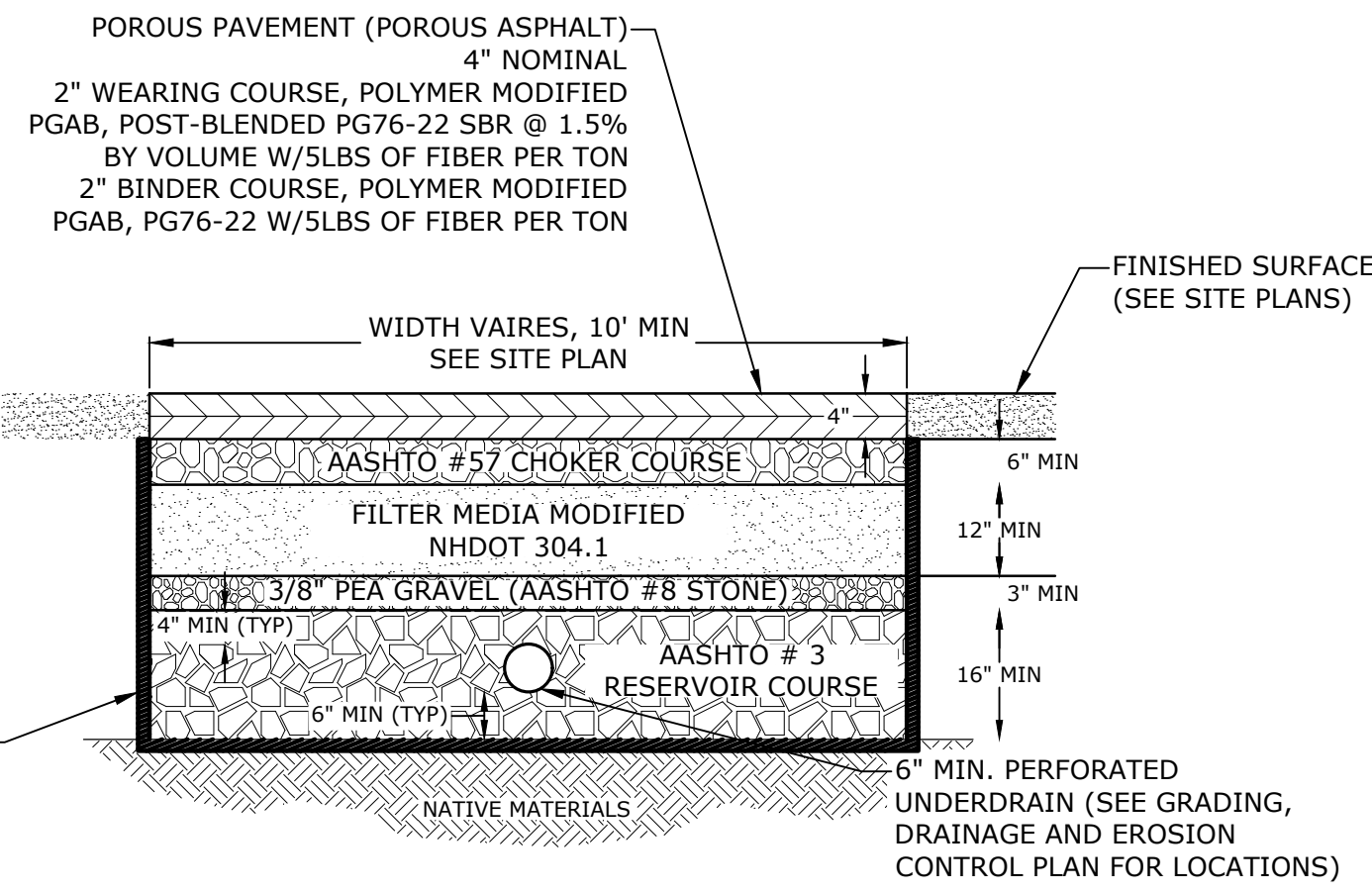
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| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
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| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-DTLS.DWG |
| DRAWN BY: | CKK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

DETAILS SHEET

SCALE: AS SHOWN

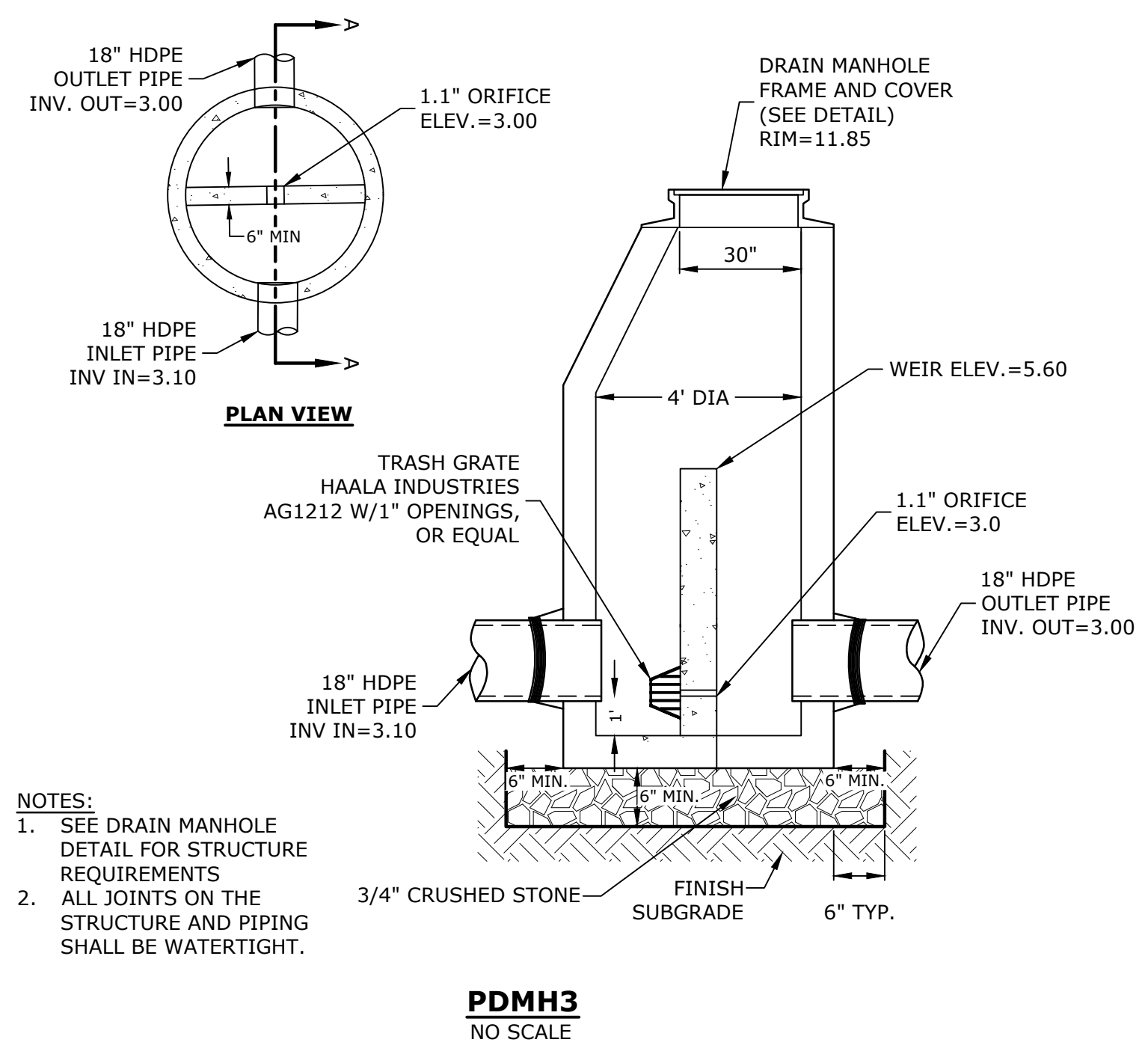
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| AASHTO #57 STONE (CHOKER COURSE) | | MODIFIED NHDOT 304.1 | | AASHTO #8 STONE (PEA GRAVEL) | | AASHTO #3 STONE (RESERVOIR COURSE) | |
|----------------------------------|-----------|----------------------|-----------|------------------------------|-----------|------------------------------------|-----------|
| SIZE | % PASSING | SIZE | % PASSING | SIZE | % PASSING | SIZE | % PASSING |
| 1 1/2" | 100 | 6" | 100 | 3/4" | 100 | 2 1/4" | 100 |
| 1" | 95-100 | #4 | 70-100 | 3/8" | 85-100 | 2" | 90-100 |
| 3/4" | 25-60 | #200 | 0-6* | #4 | 10-30 | 1 1/2" | 35-70 |
| #4 | 0-10 | *PREFERABLY <4% | | #8 | 0-10 | 1" | 0-15 |
| #8 | 0-5 | | | #16 | 0-5 | 3/8" | 0-5 |

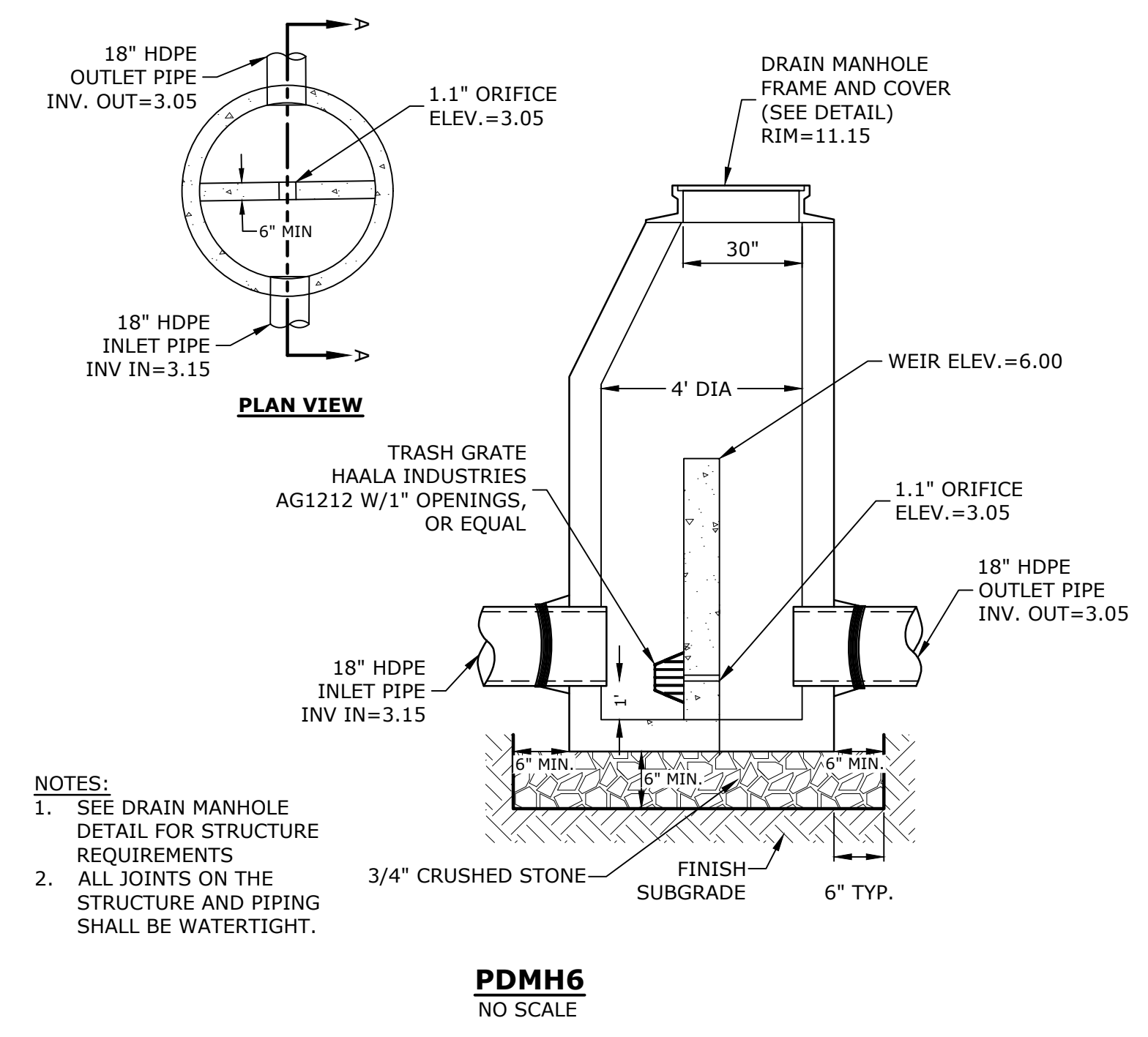
- NOTES:**
- SEE GRADING, DRAINAGE, UTILITIES AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 - POROUS ASPHALT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS FROM THE UNH STORMWATER CENTER FOR POROUS ASPHALT.
 - POROUS ASPHALT MIX SPECIFIED IS RECOMMENDED BY THE UNH STORMWATER CENTER FOR SITES ANTICIPATING H-20 LOADING.
 - FILTER COURSE TO BE INCREASED AS NECESSARY TO MEET PROPOSED GRADES.
 - INSTALL FILTER COURSE AGGREGATE IN 8-INCH MAXIMUM LIFTS TO A MAXIMUM OF 95% STANDARD PROCTOR COMPACTION (ASTM D698 / AASHTO T99). INSTALL AGGREGATE TO GRADES INDICATED ON THE DRAWINGS.
 - INSTALL CHOKER, GRAVEL, AND STONE BASE COURSE AGGREGATE TO A MAXIMUM OF 95% COMPACTION STANDARD PROCTOR (ASTM D698 / AASHTO T99). CHOKER SHOULD BE PLACED EVENLY OVER SURFACE OF FILTER COURSE BED, SUFFICIENT TO ALLOW PLACEMENT OF PAVEMENT, AND NOTIFY ENGINEER FOR APPROVAL. CHOKER BASE COURSE THICKNESS SHALL BE SUFFICIENT TO ALLOW FOR EVEN PLACEMENT OF THE POROUS ASPHALT BUT NO LESS THAN 6-INCHES IN DEPTH.
 - THE DENSITY OF SUBBASE COURSES SHALL BE DETERMINED BY AASHTO T 191 (SAND-CONE METHOD), AASHTO T 204 (DRIVE CYLINDER METHOD), OR AASHTO T 238 (NUCLEAR METHODS), OR OTHER APPROVED METHODS AT THE DISCRETION OF THE SUPERVISING ENGINEER.

POROUS ASPHALT SECTION
NO SCALE



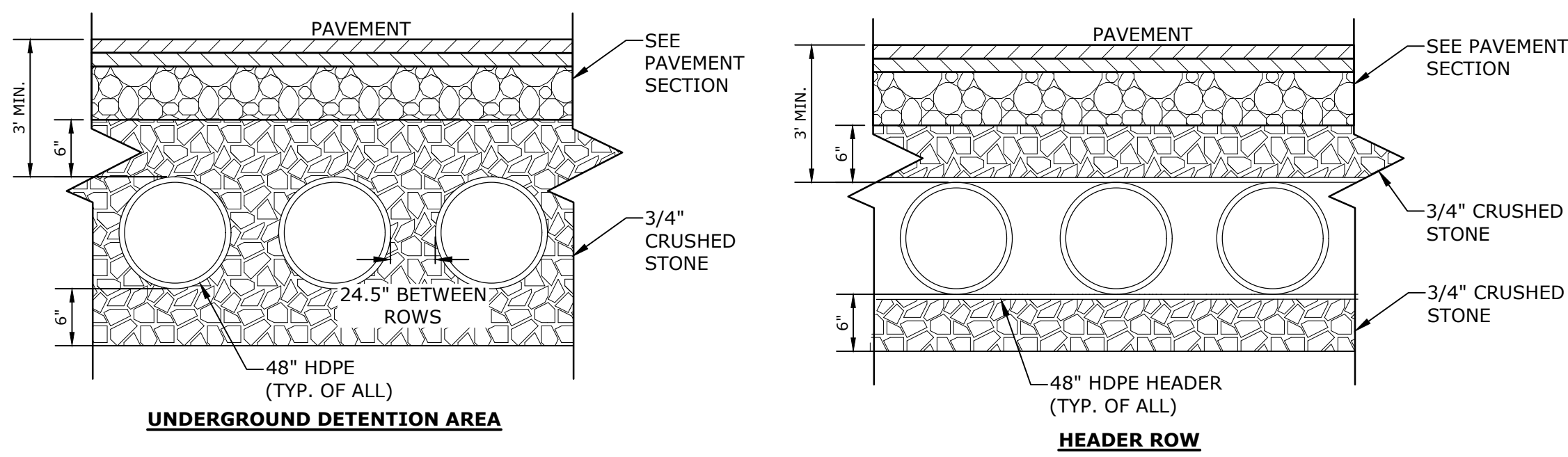
- NOTES:**
- SEE DRAIN MANHOLE DETAIL FOR STRUCTURE REQUIREMENTS
 - ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

PDMH3
NO SCALE



- NOTES:**
- SEE DRAIN MANHOLE DETAIL FOR STRUCTURE REQUIREMENTS
 - ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

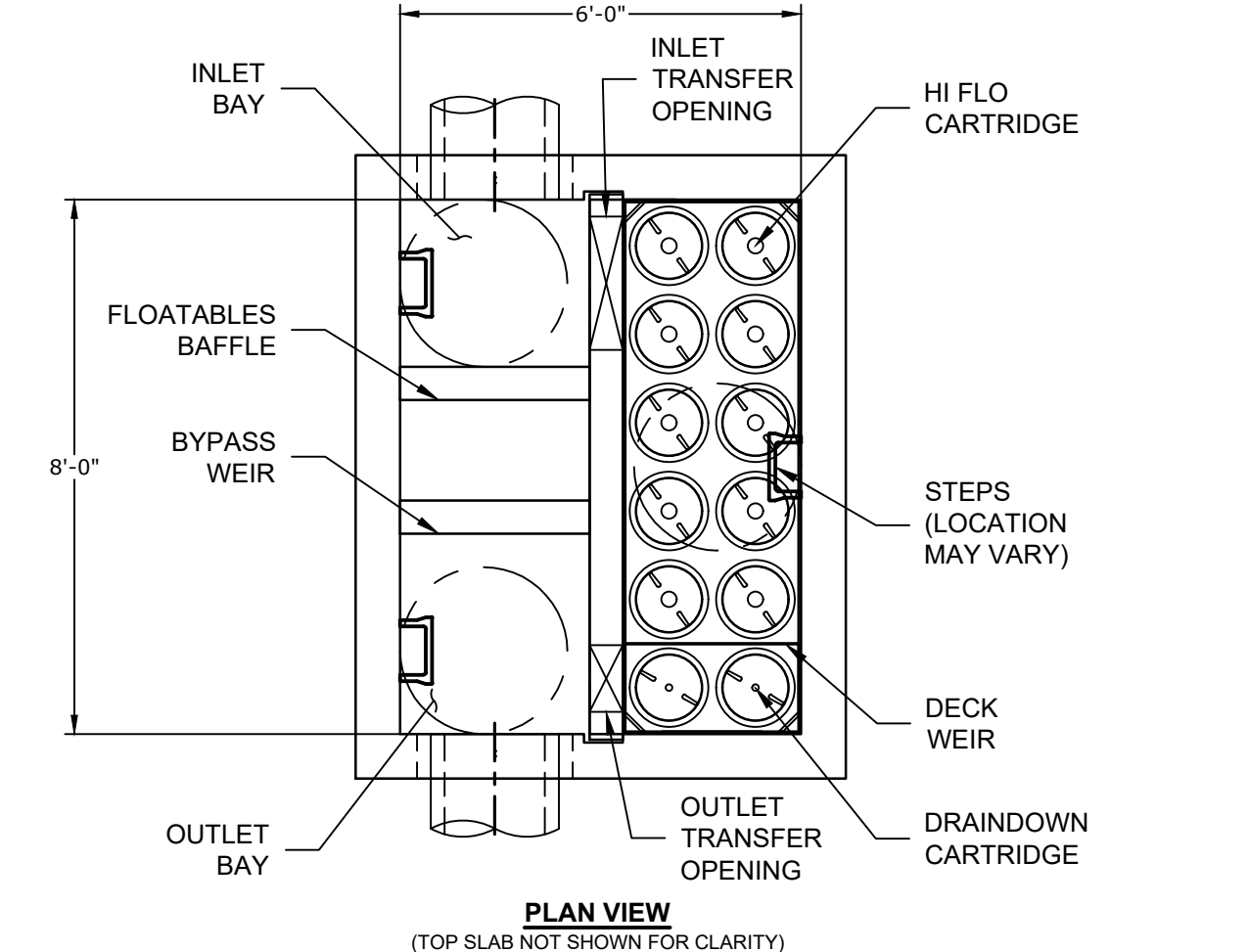
PDMH6
NO SCALE



| | FIELD ELEVATIONS | | | |
|-------|-------------------|------------------|---------------------|----------------------|
| | TOP OF STONE ELEV | TOP OF PIPE ELEV | BOTTOM OF PIPE ELEV | BOTTOM OF STONE ELEV |
| UD8 1 | 8.25' | 7.25' | 3.50' | 2.75' |
| UD8 2 | 8.25' | 7.25' | 3.50' | 2.75' |

- NOTES:**
- UNDERGROUND DETENTION SYSTEM TO BE 48" HDPE PIPE DESIGNED FOR H-20 LOADING. CONTRACTOR TO SUBMIT PIPE SPECIFICATIONS AND FINAL MANUFACTURER'S DESIGN TO ENGINEER FOR APPROVAL.
 - MANUFACTURER TO SUBMIT PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
 - THE DESIGN ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION TO CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED PER THE APPROVED DESIGN PLAN.
 - REFER TO STANDARD DUTY PAVEMENT SECTION DETAIL FOR PAVEMENT SECTION.

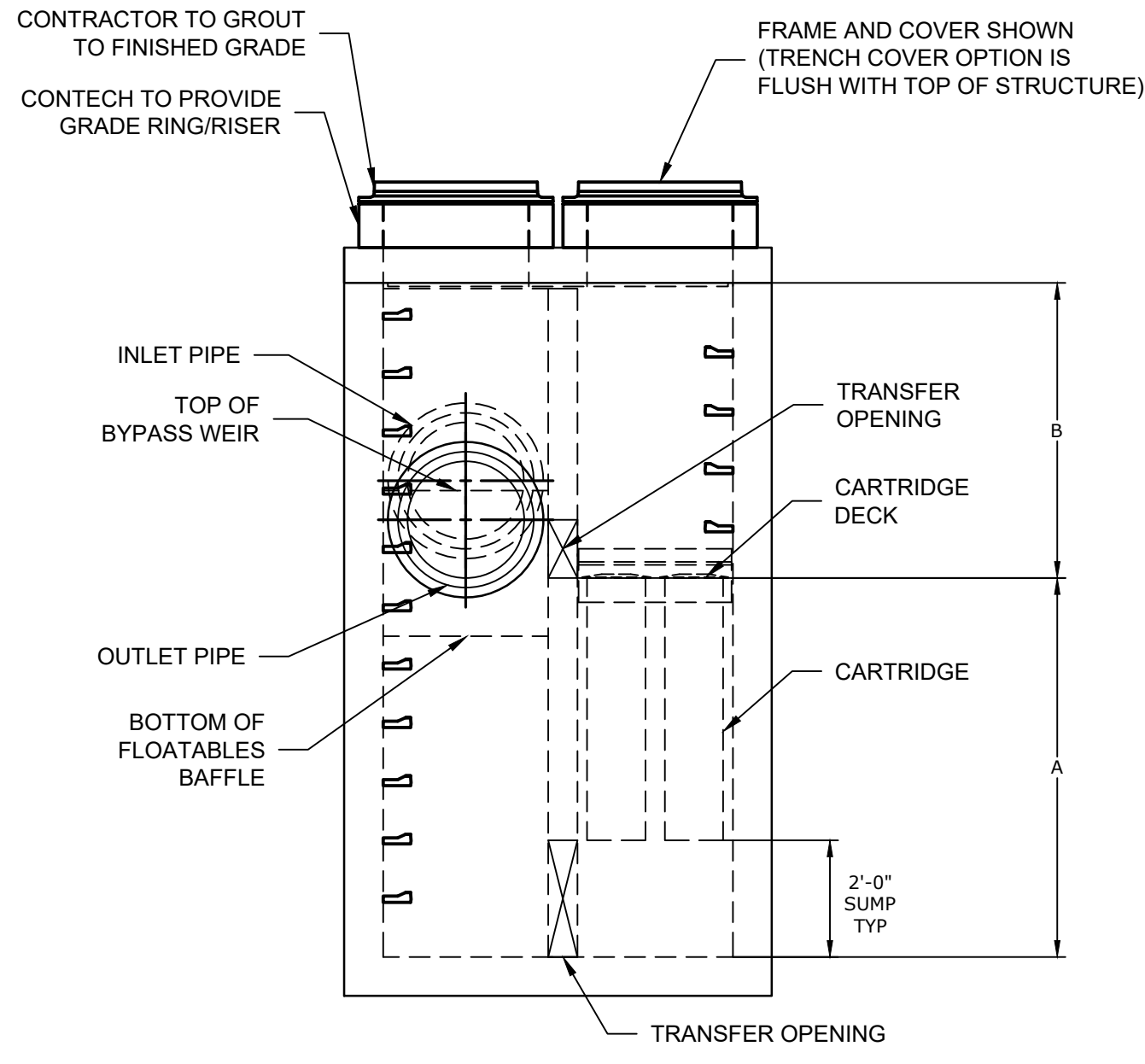
UNDERGROUND DETENTION SYSTEM DETAIL
NO SCALE



| FIELD ELEVATIONS | | | | | |
|------------------|---------------|-----------------|------------|------------------|-------------|
| | RIM ELEVATION | INLET ELEVATION | INLET PIPE | OUTLET ELEVATION | OUTLET PIPE |
| JFF 1 | 11.85 | 2.85' | 18" HDPE | 2.90' | 18" HDPE |
| JFF 2 | 11.25 | 2.90' | 18" HDPE | 2.40' | 18" HDPE |

| JELLYFISH JFPD0806 - DESIGN NOTES | | | | |
|---|---------------|---------------|---------------|---------------|
| JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OPENLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD. | | | | |
| CARTRIDGE SELECTION | 54" | 40" | 27" | 15" |
| CARTRIDGE LENGTH | 54" | 40" | 27" | 15" |
| OUTLET INVERT TO STRUCTURE INVERT (A) | 6'-6" | 5'-4" | 4'-3" | 3'-3" |
| FLOW RATE IN FLO / DRAINDOWN (GFS) (PER CART) | 0.178 / 0.089 | 0.133 / 0.067 | 0.089 / 0.045 | 0.049 / 0.025 |
| MAX. TREATMENT (GFS) | 1.98 | 1.47 | 0.98 | 0.51 |
| DECK TO INSIDE TOP (MIN) (B) | 5.00 | 4.00 | 4.00 | 4.00 |

| SITE SPECIFIC DATA REQUIREMENTS | | | |
|------------------------------------|----------|----------|----------|
| STRUCTURE ID | JF-1 | JF-2 | |
| MODEL SIZE | JFPD0806 | JFPD0806 | JFPD0806 |
| WATER QUALITY FLOW RATE (cfs) | 2.85 | 0.63 | |
| PEAK FLOW RATE (cfs) | 26.54 | 5.13 | |
| RETURN PERIOD OF PEAK FLOW (yrs) | 25 | 25 | |
| # OF CARTRIDGES REQUIRED (HF / DD) | 153 | 511 | |
| CARTRIDGE SIZE | 54" | 40" | |



- GENERAL NOTES:**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
 - JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 - CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 - STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 3' AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M80 LOAD RATINGS AND BE CAST WITH THE CONTECH LOGO.
 - STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
 - OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
 - THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
 - NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

- INSTALLATION NOTES:**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED).
 - CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERS TOP OR FLEXIBLE BOOT).
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
 - CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.

Jellyfish Filter
 CONTECH ENGINEERED SOLUTIONS LLC
 9025 Centre Pointe Dr., Suite 400, West Chester, OH 45380
 800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH JELLYFISH STORMWATER FILTER
NO SCALE

Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

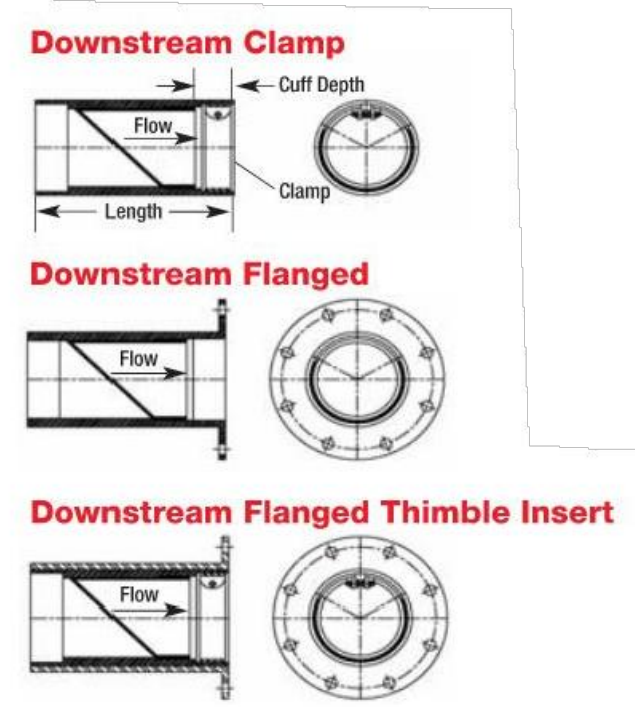
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|--------------|---------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-DTLS.DWG |
| DRAWN BY: | CHK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

DETAILS SHEET

SCALE: AS SHOWN

C-505

Last Saved: 5/13/2021 3:27pm By: M.Hansen
 Project: 0595-007 DTLS.DWG
 Title: 0595-007 DTLS.DWG
 Figure: AutoCAD/Sheet: P-0595-007-DTLS.DWG

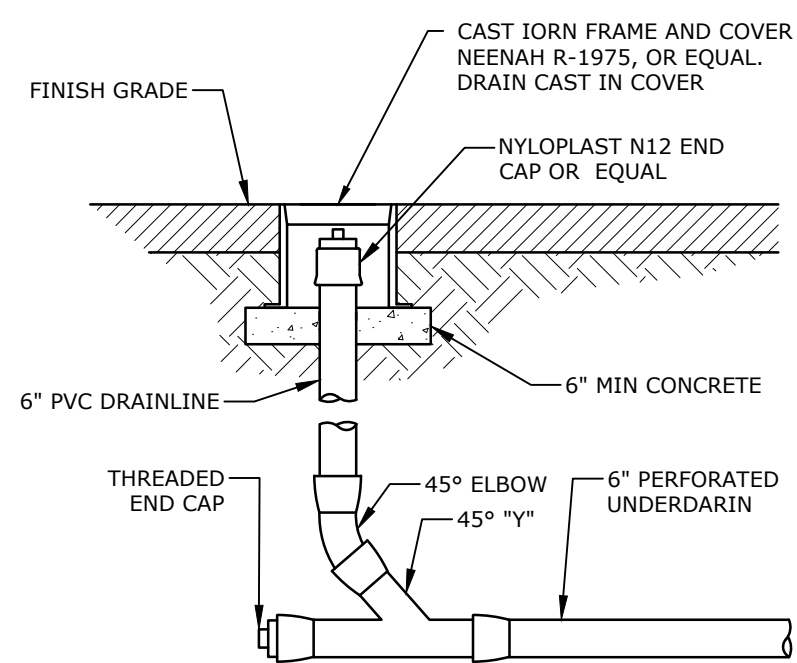


CheckMates® can be made for any pipe I.D.
Built to fit in sizes from 3" to 78".

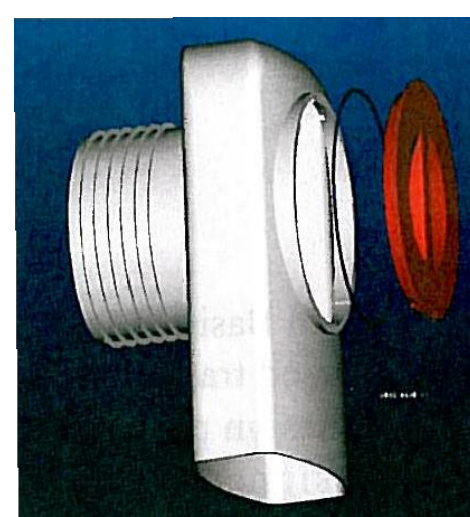
| Standard Pressure | CHECKMATE® VALVE | | | | | | | | | | |
|-------------------|------------------------|-------------|-----------------|-------------|------------------|------------|-------------|------------------------|--------|--------|----|
| | NOMINAL PIPE SIZE I.D. | | OVERALL LENGTH* | | NUMBER OF CLAMPS | CUFF DEPTH | | BACK PRESSURE RATING** | | WEIGHT | |
| | Inches | Millimeters | Inches | Millimeters | | Inches | Millimeters | Feet | Meters | lbs | Kg |
| 12 | 300 | 19.8 | 503 | 1 | 2.0 | 51 | 68 | 20.1 | 37 | 17 | |
| 14 | 350 | 25.8 | 655 | 1 | 4.0 | 102 | 64 | 20.0 | 110 | 50 | |
| 16 | 400 | 28.6 | 726 | 1 | 4.0 | 102 | 60 | 18.3 | 133 | 52 | |
| 18 | 450 | 31.0 | 787 | 1 | 4.0 | 102 | 56 | 17.1 | 143 | 65 | |
| 20 | 500 | 42.1 | 1069 | 2 | 8.0 | 203 | 53 | 16.2 | 223 | 102 | |
| 24 | 600 | 47.5 | 1207 | 2 | 8.0 | 203 | 45 | 13.7 | 304 | 137 | |

- NOTES:
- PIPES WHERE NOTED TO HAVE TIDEFLEX, CHECKMATE INLINE CHECK VALVES MANUFACTURED BY REDVALVE, OR EQUAL
 - CHECK VALVES SHALL BE INSTALLED PER THE MANUFACTURERS INSTALLATION SPECIFICATIONS

ON-SITE BACK FLOW PREVENTER
NO SCALE

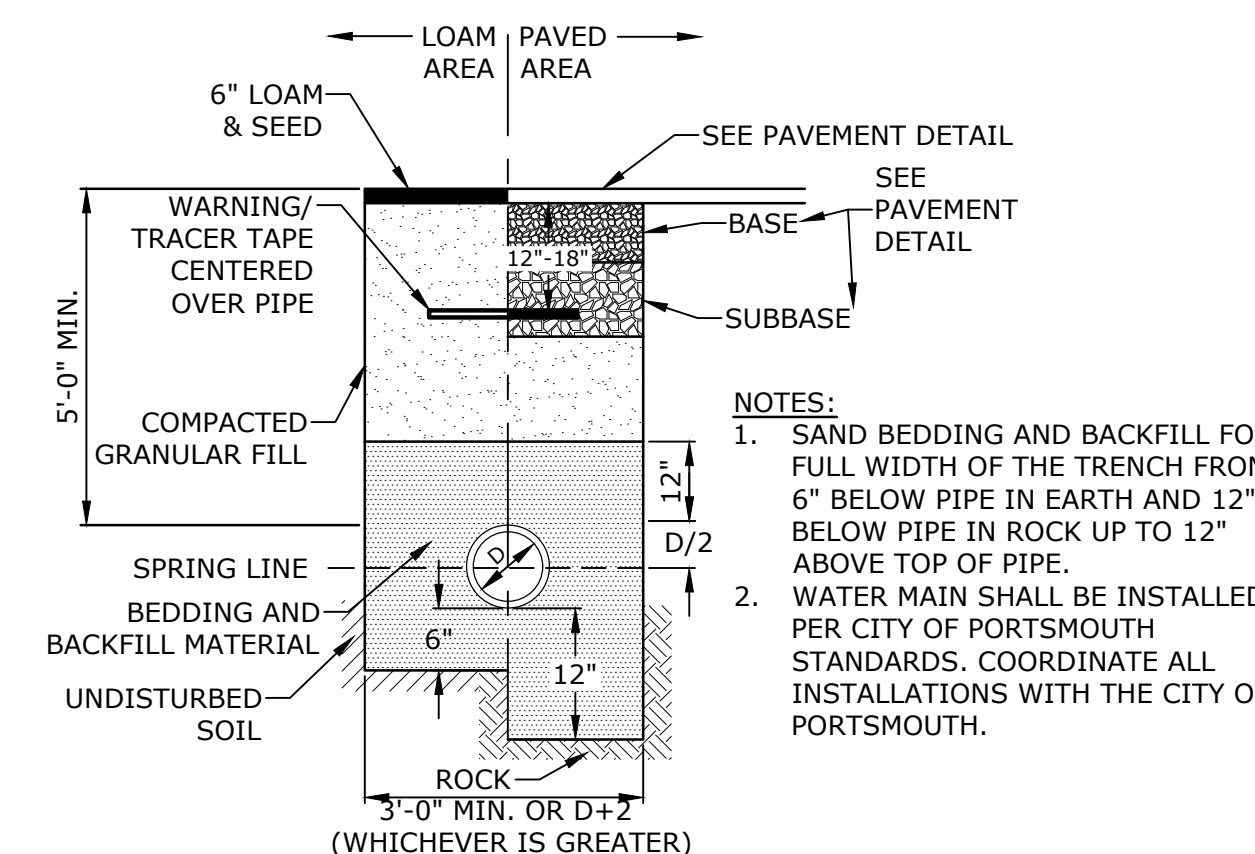


DRAIN CLEAN-OUT
NO SCALE



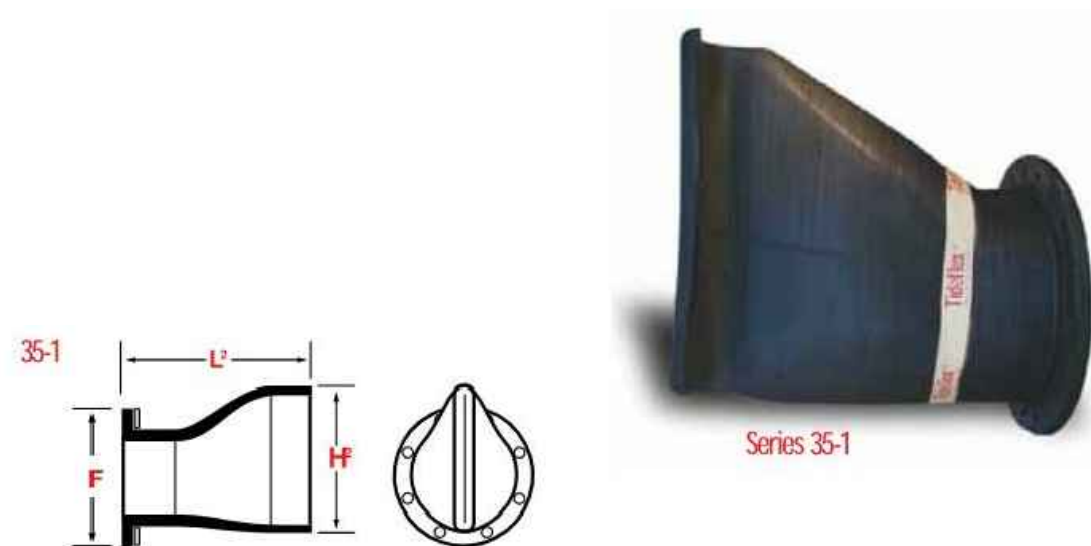
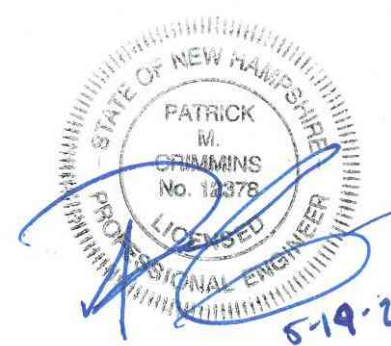
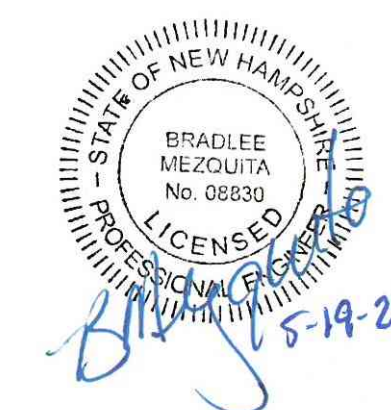
- NOTES:
- ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL). INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
 - 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP



WATER TRENCH
NO SCALE

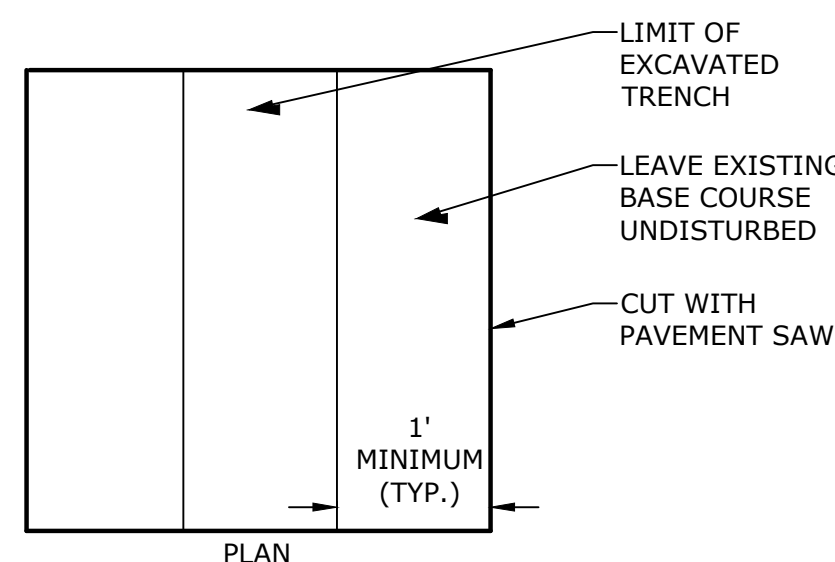
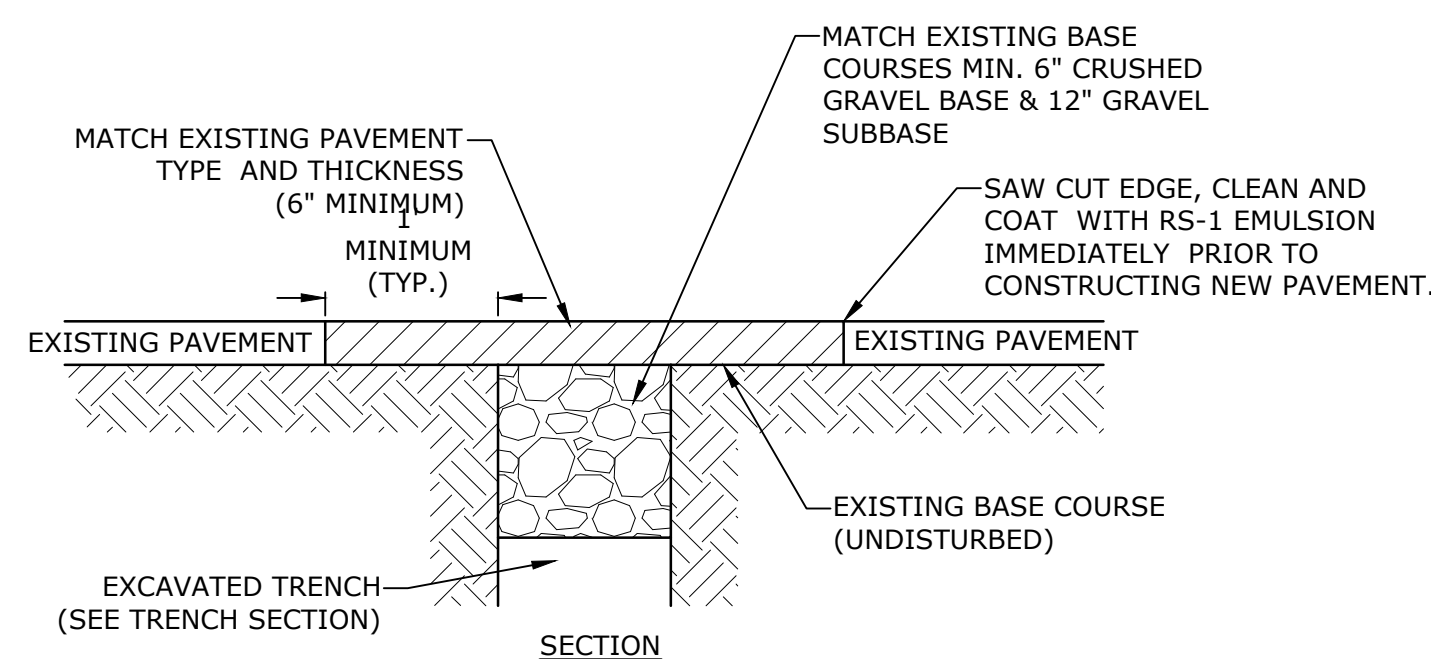
- NOTES:
- SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
 - WATER MAIN SHALL BE INSTALLED PER CITY OF PORTSMOUTH STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.



| SERIES 35-1 | | | |
|--------------------|-----------------|------------|-----------------|
| Flange Size (ANSI) | Flange O.D. (F) | Length (L) | Bill Height (H) |
| 18 | 25 | 40 | 34 |
| 20 | 27 1/2 | 48 | 37 |
| 24 | 32 | 52 | 44 |
| 30 | 38 3/4 | 62 | 55 |

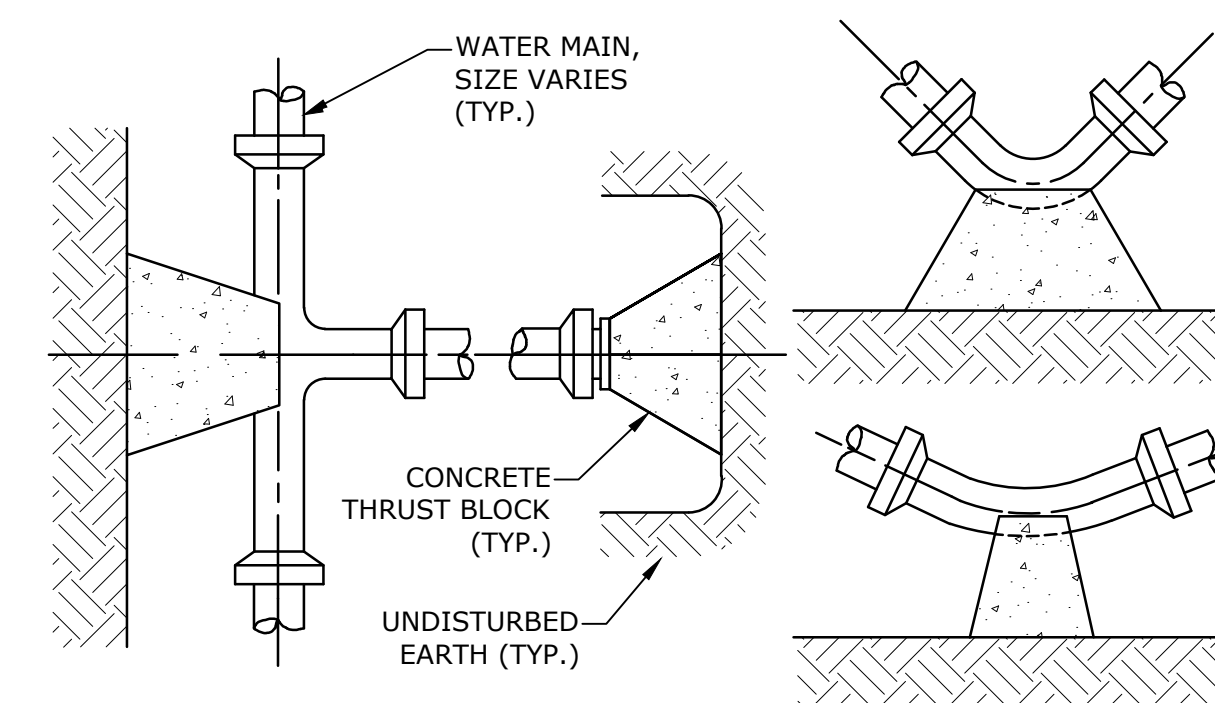
- NOTES:
- CONCRETE HEADWALL TO HAVE TIDEFLEX CHECK VALVE MANUFACTURED BY REDVALVE AND SHALL BE APPROVED BY THE CITY OF PORTSMOUTH DPW.
 - CHECK VALVE SHALL BE INSTALLED USING A FLANGED BOLT ON CONNECTION PER THE MANUFACTURERS INSTALLATION SPECIFICATIONS.
 - END OF PIPE SHALL BE FLUSH WITH CONCRETE HEADWALL AND BE GROUTED PRIOR TO THE INSTALLATION OF THE CHECK VALVE.

CITY OUTLET BACK FLOW PREVENTER
NO SCALE



NOTE:
COORDINATE AND OBTAIN APPROVAL FOR ALL TRENCHING AND PATCHING WITHIN CITY RIGHT OF WAY WITH CITY OF PORTSMOUTH DPW PRIOR TO COMMENCING WORK.

ROADWAY TRENCH PATCH
NO SCALE



| TEST PRESSURE = 200psi | SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL | | | | |
|------------------------|---|-----------|------|-------|-------|
| | REACTION TYPE | PIPE SIZE | | | |
| | | 4" | 6" | 8" | 10" |
| A 90° | 0.89 | 2.19 | 3.82 | 11.14 | 17.24 |
| B 180° | 0.65 | 1.55 | 2.78 | 8.38 | 12.00 |
| C 45° | 0.48 | 1.19 | 2.12 | 6.02 | 9.32 |
| D 22-1/2° | 0.25 | 0.60 | 1.06 | 3.08 | 4.74 |
| E 11-1/4° | 0.13 | 0.30 | 0.54 | 1.54 | 2.38 |

- NOTES:
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
 - ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 - PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
 - WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
 - INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.

THRUST BLOCKING DETAIL
NO SCALE

Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

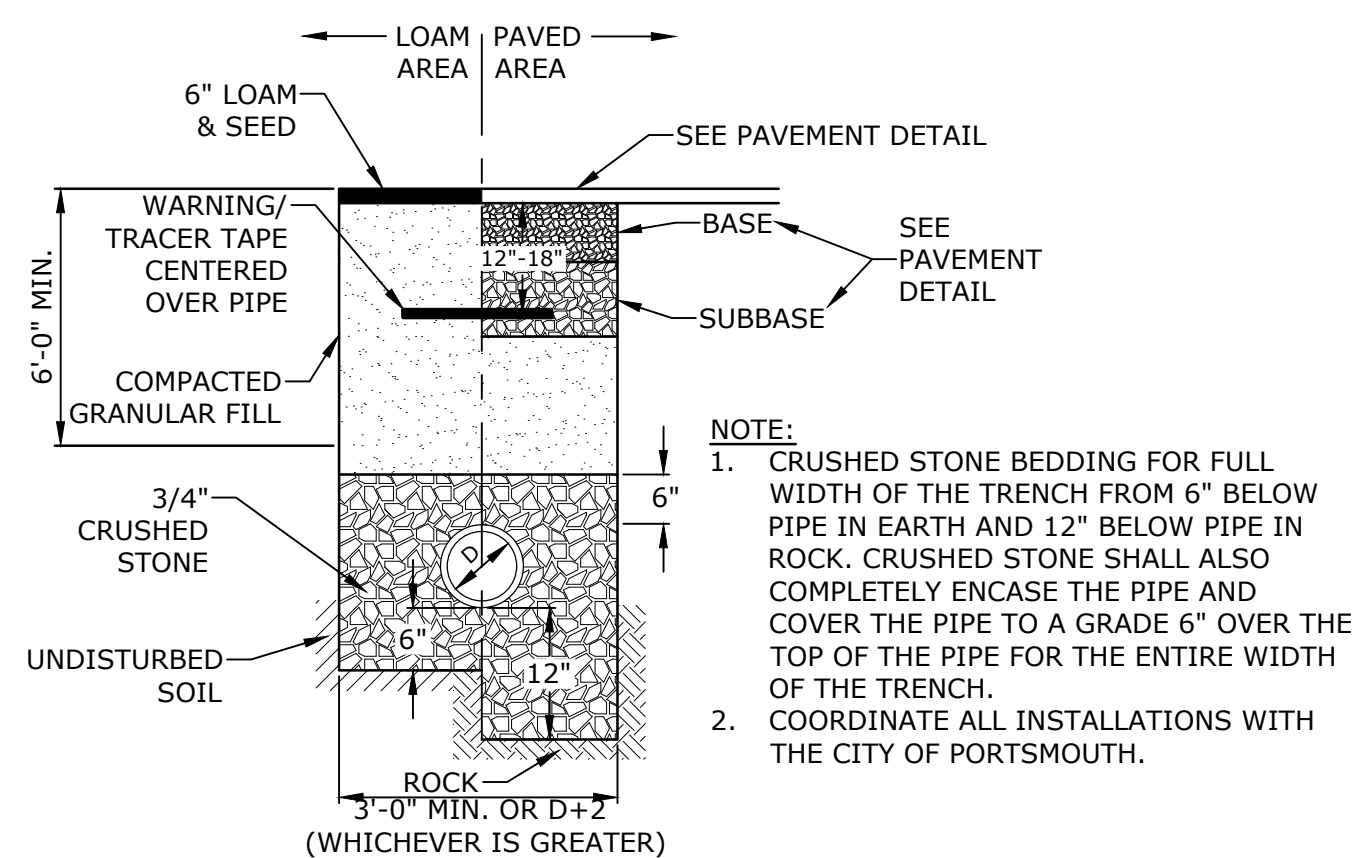
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| E | 4/28/2021 | CC Resubmission |
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| A | 12/1/2020 | TAC Work Session |

| | |
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| DATE: | December 22, 2020 |
| FILE: | P-0595-007-DTLS.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

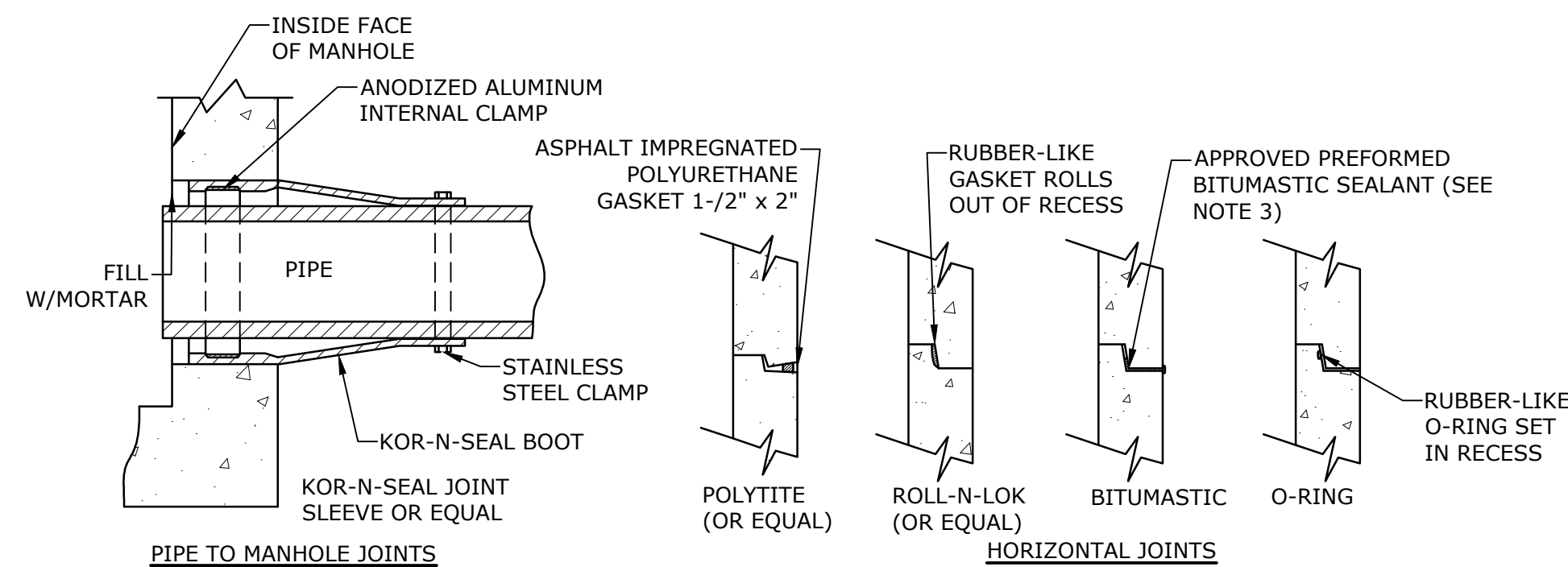
DETAILS SHEET

SCALE: AS SHOWN

C-506

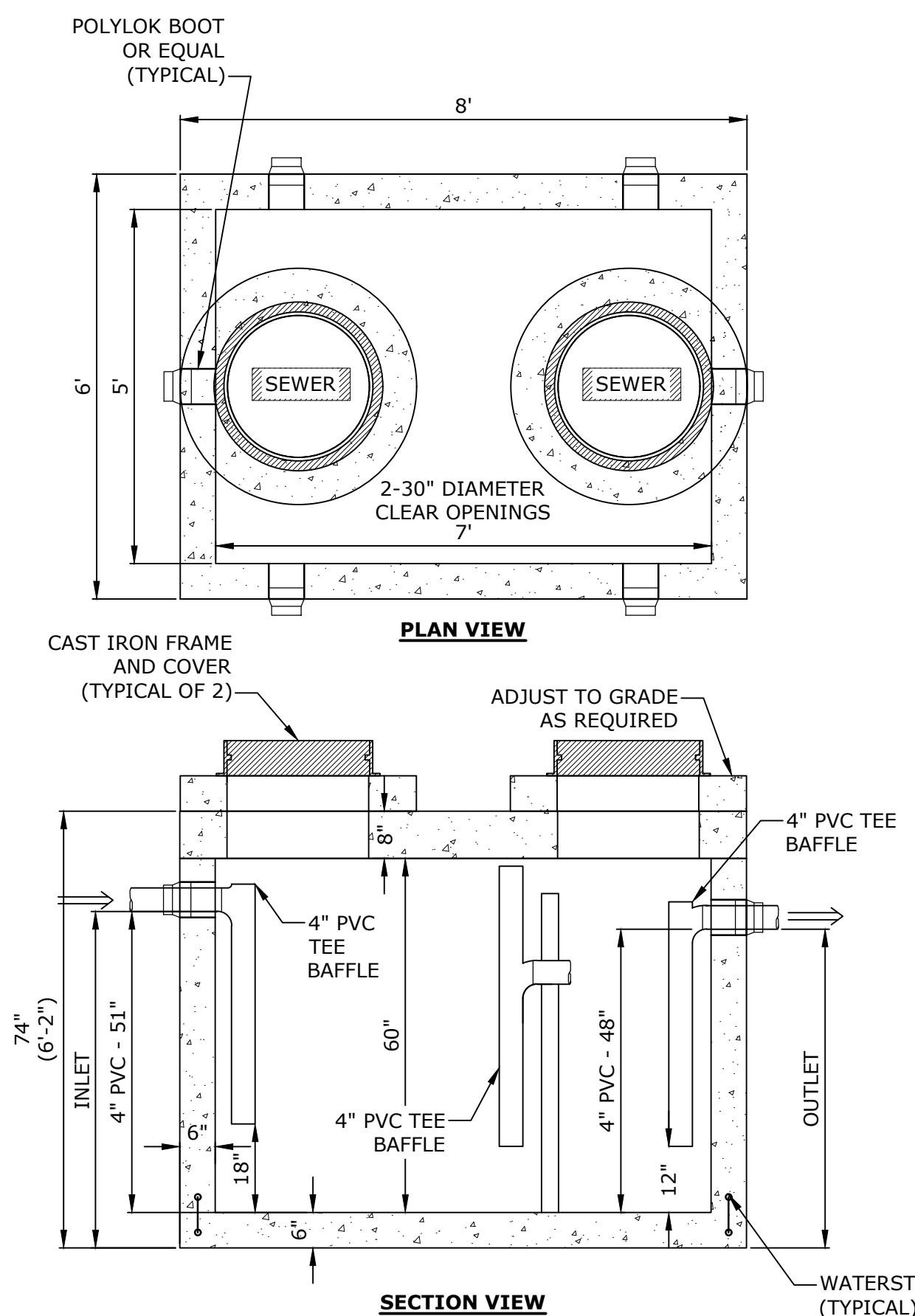


SEWER SERVICE TRENCH
NO SCALE



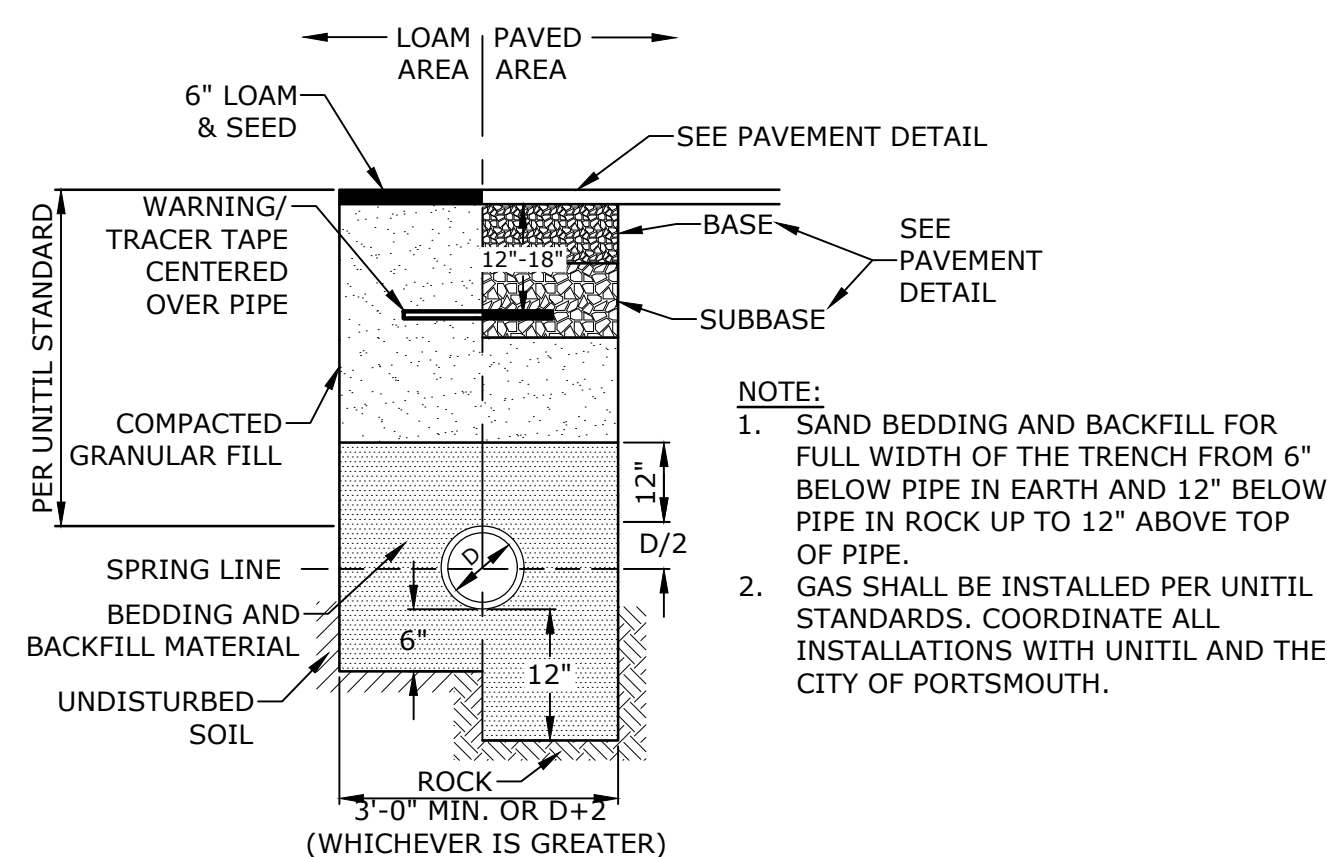
- NOTES:**
- HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
 - PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
 - FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
 - ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

MANHOLE JOINTS
NO SCALE

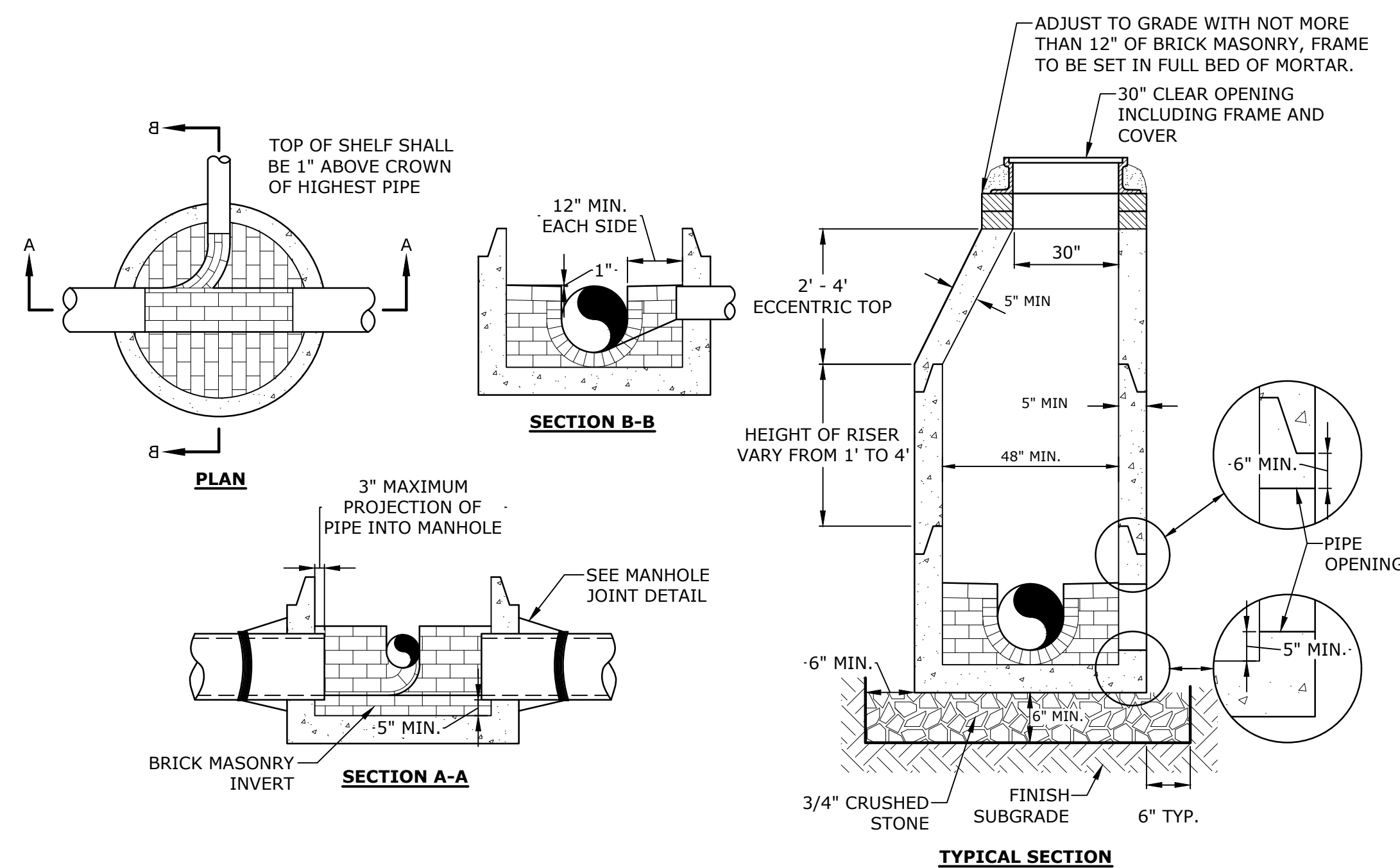


- NOTES:**
- STEEL REINFORCEMENT SHALL CONFORM TO LATEST ASTM SPECIFICATIONS: ASTM-A615 GRADE 60 REBAR.
 - CONCRETE SHALL BE $F_c=5,000$ PSI @ 28 DAYS MINIMUM.
 - FLEXIBLE SLEEVES SHALL BE PROVIDED ON ALL PIPE CONNECTIONS.
 - JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
 - INLET SHALL PENETRATE AT LEAST 9" BELOW THE LIQUID LEVEL, BUT NOT DEEPER THAN THE OUTLET BAFFLE.
 - OUTLET SHALL EXTEND BELOW THE SURFACE OF THE LIQUID EQUAL TO 40% OF THE LIQUID DEPTH (19").
 - DESIGN LOADING SHALL BE: AASHTO-HS20-44, ASTM C-890-06.
 - DESIGN SPECIFIED AS: ASTM C-1227-08, ASTM C-913-08.
 - FRAMES AND COVERS: MANHOLE FRAMES AND COVERS WITHIN CITY RIGHT OF WAY SHALL BE CITY STANDARD HINGE COVERS MANUFACTURED BY E.J. FRAMES AND COVERS WILL BE PURCHASED FROM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS. ALL OTHER MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
 - GREASE TRAP SHALL BE PHOENIX PRECAST CONCRETE P/N: C-6420 OR EQUAL.
 - TANK SHALL BE PUMPED AS NEEDED.

1,000 GALLON GREASE TRAP
NO SCALE

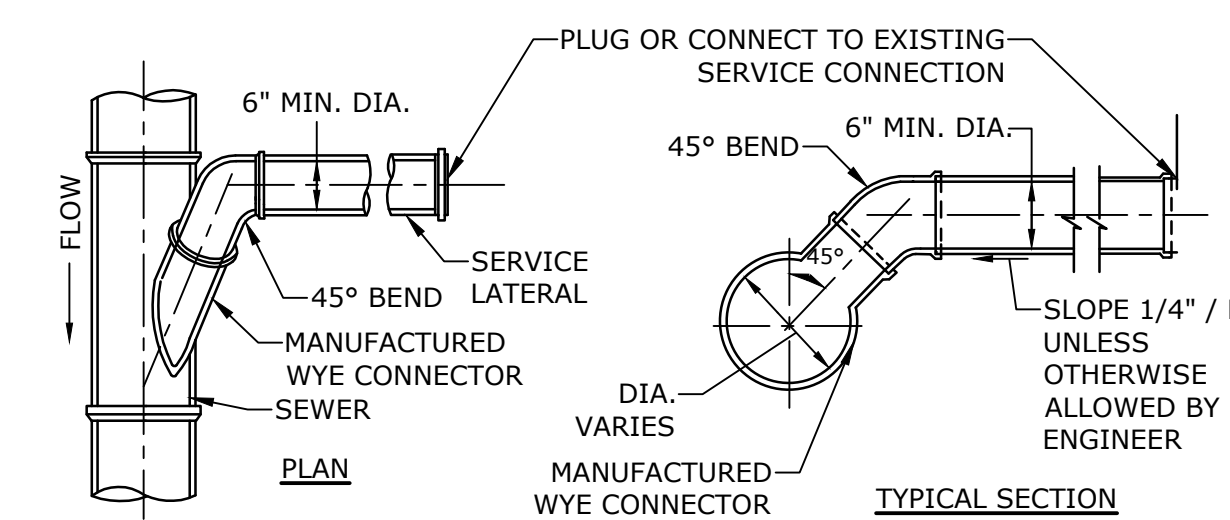


GAS TRENCH
NO SCALE

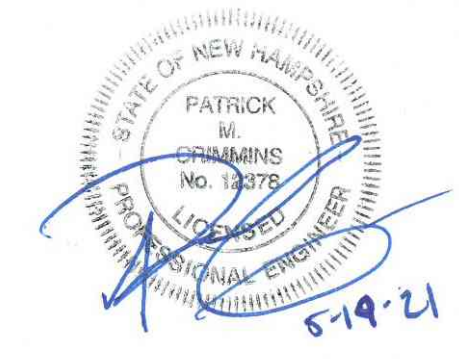
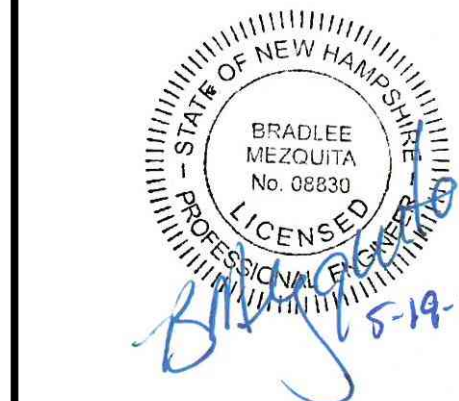


- NOTES:**
- INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
 - CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
 - INVERT BRICKS SHALL BE LAID ON EDGE.
 - TWO (2) COATS OF BITUMINOUS WATERPROOF COATING SHALL BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
 - FRAMES AND COVERS: MANHOLE FRAMES AND COVERS WITHIN CITY RIGHT OF WAY SHALL BE CITY STANDARD HINGE COVERS MANUFACTURED BY E.J. FRAMES AND COVERS WILL BE PURCHASED FROM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS. ALL OTHER MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
 - HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
 - BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H2O LOADING, AND CONFORMING TO ASTM C478-06.

SEWER MANHOLE
NO SCALE



STANDARD SERVICE LATERAL CONNECTION
NO SCALE



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

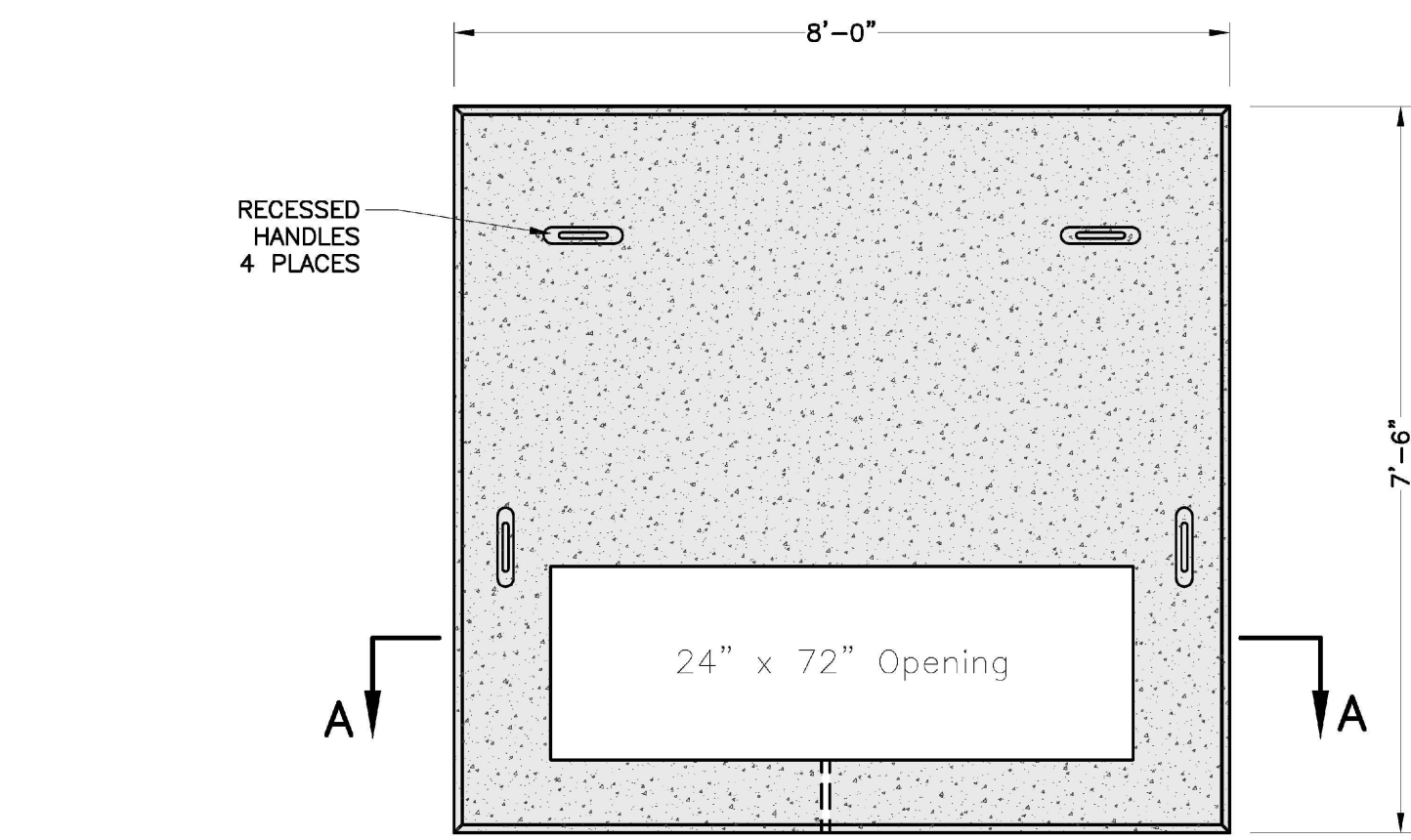
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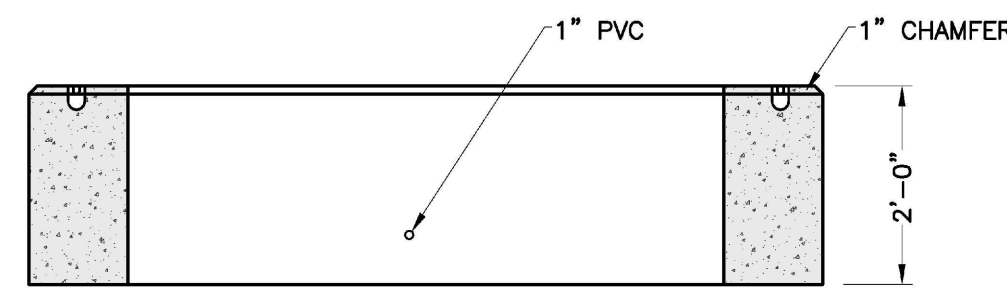
DETAILS SHEET

SCALE: AS SHOWN

C-507



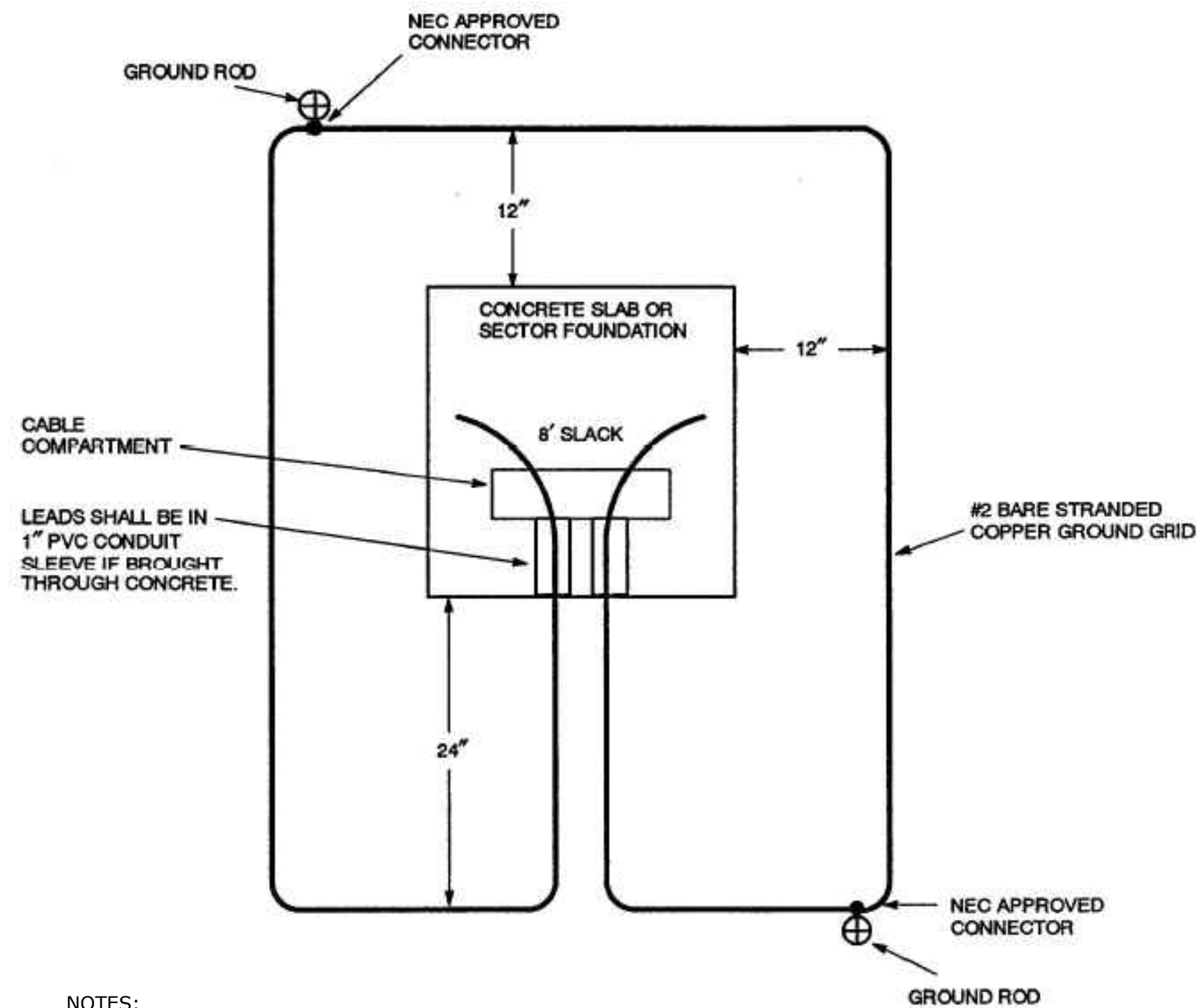
PLAN



SECTION A-A

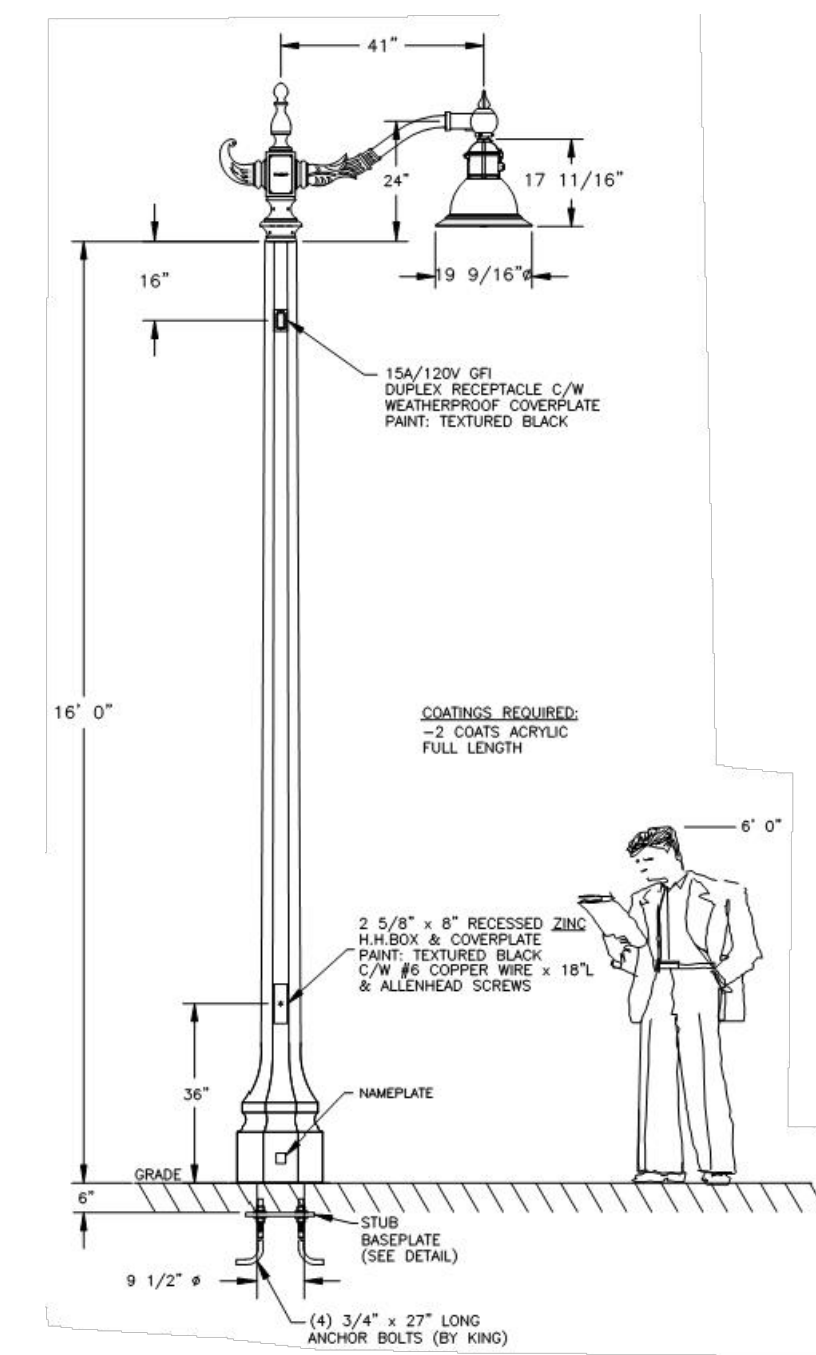
- NOTES:
1. DIMENSIONS SHOWN REPRESENT TYPICAL REQUIREMENTS. MANHOLE LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH EVERSOURCE PRIOR TO CONSTRUCTION
 2. CONCRETE MINIMUM STRENGTH - 4,000 PSI @ 28 DAYS
 3. STEEL REINFORCEMENT - ASTM A615, GRADE 60
 4. PAD MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS

3-PHASE TRANSFORMER PAD
NO SCALE



- NOTES:
- THE GROUND GRID SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AND IS TO BE BURIED AT LEAST 12 INCHES BELOW GRADE. EIGHT FEET OF EXTRA WIRE FOR EACH GROUND GRID LEG SHALL BE LEFT EXPOSED IN THE CABLE COMPARTMENT TO ALLOW FOR THE CONNECTION TO THE TRANSFORMER. THE TWO 8-FOOT GROUND RODS MAY BE EITHER GALVANIZED STEEL OR COPPERWELD AND THEY SHALL BE CONNECTED TO THE GRID WITH NEC APPROVED CONNECTORS.

PAD-MOUNTED EQUIPMENT GROUNDING GRID DETAIL
NO SCALE

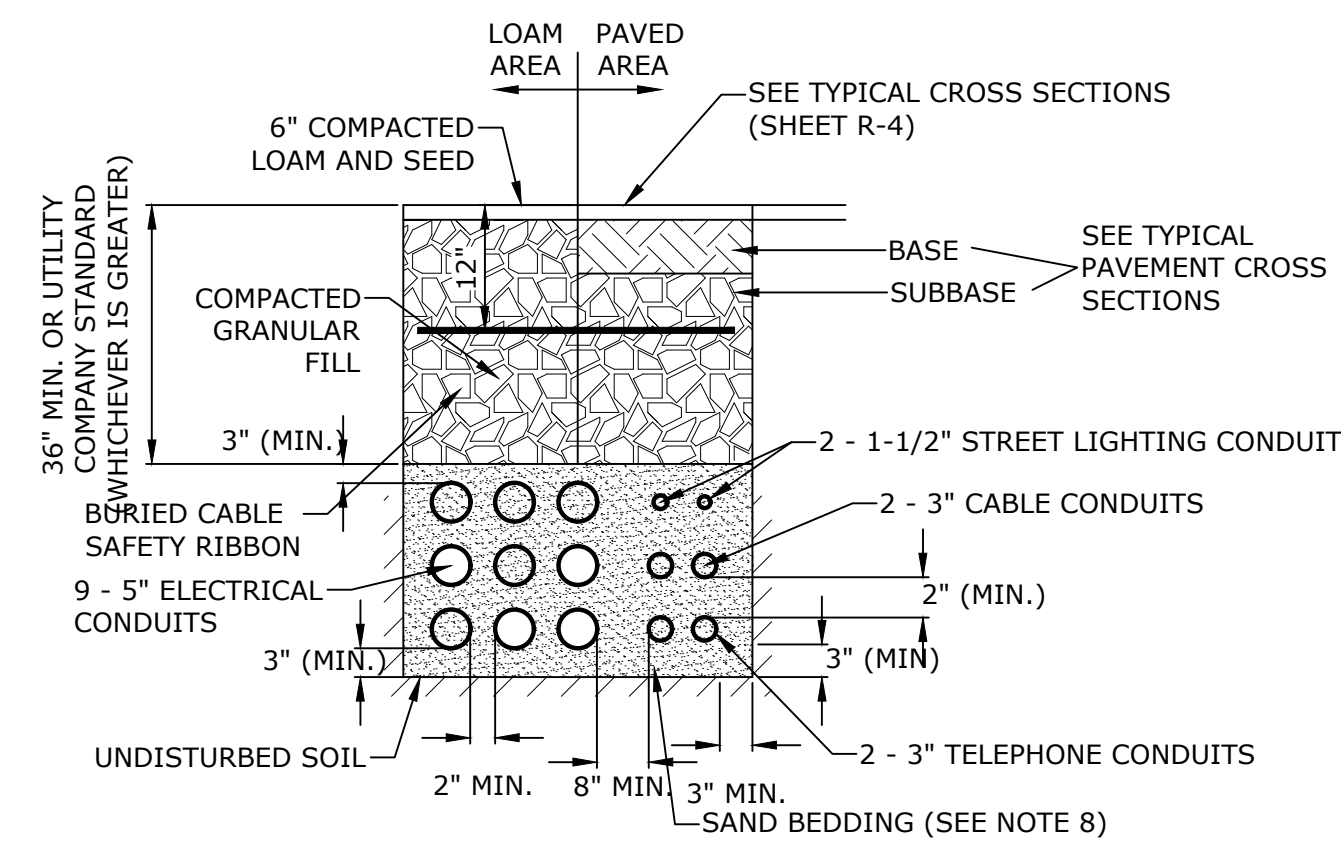
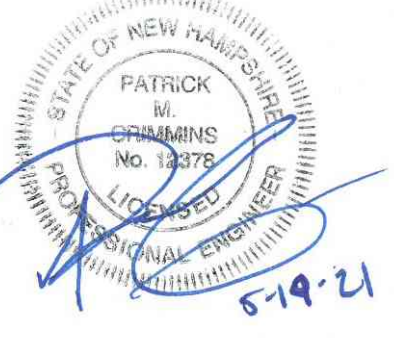


- LUMINAIRE SPECIFICATIONS:
CATALOGUE NO.: K729-P4FL-II-60(SSL)
-7030-120:277-3K S/F KPL20
GLOBE MAT'L: FLAT ARRAY, CLEAR FLAT LENS
IES CLASSIFIC.: TYPE II
WATTAGE: 60W (7030 SERIES)
LIGHT SOURCE: SOLID STATE LIGHTING
LINE VOLTAGE: 120:277V
CCT: 3000K
PAINT: TEXTURED BLACK
OPTIONS: S/F KPL-20 LEVELING DEVICE

- ARM SPECIFICATIONS:
CATALOGUE NO.: (MOD.) KA72-T-1-3
MATERIAL: ALUMINUM
PAINT: TEXTURED BLACK
OPTIONS: KPL20 LEVELING DEVICE

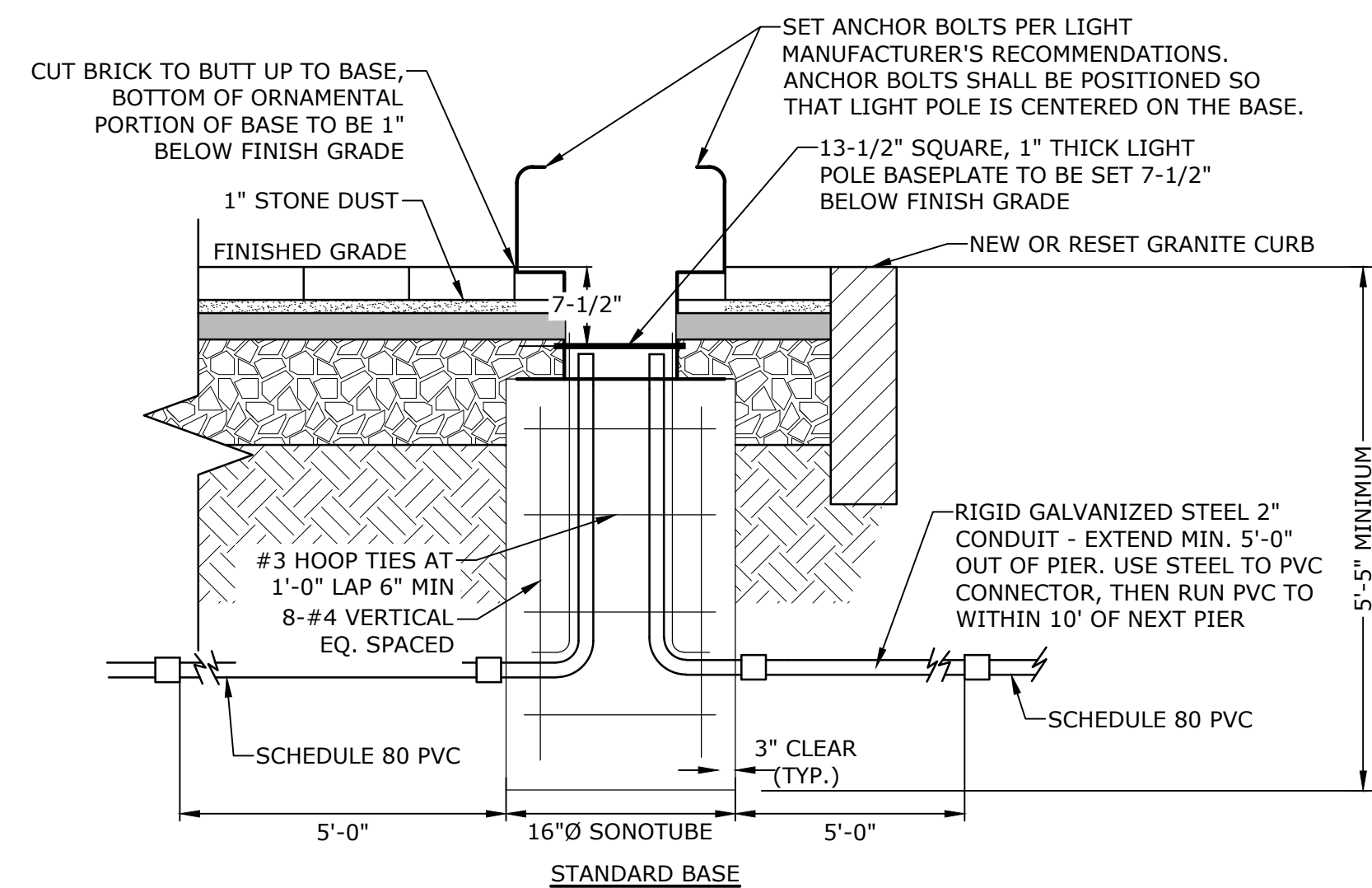
- POLE SPECIFICATIONS:
CATALOGUE NO.: KBH16-G-S11-SBP
C/W 140-30/100 & DR
SECTION: OCTAGONAL
COLOUR: ECLIPSE
FINISH: POLISHED
POLE TOP: 6 3/8" FL/FL
POLE BUTT: 9 1/2" Ø
POLE LENGTH: 16' 6"
APPROX. WEIGHT: 1,190 LBS.
MIN. RACEWAY: 1 1/8" Ø

NORTH END LIGHT POLE & FIXTURE
NO SCALE



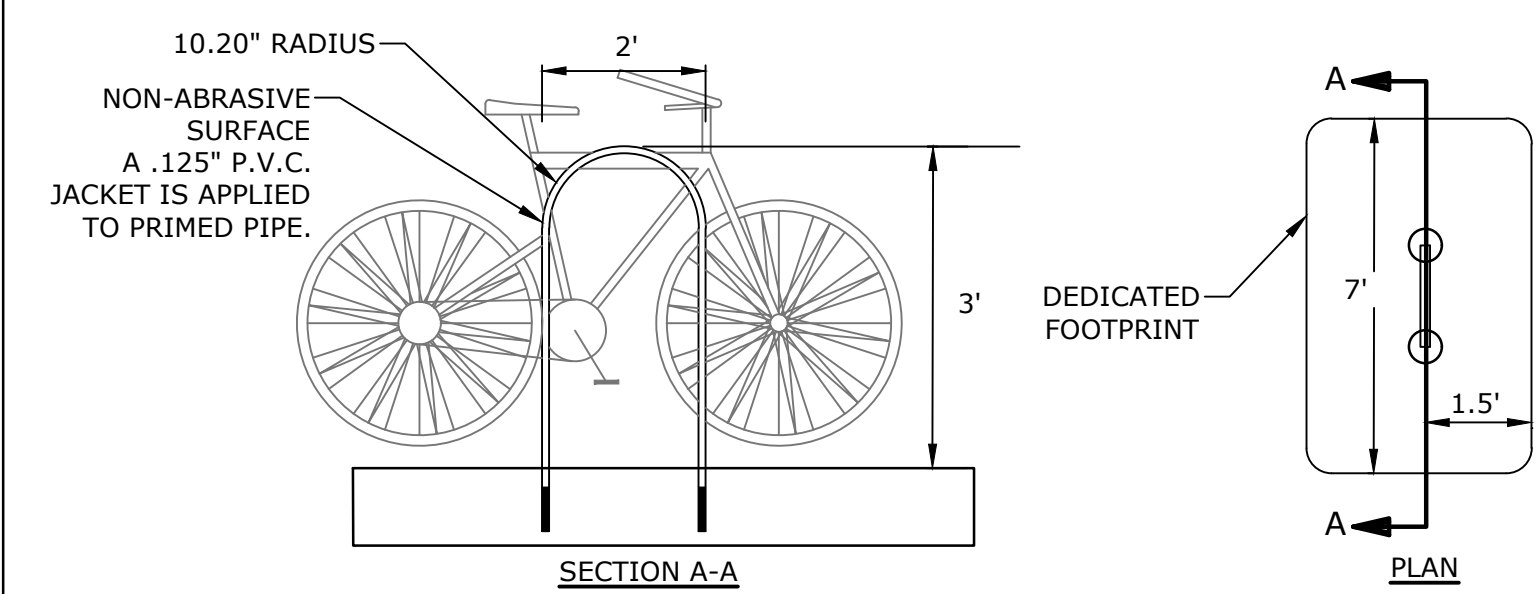
- NOTES:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
 2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
 3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
 4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
 5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
 6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
 7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
 8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE

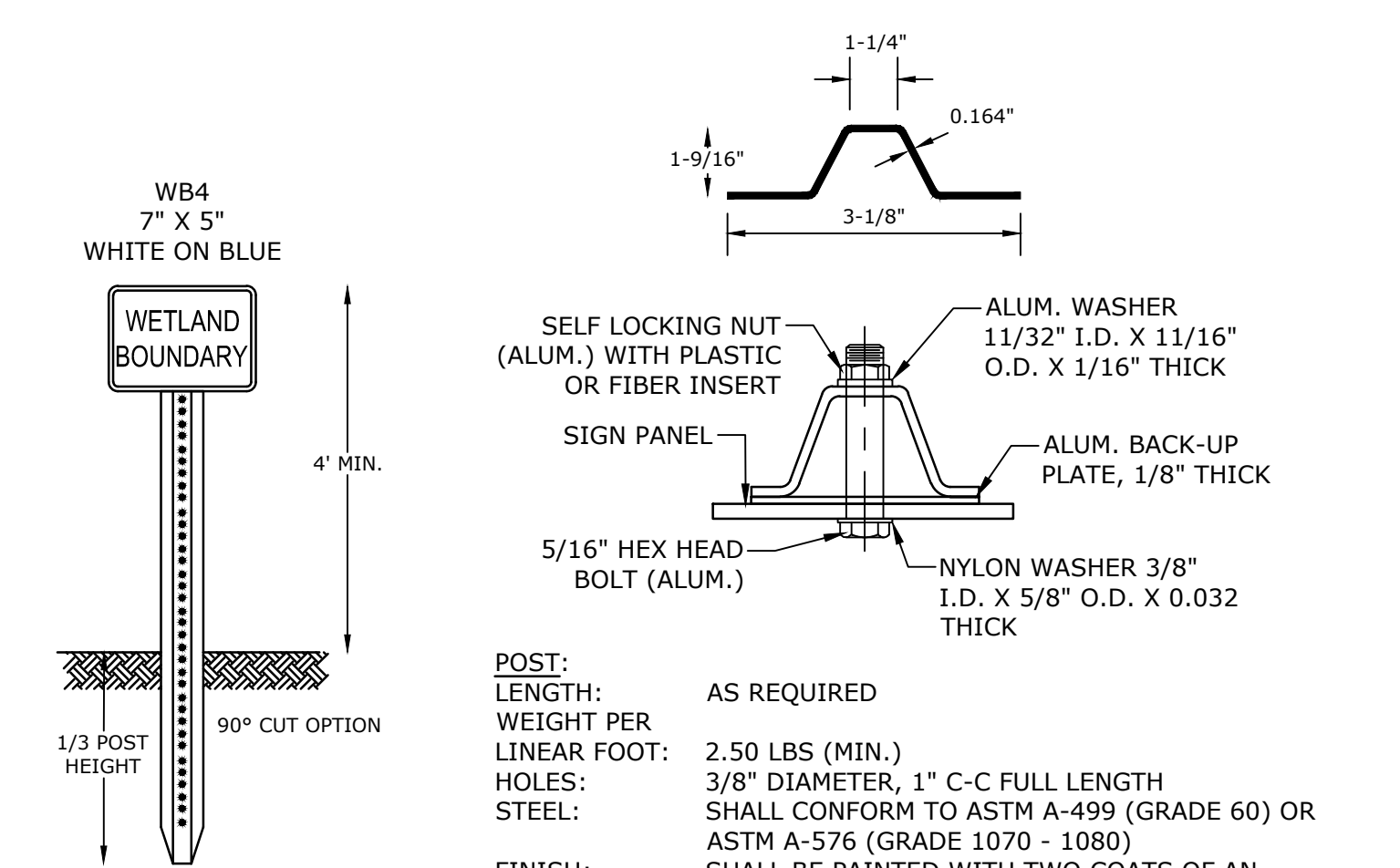


- NOTES:
1. REFER TO ELECTRICAL PLANS FOR WIRING DETAILS.
 2. CONCRETE: 4000 PSI, AIR ENTRAINED STEEL: 60 KSI
 3. LIGHT POLE FOUNDATIONS SHALL BE PLACED PRIOR TO INSTALLATION OF BRICK PAVERS.
 4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL, TO INCLUDE PERFORMANCE SPECIFICATIONS, CALCULATIONS AND NH LICENSED STRUCTURAL ENGINEER'S STAMP FOR LIGHT POLE FOUNDATION.
 5. STANDARD BASE SHALL BE CONSTRUCTED UNLESS THERE IS CONFLICT WITH THE EXISTING DUCT BANK. SPREAD FOOTING BASE SHALL BE USED IN LIEU OF STANDARD BASE IN LOCATIONS WHERE TOP OF DUCT BANK ELEVATION WILL CONFLICT WITH STANDARD POLE BASE DEPTH. CONTRACTOR SHALL VERIFY LOCATIONS WHERE SPREAD FOOTINGS ARE REQUIRED PRIOR TO CONSTRUCTION. SEE NOTE#4 FOR SUBMITTAL REQUIREMENTS.
 6. DEPTH OF FIXTURE BASE TO BE VERIFIED IN FIELD PRIOR TO INSTALLATION TO ENSURE THAT 1" OF THE ORNAMENTAL BOTTOM PORTION OF BASE TO WILL BE 1" BELOW FINISH GRADE

NORTH END LIGHT FIXTURE BASE
NO SCALE



BIKE RACK
NO SCALE



WETLAND BOUNDARY SIGN & SIGN POST
NO SCALE

Proposed Mixed Use Development

North Mill Pond Holdings, LLC

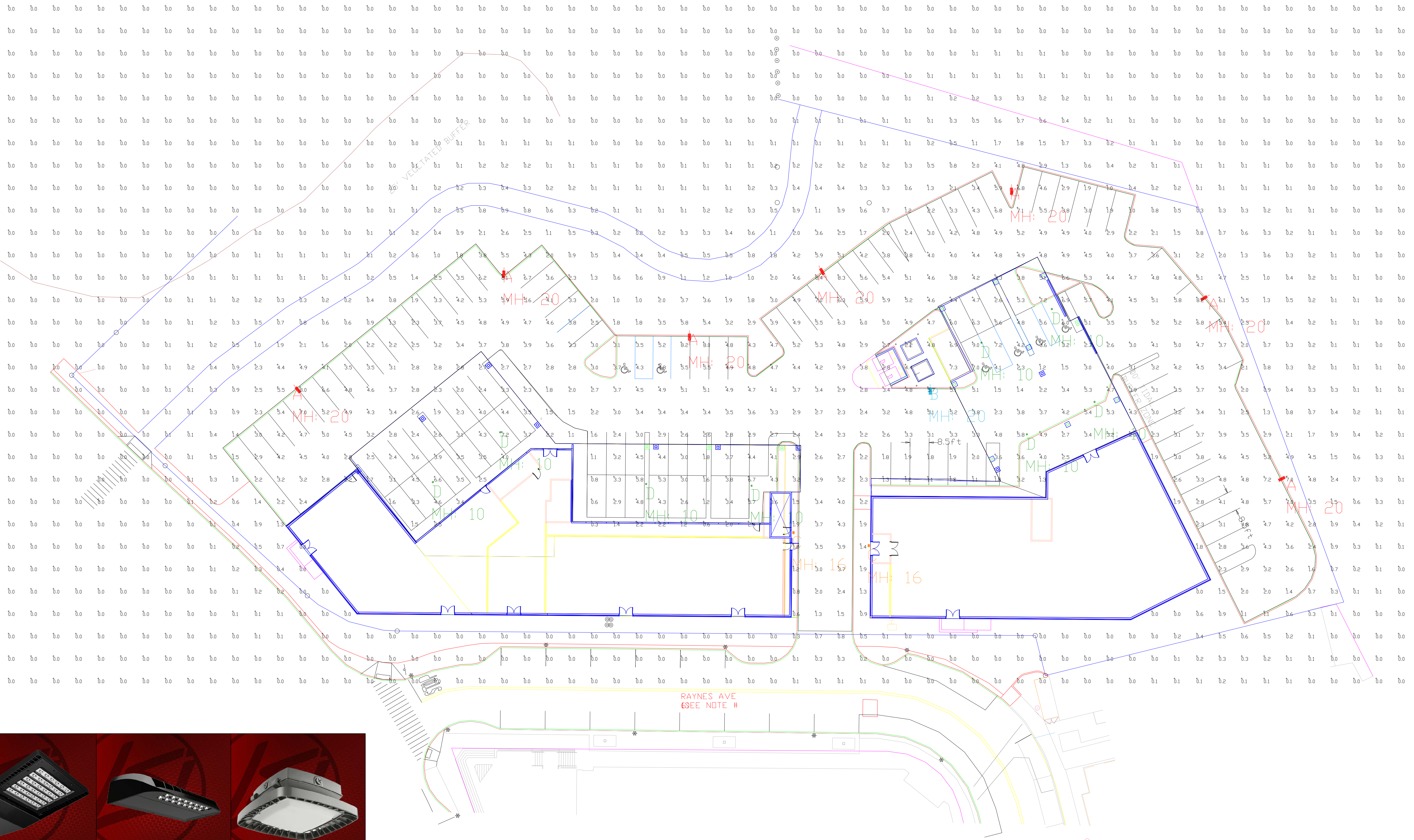
Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

| | |
|--------------|---------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-DTLS.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

DETAILS SHEET

SCALE: AS SHOWN



| Calculation Summary | | | | | | | |
|-----------------------------|-------------|-------|------|-----|-----|---------|---------|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| ALL POINTS AT GRADE 10'X10' | Illuminance | Fc | 1.24 | 9.0 | 0.0 | N.A. | N.A. |
| COVERED PARKING AREAS LEFT | Illuminance | Fc | 3.14 | 7.2 | 0.3 | 10.47 | 24.00 |
| COVERED PARKING AREAS RIGHT | Illuminance | Fc | 4.10 | 9.0 | 1.2 | 3.42 | 7.50 |
| OPEN PARKING SUMMARY | Illuminance | Fc | 3.81 | 8.3 | 1.0 | 3.81 | 8.30 |

| Luminaire Schedule | | | | | | | | | |
|--------------------|-----|-------|-------------|--|-------|-------|-------|------------------|------------|
| Symbol | Qty | Label | Arrangement | Description | LLD | UDF | LLF | Arr. Lum. Lumens | Arr. Watts |
| | 7 | A | SINGLE | SLM-LED-24L-SIL-FT-40-70CRI-SINGLE-20'MH | 1.000 | 1.000 | 0.940 | 25010 | 188.8 |
| | 1 | B | SINGLE | SLM-LED-24L-SIL-5W-40-70CRI-SINGLE-20'MH | 1.000 | 1.000 | 0.940 | 23667 | 188.8 |
| | 2 | C | SINGLE | XWM-3-LED-04L-40-16'MH | 1.000 | 1.000 | 0.980 | 4124 | 29.5 |
| | 8 | D | SINGLE | CPG-LED-5L-CA-W-40-10'MH | 1.000 | 1.000 | 0.900 | 5527 | 41.2 |

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

Total Project Watts
Total Watts = 1899



LIGHTING PROPOSAL LO-153488
XSS HOTELS
PORTSMOUTH, NH

BY: GEF DATE: 02/24/21 REV: SHEET 1 OF 1
SCALE: 1"=20'

| City of Portsmouth TAC, August 3, 2021: | | | |
|--|--|---|---------------------------------|
| | TAC Comment | Applicant Response | Sheet |
| TAC Comments from 8/3 Correspondence: | | | |
| 1 | How are the building block length requirements along Maplewood Ave. met? | The front lot line for the project site is 401.90' in length excluding the greenway community space area. The building frontage along the front lot line is a total of 315.13' in length. This calculates to 78.4% of front lot line build out, which exceeds the 50% front lot line build out required by zoning. Additionally as requested the front lot line buildouts have been calculated for both Raynes Ave and Maplewood Ave individually. A front lot line buildout exhibit has been included with the submission package. | Front Lot Line Buildout Exhibit |
| 2 | The façade modulation requirements will be addressed by the HDC but need to be consistent with the maximum of 80 feet. | Acknowledged | N/A |
| 3 | Subject to HDC approval, the 5 th floor section setback 50 feet from the frontage of 203 Maplewood Ave. and 31 Raynes Ave. is permitted due to the lot merger with 1 Raynes Ave. | Acknowledged | N/A |
| 4 | Subject to Conservation Commission and Planning Board approval, the 50+ parking spaces, dumpster enclosure, and trail improvements will all need approved under a Conditional Use Permit for being located within the 100 foot wetland buffer along the North Mill Pond. Although a 13% reduction of impervious surface is proposed more surface parking will result with the proposed project. I would suggest the three parallel parking spaces along the northern side of the 5 story building be replaced with additional landscaping. | Acknowledged. Additionally the three parallel spaces along the northern side of the hotel have been removed from the plan. | C-102 |
| 5 | An 80 millimeter pinehall brick should be used for the vehicular unit paver along Maplewood Ave. | The brick sidewalk detail has been revised to indicate that an 80 millimeter pinehall brick should be used for the vehicular unit paver along Maplewood Ave. | C-502 |
| 6 | The proposed privacy gate/ fence is acceptable as a screenwall. | Acknowledged | N/A |
| 7 | What is the proposed material for the timber decking? IPE should be considered and public access provided. | IPE will be considered when detailed design is completed and public access will be provided. | N/A |
| 8 | The optional kayak launching deck is recommended. | Acknowledged | N/A |
| 9 | The dumpster enclosure, paving patterns, privacy gate, trail entrance plantings, landscape plans, seating niches, kayak storage area and launch are all suitable improvements for the community space. | Acknowledged | N/A |
| 10 | The engineer/developer needs to demonstrate in writing that the application meets all the requirements of Article 7 of the City's Site Plan Review regulations as these relate to stormwater management. Particular emphasis should be on compliance with Section 7.4- Stormwater Management and Erosion Control Plan (SMECP), and Section 7.6- Post Construction Stormwater Management Design Standards (Paragraphs 7.6.1, 7.6.2 and 7.6.3). Note that 7.6.3 refers to the "Pollutant Tracking and Accounting Program (PTAP)", that is part of the City's MS4 Program requirements. | The application meets all the requirements of Article 7 of the City's Site Plan Review regulations and the required information is included in the Drainage Analysis. General note 13 has been added to sheet G-100 referring to the completion of the PTAP as required by the regulations. | Drainage Analysis, Sheet G-100 |

P0595-007
August 23, 2021

Mr. Dexter Legg, Chairman
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Conditional Use Permit Request for Reduced Off-Street Parking
& Shared Parking on Separate Lots,
Proposed Mixed-Use Development, Raynes Avenue, Portsmouth, NH**

Dear Chairman Legg:

On behalf of One Raynes Ave, LLC, 31 Raynes Ave, LLC & 203 Maplewood Ave, LLC (owners), and North Mill Pond Holdings, LLC (applicant), this letter is to request that a Conditional Use Permit be granted by the Planning Board to allow for reduced off-street parking and parking on a separate lot as allowed by Section 10.1112.14 and 10.1112.62 of the Zoning Ordinance.

Parking Demand Summary

For this project, parking demand was reviewed for the proposed multi-family and hotel uses using the City of Portsmouth Zoning Ordinance, Section 10.1115.20, Number of Required Off-Street Parking Spaces. For a 128-key hotel in the Downtown Overlay District (DOD), peak parking demand is 96 parking spaces. For residential use, Section 10.1115.21 requires that parking demand be calculated using Section 10.1112.30 of the Zoning Ordinance. For the proposed 60 dwelling unit multi-family use, peak parking demand was calculated based on the mix of unit sizes that are proposed. For 17 units less than 500 SF, 33 units from 500 SF to 750 SF, and 10 units over 750 SF, peak parking demand is 55 parking spaces. Section 10.1112.312 requires that one visitor parking space be provided for every five dwelling units for a total of 12 parking spaces. As allowed under Section 10.1115.23 of the Zoning Ordinance, the project is allowed to reduce the number of spaces calculated under Section 10.1115.21 by 4 parking spaces. Thus, based on the City of Portsmouth Zoning Ordinance, the total parking demand for the project is 159 spaces.

The total parking provided on the proposed site plan is 143 spaces. This includes 93 on-site parking spaces, 25 reserve parking spaces, and 25 shared parking spaces on a separate lot. Additionally, there are 16 tandem parking spaces on site, which brings the total parking count for the project to 159 spaces. The tandem spaces are proposed to be used as valet spaces as part of the managed parking for both the residential and hotel uses as described in the following Conditional Use Permit request for reduced off-street parking. As the tandem spaces are not directly tied to a specific dwelling unit, they cannot be included in the total parking count for the project.

Conditional Use Permit Requests

Reduced Off-Street Parking

The applicant is requesting a Conditional Use Permit for Reduced Off-Street Parking to allow for 143 parking spaces where 159 parking spaces are required. The proposed project intends to use 16 tandem parking spaces by the valet parking operator as an innovative solution to reduce the amount of parking area on the development parcel. Tandem parking spaces are allowed for the same dwelling unit per Article 11 Section 10.1114.33, however as the applicant will manage the parking for both the residential and hotel uses with a valet parking operator



that will operate and manage the parking 24/7/365, these 16 tandem spaces cannot be included in the total proposed parking calculation. Per Article 11 Section 10.1111.10 of the ordinance: flexibility in the administration of off-street parking standards is one of the primary ways to achieve the purpose of the section which is to manage parking supply to serve development needs without compromising community character or contributing to increased housing development costs. By implementing the use of tandem spaces with a valet operator the applicant is able to provide the required parking for the development while keeping the paved parking area out of the 50' wetland buffer.

Shared Parking on Separate Lots

The applicant will have the ability to share private parking with the office building that was recently constructed across the street at 145 Maplewood Avenue. With the off-setting peaks of these complimenting uses, the applicant intends to enter into a shared parking agreement with 145 Maplewood Avenue LLC for the use of 25 parking spaces on the 145 Maplewood parcel. The hotel and residential uses on the development parcel are complimentary to the office use on the 145 Maplewood Parcel, a use that does not have a parking requirement in the DOD. With the inclusion of the 16 tandem spaces which are part of the request for the Conditional Use Permit for Reduced Off-Street Parking and the 25 shared parking spaces, the project is providing a total of 159 parking spaces which meets the parking demand of 159 spaces.

Per Article 11 Section 10.1112.62 the shared parking arrangement shall be secured by a covenant acceptable to the City and recorded at the Rockingham County Registry of Deeds. The applicant understands that should the Planning Board grant the shared parking CUP, as a condition of approval the applicant will be required to record the agreement. The applicant the shared parking analysis with the Kane Company / 145 Maplewood LLC and they support the analysis and have committed to entering into a shared parking agreement to be secured with a covenant acceptable to the City and recorded at the RCRD.

The applicant will manage the parking for both the residential and hotel uses with a valet parking operator that will operate and manage the parking 24/7/365 onsite as well as on the separate lot to optimize the use of the available parking.

Conclusion

In addition to seeking the Conditional Use Permit for reduced parking, the applicant has explored creative parking solutions to achieve the City's parking requirements. The applicant has designed the mixed-use building such that parking lift systems can be installed in the locations of the tandem spaces that are covered by the multi-family units above in the mixed-use building. The lift systems would provide an additional 25 parking spaces bringing the total number of on-site parking spaces to 134. These 134 on-site parking spaces and 25 shared spaces on a separate lot, brings the total parking provided to 159 spaces. The applicant does not anticipate these will ever be needed but to show that the project could meet the City's parking requirements, the applicant proposes to include these lift systems as "reserve spaces" that could be constructed in the future if the applicant deems that this additional parking is in fact needed to support the developments building program.

The applicant respectfully requests a Conditional Use Permit for Reduced Off-Street Parking & Shared Parking on Separate Lots be granted. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,

TIGHE & BOND, INC.

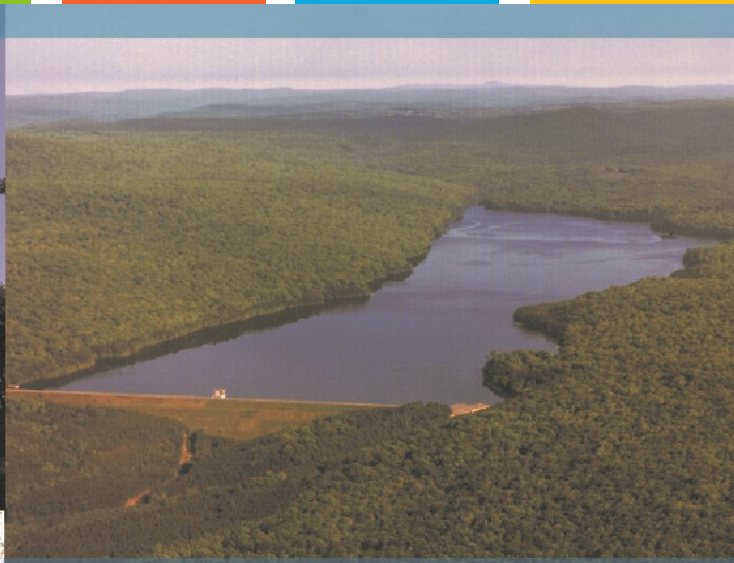
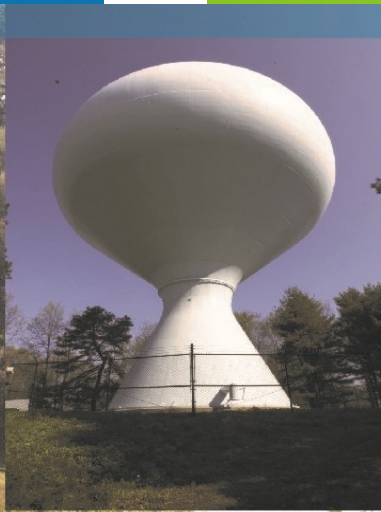


Patrick M. Crimmins, PE
Senior Project Manager



Neil A. Hansen, PE
Project Engineer

Copy: North Mill Pond Holdings, LLC



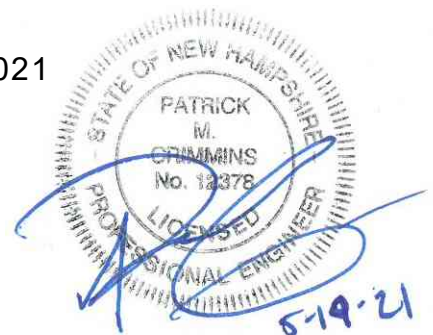
Proposed Mixed Use Development
Raynes Avenue
Portsmouth, NH

Drainage Analysis

North Mill Pond Holdings, LLC

March 22, 2021

Last Revised: May 19, 2021



Tighe & Bond

Section 1 Project Description

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Section 4 Peak Rate Comparison

Section 5 Mitigation Description

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5.2 Treatment Methods for Protecting Water Quality.5-2

Section 6 BMP Worksheets and Sizing Memos

Appendices

A Site Specific Soils Report
B Extreme Precipitation Tables

Section 1

Project Description

The proposed project is located at 1 Raynes Avenue, 31 Raynes Avenue & 203 Maplewood Avenue and is comprised of four (4) parcels that are bounded by Raynes Avenue to the south, Maplewood Avenue to the west, North Mill Pond to the north, and municipal land to the east, which is the future site of the North Mill Pond community park. The existing parcels are listed below.

| Tax Map/Lot No. | Area (ac) |
|------------------------|------------------|
| 123 / 10 | 0.170 |
| 123 / 12 | 0.140 |
| 123 / 13 | 1.323 |
| 123 / 14 | 0.906 |

The proposed project will include the construction of two (2) 5-story buildings. The first is a mixed-use residential building that has a first-floor residential lobby and two (2) commercial spaces, and 60 upper floor residential units. The second is a hotel building with 128 rooms at the corner of Raynes Ave and Vaughan Street. The project will include associated site improvements such as paving, utilities, lighting, landscaping and community space. The community space will be located on the land between North Mill Pond's mean high water (MHW) line to the 50ft buffer and will be deeded to the City of Portsmouth as community space designated for the City's North Mill Pond Trail project.

1.1 On-Site Soil Description

The site is a highly disturbed site along the North Mill Pond. The property shows evidence of what appears to be very old filling and grading associated with the existing development. The site consists of terrain that is generally flat and slopes from the south and west to the north to North Mill Pond. The existing property has an approximate high point of elevation of 14 near the corner of the property at the intersection of Raynes Ave and Maplewood Ave

A site specific soils survey was conducted by Leonard Lord, PhD, CSS, CWS of Tighe & Bond, Inc and can be found in Appendix A of this Report. Based on the soil survey, the runoff analyzed within these studies has been modeled using mostly Hydrologic Soil Group C soils and some portions of Hydrologic Soil Group A soils, as much of the site is comprised of Udorthents with two drainage classifications, moderately poorly drained soils and portions of well drained soils.

1.2 Pre- and Post-Development Comparison

The pre-development and post-development watershed areas have been analyzed at one point of analysis. While the point of analysis has remained unchanged, the contributing sub-catchment areas varied between pre-development and post-development conditions. These adjustments were made to reflect the differences in drainage patterns between the existing and proposed conditions. The overall area analyzed as part of this drainage analysis was held constant. PA-1 assesses flows that discharge directly to North Mill Pond via overland flow or various outlets.

Since North Mill Pond is a tidal water, NHDES does not require peak runoff control requirements to be met (Env-Wq 1507.06(d)). However, detention systems are included on the development site for the purpose of mitigating temperature differences between the stormwater runoff and the North Mill Pond, therefore peak runoff requirements have been met and can be found in section 4 of this report.

1.3 Calculation Methods

The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. The peak discharge rates were determined by analyzing Type III 24-hour storm events. The rainfall data for these storm events was obtained from the data published by the Northeast Regional Climate Center at Cornell University, with an additional 15% added factor of safety as required by Env-Wq 1503.08(I).

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.
2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.
3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

Section 2

Pre-Development Conditions

To analyze the pre-development condition, the site has been divided into one (1) distinct points of analysis (PA-1). This point of analysis and watershed is depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

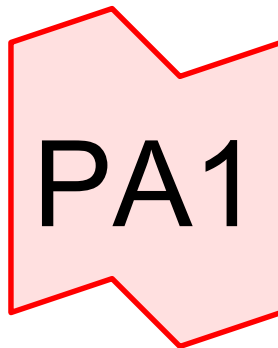
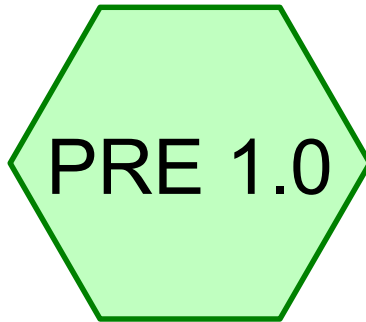
The point of analysis and its contributing watershed areas are described below:

Point of Analysis (PA-1)

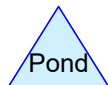
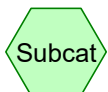
Pre-development Watershed 1.0 (PRE 1.0) is comprised of mostly impervious surfaces from paved parking and structures, as well as some disturbed forested areas to the northeast, and a run down pier. Banks along the shoreline of North Mill Pond consist of lawn, various species associated with disturbed sites, and rip rap slope. Runoff from this watershed area travels via overland flow or underground drainage system to discharge into North Mill Pond. The runoff is currently untreated before discharge.

2.1 Pre-Development Calculations

2.2 Pre-Development Watershed Plans



POINT OF ANALYSIS 1



P-0595-007 PRE

Prepared by Tighe & Bond

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Page 2

Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|-----------------|-----------|---|
| 0.007 | 39 | >75% Grass cover, Good, HSG A (PRE 1.0) |
| 0.628 | 74 | >75% Grass cover, Good, HSG C (PRE 1.0) |
| 1.117 | 98 | Paved parking, HSG C (PRE 1.0) |
| 0.068 | 98 | Rock embankment, HSG C (PRE 1.0) |
| 0.456 | 98 | Roofs, HSG C (PRE 1.0) |
| 0.056 | 98 | Unconnected pavement, HSG A (PRE 1.0) |
| 0.204 | 70 | Woods, Good, HSG C (PRE 1.0) |
| 2.537 | 90 | TOTAL AREA |

P-0595-007 PRE

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Page 3

Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|-------------------------|
| 0.063 | HSG A | PRE 1.0 |
| 0.000 | HSG B | |
| 2.474 | HSG C | PRE 1.0 |
| 0.000 | HSG D | |
| 0.000 | Other | |
| 2.537 | | TOTAL AREA |

P-0595-007 PRE

Type III 24-hr 2 Year Storm Rainfall=3.68"

Prepared by Tighe & Bond

Printed 3/19/2021

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Page 4

Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=110,529 sf 66.92% Impervious Runoff Depth=2.62"
Flow Length=189' Tc=5.0 min CN=90 Runoff=7.82 cfs 0.553 af

Link PA1: POINT OF ANALYSIS1

Inflow=7.82 cfs 0.553 af
Primary=7.82 cfs 0.553 af

Total Runoff Area = 2.537 ac Runoff Volume = 0.553 af Average Runoff Depth = 2.62"
33.08% Pervious = 0.839 ac 66.92% Impervious = 1.698 ac

P-0595-007 PRE

Type III 24-hr 10 Year Storm Rainfall=5.59"

Prepared by Tighe & Bond

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Page 5

Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=110,529 sf 66.92% Impervious Runoff Depth=4.45"
Flow Length=189' Tc=5.0 min CN=90 Runoff=12.94 cfs 0.940 af

Link PA1: POINT OF ANALYSIS1

Inflow=12.94 cfs 0.940 af
Primary=12.94 cfs 0.940 af

Total Runoff Area = 2.537 ac Runoff Volume = 0.940 af Average Runoff Depth = 4.45"
33.08% Pervious = 0.839 ac 66.92% Impervious = 1.698 ac

Summary for Subcatchment PRE 1.0:

Runoff = 12.94 cfs @ 12.07 hrs, Volume= 0.940 af, Depth= 4.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,435 | 98 | Unconnected pavement, HSG A |
| 317 | 39 | >75% Grass cover, Good, HSG A |
| 19,880 | 98 | Roofs, HSG C |
| 27,362 | 74 | >75% Grass cover, Good, HSG C |
| 8,883 | 70 | Woods, Good, HSG C |
| * 2,980 | 98 | Rock embankment, HSG C |
| 48,672 | 98 | Paved parking, HSG C |
| 110,529 | 90 | Weighted Average |
| 36,562 | | 33.08% Pervious Area |
| 73,967 | | 66.92% Impervious Area |
| 2,435 | | 3.29% Unconnected |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|--|
| 0.4 | 33 | 0.0280 | 1.35 | | Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68" |
| 0.9 | 121 | 0.0250 | 2.37 | | Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps |
| 0.1 | 35 | 0.1400 | 5.61 | | Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps |
| 1.4 | 189 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Link PA1: POINT OF ANALYSIS 1

Inflow Area = 2.537 ac, 66.92% Impervious, Inflow Depth = 4.45" for 10 Year Storm event

Inflow = 12.94 cfs @ 12.07 hrs, Volume= 0.940 af

Primary = 12.94 cfs @ 12.07 hrs, Volume= 0.940 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs

P-0595-007 PRE

Type III 24-hr 25 Year Storm Rainfall=7.08"

Prepared by Tighe & Bond

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Page 7

Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:

Runoff Area=110,529 sf 66.92% Impervious Runoff Depth=5.90"
Flow Length=189' Tc=5.0 min CN=90 Runoff=16.90 cfs 1.248 af

Link PA1: POINT OF ANALYSIS1

Inflow=16.90 cfs 1.248 af
Primary=16.90 cfs 1.248 af

Total Runoff Area = 2.537 ac Runoff Volume = 1.248 af Average Runoff Depth = 5.90"
33.08% Pervious = 0.839 ac 66.92% Impervious = 1.698 ac

P-0595-007 PRE

Type III 24-hr 50 Year Storm Rainfall=8.48"

Prepared by Tighe & Bond

Printed 3/19/2021

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Page 8

Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE 1.0:


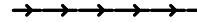


Runoff Area=110,529 sf 66.92% Impervious Runoff Depth=7.28"
Flow Length=189' Tc=5.0 min CN=90 Runoff=20.59 cfs 1.539 af

Link PA1: POINT OF ANALYSIS1

Inflow=20.59 cfs 1.539 af
Primary=20.59 cfs 1.539 af

Total Runoff Area = 2.537 ac Runoff Volume = 1.539 af Average Runoff Depth = 7.28"
33.08% Pervious = 0.839 ac 66.92% Impervious = 1.698 ac

LEGEND

-  PRE-DEVELOPMENT WATERSHED BOUNDARY
-  LONGEST FLOW PATH
-  PRE DEVELOPMENT WATERSHED AREA DESIGNATION
-  POINT OF ANALYSIS

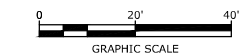
SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

| SYMBOL | SOIL TYPE | HSG |
|------------|---|-----|
| 100*/afaaa | UDORTHERTS, WET SUBSTRATUM /EXCESSIVELY DRAINED | A |
| 100*/dfccc | UDORTHERTS, WET SUBSTRATUM /MODERATELY WELL DRAINED | C |

* INDICATES THE LOCATION OF THE SLOPE CLASS IDENTIFIER (A-F)
 A - 0-3% C - 8-15% E - 25-50%
 B - 3-8% D - 15-25% F - >50%

NOTES:

1. HYDROLOGIC SOIL GROUPS FOR DISTURBED SOILS WERE BASED ON MOST SIMILAR SOIL SERIES LISTED IN *KSAT VALUES FOR NH SOILS*, SSSNE SPECIAL PUBLICATION NO. 5, 2009.
2. FIELDWORK FOR THIS MAP WAS CONDUCTED BY LEONARD A. LORD, PHD, NHCSS #19 ON OCTOBER 22, 2019.
3. THIS DETAILED SITE SPECIFIC SOIL MAP CONFORMS TO THE STANDARDS OF SSSNE PUBLICATION NO. 3, AS AMENDED, *SITE SPECIFIC SOIL MAPPING STANDARDS FOR NH AND VT*.
4. THIS MAP HAS BEEN PREPARED TO COMPLY WITH SOIL MAPPING REQUIREMENTS OF RSA 485 A:17 AND NHDES ENV-WQ, ALTERATION OF TERRAIN.
5. SEE ACCOMPANYING NARRATIVE REPORT FOR METHODOLOGY, MAP SYMBOL LEGEND, AND INTERPRETATIONS.



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

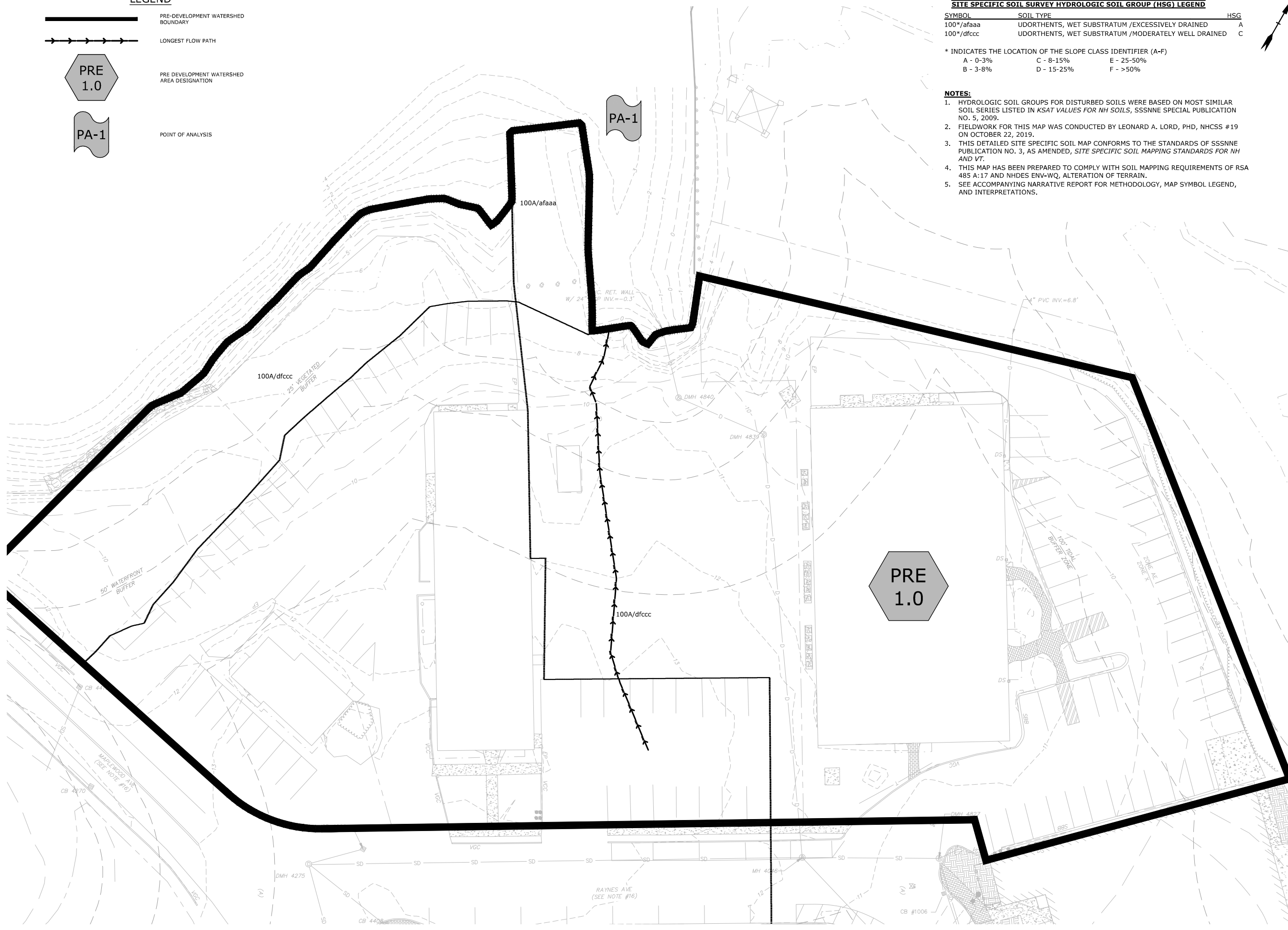
| | |
|--------------|----------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-HYDRO.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

Last Saved: 3/19/2021 9:47am By: CJK
 Printed On: Mar 22, 2021 9:47am
 File: C:\Users\CJK\OneDrive\Documents\Projects\0595-007\Raynes Ave. Hold\Drawings_Figures\AutoCAD\Sheet_P-0595-007-HYDRO.dwg



Section 3

Post-Development Conditions

The post-development condition was analyzed by dividing the watersheds into seven (7) watershed areas. Stormwater runoff from these sub-catchment areas flow via subsurface drainage systems prior to discharging to North Mill Pond. Like the pre-development condition, flows from these sub-catchment areas are modeled at one point of analysis at North Mill Pond (PA-1). As per Env-Wq 1507.06(d), since North Mill Pond is tidal water the peak runoff control requirements do not apply. However, the peak runoff requirements have been met due to the onsite underground detention basin and these comparisons can be found in Section 4 of this report.

Two underground detention system are included on the development site for the purpose of mitigating temperature differences between the stormwater runoff and the North Mill Pond. The detention systems and outlet structures have been sized to detain the WQV with a drain down time of 24 hours, prior to discharging to the treatment units. This detention basin is used to mitigate increased temperature of the initial surface runoff. Flows greater than the 2-year storm event are designed to bypass the treatment unit.

The point of analysis (PA-1) and its sub-catchment areas are depicted on the plan entitled "Post-Development Watershed Plan," Sheet C-802. The point of analysis and it's contributing watershed areas are described below:

Point of Analysis (PA-1)

Post-development Watershed 1.1 (POST 1.1) is comprised of mostly the southern building and associated impervious areas on the south end of the site. Runoff from this watershed area travels via overland flow or roof leader to deep sump catch basins and an underground detention system. The detention system and outlet structure have been sized to detain the WQV with a drain down time greater than 24 hours, prior to discharging to the treatment unit, a Contech Jellyfish Stormwater Filter (JFF-1). Flows exiting the Jellyfish Filter discharge to North Mill Pond (PA-1). The pipe network is protected by a backflow preventer within the outlet invert of a manhole structure at the most downstream location.

Post-development Watershed 1.2 (POST 1.2) like POST 1.1, is comprised of mostly the northern building and associated impervious areas on the north side of the site. Runoff from this watershed area travels via overland flow or roof leader to deep sump catch basins and an underground detention system. The detention system and outlet structure have been sized to detain the WQV with a drain down time greater than 24 hours, prior to discharging to the treatment unit, a Contech Jellyfish Stormwater Filter (JFF-2). Flows exiting the Jellyfish Filter discharge to North Mill Pond (PA-1). As previously stated, the pipe network is protected by a backflow preventer within the outlet invert of a manhole structure at the most downstream location.

Post-development Watershed 1.3 (POST 1.3) is comprised mostly of porous pavement multi use path located between the proposed development and the North Mill Pond as well as some grassed landscape areas. Runoff from the watershed infiltrates through the filter media section under the porous pavement and discharges to an underdrain. Due to the poor onsite soils and high groundwater elevation the porous pavement section has been lined with an impermeable liner and an underdrain has been provided. The underdrain connects to the closed drainage system on site, ultimately discharging to the North Mill Pond.

Post-development Watershed 1.4 (POST 1.4) is nearly identical to POST 1.3 and is comprised mostly of porous pavement multi use path located between the proposed development and the North Mill Pond as well as some grassed landscape areas. Runoff from the watershed infiltrates through the filter media section under the porous pavement and discharges to an underdrain. Due to the poor onsite soils and high groundwater elevation the porous pavement section has been lined with an impermeable liner and an underdrain has been provided. The underdrain also connects to the closed drainage system on site, ultimately discharging to the North Mill Pond.

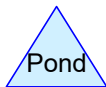
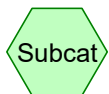
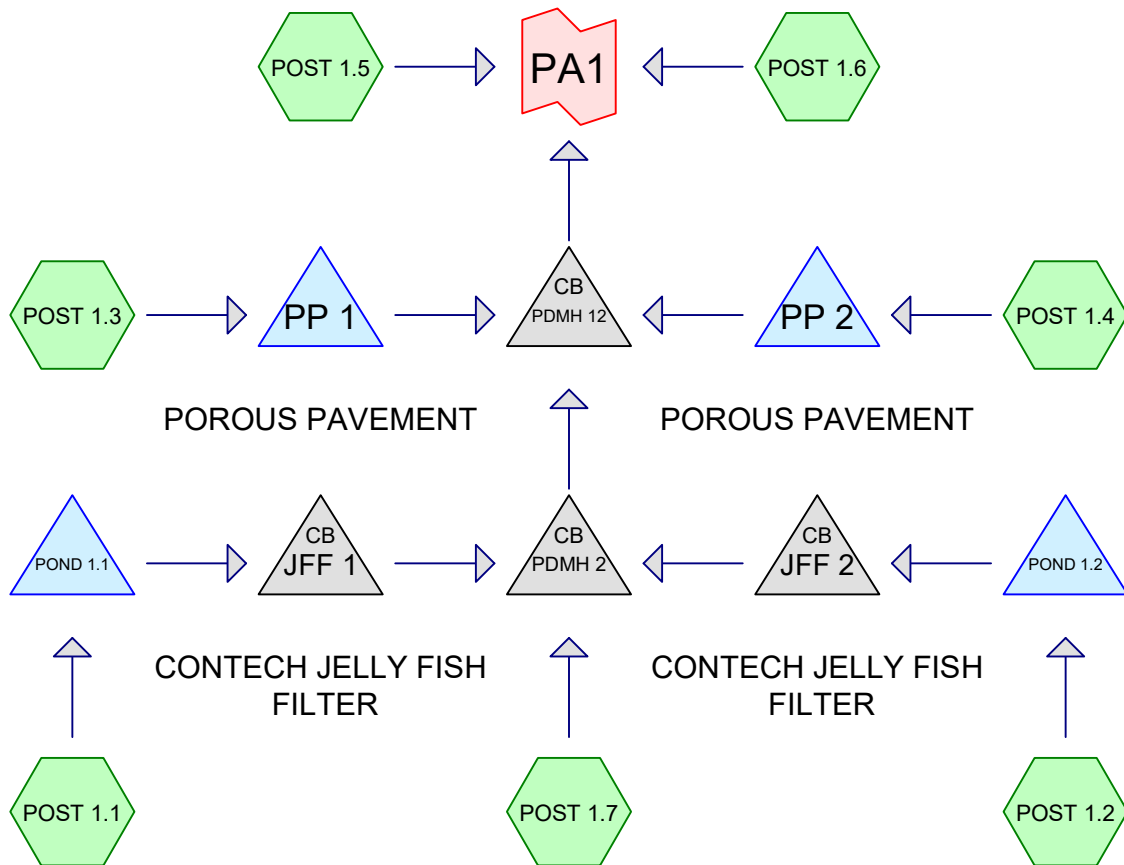
Post-development Watershed 1.5 (POST 1.5) is comprised mostly of grassy areas and a proposed boat/kayak launch and reconstructed timber pier. Runoff from this watershed simply sheets toward and discharges into North Mill Pond, as in the existing condition. There are no proposed impervious surfaces that are within this watershed area that would require treatment.

Post-development Watershed 1.6 (POST 1.6) is also comprised mostly of grassy area along the northern side of the property. Runoff from this watershed simply sheets north and discharges into North Mill Pond, as in the existing condition. There are no proposed impervious surfaces that are within this watershed area that would require treatment.

Post-development Watershed 1.7 (POST 1.7) is comprised of a small strip of sidewalk and landscaping in between the proposed buildings and the city right of way along Raynes Ave. The runoff from this Subcatchment sheets directly onto the street to the existing closed drainage system, ultimately discharging to North Mill Pond via the previously mentioned drainage system.

3.1 Post-Development Calculations

3.2 Post-Development Watershed Plans



Routing Diagram for P-0595-007 POST
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P-0595-007 POST

Prepared by Tighe & Bond

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Page 2

Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|-----------------|-----------|--|
| 0.007 | 39 | >75% Grass cover, Good, HSG A (POST 1.3, POST 1.5) |
| 0.649 | 74 | >75% Grass cover, Good, HSG C (POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7) |
| 0.056 | 98 | Paved parking, HSG A (POST 1.3, POST 1.5) |
| 1.022 | 98 | Paved parking, HSG C (POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.7) |
| 0.068 | 98 | Rock embankment, HSG C (POST 1.5) |
| 0.735 | 98 | Roofs, HSG C (POST 1.1, POST 1.2) |
| 2.537 | 92 | TOTAL AREA |

P-0595-007 POST

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Page 3

Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|--|
| 0.063 | HSG A | POST 1.3, POST 1.5 |
| 0.000 | HSG B | |
| 2.474 | HSG C | POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7 |
| 0.000 | HSG D | |
| 0.000 | Other | |
| 2.537 | | TOTAL AREA |

P-0595-007 POST

Type III 24-hr 2 Year Storm Rainfall=3.68"

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Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
 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 POST 1.1: | Runoff Area=29,844 sf 99.19% Impervious Runoff Depth=3.45" Flow Length=114' Tc=5.0 min CN=98 Runoff=2.51 cfs 0.197 af |
| Subcatchment POST 1.2: | Runoff Area=38,901 sf 97.58% Impervious Runoff Depth=3.33" Flow Length=85' Tc=5.0 min CN=97 Runoff=3.23 cfs 0.248 af |
| Subcatchment POST 1.3: | Runoff Area=13,670 sf 33.63% Impervious Runoff Depth=1.93" Flow Length=59' Slope=0.0430 '/' Tc=5.0 min CN=82 Runoff=0.73 cfs 0.051 af |
| Subcatchment POST 1.4: | Runoff Area=2,846 sf 27.79% Impervious Runoff Depth=1.86" Flow Length=33' Slope=0.0270 '/' Tc=5.0 min CN=81 Runoff=0.15 cfs 0.010 af |
| Subcatchment POST 1.5: | Runoff Area=17,643 sf 33.65% Impervious Runoff Depth=1.86" Flow Length=60' Slope=0.0520 '/' Tc=5.0 min CN=81 Runoff=0.90 cfs 0.063 af |
| Subcatchment POST 1.6: | Runoff Area=3,725 sf 0.00% Impervious Runoff Depth=1.37" Flow Length=37' Slope=0.0610 '/' Tc=5.0 min CN=74 Runoff=0.14 cfs 0.010 af |
| Subcatchment POST 1.7: | Runoff Area=3,900 sf 77.85% Impervious Runoff Depth=2.91" Flow Length=92' Slope=0.0350 '/' Tc=5.0 min CN=93 Runoff=0.30 cfs 0.022 af |
| Pond JFF 1: CONTECH JELLY FISH FILTER | Peak Elev=3.23' Inflow=2.17 cfs 0.197 af 18.0" Round Culvert n=0.013 L=7.0' S=0.0214 '/' Outflow=2.17 cfs 0.197 af |
| Pond JFF 2: CONTECH JELLY FISH FILTER | Peak Elev=3.32' Inflow=2.91 cfs 0.248 af 18.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=2.91 cfs 0.248 af |
| Pond PDMH 12: | Peak Elev=2.60' Inflow=5.33 cfs 0.506 af 24.0" Round Culvert n=0.013 L=27.0' S=0.0704 '/' Outflow=5.33 cfs 0.506 af |
| Pond PDMH 2: | Peak Elev=3.05' Inflow=5.33 cfs 0.467 af 24.0" Round Culvert n=0.013 L=34.0' S=0.0029 '/' Outflow=5.33 cfs 0.467 af |
| Pond POND 1.1: | Peak Elev=5.90' Storage=2,859 cf Inflow=2.51 cfs 0.197 af Outflow=2.17 cfs 0.197 af |
| Pond POND 1.2: | Peak Elev=6.46' Storage=3,633 cf Inflow=3.23 cfs 0.248 af Outflow=2.91 cfs 0.248 af |
| Pond PP 1: POROUS PAVEMENT | Peak Elev=5.09' Storage=1,092 cf Inflow=0.73 cfs 0.051 af Outflow=0.12 cfs 0.033 af |
| Pond PP 2: POROUS PAVEMENT | Peak Elev=4.61' Storage=189 cf Inflow=0.15 cfs 0.010 af Outflow=0.05 cfs 0.007 af |
| Link PA1: | Inflow=6.26 cfs 0.578 af Primary=6.26 cfs 0.578 af |

P-0595-007 POST

Type III 24-hr 2 Year Storm Rainfall=3.68"

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Total Runoff Area = 2.537 ac Runoff Volume = 0.599 af Average Runoff Depth = 2.84"
25.88% Pervious = 0.657 ac 74.12% Impervious = 1.881 ac

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
 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 POST 1.1: | Runoff Area=29,844 sf 99.19% Impervious Runoff Depth=5.35" Flow Length=114' Tc=5.0 min CN=98 Runoff=3.83 cfs 0.306 af |
| Subcatchment POST 1.2: | Runoff Area=38,901 sf 97.58% Impervious Runoff Depth=5.24" Flow Length=85' Tc=5.0 min CN=97 Runoff=4.96 cfs 0.390 af |
| Subcatchment POST 1.3: | Runoff Area=13,670 sf 33.63% Impervious Runoff Depth=3.61" Flow Length=59' Slope=0.0430 '/' Tc=5.0 min CN=82 Runoff=1.35 cfs 0.094 af |
| Subcatchment POST 1.4: | Runoff Area=2,846 sf 27.79% Impervious Runoff Depth=3.51" Flow Length=33' Slope=0.0270 '/' Tc=5.0 min CN=81 Runoff=0.27 cfs 0.019 af |
| Subcatchment POST 1.5: | Runoff Area=17,643 sf 33.65% Impervious Runoff Depth=3.51" Flow Length=60' Slope=0.0520 '/' Tc=5.0 min CN=81 Runoff=1.70 cfs 0.119 af |
| Subcatchment POST 1.6: | Runoff Area=3,725 sf 0.00% Impervious Runoff Depth=2.84" Flow Length=37' Slope=0.0610 '/' Tc=5.0 min CN=74 Runoff=0.29 cfs 0.020 af |
| Subcatchment POST 1.7: | Runoff Area=3,900 sf 77.85% Impervious Runoff Depth=4.78" Flow Length=92' Slope=0.0350 '/' Tc=5.0 min CN=93 Runoff=0.48 cfs 0.036 af |
| Pond JFF 1: CONTECH JELLY FISH FILTER | Peak Elev=3.66' Inflow=3.56 cfs 0.306 af 18.0" Round Culvert n=0.013 L=7.0' S=0.0214 '/' Outflow=3.56 cfs 0.306 af |
| Pond JFF 2: CONTECH JELLY FISH FILTER | Peak Elev=3.77' Inflow=4.72 cfs 0.390 af 18.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=4.72 cfs 0.390 af |
| Pond PDMH 12: | Peak Elev=2.98' Inflow=9.29 cfs 0.823 af 24.0" Round Culvert n=0.013 L=27.0' S=0.0704 '/' Outflow=9.29 cfs 0.823 af |
| Pond PDMH 2: | Peak Elev=3.47' Inflow=8.74 cfs 0.731 af 24.0" Round Culvert n=0.013 L=34.0' S=0.0029 '/' Outflow=8.74 cfs 0.731 af |
| Pond POND 1.1: | Peak Elev=6.02' Storage=3,029 cf Inflow=3.83 cfs 0.306 af Outflow=3.56 cfs 0.306 af |
| Pond POND 1.2: | Peak Elev=6.60' Storage=3,810 cf Inflow=4.96 cfs 0.390 af Outflow=4.72 cfs 0.390 af |
| Pond PP 1: POROUS PAVEMENT | Peak Elev=5.43' Storage=1,627 cf Inflow=1.35 cfs 0.094 af Outflow=0.52 cfs 0.077 af |
| Pond PP 2: POROUS PAVEMENT | Peak Elev=4.80' Storage=248 cf Inflow=0.27 cfs 0.019 af Outflow=0.17 cfs 0.016 af |
| Link PA1: | Inflow=11.23 cfs 0.962 af Primary=11.23 cfs 0.962 af |

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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Total Runoff Area = 2.537 ac Runoff Volume = 0.983 af Average Runoff Depth = 4.65"
25.88% Pervious = 0.657 ac 74.12% Impervious = 1.881 ac

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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Summary for Subcatchment POST 1.1:

Runoff = 3.83 cfs @ 12.07 hrs, Volume= 0.306 af, Depth= 5.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 17,365 | 98 | Roofs, HSG C |
| 242 | 74 | >75% Grass cover, Good, HSG C |
| 12,237 | 98 | Paved parking, HSG C |
| 29,844 | 98 | Weighted Average |
| 242 | | 0.81% Pervious Area |
| 29,602 | | 99.19% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|--|
| 0.5 | 50 | 0.0400 | 1.69 | | Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68" |
| 0.3 | 64 | 0.0360 | 3.85 | | Shallow Concentrated Flow, Paved Kv= 20.3 fps |
| 0.8 | 114 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Subcatchment POST 1.2:

Runoff = 4.96 cfs @ 12.07 hrs, Volume= 0.390 af, Depth= 5.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 14,635 | 98 | Roofs, HSG C |
| 942 | 74 | >75% Grass cover, Good, HSG C |
| 23,324 | 98 | Paved parking, HSG C |
| 38,901 | 97 | Weighted Average |
| 942 | | 2.42% Pervious Area |
| 37,959 | | 97.58% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|--|
| 0.6 | 50 | 0.0300 | 1.51 | | Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68" |
| 0.2 | 35 | 0.0270 | 3.34 | | Shallow Concentrated Flow, Paved Kv= 20.3 fps |
| 0.8 | 85 | Total, Increased to minimum Tc = 5.0 min | | | |

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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Summary for Subcatchment POST 1.3:

Runoff = 1.35 cfs @ 12.08 hrs, Volume= 0.094 af, Depth= 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 200 | 98 | Paved parking, HSG A |
| 6 | 39 | >75% Grass cover, Good, HSG A |
| 9,067 | 74 | >75% Grass cover, Good, HSG C |
| 4,397 | 98 | Paved parking, HSG C |
| 13,670 | 82 | Weighted Average |
| 9,073 | | 66.37% Pervious Area |
| 4,597 | | 33.63% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|---|
| 4.4 | 59 | 0.0430 | 0.22 | | Sheet Flow, Grass: Short n= 0.150 P2= 3.68" |
| 4.4 | 59 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Subcatchment POST 1.4:

Runoff = 0.27 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 3.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,055 | 74 | >75% Grass cover, Good, HSG C |
| 791 | 98 | Paved parking, HSG C |
| 2,846 | 81 | Weighted Average |
| 2,055 | | 72.21% Pervious Area |
| 791 | | 27.79% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|---|
| 3.3 | 33 | 0.0270 | 0.16 | | Sheet Flow, Grass: Short n= 0.150 P2= 3.68" |
| 3.3 | 33 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Subcatchment POST 1.5:

Runoff = 1.70 cfs @ 12.08 hrs, Volume= 0.119 af, Depth= 3.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,235 | 98 | Paved parking, HSG A |
| 311 | 39 | >75% Grass cover, Good, HSG A |
| * 2,980 | 98 | Rock embankment, HSG C |
| 11,396 | 74 | >75% Grass cover, Good, HSG C |
| 721 | 98 | Paved parking, HSG C |
| 17,643 | 81 | Weighted Average |
| 11,707 | | 66.35% Pervious Area |
| 5,936 | | 33.65% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|---|
| 4.1 | 60 | 0.0520 | 0.24 | | Sheet Flow, Grass: Short n= 0.150 P2= 3.68" |
| 4.1 | 60 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Subcatchment POST 1.6:

Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.020 af, Depth= 2.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 3,725 | 74 | >75% Grass cover, Good, HSG C |
| 0 | 98 | Paved parking, HSG C |
| 3,725 | 74 | Weighted Average |
| 3,725 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|--|-------------------|----------------|---|
| 2.6 | 37 | 0.0610 | 0.23 | | Sheet Flow, Grass: Short n= 0.150 P2= 3.68" |
| 2.6 | 37 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Subcatchment POST 1.7:

Runoff = 0.48 cfs @ 12.07 hrs, Volume= 0.036 af, Depth= 4.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
Type III 24-hr 10 Year Storm Rainfall=5.59"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 864 | 74 | >75% Grass cover, Good, HSG C |
| 3,036 | 98 | Paved parking, HSG C |
| 3,900 | 93 | Weighted Average |
| 864 | | 22.15% Pervious Area |
| 3,036 | | 77.85% Impervious Area |

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|-------------|------------------|--|----------------------|-------------------|--|
| 0.5 | 50 | 0.0350 | 1.61 | | Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68" |
| 0.2 | 42 | 0.0350 | 3.80 | | Shallow Concentrated Flow, Paved Kv= 20.3 fps |
| 0.7 | 92 | Total, Increased to minimum Tc = 5.0 min | | | |

Summary for Pond JFF 1: CONTECH JELLY FISH FILTER

Inflow Area = 0.685 ac, 99.19% Impervious, Inflow Depth = 5.35" for 10 Year Storm event
 Inflow = 3.56 cfs @ 12.10 hrs, Volume= 0.306 af
 Outflow = 3.56 cfs @ 12.10 hrs, Volume= 0.306 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.56 cfs @ 12.10 hrs, Volume= 0.306 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs

Peak Elev= 3.66' @ 12.13 hrs

Flood Elev= 11.50'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|--|
| #1 | Primary | 2.35' | 18.0" Round Culvert L= 7.0' Ke= 0.500 Inlet / Outlet Invert= 2.35' / 2.20' S= 0.0214 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |

Primary OutFlow Max=2.77 cfs @ 12.10 hrs HW=3.60' TW=3.45' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 2.77 cfs @ 2.39 fps)**Summary for Pond JFF 2: CONTECH JELLY FISH FILTER**

Inflow Area = 0.893 ac, 97.58% Impervious, Inflow Depth = 5.24" for 10 Year Storm event
 Inflow = 4.72 cfs @ 12.10 hrs, Volume= 0.390 af
 Outflow = 4.72 cfs @ 12.10 hrs, Volume= 0.390 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.72 cfs @ 12.10 hrs, Volume= 0.390 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs

Peak Elev= 3.77' @ 12.12 hrs

Flood Elev= 11.25'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|--|
| #1 | Primary | 2.40' | 18.0" Round Culvert L= 5.0' Ke= 0.500 Inlet / Outlet Invert= 2.40' / 2.30' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |

Primary OutFlow Max=3.86 cfs @ 12.10 hrs HW=3.70' TW=3.45' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 3.86 cfs @ 3.17 fps)

P-0595-007 POST

Type III 24-hr 10 Year Storm Rainfall=5.59"

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Summary for Pond PDMH 12:

Inflow Area = 2.047 ac, 85.22% Impervious, Inflow Depth = 4.83" for 10 Year Storm event
 Inflow = 9.29 cfs @ 12.10 hrs, Volume= 0.823 af
 Outflow = 9.29 cfs @ 12.10 hrs, Volume= 0.823 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.29 cfs @ 12.10 hrs, Volume= 0.823 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
 Peak Elev= 2.98' @ 12.10 hrs
 Flood Elev= 9.25'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|--|
| #1 | Primary | 1.60' | 24.0" Round Culvert L= 27.0' Ke= 0.500 Inlet / Outlet Invert= 1.60' / -0.30' S= 0.0704 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=9.08 cfs @ 12.10 hrs HW=2.96' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 9.08 cfs @ 3.98 fps)

Summary for Pond PDMH 2:

Inflow Area = 1.668 ac, 97.18% Impervious, Inflow Depth = 5.26" for 10 Year Storm event
 Inflow = 8.74 cfs @ 12.10 hrs, Volume= 0.731 af
 Outflow = 8.74 cfs @ 12.10 hrs, Volume= 0.731 af, Atten= 0%, Lag= 0.0 min
 Primary = 8.74 cfs @ 12.10 hrs, Volume= 0.731 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
 Peak Elev= 3.47' @ 12.10 hrs
 Flood Elev= 10.30'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 1.80' | 24.0" Round Culvert L= 34.0' Ke= 0.500 Inlet / Outlet Invert= 1.80' / 1.70' S= 0.0029 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=8.41 cfs @ 12.10 hrs HW=3.45' TW=2.96' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 8.41 cfs @ 4.11 fps)

Summary for Pond POND 1.1:

Inflow Area = 0.685 ac, 99.19% Impervious, Inflow Depth = 5.35" for 10 Year Storm event
 Inflow = 3.83 cfs @ 12.07 hrs, Volume= 0.306 af
 Outflow = 3.56 cfs @ 12.10 hrs, Volume= 0.306 af, Atten= 7%, Lag= 1.8 min
 Primary = 3.56 cfs @ 12.10 hrs, Volume= 0.306 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
 Peak Elev= 6.02' @ 12.10 hrs Surf.Area= 2,496 sf Storage= 3,029 cf
 Flood Elev= 7.25' Surf.Area= 2,496 sf Storage= 4,456 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 238.9 min (984.2 - 745.3)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|--------|---------------|---|
| #1A | 2.75' | 0 cf | 27.13'W x 92.00'L x 5.50'H Field A 13,726 cf Overall - 5,470 cf Embedded = 8,255 cf x 0.0% Voids |
| #2A | 3.25' | 4,566 cf | ADS N-12 48" x 16 Inside #1 Inside= 47.7"W x 47.7"H => 12.40 sf x 20.00'L = 248.0 cf Outside= 54.0"W x 54.0"H => 14.86 sf x 20.00'L = 297.1 cf 4 Rows of 4 Chambers 24.13' Header x 12.40 sf x 2 = 598.3 cf Inside |
| | | 4,566 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|--------|----------|--------|--|
| #1 | Primary | 3.00' | 18.0" Round Culvert L= 7.0' Ke= 0.500 Inlet / Outlet Invert= 3.00' / 2.85' S= 0.0214 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |
| #2 | Device 1 | 3.00' | 1.1" Vert. Orifice/Grate C= 0.600 |
| #3 | Device 1 | 5.60' | Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 1.00 Width (feet) 4.00 4.00 |

Primary OutFlow Max=3.49 cfs @ 12.10 hrs HW=6.01' TW=3.60' (Dynamic Tailwater)

- 1=Culvert (Passes 3.49 cfs of 12.79 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.05 cfs @ 7.48 fps)
- 3=Custom Weir/Orifice (Weir Controls 3.44 cfs @ 2.10 fps)

Summary for Pond POND 1.2:

Inflow Area = 0.893 ac, 97.58% Impervious, Inflow Depth = 5.24" for 10 Year Storm event
 Inflow = 4.96 cfs @ 12.07 hrs, Volume= 0.390 af
 Outflow = 4.72 cfs @ 12.10 hrs, Volume= 0.390 af, Atten= 5%, Lag= 1.4 min
 Primary = 4.72 cfs @ 12.10 hrs, Volume= 0.390 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
 Peak Elev= 6.60' @ 12.10 hrs Surf.Area= 2,496 sf Storage= 3,810 cf
 Flood Elev= 7.25' Surf.Area= 2,496 sf Storage= 4,456 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 267.0 min (1,019.6 - 752.6)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|--------|---------------|---|
| #1A | 2.75' | 0 cf | 27.13'W x 92.00'L x 5.50'H Field A 13,726 cf Overall - 5,470 cf Embedded = 8,255 cf x 0.0% Voids |
| #2A | 3.25' | 4,566 cf | ADS N-12 48" x 16 Inside #1 Inside= 47.7"W x 47.7"H => 12.40 sf x 20.00'L = 248.0 cf Outside= 54.0"W x 54.0"H => 14.86 sf x 20.00'L = 297.1 cf 4 Rows of 4 Chambers 24.13' Header x 12.40 sf x 2 = 598.3 cf Inside |
| | | 4,566 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|--------|----------|--------|---|
| #1 | Primary | 3.05' | 18.0" Round Culvert L= 6.0' Ke= 0.500 Inlet / Outlet Invert= 3.05' / 2.90' S= 0.0250 '/ Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |
| #2 | Device 1 | 3.05' | 1.1" Vert. Orifice/Grate C= 0.600 |
| #3 | Device 1 | 6.10' | Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 1.00 Width (feet) 4.00 4.00 |

Primary OutFlow Max=4.61 cfs @ 12.10 hrs HW=6.59' TW=3.70' (Dynamic Tailwater)

- ↑ 1=Culvert (Passes 4.61 cfs of 14.22 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.05 cfs @ 8.19 fps)
- ↑ 3=Custom Weir/Orifice (Weir Controls 4.55 cfs @ 2.30 fps)

Summary for Pond PP 1: POROUS PAVEMENT

Inflow Area = 0.314 ac, 33.63% Impervious, Inflow Depth = 3.61" for 10 Year Storm event
 Inflow = 1.35 cfs @ 12.08 hrs, Volume= 0.094 af
 Outflow = 0.52 cfs @ 12.31 hrs, Volume= 0.077 af, Atten= 61%, Lag= 14.1 min
 Primary = 0.52 cfs @ 12.31 hrs, Volume= 0.077 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
 Peak Elev= 5.43' @ 12.31 hrs Surf.Area= 3,857 sf Storage= 1,627 cf
 Flood Elev= 8.80' Surf.Area= 3,857 sf Storage= 3,386 cf

Plug-Flow detention time= 162.4 min calculated for 0.076 af (81% of inflow)
 Center-of-Mass det. time= 89.6 min (900.4 - 810.8)

| Volume | Invert | Avail.Storage | Storage Description | |
|------------------|-------------------|---------------|--|------------------------|
| #1 | 4.38' | 3,386 cf | Custom Stage Data (Prismatic) Listed below (Recalc) | |
| Elevation (feet) | Surf.Area (sq-ft) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 4.38 | 3,857 | 0.0 | 0 | 0 |
| 5.95 | 3,857 | 40.0 | 2,422 | 2,422 |
| 6.95 | 3,857 | 10.0 | 386 | 2,808 |
| 7.45 | 3,857 | 30.0 | 579 | 3,386 |
| 7.80 | 3,857 | 0.0 | 0 | 3,386 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|--------|---|
| #1 | Primary | 4.88' | 6.0" Vert. Underdrain C= 0.600 |
| #2 | Device 1 | 4.38' | 10.000 in/hr Filter Media Infiltration over Surface area |

Primary OutFlow Max=0.52 cfs @ 12.31 hrs HW=5.43' TW=2.49' (Dynamic Tailwater)

- ↑ 1=Underdrain (Orifice Controls 0.52 cfs @ 2.66 fps)
- ↑ 2=Filter Media Infiltration (Passes 0.52 cfs of 0.89 cfs potential flow)

Summary for Pond PP 2: POROUS PAVEMENT

Inflow Area = 0.065 ac, 27.79% Impervious, Inflow Depth = 3.51" for 10 Year Storm event
 Inflow = 0.27 cfs @ 12.08 hrs, Volume= 0.019 af
 Outflow = 0.17 cfs @ 12.12 hrs, Volume= 0.016 af, Atten= 36%, Lag= 2.6 min
 Primary = 0.17 cfs @ 12.12 hrs, Volume= 0.016 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs
 Peak Elev= 4.80' @ 12.17 hrs Surf.Area= 755 sf Storage= 248 cf
 Flood Elev= 8.40' Surf.Area= 755 sf Storage= 640 cf

Plug-Flow detention time= 128.3 min calculated for 0.016 af (82% of inflow)
 Center-of-Mass det. time= 55.7 min (869.2 - 813.5)

| Volume | Invert | Avail.Storage | Storage Description | |
|------------------|-------------------|---------------|--|------------------------|
| #1 | 3.98' | 640 cf | Custom Stage Data (Prismatic) Listed below (Recalc) | |
| Elevation (feet) | Surf.Area (sq-ft) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 3.98 | 755 | 0.0 | 0 | 0 |
| 5.45 | 755 | 40.0 | 444 | 444 |
| 6.55 | 755 | 10.0 | 83 | 527 |
| 7.05 | 755 | 30.0 | 113 | 640 |
| 7.40 | 755 | 0.0 | 0 | 640 |

| Device | Routing | Invert | Outlet Devices | |
|--------|----------|--------|---|--|
| #1 | Primary | 4.48' | 6.0" Vert. Underdrain C= 0.600 | |
| #2 | Device 1 | 3.98' | 10.000 in/hr Filter Media Infiltration over Surface area | |

Primary OutFlow Max=0.17 cfs @ 12.12 hrs HW=4.78' TW=2.96' (Dynamic Tailwater)
 ↑1=Underdrain (Passes 0.17 cfs of 0.23 cfs potential flow)
 ↑2=Filter Media Infiltration (Exfiltration Controls 0.17 cfs)

Summary for Link PA1:

Inflow Area = 2.537 ac, 74.12% Impervious, Inflow Depth = 4.55" for 10 Year Storm event
 Inflow = 11.23 cfs @ 12.09 hrs, Volume= 0.962 af
 Primary = 11.23 cfs @ 12.09 hrs, Volume= 0.962 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.04 hrs

P-0595-007 POST

Type III 24-hr 25 Year Storm Rainfall=7.08"

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Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
 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 POST 1.1: | Runoff Area=29,844 sf 99.19% Impervious Runoff Depth=6.84" Flow Length=114' Tc=5.0 min CN=98 Runoff=4.86 cfs 0.391 af |
| Subcatchment POST 1.2: | Runoff Area=38,901 sf 97.58% Impervious Runoff Depth=6.72" Flow Length=85' Tc=5.0 min CN=97 Runoff=6.31 cfs 0.500 af |
| Subcatchment POST 1.3: | Runoff Area=13,670 sf 33.63% Impervious Runoff Depth=4.99" Flow Length=59' Slope=0.0430 '/' Tc=5.0 min CN=82 Runoff=1.85 cfs 0.131 af |
| Subcatchment POST 1.4: | Runoff Area=2,846 sf 27.79% Impervious Runoff Depth=4.88" Flow Length=33' Slope=0.0270 '/' Tc=5.0 min CN=81 Runoff=0.38 cfs 0.027 af |
| Subcatchment POST 1.5: | Runoff Area=17,643 sf 33.65% Impervious Runoff Depth=4.88" Flow Length=60' Slope=0.0520 '/' Tc=5.0 min CN=81 Runoff=2.34 cfs 0.165 af |
| Subcatchment POST 1.6: | Runoff Area=3,725 sf 0.00% Impervious Runoff Depth=4.11" Flow Length=37' Slope=0.0610 '/' Tc=5.0 min CN=74 Runoff=0.42 cfs 0.029 af |
| Subcatchment POST 1.7: | Runoff Area=3,900 sf 77.85% Impervious Runoff Depth=6.25" Flow Length=92' Slope=0.0350 '/' Tc=5.0 min CN=93 Runoff=0.62 cfs 0.047 af |
| Pond JFF 1: CONTECH JELLY FISH FILTER | Peak Elev=4.02' Inflow=4.57 cfs 0.391 af 18.0" Round Culvert n=0.013 L=7.0' S=0.0214 '/' Outflow=4.57 cfs 0.391 af |
| Pond JFF 2: CONTECH JELLY FISH FILTER | Peak Elev=4.20' Inflow=6.06 cfs 0.500 af 18.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=6.06 cfs 0.500 af |
| Pond PDMH 12: | Peak Elev=3.24' Inflow=12.01 cfs 1.073 af 24.0" Round Culvert n=0.013 L=27.0' S=0.0704 '/' Outflow=12.01 cfs 1.073 af |
| Pond PDMH 2: | Peak Elev=3.77' Inflow=11.22 cfs 0.937 af 24.0" Round Culvert n=0.013 L=34.0' S=0.0029 '/' Outflow=11.22 cfs 0.937 af |
| Pond POND 1.1: | Peak Elev=6.09' Storage=3,136 cf Inflow=4.86 cfs 0.391 af Outflow=4.57 cfs 0.391 af |
| Pond POND 1.2: | Peak Elev=6.70' Storage=3,920 cf Inflow=6.31 cfs 0.500 af Outflow=6.06 cfs 0.500 af |
| Pond PP 1: POROUS PAVEMENT | Peak Elev=5.74' Storage=2,097 cf Inflow=1.85 cfs 0.131 af Outflow=0.74 cfs 0.113 af |
| Pond PP 2: POROUS PAVEMENT | Peak Elev=5.04' Storage=320 cf Inflow=0.38 cfs 0.027 af Outflow=0.17 cfs 0.023 af |
| Link PA1: | Inflow=14.71 cfs 1.267 af Primary=14.71 cfs 1.267 af |

P-0595-007 POST

Type III 24-hr 25 Year Storm Rainfall=7.08"

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Total Runoff Area = 2.537 ac Runoff Volume = 1.289 af Average Runoff Depth = 6.09"
25.88% Pervious = 0.657 ac 74.12% Impervious = 1.881 ac

P-0595-007 POST

Type III 24-hr 50 Year Storm Rainfall=8.48"

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Time span=0.00-48.00 hrs, dt=0.04 hrs, 1201 points
 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 POST 1.1: | Runoff Area=29,844 sf 99.19% Impervious Runoff Depth=8.24" Flow Length=114' Tc=5.0 min CN=98 Runoff=5.82 cfs 0.470 af |
| Subcatchment POST 1.2: | Runoff Area=38,901 sf 97.58% Impervious Runoff Depth=8.12" Flow Length=85' Tc=5.0 min CN=97 Runoff=7.57 cfs 0.604 af |
| Subcatchment POST 1.3: | Runoff Area=13,670 sf 33.63% Impervious Runoff Depth=6.32" Flow Length=59' Slope=0.0430 '/' Tc=5.0 min CN=82 Runoff=2.31 cfs 0.165 af |
| Subcatchment POST 1.4: | Runoff Area=2,846 sf 27.79% Impervious Runoff Depth=6.20" Flow Length=33' Slope=0.0270 '/' Tc=5.0 min CN=81 Runoff=0.47 cfs 0.034 af |
| Subcatchment POST 1.5: | Runoff Area=17,643 sf 33.65% Impervious Runoff Depth=6.20" Flow Length=60' Slope=0.0520 '/' Tc=5.0 min CN=81 Runoff=2.94 cfs 0.209 af |
| Subcatchment POST 1.6: | Runoff Area=3,725 sf 0.00% Impervious Runoff Depth=5.36" Flow Length=37' Slope=0.0610 '/' Tc=5.0 min CN=74 Runoff=0.55 cfs 0.038 af |
| Subcatchment POST 1.7: | Runoff Area=3,900 sf 77.85% Impervious Runoff Depth=7.64" Flow Length=92' Slope=0.0350 '/' Tc=5.0 min CN=93 Runoff=0.74 cfs 0.057 af |
| Pond JFF 1: CONTECH JELLY FISH FILTER | Peak Elev=4.51' Inflow=5.51 cfs 0.470 af 18.0" Round Culvert n=0.013 L=7.0' S=0.0214 '/' Outflow=5.51 cfs 0.470 af |
| Pond JFF 2: CONTECH JELLY FISH FILTER | Peak Elev=4.70' Inflow=7.33 cfs 0.604 af 18.0" Round Culvert n=0.013 L=5.0' S=0.0200 '/' Outflow=7.33 cfs 0.604 af |
| Pond PDMH 12: | Peak Elev=3.50' Inflow=14.49 cfs 1.309 af 24.0" Round Culvert n=0.013 L=27.0' S=0.0704 '/' Outflow=14.49 cfs 1.309 af |
| Pond PDMH 2: | Peak Elev=4.21' Inflow=13.56 cfs 1.132 af 24.0" Round Culvert n=0.013 L=34.0' S=0.0029 '/' Outflow=13.56 cfs 1.132 af |
| Pond POND 1.1: | Peak Elev=6.16' Storage=3,229 cf Inflow=5.82 cfs 0.470 af Outflow=5.51 cfs 0.470 af |
| Pond POND 1.2: | Peak Elev=6.78' Storage=4,012 cf Inflow=7.57 cfs 0.604 af Outflow=7.33 cfs 0.604 af |
| Pond PP 1: POROUS PAVEMENT | Peak Elev=6.19' Storage=2,515 cf Inflow=2.31 cfs 0.165 af Outflow=0.89 cfs 0.147 af |
| Pond PP 2: POROUS PAVEMENT | Peak Elev=5.31' Storage=403 cf Inflow=0.47 cfs 0.034 af Outflow=0.17 cfs 0.030 af |
| Link PA1: | Inflow=17.90 cfs 1.557 af Primary=17.90 cfs 1.557 af |

P-0595-007 POST

Type III 24-hr 50 Year Storm Rainfall=8.48"

Prepared by Tighe & Bond


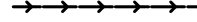



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Total Runoff Area = 2.537 ac Runoff Volume = 1.578 af Average Runoff Depth = 7.46"
25.88% Pervious = 0.657 ac 74.12% Impervious = 1.881 ac

LEGEND

-  POST-DEVELOPMENT WATERSHED BOUNDARY
-  LONGEST FLOW PATH
-  POST 1.0
PRE-DEVELOPMENT WATERSHED AREA DESIGNATION
-  POST POND 1
POST-DEVELOPMENT POND DESIGNATION
-  PA-1
POINT OF ANALYSIS

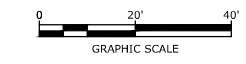
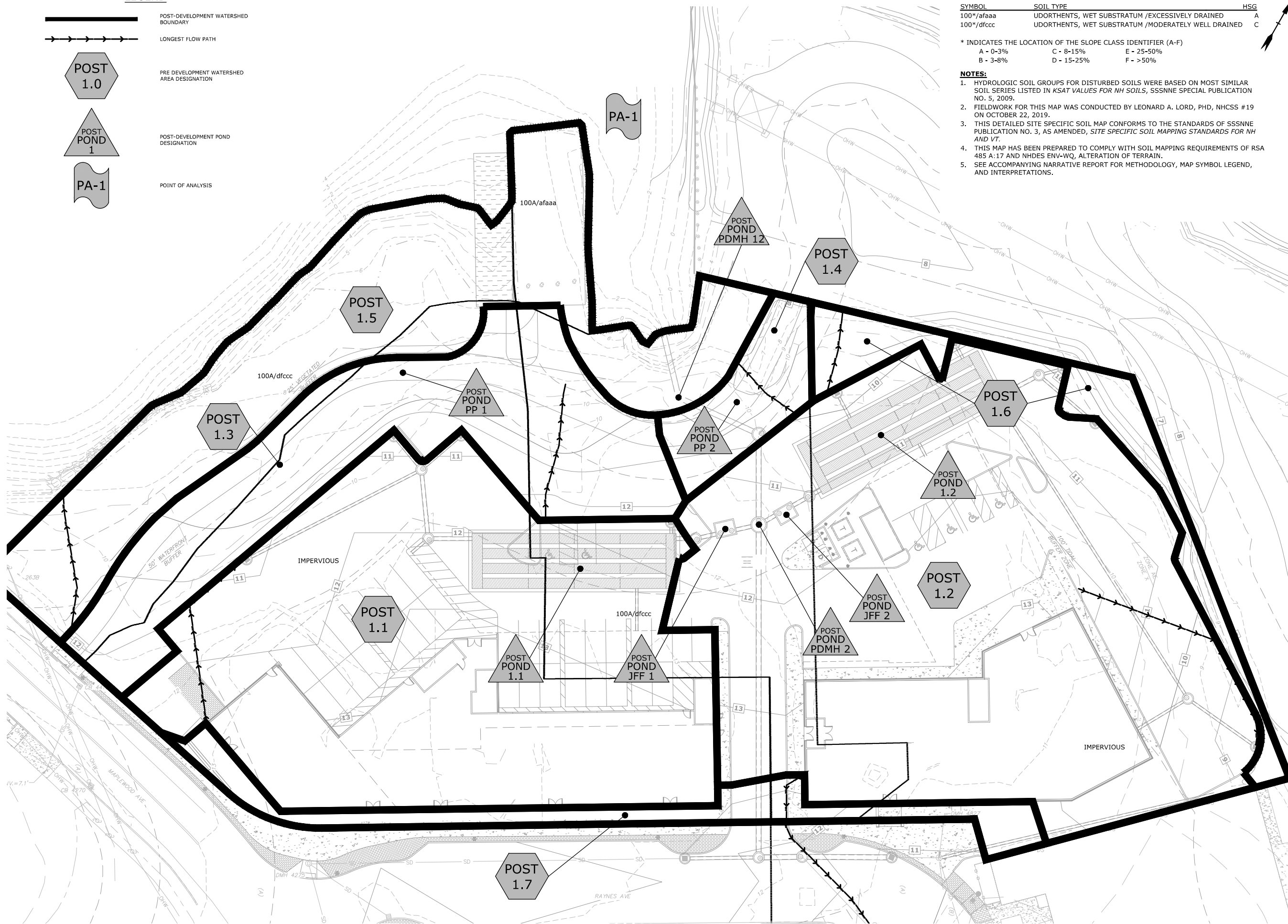
SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

| SYMBOL | SOIL TYPE | HSG |
|------------|---|-----|
| 100*/afaaa | UDORTHERENTS, WET SUBSTRATUM /EXCESSIVELY DRAINED | A |
| 100*/dfccc | UDORTHERENTS, WET SUBSTRATUM /MODERATELY WELL DRAINED | C |

* INDICATES THE LOCATION OF THE SLOPE CLASS IDENTIFIER (A-F)
 A - 0-3% C - 8-15% E - 25-50%
 B - 3-8% D - 15-25% F - >50%

NOTES:

- HYDROLOGIC SOIL GROUPS FOR DISTURBED SOILS WERE BASED ON MOST SIMILAR SOIL SERIES LISTED IN *KSAT VALUES FOR NH SOILS*, SSSNNE SPECIAL PUBLICATION NO. 5, 2009.
- FIELDWORK FOR THIS MAP WAS CONDUCTED BY LEONARD A. LORD, PHD, NHCSS #19 ON OCTOBER 22, 2019.
- THIS DETAILED SITE SPECIFIC SOIL MAP CONFORMS TO THE STANDARDS OF SSSNNE PUBLICATION NO. 3, AS AMENDED, *SITE SPECIFIC SOIL MAPPING STANDARDS FOR NH AND VT*.
- THIS MAP HAS BEEN PREPARED TO COMPLY WITH SOIL MAPPING REQUIREMENTS OF RSA 485 A:17 AND NHDES ENV-WQ, ALTERATION OF TERRAIN.
- SEE ACCOMPANYING NARRATIVE REPORT FOR METHODOLOGY, MAP SYMBOL LEGEND, AND INTERPRETATIONS.



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

| | |
|--------------|----------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-HYDRO.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

Last Saved: 3/25/2021 6:35am By: WJHansen
 Plotted On: May 18, 2021 10:03am By: WJHansen
 Figure & Symbol: P-0595-007 Gen. General Proposals P-0595-007 Figures/Autocad/Sheet/P-0595-007-HYDRO.dwg

Section 4

Peak Rate Comparison

The following table summarizes and compares the pre- and post-development peak runoff rates from the 2-year, 10-year, 25-year and 50-year storm events at the point of analysis.

Table 4.1
Comparison of Pre- and Post-Development Flows (CFS)

| | 2-Year Storm | 10-Year Storm | 25-Year Storm | 50-Year Storm |
|-----------------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| Pre-Development Watershed | | | | |
| PA-1 | 7.82 | 12.94 | 16.90 | 20.59 |
| Post-Development Watershed | | | | |
| PA-1 | 6.26 | 11.23 | 14.71 | 17.90 |

Section 5

Mitigation Description

The stormwater management system has been designed to provide stormwater treatment as required by the City of Portsmouth Site Review Regulations and NHDES AoT Regulations (Env-Wq 1500).

5.1 Pre-Treatment Methods for Protecting Water Quality

Pre-treatment for the stormwater filtration systems consist of deep sump catch basins.

5.2 Treatment Methods for Protecting Water Quality.

The runoff from proposed impervious areas will be treated by various Contech Jellyfish stormwater filtration systems. These Jellyfish systems are sized to treat the Water Quality Flows of their respective subcatchment areas. Each system is outfitted with an internal bypass that diverts peak flows away from treatment. The BMP worksheet for these treatment practices have been included in Section 5 of this report.

The multiuse path along the North Mill Pond will be constructed as lined porous pavement with and underdrain. The underdrain will discharge to the closed drainage system prior to discharging to the Pond.

| BMP | Total Suspended Solids | Total Nitrogen | Total Phosphorus |
|--|------------------------|----------------|------------------|
| Jellyfish Filter w/Pretreatment ¹ | 91% | 53% | 61% |
| Porous Pavement w/Underdrain ² | 90% | 10% | 45% |

1. Pollutant removal calculations for Jellyfish Filter with deep sump catchbasin pretreatment shown in Table 4.2.
2. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix B.

| Table 5.2 – Pollutant Removal Calculations | | | | |
|---|------------------|-------------------|-------------|--------------------|
| Contech Jellyfish Filter | | | | |
| BMP | TSS Removal Rate | Starting TSS Load | TSS Removed | Remaining TSS Load |
| Deep Sump Catchbasin w/Hood ¹ | 0.15 | 1.00 | 0.15 | 0.85 |
| Jellyfish Filter ² | 0.89 | 0.85 | 0.76 | 0.09 |
| Total Suspended Solids Removed: | | | | 91% |
| | TN Removal Rate | Starting TN Load | TN Removed | Remaining TN Load |
| Deep Sump Catchbasin w/Hood ¹ | 0.05 | 1.00 | 0.05 | 0.95 |
| Jellyfish Filter ² | 0.51 | 0.95 | 0.48 | 0.47 |
| Total Nitrogen Removed: | | | | 53% |
| | TP Removal Rate | Starting TP Load | TP Removed | Remaining TP Load |
| Deep Sump Catchbasin w/Hood ¹ | 0.05 | 1.00 | 0.05 | 0.95 |
| Jellyfish Filter ² | 0.59 | 0.95 | 0.56 | 0.39 |
| Total Phosphorus Removed: | | | | 61% |

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix E.
2. Pollutant removal efficiencies from Contech Engineered Solutions, Jellyfish Filter Stormwater Treatment performance testing results.

Section 6

BMP Worksheets and Sizing Memos



GENERAL CALCULATIONS - WQV and WQF (optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

| | | |
|-------|----------|---|
| 0.68 | ac | A = Area draining to the practice |
| 0.68 | ac | A_I = Impervious area draining to the practice |
| 1.00 | decimal | I = Percent impervious area draining to the practice, in decimal form |
| 0.95 | unitless | R_v = Runoff coefficient = $0.05 + (0.9 \times I)$ |
| 0.65 | ac-in | WQV = $1'' \times R_v \times A$ |
| 2,345 | cf | WQV conversion (ac-in \times 43,560 sf/ac \times 1ft/12'') |

Water Quality Flow (WQF)

| | | |
|-------|-------------------------|--|
| 1 | inches | P = Amount of rainfall. For WQF in NH, P = 1''. |
| 0.95 | inches | Q = Water quality depth. $Q = \text{WQV}/A$ |
| 100 | unitless | CN = Unit peak discharge curve number. $CN = 1000 / (10 + 5P + 10Q - 10 * [Q^2 + 1.25 * Q * P]^{0.5})$ |
| 0.0 | inches | S = Potential maximum retention. $S = (1000/CN) - 10$ |
| 0.009 | inches | I_a = Initial abstraction. $I_a = 0.2S$ |
| 5.0 | minutes | T_c = Time of Concentration |
| 640.0 | cfs/mi ² /in | q_u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III. |
| 0.646 | cfs | WQF = $q_u \times \text{WQV}$. Conversion: to convert "cfs/mi ² /in * ac-in" to "cfs" multiply by 1mi ² /640ac. |

Designer's Notes: POST 1.1

JFF-1

Peak Flow = 5.54 cfs



CONTECH Stormwater Solutions Inc. Engineer:
Date Prepared:

DRA
3/16/2021

Site Information

| | |
|--------------------------------------|-------------------------------|
| Project Name | Proposed Mixed Use Dev - JFF1 |
| Project State | NH |
| Project City | Portsmouth |
| Total Drainage Area, Ad | 0.87 ac |
| Post Development Impervious Area, Ai | 0.68 ac |
| Pervious Area, Ap | 0.19 ac |
| % Impervious | 78% |
| Runoff Coefficient, Rc | 0.75 |

Mass Loading Calculations

| | |
|--|------------------------|
| Mean Annual Rainfall, P | 50 in |
| Agency Required % Removal | 80% |
| Percent Runoff Capture | 90% |
| Mean Annual Runoff, Vt | 107076 ft ³ |
| Event Mean Concentration of Pollutant, EMC | 75 mg/l |
| Annual Mass Load, M total | 501.04 lbs |

Filter System

| | |
|------------------|------------|
| Filtration Brand | Jelly Fish |
| Cartridge Length | 54 in |

Jelly Fish Sizing

| | |
|-------------------------------|------------|
| Mass to be Captured by System | 400.83 lbs |
| Water Quality Flow | 0.66 cfs |

Method to Use

FLOW BASED

Summary

| | | |
|------|---------------------|--------------|
| Flow | Treatment Flow Rate | 0.80 cfs |
| | Required Size | JFPD0806-4-1 |



GENERAL CALCULATIONS - WQV and WQF (optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

| | |
|---------------|---|
| 0.89 ac | A = Area draining to the practice |
| 0.87 ac | A _i = Impervious area draining to the practice |
| 0.98 decimal | I = Percent impervious area draining to the practice, in decimal form |
| 0.93 unitless | R _v = Runoff coefficient = 0.05 + (0.9 x I) |
| 0.83 ac-in | WQV = 1" x R _v x A |
| 3,004 cf | WQV conversion (ac-in x 43,560 sf/ac x 1ft/12") |

Water Quality Flow (WQF)

| | |
|-------------------------------|--|
| 1 inches | P = Amount of rainfall. For WQF in NH, P = 1". |
| 0.93 inches | Q = Water quality depth. Q = WQV/A |
| 99 unitless | CN = Unit peak discharge curve number. $CN = 1000 / (10 + 5P + 10Q - 10 * [Q^2 + 1.25 * Q * P]^{0.5})$ |
| 0.1 inches | S = Potential maximum retention. $S = (1000 / CN) - 10$ |
| 0.012 inches | I _a = Initial abstraction. I _a = 0.2S |
| 5.0 minutes | T _c = Time of Concentration |
| 640.0 cfs/mi ² /in | q _u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III. |
| 0.828 cfs | WQF = q _u x WQV. Conversion: to convert "cfs/mi ² /in * ac-in" to "cfs" multiply by 1mi ² /640ac. |

Designer's Notes: POST 1.2

JFF 2

Peak Flow = 7.33 cfs



CONTECH Stormwater Solutions Inc. Engineer:
Date Prepared:

DRA
3/16/2021

Site Information

| | |
|--------------------------------------|------------------------------|
| Project Name | Proposed Mixed Use Dev- JFF2 |
| Project State | NH |
| Project City | Portsmouth |
| Total Drainage Area, Ad | 0.86 ac |
| Post Development Impervious Area, Ai | 0.83 ac |
| Pervious Area, Ap | 0.03 ac |
| % Impervious | 97% |
| Runoff Coefficient, Rc | 0.92 |

Mass Loading Calculations

| | |
|--|------------------------|
| Mean Annual Rainfall, P | 50 in |
| Agency Required % Removal | 80% |
| Percent Runoff Capture | 90% |
| Mean Annual Runoff, Vt | 129047 ft ³ |
| Event Mean Concentration of Pollutant, EMC | 75 mg/l |
| Annual Mass Load, M total | 603.85 lbs |

Filter System

| | |
|------------------|------------|
| Filtration Brand | Jelly Fish |
| Cartridge Length | 54 in |

Jelly Fish Sizing

| | |
|-------------------------------|------------|
| Mass to be Captured by System | 483.08 lbs |
| Water Quality Flow | 0.79 cfs |

Method to Use

FLOW BASED

Summary

| | | |
|------|---------------------|--------------|
| Flow | Treatment Flow Rate | 0.80 cfs |
| | Required Size | JFPD0806-4-1 |



FILTRATION PRACTICE DESIGN CRITERIA (Env-Wq 1508.07)

Type/Node Name: _____

PP-1

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

| | | | |
|---|----------|---|---------------------------|
| | | Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.07(a). | |
| 0.31 | ac | A = Area draining to the practice | |
| 0.10 | ac | A _I = Impervious area draining to the practice | |
| 0.33 | decimal | I = Percent impervious area draining to the practice, in decimal form | |
| 0.35 | unitless | R _v = Runoff coefficient = 0.05 + (0.9 x I) | |
| 0.11 | ac-in | WQV = 1" x R _v x A | |
| 390 | cf | WQV conversion (ac-in x 43,560 sf/ac x 1ft/12") | |
| 97 | cf | 25% x WQV (check calc for sediment forebay volume) | |
| 292 | cf | 75% x WQV (check calc for surface sand filter volume) | |
| | | Method of Pretreatment? (not required for clean or roof runoff) | |
| | cf | V _{SED} = Sediment forebay volume, if used for pretreatment | ≥ 25%WQV |
| Calculate time to drain if system IS NOT underdrained: | | | |
| 3,857 | sf | A _{SA} = Surface area of the practice | |
| | iph | K _{sat} DESIGN = Design infiltration rate ¹ | |
| | | If K _{sat} (prior to factor of safety) is < 0.50 iph, has an underdrain been provided? (Use the calculations below) | |
| YES | Yes/No | | |
| - | hours | T _{DRAIN} = Drain time = V / (A _{SA} * I _{DESIGN}) | ≤ 72-hrs |
| Calculate time to drain if system IS underdrained: | | | |
| 5.05 | ft | E _{WQV} = Elevation of WQV (attach stage-storage table) | |
| 0.08 | cfs | Q _{WQV} = Discharge at the E _{WQV} (attach stage-discharge table) | |
| 2.71 | hours | T _{DRAIN} = Drain time = 2WQV/Q _{WQV} | ≤ 72-hrs |
| 5.45 | feet | E _{FC} = Elevation of the bottom of the filter course material ² | |
| 4.48 | feet | E _{UD} = Invert elevation of the underdrain (UD), if applicable | |
| | feet | E _{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit) | |
| | feet | E _{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit) | |
| 0.97 | feet | D _{FC to UD} = Depth to UD from the bottom of the filter course | ≥ 1' |
| 5.45 | feet | D _{FC to ROCK} = Depth to bedrock from the bottom of the filter course | ≥ 1' |
| 5.45 | feet | D _{FC to SHWT} = Depth to SHWT from the bottom of the filter course | ≥ 1' |
| 6.14 | ft | Peak elevation of the 50-year storm event (infiltration can be used in analysis) | |
| 7.80 | ft | Elevation of the top of the practice | |
| YES | | 50 peak elevation ≤ Elevation of the top of the practice | ← yes |
| If a surface sand filter or underground sand filter is proposed: | | | |
| YES | ac | Drainage Area check. | < 10 ac |
| | cf | V = Volume of storage ³ (attach a stage-storage table) | ≥ 75%WQV |
| | inches | D _{FC} = Filter course thickness | 18", or 24" if within GPA |
| Sheet | | Note what sheet in the plan set contains the filter course specification. | |
| Yes/No | | Access grate provided? | ← yes |

| If a bioretention area is proposed: | | | |
|--|--------|---|---------------------------|
| YES | ac | Drainage Area no larger than 5 ac? | ← yes |
| | cf | V = Volume of storage ³ (attach a stage-storage table) | ≥ WQV |
| | inches | D _{FC} = Filter course thickness | 18", or 24" if within GPA |
| Sheet | | Note what sheet in the plan set contains the filter course specification | |
| | :1 | Pond side slopes | > 3:1 |
| Sheet | | Note what sheet in the plan set contains the planting plans and surface cover | |
| If porous pavement is proposed: | | | |
| Asphalt | | Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.) | |
| 0.1 | acres | A _{SA} = Surface area of the pervious pavement | |
| 3.5 | :1 | Ratio of the contributing area to the pervious surface area | ≤ 5:1 |
| 12.0 | inches | D _{FC} = Filter course thickness | 12", or 18" if within GPA |
| Sheet | C-505 | Note what sheet in the plan set contains the filter course spec. | mod. 304.1 (see spec) |

1. Rate of the limiting layer (either the filter course or the underlying soil). $K_{sat_{design}}$ includes factor of safety. See Env-Wq 1504.14 for guidance on determining the infiltration rate.
2. See lines 34, 40 and 48 for required depths of filter media.
3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet structure, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

P-0595-007 POST

Prepared by Tighe & Bond

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Type III 24-hr 50 Year Storm Rainfall=8.48"

Printed 3/19/2021

Stage-Area-Storage for Pond PP 1: POROUS PAVEMENT

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 4.38 | 3,857 | 0 | 6.98 | 3,857 | 2,843 |
| 4.43 | 3,857 | 77 | 7.03 | 3,857 | 2,900 |
| 4.48 | 3,857 | 154 | 7.08 | 3,857 | 2,958 |
| 4.53 | 3,857 | 231 | 7.13 | 3,857 | 3,016 |
| 4.58 | 3,857 | 309 | 7.18 | 3,857 | 3,074 |
| 4.63 | 3,857 | 386 | 7.23 | 3,857 | 3,132 |
| 4.68 | 3,857 | 463 | 7.28 | 3,857 | 3,190 |
| 4.73 | 3,857 | 540 | 7.33 | 3,857 | 3,248 |
| 4.78 | 3,857 | 617 | 7.38 | 3,857 | 3,305 |
| 4.83 | 3,857 | 694 | 7.43 | 3,857 | 3,363 |
| 4.88 | 3,857 | 771 | 7.48 | 3,857 | 3,386 |
| 4.93 | 3,857 | 849 | 7.53 | 3,857 | 3,386 |
| 4.98 | 3,857 | 926 | 7.58 | 3,857 | 3,386 |
| 5.03 | 3,857 | 1,003 | 7.63 | 3,857 | 3,386 |
| 5.08 | 3,857 | 1,080 | 7.68 | 3,857 | 3,386 |
| 5.13 | 3,857 | 1,157 | 7.73 | 3,857 | 3,386 |
| 5.18 | 3,857 | 1,234 | 7.78 | 3,857 | 3,386 |
| 5.23 | 3,857 | 1,311 | 7.83 | 3,857 | 3,386 |
| 5.28 | 3,857 | 1,389 | 7.88 | 3,857 | 3,386 |
| 5.33 | 3,857 | 1,466 | 7.93 | 3,857 | 3,386 |
| 5.38 | 3,857 | 1,543 | 7.98 | 3,857 | 3,386 |
| 5.43 | 3,857 | 1,620 | 8.03 | 3,857 | 3,386 |
| 5.48 | 3,857 | 1,697 | 8.08 | 3,857 | 3,386 |
| 5.53 | 3,857 | 1,774 | 8.13 | 3,857 | 3,386 |
| 5.58 | 3,857 | 1,851 | 8.18 | 3,857 | 3,386 |
| 5.63 | 3,857 | 1,929 | 8.23 | 3,857 | 3,386 |
| 5.68 | 3,857 | 2,006 | 8.28 | 3,857 | 3,386 |
| 5.73 | 3,857 | 2,083 | 8.33 | 3,857 | 3,386 |
| 5.78 | 3,857 | 2,160 | 8.38 | 3,857 | 3,386 |
| 5.83 | 3,857 | 2,237 | 8.43 | 3,857 | 3,386 |
| 5.88 | 3,857 | 2,314 | 8.48 | 3,857 | 3,386 |
| 5.93 | 3,857 | 2,391 | 8.53 | 3,857 | 3,386 |
| 5.98 | 3,857 | 2,434 | 8.58 | 3,857 | 3,386 |
| 6.03 | 3,857 | 2,453 | 8.63 | 3,857 | 3,386 |
| 6.08 | 3,857 | 2,472 | 8.68 | 3,857 | 3,386 |
| 6.13 | 3,857 | 2,492 | 8.73 | 3,857 | 3,386 |
| 6.18 | 3,857 | 2,511 | 8.78 | 3,857 | 3,386 |
| 6.23 | 3,857 | 2,530 | | | |
| 6.28 | 3,857 | 2,549 | | | |
| 6.33 | 3,857 | 2,569 | | | |
| 6.38 | 3,857 | 2,588 | | | |
| 6.43 | 3,857 | 2,607 | | | |
| 6.48 | 3,857 | 2,627 | | | |
| 6.53 | 3,857 | 2,646 | | | |
| 6.58 | 3,857 | 2,665 | | | |
| 6.63 | 3,857 | 2,684 | | | |
| 6.68 | 3,857 | 2,704 | | | |
| 6.73 | 3,857 | 2,723 | | | |
| 6.78 | 3,857 | 2,742 | | | |
| 6.83 | 3,857 | 2,762 | | | |
| 6.88 | 3,857 | 2,781 | | | |
| 6.93 | 3,857 | 2,800 | | | |



FILTRATION PRACTICE DESIGN CRITERIA (Env-Wq 1508.07)

Type/Node Name: _____

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

| | | | |
|---|----------|---|---------------------------|
| | | Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.07(a). | |
| 0.08 | ac | A = Area draining to the practice | |
| 0.02 | ac | A _I = Impervious area draining to the practice | |
| 0.23 | decimal | I = Percent impervious area draining to the practice, in decimal form | |
| 0.25 | unitless | R _v = Runoff coefficient = 0.05 + (0.9 x I) | |
| 0.02 | ac-in | WQV = 1" x R _v x A | |
| 73 | cf | WQV conversion (ac-in x 43,560 sf/ac x 1ft/12") | |
| 18 | cf | 25% x WQV (check calc for sediment forebay volume) | |
| 55 | cf | 75% x WQV (check calc for surface sand filter volume) | |
| | | Method of Pretreatment? (not required for clean or roof runoff) | |
| | cf | V _{SED} = Sediment forebay volume, if used for pretreatment | ≥ 25%WQV |
| Calculate time to drain if system IS NOT underdrained: | | | |
| 755 | sf | A _{SA} = Surface area of the practice | |
| | iph | K _{sat} _{DESIGN} = Design infiltration rate ¹ | |
| | | If K _{sat} (prior to factor of safety) is < 0.50 iph, has an underdrain been provided? (Use the calculations below) | |
| YES | Yes/No | | |
| - | hours | T _{DRAIN} = Drain time = V / (A _{SA} * I _{DESIGN}) | ≤ 72-hrs |
| Calculate time to drain if system IS underdrained: | | | |
| 4.75 | ft | E _{WQV} = Elevation of WQV (attach stage-storage table) | |
| 0.17 | cfs | Q _{WQV} = Discharge at the E _{WQV} (attach stage-discharge table) | |
| 0.24 | hours | T _{DRAIN} = Drain time = 2WQV/Q _{WQV} | ≤ 72-hrs |
| 5.95 | feet | E _{FC} = Elevation of the bottom of the filter course material ² | |
| 4.88 | feet | E _{UD} = Invert elevation of the underdrain (UD), if applicable | |
| | feet | E _{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit) | |
| | feet | E _{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit) | |
| 1.07 | feet | D _{FC to UD} = Depth to UD from the bottom of the filter course | ≥ 1' |
| 5.95 | feet | D _{FC to ROCK} = Depth to bedrock from the bottom of the filter course | ≥ 1' |
| 5.95 | feet | D _{FC to SHWT} = Depth to SHWT from the bottom of the filter course | ≥ 1' |
| 6.18 | ft | Peak elevation of the 50-year storm event (infiltration can be used in analysis) | |
| 7.40 | ft | Elevation of the top of the practice | |
| YES | | 50 peak elevation ≤ Elevation of the top of the practice | ← yes |
| If a surface sand filter or underground sand filter is proposed: | | | |
| YES | ac | Drainage Area check. | < 10 ac |
| | cf | V = Volume of storage ³ (attach a stage-storage table) | ≥ 75%WQV |
| | inches | D _{FC} = Filter course thickness | 18", or 24" if within GPA |
| Sheet | | Note what sheet in the plan set contains the filter course specification. | |
| Yes/No | | Access grate provided? | ← yes |

If a bioretention area is proposed:

| | | | |
|-------|--------|---|---------------------------|
| YES | ac | Drainage Area no larger than 5 ac? | ← yes |
| | cf | V = Volume of storage ³ (attach a stage-storage table) | ≥ WQV |
| | inches | D _{FC} = Filter course thickness | 18", or 24" if within GPA |
| Sheet | | Note what sheet in the plan set contains the filter course specification | |
| :1 | | Pond side slopes | > 3:1 |
| Sheet | | Note what sheet in the plan set contains the planting plans and surface cover | |

If porous pavement is proposed:

| | | | |
|-------|--------|--|---------------------------|
| | | Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.) | |
| 0.0 | acres | A _{SA} = Surface area of the pervious pavement | |
| 4.7 | :1 | Ratio of the contributing area to the pervious surface area | ≤ 5:1 |
| 12.0 | inches | D _{FC} = Filter course thickness | 12", or 18" if within GPA |
| Sheet | C-505 | Note what sheet in the plan set contains the filter course spec. | mod. 304.1 (see spec) |

1. Rate of the limiting layer (either the filter course or the underlying soil). K_{sat_{design}} includes factor of safety. See Env-Wq 1504.14 for guidance on determining the infiltration rate.
2. See lines 34, 40 and 48 for required depths of filter media.
3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet structure, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

P-0595-007 POST

Prepared by Tighe & Bond

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Type III 24-hr 50 Year Storm Rainfall=8.48"

Printed 3/19/2021

Stage-Area-Storage for Pond PP 2: POROUS PAVEMENT

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 3.98 | 755 | 0 | 6.58 | 755 | 534 |
| 4.03 | 755 | 15 | 6.63 | 755 | 545 |
| 4.08 | 755 | 30 | 6.68 | 755 | 556 |
| 4.13 | 755 | 45 | 6.73 | 755 | 568 |
| 4.18 | 755 | 60 | 6.78 | 755 | 579 |
| 4.23 | 755 | 76 | 6.83 | 755 | 590 |
| 4.28 | 755 | 91 | 6.88 | 755 | 602 |
| 4.33 | 755 | 106 | 6.93 | 755 | 613 |
| 4.38 | 755 | 121 | 6.98 | 755 | 624 |
| 4.43 | 755 | 136 | 7.03 | 755 | 636 |
| 4.48 | 755 | 151 | 7.08 | 755 | 640 |
| 4.53 | 755 | 166 | 7.13 | 755 | 640 |
| 4.58 | 755 | 181 | 7.18 | 755 | 640 |
| 4.63 | 755 | 196 | 7.23 | 755 | 640 |
| 4.68 | 755 | 211 | 7.28 | 755 | 640 |
| 4.73 | 755 | 227 | 7.33 | 755 | 640 |
| 4.78 | 755 | 242 | 7.38 | 755 | 640 |
| 4.83 | 755 | 257 | 7.43 | 755 | 640 |
| 4.88 | 755 | 272 | 7.48 | 755 | 640 |
| 4.93 | 755 | 287 | 7.53 | 755 | 640 |
| 4.98 | 755 | 302 | 7.58 | 755 | 640 |
| 5.03 | 755 | 317 | 7.63 | 755 | 640 |
| 5.08 | 755 | 332 | 7.68 | 755 | 640 |
| 5.13 | 755 | 347 | 7.73 | 755 | 640 |
| 5.18 | 755 | 362 | 7.78 | 755 | 640 |
| 5.23 | 755 | 378 | 7.83 | 755 | 640 |
| 5.28 | 755 | 393 | 7.88 | 755 | 640 |
| 5.33 | 755 | 408 | 7.93 | 755 | 640 |
| 5.38 | 755 | 423 | 7.98 | 755 | 640 |
| 5.43 | 755 | 438 | 8.03 | 755 | 640 |
| 5.48 | 755 | 446 | 8.08 | 755 | 640 |
| 5.53 | 755 | 450 | 8.13 | 755 | 640 |
| 5.58 | 755 | 454 | 8.18 | 755 | 640 |
| 5.63 | 755 | 458 | 8.23 | 755 | 640 |
| 5.68 | 755 | 461 | 8.28 | 755 | 640 |
| 5.73 | 755 | 465 | 8.33 | 755 | 640 |
| 5.78 | 755 | 469 | 8.38 | 755 | 640 |
| 5.83 | 755 | 473 | | | |
| 5.88 | 755 | 476 | | | |
| 5.93 | 755 | 480 | | | |
| 5.98 | 755 | 484 | | | |
| 6.03 | 755 | 488 | | | |
| 6.08 | 755 | 492 | | | |
| 6.13 | 755 | 495 | | | |
| 6.18 | 755 | 499 | | | |
| 6.23 | 755 | 503 | | | |
| 6.28 | 755 | 507 | | | |
| 6.33 | 755 | 510 | | | |
| 6.38 | 755 | 514 | | | |
| 6.43 | 755 | 518 | | | |
| 6.48 | 755 | 522 | | | |
| 6.53 | 755 | 525 | | | |

APPENDIX A



ProCon, LLC
31 Raynes Avenue Project
Portsmouth, NH

SITE SPECIFIC SOIL MAP

June 2020

Tighe&Bond
Engineers | Environmental Specialists

1.0 Introduction

This report is provided in conjunction with a 1.35 +/- acre Site Specific Soil Map (SSSM) prepared by Tighe & Bond for a parcel at 31 Raynes Avenue in Portsmouth, NH. The purpose of the mapping was to assist in the evaluation of drainage and other soil-related uses associated with site improvements, and may be used as part of an Alteration of Terrain (AoT) permit application.

2.0 Methods

Fieldwork for the soil mapping was completed October 22, 2019 based on *Site-Specific Soil Mapping Standards for New Hampshire and Vermont, Version 5.0*, (Society of Soil Scientists of Northern New England [SSSNNE] Special Publication No. 3, December 2017). The poorly and very poorly drained soil types under this system are based on the most recent version of *Field Indicators for Identifying Hydric Soils in New England, Version 4* (New England Interstate Water Pollution Control Commission, 2018).

The soil legend for this map is based on the soil series currently mapped in the State of New Hampshire as published in the *New Hampshire State-Wide Numerical Soils Legend* (USDA Natural Resources Conservation Service, Issue #10, 2011). Since this soil map includes disturbed soils and may be used for an AoT application, the map symbols are composed of two major parts separated by a forward slash (/). The first part of the soil symbol includes a numerical identifier from the state-wide soil legend, followed by a letter indicating the slope class (e.g., 299A). Slope class identifiers are as follows:

| | | | |
|---|-------|---|--------|
| A | 0-3% | D | 15-25% |
| B | 3-8% | E | 25-50% |
| C | 8-15% | F | >50% |

The second part of the symbol is based on the SSSNNE Disturbed Soil Supplemental Symbols, which are included within the Site Specific Soil Map (SSSM) standards. This portion of the symbol translates as follows:

Character 1: Drainage Class

- a-Excessively Drained
- b-Somewhat Excessively Drained
- c-Well Drained
- d-Moderately Well Drained
- e-Somewhat Poorly Drained
- f-Poorly Drained
- g-Very Poorly Drained
- h-Not Determined

Character 2: Parent Material (of naturally formed soil only, if present)

- a-No natural soil within 60 inches
- b-Glaciofluvial deposits (outwash/terraces of sand or sand and gravel)
- c-Glacial till material (active ice)
- d-Glaciolacustrine very fine sand and silt deposits (glacial lakes)
- e-Loamy/sandy over silt/clay deposits
- f-Marine silt and clay deposits (ocean waters)
- g-Alluvial deposits (floodplains)
- h-Organic materials-fresh water wetlands
- i-Organic materials-tidal wetlands

Character 3: Restrictive Properties

- a-None
- b-Bouldery surface with more than 15% of the surface covered with boulders
- c-Mineral restrictive layer(s) are present in the soil profile less than 40 inches below the soil surface such as hard pan, platy structure or clayey texture with consistence of at least firm (i.e. more than 20 newtons).
- d-Bedrock in the soil profile; 0-20 inches
- e-Bedrock in the soil profile; 20-60 inches
- f-Areas where depth to bedrock is so variable that a single soil type cannot be applied, will be mapped as a complex of soil types
- g-Subject to flooding
- h-Manufactured impervious surface including pavement, concrete, or built-up surfaces (e.g. buildings) with no morphological restrictive layer within control section

Character 4: Estimated Ksat (most limiting layer excluding symbol 3h above)

- a-High
- b-Moderate
- c-Low
- d-Not determined *See "Guidelines for Ksat Class Placement" in Chapter 3 of the Soil Survey Manual, USDA

Character 5: Hydrologic Soil Group

- a-Group A
- b-Group B
- c-Group C
- d-Group D
- e-Not determined

SSSM report standards require estimates of the maximum size of *limiting* inclusions for the entire soil map and an estimate of the percentage of *dissimilar* inclusions within each map unit. *Limiting* inclusions are soils "...that differ appreciably in one or more soil properties from the named soil in a map unit. The difference in soil properties is more restrictive and may affect use and management." *Dissimilar* inclusions are "...soils that either do not share limits of some important diagnostic properties of the named taxon, or, in the professional judgment of the soil scientist, have different use or management requirements." The maximum size of any limiting inclusions in this soil map is estimated to be less than 2,000 square feet. Any dissimilar inclusions noted during the mapping are listed below within the map unit descriptions.

3.0 Site Features

The parcel is a highly disturbed site along the North Mill Pond. The property shows evidence of what appears to be very old filling and grading associated with the existing development.

4.0 Soil Map Unit Descriptions

Below are descriptions for each of the map units found on the accompanying SSSM. The "*" after the numerical map unit symbol represents a placeholder for the slope class indicators described above.

100*/afaaa—Udorthents, wet substratum

Landscape Setting: Soils that have been filled and leveled over what was originally hydric soils. On this site this map unit represents fill that was used to construct a pier.

Drainage Class: Excessively drained

Parent Material of Natural Soil: Fill over marine silts and clays at <60 inches (presumed).

Typical Textures: Very gravelly sand (mixed sand and crushed stone)

Hydrologic Soil Group: A

Dissimilar Inclusions: None noted

Limiting Inclusions: None noted

Additional Notes: Soils in these areas have properties that are similar to the Hinckley soil series for Hydrologic Soil Group determination

100*/dfccc—Udorthents, wet substratum

Landscape Setting: Soils that have been filled and leveled over what was originally hydric soils

Drainage Class: Moderately well drained.

Parent Material: Fill over marine silts and clays at <60 inches (presumed).

Typical Textures: Very gravelly sandy loam and gravelly silty clay loam fill

Hydrologic Soil Group: C

Dissimilar Inclusions: None noted

Limiting Inclusions: Slopes along the shore are steeper than the mapped unit and are affected by tidal inundation. These areas comprise less than 10% of the unit

Additional Notes: Soils in these areas have properties that are similar to the Elmridge soil series for Hydrologic Soil Group determination

Site Specific Soil Map Legend

31 Raynes Avenue, Portsmouth, NH

Slope Class Identifiers

| | | | |
|---|-------|---|--------|
| A | 0-3% | D | 15-25% |
| B | 3-8% | E | 25-50% |
| C | 8-15% | F | >50% |

Map Unit Symbols

| <u>Map Number* /Disturbed Soil Numerator**</u> | <u>Soil Map Unit Name</u> | <u>Hydrologic Soil Group</u> |
|---|---|---|
| 100*/afaaa | Udorthents, wet substratum / excessively drained, over marine silts and clays, no restrictive layer within 40 inches, high Ksat, Hydrologic Soil Group A | A |
| 100*/dfccc | Udorthents, wet substratum / moderately well drained, over marine silts and clays, with a restrictive layer within 40 inches, low Ksat, Hydrologic Soil Group C | C |

*Indicates the location of the slope class identifier (A-F)

**Supplemental symbols are used to further characterize disturbed soils for Alteration of Terrain permits

Soil Mapping Notes:

1. Hydrologic soil groups for disturbed soils were based on most similar soil series listed in *Ksat Values for NH Soils*, SSSNNE Special Publication No. 5, 2009.
2. Fieldwork for this map was conducted by Leonard A. Lord, PhD, NHCSS #19 on October 22, 2019.
3. This detailed Site Specific Soil Map conforms to the standards of SSSNNE Publication No. 3, as amended, *Site Specific Soil Mapping Standards for NH and VT*.
4. This map has been prepared to comply with soil mapping requirements of RSA 485 A:17 and NHDES Env-Wq, Alteration of Terrain.
5. See accompanying narrative report for methodology, map symbol legend, and interpretations.



APPENDIX B

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

| | |
|------------------|---------------------------------|
| Smoothing | Yes |
| State | New Hampshire |
| Location | |
| Longitude | 70.764 degrees West |
| Latitude | 43.080 degrees North |
| Elevation | 0 feet |
| Date/Time | Fri, 24 Jul 2020 12:23:19 -0400 |

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 | 1.04 | 1yr | 0.70 | 0.98 | 1.21 | 1.56 | 2.03 | 2.65 | 2.92 | 1yr | 2.35 | 2.81 | 3.22 | 3.94 | 4.54 | 1yr |
| 2yr | 0.32 | 0.50 | 0.62 | 0.81 | 1.02 | 1.30 | 2yr | 0.88 | 1.18 | 1.52 | 1.94 | 2.48 | 3.20 | 3.57 | 2yr | 2.84 | 3.43 | 3.93 | 4.67 | 5.32 | 2yr |
| 5yr | 0.37 | 0.58 | 0.73 | 0.97 | 1.25 | 1.61 | 5yr | 1.08 | 1.47 | 1.89 | 2.43 | 3.14 | 4.06 | 4.57 | 5yr | 3.59 | 4.40 | 5.03 | 5.93 | 6.69 | 5yr |
| 10yr | 0.41 | 0.65 | 0.82 | 1.11 | 1.45 | 1.89 | 10yr | 1.25 | 1.72 | 2.23 | 2.89 | 3.74 | 4.86 | 5.52 | 10yr | 4.30 | 5.31 | 6.07 | 7.09 | 7.96 | 10yr |
| 25yr | 0.48 | 0.76 | 0.97 | 1.33 | 1.77 | 2.33 | 25yr | 1.53 | 2.14 | 2.77 | 3.62 | 4.73 | 6.16 | 7.09 | 25yr | 5.45 | 6.81 | 7.78 | 9.00 | 10.03 | 25yr |
| 50yr | 0.53 | 0.86 | 1.10 | 1.53 | 2.07 | 2.75 | 50yr | 1.78 | 2.52 | 3.28 | 4.31 | 5.65 | 7.37 | 8.57 | 50yr | 6.53 | 8.24 | 9.40 | 10.79 | 11.95 | 50yr |
| 100yr | 0.59 | 0.96 | 1.24 | 1.76 | 2.41 | 3.25 | 100yr | 2.08 | 2.97 | 3.90 | 5.15 | 6.75 | 8.83 | 10.36 | 100yr | 7.82 | 9.96 | 11.35 | 12.93 | 14.24 | 100yr |
| 200yr | 0.67 | 1.10 | 1.42 | 2.04 | 2.82 | 3.82 | 200yr | 2.43 | 3.51 | 4.60 | 6.11 | 8.06 | 10.58 | 12.52 | 200yr | 9.37 | 12.04 | 13.71 | 15.50 | 16.98 | 200yr |
| 500yr | 0.80 | 1.31 | 1.71 | 2.48 | 3.47 | 4.75 | 500yr | 2.99 | 4.37 | 5.75 | 7.68 | 10.19 | 13.45 | 16.11 | 500yr | 11.90 | 15.49 | 17.61 | 19.72 | 21.44 | 500yr |

Lower Confidence Limits

| | 5min | 10min | 15min | 30min | 60min | 120min | | 1hr | 2hr | 3hr | 6hr | 12hr | 24hr | 48hr | | 1day | 2day | 4day | 7day | 10day | |
|--------------|------|-------|-------|-------|-------|--------|--------------|------|------|------|------|------|------|-------|--------------|------|-------|-------|-------|-------|--------------|
| 1yr | 0.23 | 0.36 | 0.44 | 0.59 | 0.73 | 0.88 | 1yr | 0.63 | 0.86 | 0.92 | 1.33 | 1.68 | 2.23 | 2.48 | 1yr | 1.97 | 2.39 | 2.86 | 3.18 | 3.88 | 1yr |
| 2yr | 0.31 | 0.49 | 0.60 | 0.81 | 1.00 | 1.19 | 2yr | 0.86 | 1.16 | 1.37 | 1.82 | 2.34 | 3.05 | 3.45 | 2yr | 2.70 | 3.31 | 3.82 | 4.54 | 5.07 | 2yr |
| 5yr | 0.35 | 0.54 | 0.67 | 0.92 | 1.17 | 1.40 | 5yr | 1.01 | 1.37 | 1.61 | 2.12 | 2.73 | 3.78 | 4.18 | 5yr | 3.34 | 4.02 | 4.71 | 5.52 | 6.23 | 5yr |
| 10yr | 0.38 | 0.59 | 0.73 | 1.02 | 1.32 | 1.60 | 10yr | 1.14 | 1.56 | 1.80 | 2.39 | 3.06 | 4.36 | 4.85 | 10yr | 3.86 | 4.66 | 5.42 | 6.39 | 7.17 | 10yr |
| 25yr | 0.44 | 0.67 | 0.83 | 1.18 | 1.56 | 1.90 | 25yr | 1.34 | 1.86 | 2.10 | 2.76 | 3.54 | 4.70 | 5.87 | 25yr | 4.16 | 5.64 | 6.62 | 7.76 | 8.65 | 25yr |
| 50yr | 0.48 | 0.73 | 0.91 | 1.31 | 1.76 | 2.17 | 50yr | 1.52 | 2.12 | 2.34 | 3.07 | 3.93 | 5.31 | 6.77 | 50yr | 4.70 | 6.51 | 7.68 | 9.00 | 9.98 | 50yr |
| 100yr | 0.53 | 0.81 | 1.01 | 1.46 | 2.00 | 2.47 | 100yr | 1.73 | 2.41 | 2.62 | 3.42 | 4.35 | 5.96 | 7.81 | 100yr | 5.28 | 7.51 | 8.92 | 10.45 | 11.52 | 100yr |
| 200yr | 0.59 | 0.89 | 1.12 | 1.63 | 2.27 | 2.81 | 200yr | 1.96 | 2.75 | 2.93 | 3.79 | 4.79 | 6.68 | 9.01 | 200yr | 5.91 | 8.66 | 10.34 | 12.15 | 13.31 | 200yr |
| 500yr | 0.68 | 1.02 | 1.31 | 1.90 | 2.70 | 3.36 | 500yr | 2.33 | 3.28 | 3.41 | 4.32 | 5.46 | 7.76 | 10.87 | 500yr | 6.87 | 10.45 | 12.58 | 14.86 | 16.11 | 500yr |

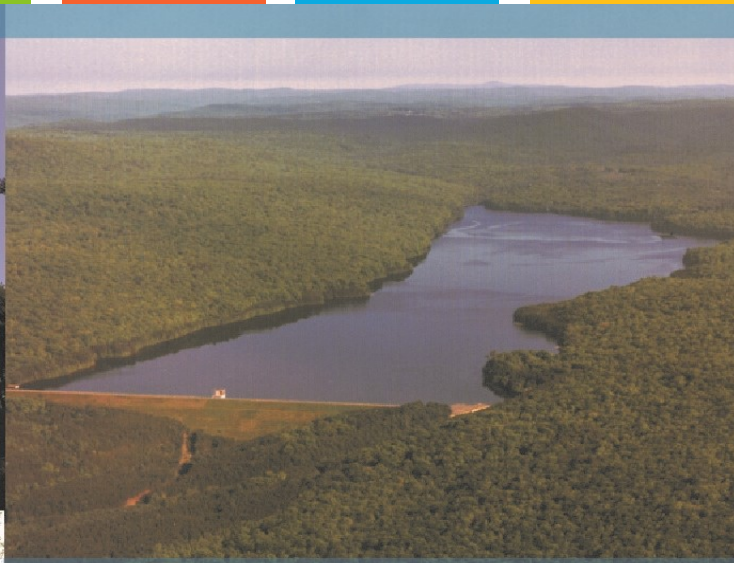
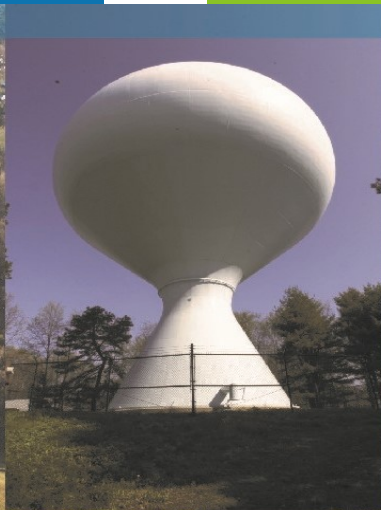
Upper Confidence Limits

| | 5min | 10min | 15min | 30min | 60min | 120min | | 1hr | 2hr | 3hr | 6hr | 12hr | 24hr | 48hr | | 1day | 2day | 4day | 7day | 10day | |
|--------------|------|-------|-------|-------|-------|--------|--------------|------|------|------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|--------------|
| 1yr | 0.28 | 0.44 | 0.54 | 0.72 | 0.89 | 1.08 | 1yr | 0.77 | 1.06 | 1.26 | 1.74 | 2.21 | 2.98 | 3.16 | 1yr | 2.64 | 3.04 | 3.58 | 4.37 | 5.04 | 1yr |
| 2yr | 0.34 | 0.52 | 0.64 | 0.86 | 1.07 | 1.27 | 2yr | 0.92 | 1.24 | 1.48 | 1.96 | 2.52 | 3.42 | 3.70 | 2yr | 3.03 | 3.56 | 4.08 | 4.83 | 5.62 | 2yr |
| 5yr | 0.40 | 0.62 | 0.76 | 1.05 | 1.34 | 1.62 | 5yr | 1.15 | 1.58 | 1.88 | 2.53 | 3.25 | 4.33 | 4.96 | 5yr | 3.84 | 4.77 | 5.37 | 6.37 | 7.15 | 5yr |
| 10yr | 0.47 | 0.72 | 0.89 | 1.24 | 1.61 | 1.97 | 10yr | 1.39 | 1.93 | 2.28 | 3.11 | 3.95 | 5.33 | 6.20 | 10yr | 4.72 | 5.96 | 6.82 | 7.83 | 8.74 | 10yr |
| 25yr | 0.57 | 0.87 | 1.09 | 1.55 | 2.04 | 2.57 | 25yr | 1.76 | 2.51 | 2.95 | 4.07 | 5.15 | 7.77 | 8.34 | 25yr | 6.88 | 8.02 | 9.15 | 10.33 | 11.40 | 25yr |
| 50yr | 0.67 | 1.02 | 1.27 | 1.82 | 2.46 | 3.12 | 50yr | 2.12 | 3.05 | 3.59 | 5.00 | 6.32 | 9.73 | 10.46 | 50yr | 8.62 | 10.06 | 11.45 | 12.71 | 13.95 | 50yr |
| 100yr | 0.79 | 1.19 | 1.49 | 2.15 | 2.95 | 3.80 | 100yr | 2.55 | 3.72 | 4.37 | 6.15 | 7.76 | 12.18 | 13.11 | 100yr | 10.78 | 12.61 | 14.32 | 15.68 | 17.08 | 100yr |
| 200yr | 0.92 | 1.39 | 1.76 | 2.54 | 3.55 | 4.64 | 200yr | 3.06 | 4.54 | 5.33 | 7.58 | 9.53 | 15.29 | 16.45 | 200yr | 13.53 | 15.82 | 17.94 | 19.34 | 20.91 | 200yr |
| 500yr | 1.14 | 1.70 | 2.19 | 3.18 | 4.52 | 6.02 | 500yr | 3.90 | 5.89 | 6.92 | 10.01 | 12.54 | 20.67 | 22.22 | 500yr | 18.29 | 21.37 | 24.18 | 25.50 | 27.33 | 500yr |



| Coastal and Great Bay Region Precipitation Increase | | |
|---|-------------------------|-------------------------------|
| | 24-hr Storm Event (in.) | 24-hr Storm Event + 15% (in.) |
| 1 Year | 2.65 | 3.05 |
| 2 Year | 3.20 | 3.68 |
| 10 Year | 4.86 | 5.59 |
| 25 Year | 6.16 | 7.08 |
| 50 Year | 7.37 | 8.48 |
| 100 Year | 8.83 | 10.15 |





Proposed Mixed Use Development
Raynes Avenue
Portsmouth, NH

Long-Term Operation & Maintenance Plan

North Mill Pond Holdings, LLC

May 19, 2021

Tighe&Bond

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Section 1

Long-Term Operation & Maintenance Plan

It is the intent of this Operation and Maintenance Plan to identify the areas of this site that need special attention and consideration, as well as implementing a plan to assure routine maintenance. By identifying the areas of concern as well as implementing a frequent and routine maintenance schedule the site will maintain a high-quality stormwater runoff.

1.1 Contact/Responsible Party

| Maintenance Area | Contact/Responsible Party |
|--|---|
| Development Site | North Mill Pond Holdings, LLC 1359 Hooksett Road Hooksett NH, 03106 |
| North Mill Pond Trail (City Easement) | City of Portsmouth DPW 680 Peverly Hill Road Portsmouth, NH 03801 |

(Note: The contact information for the Contact/Responsible Party shall be kept current. If ownership changes, the Operation and Maintenance Plan must be transferred to the new party.)

1.2 Maintenance Items

Maintenance of the following items shall be recorded:

- Litter/Debris Removal
- Landscaping
- Catchbasin Cleaning
- Pavement Sweeping
- Underground Detention System
- Contech Jellyfish Filtration System
- Porous Pavement

The following maintenance items and schedule represent the minimum action required. Periodic site inspections shall be conducted, and all measures must be maintained in effective operating condition. The following items shall be observed during site inspection and maintenance:

- Inspect vegetated areas, particularly slopes and embankments for areas of erosion. Replant and restore as necessary
- Inspect catch basins for sediment buildup
- Inspect site for trash and debris

1.3 Overall Site Operation & Maintenance Schedule

| Maintenance Item | Frequency of Maintenance | Responsible Party |
|--|---|-------------------------------|
| Litter/Debris Removal | Weekly | North Mill Pond Holdings, LLC |
| Pavement Sweeping - Sweep impervious areas to remove sand and litter. | Bi-Annually | North Mill Pond Holdings, LLC |
| Landscaping - Landscaped islands to be maintained and mulched. | Maintained as required and mulched each Spring | North Mill Pond Holdings, LLC |
| Catch Basin (CB) Cleaning - CB to be cleaned of solids and oils. | Annually | North Mill Pond Holdings, LLC |
| Jelly Fish Units | In accordance with Manufacturer's Recommendations | North Mill Pond Holdings, LLC |
| Underground Detention Basin - Visual observation of sediment levels within system | Annually | North Mill Pond Holdings, LLC |
| Porous Pavement - Clean using a vacuum sweeper | Bi-Annually | City of Portsmouth DPW |

1.3.1 Disposal Requirements

Disposal of debris, trash, sediment and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state and federal waste regulations.

1.4 Underground Detention System Maintenance Requirements

| Underground Detention System Inspection/Maintenance Requirements | | |
|---|------------------------|---|
| Inspection/ Maintenance | Frequency | Action |
| Monitor inlet and outlet structures for sediment accumulation | Two (2) times annually | <ul style="list-style-type: none"> - Trash, debris and sediment to be removed - Any required maintenance shall be addressed |
| Deep Sump Catchbasins | Two (2) times annually | <ul style="list-style-type: none"> - Removal of sediment as warranted by inspection - No less than once annually |
| Monitor detention system for sediment accumulation | Two (2) times annually | <ul style="list-style-type: none"> - Trash, debris and sediment to be removed - Any required maintenance shall be addressed |

1.5 Contech Jellyfish Filter System Maintenance Requirements

| Contech Jellyfish Filter System Inspection/Maintenance Requirements | | |
|---|---|---|
| Inspection/ Maintenance | Frequency | Action |
| Inspect vault for sediment build up, static water, plugged media and bypass condition | One (1) time annually and after any rainfall event exceeding 2.5" in a 24-hr period | Maintenance required for any of the following: <ul style="list-style-type: none"> - >4" of sediment on the vault floor - >1/4" of sediment on top of the cartridge - .4" of static water above the cartridge bottom more than 24 hours after a rain event - If pore space between media is absent. - If vault is in bypass condition during an average rainfall event. |
| Replace Cartridges | As required by inspection, 1-5 years. | <ul style="list-style-type: none"> - Remove filter cartridges per manufacturer methods. - Vacuum sediment from vault. - Install new cartridges per manufacturer methods |

**Jellyfish[®] Filter
Owner's Manual**



CONTECH[®]
ENGINEERED SOLUTIONS
Jellyfish[®] Filter

INLET
PIPE MUST BE
CENTERED IN
OPENING

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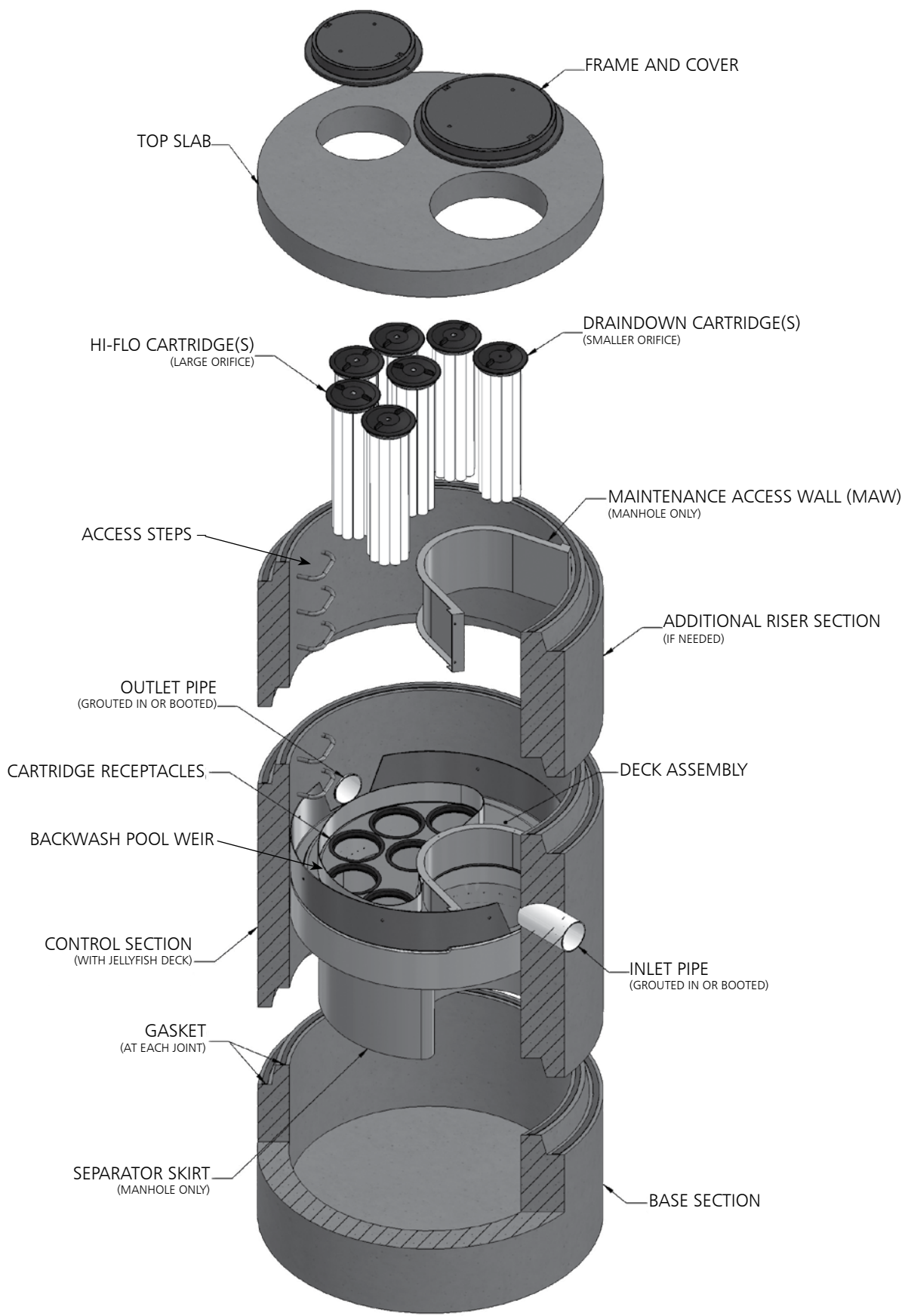
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THANK YOU FOR PURCHASING THE JELLYFISH® FILTER!

Contech Engineered Solutions would like to thank you for selecting the Jellyfish Filter to meet your project's stormwater treatment needs. With proper inspection and maintenance, the Jellyfish Filter is designed to deliver ongoing, high levels of stormwater pollutant removal.

If you have any questions, please feel free to call us or e-mail us:

Contech Engineered Solutions
9025 Centre Pointe Drive, Suite 400 | West Chester, OH 45069
513-645-7000 | 800-338-1122
www.ContechES.com
info@conteches.com



WARNINGS / CAUTION

1. FALL PROTECTION may be required.
2. WATCH YOUR STEP if standing on the Jellyfish Filter Deck at any time; Great care and safety must be taken while walking or maneuvering on the Jellyfish Filter Deck. Attentive care must be taken while standing on the Jellyfish Filter Deck at all times to prevent stepping onto a lid, into or through a cartridge hole or slipping on the deck.
3. The Jellyfish Filter Deck can be SLIPPERY WHEN WET.
4. If the Top Slab, Covers or Hatches have not yet been installed, or are removed for any reason, great care must be taken to NOT DROP ANYTHING ONTO THE JELLYFISH FILTER DECK. The Jellyfish Filter Deck and Cartridge Receptacle Rings can be damaged under high impact loads. This type of activity voids all warranties. All damaged items to be replaced at owner's expense.
5. Maximum deck load 2 persons, total weight 450 lbs.

Safety Notice

Jobsite safety is a topic and practice addressed comprehensively by others. The inclusions here are intended to be reminders to whole areas of Safety Practice that are the responsibility of the Owner(s), Manager(s) and Contractor(s). OSHA and Canadian OSH, and Federal, State/Provincial, and Local Jurisdiction Safety Standards apply on any given site or project. The knowledge and applicability of those responsibilities is the Contractor's responsibility and outside the scope of Contech Engineered Solutions.

Confined Space Entry

Secure all equipment and perform all training to meet applicable local and OSHA regulations regarding confined space entry. It is the Contractor's or entry personnel's responsibility to proceed safely at all times.

Personal Safety Equipment

Contractor is responsible to provide and wear appropriate personal protection equipment as needed including, but not limited to safety boots, hard hat, reflective vest, protective eyewear, gloves and fall protection equipment as necessary. Make sure all equipment is staffed with trained and/or certified personnel, and all equipment is checked for proper operation and safety features prior to use.

- Fall protection equipment
- Eye protection
- Safety boots
- Ear protection
- Gloves
- Ventilation and respiratory protection
- Hard hat
- Maintenance and protection of traffic plan

Chapter 1

1.0 – Owner Specific Jellyfish Filter Product Information

Below you will find a reference page that can be filled out according to your Jellyfish Filter specification to help you easily inspect, maintain and order parts for your system.

| | |
|--|--|
| Owner Name: | |
| Phone Number: | |
| Site Address: | |
| Site GPS Coordinates/unit location: | |
| Unit Location Description: | |
| Jellyfish Filter Model No.: | |
| Contech Project & Sequence Number | |
| No. of Hi-Flo Cartridges | |
| No. of Cartridges: | |
| Length of Draindown Cartridges: | |
| No. of Blank Cartridge Lids: | |
| Bypass Configuration (Online/Offline): | |

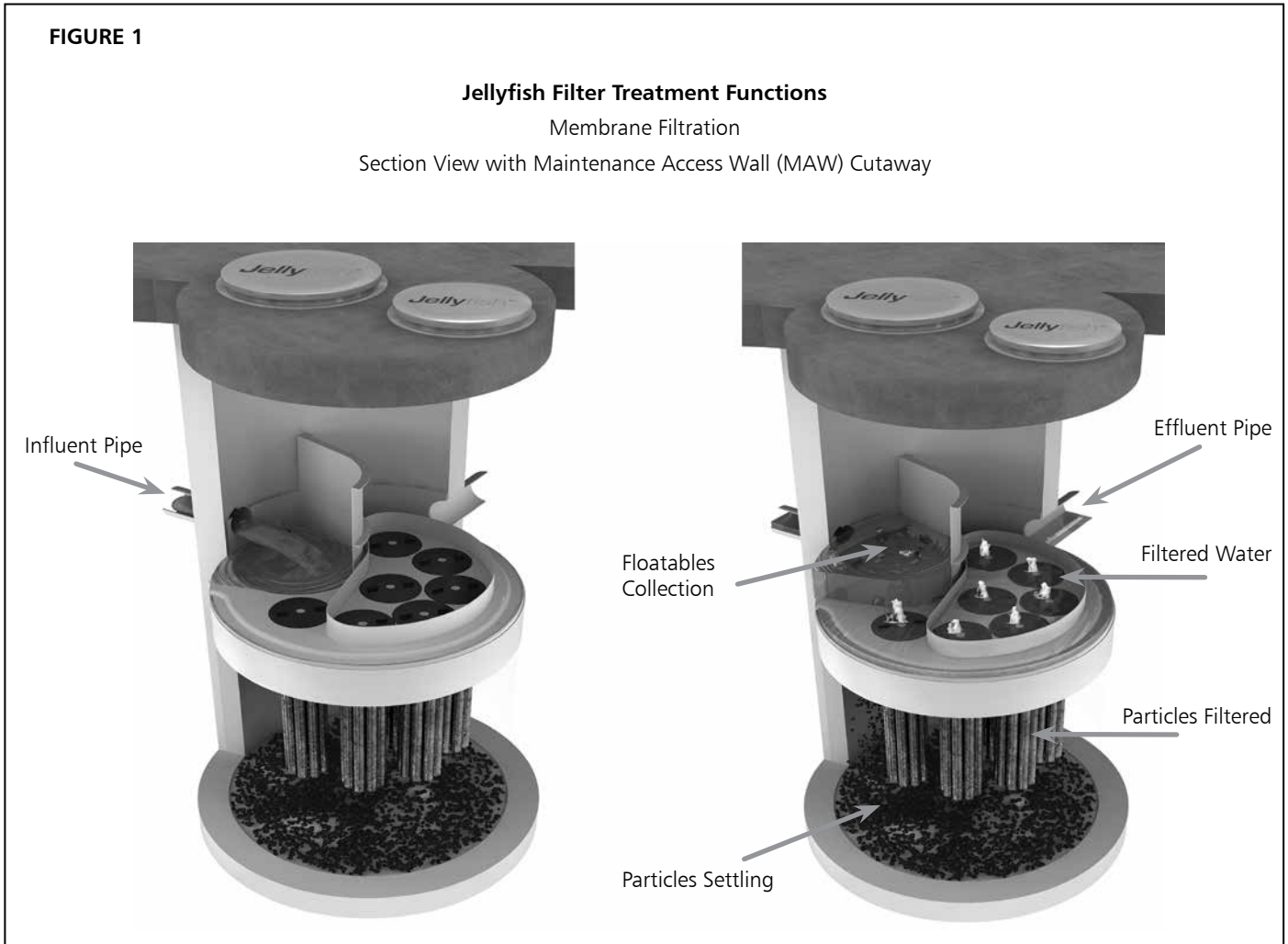
Notes:

Chapter 2

2.0 – Jellyfish Filter System Operations and Functions

The Jellyfish Filter is an engineered stormwater quality treatment technology that removes a high level and wide variety of stormwater pollutants. Each Jellyfish Filter cartridge consists of eleven membrane - encased filter elements (“filtration tentacles”) attached to a cartridge head plate. The filtration tentacles provide a large filtration surface area, resulting in high flow and high pollutant removal capacity.

The Jellyfish Filter functions are depicted in Figure 1 below.



Jellyfish Filter cartridges are backwashed after each peak storm event, which removes accumulated sediment from the membranes. This backwash process extends the service life of the cartridges and increases the time between maintenance events.

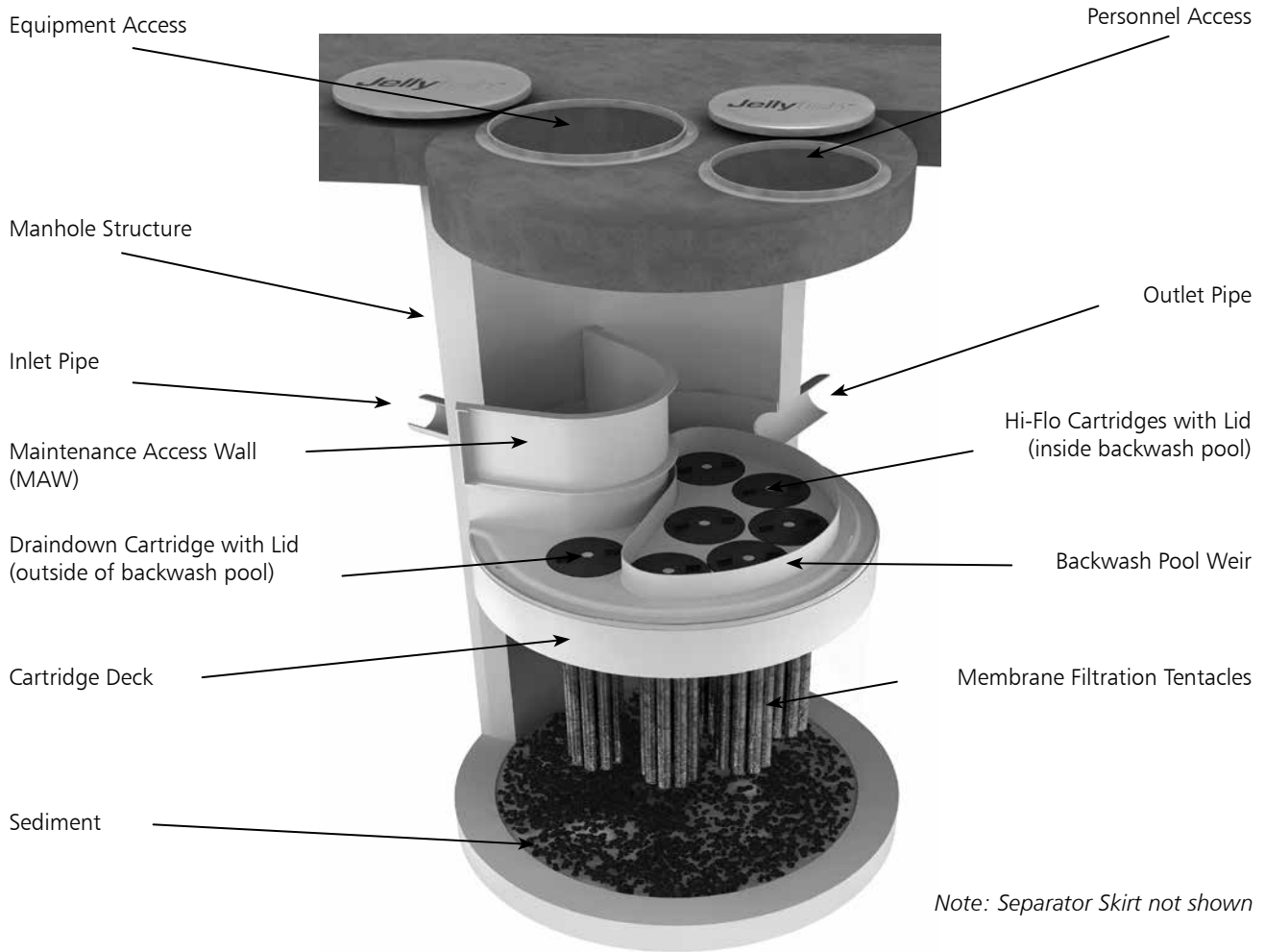
For additional details on the operation and pollutant capabilities of the Jellyfish Filter please refer to additional details on our website at www.ContechES.com.

2.1 – Components and Cartridges

The Jellyfish Filter and components are depicted in Figure 2 below.

FIGURE 2

Jellyfish Filter Components



Tentacles are available in various lengths as depicted in Table 1 below.

Table 1 – Cartridge Lengths / Weights and Cartridge Lid Orifice Diameters

| Cartridge Lengths | Dry Weight | Hi-Flo Orifice Diameter | Draindown Orifice Diameter |
|----------------------|-------------------|-------------------------|----------------------------|
| 15 inches (381 mm) | 10 lbs (4.5 kg) | 35 mm | 20 mm |
| 27 inches (686 mm) | 14.5 lbs (6.6 kg) | 45 mm | 25 mm |
| 40 inches (1,016 mm) | 19.5 lbs (8.9 kg) | 55 mm | 30 mm |
| 54 inches (1,372 mm) | 25 lbs (11.4 kg) | 70 mm | 35 mm |

2.2 – Jellyfish Membrane Filtration Cartridge Assembly

The Jellyfish Filter utilizes multiple membrane filtration cartridges. Each cartridge consists of removable cylindrical filtration “tentacles” attached to a cartridge head plate. Each filtration tentacle has a threaded pipe nipple and o-ring. To attach, insert the top pipe nipples with the o-ring through the head plate holes and secure with locking nuts. Hex nuts to be hand tightened and checked with a wrench as shown below.

2.3 – Jellyfish Membrane Filtration Cartridge Installation

- Cartridge installation will be performed by trained individuals and coordinated with the installing site Contractor. Flow diversion devices are required to be in place until the site is stabilized (final paving and landscaping in place). Failure to address this step completely will reduce the time between required maintenance.
- Descend to the cartridge deck (see Safety Notice and page 3).
- Refer to Contech's submittal drawings to determine proper quantity and placement of Hi-Flo, Draindown and Blank cartridges with appropriate lids. Lower the Jellyfish membrane filtration cartridges into the cartridge receptacles within the cartridge deck. It is possible that not all cartridge receptacles will be filled with a filter cartridge. In that case, a blank headplate and blank cartridge lid (no orifice) would be installed.



Cartridge Assembly

Do not force the tentacles down into the cartridge receptacle, as this may damage the membranes. Apply downward pressure on the cartridge head plate to seat the lubricated rim gasket (thick circular gasket surrounding the circumference of the head plate) into the cartridge receptacle. (See Figure 3 for details on approved lubricants for use with rim gasket.)

- Examine the cartridge lids to differentiate lids with a small orifice, a large orifice, and no orifice.
 - Lids with a small orifice are to be inserted into the Draindown cartridge receptacles, outside of the backwash pool weir.
 - Lids with a large orifice are to be inserted into the Hi-Flo cartridge receptacles within the backwash pool weir.
 - Lids with no orifice (blank cartridge lids) and a blank headplate are to be inserted into unoccupied cartridge receptacles.
- To install a cartridge lid, align both cartridge lid male threads with the cartridge receptacle female threads before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation.

3.0 Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system. Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

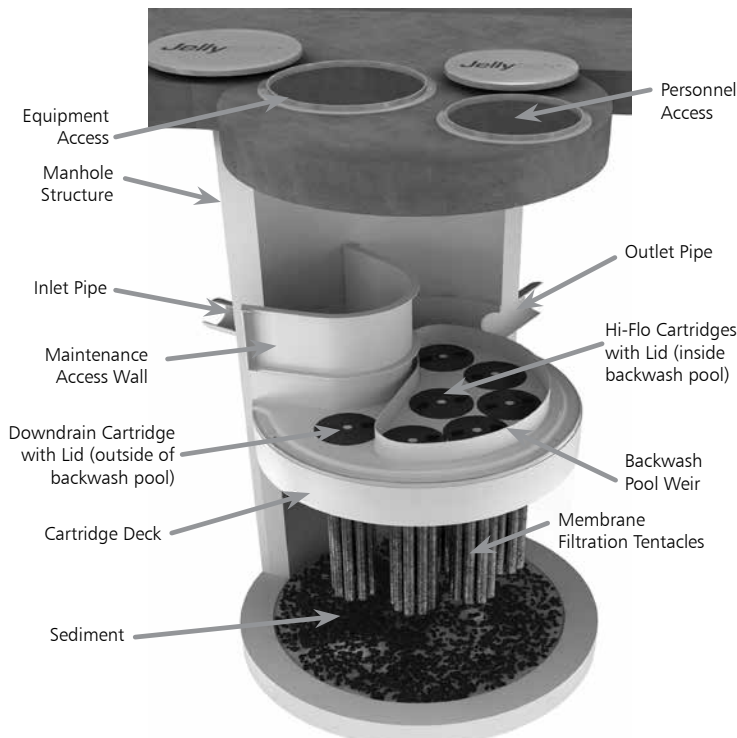
- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW) or inlet bay for vault systems

Maintenance activities include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed

4.0 Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of, the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent.*



Note: Separator Skirt not shown

1. A minimum of quarterly inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
2. Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
3. Inspection is recommended after each major storm event.
4. Inspection is required immediately after an upstream oil, fuel or other chemical spill.

5.0 Inspection Procedure

The following procedure is recommended when performing inspections:

1. Provide traffic control measures as necessary.
2. Inspect the MAW or inlet bay for floatable pollutants such as trash, debris, and oil sheen.
3. Measure oil and sediment depth in several locations, by lowering a sediment probe until contact is made with the floor of the structure. Record sediment depth, and presences of any oil layers.
4. Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
5. Inspect the MAW (where appropriate), cartridge deck and receptacles, and backwash pool weir, for damaged or broken components.

5.1 Dry weather inspections

- Inspect the cartridge deck for standing water, and/or sediment on the deck.
- No standing water under normal operating conditions.
- Standing water inside the backwash pool, but not outside the backwash pool indicates, that the filter cartridges need to be rinsed.



Inspection Utilizing Sediment Probe

- Standing water outside the backwash pool is not anticipated and may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Any appreciable sediment ($\geq 1/16''$) accumulated on the deck surface should be removed.

5.2 Wet weather inspections

- Observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW or inlet bay.
- Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
- Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
- 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges need to be rinsed.

6.0 Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

1. Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
2. Floatable trash, debris, and oil removal.
3. Deck cleaned and free from sediment.
4. Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
5. Replace tentacles if rinsing does not restore adequate hydraulic capacity, remove accumulated sediment, or if damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
6. Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
7. The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged or compromised by the spill.

7.0 Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures. *Caution: Dropping objects onto the cartridge deck may cause damage.*
3. Perform Inspection Procedure prior to maintenance activity.

4. To access the cartridge deck for filter cartridge service, descend into the structure and step directly onto the deck. *Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.*
5. Maximum weight of maintenance crew and equipment on the cartridge deck not to exceed 450 lbs.

7.1 Filter Cartridge Removal

1. Remove a cartridge lid.
2. Remove cartridges from the deck using the lifting loops in the cartridge head plate. Rope or a lifting device (available from Contech) should be used. *Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Wet cartridges typically weigh between 100 and 125 lbs.*
3. Replace and secure the cartridge lid on the exposed empty receptacle as a safety precaution. Contech does not recommend exposing more than one empty cartridge receptacle at a time.

7.2 Filter Cartridge Rinsing

1. Remove all 11 tentacles from the cartridge head plate. Take care not to lose or damage the O-ring seal as well as the plastic threaded nut and connector.
2. Position tentacles in a container (or over the MAW), with the



Cartridge Removal & Lifting Device



threaded connector (open end) facing down, so rinse water is flushed through the membrane and captured in the container.

3. Using the Jellyfish rinse tool (available from Contech) or a low-pressure garden hose sprayer, direct water spray onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. *Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane.*
4. Collected rinse water is typically removed by vacuum hose.

5. Reassemble cartridges as detailed later in this document. Reuse O-rings and nuts, ensuring proper placement on each tentacle.

7.3 Sediment and Floatables Extraction

1. Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening. Be careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck on manhole systems. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
2. Vacuum floatable trash, debris, and oil, from the MAW opening or inlet bay. Alternatively, floatable solids may be removed by a net or skimmer.
3. Pressure wash cartridge deck and receptacles to remove all



Rinsing Cartridge with Contech Rinse Tool

sediment and debris. Sediment should be rinsed into the sump area. Take care not to flush rinse water into the outlet pipe.

4. Remove water from the sump area. Vacuum or pump equipment should only be introduced through the MAW or inlet bay.
5. Remove the sediment from the bottom of the unit through the MAW or inlet bay opening.
6. For larger diameter Jellyfish Filter manholes (≥ 8 -ft) and some



Vacuuming Sump Through MAW

vaults complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

7.4 Filter Cartridge Reinstallation and Replacement

1. Cartridges should be installed after the deck has been cleaned. It is important that the receptacle surfaces be free from grit and debris.
2. Remove cartridge lid from deck and carefully lower the filter cartridge into the receptacle until head plate gasket is seated squarely in receptacle. *Caution: Do not force the cartridge downward; damage may occur.*
3. Replace the cartridge lid and check to see that both male threads are properly seated before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation. See next page for additional details.
4. If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.

7.5 Chemical Spills

Caution: If a chemical spill has been captured, do not attempt maintenance. Immediately contact the local hazard response agency and contact Contech.

7.6 Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Jellyfish Filter Components & Filter Cartridge Assembly and Installation

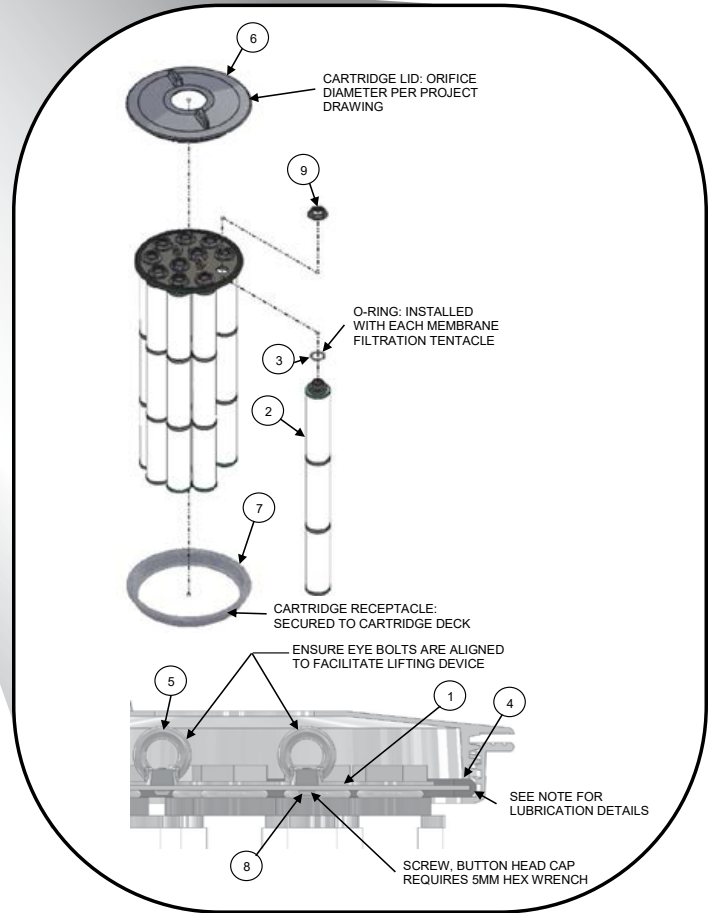
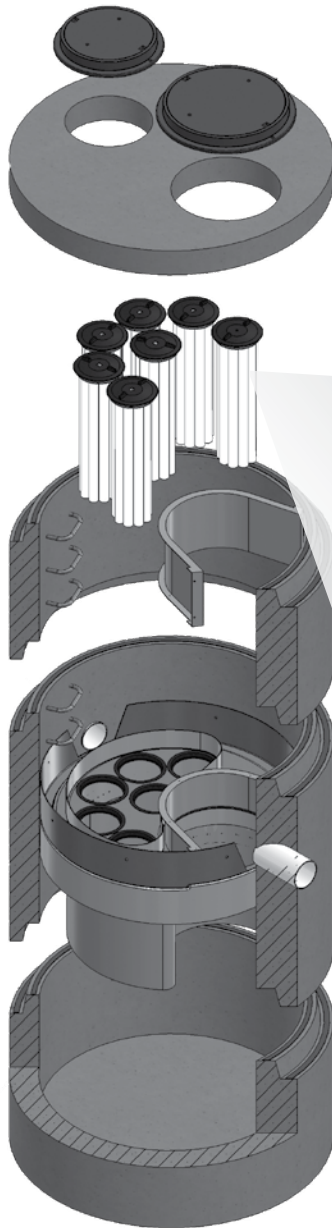


TABLE 1: BOM

| ITEM NO. | DESCRIPTION |
|----------|----------------------------------|
| 1 | JF HEAD PLATE |
| 2 | JF TENTACLE |
| 3 | JF O-RING |
| 4 | JF HEAD PLATE GASKET |
| 5 | JF CARTRIDGE EYELET |
| 6 | JF 14IN COVER |
| 7 | JF RECEPTACLE |
| 8 | BUTTON HEAD CAP SCREW M6X14MM SS |
| 9 | JF CARTRIDGE NUT |

TABLE 2: APPROVED GASKET LUBRICANTS

| PART NO. | MFR | DESCRIPTION |
|-----------|-----------|----------------------|
| 78713 | LA-CO | LUBRI-JOINT |
| 40501 | HERCULES | DUCK BUTTER |
| 30600 | OATEY | PIPE LUBRICANT |
| PSLUBXL1Q | PROSELECT | PIPE JOINT LUBRICANT |

NOTES:

Head Plate Gasket Installation:

Install Head Plate Gasket (Item 4) onto the Head Plate (Item 1) and liberally apply a lubricant from Table 2: Approved Gasket Lubricants onto the gasket where it contacts the Receptacle (Item 7) and Cartridge Lid (Item 6). Follow Lubricant manufacturer's instructions.

Lid Assembly:

Rotate Cartridge Lid counter-clockwise until both male threads drop down and properly seat. Then rotate Cartridge Lid clock-wise approximately one-third of a full rotation until Cartridge Lid is firmly secured, creating a watertight seal.

Jellyfish Filter Inspection and Maintenance Log

Owner: _____ Jellyfish Model No.: _____

Location: _____ GPS Coordinates: _____

Land Use: Commercial: _____ Industrial: _____ Service Station: _____

 Road/Highway: _____ Airport: _____ Residential: _____ Parking Lot: _____

| | | | | | |
|---|--|--|--|--|--|
| Date/Time: | | | | | |
| Inspector: | | | | | |
| Maintenance Contractor: | | | | | |
| Visible Oil Present: (Y/N) | | | | | |
| Oil Quantity Removed | | | | | |
| Floatable Debris Present: (Y/N) | | | | | |
| Floatable Debris removed: (Y/N) | | | | | |
| Water Depth in Backwash Pool | | | | | |
| Cartridges externally rinsed/re-commissioned: (Y/N) | | | | | |
| New tentacles put on Cartridges: (Y/N) | | | | | |
| Sediment Depth Measured: (Y/N) | | | | | |
| Sediment Depth (inches or mm): | | | | | |
| Sediment Removed: (Y/N) | | | | | |
| Cartridge Lids intact: (Y/N) | | | | | |
| Observed Damage: | | | | | |
| Comments: | | | | | |

1.6 Porous Asphalt Maintenance Requirements

| Porous Asphalt Inspection/Maintenance Requirements | | |
|--|------------------------------------|---|
| Inspection/ Maintenance | Frequency | Action |
| Monitor for sediment build up, particularly in the winter. | Two (2) – Four (4) Times Annually. | - Clean with vacuum sweeper, bi-annually - Loose debris such as leaves or can be removed using a power/leaf blower or gutter broom. Fall and spring cleanup should be accompanied by pavement vacuuming. |
| Inspect Adjacent Vegetation | Two (2) – Four (4) Times Annually. | - Repair or replace any eroded areas. |
| Inspect for standing water -Within 30 minutes following a rain event. | One (1) – Two (2) Times Annually | - Use of a power washer or compressed air blower at an angle of 30 degrees or less can be effective, vacuum or vacuum sweeper if necessary. |
| Damage to pavement | As needed | - Repairs should be made as identified. |

Porous Asphalt Winter Maintenance Guidelines:

- ***No winter sanding or salting of porous pavements is permitted***
- Porous surfaces are commonly not treated and plowed until 2 or more inches of snow accumulation.
- Plow after every storm. If possible, plow with a slightly raised blade, this will help prevent pavement scarring.

Additional Porous Asphalt Operation and Maintenance Requirements:

- Never reseal or repave with impermeable materials.
- Inspect annually for pavement deterioration or spalling.
- Monitor periodically to ensure the pavement surface drains effectively after storms.

1.7 Snow & Ice Management for Standard Asphalt and Walkways

There are no snow storage areas on site. The property manager will be responsible for timely snow removal from all private sidewalks, driveways, and parking areas. All snow removal will be hauled off-site and legally disposed of. Salt storage areas shall be covered or located such that no direct untreated discharges are possible to receiving waters from the storage site. Salt storage is not permitted within the 100' wetland buffer. Salt and sand shall be used to the minimum extent practical (refer to the attached for de-icing application rate guideline from the New Hampshire Stormwater Management Manual, Volume 2,).

Section 2

Chloride Management Plan

Winter Operational Guidelines

The following Chloride Management Plan is for the Raynes Avenue, Mixed Use Development in Portsmouth, New Hampshire. The Plan includes operational guidelines including winter operator certification requirements, weather monitoring, equipment calibration requirements, mechanical removal, and salt usage evaluation and monitoring. Due to the evolving nature of chloride management efforts, the Chlorides Management Plan will be reviewed annually, in advance of the winter season, to reflect the current management standards.

2.1 Background Information

The Raynes Avenue, Mixed Use Development is located along the North Mill Pond in Portsmouth, New Hampshire.

2.2 Operational Guidelines – Chloride Management

All private contractors engaged at the development site for the purposes of winter operational snow removal and surface maintenance, are responsible for assisting in meeting compliance for the following protocols. Private contractors are expected to minimize the effects of the use of de-icing, anti-icing and pretreatment materials by adhering to the strict guidelines outlined below.

The winter operational de-icing, anti-icing and pretreatment materials will adhere to the following protocols:

2.2.1 Winter Operator Certification Requirements

All private contractors engaged at the premises for the purpose of winter operational snow removal and surface maintenance must be current UNHT2 Green SnowPro Certified operators or equivalent and will use only pre-approved methods for spreading abrasives on private roadways and parking lots. All private contractors engaged at the premises for the purpose of winter operational snow removal and surface maintenance shall provide to the property management two copies of the annual UNHT2 Green SnowPro certificate or equivalent for each operator utilized on the premises. The annual UNHT2 Green SnowPro certificate or equivalent for each operator will be available on file in the Facilities Management office and be present in the vehicle/carrier at all times.

2.2.2 Improved Weather Monitoring

The property manager will coordinate weather information for use by winter

maintenance contractors. This information in conjunction with site specific air/ground surface temperature monitoring will ensure that private contractors engaged at the premises for the purpose of winter operational snow removal and surface maintenance will make more informed decisions as to when and to what extent de-icing, anti-icing and pretreatment materials are applied to private roadways, sidewalks, and parking lots.

2.2.3 Equipment Calibration Requirements

All equipment utilized on the premises for the purpose of winter operational snow removal and surface maintenance will conform to the following calibration requirements.

2.2.3.1 Annual Calibration Requirements

All private contractors engaged at the premises for the purpose of winter operational snow removal and surface maintenance shall provide two copies of the annual calibration report for each piece of equipment utilized on the premises. Each calibration report shall include the vehicle/carrier VIN number and the serial numbers for each component including, but not limited to, spreader control units, salt aggregate spreader equipment, brining/pre-wetting equipment, ground speed orientation unit, and air/ground surface temperature monitor. Annual calibration reports will be available on file in the Facilities Management office and be present in the vehicle/carrier at all times.

Prior to each use, each vehicle/carrier operator will perform a systems check to verify that unit settings remain within the guidelines established by the Management Team in order to accurately dispense material. All private contractors engaged at the premises for the purpose of winter operational snow removal and surface maintenance will be subject to spot inspections by members of the Property Management Team to ensure that each vehicle/carrier is operating in a manner consistent with the guidelines set herein or State and Municipal regulations. All units will be recalibrated, and the updated calibration reports will be provided each time repairs or maintenance procedures affect the hydraulic system of the vehicle/carrier.

2.2.4 Increased Mechanical Removal Capabilities

All private contractors engaged at the premises will endeavor to use mechanical removal means on a more frequent basis for roadways, parking lots and sidewalks. Dedicating more manpower and equipment to increase snow removal frequencies prevents the buildup of snow and the corresponding need for de-icing, anti-icing and pretreatment materials. Shortened maintenance routes, with shorter service intervals, will be used to stay ahead of snowfall. Minimized snow and ice packing will reduce the need for abrasives, salt aggregates, and/or brining solution to restore surfaces back to bare surface states after winter precipitation events.

After storm events the management team will be responsible for having the streets swept to recapture un-melted de-icing materials, when practical.

2.3 Salt Usage Evaluation and Monitoring

All private contractors engaged at the premises for the purpose of winter operational snow removal and surface maintenance shall provide two copies of a storm report, which includes detailed information regarding treatment areas and the use of de-icing, anti-icing and pretreatment materials applied for the removal of snow and surface maintenance on the premises. The property manager will maintain copies of Summary Documents, including copies of the Storm Reports, operator certifications, equipment used for roadway and sidewalk winter maintenance, calibration reports and amount of de-icing materials used.

2.4 Summary

The above-described methodologies are incorporated into the Operational Manual and are to be used to qualify and retain all private contractors engaged at the Raynes Avenue premises for the purpose of winter operational snow removal and surface maintenance. This section of the Manual is intended to be an adaptive management document that is modified as required based on experience gained from past practices and technological advancements that reflect chloride BMP standards. All employees directly involved with winter operational activities are required to review this document and the current standard Best Management Practices published by the UNH Technology Transfer (T2) program annually. All employees directly involved with winter operational activities, and all private contractors engaged at the premises for the purposes of winter operational snow removal and surface maintenance, must be current UNHT2 Green SnowPro Certified operators or equivalent and undergo the necessary requirements to maintain this certification annually.

Deicing Application Rate Guidelines

24' of pavement (typical two-lane road)

These rates are not fixed values, but rather the middle of a range to be selected and adjusted by an agency according to its local conditions and experience.

| Pavement Temp. (°F) and Trend (↑↓) | Weather Condition | Maintenance Actions | Pounds per two-lane mile | | | |
|------------------------------------|-----------------------|---|---|---|-----------------|------------------------------------|
| | | | Salt Prewetted / Pretreated with Salt Brine | Salt Prewetted / Pretreated with Other Blends | Dry Salt* | Winter Sand (abrasives) |
| > 30° ↑ | Snow | Plow, treat intersections only | 80 | 70 | 100* | Not recommended |
| | Freezing Rain | Apply Chemical | 80 - 160 | 70 - 140 | 100 - 200* | Not recommended |
| 30° ↓ | Snow | Plow and apply chemical | 80 - 160 | 70 - 140 | 100 - 200* | Not recommended |
| | Freezing Rain | Apply Chemical | 150 - 200 | 130 - 180 | 180 - 240* | Not recommended |
| 25° - 30° ↑ | Snow | Plow and apply chemical | 120 - 160 | 100 - 140 | 150 - 200* | Not recommended |
| | Freezing Rain | Apply Chemical | 150 - 200 | 130 - 180 | 180 - 240* | Not recommended |
| 25° - 30° ↓ | Snow | Plow and apply chemical | 120 - 160 | 100 - 140 | 150 - 200* | Not recommended |
| | Freezing Rain | Apply Chemical | 160 - 240 | 140 - 210 | 200 - 300* | 400 |
| 20° - 25° ↑ | Snow or Freezing Rain | Plow and apply chemical | 160 - 240 | 140 - 210 | 200 - 300* | 400 |
| 20° - 25° ↓ | Snow | Plow and apply chemical | 200 - 280 | 175 - 250 | 250 - 350* | Not recommended |
| | Freezing Rain | Apply Chemical | 240 - 320 | 210 - 280 | 300 - 400* | 400 |
| 15° - 20° ↑ | Snow | Plow and apply chemical | 200 - 280 | 175 - 250 | 250 - 350* | Not recommended |
| | Freezing Rain | Apply Chemical | 240 - 320 | 210 - 280 | 300 - 400* | 400 |
| 15° - 20° ↓ | Snow or Freezing Rain | Plow and apply chemical | 240 - 320 | 210 - 280 | 300 - 400* | 500 for freezing rain |
| 0° - 15° ↑↓ | Snow | Plow, treat with blends, sand hazardous areas | Not recommended | 300 - 400 | Not recommended | 500 - 750 spot treatment as needed |
| < 0° | Snow | Plow, treat with blends, sand hazardous areas | Not recommended | 400 - 600** | Not recommended | 500 - 750 spot treatment as needed |

* Dry salt is not recommended. It is likely to blow off the road before it melts ice.

** A blend of 6 - 8 gal/ton MgCl₂ or CaCl₂ added to NaCl can melt ice as low as -10°.

| 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: | | | | |

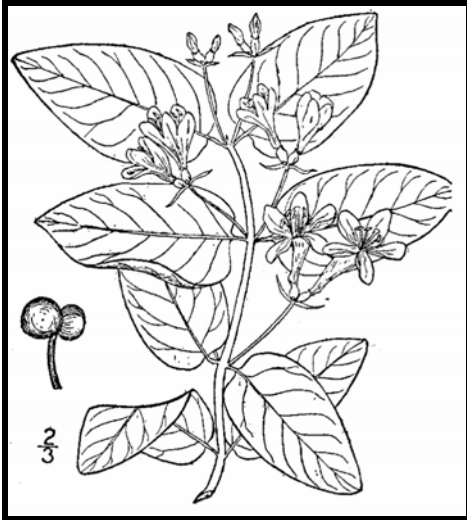
Section 3

Invasive Species

With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem is classified as an invasive species. Refer to the following fact sheet prepared by the University of New Hampshire Cooperative Extension entitled Methods for Disposing Non-Native Invasive Plants for recommended methods to dispose of invasive plant species.



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.nhinvases.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.

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.






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.

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.

| Woody Plants | Method of Reproducing | Methods of Disposal |
|--|---|--|
| Norway maple <i>(Acer platanoides)</i> European barberry <i>(Berberis vulgaris)</i> Japanese barberry <i>(Berberis thunbergii)</i> autumn olive <i>(Elaeagnus umbellata)</i> burning bush <i>(Euonymus alatus)</i> Morrow's honeysuckle <i>(Lonicera morrowii)</i> Tatarian honeysuckle <i>(Lonicera tatarica)</i> showy bush honeysuckle <i>(Lonicera x bella)</i> common buckthorn <i>(Rhamnus cathartica)</i> glossy buckthorn <i>(Frangula alnus)</i> |  | <p>Prior to fruit/seed ripening</p> <p>Seedlings and small plants</p> <ul style="list-style-type: none"> ▪ Pull or cut and leave on site with roots exposed. No special care needed. <p>Larger plants</p> <ul style="list-style-type: none"> ▪ Use as firewood. ▪ Make a brush pile. ▪ Chip. ▪ Burn. |
| | | <p>After fruit/seed is ripe</p> <p>Don't remove from site.</p> <ul style="list-style-type: none"> ▪ Burn. ▪ Make a covered brush pile. ▪ Chip once all fruit has dropped from branches. ▪ Leave resulting chips on site and monitor. |
| oriental bittersweet <i>(Celastrus orbiculatus)</i> multiflora rose <i>(Rosa multiflora)</i> |  | <p>Prior to fruit/seed ripening</p> <p>Seedlings and small plants</p> <ul style="list-style-type: none"> ▪ Pull or cut and leave on site with roots exposed. No special care needed. <p>Larger plants</p> <ul style="list-style-type: none"> ▪ Make a brush pile. ▪ Burn. |
| | | <p>After fruit/seed is ripe</p> <p>Don't remove from site.</p> <ul style="list-style-type: none"> ▪ Burn. ▪ Make a covered brush pile. ▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor. |

| Non-Woody Plants | Method of Reproducing | Methods of Disposal |
|--|---|---|
| <p>garlic mustard (<i>Alliaria petiolata</i>)</p> <p>spotted knapweed (<i>Centaurea maculosa</i>)</p> <ul style="list-style-type: none"> ▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling. <p>black swallow-wort (<i>Cynanchum nigrum</i>)</p> <ul style="list-style-type: none"> ▪ May cause skin rash. Wear gloves and long sleeves when handling. <p>pale swallow-wort (<i>Cynanchum rossicum</i>)</p> <p>giant hogweed (<i>Heracleum mantegazzianum</i>)</p> <ul style="list-style-type: none"> ▪ Can cause major skin rash. Wear gloves and long sleeves when handling. <p>dame's rocket (<i>Hesperis matronalis</i>)</p> <p>perennial pepperweed (<i>Lepidium latifolium</i>)</p> <p>purple loosestrife (<i>Lythrum salicaria</i>)</p> <p>Japanese stilt grass (<i>Microstegium vimineum</i>)</p> <p>mile-a-minute weed (<i>Polygonum perfoliatum</i>)</p> | <p>Fruits and Seeds</p>  | <p>Prior to flowering Depends on scale of infestation</p> <p>Small infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and leave on site with roots exposed. <p>Large infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material. <hr/> <p>During and following flowering Do nothing until the following year or remove flowering heads and bag and let rot.</p> <p>Small infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and leave on site with roots exposed. <p>Large infestation</p> <ul style="list-style-type: none"> ▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material. |
| <p>common reed (<i>Phragmites australis</i>)</p> <p>Japanese knotweed (<i>Polygonum cuspidatum</i>)</p> <p>Bohemian knotweed (<i>Polygonum x bohemicum</i>)</p> | <p>Fruits, Seeds, Plant Fragments</p> <p>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.</p> | <p>Small infestation</p> <ul style="list-style-type: none"> ▪ Bag all plant material and let rot. ▪ Never pile and use resulting material as compost. ▪ Burn. <p>Large infestation</p> <ul style="list-style-type: none"> ▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile. ▪ Monitor and remove any sprouting material. ▪ Pile, let dry, and burn. |

January 2010

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Managing Invasive Plants

Methods of Control

by Christopher Mattrick

They're out there. The problem of invasive plants is as close as your own backyard.

Maybe a favorite dogwood tree is struggling in the clutches of an Oriental bittersweet vine. Clawlike canes of multiflora rose are scratching at the side of your house. That handsome burning bush you planted few years ago has become a whole clump in practically no time ... but what happened to the azalea that used to grow right next to it?

If you think controlling or managing invasive plants on your property is a daunting task, you're not alone. Though this topic is getting lots of attention from federal, state, and local government agencies, as well as the media, the basic question for most homeowners is simply, "How do I get rid of the invasive plants in my own landscape?" Fortunately, the best place to begin to tackle this complex issue is in our own backyards and on local conservation lands. We hope the information provided here will help you take back your yard. We won't kid you—there's some work involved, but the payoff in beauty, wildlife habitat, and peace of mind makes it all worthwhile.

PLAN OF ATTACK

Three broad categories cover most invasive plant control: mechanical, chemical, and biological. Mechanical control means physically removing plants from the environment



Spraying chemicals to control invasive plants.

through cutting or pulling. Chemical control uses herbicides to kill plants and inhibit regrowth. Techniques and chemicals used will vary depending on the species. Biological controls use plant diseases or insect predators, typically from the targeted species' home range. Several techniques may be effective in controlling a single species, but there is usually one preferred method—the one that is most resource efficient with minimal impact on non-target species and the environment.

MECHANICAL CONTROL METHODS

Mechanical treatments are usually the first ones to look at when evaluating an invasive plant removal project. These procedures do not require special licensing or introduce chemicals into the environment. They do require permits in some situations, such as wetland zones. [See sidebar on page 23.] Mechanical removal is highly labor intensive and creates a significant amount of site disturbance, which can lead to rapid reinvasion if not handled properly.

Pulling and digging

Many herbaceous plants and some woody species (up to about one inch in diameter), if present in limited quantities, can be pulled out or dug up. It's important to remove as much of the root system as possible; even a small portion can restart the infestation. Pull plants by hand or use a digging fork, as shovels can shear off portions of the root system, allowing for regrowth. To remove larger woody stems (up to about three inches in diameter), use a Weed Wrench™, Root Jack, or Root Talon. These tools, available from several manufacturers, are designed to remove the aboveground portion of the plant as well as the entire root system. It's easiest to undertake this type of control in the spring or early summer when soils are moist and plants come out more easily.



Using tools to remove woody stems.



Volunteers hand pulling invasive plants.

Suffocation

Try suffocating small seedlings and herbaceous plants. Place double or triple layers of thick UV-stabilized plastic sheeting, either clear or black (personally I like clear), over the infestation and secure the plastic with stakes or weights. Make sure the plastic extends at least five feet past the edge of infestation on all sides. Leave the plastic in place for at least two years. This technique will kill everything beneath the plastic—invasive and non-invasive plants alike. Once the plastic is removed, sow a cover crop such as annual rye to prevent new invasions.

Cutting or mowing

This technique is best suited for locations you can visit and treat often. To be effective, you will need to mow or cut infested areas three or four times a year for up to five years. The goal is to interrupt the plant's ability to photosynthesize by removing as much leafy material as possible. Cut the plants at ground level and remove all resulting debris from the site. With this treatment, the infestation may actually appear to get worse at first, so you will need to be as persistent as the invasive plants themselves. Each time you cut the plants back, the root system gets slightly larger, but must also rely on its energy reserves to push up new growth. Eventually, you will exhaust these reserves and the plants will die. This may take many years, so you have to remain committed to this process once you start; otherwise the treatment can backfire, making the problem worse.

CHEMICAL CONTROL METHODS

Herbicides are among the most effective and resource-efficient tools to treat invasive species. Most of the commonly known invasive plants can be treated using only two herbicides—glyphosate (the active ingredient in Roundup™ and Rodeo™) and triclopyr (the active ingredient in Brush-B-Gone™ and Garlon™). Glyphosate is non-selective, meaning it kills everything it contacts. Triclopyr is selective and does not injure monocots (grasses, orchids, lilies, etc.). Please read labels and follow directions precisely for both environmental and personal safety. These are relatively benign herbicides, but improperly used they can still cause both short- and long-term health and environmental problems. Special aquatic formulations are required when working in wetland zones. You are required to have a state-issued pesticide applicator license when applying these chemicals on land you do not own. To learn more about the pesticide regulations in your state, visit or call your state's pesticide control division, usually part of the state's Department of Agriculture. In wetland areas, additional permits are usually required by the Wetlands Protection Act. [See sidebar on page 23.]

Foliar applications

When problems are on a small scale, this type of treatment is usually applied with a backpack sprayer or even a small handheld spray bottle. It is an excellent way to treat large monocultures of herbaceous plants, or to spot-treat individual plants that are difficult to remove mechanically, such as goutweed, swallowwort, or purple loosestrife. It is also an effective treatment for some woody species, such as Japanese barberry, multiflora rose, Japanese honeysuckle, and Oriental bittersweet that grow in dense masses or large numbers over many acres. The herbicide mixture should contain no more than five percent of the active ingredient, but it is important to follow the instructions on the product label. This treatment is most effective when the plants are actively growing, ideally when they are flowering or beginning to form fruit. It has been shown that plants are often more susceptible to this type of treatment if the existing stems are cut off and the regrowth is treated. This is especially true for Japanese knotweed. The target plants should be thoroughly wetted with the herbicide on a day when there is no rain in the forecast for the next 24 to 48 hours.

Cut stem treatments

There are several different types of cut stem treatments, but here we will review only the one most commonly used. All treatments of this type require a higher concentration of the active ingredient than is used in foliar applications. A 25 to 35 percent solution of the active ingredient should be used for cut stem treatments, but read and follow all label instructions. In most cases, the appropriate herbicide is glyphosate, except for Oriental bittersweet, on which triclopyr should be used. This treatment can be used on all woody stems, as well as phragmites and Japanese knotweed.

For woody stems, treatments are most effective when applied in the late summer and autumn—between late August and November. Stems should be cut close to the ground, but not so close that you will lose track of them. Apply herbicide directly to the cut surface as soon as possible after cutting. Delaying the application will reduce the effectiveness of the treatment. The herbicide can be applied with a sponge, paintbrush, or spray bottle.



Cut stem treatment tools.

For phragmites and Japanese knotweed, treatment is the same, but the timing and equipment are different. Plants should be treated anytime from mid-July through September, but the hottest, most humid days of the summer are best

for this method. Cut the stems halfway between two leaf nodes at a comfortable height. Inject (or squirt) herbicide into the exposed hollow stem. All stems in an infestation should be treated. A wash bottle is the most effective application tool, but you can also use an eyedropper, spray bottle, or one of the recently developed high-tech injection systems.

It is helpful to mix a dye in with the herbicide solution. The dye will stain the treated surface and mark the areas that have been treated, preventing unnecessary reapplication. You can buy a specially formulated herbicide dye, or use food coloring or laundry dye.

There is not enough space in this article to describe all the possible ways to control invasive plants. You can find other treatments, along with more details on the above-described methods, and species-specific recommendations on The Nature Conservancy Web site (tncweeds.ucdavis.edu). An upcoming posting on the Invasive Plant Atlas of New England (www.ipane.org) and the New England Wild Flower Society (www.newfs.org) Web sites will also provide further details.



Hollow stem injection tools.

Biological controls—still on the horizon

Biological controls are moving into the forefront of control methodology, but currently the only widely available and applied biocontrol relates to purple loosestrife. More information on purple loosestrife and other biological control projects can be found at www.invasiveplants.net.

DISPOSAL OF INVASIVE PLANTS

Proper disposal of removed invasive plant material is critical to the control process. Leftover plant material can cause new infestations or reinfest the existing project area. There are many appropriate ways to dispose of invasive plant debris. I've listed them here in order of preference.

- 1. Burn it**—Make a brush pile and burn the material following local safety regulations and restrictions, or haul it to your town's landfill and place it in their burn pile.
- 2. Pile it**—Make a pile of the woody debris. This technique will provide shelter for wildlife as well.
- 3. Compost it**—Place all your herbaceous invasive plant debris in a pile and process as compost. Watch the pile closely for resprouts and remove as necessary. Do not use the resulting compost in your garden. The pile is for invasive plants only.



Injecting herbicide into the hollow stem of phragmites.

4. Dry it/cook it—Place woody debris out on your driveway or any asphalt surface and let it dry out for a month. Place herbaceous material in a doubled-up black trash bag and let it cook in the sun for one month. At the end of the month, the material should be non-viable and you can dump it or dispose of it with the trash. The method assumes there is no viable seed mixed in with the removed material.

Care should be taken in the disposal of all invasive plants, but several species need extra attention. These are the ones that have the ability to sprout vigorously from plant fragments and should ideally be burned or dried prior to disposal: Oriental bittersweet, multiflora rose, Japanese honeysuckle, phragmites, and Japanese knotweed.

Christopher Mattrick is the former Senior Conservation Programs Manager for New England Wild Flower Society, where he managed conservation volunteer and invasive and rare plant management programs. Today, Chris and his family work and play in the White Mountains of New Hampshire, where he is the Forest Botanist and Invasive Species Coordinator for the White Mountain National Forest.



Controlling Invasive Plants in Wetlands

Special concerns; special precautions

Control of invasive plants in or around wetlands or bodies of water requires a unique set of considerations. Removal projects in wetland zones can be legal and effective if handled appropriately. In many cases, herbicides may be the least disruptive tools with which to remove invasive plants. You will need a state-issued pesticide license to apply herbicide on someone else's property, but all projects in wetland or aquatic systems fall under the jurisdiction of the Wetlands Protection Act and therefore require a permit. *Yes, even hand-pulling that colony of glossy buckthorn plants from your own swampland requires a permit.* Getting a permit for legal removal is fairly painless if you plan your project carefully.

1. Investigate and understand the required permits and learn how to obtain them. The entity charged with the enforcement of the Wetlands Protection Act varies from state to state. For more information in your state, contact:

ME: Department of Environmental Protection
www.state.me.us/dep/blwq/docstand/nrpapage.htm

NH: Department of Environmental Services
www.des.state.nh.us/wetlands/

VT: Department of Environmental Conservation
www.anr.state.vt.us/dec/waterq/permits/htm/pm_cud.htm

MA: Consult your local town conservation commission

RI: Department of Environmental Management
www.dem.ri.gov/programs/benviron/water/permits/fresh/index.htm

CT: Consult your local town Inland Wetland and Conservation Commission

2. Consult an individual or organization with experience in this area. Firsthand experience in conducting projects in wetland zones and navigating the permitting process is priceless. Most states have wetland scientist societies whose members are experienced in working in wetlands and navigating the regulations affecting them. A simple Web search will reveal the contact point for these societies. Additionally, most environmental consulting firms and some nonprofit organizations have skills in this area.

3. Develop a well-written and thorough project plan. You are more likely to be successful in obtaining a permit for your project if you submit a project plan along with your permit application. The plan should include the reasons for the project, your objectives in completing the project, how you plan to reach those objectives, and how you will monitor the outcome.

4. Ensure that the herbicides you plan to use are approved for aquatic use. Experts consider most herbicides harmful to water quality or aquatic organisms, but rate some formulations as safe for aquatic use. Do the research and select an approved herbicide, and then closely follow the instructions on the label.

5. If you are unsure—research, study, and most of all, ask for help. Follow the rules. The damage caused to aquatic systems by the use of an inappropriate herbicide or the misapplication of an appropriate herbicide not only damages the environment, but also may reduce public support for safe, well-planned projects.

Section 4

Annual Updates and Log Requirements

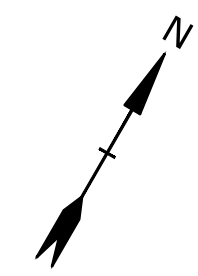
The Owner and/or Contact/Responsible Party shall review this Operation and Maintenance Plan once per year for its effectiveness and adjust the plan and deed as necessary.

A log of all preventative and corrective measures for the stormwater system shall be kept on-site and be made available upon request by any public entity with administrative, health environmental or safety authority over the site including NHDES.

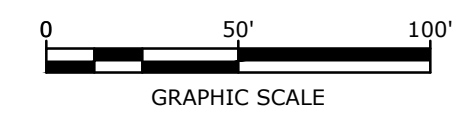
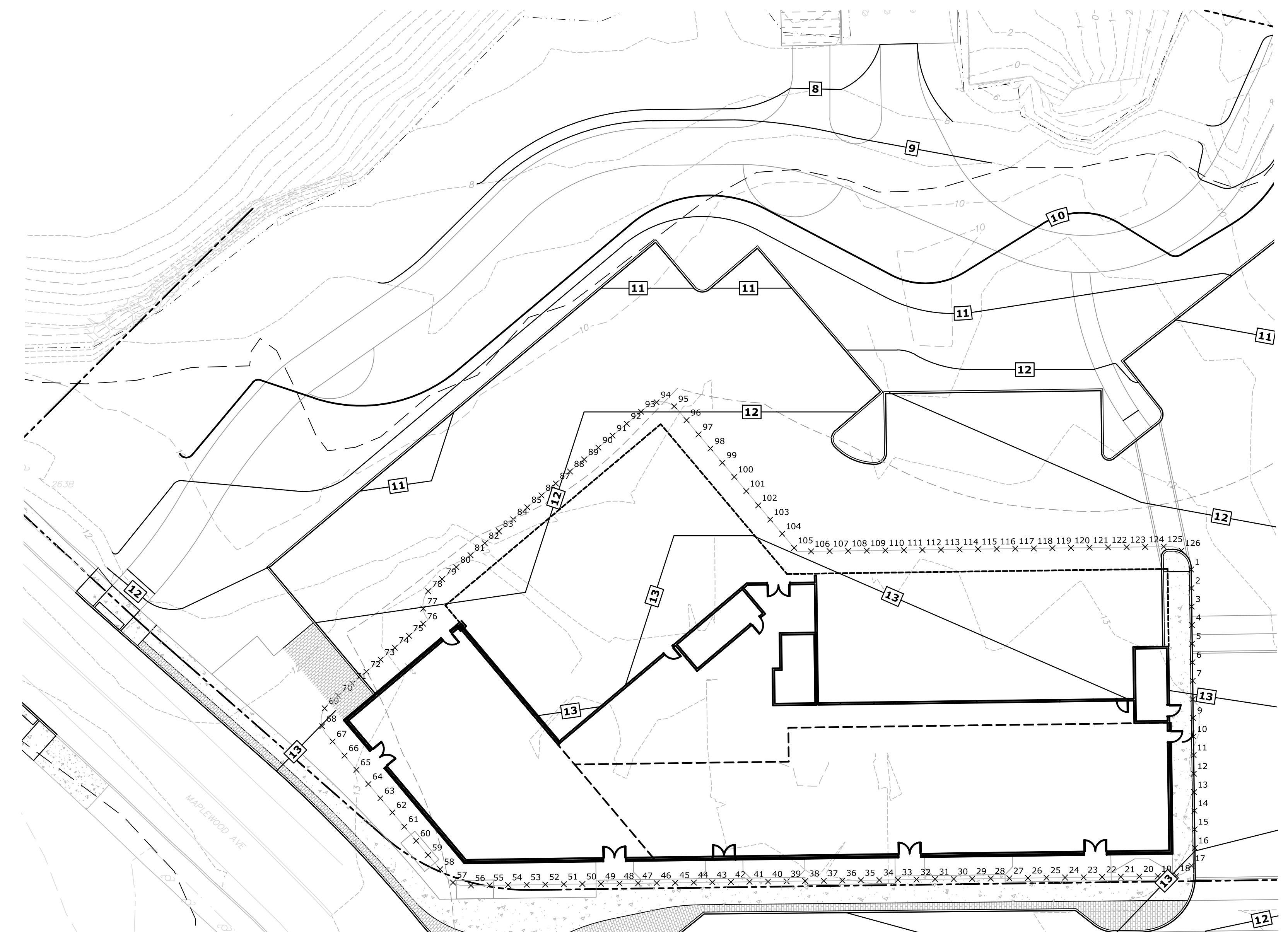
Copies of the Stormwater Maintenance report shall be submitted to the City of Portsmouth on an annual basis.

| Stormwater Management Report | | | | | | |
|-------------------------------------|---------------------------|---|--|--|----------------------------------|---------------------|
| Mixed Use Development | | Raynes Avenue – Map 123 Lots 10, 12, 13 & 14 | | | | |
| BMP Description | Date of Inspection | Inspector | BMP Installed and Operating Properly? | Cleaning / Corrective Action Needed | Date of Cleaning / Repair | Performed By |
| Deep Sump CB's | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Underground Detention | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Jellyfish Filter 1 | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Jellyfish Filter 2 | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Porous Pavement | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |

| Stormwater Management Report | | | | | | |
|------------------------------|--------------------|-----------------------|--|-------------------------------------|---------------------------|--------------|
| City of Portsmouth | | North Mill Pond Trail | | | | |
| BMP Description | Date of Inspection | Inspector | BMP Installed and Operating Properly? | Cleaning / Corrective Action Needed | Date of Cleaning / Repair | Performed By |
| Porous Pavement | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |



| MIXED USE BUILDING GRADE PLANE ELEVATIONS | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|-------------------------------|--------------|-----------|-----------------|
| POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT |
| 1 | 12.15 | 72.67 | 59.77 | 25 | 13.23 | 60.25 | 47.35 | 49 | 13.82 | 28.75 | 15.85 | 73 | 12.25 | 28.75 | 15.85 | 96 | 12.05 | 72.67 | 59.77 | 120 | 12.35 | 72.67 | 59.77 |
| 2 | 12.20 | 72.67 | 59.77 | 26 | 13.27 | 60.25 | 47.35 | 50 | 13.82 | 28.75 | 15.85 | 74 | 12.20 | 28.75 | 15.85 | 97 | 12.15 | 72.67 | 59.77 | 121 | 12.35 | 72.67 | 59.77 |
| 3 | 12.25 | 72.67 | 59.77 | 27 | 13.30 | 60.25 | 47.35 | 51 | 13.82 | 28.75 | 15.85 | 75 | 12.15 | 28.75 | 15.85 | 98 | 12.25 | 72.67 | 59.77 | 122 | 12.30 | 72.67 | 59.77 |
| 4 | 12.55 | 72.67 | 59.77 | 28 | 13.33 | 60.25 | 47.35 | 52 | 13.82 | 28.75 | 15.85 | 76 | 12.10 | 28.75 | 15.85 | 99 | 12.35 | 72.67 | 59.77 | 123 | 12.25 | 72.67 | 59.77 |
| 5 | 12.85 | 72.67 | 59.77 | 29 | 13.36 | 60.25 | 47.35 | 53 | 13.82 | 28.75 | 15.85 | 77 | 12.00 | 72.67 | 59.77 | 100 | 12.45 | 72.67 | 59.77 | 124 | 12.20 | 72.67 | 59.77 |
| 6 | 12.90 | 72.67 | 59.77 | 30 | 13.40 | 60.25 | 47.35 | 54 | 13.82 | 28.75 | 15.85 | 78 | 11.90 | 72.67 | 59.77 | 101 | 12.55 | 72.67 | 59.77 | 125 | 12.15 | 72.67 | 59.77 |
| 7 | 12.95 | 72.67 | 59.77 | 31 | 13.45 | 60.25 | 47.35 | 55 | 13.82 | 28.75 | 15.85 | 79 | 11.85 | 72.67 | 59.77 | 102 | 12.65 | 72.67 | 59.77 | 126 | 12.15 | 72.67 | 59.77 |
| 8 | 13.00 | 72.67 | 59.77 | 32 | 13.50 | 60.25 | 47.35 | 56 | 13.82 | 28.75 | 15.85 | 80 | 11.75 | 72.67 | 59.77 | 103 | 12.75 | 72.67 | 59.77 | AVERAGE GRADE PLANE ELEVATION | | | 12.90 |
| 9 | 13.05 | 72.67 | 59.77 | 33 | 13.53 | 60.25 | 47.35 | 57 | 13.82 | 28.75 | 15.85 | 81 | 11.70 | 72.67 | 59.77 | 104 | 12.90 | 72.67 | 59.77 | | | | |
| 10 | 13.10 | 60.25 | 47.35 | 34 | 13.56 | 60.25 | 47.35 | 58 | 13.82 | 28.75 | 15.85 | 82 | 11.65 | 72.67 | 59.77 | 105 | 12.95 | 72.67 | 59.77 | | | | |
| 11 | 13.15 | 60.25 | 47.35 | 35 | 13.59 | 60.25 | 47.35 | 59 | 13.82 | 28.75 | 15.85 | 83 | 11.70 | 72.67 | 59.77 | 106 | 12.95 | 72.67 | 59.77 | | | | |
| 12 | 13.20 | 60.25 | 47.35 | 36 | 13.62 | 60.25 | 47.35 | 60 | 13.82 | 28.75 | 15.85 | 84 | 11.75 | 72.67 | 59.77 | 107 | 12.90 | 72.67 | 59.77 | | | | |
| 13 | 13.25 | 60.25 | 47.35 | 37 | 13.65 | 60.25 | 47.35 | 61 | 13.82 | 28.75 | 15.85 | 85 | 11.80 | 72.67 | 59.77 | 108 | 12.85 | 72.67 | 59.77 | | | | |
| 14 | 13.30 | 60.25 | 47.35 | 38 | 13.68 | 60.25 | 47.35 | 62 | 13.82 | 28.75 | 15.85 | 86 | 11.90 | 72.67 | 59.77 | 109 | 12.85 | 72.67 | 59.77 | | | | |
| 15 | 13.20 | 60.25 | 47.35 | 39 | 13.72 | 60.25 | 47.35 | 63 | 13.82 | 28.75 | 15.85 | 87 | 12.00 | 72.67 | 59.77 | 110 | 12.80 | 72.67 | 59.77 | | | | |
| 16 | 13.05 | 60.25 | 47.35 | 40 | 13.74 | 60.25 | 47.35 | 64 | 13.82 | 28.75 | 15.85 | 88 | 12.00 | 72.67 | 59.77 | 111 | 12.75 | 72.67 | 59.77 | | | | |
| 17 | 12.90 | 60.25 | 47.35 | 41 | 13.77 | 60.25 | 47.35 | 65 | 13.82 | 28.75 | 15.85 | 89 | 12.10 | 72.67 | 59.77 | 112 | 12.70 | 72.67 | 59.77 | | | | |
| 18 | 12.85 | 60.25 | 47.35 | 42 | 13.80 | 60.25 | 47.35 | 66 | 13.82 | 28.75 | 15.85 | 90 | 12.20 | 72.67 | 59.77 | 113 | 12.65 | 72.67 | 59.77 | | | | |
| 19 | 12.95 | 60.25 | 47.35 | 43 | 13.82 | 60.25 | 47.35 | 67 | 13.82 | 28.75 | 15.85 | 91 | 12.20 | 72.67 | 59.77 | 114 | 12.60 | 72.67 | 59.77 | | | | |
| 20 | 13.00 | 60.25 | 47.35 | 44 | 13.82 | 60.25 | 47.35 | 68 | 13.00 | 28.75 | 15.85 | 92 | 12.10 | 72.67 | 59.77 | 115 | 12.60 | 72.67 | 59.77 | | | | |
| 21 | 13.05 | 60.25 | 47.35 | 45 | 13.82 | 60.25 | 47.35 | 69 | 12.95 | 28.75 | 15.85 | 93 | 12.00 | 72.67 | 59.77 | 116 | 12.55 | 72.67 | 59.77 | | | | |
| 22 | 13.10 | 60.25 | 47.35 | 46 | 13.82 | 28.75 | 15.85 | 70 | 12.45 | 28.75 | 15.85 | 94 | 11.95 | 72.67 | 59.77 | 117 | 12.50 | 72.67 | 59.77 | | | | |
| 23 | 13.15 | 60.25 | 47.35 | 47 | 13.82 | 28.75 | 15.85 | 71 | 12.35 | 28.75 | 15.85 | 95 | 11.95 | 72.67 | 59.77 | 118 | 12.45 | 72.67 | 59.77 | | | | |
| 24 | 13.20 | 60.25 | 47.35 | 48 | 13.82 | 28.75 | 15.85 | 72 | 12.30 | 28.75 | 15.85 | 96 | 12.05 | 72.67 | 59.77 | 119 | 12.40 | 72.67 | 59.77 | | | | |



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

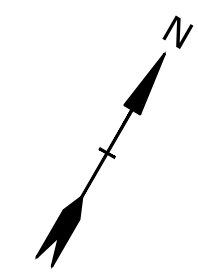
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|--------------|-------------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-EXHIBITS.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

MIXED USE GRADE PLANE EXHIBIT

SCALE: AS SHOWN

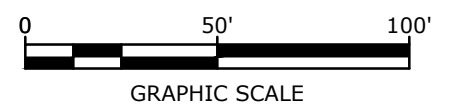
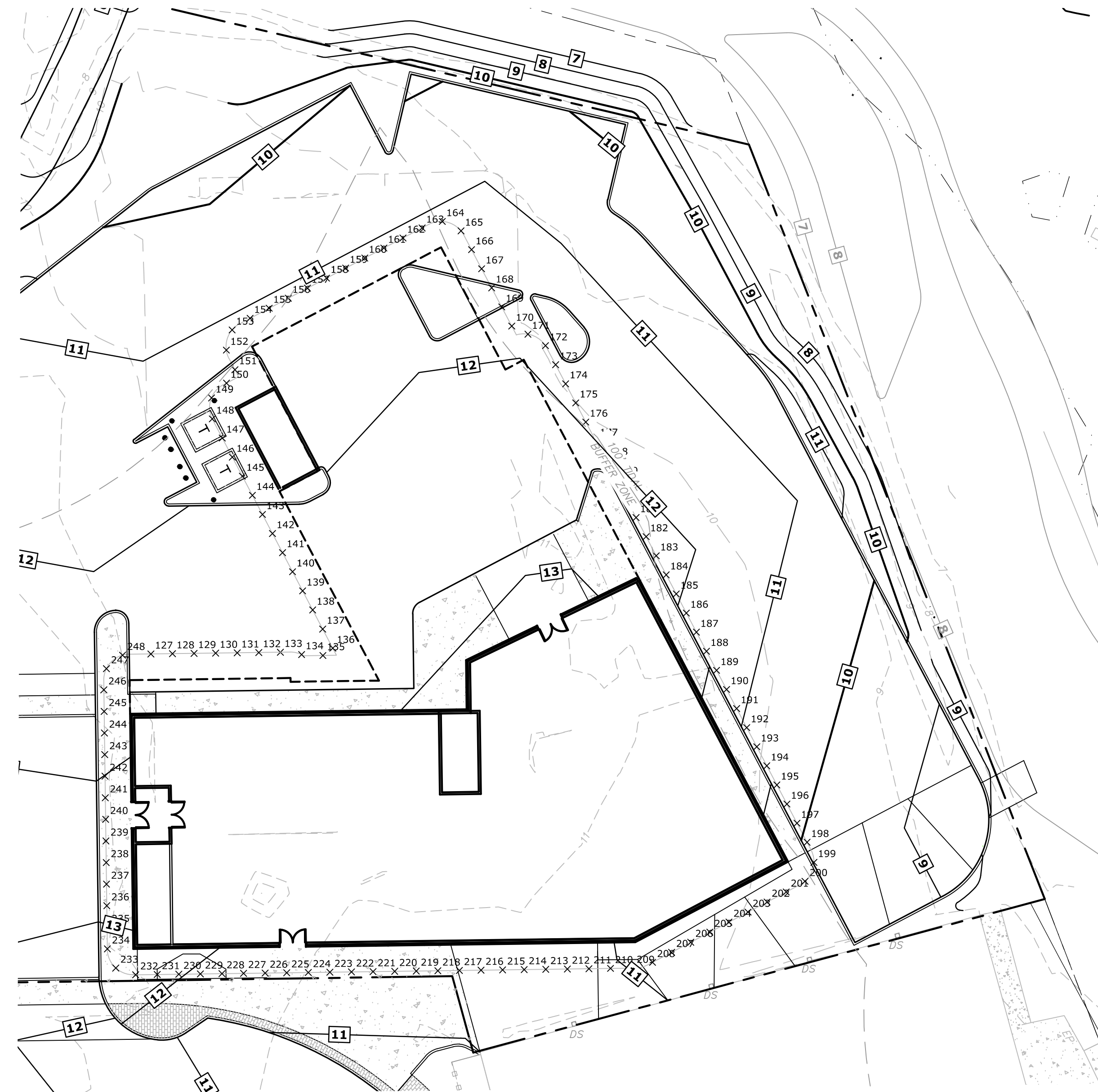
| | BUILDING ELEVATIONS AND HEIGHTS | | | | |
|-----------|---------------------------------|----------------------------|--------|-----------------|--------|
| | GRADE PLANE ELEVATION | BUILDING ELEVATION ALLOWED | | BUILDING HEIGHT | |
| MIXED USE | 12.90' | 72.90' | 72.67' | 60.00' | 59.77' |
| HOTEL | 11.85' | 71.85' | 71.75' | 60.00' | 59.90' |

Last Saved: 5/19/2021 1:51:51 PM By: MAHansen
 Plotted On: 12/22/2020 11:51:51 AM By: MAHansen
 Tighe & Bond 21 W P0595 Proj Con General Proposals P0595-007 Baynes Ave Hotel Drawings Figures/AutoCAD/Sheet/P-0595-007-EXHIBITS.dwg



HOTEL BUILDING GRADE PLANE ELEVATIONS

| POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT | POINT # | SURFACE ELEV | ROOF ELEV | BUILDING HEIGHT |
|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|---------|--------------|-----------|-----------------|-------------------------------|--------------|-----------|-----------------|
| 127 | 12.45 | 71.75 | 59.90 | 151 | 11.85 | 71.75 | 59.90 | 175 | 11.96 | 71.75 | 59.90 | 199 | 10.40 | 71.75 | 59.90 | 222 | 12.30 | 71.75 | 59.90 | 246 | 12.75 | 71.75 | 59.90 |
| 128 | 12.50 | 71.75 | 59.90 | 152 | 11.20 | 71.75 | 59.90 | 176 | 11.98 | 71.75 | 59.90 | 200 | 10.45 | 71.75 | 59.90 | 223 | 12.70 | 71.75 | 59.90 | 247 | 12.90 | 71.75 | 59.90 |
| 129 | 12.60 | 71.75 | 59.90 | 153 | 11.10 | 71.75 | 59.90 | 177 | 12.00 | 71.75 | 59.90 | 201 | 10.50 | 71.75 | 59.90 | 224 | 13.10 | 71.75 | 59.90 | 248 | 12.70 | 71.75 | 59.90 |
| 130 | 12.65 | 71.75 | 59.90 | 154 | 11.10 | 71.75 | 59.90 | 178 | 12.05 | 71.75 | 59.90 | 202 | 10.55 | 71.75 | 59.90 | 225 | 13.15 | 71.75 | 59.90 | AVERAGE GRADE PLANE ELEVATION | | | 11.85 |
| 131 | 12.70 | 71.75 | 59.90 | 155 | 11.10 | 71.75 | 59.90 | 179 | 12.10 | 71.75 | 59.90 | 203 | 10.65 | 71.75 | 59.90 | 226 | 11.85 | 71.75 | 59.90 | | | | |
| 132 | 12.75 | 71.75 | 59.90 | 156 | 11.10 | 71.75 | 59.90 | 180 | 12.15 | 71.75 | 59.90 | 204 | 10.70 | 71.75 | 59.90 | 227 | 11.85 | 71.75 | 59.90 | | | | |
| 133 | 12.80 | 71.75 | 59.90 | 157 | 11.10 | 71.75 | 59.90 | 181 | 12.25 | 71.75 | 59.90 | 205 | 10.75 | 71.75 | 59.90 | 228 | 11.90 | 71.75 | 59.90 | | | | |
| 134 | 12.85 | 71.75 | 59.90 | 158 | 11.10 | 71.75 | 59.90 | 182 | 12.30 | 71.75 | 59.90 | 206 | 10.80 | 71.75 | 59.90 | 229 | 11.95 | 71.75 | 59.90 | | | | |
| 135 | 12.90 | 71.75 | 59.90 | 159 | 11.10 | 71.75 | 59.90 | 183 | 12.35 | 71.75 | 59.90 | 207 | 10.85 | 71.75 | 59.90 | 230 | 13.05 | 71.75 | 59.90 | | | | |
| 136 | 12.90 | 71.75 | 59.90 | 160 | 11.10 | 71.75 | 59.90 | 184 | 12.35 | 71.75 | 59.90 | 208 | 10.90 | 71.75 | 59.90 | 231 | 12.30 | 71.75 | 59.90 | | | | |
| 137 | 12.80 | 71.75 | 59.90 | 161 | 11.10 | 71.75 | 59.90 | 185 | 12.05 | 71.75 | 59.90 | 209 | 11.00 | 71.75 | 59.90 | 232 | 12.50 | 71.75 | 59.90 | | | | |
| 138 | 12.75 | 71.75 | 59.90 | 162 | 11.10 | 71.75 | 59.90 | 186 | 11.90 | 71.75 | 59.90 | 210 | 11.02 | 71.75 | 59.90 | 233 | 12.50 | 71.75 | 59.90 | | | | |
| 139 | 12.65 | 71.75 | 59.90 | 163 | 11.10 | 71.75 | 59.90 | 187 | 11.70 | 71.75 | 59.90 | 211 | 11.05 | 71.75 | 59.90 | 234 | 12.85 | 71.75 | 59.90 | | | | |
| 140 | 12.55 | 71.75 | 59.90 | 164 | 11.10 | 71.75 | 59.90 | 188 | 11.50 | 71.75 | 59.90 | 212 | 11.10 | 71.75 | 59.90 | 235 | 13.00 | 71.75 | 59.90 | | | | |
| 141 | 12.45 | 71.75 | 59.90 | 165 | 11.15 | 71.75 | 59.90 | 189 | 11.35 | 71.75 | 59.90 | 213 | 11.15 | 71.75 | 59.90 | 236 | 13.25 | 71.75 | 59.90 | | | | |
| 142 | 12.35 | 71.75 | 59.90 | 166 | 11.25 | 71.75 | 59.90 | 190 | 11.20 | 71.75 | 59.90 | 214 | 11.20 | 71.75 | 59.90 | 237 | 13.30 | 71.75 | 59.90 | | | | |
| 143 | 12.25 | 71.75 | 59.90 | 167 | 11.35 | 71.75 | 59.90 | 191 | 11.05 | 71.75 | 59.90 | 215 | 11.25 | 71.75 | 59.90 | 238 | 13.25 | 71.75 | 59.90 | | | | |
| 144 | 12.65 | 71.75 | 59.90 | 168 | 11.90 | 71.75 | 59.90 | 192 | 10.80 | 71.75 | 59.90 | 216 | 11.30 | 71.75 | 59.90 | 239 | 13.15 | 71.75 | 59.90 | | | | |
| 145 | 12.50 | 71.75 | 59.90 | 169 | 11.80 | 71.75 | 59.90 | 193 | 10.65 | 71.75 | 59.90 | 217 | 11.20 | 71.75 | 59.90 | 240 | 13.10 | 71.75 | 59.90 | | | | |
| 146 | 12.40 | 71.75 | 59.90 | 170 | 11.90 | 71.75 | 59.90 | 194 | 10.50 | 71.75 | 59.90 | 218 | 11.15 | 71.75 | 59.90 | 241 | 13.00 | 71.75 | 59.90 | | | | |
| 147 | 12.25 | 71.75 | 59.90 | 171 | 11.90 | 71.75 | 59.90 | 195 | 10.30 | 71.75 | 59.90 | 219 | 11.30 | 71.75 | 59.90 | 242 | 12.95 | 71.75 | 59.90 | | | | |
| 148 | 12.10 | 71.75 | 59.90 | 172 | 11.90 | 71.75 | 59.90 | 196 | 10.20 | 71.75 | 59.90 | 220 | 11.50 | 71.75 | 59.90 | 243 | 12.90 | 71.75 | 59.90 | | | | |
| 149 | 11.95 | 71.75 | 59.90 | 173 | 11.92 | 71.75 | 59.90 | 197 | 10.05 | 71.75 | 59.90 | 221 | 11.90 | 71.75 | 59.90 | 244 | 12.85 | 71.75 | 59.90 | | | | |
| 150 | 11.90 | 71.75 | 59.90 | 174 | 11.94 | 71.75 | 59.90 | 198 | 9.95 | 71.75 | 59.90 | 222 | 12.30 | 71.75 | 59.90 | 245 | 12.80 | 71.75 | 59.90 | | | | |



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

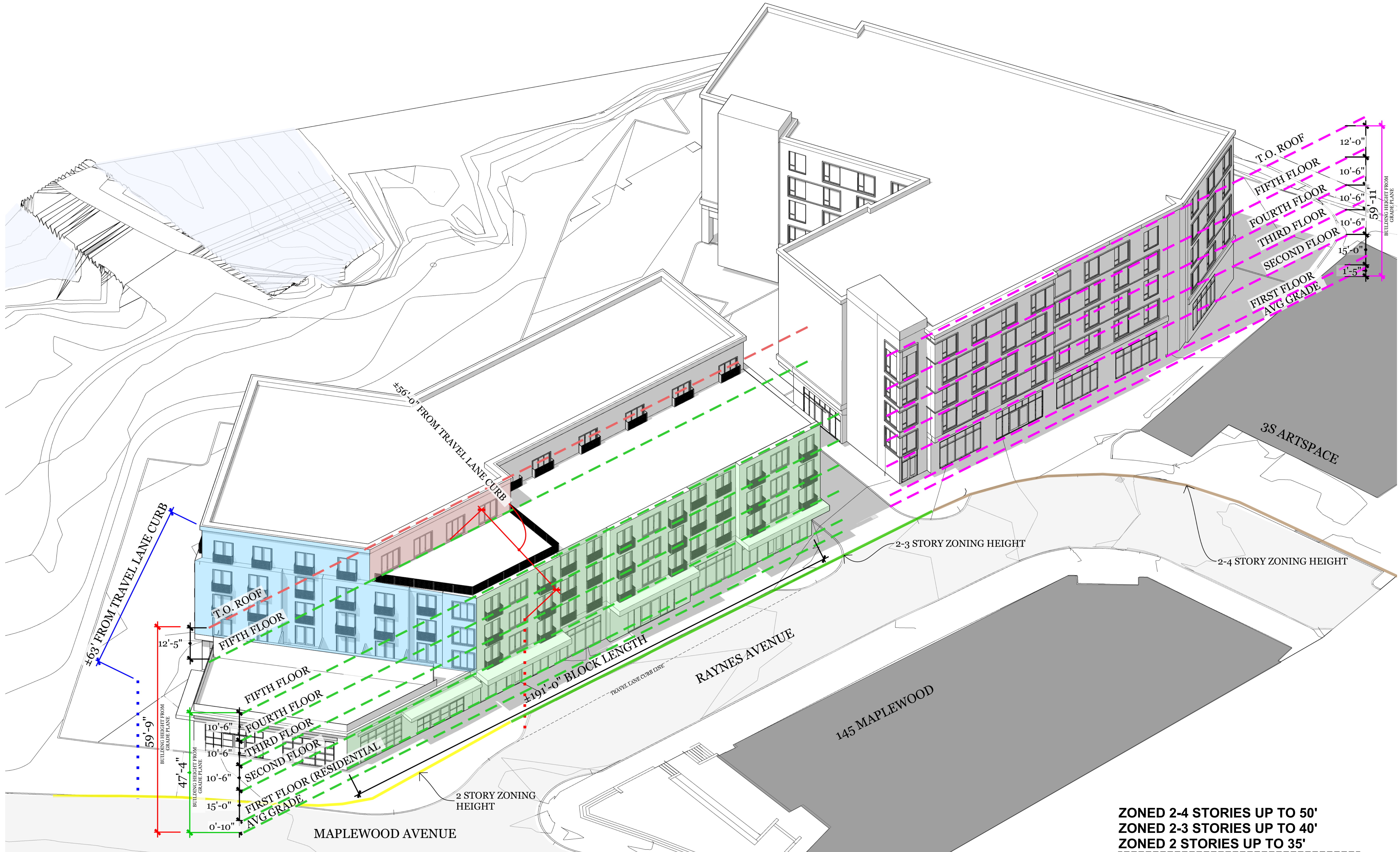
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| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

| | |
|--------------|-------------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-EXHIBITS.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

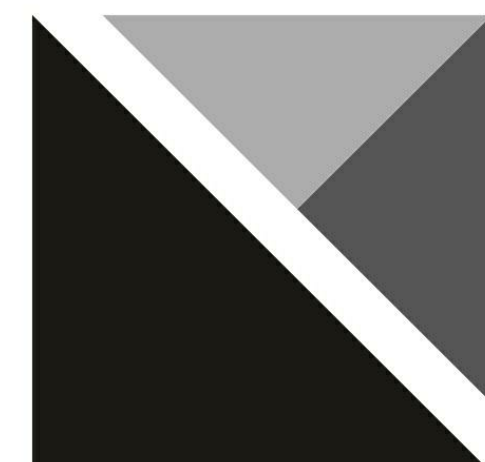
HOTEL GRADE PLANE EXHIBIT

SCALE: AS SHOWN

| | GRADE PLANE ELEVATION | BUILDING ELEVATION | | BUILDING HEIGHT | |
|-----------|-----------------------|--------------------|----------|-----------------|----------|
| | | ALLOWED | PROPOSED | ALLOWED | PROPOSED |
| MIXED USE | 12.90' | 72.90' | 72.67' | 60.00' | 59.77' |
| HOTEL | 11.85' | 71.85' | 71.75' | 60.00' | 59.90' |



ZONED 2-4 STORIES UP TO 50'
ZONED 2-3 STORIES UP TO 40'
ZONED 2 STORIES UP TO 35'
NORTH END INCENTIVE OVERLAY
 ADDITIONAL 1 STORY/10' WITH ADDITION OF 20% COMMUNITY SPACE
MAXIMUM BLOCK LENGTH 200'



PROCON
 CONNECT • CREATE • CONSTRUCT

PO BOX 4430
 MANCHESTER NH 03108
 603.623.8811
 PROCONINC.COM

PROPOSED MIXED USE DEVELOPMENT
 Raynes Avenue
 Portsmouth, NH

PROJECT: _____

| Date | Issue Description |
|------|-------------------|
| | |
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PROFESSIONAL SEAL

Architect: JAL
 Drawn By: Author
 Project No.: XXX
 Copyright: 2018 Pro Con, Inc.

Drawing Sheet
HEIGHT EXHIBIT

Drawing Sheet
A3.01

**PROPOSED MIXED USE
DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE**

FRONT LOT LINE BUILDOUT EXHIBIT

CITY OF PORTSMOUTH ZONING 10.5A60:

Front lot line buildout

The portion of the width of the required **front yard** or front building setback that is occupied by a **building**.

FRONT LOT LINE BUILDOUT:

| FRONT LOT LINE BUILDOUT | REQUIRED | PROPOSED |
|-------------------------|----------|----------------------|
| FRONT LOT LINE BUILDOUT | 50% | 78.4% ⁽¹⁾ |

(1) - TOTAL FRONT LOT LINE LENGTH SUBTRACTS FRONTAGE FOR REQUIRED GREENWAY COMMUNITY SPACE AREA

FRONT LOT LINE BUILDOUT - INDIVIDUAL STREETS:

| STREET | REQUIRED | PROPOSED |
|------------------|----------|----------------------|
| MAPLEWOOD AVENUE | 50% | 50.8% ⁽²⁾ |
| RAYNES AVENUE | 50% | 87.5% ⁽³⁾ |

(2) - MAPLEWOOD AVENUE FRONT LOT LINE BUILDOUT:

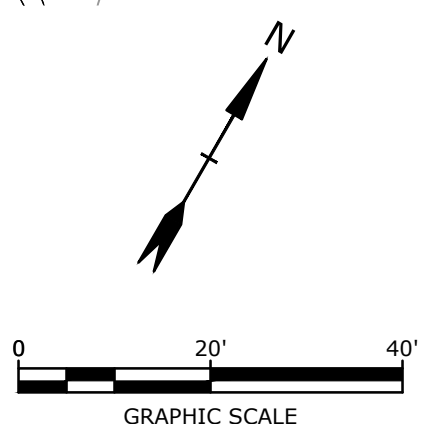
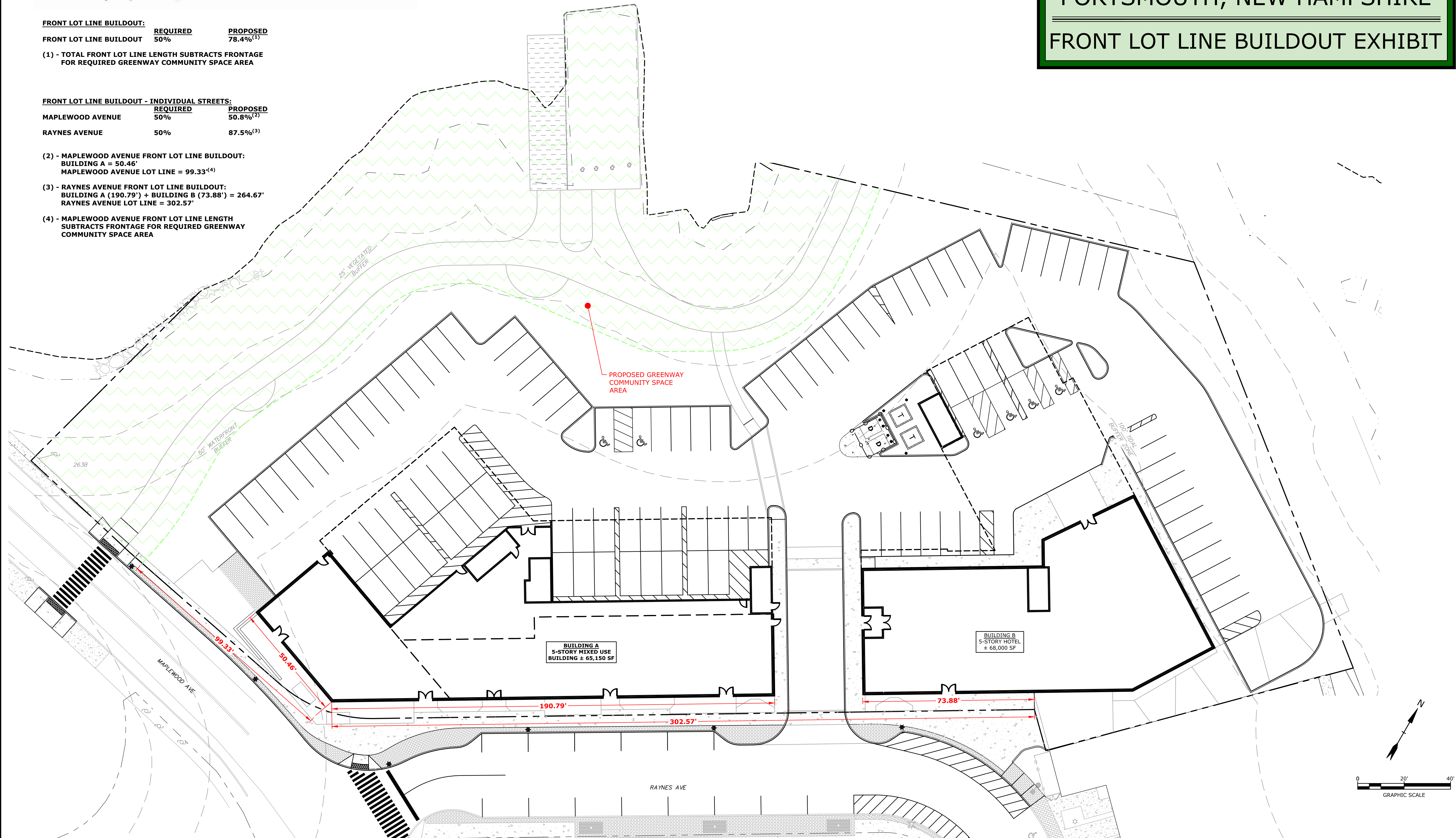
BUILDING A = 50.46'
MAPLEWOOD AVENUE LOT LINE = 99.33'⁽⁴⁾

(3) - RAYNES AVENUE FRONT LOT LINE BUILDOUT:

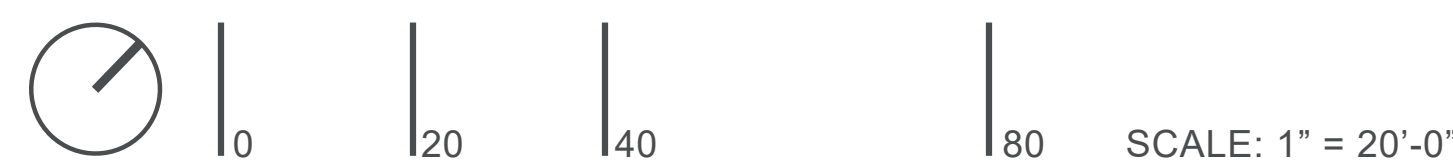
BUILDING A (190.79') + BUILDING B (73.88') = 264.67'
RAYNES AVENUE LOT LINE = 302.57'

(4) - MAPLEWOOD AVENUE FRONT LOT LINE LENGTH

SUBTRACTS FRONTAGE FOR REQUIRED GREENWAY COMMUNITY SPACE AREA



Last Save Date: August 23, 2021, 11:38 AM By: MAHANSEN
 Plot Date: Monday, August 23, 2021, Plotted By: Neil A. Hansen
 T&E File Location: J:\P\0595 Proj Con General Proposals\0595-007-EXHIBITS.dwg Layout Tab: BUILDOUT

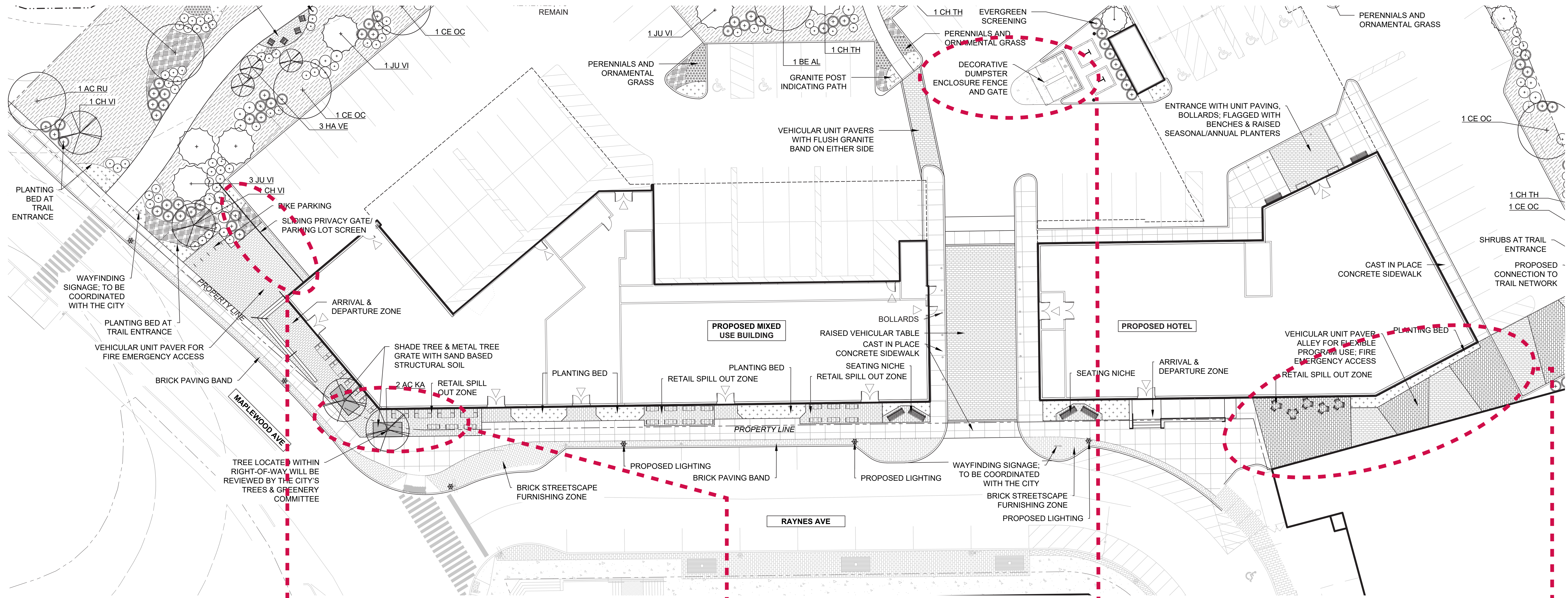


SITE LANDSCAPE PLAN

RAYNES AVE - PORTSMOUTH, NH



5/25/2021



SLIDING PRIVACY GATE / PARKING LOT SCREEN



RETAIL SPILL OUT AT CORNER



DUMPSTER ENCLOSURE



ALTERNATING PAVING PATTERN



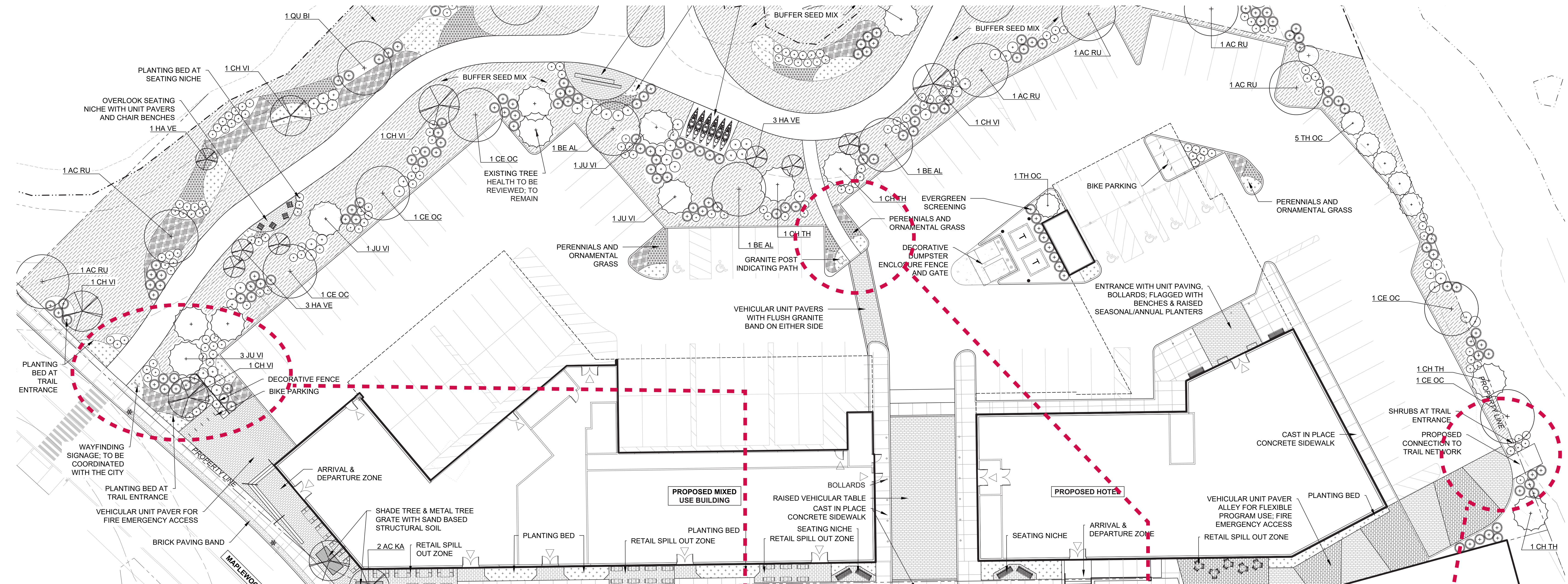
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RAYNES AVE - PORTSMOUTH, NH

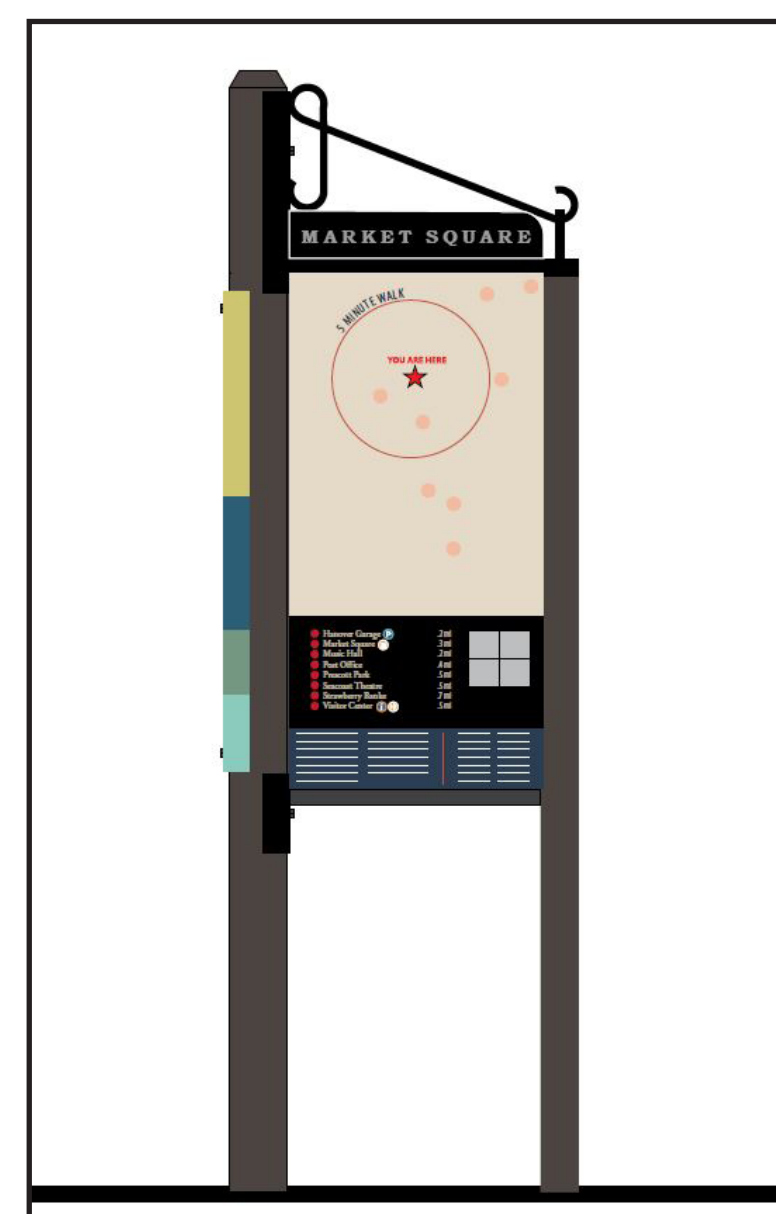
7/21/2021

SITE LANDSCAPE PRECEDENT IMAGERY

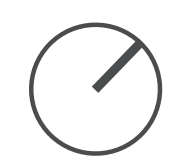
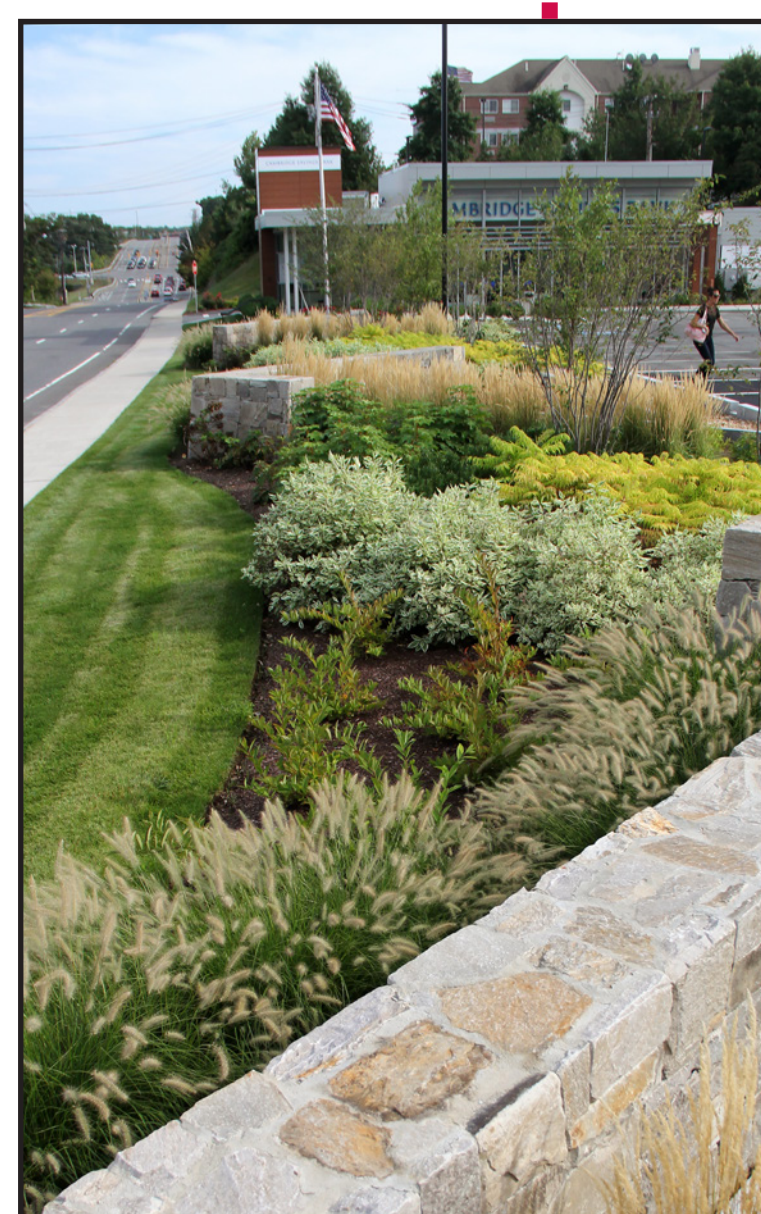




PORTSMOUTH KIOSK 1



TRAIL ENTRANCE PLANTINGS



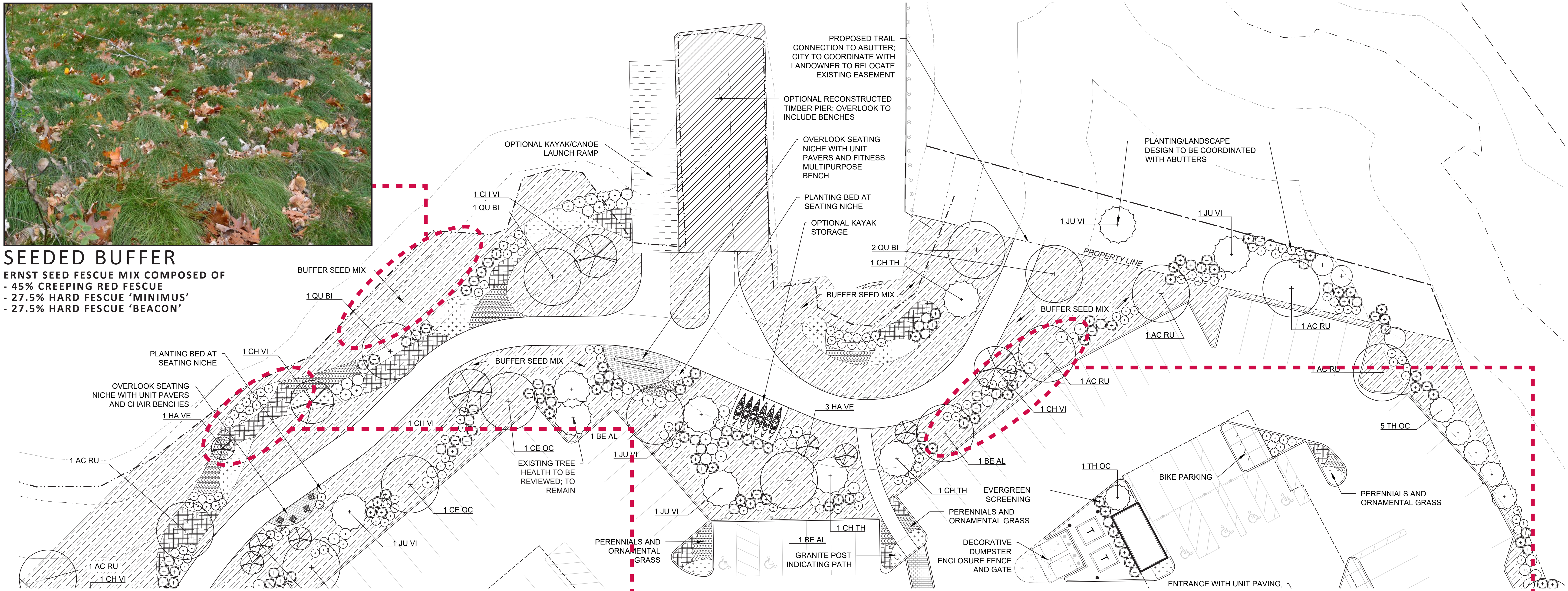
SCALE: N.T.S

SITE LANDSCAPE PRECEDENT IMAGERY



SEEDED BUFFER

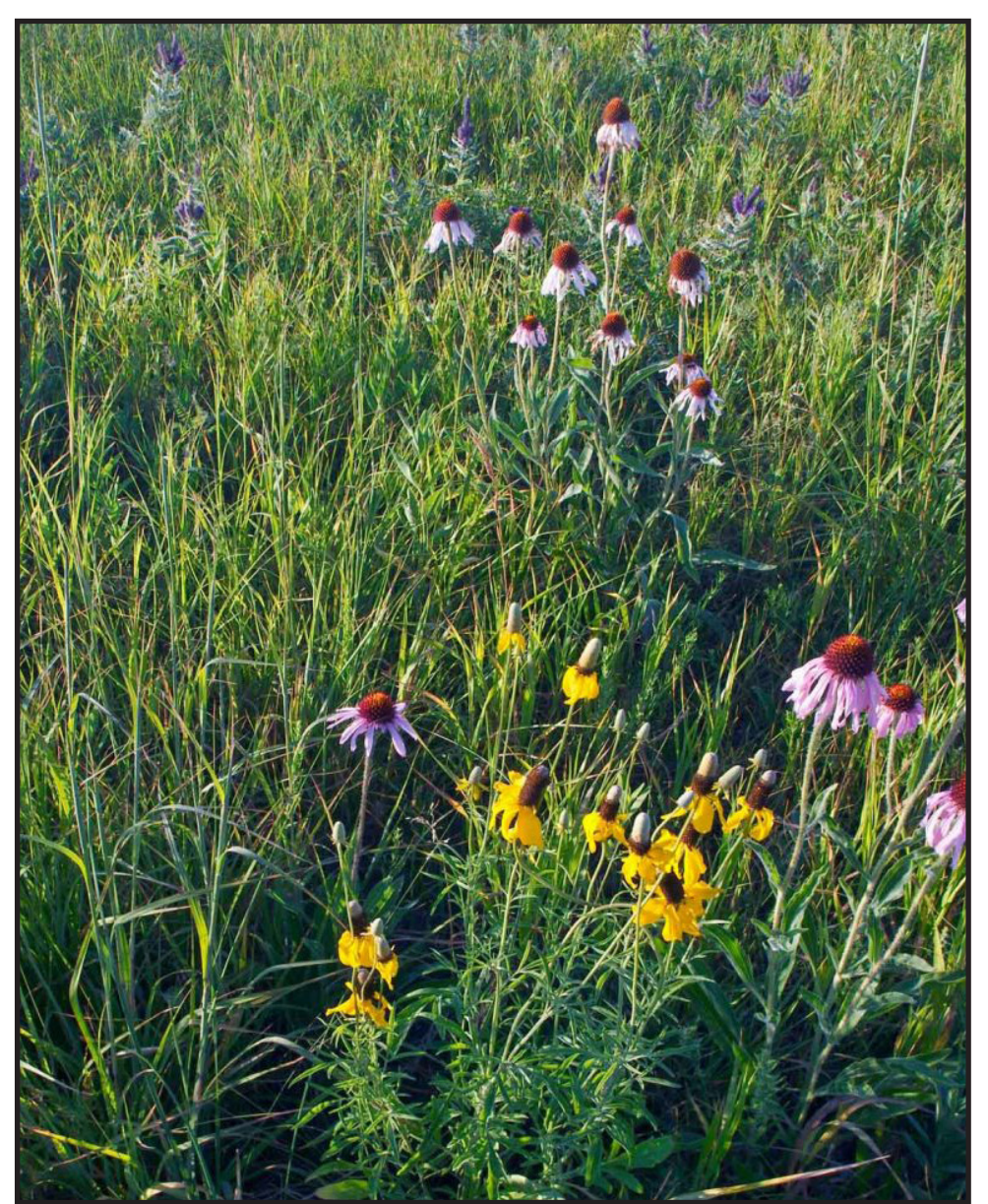
ERNST SEED FESCUE MIX COMPOSED OF
 - 45% CREEPING RED FESCUE
 - 27.5% HARD FESCUE 'MINIMUS'
 - 27.5% HARD FESCUE 'BEACON'



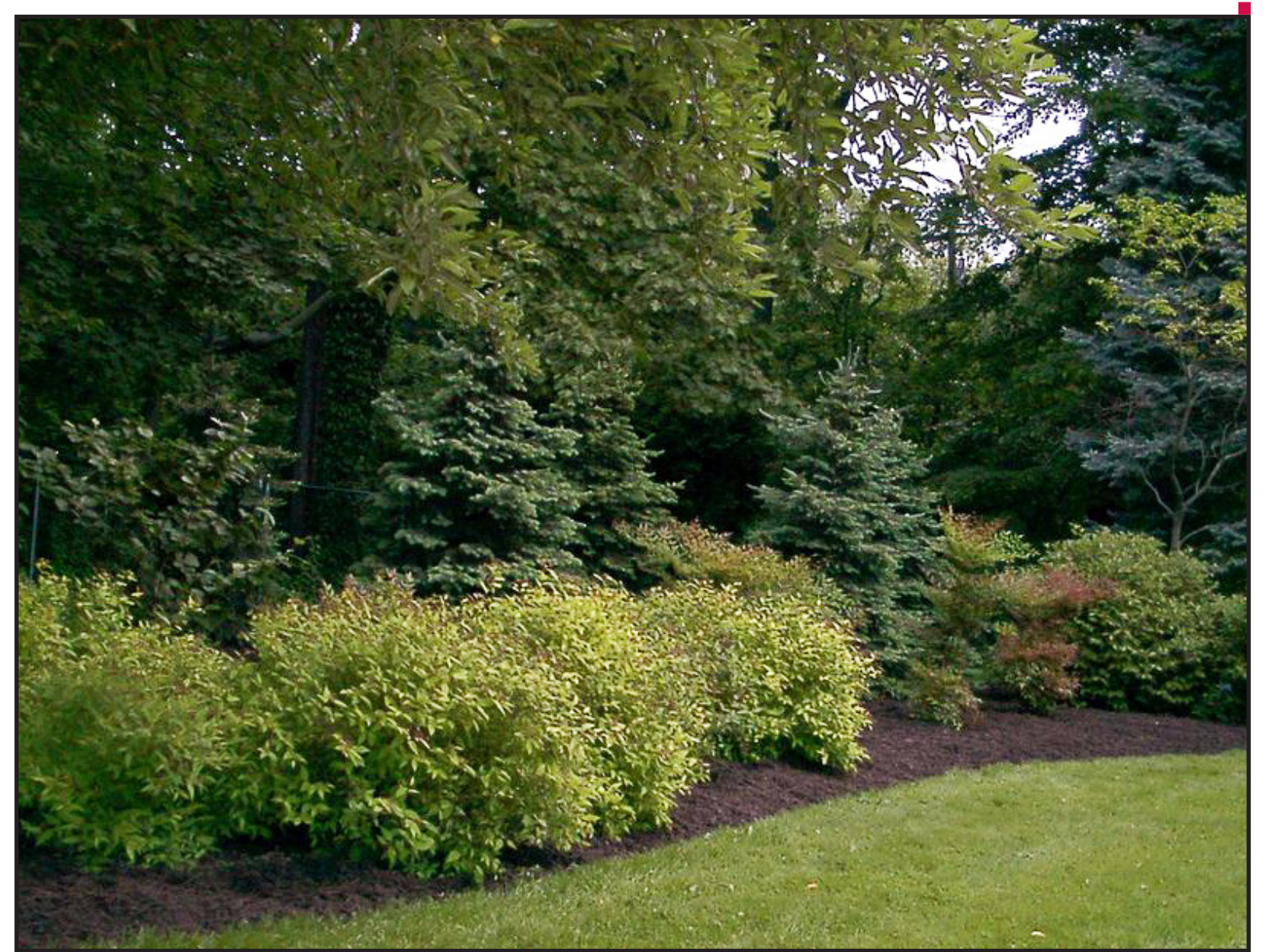
RESTORATION PLANTING NOTES

1. INVASIVE PLANT MATERIAL WILL BE REMOVED USING MECHANICAL, WHOLE PLANT REMOVAL STRATEGIES AND CHIPPED AND COMPOSTED AT AN APPROPRIATE FACILITY OR BURNED ON SITE ACCORDING TO LOCAL FIRE DEPARTMENT RULES AND REGULATIONS.
2. DISTURBED SOILS WILL BE AUGMENTED AS NEED WITH A CUSTOM BLENDED SOIL OF ONE PART LOAM, ONE PART COMPOST AND ONE PART CLEAN SAND.
3. SEEDED AREAS ARE TO BE COVERED WITH SALT MARSH HAY TO RETAIN SOIL MOISTURE AND PROTECT AGAINST SEED PREDATION BY BIRDS AND SMALL MAMMALS.
4. NATIVE PLANT MATERIAL WILL BE LAID OUT AND INSTALLED BY AN ECOLOGICAL RESTORATION SPECIALIST OR PERSONS TRAINED IN HORTICULTURAL PRACTICES. EXACT PLANT LOCATIONS WILL BE DETERMINED IN THE FIELD BASED ON SITE-SPECIFIC PLANTING CONDITIONS AND MICRO-TOPOGRAPHY.
5. THE NEW PLANTINGS WILL BE IRRIGATED FOR ONE FULL GROWING SEASON OR UNTIL THE SEED AND PLANT MATERIAL IS ESTABLISHED.
6. MONTHLY INSPECTIONS WILL BE CONDUCTED FOR THE FIRST GROWING SEASON AND TREATMENT/REMOVAL OF INVASIVE SPECIES WILL BE IMPLEMENTED AS NEEDED DURING THE ESTABLISHED PERIOD.
7. CARE IS TO BE TAKEN IN REMOVING ANY NEW COLONIZING INVASIVE PLANT MATERIAL TO MINIMIZE DISTURBANCE TO ESTABLISHING NATIVE PLANT SPECIES.
8. PRACTICES IN ASSOCIATION WITH FERTILIZERS AND PESTICIDES WILL COMPLY WITH ORDINANCES 10.1018.24 AND 10.1018.25.

SHRUB, PERENNIAL AND GRASS COMBO

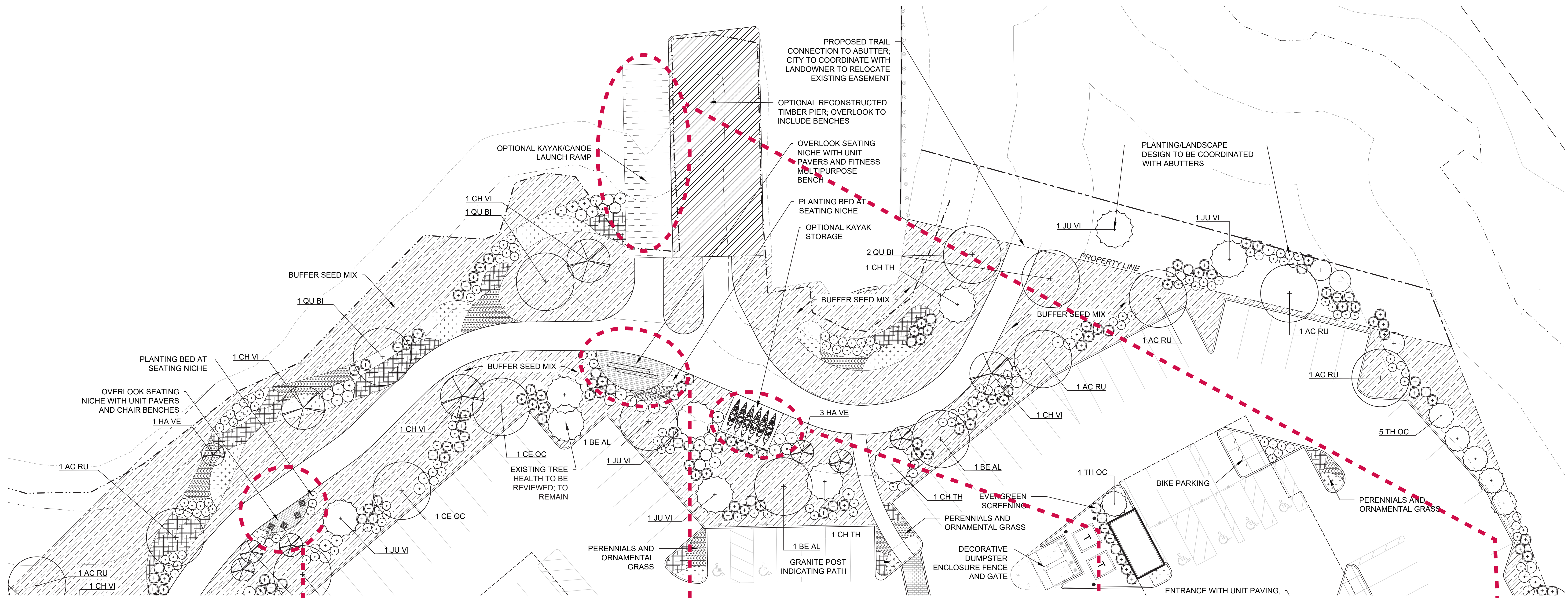


MIXED HEIGHT PARKING BUFFER



SCALE: N.T.S

SITE LANDSCAPE PRECEDENT IMAGERY



SEATING NICHE ONE



SEATING NICHE TWO



OPTIONAL KAYAK STORAGE



OPTIONAL KAYAK LAUNCH



SCALE: N.T.S

31 Raynes Avenue, Portsmouth, NH: Wetland & Buffer Report

TO: Patrick Crimmins, PE
FROM: Leonard A. Lord, PhD, CSS, CWS
DATE: January 6, 2020
PROJECT: P-0595-007

On October 29, 2019, Tighe & Bond delineated and assessed tidal wetlands and their 100-foot buffers at 31 Raynes Avenue in Portsmouth, NH. This 1.35-acre parcel lies along the northwestern end of North Mill Pond.

Methods

The wetland delineation was based on criteria specified in the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012). The Highest Observable Tide Line (HOTL) was delineated based on the definition found in the NH Department of Environmental Services (NHDES) Wetland Rules Env-Wt 101.49/Env-Wt 602.23. Wetlands were classified based on the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). The only wetlands located on the parcel are tidal wetlands (HOTL), which were delineated with sequentially-numbered flagging labelled 1B-1 to 1B-27.

Important wetland functions and values were also assessed and summarized in the vicinity of the parcel. The assessment was based on the *Maine Citizens Guide to Evaluating, Restoring, and Managing Tidal Marshes* (Bryan et al., 1997) and *The Highway Methodology Workbook Supplement—Wetland Functions and Values: A Descriptive Approach*, NAEPP-360-1-30a, US Army Corps of Engineers, New England Division, (September 1999).

Wetlands

Wetlands on this site were generally classified as estuarine intertidal rocky shore, rubble, regularly flooded (E2RS2N), though some areas exhibited more of a cobble-gravel substrate. The wetland edge slopes sharply along the southern portion of the site and is armored with rip rap. The northern portion of the wetland edge includes an old boat ramp, an old pier filled with sand and crushed stone, and a culvert outlet and headwall. Sparse halophytic vegetation along the upper portion of the tidal wetland edge includes sea lavender (*Limonium carolinianum*), salt meadow grass (*Spartina patens*), and seaside goldenrod (*Solidago sempervirens*). Important wetland functions in this portion of North Mill Pond include recreation potential and aesthetic quality, though both functions are impacted by the density and character of the surrounding urban development.

Tidal Buffer

The 100-foot tidal buffer on this parcel consists primarily of maintained lawn, a commercial building, and a parking lot. There is also an old wood-framed pier that is filled with sand and

crushed stone. There are small patches of shrubby vegetation and small trees at the tops of the slopes between the lawn and tidal wetlands, particularly at both ends of the wetland delineation. Species in these patches include autumn olive (*Elaeagnus umbellata*), staghorn sumac (*Rhus typhina*), Japanese knotweed (*Polygonum cuspidatum*), Norway maple (*Acer platanoides*), and Asiatic bittersweet (*Celastrus orbiculatus*). The highly developed tidal buffer provides some vegetated permeable surfaces to help reduce and filter runoff, but otherwise does little to enhance and protect the downgradient tidal wetland.

J:\P\0595 Pro Con General Proposals\0595-007 Raynes Ave Hotel\Environmental\Raynes+Green Wetlands+Soils\Raynes Ave Wetland-Buffer Rept 2020-1-9.docx

Photographic Log

Client: ProCon

Job Number: P-0595-007

Site: 31 Raynes Avenue, Portsmouth, NH

| | | |
|---|-------------------------|-----------------------------------|
| Photograph No.: 1 | Date: 10/29/2019 | Direction Taken: Northeast |
| Description: Steep wetland bank armored with riprap along the southern wetland edge. | | |
|  | | |

| | | |
|--|-------------------------|-----------------------------------|
| Photograph No.: 2 | Date: 10/29/2019 | Direction Taken: Southwest |
| Description: Culvert outlet, steep bank, and filled pier along northern wetland edge. | | |
|  | | |

Photographic Log

Client: ProCon

Job Number: P-0595-007

Site: 31 Raynes Avenue, Portsmouth, NH

| | | |
|--------------------------|-------------------------|-------------------------------|
| Photograph No.: 3 | Date: 10/29/2019 | Direction Taken: North |
|--------------------------|-------------------------|-------------------------------|

Description: Grassed portion of the tidal buffer. Tidal wetland boundary marked with pink flags extends over the top of the slope into the lawn in the background.



| | | |
|--------------------------|-------------------------|-----------------------------------|
| Photograph No.: 4 | Date: 10/29/2019 | Direction Taken: Southeast |
|--------------------------|-------------------------|-----------------------------------|

Description: Commercial buildings and parking lot in the tidal buffer viewed from near the wetland edge.



Photographic Log

Client: ProCon

Job Number: P-0595-007

Site: 31 Raynes Avenue, Portsmouth, NH

| | | |
|--------------------------|-------------------------|-------------------------------|
| Photograph No.: 5 | Date: 10/29/2019 | Direction Taken: North |
|--------------------------|-------------------------|-------------------------------|

Description: View of an old boat launch to the left and an old pier framed with wood and filled with sand and crushed stone to the right.



| | | |
|--------------------------|-------------------------|-----------------------------------|
| Photograph No.: 6 | Date: 10/29/2019 | Direction Taken: Northwest |
|--------------------------|-------------------------|-----------------------------------|

Description: Shrubby vegetation in the tidal buffer at the northern end of the site.

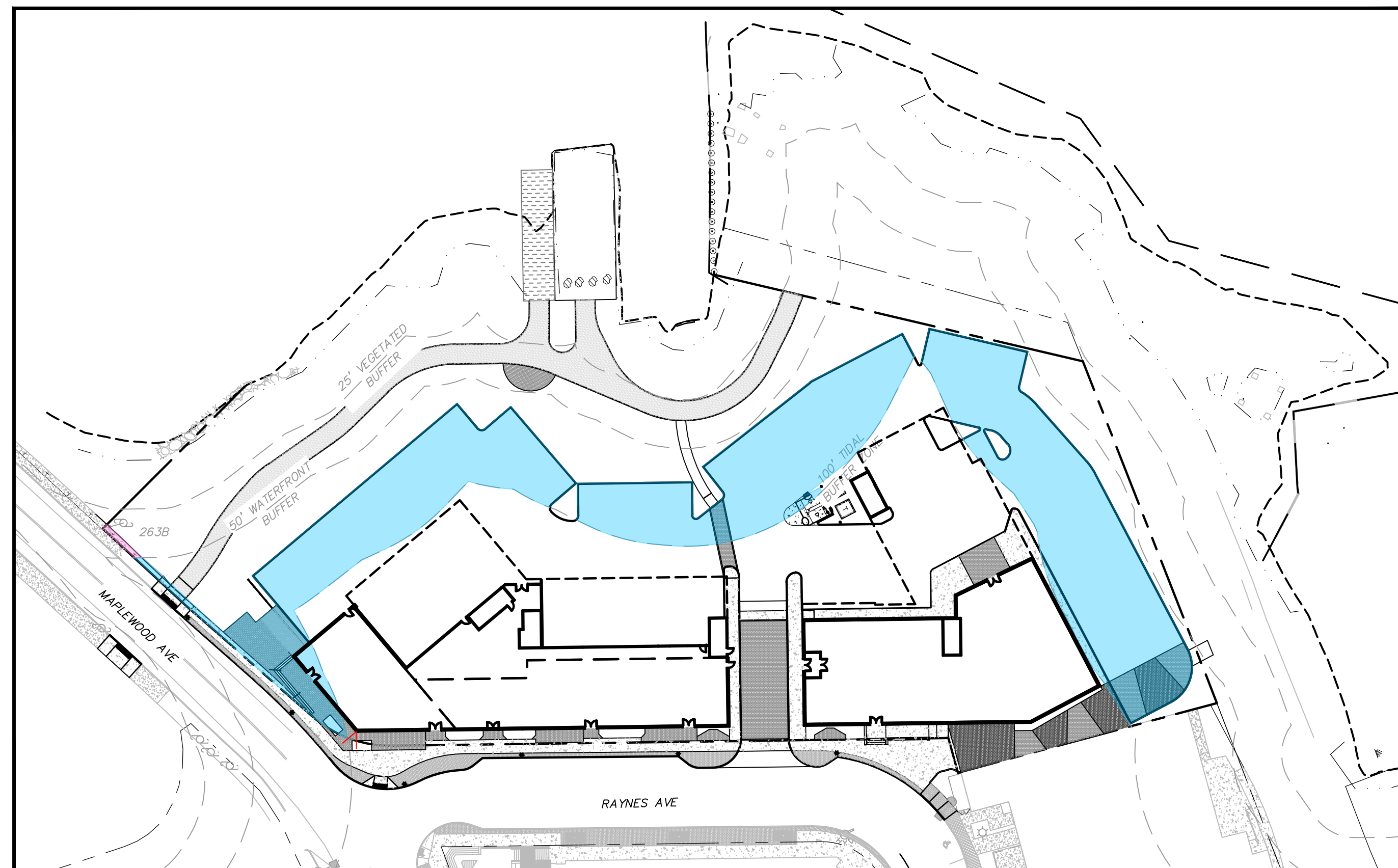


**PROPOSED MIXED USE
DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE**

WETLAND BUFFER IMPERVIOUS SURFACE EXHIBIT



EXISTING CONDITIONS IMPERVIOUS SURFACE

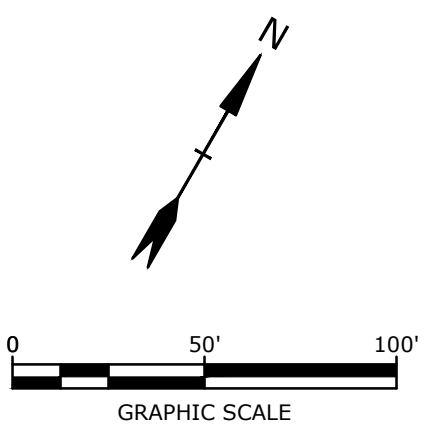


PROPOSED DEVELOPMENT IMPERVIOUS SURFACE

| Impervious Surface Within Buffer Area | | | |
|---|-----------------------------|------------------------|----------------------------|
| Wetland Buffer Setback | Existing Impervious Surface | Previous TAC Site Plan | Current Proposed Site Plan |
| 0 - 25 FT | 848 SF | 0 SF | 0 SF |
| 25 - 50 FT | 3,006 SF | 67 SF (1) | 67 SF (1) |
| 50 - 100 FT | 24,473 SF | 24,460 SF | 23,955 SF |
| Total Impervious Surface | 28,327 SF | 24,527 SF | 24,022 SF |
| IMPERVIOUS SURFACE NET REDUCTION | | | 4,305 SF |

(1) Reconstructed City Sidewalk Area

AREA OF TEMPORARY WETLAND BUFFER IMPACTS FOR CONSTRUCTION



Tighe & Bond

COMMUNITY OPEN SPACE:



GREENWAY
COMMUNITY SPACE

REQUIRED

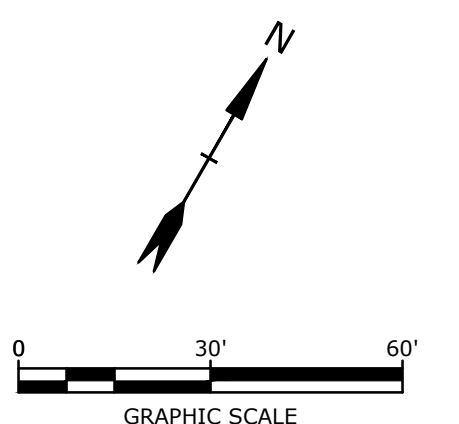
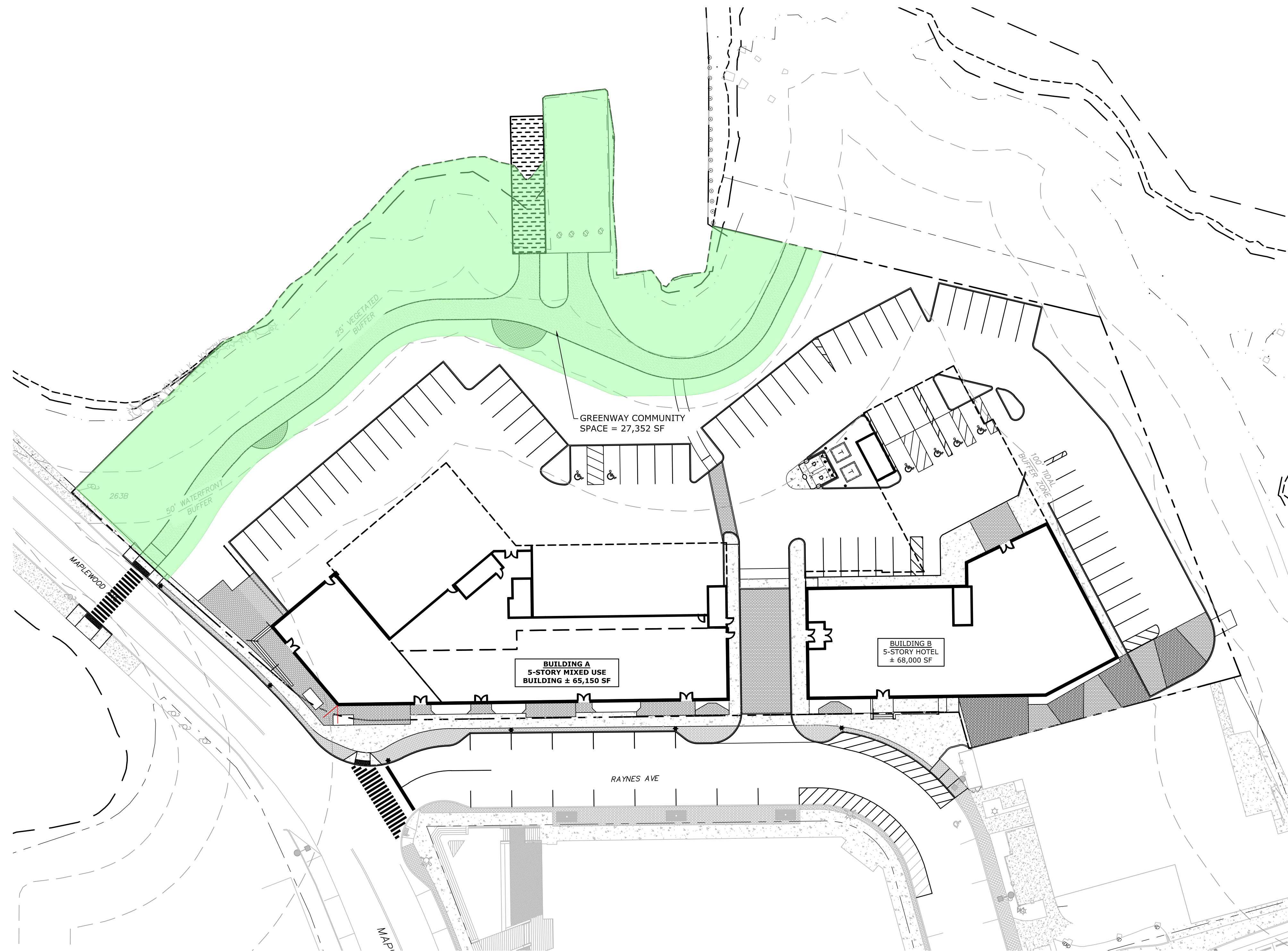
PROVIDED

TOTAL LOT AREA: 110,415 SF
COMMUNITY OPEN SPACE (20% OF TOTAL)

21,274 SF
20%

27,352 SF
24.8%

PROPOSED MIXED USE
DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE
COMMUNITY SPACE EXHIBIT

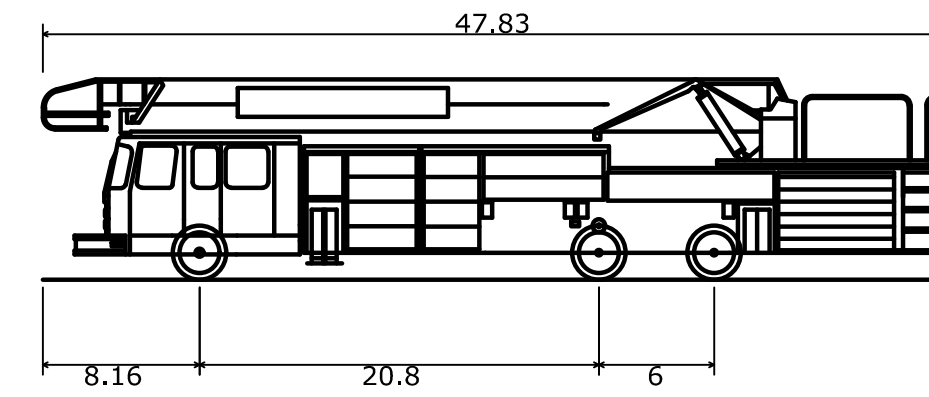


Tighe & Bond

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 Plot Date: Monday, August 23, 2021 Plotted By: Neil A. Hansen
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PROPOSED MIXED USE DEVELOPMENT PORTSMOUTH, NEW HAMPSHIRE

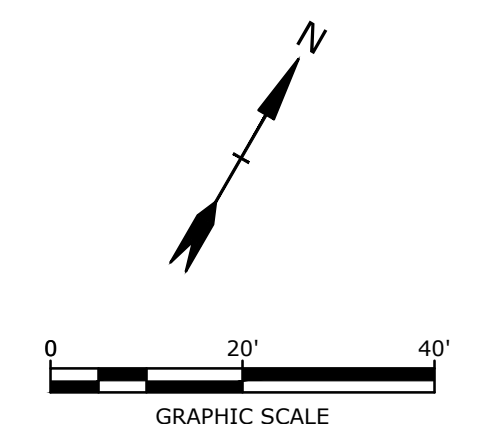
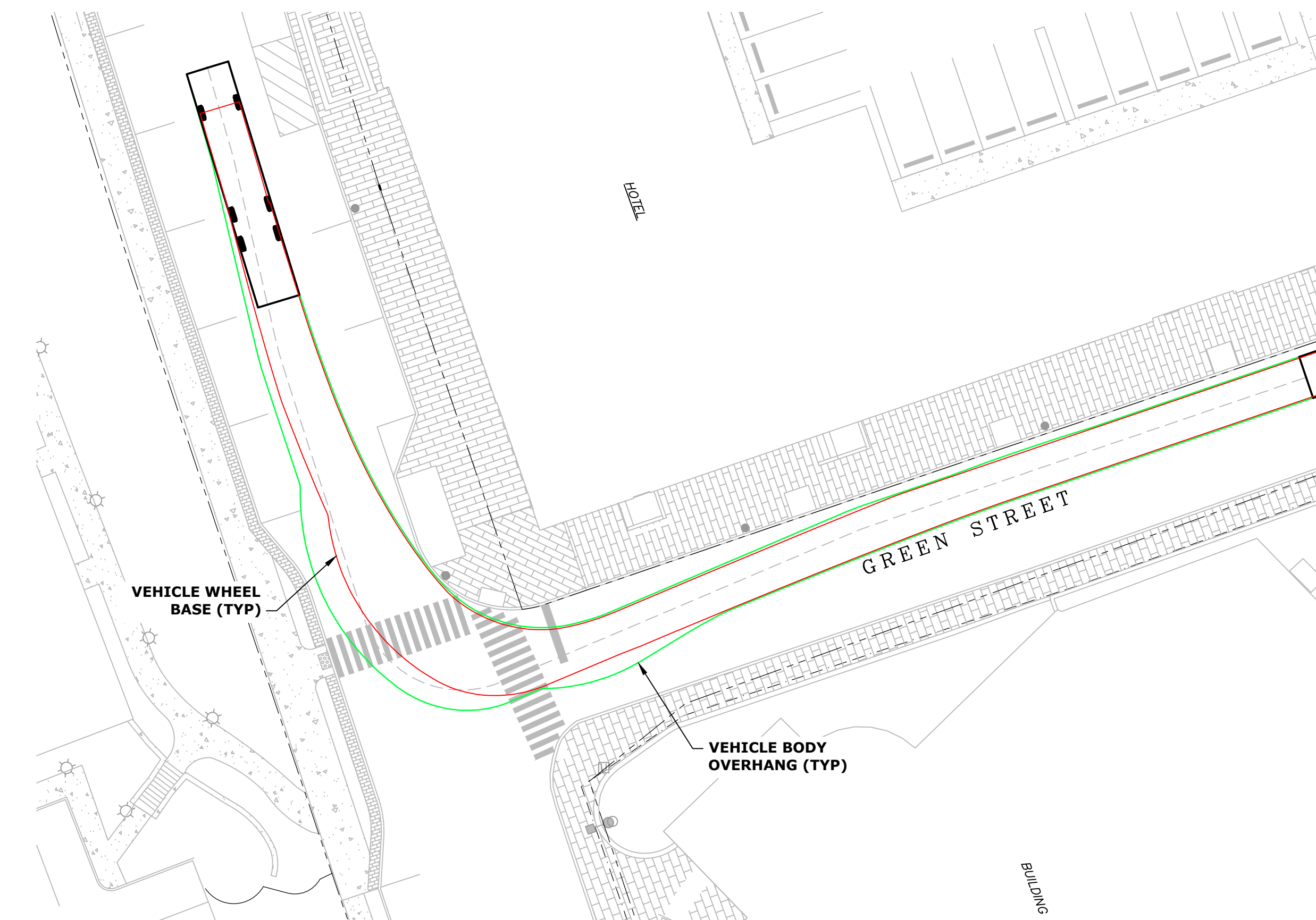
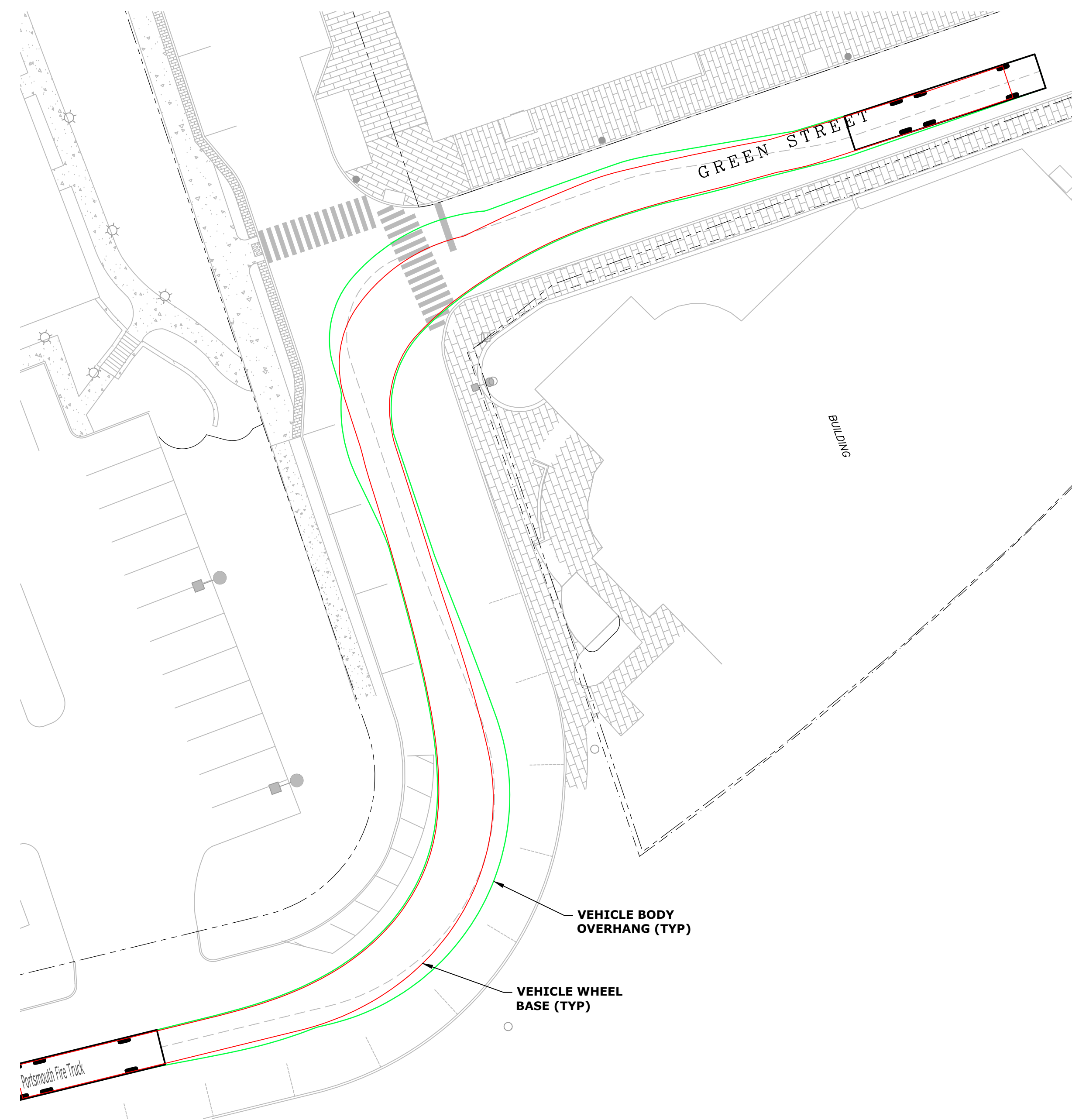
FIRE TRUCK TURNING EXHIBIT



| | |
|------------------------------|----------|
| Portsmouth Fire Truck | |
| Overall Length | 47.830ft |
| Overall Width | 8.500ft |
| Overall Body Height | 10.432ft |
| Min Body Ground Clearance | 0.862ft |
| Track Width | 8.000ft |
| Lock-to-lock time | 6.00s |
| Max Steering Angle (Virtual) | 38.00° |

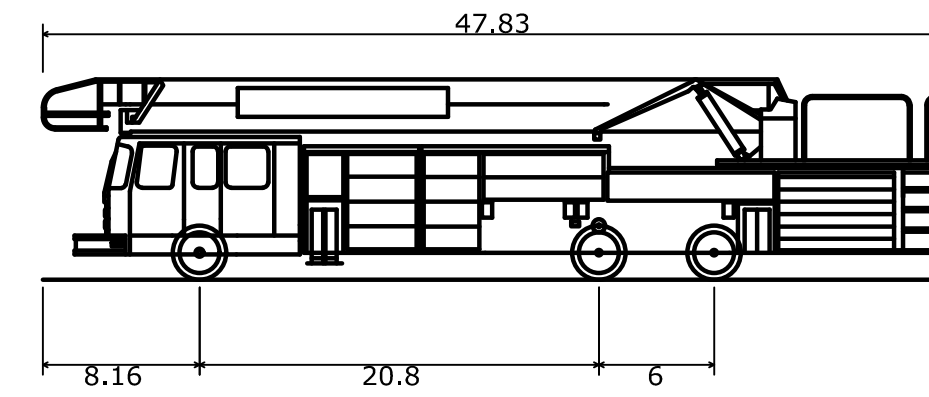
LEGEND

- VEHICLE OVERHANG
- VEHICLE WHEEL BASE



PROPOSED MIXED USE DEVELOPMENT PORTSMOUTH, NEW HAMPSHIRE

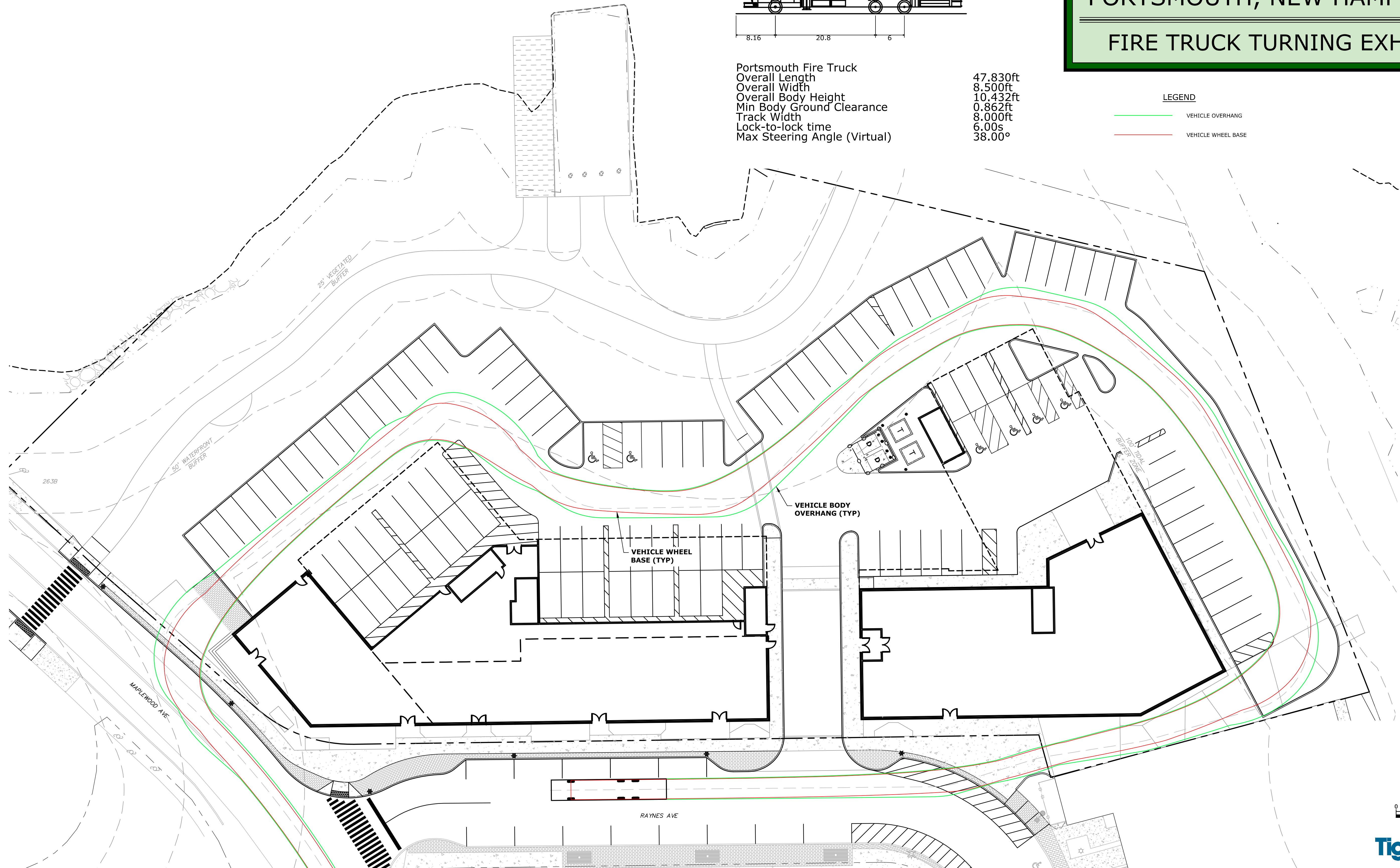
FIRE TRUCK TURNING EXHIBIT



| | |
|------------------------------|----------|
| Portsmouth Fire Truck | |
| Overall Length | 47.830ft |
| Overall Width | 8.500ft |
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| Min Body Ground Clearance | 0.862ft |
| Track Width | 8.000ft |
| Lock-to-lock time | 6.00s |
| Max Steering Angle (Virtual) | 38.00° |

LEGEND

- VEHICLE OVERHANG
- VEHICLE WHEEL BASE

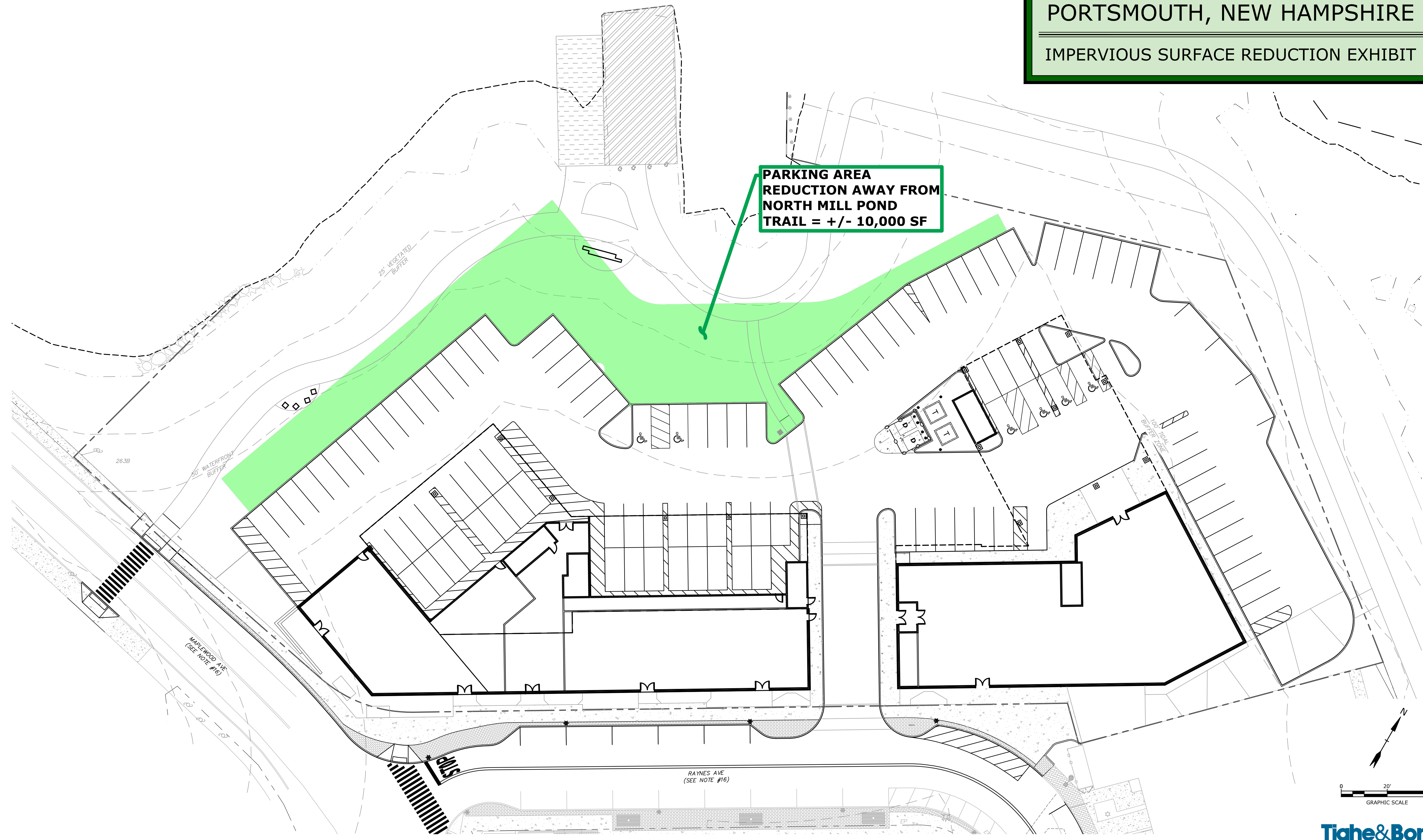


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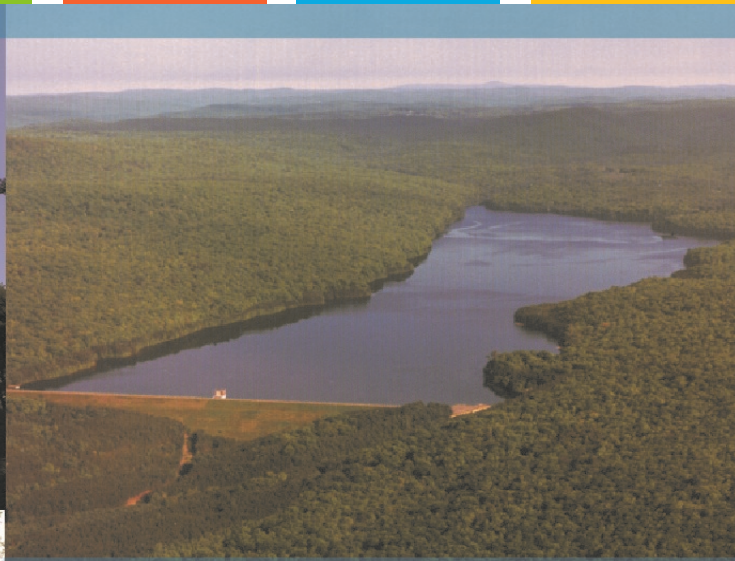
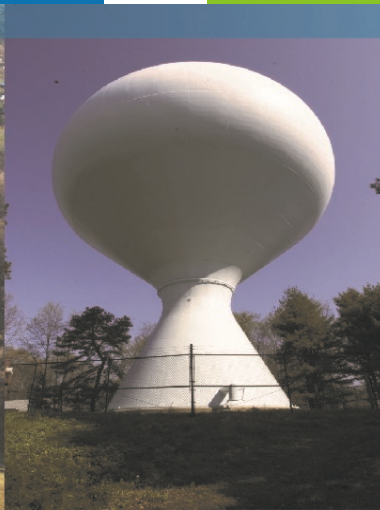
Tighe&Bond

PROPOSED MIXED USE
DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE
IMPERVIOUS SURFACE REDUCTION EXHIBIT

PARKING AREA
REDUCTION AWAY FROM
NORTH MILL POND
TRAIL = +/- 10,000 SF



Last Save Date: March 22, 2021 12:57 PM By: CKRZCUIK
Plot Date: Monday, March 22, 2021 Plotted By: Colter Krzcuik
T&B File Location: J:\P\0595 Proj Con General Proposals\0595-007-Raynes Ave Hotel\Drawings_Figures\AutoCAD\Sheets\0595-007-EXHIBITS.dwg Layout Tab: IMPERVIOUS



Raynes Avenue Development
Portsmouth, NH

Traffic Impact Study

NORTH MILL POND HOLDINGS, LLC

Revised August 2, 2021

Tighe&Bond

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Section 1

Introduction

Tighe & Bond has prepared this *Traffic Evaluation* to summarize the potential changes in the traffic operations resulting from the construction of a 128-room hotel, 60-unit residential building, 5,200 square feet (sf) of retail space, and 4,400 sf of restaurant space (the Project) located on the north side of Raynes Avenue in Portsmouth, New Hampshire (the Site).

The Site is bounded by Raynes Avenue to the south, Maplewood Avenue to the west, and Mill Pond to the north and east. The Site is currently developed with three buildings consisting of the Vanguard Key Club (1 Raynes Avenue), a vacant office building (31 Raynes Avenue), and a vacant laundromat (203 Maplewood Avenue). Paved/ unpaved parking areas and lawn/landscaping are provided for the existing uses. A portion of the parking area is currently used for paid parking.

Vehicular access to the Site will be provided via a new driveway located just west of the existing Vanguard Key Club curb cut, along the north side of Raynes Avenue. The project includes approximately 112 parking spaces on site with additional parking provided off-site. The Project will close the two existing curb cuts on the north side of Raynes Avenue, as well as the nondelineated curb cut on Maplewood Avenue.

The trip generation analysis indicates that the Project can be expected to generate approximately 122 new vehicular trips during the weekday afternoon peak hour (71 entering trips, 51 exiting trips), and 195 new vehicular trips during the Saturday midday peak hour (108 entering trips, 87 exiting trips).

A traffic operations analysis was conducted for the study intersections during the weekday afternoon peak hour and Saturday midday peak hour. The analysis was conducted for the following four scenarios:

- 2022 No-Build Scenario – Future Projected Traffic Volumes without Site Generated Traffic and Existing Roadway Geometry
- 2022 Build Scenario – Future Projected Traffic Volumes with Site Generated Traffic and Proposed Roadway Geometry
- 2032 No-Build Scenario – Future Projected Traffic Volumes without Site Generated Traffic (10-year Horizon) and Existing Roadway Geometry
- 2032 Build Scenario – Future Projected Traffic Volumes with Site Generated Traffic (10-year Horizon) and Proposed Roadway Geometry

The Study builds off the approved 111 Maplewood Avenue Traffic Evaluation, conducted for a proposed office and retail development on the same block in 2019. Due to the expected reduction in traffic volumes as a result of the COVID-19 pandemic, traffic counts were not collected to support this traffic evaluation for the afternoon peak hour. Saturday midday peak hour traffic volumes were collected in June 2021. The June 2021 counts were validated by comparing 2021 traffic volumes to historical traffic volumes as further detailed in Section 2.3. The traffic counts were projected to and analyzed for the expected 2022 opening year and 10-year Horizon year of 2032 per NHDOT guidelines.

The remainder of the report summarizes the evaluation which includes a description of the study area, traffic volumes during the weekday afternoon and Saturday midday peak periods, trip generation estimates for the Project, estimated trip distribution patterns for the new site generated trips, traffic volume projections for the analysis scenarios, traffic operations analysis for the study area intersections, and a summary of the study findings.

Section 2

Existing Conditions

This section includes a description of existing study area roadway geometry, intersection geometry, intersection traffic control, and data collection efforts within the study area. Figure 1 shows the location of the Site in relation to the surrounding roadway network and study area.

2.1 Roadway Descriptions

Raynes Avenue is a two-lane roadway (one lane in each direction) that runs east-west between Maplewood Avenue and Vaughan Street. On-street parallel parking and sidewalks are provided on both sides of Raynes Avenue in the vicinity of the Project. The roadway has a posted speed limit of 25 miles per hour (mph) near the site.

The other study area roadways (Maplewood Avenue, Vaughan Street, Deer Street, Russell Street, and Market Street) within the study area have similar urban characteristics: two-lane roadways, on-street parallel parking, sidewalks, and low speed limits (25 mph or less). Land uses near the Site are a mix of commercial businesses, restaurants, hotels and residential.

2.2 Study Area Intersection Descriptions

Seven existing intersections were included for analysis in the study area. The study area is consistent with the study area used in the previously approved 111 Maplewood Avenue Traffic Evaluation.

Maplewood Avenue at Raynes Avenue

Raynes Avenue intersects Maplewood Avenue from the east to form a three-way unsignalized intersection. All approaches at this intersection provide a single lane. Sidewalks are provided on both sides of Maplewood Avenue. On-street parallel parking is provided on both sides of Maplewood Avenue and Raynes Avenue. Maplewood Avenue operates with the right of way while the minor street approach of Raynes Avenue operates under stop control. A bike lane is striped along both sides of Maplewood Avenue.

Maplewood Avenue at Vaughan Street

Vaughan Street and a private driveway intersect Maplewood Avenue from the east and the west, respectively, to form a four-way unsignalized intersection. All approaches at this intersection provide a single lane. Sidewalks are provided on both sides of Maplewood Avenue, but no crosswalks are provided at the intersection. On-street parallel parking is provided on both sides of Maplewood Avenue west of Vaughan Street and on both sides of Vaughan Street. A bike lane is striped along both sides of Maplewood Avenue north of the intersection and along Maplewood Avenue northbound approach south of the intersection. Maplewood Avenue operates with the right of way while the minor street approaches of Vaughan Street and the private driveway operate as the stop-controlled approaches.

Maplewood Avenue at Deer Street

Deer Street intersects Maplewood Avenue from the east and west to form a four-way signalized intersection. Maplewood Avenue southbound approach consists of left turn only lane and a right/through shared lane. Maplewood Avenue northbound approach consists of an exclusive left turn lane, exclusive through lane and an exclusive right turn lane. Deer Street eastbound approach consists of a single lane. Deer Street westbound approach consists of an exclusive left turn lane and a right and through shared lane. The intersection is equipped with an exclusive actuated pedestrian phase. Each leg of the intersection has painted crosswalks.

Vaughan Street at Green Street

Green Street intersects Vaughan Street from the east, forming a three-way unsignalized intersection. Both roadways provide a single lane of travel in each direction. Vehicles exiting from Green Street operate under stop control. The width of Green Street ranges between 17 and 24 feet of pavement with no delineation of travel lanes or shoulders. A brick paver sidewalk exists on the east side of Green Street, south of the railroad tracks. On-street parking is allowed on the south side of Vaughan Street at the intersection.

Deer Street at Russell Street

Russell Street intersects Deer Street from the north to form a three-way unsignalized intersection. The southbound approach on Russell Street provides a single lane that operates under a stop control. The westbound and eastbound approaches on Deer Street both provide a single lane. The intersection provides sidewalks on all sides of the intersection approaches. A crosswalk is available for pedestrians crossing Deer Street east of Russell Street. On Street parking is available on all approaches.

Russell Street at Green Street

Green Street intersects Russell Street from the west to form a three-way unsignalized intersection. The eastbound approach of Green Street provides a single lane that operates under stop control. The northbound and southbound approaches on Russell Street also both provide a single multi-use lane. Sidewalk is provided on both sides of Russell Street, but no crosswalks are provided at the intersection. On-street metered parking is provided on Russell Street south of Green Street.

Market Street at Russell Street

Russell Street intersects Market Street from the south, forming a three-way unsignalized intersection. Market Street eastbound consists of a through lane and a channelized right turn lane that operates as free flow movements. The westbound approach consists of a single through lane. The intersection geometry is designed to prohibit westbound left turns from Market Street to Russell Street. The Russell Street approach is a single lane that is wide enough for right turning vehicles to bypass waiting left turning vehicles. The Russell Street approach operates under stop control. Pedestrian crosswalks are provided along Russell Street and the westbound Market Street approach with sidewalks provided on all approaches. It is noted that the intersection is fully signalized with mast arms, vehicular and pedestrian signal heads, etc. However, the signal indications are in flashing mode, with yellow indications facing Market Street and red indication facing Russell Street.

2.3 Existing Traffic Data

Evaluation of the traffic impacts related to the Project requires the quantification of existing roadway and traffic conditions throughout the study area. As previously stated, turning movement counts were not conducted at this time for the weekday afternoon peak hour due to expected lower than normal traffic volumes in the study area due to the effects of the COVID-19 pandemic. Existing traffic volumes from the previously approved 111 Maplewood Avenue traffic study were used to develop the existing traffic volumes for the Study. For the Saturday midday, turning movement counts were collected in June 2021.

Manual turning movement counts at the study area intersections for the previous study were collected in January 2019 during the weekday afternoon peak period (4:00 PM to 6:00 PM). The raw traffic count data is provided in the 111 Maplewood Traffic Evaluation, enclosed in Appendix G. Traffic counts for the Saturday midday peak period (11:00 AM to 1:00 PM) were collected in June 2021 prior to the end of the school year. The raw traffic counts for the Saturday midday peak hour are included in Appendix I.

The June 2021 Saturday midday turning movement counts collected were confirmed by comparing the automatic traffic recorder (ATR) volumes collected during the same week to historical NHDOT volumes at the same location, on Maplewood Avenue approximately 100 feet southeast of Raynes Avenue. As shown in Table 1 below, traffic volumes were observed to have been higher in 2021 than those collected prior to the pandemic, and the turning movement counts were assumed to be sufficient as a basis for this study as collected.

TABLE 1

Maplewood Avenue Historical Average Daily Traffic (ADT)

| Year | ADT (vehicles per day) | Source |
|------|------------------------|-------------------------------------|
| 2017 | 7,300 | NHDOT August 2020 ATR (ID 82379035) |
| 2018 | 6,603 | NHDOT Growth Estimate |
| 2019 | 6,682 | NHDOT Growth Estimate |
| 2020 | 5,727 | NHDOT August 2020 ATR (ID 82379035) |
| 2021 | 10,607 | Tighe & Bond June 2021 ATR |

Evidence of traffic volumes returning to typical levels is also represented in daily traffic volume data collected by the City at Market Street at Nobles Island since February 2020. Saturday traffic volumes in June 2020 were approximately 9,000 vpd but have since approached 13,000 vpd one year later. The 7-day rolling average traffic volume at this location is provided in Appendix J.

2.3.1 Seasonal Variation

The raw traffic counts were seasonally adjusted to peak month conditions based on nearby traffic volume count stations proximate to Portsmouth. Seasonal adjustment factors based on data available from the Urban Highway (Group 4) continuous count stations were applied to the traffic count data. A seasonal adjustment factor of 19 percent was used for the weekday afternoon peak hour volumes based on 2014 to 2016 monthly traffic volume data, while an adjustment factor of 2 percent was applied to the Saturday midday peak hour volumes based on the 2019 monthly traffic volume data.

Section 3

No-Build Conditions

The following section describes the estimation of traffic volumes in the study area for the No-Build Conditions. The 2022 and 2032 No-Build Conditions will serve as the baseline for comparison purposes to measure the impacts of the Project.

3.1 Planned Roadway and Intersection Projects

Information obtained from the City traffic department staff was used to identify planned roadway improvement and new development projects in the area that could affect future traffic conditions. The following improvements, described in record studies prepared for other projects in the area, were considered when developing the No-Build conditions analysis.

- *Market Street/Russell Street reconstruction:* The City is in the early planning stages for the construction of a roundabout at the intersection of Market Street/Russell Street. At this time, no detailed plans have been developed. Therefore, this improvement is not included in the future conditions presented in this study. It is anticipated that a roundabout configuration would have a beneficial effect on the traffic operations and safety at the intersection.
- *North End Portsmouth Development (also referred to as the "Harbor Corp Project") Off-Site Improvements:* The timetable for this project is currently unknown. However, since the development related traffic volumes are included in the No-Build analysis, traffic improvements proposed for this development were also take into consideration, where applicable.
- *Maplewood Avenue Corridor Project:* The Maplewood Avenue corridor improvement project includes full depth pavement construction/reclamation, sidewalk construction, drainage/water/sewer improvements, traffic calming measures, pavement striping, and improvements to bicycle accommodations. The Project extends between Woodbury Avenue to the west and Dennett Street to the east. Construction will be completed in late 2020/ early 2021.
- *Maplewood Avenue Road Diet:* The City has conducted preliminary planning for a possible Maplewood Avenue Road Diet Project. The concept of the road diet would consider one through travel lane along Maplewood Avenue with auxiliary turn lanes provided, where necessary, at the intersections with Deer Street, Hanover Street, and Islington Street. This would present an opportunity for landscaped islands and/or improved bicycle accommodations. These improvements were not included in the future-year conditions as the construction timetable is unknown.
- *Maplewood Avenue Railroad Crossing:* NHDOT is currently designing improvements for several rail crossings in the State. As part of the project, the DOT is seeking to reconstruct the at-grade crossing along Maplewood Avenue immediately north of Deer Street, as well as the railroad crossing on Green Street immediately west of Russell Street. The improvements are set to include new signage, railroad gates and signals where appropriate. This project has been delayed and implementation dates are currently unknown.

- As part of the Deer Street Garage and Mixed-Use Development, the eastbound shared left-through-right lane is proposed to be restriped as a dedicated left-turn lane and shared through-right lane. This is reflected in the analyses in 2032 under No Build and Build conditions.

3.2 Traffic Growth

The 2022 No-Build Condition traffic volumes were developed by growing the existing traffic volumes for the weekday afternoon and Saturday midday peak hours to the projected build year. Two components of traffic growth were incorporated. The first component was to estimate an annual average traffic growth rate. Based on a review of recent studies in the vicinity of the Project, a one percent per year background traffic growth rate was assumed in the analysis.

The second component to determining traffic growth was identifying any proposed development projects that are near or within the study area. Based on discussions with the City of Portsmouth staff during the previous study, it was determined that the following projects are either planned, under construction, or partially occupied. Traffic volumes related to these projects were obtained from record studies and distributed through the study area to develop the 2022 and 2032 No Build Condition traffic volumes. Because the opening year is three years after the previously approved 111 Maplewood Avenue study that this study is based on, the no-build development traffic volumes were added to the 2022 No Build volumes. This approach is considered conservative as the developments described below may not actually be fully constructed and/or occupied by 2022. The following developments were incorporated into the no-build traffic volumes:

- *Deer Street Garage and Mixed-Use Development:* This project will be located in the northwest corner of the Maplewood Avenue/Deer Street intersection. The traffic study for the project indicates that the full build-out of the project consists of a 600-stall municipal public parking garage with 4,700 sf of integral retail; and four mixed-use buildings. The four mixed-use buildings include a combination of 80 residential apartments, 108 hotel rooms, 41,300 sf of office, 20,000 sf of retail, 9,900 sf of restaurants, a 4,700 sf bar, and a 2,700 sf bank.
- *299 Vaughan Street:* This project is located at the corner of the intersection Vaughan Street and Green Street. It involves the demolition of an auto parts store and construction of a 143-room hotel with approximately 2,900 square feet of leasable commercial/retail space. This project has been constructed and is occupied.
- *40 Bridge Street:* This project consists of constructing a 4,025 sf restaurant and six residential condos. The project has been constructed.
- *75 Congress Street:* This project consists of constructing 10 residential condos. Due to the low traffic-generating nature of this land use and the limited number of units, traffic generated by the development was assumed to be included as part of the 1.0 percent annual background growth rate.
- *Harbor Corp Redevelopment:* This project consists of constructing a 98-room hotel and conference center, 14 condominium units, a 40,000 sf grocery store, and a 540-space parking garage.
- *172 Hanover Street:* The project consists of renovating a 7,000 sf restaurant that has been vacant for several years.

- *30 Maplewood Avenue:* The vacancy assumptions for this development that were included in the Deer Street garage traffic study were used in the current study as well.
- *46-64 Maplewood Avenue:* This project consists of constructing 22 residential apartments and 13,475 sf of retail space. The project has been constructed.
- *173-175 Market Street:* This project consists of constructing 3,331 sf of commercial space, 1,759 sf of office space, and six residential condos. The project has been constructed.
- *111 Maplewood Avenue:* This project includes 74,000 sf of office space with ancillary commercial space. The project is currently under construction and is expected to be completed in 2021.

It is assumed that other smaller developments or small vacancies in existing developments are captured by the background traffic growth rate assumptions used in the previous study analysis.

It is also important to note that the Saturday midday traffic volumes collected in June 2021 may include background development volumes of projects that are already partially or fully occupied that were also added to the no-build development volumes previously discussed. This measure was taken due to the uncertainty of building occupancy levels of new developments in the area due to potential effects on the pandemic.

The 2022 and 2032 No Build conditions volumes for the weekday afternoon and Saturday midday peak hours are shown in Figures 2 to 5.

3.3 Traffic Operations Analysis – No-Build Conditions

Capacity and queue analyses were conducted for the 2020 and 2032 No Build Conditions during the afternoon peak hour using Trafficware Synchro Studio 10 – Traffic Analysis Software. The software conducts the analysis based up on the methodology provided in the Highway Capacity Manual, 6th Edition, 2016. The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operation conditions based on the calculated average delay per vehicle. A summary of the HCM capacity analysis methodology and a detailed definition of LOS is provided in Appendix D. The queue analysis results are summarized in terms of the 50th percentile queue length, and the 95th percentile queue length. The 50th percentile queue length represents the approximate average queue length, and the 95th percentile queue length represents the design queue length under peak traffic conditions. Tables 2 and 3 summarize the capacity and queue analyses results, respectively, Capacity analyses worksheets with full inputs, settings, and results are provided in Appendix E.

The analysis for the Maplewood Avenue at Deer Street signalized intersection indicates that failing operations are experienced at the intersection under 2022 No Build conditions. The intersection operations improve slightly under 2032 No Build conditions with signal optimization and the addition of an eastbound dedicated left-turn on Deer Street that will be implemented with the Deer Street development. Vehicular queues exceed available storage on the westbound left-turn lanes during both 2022 and 2032 No Build conditions during both time periods.

The unsignalized intersections experience failing operations at multiple approaches under 2022 and 2032 No Build conditions during both time periods. When the ambient

background growth rate is applied to develop 2032 No Build traffic volumes, vehicular delays at several side street approaches increase further. The failing operations experienced on several side street approaches are consistent with the operations shown on previous traffic studies in the area. Significant queuing is experienced on the eastbound left approach at the intersection of Market Street at Russell Street and the westbound approach at the intersection of Raynes Avenue at Maplewood Avenue under 2022 and 2032 No Build conditions during both time periods.

Section 4

Build Conditions

The Project includes a new 128-room hotel, 60-unit residential building, 5,200 square feet (sf) of retail space, and 4,400 sf of restaurant space. Approximately 162 parking spaces will be provided, 25 of which will be provided at 145 Maplewood Avenue across the street from the development. The following sections describe the methodology to estimate the total number of site generated trips and their distribution within the study area roadway network.

4.1 Site Access

Site access will be provided via one unsignalized full access driveway on Raynes Avenue, just west of the existing Vanguard Key Club driveway. The existing driveways at the Vanguard Key Club, vacant laundry business, and vacant office building will be closed as part of the project.

Adequate sight distance will be provided at the proposed site driveway.

Vaughan Street and Raynes Avenue will be converted to one-way in coordination with the City as part of the project. The one-way conversion and proposed pavement markings and signage are shown on the Site Plan (C-102.1) and Neighborhood Signage Plan (C-102.2) found in Appendix C. As shown on the plans, Vaughn Street and Raynes Avenue will provide a single lane northwest-bound with adjacent parallel parking, shoulders, and/or bump-outs for pedestrian access. At the intersection with Maplewood Avenue, Raynes Avenue is proposed to be widened to provide a two-lane approach with an exclusive left turn and an exclusive right turn lane. The two-lane exiting Raynes Avenue is recommended based on the consolidation of the existing two exiting access points to Maplewood Avenue and the results of the No-Build Capacity Analyses detailed in Section 2.3.

4.2 Trip Generation

Site generated traffic volumes for the Project were estimated using rates published in the Institute of Transportation Engineers (ITE) Trip Generation, 10th edition, 2017. ITE provides data to estimate the total number of vehicular trips associated with a site based on the specific land uses. To estimate the trip generation for the Project, ITE Land Use Code (LUC) 310 – Hotel, LUC 220 – Multifamily Housing (Mid-Rise), LUC 820 – Retail/Shopping Center, and LUC 931 – Quality Restaurant were used. The proposed trip generation for the weekday afternoon and Saturday midday peak hours is presented in Table 4.

Mixed-use developments typically generate shared trips, also known as internal capture. The internal capture rate for the proposed development was determined using the *National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* by the Transportation Research Board, 2011. The total internal capture rate is estimated to be 22 percent for entering vehicles, and 29 percent for exiting vehicles during the afternoon peak hour. While shared trips may occur during the Saturday peak hour, there is no internal capture rate available from the NCHRP reference. Because there was no deduction for shared trips, the estimated

Saturday midday trips generated by the development is considered conservative. The detailed calculation spreadsheet is included in Appendix F.

Pass-by trips, or vehicles that are already on the roadway adjacent to the site (Raynes Avenue) were deducted from the trip generation estimate according to rates suggested by ITE. A pass-by trip rate of 34% was used for the retail component and a pass-by rate of 43% be used for the restaurant portion of the project during the weekday afternoon peak hour. A pass-by rate of 26% was used for the retail use during the Saturday midday peak hour. ITE does not outline a pass-by rate for the restaurant land use code utilize in the trip generation. Similar pass-by rates were utilized for previously approved developments in the area.

Because there were no existing counts available for the three existing driveways on the site frontage on Raynes Avenue, existing site traffic volumes were not deducted from the trip generation estimate. This results in a conservative existing traffic volume estimate as it was observed that a portion of the parking areas are currently used as paid parking areas. Additional parking on the east side of the site is currently utilized by the Vanguard Key Club.

As a result of the proposed conversion to one-way traffic on Raynes Avenue and Vaughan Street as previously mentioned, future no-build traffic volumes and site generated traffic volumes were redistributed through the roadway network based on traffic patterns utilized under the Build condition. The redistributed traffic volumes are shown on Figures 6 to 9.

4.3 Arrival and Departure Distribution

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project site. Trip distribution patterns for the Project were based on a review of previous traffic studies conducted for nearby projects and observed travel patterns.

The following arrival/ departure distributions are anticipated for the hotel and restaurant trips based on the previously approved 299 Vaughan Street Development TIS:

- 30% to/from the west via Maplewood Avenue
- 30% to/from the east via Maplewood Avenue
- 40% to/from the northwest via Market Street

The following arrival/ departure distributions are anticipated for the retail trips based on the previously approved 111 Maplewood Avenue Development TIS:

- 30% to/from the west via Maplewood Avenue
- 55% to/from the east via Maplewood Avenue
- 15% to/from the northwest via Market Street

The following arrival/ departure distributions are anticipated for the residential trips based on the Deer Street Parking Garage Development TIAS:

- 55% to/from the west via Maplewood Avenue
- 35% to/from the west via Maplewood Avenue
- 10% to/from the northwest via Market Street

The trip distribution patterns for the hotel, restaurant, residential, and retails use are shown in Figures 10 to 12. The vehicular trips associated with the Project were assigned to the study area and are shown in Figures 13 and 14 for the weekday afternoon and Saturday midday peak hours, respectively.

4.4 Traffic Operations Analysis – Build Condition

The Build condition traffic operations analyses are based on the 2022 and 2032 Build traffic volumes. These volumes were developed by adding the site generated trips to the 2022 and 2032 No-Build traffic volumes. The Build condition traffic volumes are shown in Figures 15 to 18. The Build Condition analyses are summarized in Tables 2 and 3 for LOS and queues, respectively, with capacity analysis worksheets included in Appendix E.

The analyses show that the signalized intersection of Maplewood Avenue at Deer Street experiences improved operations under the 2022 Build condition over the 2022 No-Build Condition as a result of minor timing and phasing modifications to the signal. Under 2032 Build conditions, the intersection continues to experience failing operations with timing and phasing modifications. It is important to note that the additional traffic volume generated by the development does not have a detrimental effect on the intersection operations. The failing operations shown are consistent with other previously approved developments in the area.

At the unsignalized locations within the study area, failing operations continue to be experienced on the side street approaches under 2022 and 2032 Build conditions. The westbound approaches at the intersection of Maplewood Avenue at Raynes Avenue experience degradation in level of service and increased vehicular queues due to the conversion of Vaughan Street and Raynes Avenue to one-way. However, the poor operations at Maplewood Avenue and Raynes Avenue are offset by the improved operations at the intersection of Maplewood Avenue at Vaughan Street. The one-way conversion of Vaughan Street and Raynes Avenue shifts the capacity issues further north on Maplewood Avenue away from the railroad crossing and signalized intersection. Minor increases in delays and queuing are experienced at the other side street approaches in the study area under Build conditions. The failing operations on side streets are typical in congested urban areas.

The proposed development is not expected to significantly degrade intersection operations beyond what is already expected to be experienced under 2022 and 2032 No Build conditions.

Section 5

Conclusions and Recommendations

The Raynes Avenue redevelopment proposes to demolish the three existing buildings on the Site and construct a mixed-use development which will include a 128-room hotel, 60 residential units, 5,200 square feet (sf) of retail space, and 4,400 sf of restaurant space. The Site will provide approximately 112 parking spaces. Site access will be provided via a single full-access driveway on the north side of Raynes Avenue. The proposed redevelopment is expected to be constructed by the end of 2022.

The proposed redevelopment is expected to generate 122 new vehicular trips (71 entering, 51 exiting) during the afternoon peak hour and 195 new vehicular trips (108 entering, 87 exiting) during the Saturday midday peak hour. The site trip generation includes an internal capture credit of 22% and 29% for entering and exiting vehicles, respectively during the weekday afternoon peak hour. Pass-by trip rates of 34% and 26% were used for the retail use during the weekday afternoon and Saturday midday peak hours, respectively. A 43% pass-by rate was used for the restaurant use during the weekday afternoon peak hour. This methodology is in line with the industry standard and consistent with methodology utilized in similar traffic studies conducted by others within Portsmouth.

Capacity analysis indicates that when potential future projects in the area are all constructed, substantial traffic volumes will be added to the study area network which will cause increases congestion at a number of intersections within the study area, especially for the side street movements. Site generated traffic represents a relatively small percentage of the cumulative traffic volume expected to be generated by the potential future projects.

As the planned projects get implemented, and the traffic improvements associated with the projects are designed, additional consideration should be given to accommodate side street movements. System-wide traffic improvement measures, such as promotion of reduced automobile usage, enhanced transit services to the area and promotion of remote/underutilized parking areas can also be considered by the City to reduce the volume of vehicular traffic generated within the downtown street network during peak times.

Based on the results of the foregoing analysis, it is the professional opinion of Tighe & Bond that the additional traffic expected to be generated from the Raynes Avenue development is not expected to significantly impact traffic operations within the study area.

APPENDIX A
Tables

TABLE 2

Intersection Operation Summary - Vehicular Levels of Service / Average Delay (sec/veh)

| | | Weekday Afternoon Peak Hour | | | | Saturday Midday Peak Hour | | | |
|---|------------------|-----------------------------|------------------|------------------|-----------------|---------------------------|-----------------|-----------------|-----------|
| Lane Use | 2022 No Build | 2022 Build | 2032 No Build | 2032 Build | 2022 No Build | 2022 Build | 2032 No Build | 2032 Build | |
| Traffic Signal - Maplewood Avenue at Deer Street | | | | | | | | | |
| Overall | F / 603.4 | F / 596.8 | F / 128.9 | F / 130.5 | D / 50.9 | E / 78.6 | C / 25.5 | C / 28.6 | |
| Deer Street | EB | F / 1902.1 | F / 1902.1 | -- / -- | -- / -- | F / 111.1 | F / 220.8 | -- / -- | -- / -- |
| | EBL | -- / -- | -- / -- | F / 263.1 | F / 257.6 | -- / -- | -- / -- | C / 27.4 | C / 29.3 |
| | EBTR | -- / -- | -- / -- | F / 96.7 | F / 95.1 | -- / -- | -- / -- | C / 24.3 | C / 24.3 |
| | WBL | F / 399.9 | F / 399.9 | F / 253.6 | F / 249.7 | F / 117.0 | F / 179.1 | C / 34.7 | D / 36.7 |
| | WBTR | D / 41.7 | D / 41.7 | E / 56.0 | E / 55.6 | C / 28.5 | C / 30.7 | A / 0.5 | C / 28.1 |
| Maplewood Avenue | NBL | B / 16.7 | B / 16.9 | C / 31.6 | C / 30.8 | C / 31.9 | C / 34.0 | B / 15.8 | B / 16.2 |
| | NBT | C / 20.8 | C / 21.4 | E / 62.5 | E / 72.7 | D / 38.5 | D / 42.2 | C / 30.8 | C / 32.8 |
| | NBR | A / 3.7 | A / 4.0 | A / 5.9 | A / 6.5 | A / 5.5 | A / 5.5 | A / 3.7 | A / 3.7 |
| | SBL | A / 8.5 | A / 8.6 | D / 42.2 | D / 41.8 | C / 20.6 | C / 22.3 | B / 18.4 | B / 19.5 |
| | SBTR | B / 14.5 | B / 14.9 | F / 126.1 | F / 134.7 | C / 24.5 | C / 28.1 | C / 32.4 | C / 34.6 |
| Unsignalized TWSC - Raynes Avenue at Site Driveway | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Site Driveway | SBR | -- / -- | B / 11.1 | -- / -- | B / 11.4 | -- / -- | A / 9.8 | -- / -- | A / 9.8 |
| Unsignalized TWSC - Maplewood Avenue at Raynes Avenue | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Raynes Avenue | WB | F / 231.7 | -- / -- | F / 431.1 | -- / -- | C / 19.1 | -- / -- | C / 21.8 | -- / -- |
| | WBL | -- / -- | F / 870.6 | -- / -- | F / 1241.7 | -- / -- | F / 66.8 | -- / -- | F / 96.3 |
| | WBR | -- / -- | E / 42.9 | -- / -- | F / 65.2 | -- / -- | B / 13.1 | -- / -- | B / 13.8 |
| Maplewood Avenue | SB | B / 11.3 | -- / -- | B / 11.9 | -- / -- | A / 8.7 | -- / -- | A / 8.8 | -- / -- |
| Unsignalized TWSC - Maplewood Avenue at Vaughan Street | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Vaughan Street | WB | F / 375.7 | -- / -- | F / 610.7 | -- / -- | D / 25.5 | -- / -- | D / 26.8 | -- / -- |
| Maplewood Avenue | SB | B / 10.8 | C / 16.1 | B / 11.3 | E / 37.8 | A / 8.8 | A / 3.8 | A / 8.9 | A / 4.2 |
| Unsignalized TWSC - Vaughan Street at Green Street | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Green Street | WB | A / 9.6 | -- / -- | A / 9.8 | -- / -- | A / 9.2 | -- / -- | A / 9.2 | -- / -- |
| | WBR | -- / -- | B / 11.4 | -- / -- | B / 11.7 | -- / -- | B / 10.5 | -- / -- | B / 10.6 |
| Vaughan Street | SB | A / 7.7 | -- / -- | A / 7.7 | -- / -- | A / 7.5 | -- / -- | A / 7.4 | -- / -- |
| Unsignalized TWSC - Deer Street at Russell Street | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Deer Street | EB | A / 8.5 | A / 8.5 | A / 8.7 | A / 8.7 | A / 8.2 | A / 8.2 | A / 8.3 | A / 8.3 |
| Russell Street | SB | E / 49.0 | E / 49.0 | F / 83.9 | F / 83.9 | C / 16.7 | C / 16.7 | C / 18.5 | C / 18.5 |
| Unsignalized TWSC - Russell Street at Green Street | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Russell Street | NB | A / 9.3 | A / 9.4 | A / 9.5 | A / 9.6 | A / 8.1 | A / 8.2 | A / 8.2 | A / 8.3 |
| Green Street | EB | F / 64.7 | F / 96.5 | F / 103.7 | F / 159.2 | C / 15.2 | C / 17.1 | C / 15.9 | C / 18.1 |
| Unsignalized TWSC - Market Street at Russell Street | | | | | | | | | |
| Overall | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | -- / -- | |
| Russell Street | EBL | F / 685.7 | F / 719.6 | F / 966.1 | F / 1005.9 | F / 73.0 | F / 96.2 | F / 128.3 | F / 163.8 |
| | EBR | B / 10.5 | B / 10.5 | B / 10.9 | B / 10.9 | B / 11.4 | B / 11.4 | B / 11.9 | B / 11.9 |

TABLE 3

Intersection Operation Summary - Vehicular 50th / 95th Percentile Queue (In Feet)

| | | | Weekday Afternoon Peak Hour | | | | Saturday Midday Peak Hour | | | |
|---|----------|-------------------|-----------------------------|------------|---------------|------------|---------------------------|------------|---------------|------------|
| | Lane Use | Available Storage | 2022 No Build | 2022 Build | 2032 No Build | 2032 Build | 2022 No Build | 2022 Build | 2032 No Build | 2032 Build |
| Traffic Signal - Maplewood Avenue at Deer Street | | | | | | | | | | |
| Deer Street | EB | 590 | 465 / 430 | 1186 / 982 | -- / -- | -- / -- | 240 / 331 | 343 / 332 | -- / -- | -- / -- |
| | EBL | 590 | -- / -- | -- / -- | 247 / 236 | 475 / 415 | -- / -- | -- / -- | 78 / 110 | 78 / 110 |
| | EBTR | 590 | -- / -- | -- / -- | 199 / 200 | 348 / 300 | -- / -- | -- / -- | 61 / 97 | 61 / 97 |
| | WBL | 100 | 306 / 381 | 466 / 530 | 356 / 426 | 411 / 474 | 203 / 341 | 260 / 337 | 131 / 191 | 142 / 204 |
| | WBTR | 350 | 113 / 149 | 183 / 224 | 160 / 202 | 212 / 255 | 86 / 145 | 103 / 140 | 0 / 0 | 89 / 149 |
| Maplewood Avenue | NBL | 100 | 7 / 19 | 26 / 57 | 19 / 39 | 29 / 55 | 29 / 65 | 31 / 67 | 18 / 39 | 18 / 39 |
| | NBT | 350 | 220 / 309 | 281 / 396 | 327 / 496 | 450 / 655 | 295 / 484 | 372 / 544 | 260 / 374 | 291 / 416 |
| | NBR | 350 | 2 / 35 | 14 / 52 | 0 / 45 | 17 / 67 | 0 / 56 | 0 / 50 | 0 / 46 | 0 / 46 |
| | SBL | 150 | 15 / 28 | 21 / 36 | 29 / 51 | 37 / 71 | 45 / 82 | 51 / 81 | 40 / 71 | 40 / 71 |
| | SBTR | >500 | 183 / 226 | 277 / 334 | 451 / 573 | 691 / 804 | 277 / 405 | 358 / 441 | 311 / 451 | 340 / 494 |
| Unsignalized TWSC - Raynes Avenue at Site Driveway | | | | | | | | | | |
| Site Driveway | SBR | 90 | -- / -- | 8 | -- / -- | 8 | -- / -- | 10 | -- / -- | 10 |
| Unsignalized TWSC - Maplewood Avenue at Raynes Avenue | | | | | | | | | | |
| Raynes Avenue | WB | 175 | 325 | -- / -- | 443 | -- / -- | 25 | -- / -- | 33 | -- / -- |
| | WBL | 175 | -- / -- | 603 | -- / -- | 695 | -- / -- | 133 | -- / -- | 168 |
| | WBR | 50 | -- / -- | 140 | -- / -- | 193 | -- / -- | 18 | -- / -- | 20 |
| Maplewood Avenue | SB | >500 | 15 | -- / -- | 18 | -- / -- | 3 | -- / -- | 5 | -- / -- |
| Unsignalized TWSC - Maplewood Avenue at Vaughan Street | | | | | | | | | | |
| Vaughan Street | WB | 325 | 293 | -- | 370 | -- | 15 | -- | 15 | -- |
| Maplewood Avenue | SB | >500 | 3 | 16 | 3 | 1 | 0 | 14 | 0 | 15 |
| Unsignalized TWSC - Vaughan Street at Green Street | | | | | | | | | | |
| Green Street | WB | 420 | 8 | -- / -- | 10 | -- / -- | 5 | -- / -- | 5 | -- / -- |
| | WBR | 420 | -- / -- | 15 | -- / -- | 15 | -- / -- | 13 | -- / -- | 15 |
| Vaughan Street | SB | 400 | 5 | -- | 8 | -- | 3 | -- | 3 | -- |
| Unsignalized TWSC - Deer Street at Russell Street | | | | | | | | | | |
| Deer Street | EB | 390 | 33 | 33 | 35 | 35 | 18 | 18 | 20 | 20 |
| Russell Street | SB | 650 | 368 | 368 | 525 | 525 | 100 | 100 | 118 | 118 |
| Unsignalized TWSC - Russell Street at Green Street | | | | | | | | | | |
| Russell Street | NB | 410 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Green Street | EB | 420 | 123 | 175 | 168 | 235 | 10 | 20 | 10 | 23 |
| Unsignalized TWSC - Market Street at Russell Street | | | | | | | | | | |
| Russell Street | EBL | 580 | 1275 | 1335 | 1525 | 1585 | 265 | 328 | 370 | 447 |
| | EBR | 150 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 |

TABLE 4
Site Generated Traffic Summary

| Proposed - 128 Room Hotel | | | |
|---|-------------------|-----------------|------------------|
| Peak Hour Period | Enter | Exit | Total |
| Weekday Afternoon | 36 | 34 | 70 |
| Saturday MIDDAY | 52 | 41 | 93 |
| Proposed - 60 Residential Units | | | |
| Peak Hour Period | Enter | Exit | Total |
| Weekday Afternoon | 16 | 10 | 26 |
| Saturday MIDDAY | 13 | 13 | 26 |
| Proposed - 5,200 SF Retail Space | | | |
| Peak Hour Period | Enter | Exit | Total |
| Weekday Afternoon | 10 | 10 | 20 |
| Saturday MIDDAY | 12 | 11 | 23 |
| Proposed - 4,400 SF Restaurant Space | | | |
| Peak Hour Period | Enter | Exit | Total |
| Weekday Afternoon | 23 | 11 | 34 |
| Saturday MIDDAY | 28 | 19 | 47 |
| Total Trips | | | |
| Peak Hour Period | Enter | Exit | Total |
| Weekday Afternoon | 85 | 65 | 150 |
| Saturday MIDDAY | 105 | 84 | 189 |
| Internal Capture¹ | | | |
| Peak Hour Period | 22% Enter | 29% Exit | 25% Total |
| Weekday Afternoon | 19 | 19 | 38 |
| Saturday MIDDAY | NO DATA AVAILABLE | | |
| Pass-By Trips (Retail)² | | | |
| Peak Hour Period | Enter | Exit | 34% Total |
| Weekday Afternoon | 1 | 1 | 2 |
| Saturday MIDDAY | 3 | 3 | 6 |
| Pass-By Trips (Restaurant)³ | | | |
| Peak Hour Period | Enter | Exit | 43% Total |
| Weekday Afternoon | 4 | 4 | 8 |
| Saturday MIDDAY | NO DATA AVAILABLE | | |
| Net Vehicular Trips (Total minus Internal Capture) | | | |
| Peak Hour Period | Enter | Exit | Total |
| Weekday Afternoon | 71 | 51 | 122 |
| Saturday MIDDAY | 108 | 87 | 195 |

Source: Institute of Transportation Engineering, Trip Generation, 10th Edition, 2017.
Land Use - 221 Multifamily Housing (Mid-Rise)
310 Hotel
820 Retail
931 Quality Restaurant

¹NCHRP Report 684-Enhancing Internal Trip Capture Estimation for Mixed-Use Developments, Transportation Research Board, Washington, DC, 2011

²Average Pass-By Trip Percentage based on Pass-By and Non-Pass-By Trips Weekday, PM and Saturday MIDDAY Peak Period, Land Use Code 820-Shopping Center, Trip Generation, 10th Edition, 2017

³Average Pass-By Trip Percentage based on Pass-By and Non-Pass-By Trips Weekday, PM Peak Period, Land Use Code 932-High-Turnover (Sit-Down) Restaurant, Trip Generation, 10th Edition, 2017

APPENDIX B
Figures



LEGEND



STUDY AREA INTERSECTION

**PROPOSED MIXED-USE DEVELOPMENT
RAYNES AVENUE, PORTSMOUTH, NH**

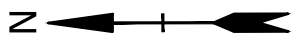
STUDY AREA

DATE: 7/14/2021

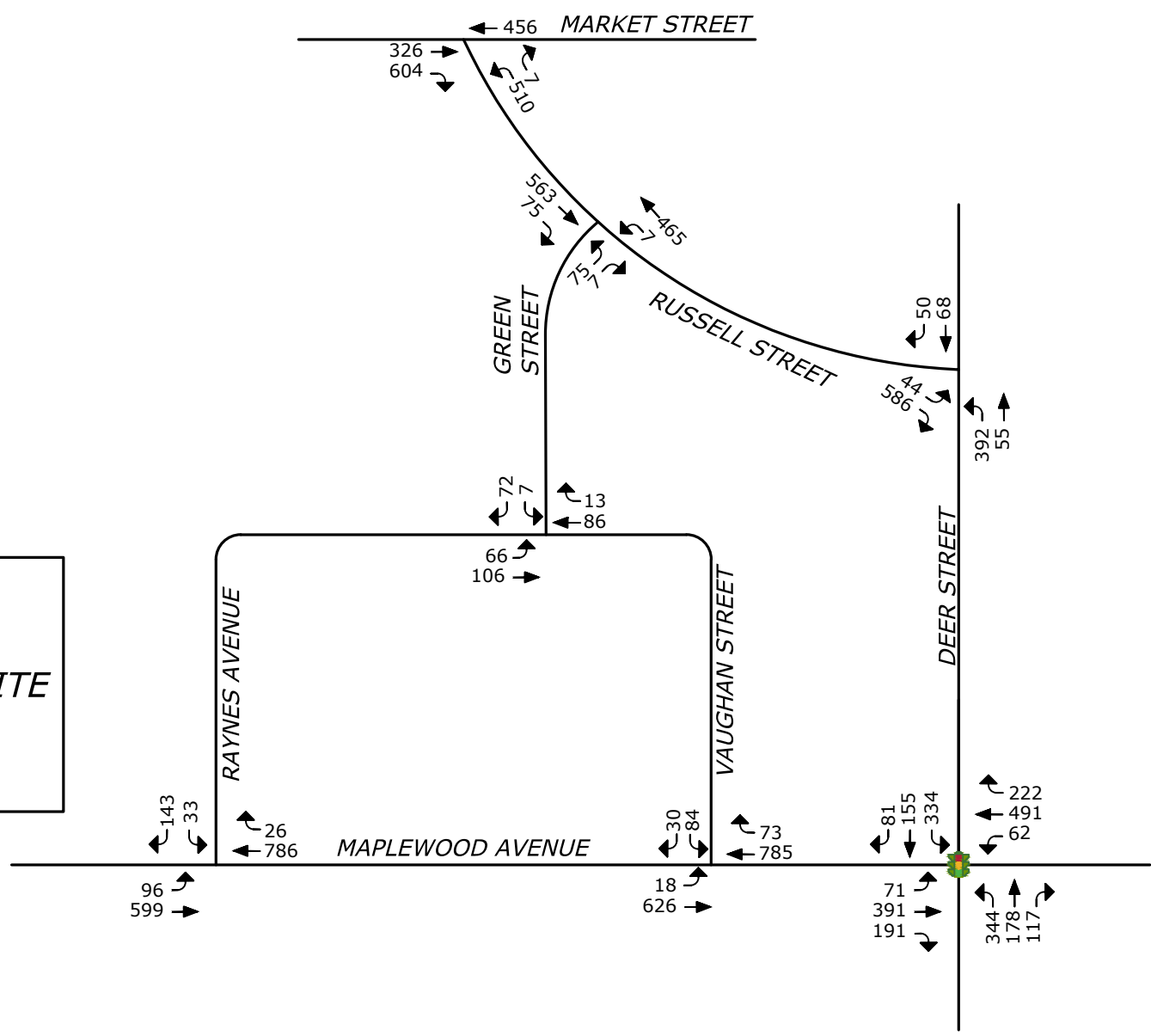
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FIGURE 1

Tighe & Bond
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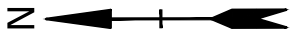
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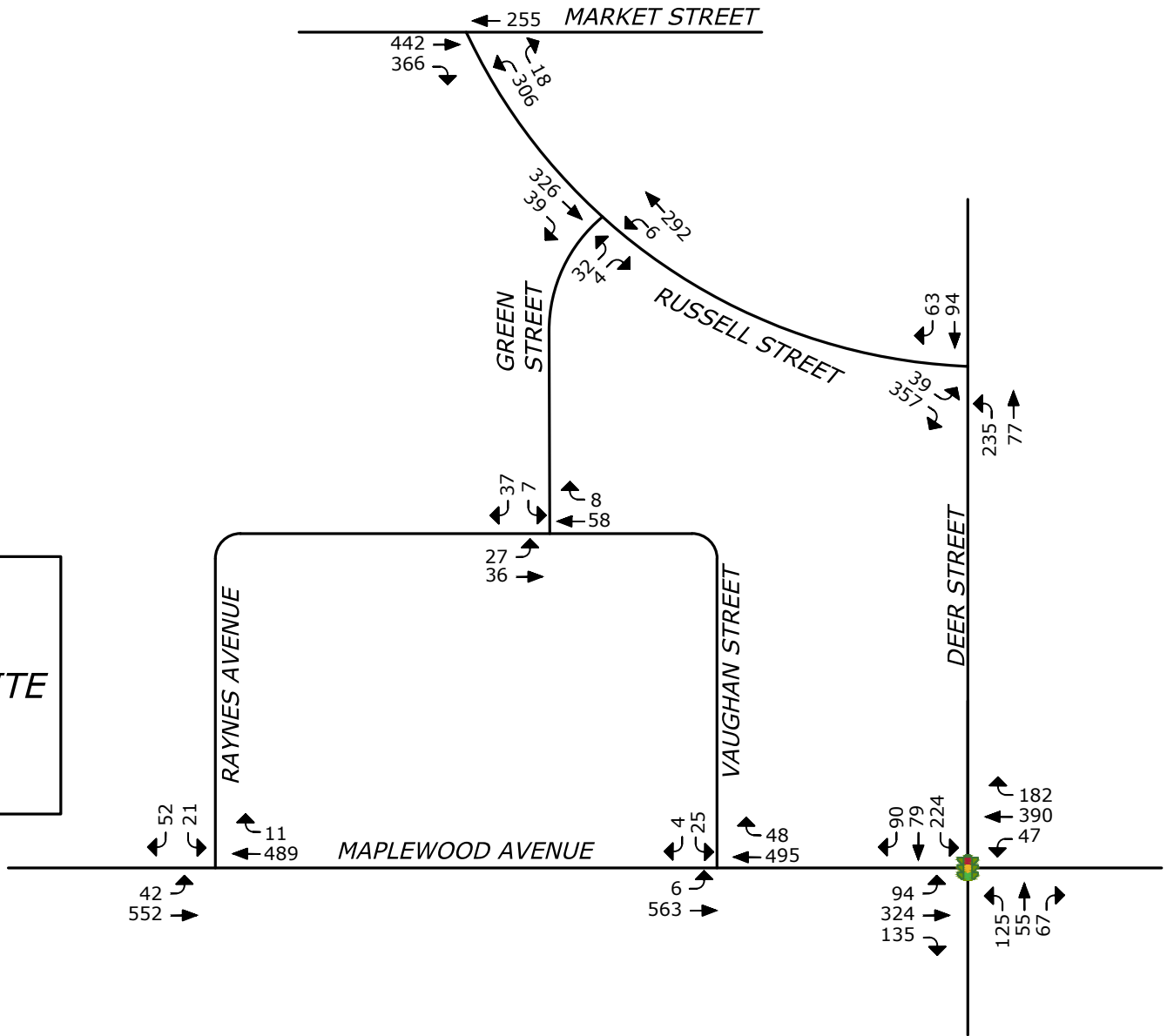
LEGEND

 TRAFFIC SIGNAL

| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2022 NO BUILD WEEKDAY AFTERNOON PEAK HOUR TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 2 | |



SITE



LEGEND



TRAFFIC SIGNAL

**PROPOSED MIXED-USE DEVELOPMENT
RAYNES AVENUE, PORTSMOUTH, NH**

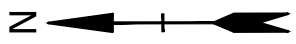
2022 NO BUILD SATURDAY MIDDAY PEAK
HOUR TRAFFIC VOLUMES

DATE: 7/14/2021

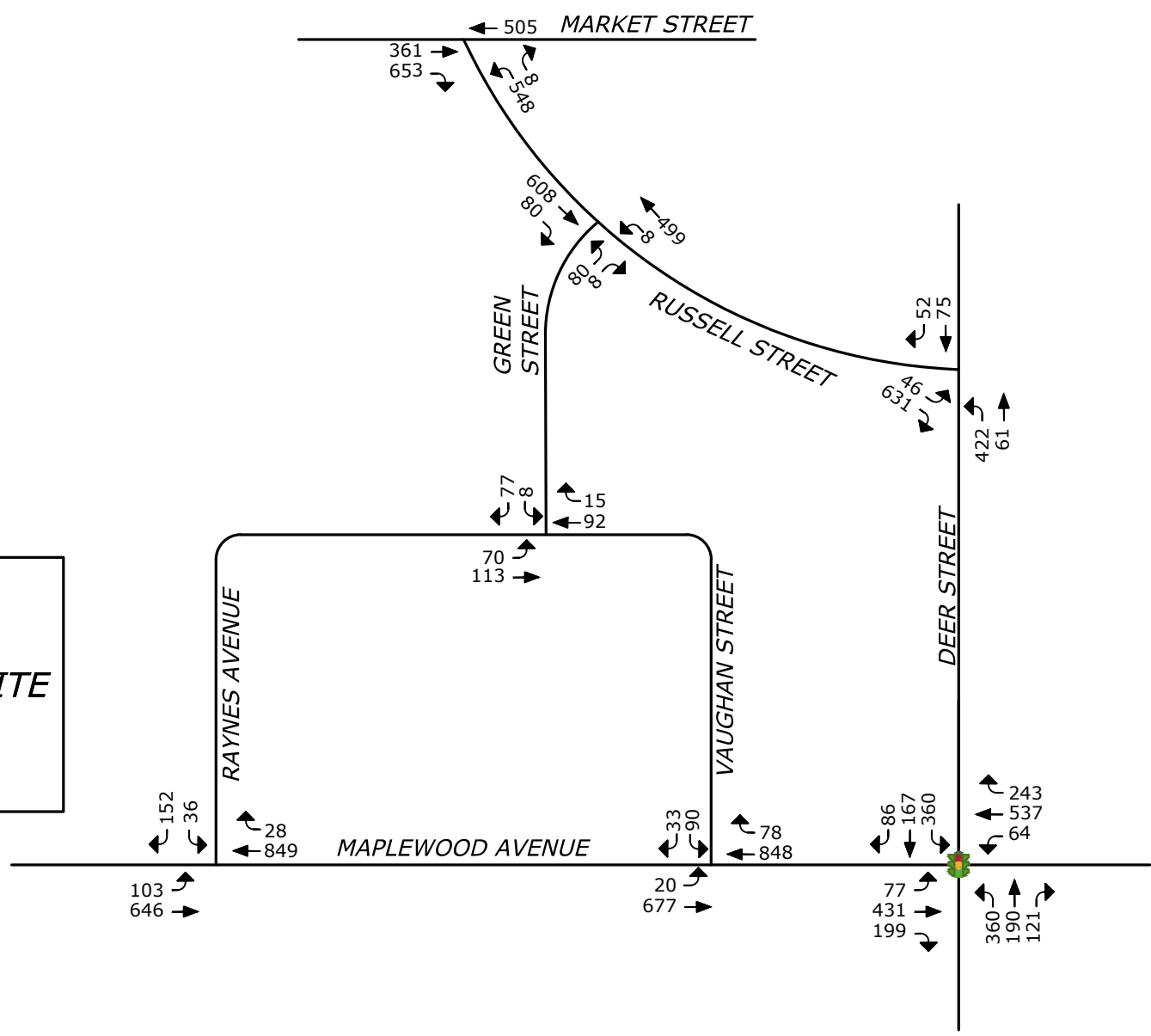
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FIGURE 3






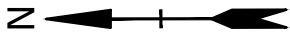
SITE



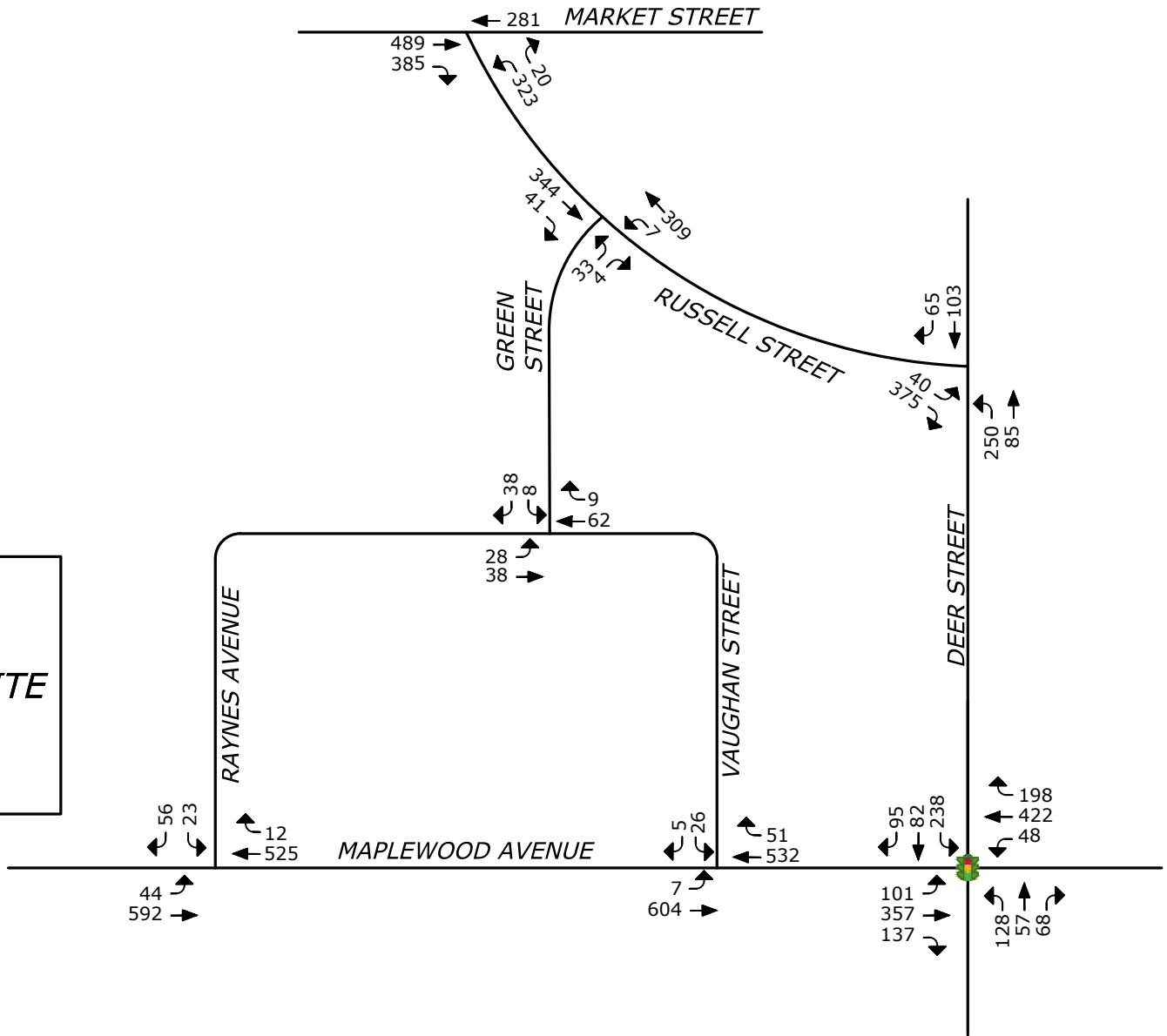
LEGEND

 TRAFFIC SIGNAL

| | |
|---|--|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2032 NO BUILD WEEKDAY AFTERNOON PEAK HOUR TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 4 | |



SITE



LEGEND



TRAFFIC SIGNAL

**PROPOSED MIXED-USE DEVELOPMENT
RAYNES AVENUE, PORTSMOUTH, NH**

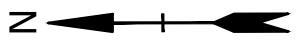
2032 NO BUILD SATURDAY MIDDAY PEAK
HOUR TRAFFIC VOLUMES

DATE: 7/14/2021

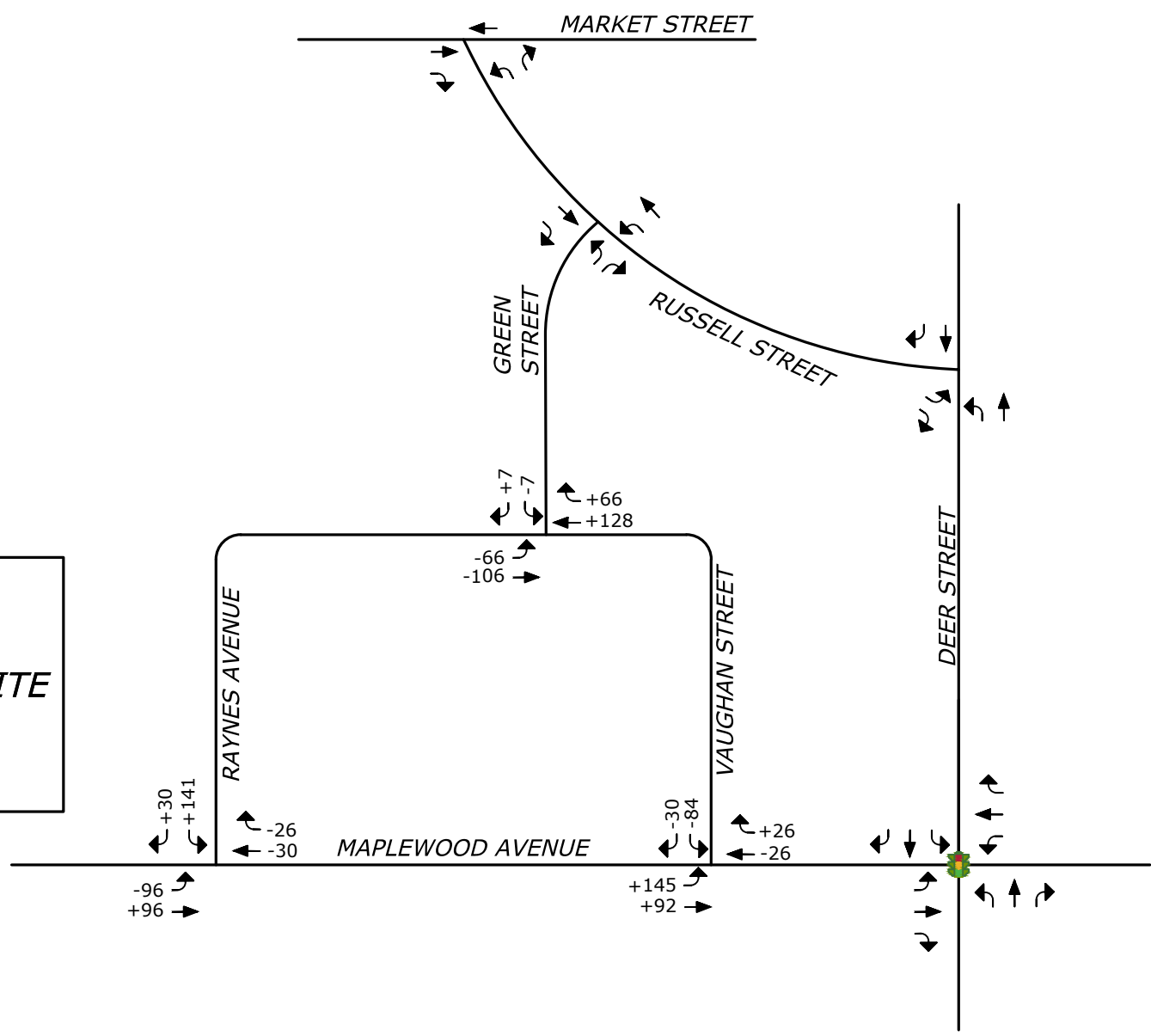
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FIGURE 5






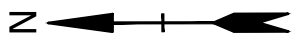
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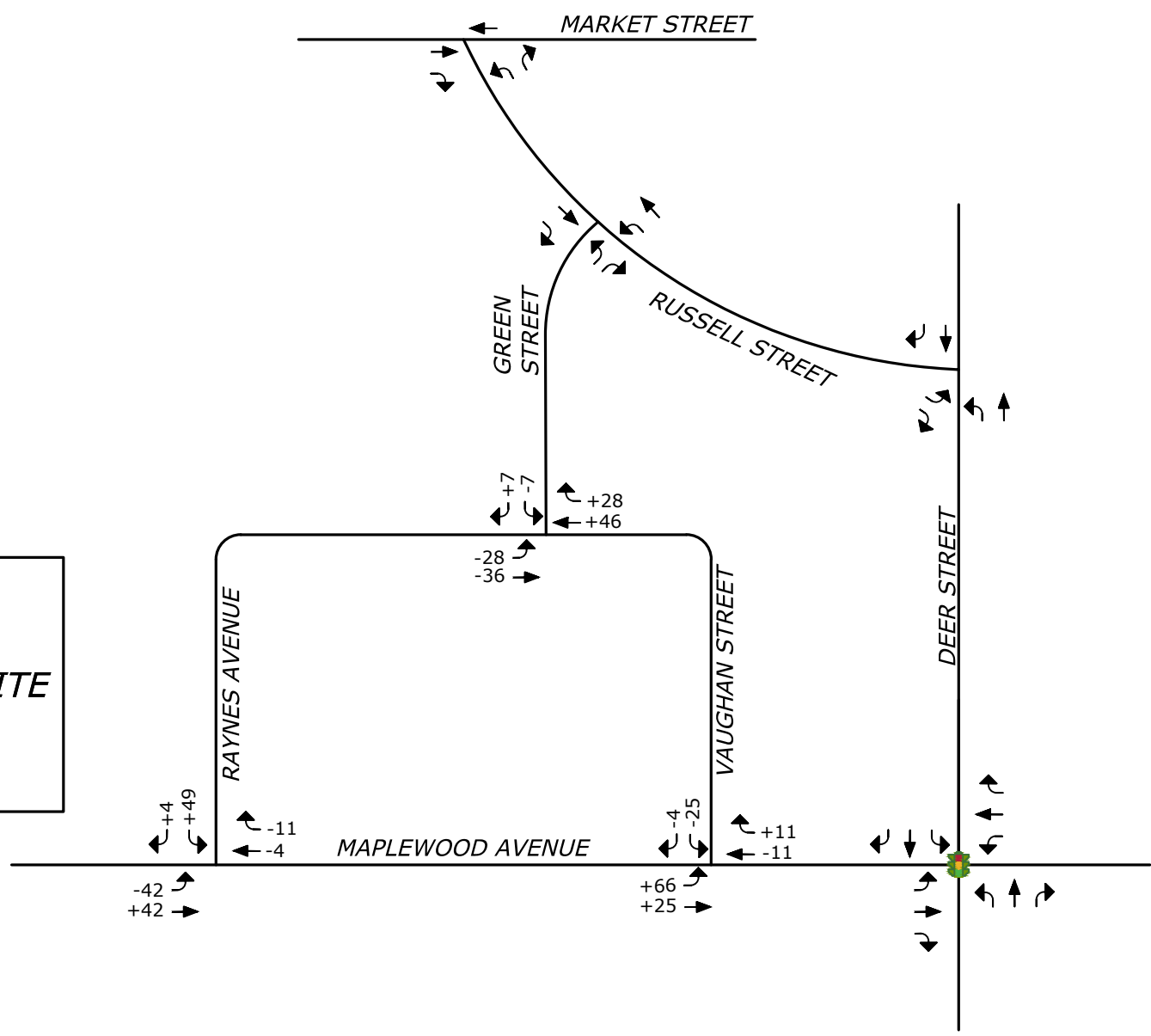
LEGEND

 TRAFFIC SIGNAL

| | |
|--|--|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2022 NO BUILD WEEKDAY AFTERNOON PEAK HOUR REDISTRIBUTED TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 6 | |




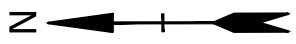
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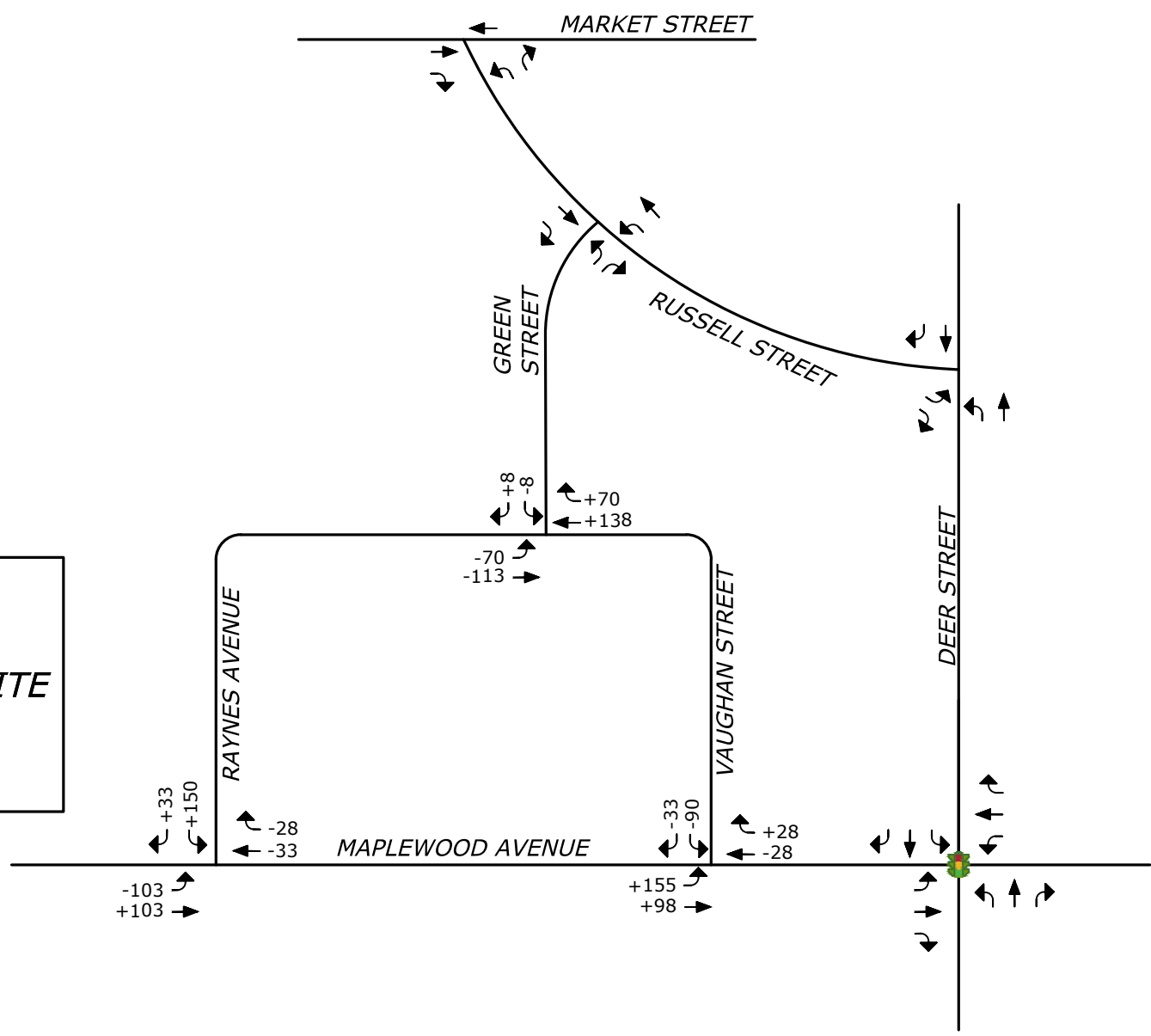
LEGEND

 TRAFFIC SIGNAL

| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2022 NO BUILD SATURDAY MIDDAY PEAK HOUR REDISTRIBUTED TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 7 | |




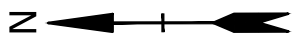
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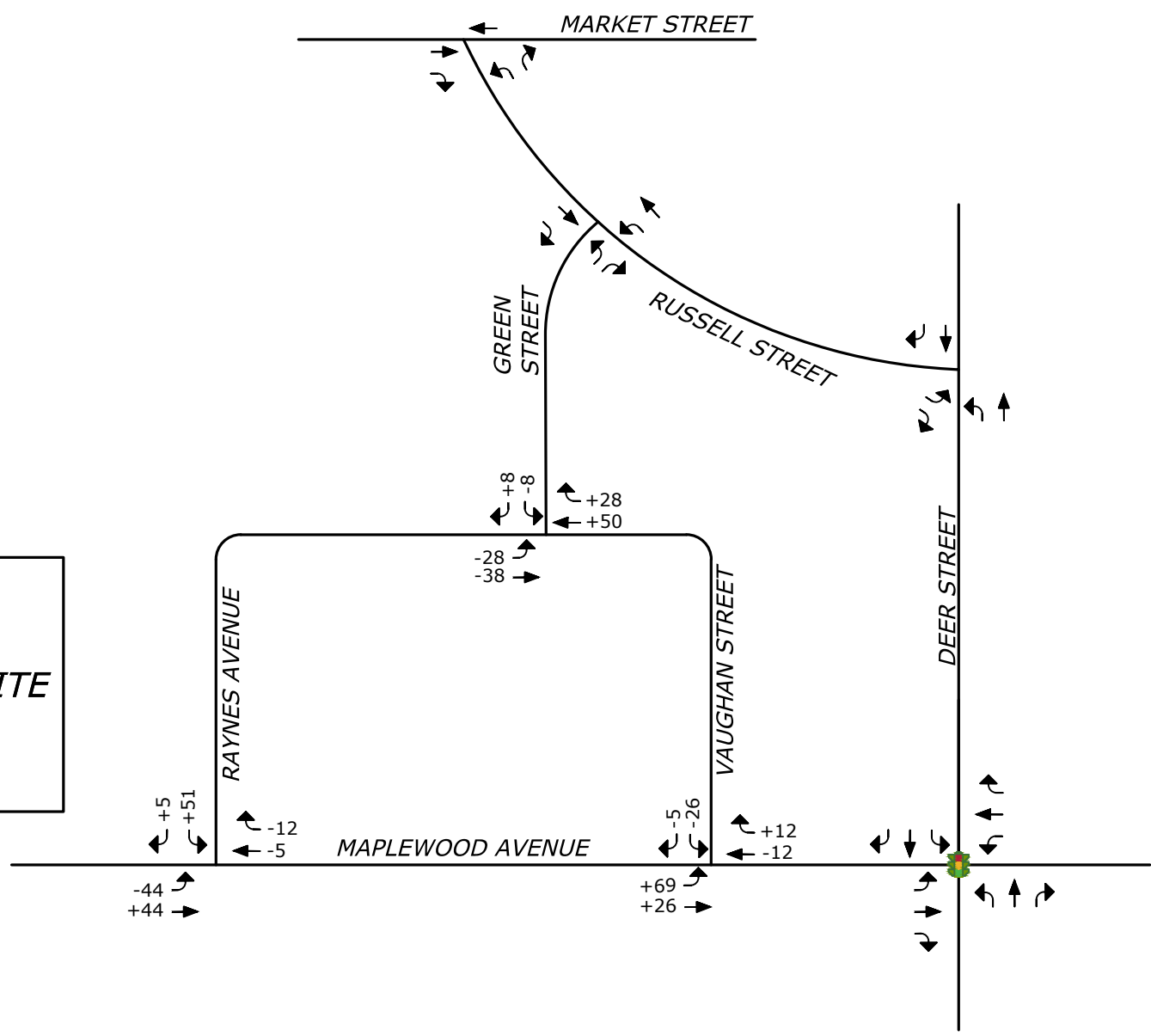
LEGEND

 TRAFFIC SIGNAL

| | |
|--|--|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2032 NO BUILD WEEKDAY AFTERNOON PEAK HOUR REDISTRIBUTED TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 8 | |




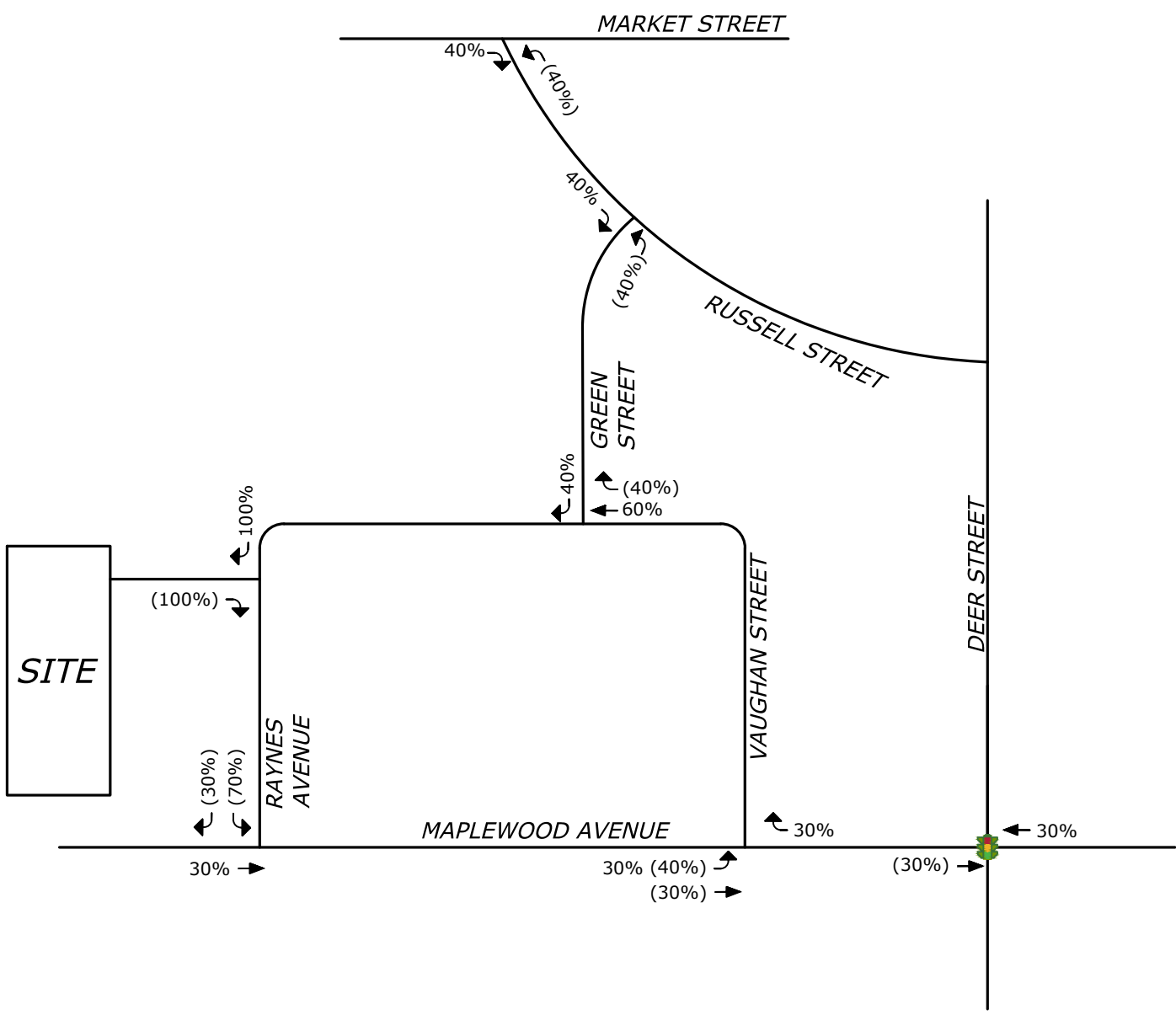
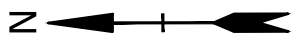
SITE




LEGEND


 TRAFFIC SIGNAL

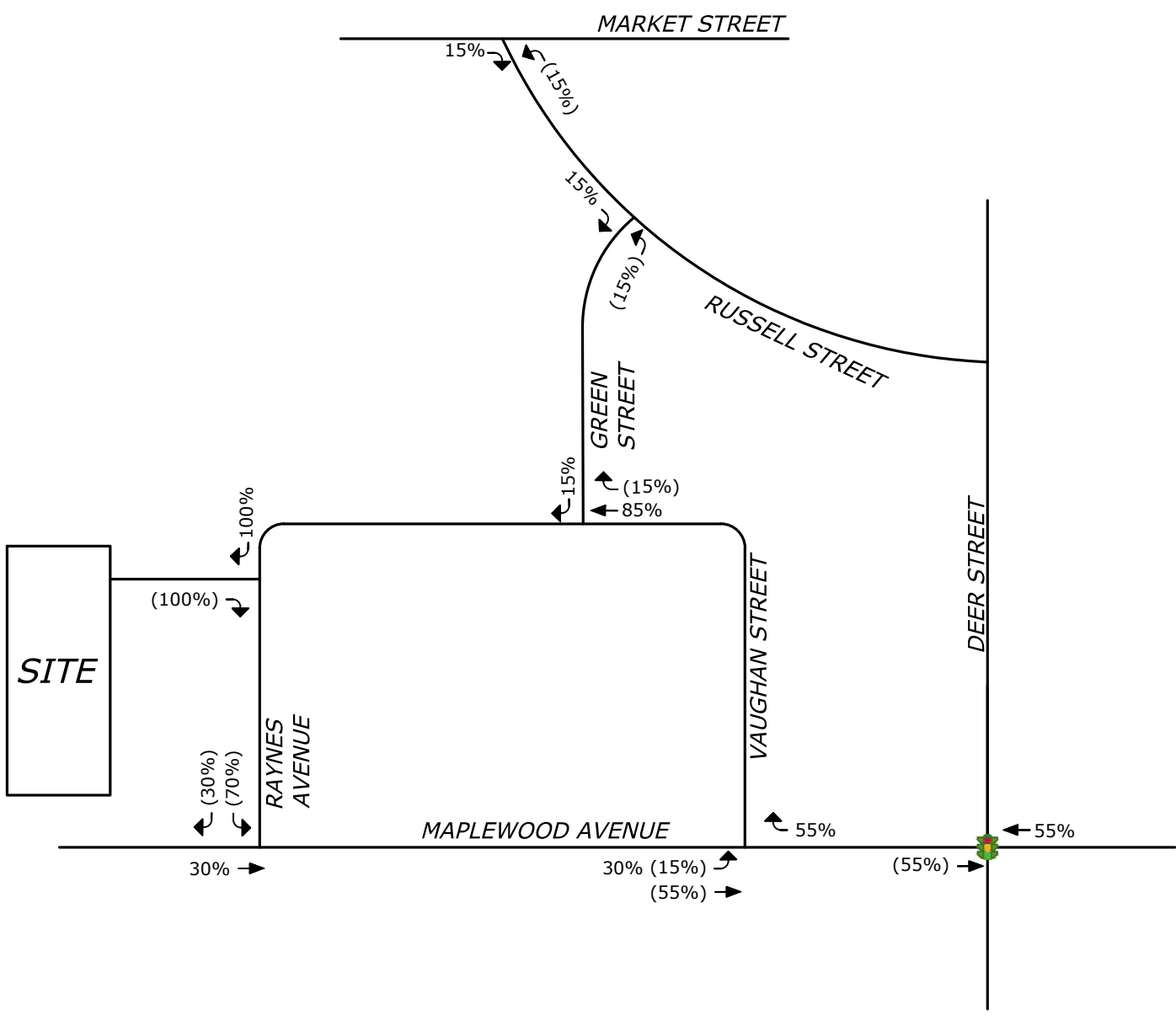
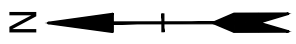
| | |
|--|--|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2032 NO BUILD SATURDAY MIDDAY PEAK HOUR REDISTRIBUTED TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 9 | |




LEGEND


-  TRAFFIC SIGNAL
- XX ENTERING
- (XX) EXITING

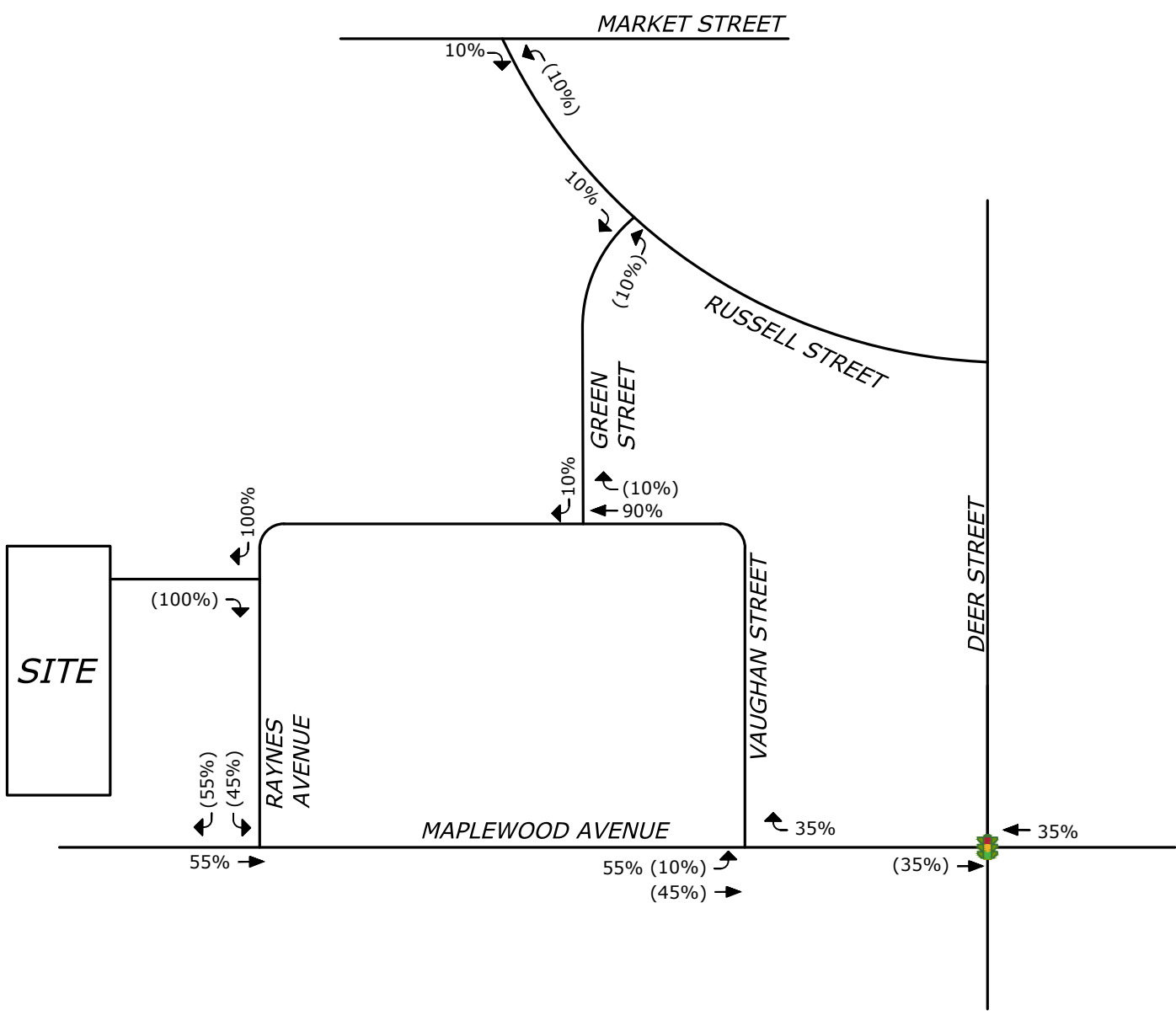
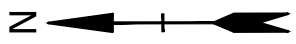
| | |
|--|---|
| <p>PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH</p> | |
| <p>HOTEL AND RESTAURANT TRIP DISTRIBUTION</p> | |
| <p>DATE: 7/14/2021</p> |  www.tighebond.com |
| <p>SCALE: NO SCALE</p> | |
| <p>FIGURE 10</p> | |




LEGEND


-  TRAFFIC SIGNAL
- XX ENTERING
- (XX) EXITING

| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| RETAIL TRIP DISTRIBUTION | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 11 | |



LEGEND

-  TRAFFIC SIGNAL
- XX ENTERING
- (XX) EXITING

| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| RESIDENTIAL TRIP DISTRIBUTION | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 12 | |

HOTEL GENERATED TRIPS

ENTERING: 34
 EXITING: 33
 TOTAL: 67

RESIDENTIAL GENERATED TRIPS

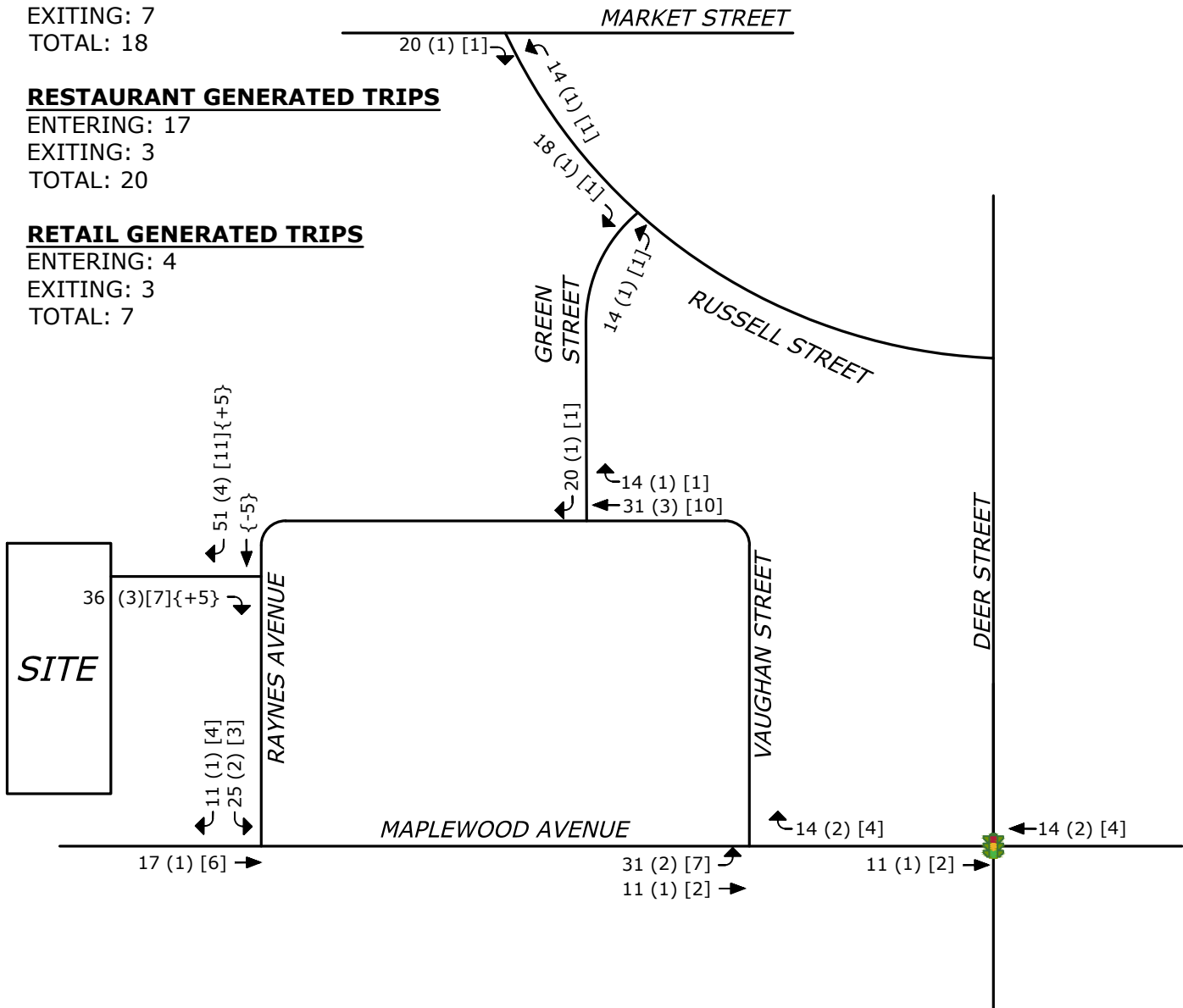
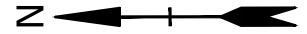
ENTERING: 11
 EXITING: 7
 TOTAL: 18

RESTAURANT GENERATED TRIPS

ENTERING: 17
 EXITING: 3
 TOTAL: 20

RETAIL GENERATED TRIPS

ENTERING: 4
 EXITING: 3
 TOTAL: 7



LEGEND



TRAFFIC SIGNAL

- XX HOTEL & RESTAURANT TRIPS
- (XX) RETAIL TRIPS
- [XX] RESIDENTIAL TRIPS
- {XX} PASS-BY TRIPS

PROPOSED MIXED-USE DEVELOPMENT
 RAYNES AVENUE, PORTSMOUTH, NH

WEEKDAY AFTERNOON PEAK HOUR SITE
 GENERATED TRIPS

DATE: 7/14/2021

SCALE: NO SCALE

FIGURE 13



HOTEL GENERATED TRIPS

ENTERING: 52
 EXITING: 41
 TOTAL: 93

RESIDENTIAL GENERATED TRIPS

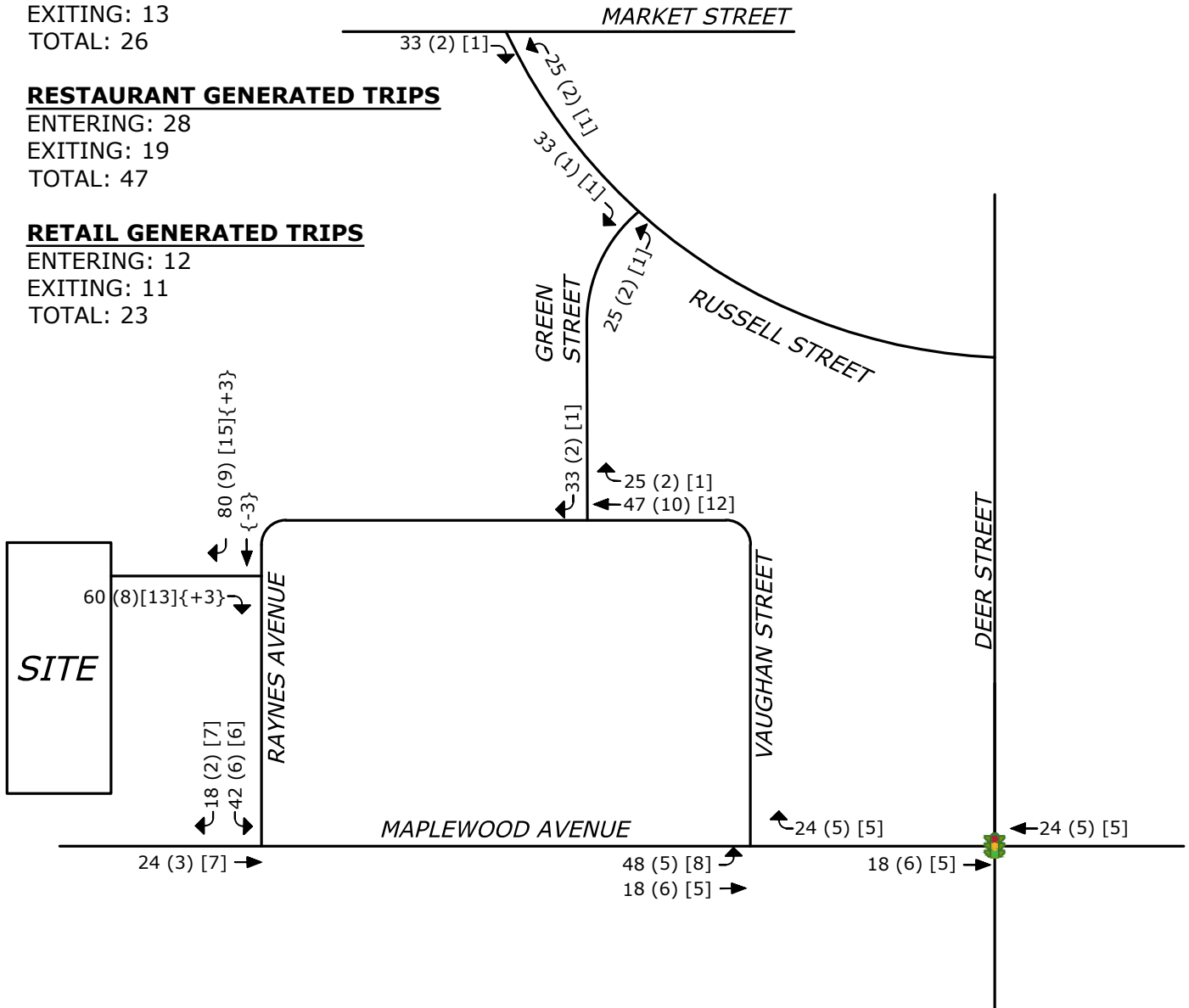
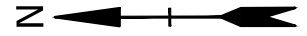
ENTERING: 13
 EXITING: 13
 TOTAL: 26

RESTAURANT GENERATED TRIPS

ENTERING: 28
 EXITING: 19
 TOTAL: 47

RETAIL GENERATED TRIPS

ENTERING: 12
 EXITING: 11
 TOTAL: 23



LEGEND



TRAFFIC SIGNAL

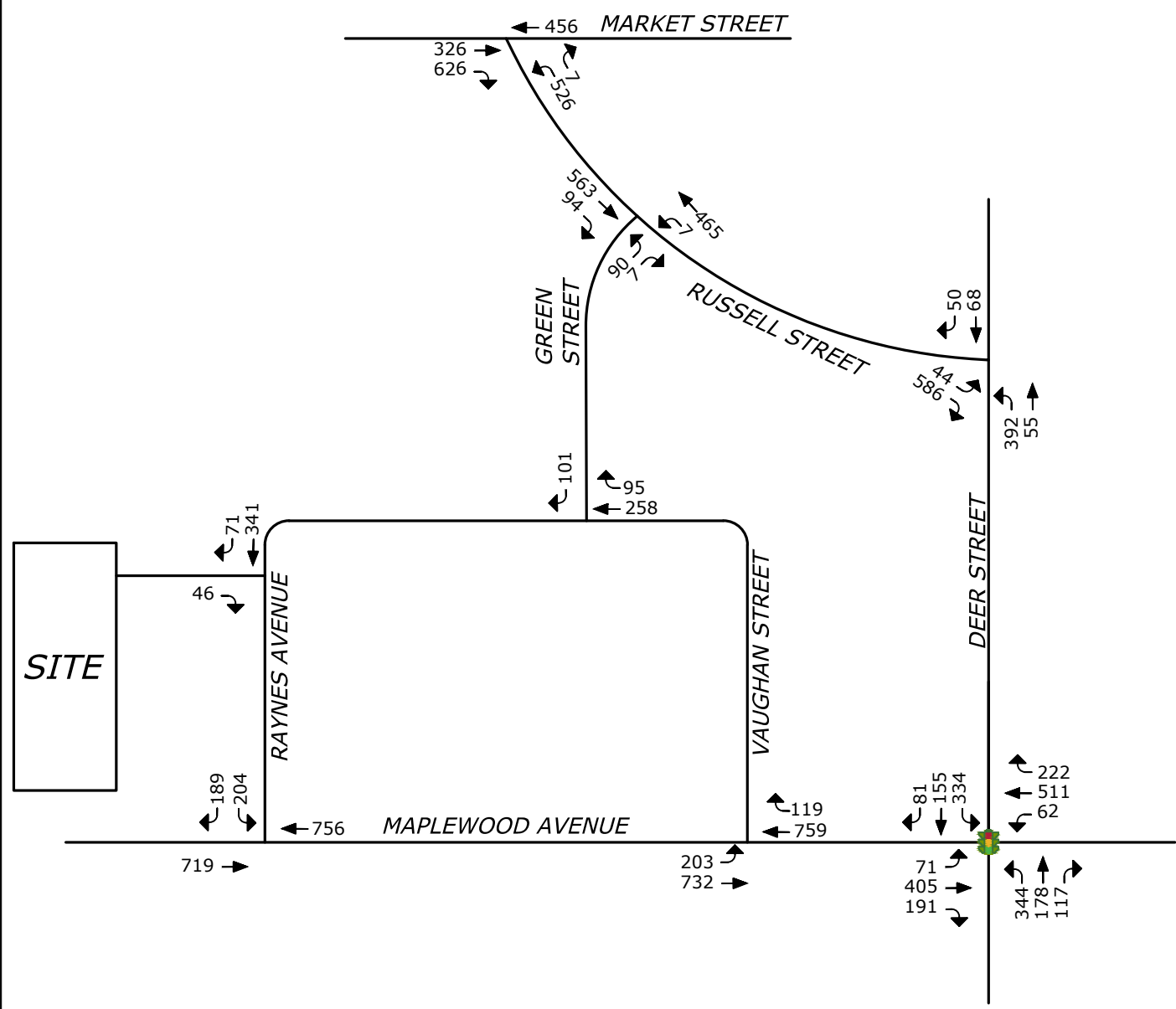
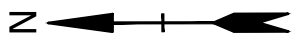
- XX HOTEL & RESTAURANT TRIPS
- (XX) RETAIL TRIPS
- [XX] RESIDENTIAL TRIPS
- {XX} PASS-BY TRIPS

PROPOSED MIXED-USE DEVELOPMENT
 RAYNES AVENUE, PORTSMOUTH, NH

SATURDAY MIDDAY PEAK HOUR SITE
 GENERATED TRIPS

DATE: 8/2/2021
 SCALE: NO SCALE
 FIGURE 14




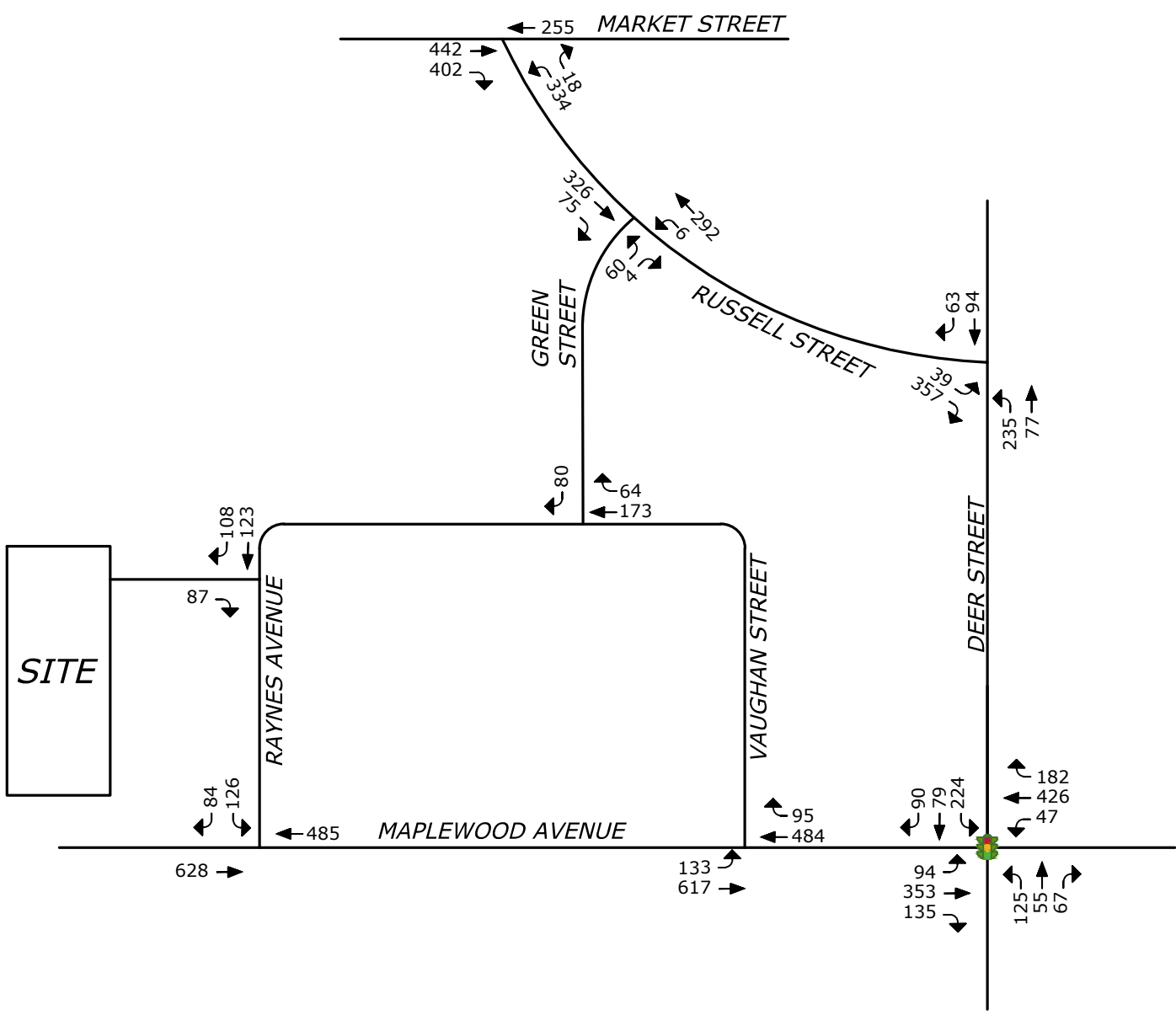
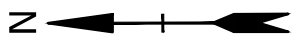


SITE

LEGEND


 TRAFFIC SIGNAL

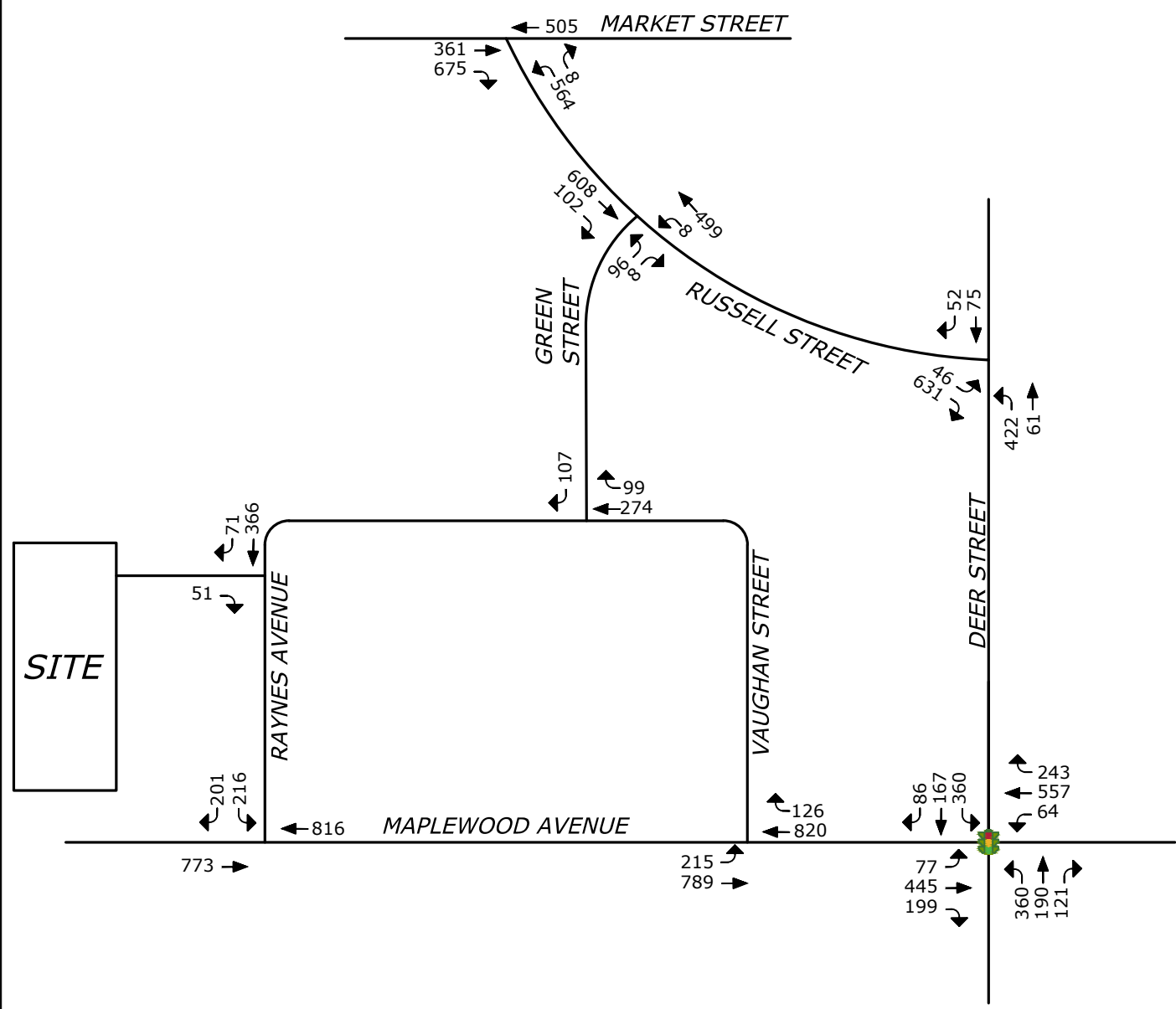
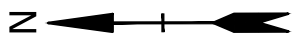
| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2022 BUILD WEEKDAY AFTERNOON PEAK HOUR TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 15 | |



LEGEND


 TRAFFIC SIGNAL

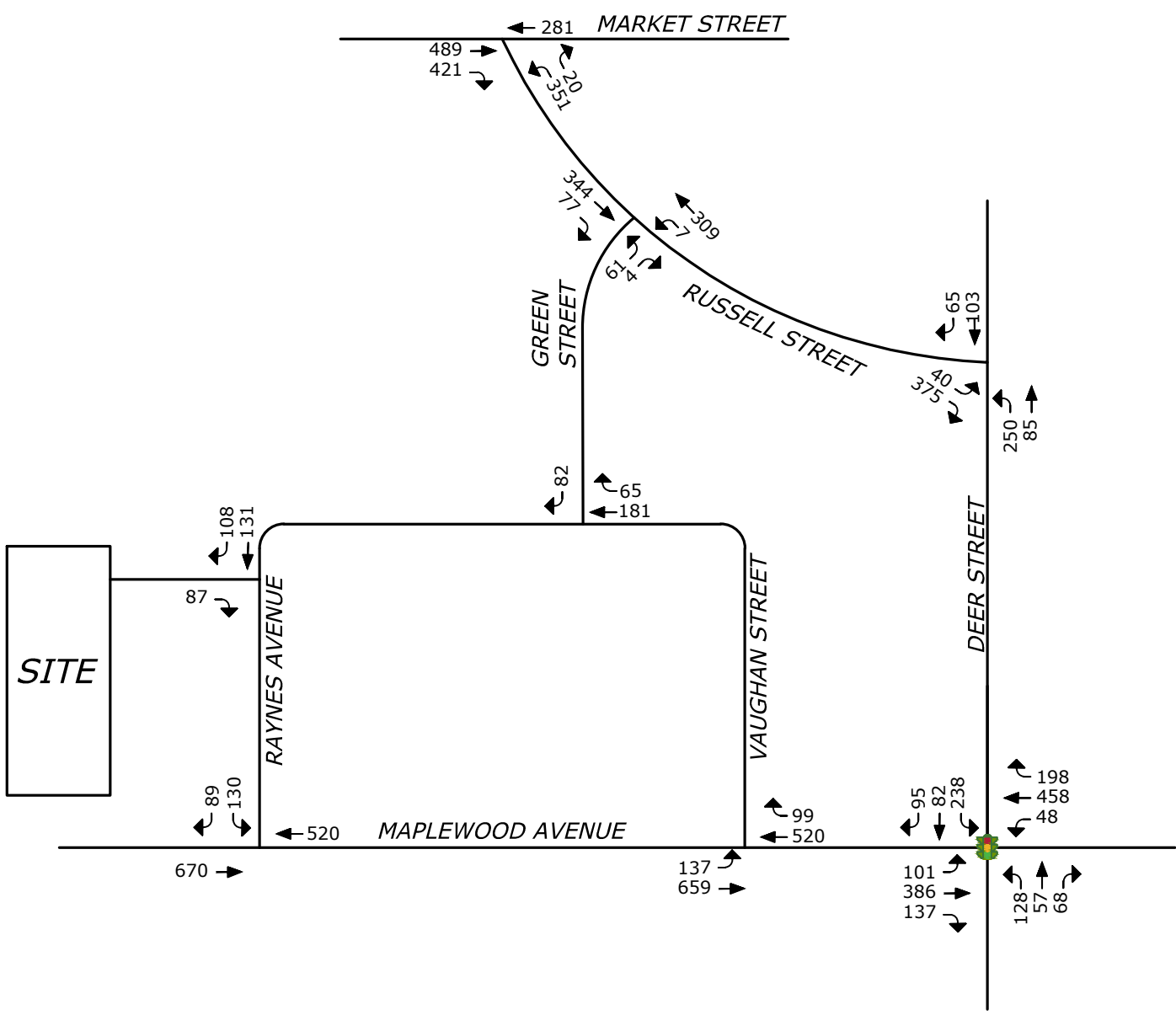
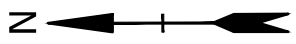
| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2022 BUILD SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES | |
| DATE: 8/2/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 16 | |



LEGEND

 TRAFFIC SIGNAL


| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2032 BUILD WEEKDAY AFTERNOON PEAK HOUR TRAFFIC VOLUMES | |
| DATE: 7/14/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 17 | |



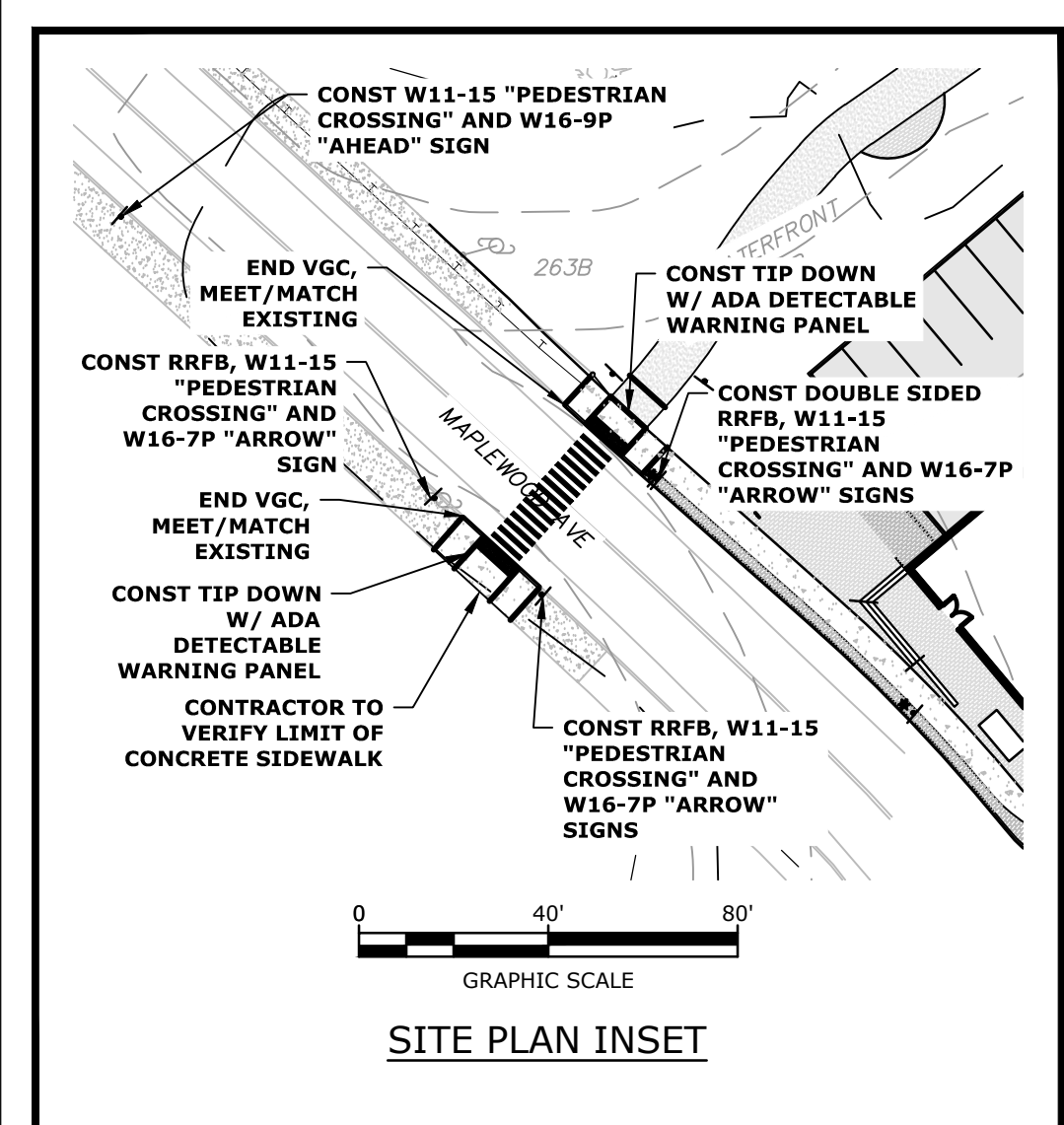
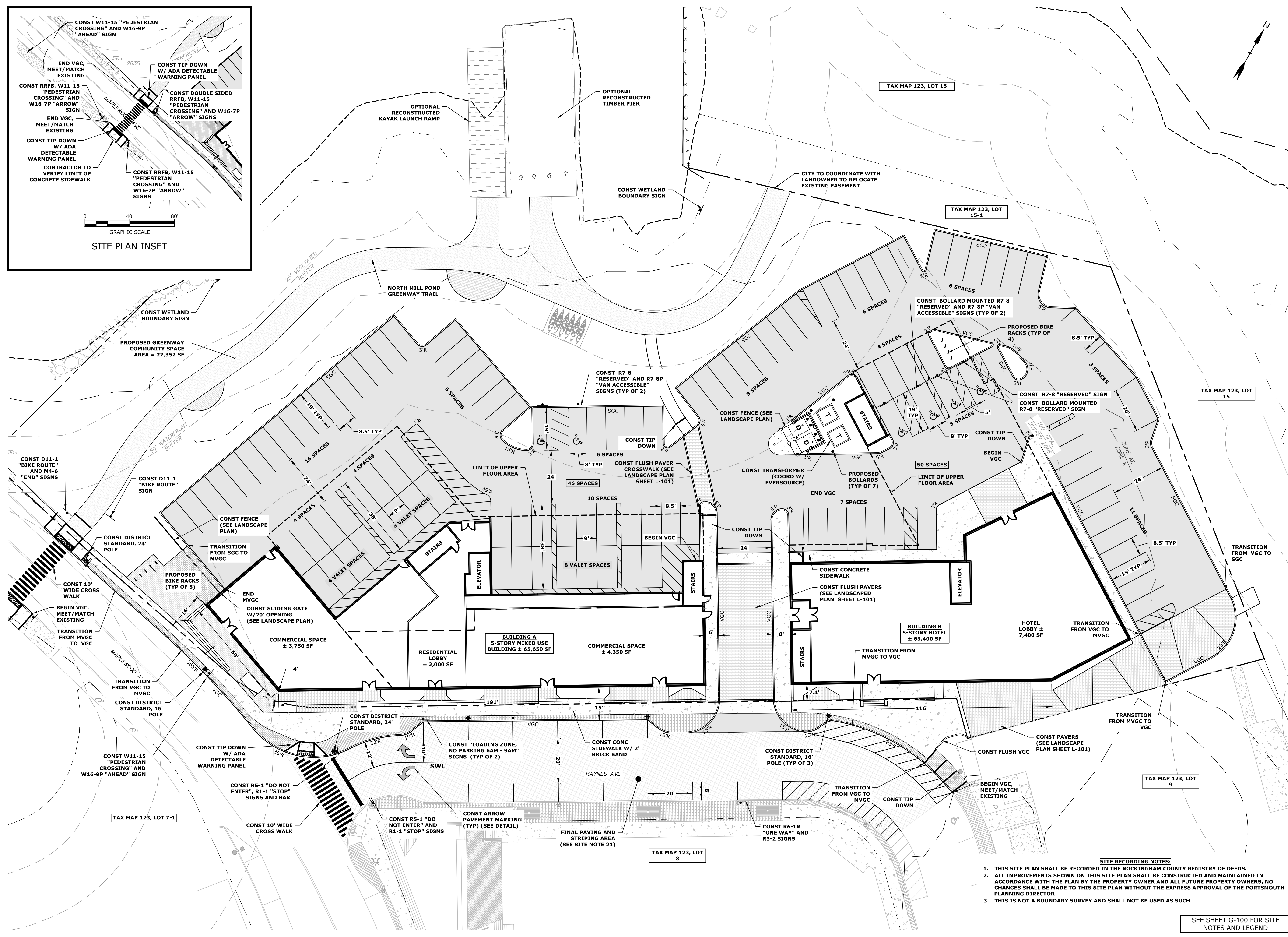
SITE

LEGEND

 TRAFFIC SIGNAL

| | |
|---|---|
| PROPOSED MIXED-USE DEVELOPMENT RAYNES AVENUE, PORTSMOUTH, NH | |
| 2032 BUILD SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES | |
| DATE: 8/2/2021 |  www.tighebond.com |
| SCALE: NO SCALE | |
| FIGURE 18 | |

APPENDIX C
Site Development Plan



STATE OF NEW HAMPSHIRE
 BRADLEY M. CRADOCK
 No. 00359
 LICENSED PROFESSIONAL ENGINEER
 7-21-21

STATE OF NEW HAMPSHIRE
 PATRICK M. CRADOCK
 No. 16877
 LICENSED PROFESSIONAL ENGINEER
 7-21-2021

TAX MAP 123, LOT 15-1
 TAX MAP 123, LOT 15
 TAX MAP 123, LOT 9
 TAX MAP 123, LOT 8

GRAPHIC SCALE 0 20' 40'

Proposed Mixed Use Development
 North Mill Pond Holdings, LLC
 Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

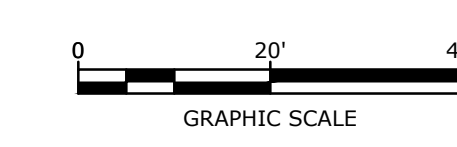
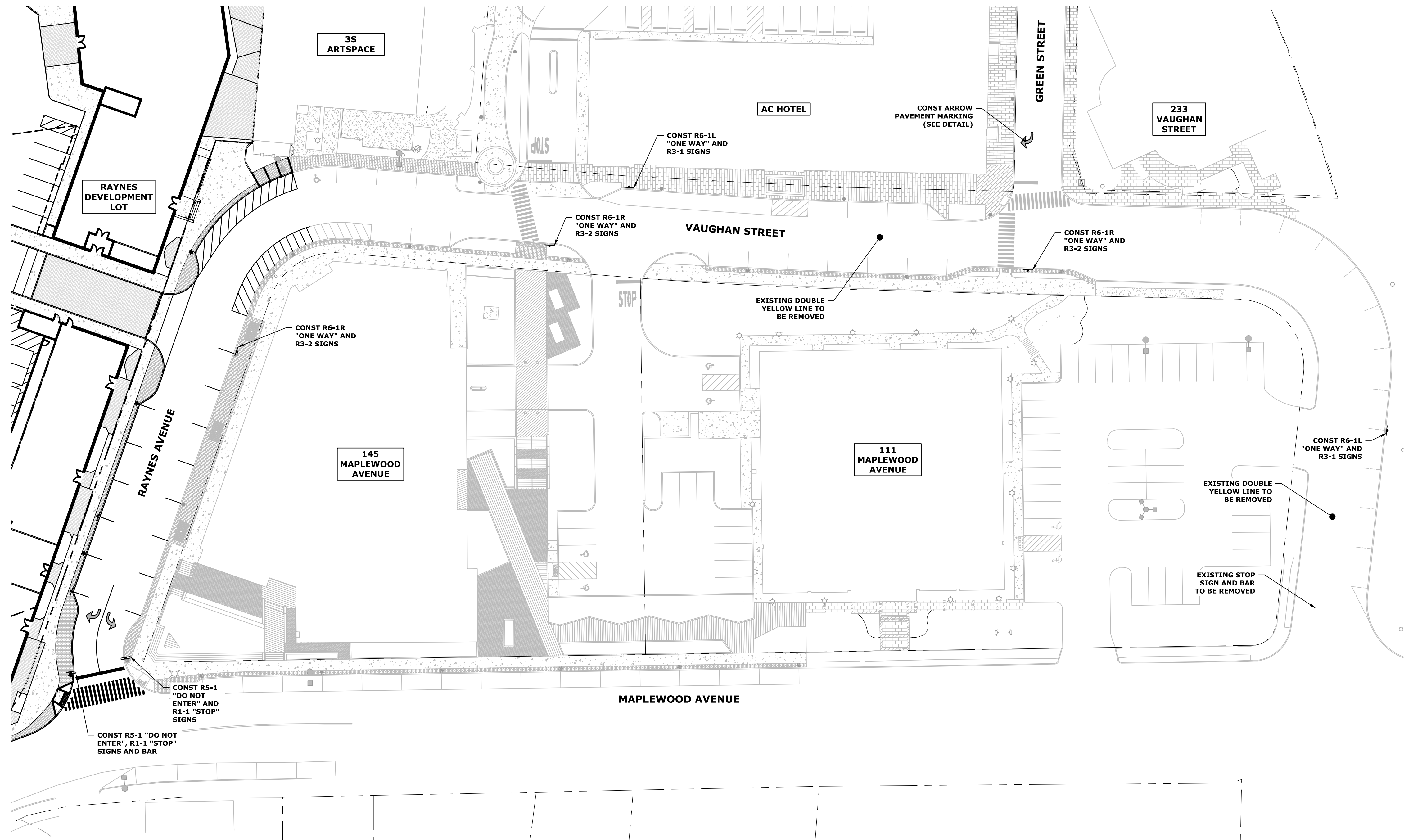
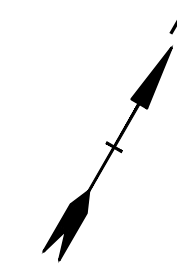
PROJECT NO: P-0595-007
 DATE: December 22, 2020
 FILE: P-0595-007-C-DSGN.DWG
 DRAWN BY: CJK
 CHECKED BY: NAH/PMC
 APPROVED BY: BLM

- SITE RECORDING NOTES:**
1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
 2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
 3. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.

SITE PLAN
 SCALE: AS SHOWN
 C-102.1

Last Saved: 7/20/2021 1:46pm By: NAH/PMC
 Plotted On: 7/20/2021 1:46pm By: NAH/PMC
 Title & Content: P-0595-007_Consultant_Proposal_P0595-007_C-DSGN.dwg
 Figure/AutoCAD/Sheet/P-0595-007_C-DSGN.dwg

SEE SHEET G-100 FOR SITE NOTES AND LEGEND



Proposed Mixed Use Development

North Mill Pond Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------------------|
| H | 7/21/2021 | TAC Resubmission |
| G | 5/26/2021 | CC Resubmission |
| F | 5/19/2021 | TAC Resubmission |
| E | 4/28/2021 | CC Resubmission |
| D | 4/21/2021 | TAC Resubmission |
| C | 3/22/2021 | TAC Submission |
| B | 3/10/2021 | Design Review Resubmission |
| A | 12/1/2020 | TAC Work Session |

| | |
|--------------|-----------------------|
| PROJECT NO: | P-0595-007 |
| DATE: | December 22, 2020 |
| FILE: | P-0595-007-C-DSGN.DWG |
| DRAWN BY: | CJK |
| CHECKED BY: | NAH/PMC |
| APPROVED BY: | BLM |

NEIGHBORHOOD SIGNAGE PLAN

SCALE: AS SHOWN

SEE SHEET G-100 FOR SITE NOTES AND LEGEND

C-102.2

Last Saved: 7/20/2021 1:46pm By: M.Hansen
 Plotted On: Jul 20 2021 10:52 AM
 Title & Content: 210 P0595 Proj Con General Proposals P0595-007 Raynes Ave Hotel Drawings Figures/AutoCAD/Sheet/P-0595-007-C-DSGN.dwg

APPENDIX D
Capacity Analysis Methodology

CAPACITY ANALYSIS METHODOLOGY

A primary result of capacity analysis is the assignment of levels of service to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM).¹ The concept of level of service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year. A description of the operating condition under each level of service is provided below:

- *LOS A* describes conditions with little to no delay to motorists.
- *LOS B* represents a desirable level with relatively low delay to motorists.
- *LOS C* describes conditions with average delays to motorists.
- *LOS D* describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.
- *LOS E* represents operating conditions with high delay values. This level is considered by many agencies to be the limit of acceptable delay.
- *LOS F* is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.

Signalized Intersections

Levels of service for signalized intersections are also calculated using the operational analysis methodology of the HCM. The methodology for signalized intersections assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on average *control* delay. Control delay is used to establish the operating characteristics for an intersection or an approach to an intersection. Volume-to-capacity (v/c) ratios are also used to help signify the utilization of a lane group's capacity at an intersection. A v/c ratio of ≥ 1.00 represents conditions when the traffic signal cycle capacity is fully utilized and indicates a capacity failure. The level-of-service criteria for signalized intersections are shown in Table A-1.

¹*Highway Capacity Manual, 6TH Edition: A Guide for Multimodal Mobility Analysis*. Washington, D.C.: Transportation Research Board, 2016.

Unsignalized Intersections

Levels of service for unsignalized intersections are calculated using the operational analysis methodology of the HCM. The procedure accounts for lane configuration on both the minor and major street approaches, conflicting traffic stream volumes, and the type of intersection control (STOP, YIELD, or all-way STOP control). The definition of level of service for unsignalized intersections is a function of average *control* delay. Control delay at an unsignalized intersection is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. This time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position.

Volume-to-capacity (v/c) ratios are also used to help signify the utilization of a movement's capacity at an intersection. A v/c ratio of ≥ 1.00 represents conditions when the movement is fully utilized and indicates a capacity failure. The capacity of the movements is based on the distribution of gaps in the major street traffic stream, the selection of gaps to complete the desired movement, and the follow-up headways for each driver in the queue. When an unsignalized intersection is located within 0.25 miles of a signalized intersection, traffic flows may not be random and some platoon structure may exist, thereby affecting the minor street operations. The level-of-service criteria for unsignalized intersections are shown in Table A-1.

TABLE A-1
Level-of-Service Criteria for Intersections

| Level of Service | Signalized Intersection Criteria | Unsignalized Intersection Criteria | V/C Ratio >1.00 ^a |
|------------------|---|---|------------------------------|
| | Average Control Delay (Seconds per Vehicle) | Average Control Delay (Seconds per Vehicle) | |
| A | ≤ 10 | ≤ 10 | F |
| B | >10 and ≤ 20 | >10 and ≤ 15 | F |
| C | >20 and ≤ 35 | >15 and ≤ 25 | F |
| D | >35 and ≤ 55 | >25 and ≤ 35 | F |
| E | >55 and ≤ 80 | >35 and ≤ 50 | F |
| F | >80 | >50 | F |

Note: ^aFor approach-based and intersection-wide assessments, LOS is defined solely by control delay.





















Source: *Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis*. Washington, D.C.: Transportation Research Board, 2016. Exhibit 19-8, Pg. 19-16.

For signalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to the entire intersection. For unsignalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups on the minor street approaches or to the left turns from the major street approaches.

APPENDIX E

Capacity Analyses
2022 No Build Conditions

101: Maplewood Ave & Deer St
2022 No Build Weekday PM Peak

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | |  |  |  |  |  | |
| Traffic Volume (vph) | 344 | 178 | 117 | 334 | 155 | 81 | 62 | 491 | 222 | 71 | 391 | 191 |
| Future Volume (vph) | 344 | 178 | 117 | 334 | 155 | 81 | 62 | 491 | 222 | 71 | 391 | 191 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.975 | | | 0.948 | | | | 0.850 | | 0.951 | |
| Flt Protected | | 0.974 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1828 | 0 | 1770 | 1884 | 0 | 1711 | 1801 | 1636 | 1711 | 1712 | 0 |
| Flt Permitted | | 0.390 | | 0.538 | | | 0.349 | | | 0.288 | | |
| Satd. Flow (perm) | 0 | 732 | 0 | 1002 | 1884 | 0 | 628 | 1801 | 1636 | 519 | 1712 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 10 | | | 23 | | | | 221 | | | 27 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 521 | 270 | 177 | 439 | 204 | 107 | 71 | 564 | 255 | 87 | 477 | 233 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 968 | 0 | 439 | 311 | 0 | 71 | 564 | 255 | 87 | 710 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | |
| Total Split (s) | 33.0 | 33.0 | | 33.0 | 33.0 | | 35.0 | 35.0 | 35.0 | 16.0 | 51.0 | |
| Total Split (%) | 30.0% | 30.0% | | 30.0% | 30.0% | | 31.8% | 31.8% | 31.8% | 14.5% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | Max | Max | | None | None | | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | | 27.0 | | 27.0 | 27.0 | | 59.7 | 59.7 | 59.7 | 71.0 | 71.0 | |
| Actuated g/C Ratio | | 0.25 | | 0.25 | 0.25 | | 0.54 | 0.54 | 0.54 | 0.65 | 0.65 | |
| v/c Ratio | | 5.18 | | 1.79 | 0.65 | | 0.21 | 0.58 | 0.26 | 0.21 | 0.64 | |
| Control Delay | | 1902.1 | | 399.9 | 41.7 | | 16.7 | 20.8 | 3.7 | 8.5 | 14.5 | |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 1902.1 | | 399.9 | 41.7 | | 16.7 | 20.8 | 3.7 | 8.5 | 14.5 | |
| LOS | | F | | F | D | | B | C | A | A | B | |
| Approach Delay | | 1902.1 | | | 251.4 | | | 15.6 | | | 13.8 | |
| Approach LOS | | F | | | F | | | B | | | B | |
| Queue Length 50th (ft) | | ~1186 | | ~466 | 183 | | 26 | 265 | 11 | 21 | 266 | |

101: Maplewood Ave & Deer St
 2022 No Build Weekday PM Peak

| | |
|---------------------------|------|
| Lane Group | Ø9 |
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Fr _t | |
| Fl _t Protected | |
| Satd. Flow (prot) | |
| Fl _t Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Peak Hour Factor | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 26.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 24% |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |

101: Maplewood Ave & Deer St
 2022 No Build Weekday PM Peak

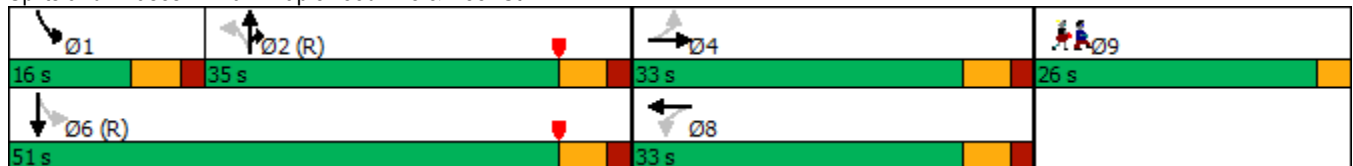


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | | #982 | | #530 | 224 | | 56 | 375 | 48 | 36 | 321 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 187 | | 245 | 479 | | 341 | 977 | 989 | 443 | 1114 | |
| Starvation Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 5.18 | | 1.79 | 0.65 | | 0.21 | 0.58 | 0.26 | 0.20 | 0.64 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 5.18
 Intersection Signal Delay: 603.4
 Intersection LOS: F
 Intersection Capacity Utilization 114.6%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



101: Maplewood Ave & Deer St
2022 No Build Weekday PM Peak

| | |
|-------------------------|----|
| Lane Group | Ø9 |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |
| Intersection Summary | |

201: Maplewood Ave & Raynes Ave
 2022 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 25.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 33 | 143 | 786 | 26 | 96 | 599 |
| Future Vol, veh/h | 33 | 143 | 786 | 26 | 96 | 599 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 41 | 179 | 983 | 33 | 108 | 673 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 1889 | 1000 | 0 | 0 | 1016 | 0 |
| Stage 1 | 1000 | - | - | - | - | - |
| Stage 2 | 889 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 77 | 295 | - | - | 683 | - |
| Stage 1 | 356 | - | - | - | - | - |
| Stage 2 | 402 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 58 | 295 | - | - | 683 | - |
| Mov Cap-2 Maneuver | 58 | - | - | - | - | - |
| Stage 1 | 356 | - | - | - | - | - |
| Stage 2 | 300 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 231.7 | 0 | 1.6 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 167 | 683 |
| HCM Lane V/C Ratio | - | - | 1.317 | 0.158 |
| HCM Control Delay (s) | - | - | 231.7 | 11.3 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 13 | 0.6 |

202: Maplewood Ave & Vaughan St
 2022 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 28.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 84 | 30 | 785 | 73 | 18 | 626 |
| Future Vol, veh/h | 84 | 30 | 785 | 73 | 18 | 626 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 112 | 40 | 994 | 92 | 21 | 745 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1827 | 1040 | 0 | 0 | 1086 |
| Stage 1 | 1040 | - | - | - | - |
| Stage 2 | 787 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | ~ 84 | 280 | - | - | 642 |
| Stage 1 | 341 | - | - | - | - |
| Stage 2 | 449 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 79 | 280 | - | - | 642 |
| Mov Cap-2 Maneuver | ~ 79 | - | - | - | - |
| Stage 1 | 341 | - | - | - | - |
| Stage 2 | 424 | - | - | - | - |

| Approach | WB | NB | SB |
|------------------------|-------|----|-----|
| HCM Control Delay, s\$ | 375.7 | 0 | 0.3 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|----------|-------|
| Capacity (veh/h) | - | - | 97 | 642 |
| HCM Lane V/C Ratio | - | - | 1.567 | 0.033 |
| HCM Control Delay (s) | - | - | \$ 375.7 | 10.8 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 11.7 | 0.1 |

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

203: Vaughan St & Green St
 2022 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | R | T | R | L | T |
| Traffic Vol, veh/h | 7 | 72 | 86 | 13 | 66 | 106 |
| Future Vol, veh/h | 7 | 72 | 86 | 13 | 66 | 106 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 77 | 106 | 16 | 108 | 174 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 504 | 114 | 0 | 0 | 122 | 0 |
| Stage 1 | 114 | - | - | - | - | - |
| Stage 2 | 390 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 528 | 939 | - | - | 1465 | - |
| Stage 1 | 911 | - | - | - | - | - |
| Stage 2 | 684 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 485 | 939 | - | - | 1465 | - |
| Mov Cap-2 Maneuver | 485 | - | - | - | - | - |
| Stage 1 | 911 | - | - | - | - | - |
| Stage 2 | 628 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.6 | 0 | 2.9 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 867 | 1465 |
| HCM Lane V/C Ratio | - | - | 0.098 | 0.074 |
| HCM Control Delay (s) | - | - | 9.6 | 7.7 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.2 |

204: Deer St & Russell St
 2022 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 28.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 392 | 55 | 68 | 50 | 44 | 586 |
| Future Vol, veh/h | 392 | 55 | 68 | 50 | 44 | 586 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 436 | 61 | 77 | 57 | 49 | 651 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 134 | 0 | - | 0 | 1039 106 |
| Stage 1 | - | - | - | - | 106 - |
| Stage 2 | - | - | - | - | 933 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1451 | - | - | - | 255 948 |
| Stage 1 | - | - | - | - | 918 - |
| Stage 2 | - | - | - | - | 383 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1451 | - | - | - | 176 948 |
| Mov Cap-2 Maneuver | - | - | - | - | 176 - |
| Stage 1 | - | - | - | - | 633 - |
| Stage 2 | - | - | - | - | 383 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 7.5 | 0 | 49 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1451 | - | - | - | 726 |
| HCM Lane V/C Ratio | 0.3 | - | - | - | 0.964 |
| HCM Control Delay (s) | 8.5 | 0 | - | - | 49 |
| HCM Lane LOS | A | A | - | - | E |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 14.7 |

205: Russell St & Green St
 2022 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 6.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | | T | | |
| Traffic Vol, veh/h | 75 | 7 | 7 | 465 | 563 | 75 |
| Future Vol, veh/h | 75 | 7 | 7 | 465 | 563 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 129 | 12 | 8 | 547 | 670 | 89 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1278 | 715 | 759 | 0 | - | 0 |
| Stage 1 | 715 | - | - | - | - | - |
| Stage 2 | 563 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 183 | 431 | 852 | - | - | - |
| Stage 1 | 485 | - | - | - | - | - |
| Stage 2 | 570 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 181 | 431 | 852 | - | - | - |
| Mov Cap-2 Maneuver | 181 | - | - | - | - | - |
| Stage 1 | 479 | - | - | - | - | - |
| Stage 2 | 570 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 64.7 | 0.1 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 852 | - | 190 | - | - |
| HCM Lane V/C Ratio | 0.01 | - | 0.744 | - | - |
| HCM Control Delay (s) | 9.3 | 0 | 64.7 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 4.9 | - | - |

206: Market St & Russell St
 2022 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 180.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 510 | 7 | 0 | 456 | 326 | 604 |
| Future Vol, veh/h | 510 | 7 | 0 | 456 | 326 | 604 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 630 | 9 | 0 | 642 | 388 | 719 |





















| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1030 | 388 | - | 0 | - | 0 |
| Stage 1 | 388 | - | - | - | - | - |
| Stage 2 | 642 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 259 | 660 | 0 | - | - | - |
| Stage 1 | 686 | - | 0 | - | - | - |
| Stage 2 | ~ 524 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 259 | 660 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 259 | - | - | - | - | - |
| Stage 1 | 686 | - | - | - | - | - |
| Stage 2 | ~ 524 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 676.6 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|----------|-------|-----|-----|
| Capacity (veh/h) | - | 259 | 660 | - | - |
| HCM Lane V/C Ratio | - | 2.431 | 0.013 | - | - |
| HCM Control Delay (s) | - | \$ 685.7 | 10.5 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 51 | 0 | - | - |

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

101: Maplewood Ave & Deer St
2022 No Build Saturday Midday

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | |  |  |  |  |  | |
| Traffic Volume (vph) | 125 | 55 | 67 | 224 | 79 | 90 | 47 | 390 | 182 | 94 | 324 | 135 |
| Future Volume (vph) | 125 | 55 | 67 | 224 | 79 | 90 | 47 | 390 | 182 | 94 | 324 | 135 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.963 | | | 0.920 | | | | 0.850 | | 0.956 | |
| Fl _t Protected | | 0.975 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1807 | 0 | 1770 | 1828 | 0 | 1711 | 1801 | 1636 | 1711 | 1721 | 0 |
| Fl _t Permitted | | 0.626 | | 0.535 | | | 0.465 | | | 0.261 | | |
| Satd. Flow (perm) | 0 | 1160 | 0 | 997 | 1828 | 0 | 837 | 1801 | 1636 | 470 | 1721 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 16 | | | 50 | | | | 202 | | | 23 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.78 | 0.78 | 0.78 | 0.86 | 0.86 | 0.86 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 160 | 71 | 86 | 260 | 92 | 105 | 52 | 433 | 202 | 103 | 356 | 148 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 317 | 0 | 260 | 197 | 0 | 52 | 433 | 202 | 103 | 504 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | |
| Total Split (s) | 33.0 | 33.0 | | 33.0 | 33.0 | | 35.0 | 35.0 | 35.0 | 16.0 | 51.0 | |
| Total Split (%) | 30.0% | 30.0% | | 30.0% | 30.0% | | 31.8% | 31.8% | 31.8% | 14.5% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | Max | Max | | None | None | | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | | 27.0 | | 27.0 | 27.0 | | 40.8 | 40.8 | 40.8 | 55.4 | 55.4 | |
| Actuated g/C Ratio | | 0.25 | | 0.25 | 0.25 | | 0.37 | 0.37 | 0.37 | 0.50 | 0.50 | |
| v/c Ratio | | 1.07 | | 1.07 | 0.41 | | 0.17 | 0.65 | 0.28 | 0.31 | 0.57 | |
| Control Delay | | 111.1 | | 117.0 | 28.5 | | 31.9 | 38.5 | 5.5 | 20.6 | 24.5 | |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 111.1 | | 117.0 | 28.5 | | 31.9 | 38.5 | 5.5 | 20.6 | 24.5 | |
| LOS | | F | | F | C | | C | D | A | C | C | |
| Approach Delay | | 111.1 | | | 78.9 | | | 28.3 | | | 23.9 | |
| Approach LOS | | F | | | E | | | C | | | C | |
| Queue Length 50th (ft) | | ~240 | | ~203 | 86 | | 29 | 295 | 0 | 45 | 277 | |

101: Maplewood Ave & Deer St
 2022 No Build Saturday Midday

| | |
|---------------------------|------|
| Lane Group | Ø9 |
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Fr _t | |
| Fl _t Protected | |
| Satd. Flow (prot) | |
| Fl _t Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Peak Hour Factor | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 26.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 24% |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |

101: Maplewood Ave & Deer St
 2022 No Build Saturday Midday

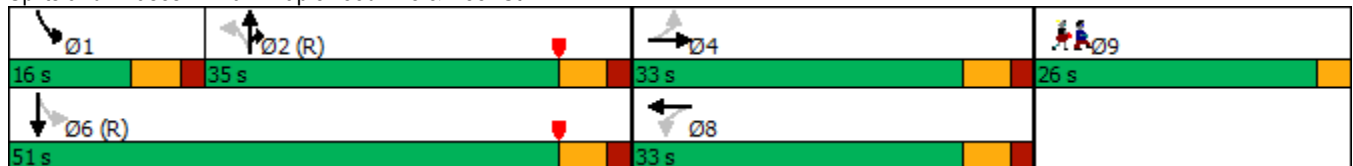


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | | #331 | | #341 | 145 | | 65 | #484 | 56 | 82 | 405 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 296 | | 244 | 486 | | 310 | 668 | 734 | 349 | 877 | |
| Starvation Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 1.07 | | 1.07 | 0.41 | | 0.17 | 0.65 | 0.28 | 0.30 | 0.57 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 50.9 Intersection LOS: D
 Intersection Capacity Utilization 79.9% ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



101: Maplewood Ave & Deer St
2022 No Build Saturday Midday

| | |
|-------------------------|----|
| Lane Group | Ø9 |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |
| Intersection Summary | |

201: Maplewood Ave & Raynes Ave
 2022 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | R | T | R | L | T |
| Traffic Vol, veh/h | 21 | 52 | 489 | 11 | 42 | 552 |
| Future Vol, veh/h | 21 | 52 | 489 | 11 | 42 | 552 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 81 | 81 | 91 | 91 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 64 | 537 | 12 | 46 | 600 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1235 | 543 | 0 | 0 | 549 |
| Stage 1 | 543 | - | - | - | - |
| Stage 2 | 692 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 195 | 540 | - | - | 1021 |
| Stage 1 | 582 | - | - | - | - |
| Stage 2 | 497 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 182 | 540 | - | - | 1021 |
| Mov Cap-2 Maneuver | 182 | - | - | - | - |
| Stage 1 | 582 | - | - | - | - |
| Stage 2 | 463 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 19.1 | 0 | 0.6 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 345 | 1021 |
| HCM Lane V/C Ratio | - | - | 0.261 | 0.045 |
| HCM Control Delay (s) | - | - | 19.1 | 8.7 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 1 | 0.1 |

202: Maplewood Ave & Vaughan St
 2022 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 25 | 4 | 495 | 48 | 6 | 563 |
| Future Vol, veh/h | 25 | 4 | 495 | 48 | 6 | 563 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 5 | 563 | 55 | 7 | 640 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1245 | 591 | 0 | 0 | 618 |
| Stage 1 | 591 | - | - | - | - |
| Stage 2 | 654 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 192 | 507 | - | - | 962 |
| Stage 1 | 553 | - | - | - | - |
| Stage 2 | 517 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 190 | 507 | - | - | 962 |
| Mov Cap-2 Maneuver | 190 | - | - | - | - |
| Stage 1 | 553 | - | - | - | - |
| Stage 2 | 511 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 25.5 | 0 | 0.1 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 208 | 962 |
| HCM Lane V/C Ratio | - | - | 0.158 | 0.007 |
| HCM Control Delay (s) | - | - | 25.5 | 8.8 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 0.6 | 0 |

203: Vaughan St & Green St
2022 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.5 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 7 | 37 | 58 | 8 | 27 | 36 |
| Future Vol, veh/h | 7 | 37 | 58 | 8 | 27 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 67 | 67 | 67 | 67 | 67 | 67 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 55 | 87 | 12 | 40 | 54 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 227 | 93 | 0 | 0 | 99 |
| Stage 1 | 93 | - | - | - | - |
| Stage 2 | 134 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 761 | 964 | - | - | 1494 |
| Stage 1 | 931 | - | - | - | - |
| Stage 2 | 892 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 740 | 964 | - | - | 1494 |
| Mov Cap-2 Maneuver | 740 | - | - | - | - |
| Stage 1 | 931 | - | - | - | - |
| Stage 2 | 867 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.2 | 0 | 3.2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 920 | 1494 |
| HCM Lane V/C Ratio | - | - | 0.071 | 0.027 |
| HCM Control Delay (s) | - | - | 9.2 | 7.5 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

204: Deer St & Russell St
2022 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Vol, veh/h | 235 | 77 | 94 | 63 | 39 | 357 |
| Future Vol, veh/h | 235 | 77 | 94 | 63 | 39 | 357 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 81 | 81 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 258 | 85 | 116 | 78 | 44 | 401 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 194 | 0 | - | 0 | 756 155 |
| Stage 1 | - | - | - | - | 155 - |
| Stage 2 | - | - | - | - | 601 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1379 | - | - | - | 376 891 |
| Stage 1 | - | - | - | - | 873 - |
| Stage 2 | - | - | - | - | 547 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1379 | - | - | - | 302 891 |
| Mov Cap-2 Maneuver | - | - | - | - | 302 - |
| Stage 1 | - | - | - | - | 702 - |
| Stage 2 | - | - | - | - | 547 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.2 | 0 | 16.7 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1379 | - | - | - | 747 |
| HCM Lane V/C Ratio | 0.187 | - | - | - | 0.596 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 16.7 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.7 | - | - | - | 4 |

205: Russell St & Green St
2022 No Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | TT | | | TT | TT | |
| Traffic Vol, veh/h | 32 | 4 | 6 | 292 | 326 | 39 |
| Future Vol, veh/h | 32 | 4 | 6 | 292 | 326 | 39 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 75 | 75 | 83 | 83 | 93 | 93 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 43 | 5 | 7 | 352 | 351 | 42 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 738 | 372 | 393 | 0 | - | 0 |
| Stage 1 | 372 | - | - | - | - | - |
| Stage 2 | 366 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 385 | 674 | 1166 | - | - | - |
| Stage 1 | 697 | - | - | - | - | - |
| Stage 2 | 702 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 382 | 674 | 1166 | - | - | - |
| Mov Cap-2 Maneuver | 382 | - | - | - | - | - |
| Stage 1 | 692 | - | - | - | - | - |
| Stage 2 | 702 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.2 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1166 | - | 401 | - | - |
| HCM Lane V/C Ratio | 0.006 | - | 0.12 | - | - |
| HCM Control Delay (s) | 8.1 | 0 | 15.2 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.4 | - | - |

206: Market St & Russell St
2022 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 16.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 306 | 18 | 0 | 255 | 442 | 366 |
| Future Vol, veh/h | 306 | 18 | 0 | 255 | 442 | 366 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 85 | 85 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 348 | 20 | 0 | 300 | 486 | 402 |






















| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 786 | 486 | - | 0 | - | 0 |
| Stage 1 | 486 | - | - | - | - | - |
| Stage 2 | 300 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | 361 | 581 | 0 | - | - | - |
| Stage 1 | 618 | - | 0 | - | - | - |
| Stage 2 | 752 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 361 | 581 | - | - | - | - |
| Mov Cap-2 Maneuver | 361 | - | - | - | - | - |
| Stage 1 | 618 | - | - | - | - | - |
| Stage 2 | 752 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 69.6 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 361 | 581 | - | - |
| HCM Lane V/C Ratio | - | 0.963 | 0.035 | - | - |
| HCM Control Delay (s) | - | 73 | 11.4 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 10.6 | 0.1 | - | - |

APPENDIX E
Capacity Analyses
2022 Build Conditions

101: Maplewood Ave & Deer St
2022 Build Weekday PM Peak

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 344 | 178 | 117 | 334 | 155 | 81 | 62 | 511 | 222 | 71 | 405 | 191 |
| Future Volume (vph) | 344 | 178 | 117 | 334 | 155 | 81 | 62 | 511 | 222 | 71 | 405 | 191 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.975 | | | 0.948 | | | | 0.850 | | 0.952 | |
| Flt Protected | | 0.974 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1828 | 0 | 1770 | 1884 | 0 | 1711 | 1801 | 1636 | 1711 | 1714 | 0 |
| Flt Permitted | | 0.390 | | 0.538 | | | 0.336 | | | 0.272 | | |
| Satd. Flow (perm) | 0 | 732 | 0 | 1002 | 1884 | 0 | 605 | 1801 | 1636 | 490 | 1714 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 10 | | | 23 | | | | 212 | | | 26 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 521 | 270 | 177 | 439 | 204 | 107 | 71 | 587 | 255 | 87 | 494 | 233 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 968 | 0 | 439 | 311 | 0 | 71 | 587 | 255 | 87 | 727 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | |
| Total Split (s) | 33.0 | 33.0 | | 33.0 | 33.0 | | 35.0 | 35.0 | 35.0 | 16.0 | 51.0 | |
| Total Split (%) | 30.0% | 30.0% | | 30.0% | 30.0% | | 31.8% | 31.8% | 31.8% | 14.5% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | Max | Max | | None | None | | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | | 27.0 | | 27.0 | 27.0 | | 59.7 | 59.7 | 59.7 | 71.0 | 71.0 | |
| Actuated g/C Ratio | | 0.25 | | 0.25 | 0.25 | | 0.54 | 0.54 | 0.54 | 0.65 | 0.65 | |
| v/c Ratio | | 5.18 | | 1.79 | 0.65 | | 0.22 | 0.60 | 0.26 | 0.22 | 0.65 | |
| Control Delay | | 1902.1 | | 399.9 | 41.7 | | 16.9 | 21.4 | 4.0 | 8.6 | 14.9 | |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 1902.1 | | 399.9 | 41.7 | | 16.9 | 21.4 | 4.0 | 8.6 | 14.9 | |
| LOS | | F | | F | D | | B | C | A | A | B | |
| Approach Delay | | 1902.1 | | | 251.4 | | | 16.2 | | | 14.2 | |
| Approach LOS | | F | | | F | | | B | | | B | |
| Queue Length 50th (ft) | | ~1186 | | ~466 | 183 | | 26 | 281 | 14 | 21 | 277 | |

101: Maplewood Ave & Deer St
 2022 Build Weekday PM Peak

| | |
|---------------------------|------|
| Lane Group | Ø9 |
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Fr _t | |
| Fl _t Protected | |
| Satd. Flow (prot) | |
| Fl _t Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Peak Hour Factor | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 26.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 24% |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |

101: Maplewood Ave & Deer St
 2022 Build Weekday PM Peak

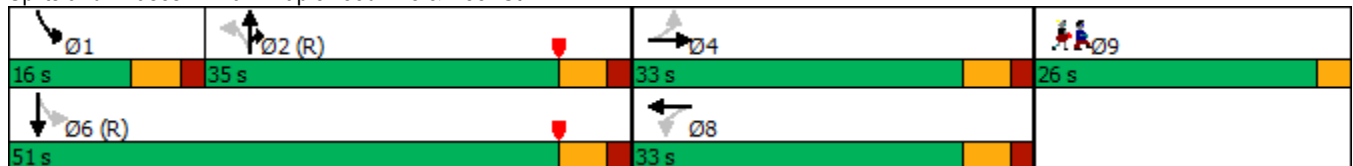


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | | #982 | | #530 | 224 | | 57 | 396 | 52 | 36 | 334 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 187 | | 245 | 479 | | 328 | 977 | 985 | 427 | 1115 | |
| Starvation Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 5.18 | | 1.79 | 0.65 | | 0.22 | 0.60 | 0.26 | 0.20 | 0.65 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 5.18
 Intersection Signal Delay: 596.8 Intersection LOS: F
 Intersection Capacity Utilization 115.3% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



101: Maplewood Ave & Deer St
2022 Build Weekday PM Peak

| | |
|-------------------------|----|
| Lane Group | Ø9 |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |
| Intersection Summary | |

201: Maplewood Ave & Raynes Ave
 2022 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 103.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↘ | ↗ | ↑ | | | ↑ |
| Traffic Vol, veh/h | 204 | 189 | 756 | 0 | 0 | 719 |
| Future Vol, veh/h | 204 | 189 | 756 | 0 | 0 | 719 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 50 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 255 | 236 | 945 | 0 | 0 | 808 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1753 | 945 | 0 | - | - | - |
| Stage 1 | 945 | - | - | - | - | - |
| Stage 2 | 808 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 94 | 318 | - | 0 | 0 | - |
| Stage 1 | 378 | - | - | 0 | 0 | - |
| Stage 2 | 438 | - | - | 0 | 0 | - |
| Platoon blocked, % | | | - | | | - |
| Mov Cap-1 Maneuver | ~ 94 | 318 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 94 | - | - | - | - | - |
| Stage 1 | 378 | - | - | - | - | - |
| Stage 2 | 438 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 472.5 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBTWBLn1 | WBLn2 | SBT |
|-----------------------|----------|----------|-------|
| Capacity (veh/h) | - | 94 | 318 |
| HCM Lane V/C Ratio | - | 2.713 | 0.743 |
| HCM Control Delay (s) | - | \$ 870.6 | 42.9 |
| HCM Lane LOS | - | F | E |
| HCM 95th %tile Q(veh) | - | 24.1 | 5.6 |

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

202: Maplewood Ave & Vaughan St
2022 Build Weekday PM Peak



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|-----------------------------------|------|------|--------|----------------------|------|------|
| Lane Configurations | | | ↶ | | | ↷ |
| Traffic Volume (veh/h) | 0 | 0 | 759 | 119 | 203 | 732 |
| Future Volume (Veh/h) | 0 | 0 | 759 | 119 | 203 | 732 |
| Sign Control | Stop | | Free | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.79 | 0.79 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 0 | 0 | 961 | 151 | 242 | 871 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | 231 | | | | | |
| pX, platoon unblocked | 0.77 | 0.77 | | | 0.77 | |
| vC, conflicting volume | 2392 | 1036 | | | 1112 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2651 | 902 | | | 999 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 100 | 100 | | | 55 | |
| cM capacity (veh/h) | 11 | 261 | | | 537 | |
| Direction, Lane # | NB 1 | SB 1 | | | | |
| Volume Total | 1112 | 1113 | | | | |
| Volume Left | 0 | 242 | | | | |
| Volume Right | 151 | 0 | | | | |
| cSH | 1700 | 537 | | | | |
| Volume to Capacity | 0.65 | 0.45 | | | | |
| Queue Length 95th (ft) | 0 | 58 | | | | |
| Control Delay (s) | 0.0 | 16.1 | | | | |
| Lane LOS | | | C | | | |
| Approach Delay (s) | 0.0 | 16.1 | | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 8.1 | | | |
| Intersection Capacity Utilization | | | 103.6% | ICU Level of Service | G | |
| Analysis Period (min) | | | 15 | | | |

203: Vaughan St & Green St
 2022 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|-------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↘ | | | |
| Traffic Vol, veh/h | 0 | 101 | 258 | 95 | 0 | 0 |
| Future Vol, veh/h | 0 | 101 | 258 | 95 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 16979 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 109 | 319 | 117 | 0 | 0 |

| Major/Minor | Minor1 | Major1 | | |
|----------------------|--------|--------|---|---|
| Conflicting Flow All | - | 378 | 0 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | 6.22 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | 3.318 | - | - |
| Pot Cap-1 Maneuver | 0 | 669 | - | - |
| Stage 1 | 0 | - | - | - |
| Stage 2 | 0 | - | - | - |
| Platoon blocked, % | | | - | - |
| Mov Cap-1 Maneuver | - | 669 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | WB | NB |
|----------------------|------|----|
| HCM Control Delay, s | 11.4 | 0 |
| HCM LOS | B | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 |
|-----------------------|-----|----------|
| Capacity (veh/h) | - | - 669 |
| HCM Lane V/C Ratio | - | - 0.162 |
| HCM Control Delay (s) | - | - 11.4 |
| HCM Lane LOS | - | - B |
| HCM 95th %tile Q(veh) | - | - 0.6 |

204: Deer St & Russell St
2022 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 28.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 392 | 55 | 68 | 50 | 44 | 586 |
| Future Vol, veh/h | 392 | 55 | 68 | 50 | 44 | 586 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 436 | 61 | 77 | 57 | 49 | 651 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 134 | 0 | - | 0 | 1039 106 |
| Stage 1 | - | - | - | - | 106 - |
| Stage 2 | - | - | - | - | 933 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1451 | - | - | - | 255 948 |
| Stage 1 | - | - | - | - | 918 - |
| Stage 2 | - | - | - | - | 383 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1451 | - | - | - | 176 948 |
| Mov Cap-2 Maneuver | - | - | - | - | 176 - |
| Stage 1 | - | - | - | - | 633 - |
| Stage 2 | - | - | - | - | 383 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 7.5 | 0 | 49 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1451 | - | - | - | 726 |
| HCM Lane V/C Ratio | 0.3 | - | - | - | 0.964 |
| HCM Control Delay (s) | 8.5 | 0 | - | - | 49 |
| HCM Lane LOS | A | A | - | - | E |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 14.7 |

205: Russell St & Green St
2022 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | | T | | |
| Traffic Vol, veh/h | 91 | 7 | 7 | 465 | 563 | 97 |
| Future Vol, veh/h | 91 | 7 | 7 | 465 | 563 | 97 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 157 | 12 | 8 | 547 | 670 | 115 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1291 | 728 | 785 | 0 | - | 0 |
| Stage 1 | 728 | - | - | - | - | - |
| Stage 2 | 563 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 180 | 423 | 834 | - | - | - |
| Stage 1 | 478 | - | - | - | - | - |
| Stage 2 | 570 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 177 | 423 | 834 | - | - | - |
| Mov Cap-2 Maneuver | 177 | - | - | - | - | - |
| Stage 1 | 471 | - | - | - | - | - |
| Stage 2 | 570 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 96.5 | 0.1 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 834 | - | 185 | - | - |
| HCM Lane V/C Ratio | 0.01 | - | 0.913 | - | - |
| HCM Control Delay (s) | 9.4 | 0 | 96.5 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 7 | - | - |

206: Market St & Russell St
 2022 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 192.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 526 | 7 | 0 | 456 | 326 | 626 |
| Future Vol, veh/h | 526 | 7 | 0 | 456 | 326 | 626 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 649 | 9 | 0 | 642 | 388 | 745 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1030 | 388 | - | 0 | - | 0 |
| Stage 1 | 388 | - | - | - | - | - |
| Stage 2 | 642 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 259 | 660 | 0 | - | - | - |
| Stage 1 | 686 | - | 0 | - | - | - |
| Stage 2 | ~ 524 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 259 | 660 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 259 | - | - | - | - | - |
| Stage 1 | 686 | - | - | - | - | - |
| Stage 2 | ~ 524 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 710.3 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 259 | 660 | - | - |
| HCM Lane V/C Ratio | - | 2.507 | 0.013 | - | - |
| HCM Control Delay (s) | - | 719.6 | 10.5 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 53.4 | 0 | - | - |

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

301: Raynes Ave & Site Driveway
2022 Build Weekday PM Peak






















| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | ↶ | | | ↷ |
| Traffic Vol, veh/h | 0 | 0 | 341 | 71 | 0 | 51 |
| Future Vol, veh/h | 0 | 0 | 341 | 71 | 0 | 51 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 371 | 77 | 0 | 55 |

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

| Approach | WB | SB |
|----------------------|----|------|
| HCM Control Delay, s | 0 | 11.1 |
| HCM LOS | | B |

| Minor Lane/Major Mvmt | WBT | WBR | SBLn1 |
|-----------------------|-----|-----|-------|
| Capacity (veh/h) | - | - | 642 |
| HCM Lane V/C Ratio | - | - | 0.086 |
| HCM Control Delay (s) | - | - | 11.1 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.3 |

101: Maplewood Ave & Deer St
2022 Build Saturday Midday

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 125 | 55 | 67 | 224 | 79 | 90 | 47 | 426 | 182 | 94 | 353 | 135 |
| Future Volume (vph) | 125 | 55 | 67 | 224 | 79 | 90 | 47 | 426 | 182 | 94 | 353 | 135 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.963 | | | 0.920 | | | | 0.850 | | 0.958 | |
| Fl _t Protected | | 0.975 | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1807 | 0 | 1770 | 1828 | 0 | 1711 | 1801 | 1636 | 1711 | 1725 | 0 |
| Fl _t Permitted | | 0.575 | | 0.518 | | | 0.363 | | | 0.204 | | |
| Satd. Flow (perm) | 0 | 1066 | 0 | 965 | 1828 | 0 | 654 | 1801 | 1636 | 367 | 1725 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 16 | | | 49 | | | | 209 | | | 21 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 189 | 83 | 102 | 295 | 104 | 118 | 54 | 490 | 209 | 115 | 430 | 165 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 374 | 0 | 295 | 222 | 0 | 54 | 490 | 209 | 115 | 595 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | |
| Total Split (s) | 33.0 | 33.0 | | 33.0 | 33.0 | | 35.0 | 35.0 | 35.0 | 16.0 | 51.0 | |
| Total Split (%) | 30.0% | 30.0% | | 30.0% | 30.0% | | 31.8% | 31.8% | 31.8% | 14.5% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | Max | Max | | None | None | | C-Max | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | | 27.0 | | 27.0 | 27.0 | | 40.7 | 40.7 | 40.7 | 55.4 | 55.4 | |
| Actuated g/C Ratio | | 0.25 | | 0.25 | 0.25 | | 0.37 | 0.37 | 0.37 | 0.50 | 0.50 | |
| v/c Ratio | | 1.37 | | 1.25 | 0.46 | | 0.22 | 0.74 | 0.28 | 0.40 | 0.68 | |
| Control Delay | | 220.8 | | 179.1 | 30.7 | | 34.0 | 42.2 | 5.5 | 22.3 | 28.1 | |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 220.8 | | 179.1 | 30.7 | | 34.0 | 42.2 | 5.5 | 22.3 | 28.1 | |
| LOS | | F | | F | C | | C | D | A | C | C | |
| Approach Delay | | 220.8 | | | 115.4 | | | 31.4 | | | 27.1 | |
| Approach LOS | | F | | | F | | | C | | | C | |
| Queue Length 50th (ft) | | ~343 | | ~260 | 103 | | 31 | ~372 | 0 | 51 | 358 | |

101: Maplewood Ave & Deer St
 2022 Build Saturday Midday

| | |
|---------------------------|------|
| Lane Group | Ø9 |
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Fr _t | |
| Fl _t Protected | |
| Satd. Flow (prot) | |
| Fl _t Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Peak Hour Factor | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 26.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 24% |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |
| Queue Length 50th (ft) | |

101: Maplewood Ave & Deer St
 2022 Build Saturday Midday

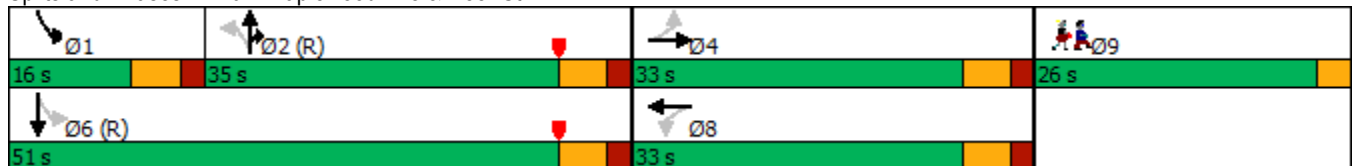


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | | #332 | | #337 | 140 | | 67 | #544 | 50 | 81 | 441 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 273 | | 236 | 485 | | 241 | 665 | 736 | 307 | 879 | |
| Starvation Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 1.37 | | 1.25 | 0.46 | | 0.22 | 0.74 | 0.28 | 0.37 | 0.68 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay: 78.6
 Intersection LOS: E
 Intersection Capacity Utilization 81.4%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



101: Maplewood Ave & Deer St
2022 Build Saturday Midday

| | |
|-------------------------|----|
| Lane Group | Ø9 |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |
| Intersection Summary | |

201: Maplewood Ave & Raynes Ave
 2022 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↘ | ↗ | ↑ | | | ↑ |
| Traffic Vol, veh/h | 126 | 84 | 485 | 0 | 0 | 628 |
| Future Vol, veh/h | 126 | 84 | 485 | 0 | 0 | 628 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 50 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 81 | 81 | 91 | 91 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 156 | 104 | 533 | 0 | 0 | 683 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1216 | 533 | 0 | - | - | - |
| Stage 1 | 533 | - | - | - | - | - |
| Stage 2 | 683 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | 200 | 547 | - | 0 | 0 | - |
| Stage 1 | 588 | - | - | 0 | 0 | - |
| Stage 2 | 502 | - | - | 0 | 0 | - |
| Platoon blocked, % | | | - | | | - |
| Mov Cap-1 Maneuver | 200 | 547 | - | - | - | - |
| Mov Cap-2 Maneuver | 200 | - | - | - | - | - |
| Stage 1 | 588 | - | - | - | - | - |
| Stage 2 | 502 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 45.3 | 0 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBTWBLn1 | WBLn2 | SBT |
|-----------------------|----------|-------|------|
| Capacity (veh/h) | - | 200 | 547 |
| HCM Lane V/C Ratio | - | 0.778 | 0.19 |
| HCM Control Delay (s) | - | 66.8 | 13.1 |
| HCM Lane LOS | - | F | B |
| HCM 95th %tile Q(veh) | - | 5.3 | 0.7 |

202: Maplewood Ave & Vaughan St
 2022 Build Saturday Midday



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|-----------------------------------|------|------|-------|------|----------------------|------|
| Lane Configurations | | | ↔ | | | ↔ |
| Traffic Volume (veh/h) | 0 | 0 | 484 | 95 | 133 | 617 |
| Future Volume (Veh/h) | 0 | 0 | 484 | 95 | 133 | 617 |
| Sign Control | Stop | | Free | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.90 | 0.90 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 0 | 0 | 538 | 106 | 143 | 663 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | 231 | | | | | |
| pX, platoon unblocked | 0.77 | 0.77 | | | 0.77 | |
| vC, conflicting volume | 1540 | 591 | | | 644 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1552 | 321 | | | 390 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 100 | 100 | | | 84 | |
| cM capacity (veh/h) | 81 | 555 | | | 901 | |
| Direction, Lane # | NB 1 | SB 1 | | | | |
| Volume Total | 644 | 806 | | | | |
| Volume Left | 0 | 143 | | | | |
| Volume Right | 106 | 0 | | | | |
| cSH | 1700 | 901 | | | | |
| Volume to Capacity | 0.38 | 0.16 | | | | |
| Queue Length 95th (ft) | 0 | 14 | | | | |
| Control Delay (s) | 0.0 | 3.8 | | | | |
| Lane LOS | | | A | | | |
| Approach Delay (s) | 0.0 | 3.8 | | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 2.1 | | | |
| Intersection Capacity Utilization | | | 77.7% | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | |

203: Vaughan St & Green St
2022 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↘ | | | |
| Traffic Vol, veh/h | 0 | 80 | 173 | 64 | 0 | 0 |
| Future Vol, veh/h | 0 | 80 | 173 | 64 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 67 | 67 | 78 | 78 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 119 | 222 | 82 | 0 | 0 |

| Major/Minor | Minor1 | Major1 | | |
|----------------------|--------|--------|---|---|
| Conflicting Flow All | - | 263 | 0 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | 6.22 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | 3.318 | - | - |
| Pot Cap-1 Maneuver | 0 | 776 | - | - |
| Stage 1 | 0 | - | - | - |
| Stage 2 | 0 | - | - | - |
| Platoon blocked, % | | | - | - |
| Mov Cap-1 Maneuver | - | 776 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | WB | NB |
|----------------------|------|----|
| HCM Control Delay, s | 10.5 | 0 |
| HCM LOS | B | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 |
|-----------------------|-----|----------|
| Capacity (veh/h) | - | - 776 |
| HCM Lane V/C Ratio | - | - 0.154 |
| HCM Control Delay (s) | - | - 10.5 |
| HCM Lane LOS | - | - B |
| HCM 95th %tile Q(veh) | - | - 0.5 |

204: Deer St & Russell St
2022 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 235 | 77 | 94 | 63 | 39 | 357 |
| Future Vol, veh/h | 235 | 77 | 94 | 63 | 39 | 357 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 81 | 81 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 258 | 85 | 116 | 78 | 44 | 401 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 194 | 0 | - | 0 | 756 155 |
| Stage 1 | - | - | - | - | 155 - |
| Stage 2 | - | - | - | - | 601 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1379 | - | - | - | 376 891 |
| Stage 1 | - | - | - | - | 873 - |
| Stage 2 | - | - | - | - | 547 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1379 | - | - | - | 302 891 |
| Mov Cap-2 Maneuver | - | - | - | - | 302 - |
| Stage 1 | - | - | - | - | 702 - |
| Stage 2 | - | - | - | - | 547 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.2 | 0 | 16.7 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1379 | - | - | - | 747 |
| HCM Lane V/C Ratio | 0.187 | - | - | - | 0.596 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 16.7 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.7 | - | - | - | 4 |

205: Russell St & Green St
2022 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 60 | 4 | 6 | 292 | 326 | 75 |
| Future Vol, veh/h | 60 | 4 | 6 | 292 | 326 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 75 | 75 | 83 | 83 | 93 | 93 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 80 | 5 | 7 | 352 | 351 | 81 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 758 | 392 | 432 | 0 | - | 0 |
| Stage 1 | 392 | - | - | - | - | - |
| Stage 2 | 366 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 375 | 657 | 1128 | - | - | - |
| Stage 1 | 683 | - | - | - | - | - |
| Stage 2 | 702 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 372 | 657 | 1128 | - | - | - |
| Mov Cap-2 Maneuver | 372 | - | - | - | - | - |
| Stage 1 | 678 | - | - | - | - | - |
| Stage 2 | 702 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 17.1 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1128 | - | 382 | - | - |
| HCM Lane V/C Ratio | 0.006 | - | 0.223 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 17.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.8 | - | - |

206: Market St & Russell St
2022 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 22.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 334 | 18 | 0 | 255 | 442 | 402 |
| Future Vol, veh/h | 334 | 18 | 0 | 255 | 442 | 402 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 85 | 85 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 380 | 20 | 0 | 300 | 486 | 442 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 786 | 486 | - | 0 | - | 0 |
| Stage 1 | 486 | - | - | - | - | - |
| Stage 2 | 300 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 361 | 581 | 0 | - | - | - |
| Stage 1 | 618 | - | 0 | - | - | - |
| Stage 2 | 752 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 361 | 581 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 361 | - | - | - | - | - |
| Stage 1 | 618 | - | - | - | - | - |
| Stage 2 | 752 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 91.9 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 361 | 581 | - | - |
| HCM Lane V/C Ratio | - | 1.051 | 0.035 | - | - |
| HCM Control Delay (s) | - | 96.2 | 11.4 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 13.1 | 0.1 | - | - |

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

301: Raynes Ave & Site Driveway
 2022 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | ↔ | | | ↔ |
| Traffic Vol, veh/h | 0 | 0 | 123 | 108 | 0 | 87 |
| Future Vol, veh/h | 0 | 0 | 123 | 108 | 0 | 87 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 1 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 134 | 117 | 0 | 95 |

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

| Approach | WB | SB |
|----------------------|----|-----|
| HCM Control Delay, s | 0 | 9.8 |
| HCM LOS | | A |

| Minor Lane/Major Mvmt | WBT | WBR | SBLn1 |
|-----------------------|-----|-----|-------|
| Capacity (veh/h) | - | - | 849 |
| HCM Lane V/C Ratio | - | - | 0.111 |
| HCM Control Delay (s) | - | - | 9.8 |
| HCM Lane LOS | - | - | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 |

APPENDIX E

Capacity Analyses
2032 No Build Conditions

101: Maplewood Ave & Deer St
 2032 No Build Weekday PM Peak



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 360 | 190 | 121 | 360 | 167 | 86 | 64 | 537 | 243 | 77 | 431 | 199 |
| Future Volume (vph) | 360 | 190 | 121 | 360 | 167 | 86 | 64 | 537 | 243 | 77 | 431 | 199 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.942 | | | 0.949 | | | | 0.850 | | 0.953 | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1652 | 1813 | 0 | 1770 | 1886 | 0 | 1711 | 1801 | 1636 | 1711 | 1716 | 0 |
| Fl _t Permitted | 0.197 | | | 0.174 | | | 0.101 | | | 0.100 | | |
| Satd. Flow (perm) | 342 | 1813 | 0 | 324 | 1886 | 0 | 182 | 1801 | 1636 | 180 | 1716 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 27 | | | 21 | | | | 252 | | | 23 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 545 | 288 | 183 | 474 | 220 | 113 | 74 | 617 | 279 | 94 | 526 | 243 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 545 | 471 | 0 | 474 | 333 | 0 | 74 | 617 | 279 | 94 | 769 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Prot | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 20.0 | 25.0 | | 11.5 | 29.0 | 29.0 | 11.0 | 28.0 | |
| Total Split (s) | 25.0 | 32.0 | | 22.0 | 29.0 | | 11.5 | 45.0 | 45.0 | 11.0 | 45.0 | |
| Total Split (%) | 22.6% | 29.0% | | 19.9% | 26.2% | | 10.4% | 40.7% | 40.7% | 10.0% | 40.7% | |
| Yellow Time (s) | 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 | | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.5 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | Max | | None | None | | None | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | 45.0 | 26.0 | | 39.0 | 23.0 | | 44.0 | 39.5 | 39.5 | 45.3 | 41.3 | |
| Actuated g/C Ratio | 0.41 | 0.24 | | 0.35 | 0.21 | | 0.40 | 0.36 | 0.36 | 0.41 | 0.37 | |
| v/c Ratio | 1.50 | 1.05 | | 1.47 | 0.81 | | 0.52 | 0.96 | 0.37 | 0.66 | 1.17 | |
| Control Delay | 263.1 | 96.7 | | 253.6 | 56.0 | | 31.6 | 62.5 | 5.9 | 42.2 | 126.1 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 263.1 | 96.7 | | 253.6 | 56.0 | | 31.6 | 62.5 | 5.9 | 42.2 | 126.1 | |
| LOS | F | F | | F | E | | C | E | A | D | F | |
| Approach Delay | | 185.9 | | | 172.1 | | | 43.9 | | | 116.9 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Queue Length 50th (ft) | ~480 | ~351 | | ~414 | 213 | | 29 | 424 | 12 | 37 | ~672 | |

101: Maplewood Ave & Deer St
 2032 No Build Weekday PM Peak

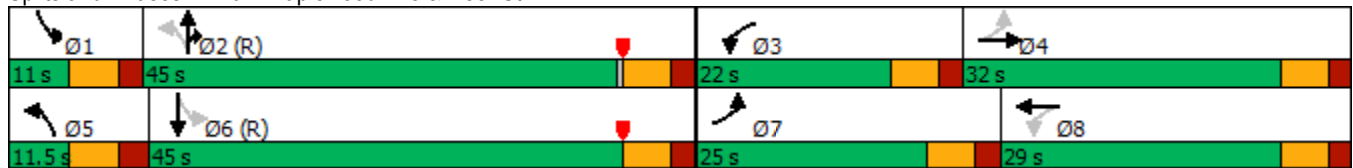


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | #418 | 301 | | #476 | 256 | | 56 | #619 | 62 | #72 | #785 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 364 | 447 | | 323 | 409 | | 141 | 643 | 746 | 142 | 655 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.50 | 1.05 | | 1.47 | 0.81 | | 0.52 | 0.96 | 0.37 | 0.66 | 1.17 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110.5
 Actuated Cycle Length: 110.5
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.50
 Intersection Signal Delay: 128.9 Intersection LOS: F
 Intersection Capacity Utilization 96.7% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



201: Maplewood Ave & Raynes Ave
 2032 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 47.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Y | | B | | | A |
| Traffic Vol, veh/h | 36 | 152 | 849 | 28 | 103 | 646 |
| Future Vol, veh/h | 36 | 152 | 849 | 28 | 103 | 646 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 45 | 190 | 1061 | 35 | 116 | 726 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 2037 | 1079 | 0 | 0 | 1096 |
| Stage 1 | 1079 | - | - | - | - |
| Stage 2 | 958 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 62 | 265 | - | - | 637 |
| Stage 1 | 326 | - | - | - | - |
| Stage 2 | 373 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 43 | 265 | - | - | 637 |
| Mov Cap-2 Maneuver | ~ 43 | - | - | - | - |
| Stage 1 | 326 | - | - | - | - |
| Stage 2 | 259 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 431.1 | 0 | 1.6 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 133 | 637 |
| HCM Lane V/C Ratio | - | - | 1.767 | 0.182 |
| HCM Control Delay (s) | - | - | 431.1 | 11.9 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 17.7 | 0.7 |

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

202: Maplewood Ave & Vaughan St
 2032 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 46.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | R | T | R | L | T |
| Traffic Vol, veh/h | 90 | 33 | 848 | 78 | 20 | 677 |
| Future Vol, veh/h | 90 | 33 | 848 | 78 | 20 | 677 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 120 | 44 | 1073 | 99 | 24 | 806 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1977 | 1123 | 0 | 0 | 1172 |
| Stage 1 | 1123 | - | - | - | - |
| Stage 2 | 854 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | ~ 68 | 250 | - | - | 596 |
| Stage 1 | 311 | - | - | - | - |
| Stage 2 | 417 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 63 | 250 | - | - | 596 |
| Mov Cap-2 Maneuver | ~ 63 | - | - | - | - |
| Stage 1 | 311 | - | - | - | - |
| Stage 2 | 387 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 610.7 | 0 | 0.3 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 79 | 596 |
| HCM Lane V/C Ratio | - | - | 2.076 | 0.04 |
| HCM Control Delay (s) | - | - | 610.7 | 11.3 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 14.8 | 0.1 |

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

203: Vaughan St & Green St
 2032 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | R | T | R | L | T |
| Traffic Vol, veh/h | 8 | 77 | 92 | 15 | 70 | 113 |
| Future Vol, veh/h | 8 | 77 | 92 | 15 | 70 | 113 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 83 | 114 | 19 | 115 | 185 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 539 | 124 | 0 | 0 | 133 |
| Stage 1 | 124 | - | - | - | - |
| Stage 2 | 415 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 503 | 927 | - | - | 1452 |
| Stage 1 | 902 | - | - | - | - |
| Stage 2 | 666 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 459 | 927 | - | - | 1452 |
| Mov Cap-2 Maneuver | 459 | - | - | - | - |
| Stage 1 | 902 | - | - | - | - |
| Stage 2 | 607 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.8 | 0 | 2.9 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 846 | 1452 |
| HCM Lane V/C Ratio | - | - | 0.108 | 0.079 |
| HCM Control Delay (s) | - | - | 9.8 | 7.7 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0.3 |

204: Deer St & Russell St
 2032 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 46.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Vol, veh/h | 422 | 61 | 75 | 52 | 46 | 631 |
| Future Vol, veh/h | 422 | 61 | 75 | 52 | 46 | 631 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 469 | 68 | 85 | 59 | 51 | 701 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 144 | 0 | - | 0 | 1121 115 |
| Stage 1 | - | - | - | - | 115 - |
| Stage 2 | - | - | - | - | 1006 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1438 | - | - | - | 228 937 |
| Stage 1 | - | - | - | - | 910 - |
| Stage 2 | - | - | - | - | 353 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1438 | - | - | - | 151 937 |
| Mov Cap-2 Maneuver | - | - | - | - | 151 - |
| Stage 1 | - | - | - | - | 602 - |
| Stage 2 | - | - | - | - | 353 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.6 | 0 | 83.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1438 | - | - | - | 692 |
| HCM Lane V/C Ratio | 0.326 | - | - | - | 1.087 |
| HCM Control Delay (s) | 8.7 | 0 | - | - | 83.9 |
| HCM Lane LOS | A | A | - | - | F |
| HCM 95th %tile Q(veh) | 1.4 | - | - | - | 21 |

205: Russell St & Green St
 2032 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | | T | | T |
| Traffic Vol, veh/h | 80 | 8 | 8 | 499 | 608 | 80 |
| Future Vol, veh/h | 80 | 8 | 8 | 499 | 608 | 80 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 138 | 14 | 9 | 587 | 724 | 95 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1377 | 772 | 819 | 0 | - | 0 |
| Stage 1 | 772 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 160 | 400 | 810 | - | - | - |
| Stage 1 | 456 | - | - | - | - | - |
| Stage 2 | 545 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 157 | 400 | 810 | - | - | - |
| Mov Cap-2 Maneuver | 157 | - | - | - | - | - |
| Stage 1 | 449 | - | - | - | - | - |
| Stage 2 | 545 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|-----|----|
| HCM Control Delay, s | 103.7 | 0.1 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 810 | - | 166 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.914 | - | - |
| HCM Control Delay (s) | 9.5 | 0 | 103.7 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 6.7 | - | - |

206: Market St & Russell St
 2032 No Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 251 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 548 | 8 | 0 | 505 | 361 | 653 |
| Future Vol, veh/h | 548 | 8 | 0 | 505 | 361 | 653 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 677 | 10 | 0 | 711 | 430 | 777 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1141 | 430 | - | 0 | - | 0 |
| Stage 1 | 430 | - | - | - | - | - |
| Stage 2 | 711 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 222 | 625 | 0 | - | - | - |
| Stage 1 | ~ 656 | - | 0 | - | - | - |
| Stage 2 | ~ 487 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 222 | 625 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 222 | - | - | - | - | - |
| Stage 1 | ~ 656 | - | - | - | - | - |
| Stage 2 | ~ 487 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 952.4 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|----------|-------|-----|-----|
| Capacity (veh/h) | - | 222 | 625 | - | - |
| HCM Lane V/C Ratio | - | 3.047 | 0.016 | - | - |
| HCM Control Delay (s) | - | \$ 966.1 | 10.9 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 61 | 0 | - | - |

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

101: Maplewood Ave & Deer St
2032 No Build Saturday Midday



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 128 | 57 | 68 | 238 | 82 | 95 | 48 | 422 | 198 | 101 | 357 | 137 |
| Future Volume (vph) | 128 | 57 | 68 | 238 | 82 | 95 | 48 | 422 | 198 | 101 | 357 | 137 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.918 | | | 0.920 | | | | 0.850 | | 0.958 | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1652 | 1767 | 0 | 1770 | 1828 | 0 | 1711 | 1801 | 1636 | 1711 | 1725 | 0 |
| Fl _t Permitted | 0.527 | | | 0.609 | | | 0.250 | | | 0.302 | | |
| Satd. Flow (perm) | 916 | 1767 | 0 | 1134 | 1828 | 0 | 450 | 1801 | 1636 | 544 | 1725 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 52 | | | 51 | | | | 220 | | | 21 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.78 | 0.78 | 0.78 | 0.86 | 0.86 | 0.86 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 164 | 73 | 87 | 277 | 95 | 110 | 53 | 469 | 220 | 111 | 392 | 151 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 164 | 160 | 0 | 277 | 205 | 0 | 53 | 469 | 220 | 111 | 543 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Prot | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 10.0 | 29.0 | | 11.0 | 29.0 | 29.0 | 11.0 | 28.0 | |
| Total Split (s) | 14.0 | 34.0 | | 14.0 | 34.0 | | 11.0 | 51.0 | 51.0 | 11.0 | 51.0 | |
| Total Split (%) | 12.7% | 30.9% | | 12.7% | 30.9% | | 10.0% | 46.4% | 46.4% | 10.0% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | Max | | None | None | | None | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | 36.0 | 28.0 | | 36.0 | 28.0 | | 50.0 | 45.0 | 45.0 | 51.2 | 47.2 | |
| Actuated g/C Ratio | 0.33 | 0.25 | | 0.33 | 0.25 | | 0.45 | 0.41 | 0.41 | 0.47 | 0.43 | |
| v/c Ratio | 0.46 | 0.33 | | 0.66 | 0.41 | | 0.20 | 0.64 | 0.28 | 0.36 | 0.72 | |
| Control Delay | 29.3 | 24.3 | | 36.7 | 28.1 | | 15.8 | 30.8 | 3.7 | 18.4 | 32.4 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 29.3 | 24.3 | | 36.7 | 28.1 | | 15.8 | 30.8 | 3.7 | 18.4 | 32.4 | |
| LOS | C | C | | D | C | | B | C | A | B | C | |
| Approach Delay | | 26.8 | | | 33.0 | | | 21.7 | | | 30.1 | |
| Approach LOS | | C | | | C | | | C | | | C | |
| Queue Length 50th (ft) | 78 | 61 | | 142 | 89 | | 18 | 260 | 0 | 40 | 311 | |

101: Maplewood Ave & Deer St
 2032 No Build Saturday Midday

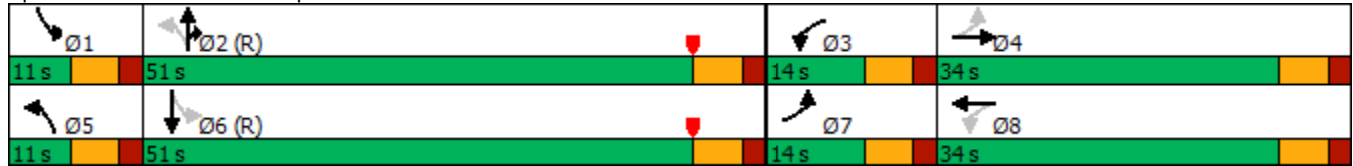


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | 110 | 97 | | 204 | 149 | | 39 | 374 | 46 | 71 | 451 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 353 | 488 | | 417 | 503 | | 261 | 736 | 799 | 306 | 752 | |
| 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 | 0.46 | 0.33 | | 0.66 | 0.41 | | 0.20 | 0.64 | 0.28 | 0.36 | 0.72 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow |
| Natural Cycle: | 80 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 27.4 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 71.6% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 101: Maplewood Ave & Deer St



201: Maplewood Ave & Raynes Ave
 2032 No Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | Y | | B | | | A |
| Traffic Vol, veh/h | 23 | 56 | 525 | 12 | 44 | 592 |
| Future Vol, veh/h | 23 | 56 | 525 | 12 | 44 | 592 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 81 | 81 | 91 | 91 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 28 | 69 | 577 | 13 | 48 | 643 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1323 | 584 | 0 | 0 | 590 |
| Stage 1 | 584 | - | - | - | - |
| Stage 2 | 739 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 172 | 512 | - | - | 985 |
| Stage 1 | 557 | - | - | - | - |
| Stage 2 | 472 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 159 | 512 | - | - | 985 |
| Mov Cap-2 Maneuver | 159 | - | - | - | - |
| Stage 1 | 557 | - | - | - | - |
| Stage 2 | 436 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 21.8 | 0 | 0.6 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 311 | 985 |
| HCM Lane V/C Ratio | - | - | 0.314 | 0.049 |
| HCM Control Delay (s) | - | - | 21.8 | 8.8 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 1.3 | 0.2 |

202: Maplewood Ave & Vaughan St
 2032 No Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 26 | 5 | 532 | 51 | 7 | 604 |
| Future Vol, veh/h | 26 | 5 | 532 | 51 | 7 | 604 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 88 | 88 | 90 | 90 | 93 | 93 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 30 | 6 | 591 | 57 | 8 | 649 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 1285 | 620 | 0 | 0 | 648 | 0 |
| Stage 1 | 620 | - | - | - | - | - |
| Stage 2 | 665 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 182 | 488 | - | - | 938 | - |
| Stage 1 | 536 | - | - | - | - | - |
| Stage 2 | 511 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 180 | 488 | - | - | 938 | - |
| Mov Cap-2 Maneuver | 180 | - | - | - | - | - |
| Stage 1 | 536 | - | - | - | - | - |
| Stage 2 | 504 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 26.8 | 0 | 0.1 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 200 | 938 |
| HCM Lane V/C Ratio | - | - | 0.176 | 0.008 |
| HCM Control Delay (s) | - | - | 26.8 | 8.9 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 0.6 | 0 |

203: Vaughan St & Green St
 2032 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 8 | 38 | 62 | 9 | 28 | 38 |
| Future Vol, veh/h | 8 | 38 | 62 | 9 | 28 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 67 | 67 | 78 | 78 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 57 | 79 | 12 | 31 | 42 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 189 | 85 | 0 | 0 | 91 |
| Stage 1 | 85 | - | - | - | - |
| Stage 2 | 104 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 800 | 974 | - | - | 1504 |
| Stage 1 | 938 | - | - | - | - |
| Stage 2 | 920 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 783 | 974 | - | - | 1504 |
| Mov Cap-2 Maneuver | 783 | - | - | - | - |
| Stage 1 | 938 | - | - | - | - |
| Stage 2 | 901 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.2 | 0 | 3.2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 934 | 1504 |
| HCM Lane V/C Ratio | - | - | 0.074 | 0.02 |
| HCM Control Delay (s) | - | - | 9.2 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

204: Deer St & Russell St
 2032 No Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 250 | 85 | 103 | 65 | 40 | 375 |
| Future Vol, veh/h | 250 | 85 | 103 | 65 | 40 | 375 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 81 | 81 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 275 | 93 | 127 | 80 | 45 | 421 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|-------|-------|
| Conflicting Flow All | 207 | 0 | 0 | 810 | 167 |
| Stage 1 | - | - | - | 167 | - |
| Stage 2 | - | - | - | 643 | - |
| Critical Hdwy | 4.12 | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1364 | - | - | 349 | 877 |
| Stage 1 | - | - | - | 863 | - |
| Stage 2 | - | - | - | 523 | - |
| Platoon blocked, % | | - | - | | |
| Mov Cap-1 Maneuver | 1364 | - | - | 275 | 877 |
| Mov Cap-2 Maneuver | - | - | - | 275 | - |
| Stage 1 | - | - | - | 679 | - |
| Stage 2 | - | - | - | 523 | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.2 | 0 | 18.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1364 | - | - | - | 724 |
| HCM Lane V/C Ratio | 0.201 | - | - | - | 0.644 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 18.5 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.8 | - | - | - | 4.7 |

205: Russell St & Green St
 2032 No Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 33 | 4 | 7 | 309 | 344 | 41 |
| Future Vol, veh/h | 33 | 4 | 7 | 309 | 344 | 41 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 75 | 75 | 83 | 83 | 93 | 93 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 44 | 5 | 8 | 372 | 370 | 44 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 780 | 392 | 414 | 0 | - | 0 |
| Stage 1 | 392 | - | - | - | - | - |
| Stage 2 | 388 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 364 | 657 | 1145 | - | - | - |
| Stage 1 | 683 | - | - | - | - | - |
| Stage 2 | 686 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 361 | 657 | 1145 | - | - | - |
| Mov Cap-2 Maneuver | 361 | - | - | - | - | - |
| Stage 1 | 677 | - | - | - | - | - |
| Stage 2 | 686 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.9 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1145 | - | 379 | - | - |
| HCM Lane V/C Ratio | 0.007 | - | 0.13 | - | - |
| HCM Control Delay (s) | 8.2 | 0 | 15.9 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.4 | - | - |

206: Market St & Russell St
 2032 No Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 28.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 323 | 20 | 0 | 281 | 489 | 385 |
| Future Vol, veh/h | 323 | 20 | 0 | 281 | 489 | 385 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 85 | 85 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 367 | 23 | 0 | 331 | 537 | 423 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 868 | 537 | - | 0 | - | 0 |
| Stage 1 | 537 | - | - | - | - | - |
| Stage 2 | 331 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 323 | 544 | 0 | - | - | - |
| Stage 1 | 586 | - | 0 | - | - | - |
| Stage 2 | 728 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 323 | 544 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 323 | - | - | - | - | - |
| Stage 1 | 586 | - | - | - | - | - |
| Stage 2 | 728 | - | - | - | - | - |























| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 121.5 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 323 | 544 | - | - |
| HCM Lane V/C Ratio | - | 1.136 | 0.042 | - | - |
| HCM Control Delay (s) | - | 128.3 | 11.9 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 14.8 | 0.1 | - | - |

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

APPENDIX E
Capacity Analyses
2032 Build Conditions

101: Maplewood Ave & Deer St
 2032 Build Weekday PM Peak

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 360 | 190 | 121 | 360 | 167 | 86 | 64 | 557 | 243 | 77 | 445 | 199 |
| Future Volume (vph) | 360 | 190 | 121 | 360 | 167 | 86 | 64 | 557 | 243 | 77 | 445 | 199 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.942 | | | 0.949 | | | | 0.850 | | 0.954 | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1652 | 1813 | 0 | 1770 | 1886 | 0 | 1711 | 1801 | 1636 | 1711 | 1718 | 0 |
| Fl _t Permitted | 0.199 | | | 0.174 | | | 0.103 | | | 0.100 | | |
| Satd. Flow (perm) | 346 | 1813 | 0 | 324 | 1886 | 0 | 185 | 1801 | 1636 | 180 | 1718 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 27 | | | 21 | | | | 243 | | | 23 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 545 | 288 | 183 | 474 | 220 | 113 | 74 | 640 | 279 | 94 | 543 | 243 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 545 | 471 | 0 | 474 | 333 | 0 | 74 | 640 | 279 | 94 | 786 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Prot | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 29.0 | 29.0 | 11.0 | 28.0 | |
| Total Split (s) | 25.0 | 32.0 | | 22.0 | 29.0 | | 11.0 | 45.0 | 45.0 | 11.0 | 45.0 | |
| Total Split (%) | 22.7% | 29.1% | | 20.0% | 26.4% | | 10.0% | 40.9% | 40.9% | 10.0% | 40.9% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | Max | | None | None | | None | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | 45.0 | 26.0 | | 39.0 | 23.0 | | 44.0 | 39.0 | 39.0 | 45.2 | 41.2 | |
| Actuated g/C Ratio | 0.41 | 0.24 | | 0.35 | 0.21 | | 0.40 | 0.35 | 0.35 | 0.41 | 0.37 | |
| v/c Ratio | 1.49 | 1.05 | | 1.46 | 0.81 | | 0.52 | 1.00 | 0.38 | 0.66 | 1.20 | |
| Control Delay | 257.6 | 95.1 | | 249.7 | 55.6 | | 30.8 | 72.7 | 6.5 | 41.8 | 134.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 257.6 | 95.1 | | 249.7 | 55.6 | | 30.8 | 72.7 | 6.5 | 41.8 | 134.7 | |
| LOS | F | F | | F | E | | C | E | A | D | F | |
| Approach Delay | | 182.3 | | | 169.6 | | | 51.0 | | | 124.7 | |
| Approach LOS | | F | | | F | | | D | | | F | |
| Queue Length 50th (ft) | ~475 | ~348 | | ~411 | 212 | | 29 | ~450 | 17 | 37 | ~691 | |

101: Maplewood Ave & Deer St
 2032 Build Weekday PM Peak

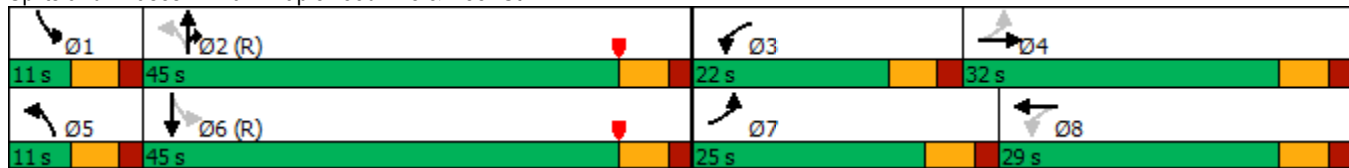


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | #415 | 300 | | #474 | 255 | | 55 | #655 | 67 | #71 | #804 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 367 | 449 | | 325 | 410 | | 143 | 638 | 736 | 143 | 657 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.49 | 1.05 | | 1.46 | 0.81 | | 0.52 | 1.00 | 0.38 | 0.66 | 1.20 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.49
 Intersection Signal Delay: 130.5 Intersection LOS: F
 Intersection Capacity Utilization 97.0% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



201: Maplewood Ave & Raynes Ave
 2032 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 145.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↘ | ↗ | ↑ | | | ↑ |
| Traffic Vol, veh/h | 216 | 201 | 816 | 0 | 0 | 773 |
| Future Vol, veh/h | 216 | 201 | 816 | 0 | 0 | 773 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 50 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 270 | 251 | 1020 | 0 | 0 | 869 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1889 | 1020 | 0 | - | - | - |
| Stage 1 | 1020 | - | - | - | - | - |
| Stage 2 | 869 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 77 | 287 | - | 0 | 0 | - |
| Stage 1 | 348 | - | - | 0 | 0 | - |
| Stage 2 | 410 | - | - | 0 | 0 | - |
| Platoon blocked, % | | | - | | | - |
| Mov Cap-1 Maneuver | ~ 77 | 287 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 77 | - | - | - | - | - |
| Stage 1 | 348 | - | - | - | - | - |
| Stage 2 | 410 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----------|----|----|
| HCM Control Delay, s | \$ 674.6 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBTWBLn1 | WBLn2 | SBT |
|-----------------------|----------|--------|-------|
| Capacity (veh/h) | - | 77 | 287 |
| HCM Lane V/C Ratio | - | 3.506 | 0.875 |
| HCM Control Delay (s) | \$ | 1241.7 | 65.2 |
| HCM Lane LOS | - | F | F |
| HCM 95th %tile Q(veh) | - | 27.8 | 7.7 |

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

202: Maplewood Ave & Vaughan St
 2032 Build Weekday PM Peak



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|-----------------------------------|-------------|-------------|--------|----------------------|------|------|
| Lane Configurations | | | ↔ | | | ↔ |
| Traffic Volume (veh/h) | 0 | 0 | 820 | 126 | 215 | 789 |
| Future Volume (Veh/h) | 0 | 0 | 820 | 126 | 215 | 789 |
| Sign Control | Stop | | Free | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.79 | 0.79 | 0.84 | 0.84 |
| Hourly flow rate (vph) | 0 | 0 | 1038 | 159 | 256 | 939 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | 231 | | | | | |
| pX, platoon unblocked | 0.42 | 0.42 | | | 0.42 | |
| vC, conflicting volume | 2568 | 1118 | | | 1197 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 4020 | 598 | | | 786 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 100 | 100 | | | 28 | |
| cM capacity (veh/h) | 0 | 213 | | | 353 | |
| Direction, Lane # | NB 1 | SB 1 | | | | |
| Volume Total | 1197 | 1195 | | | | |
| Volume Left | 0 | 256 | | | | |
| Volume Right | 159 | 0 | | | | |
| cSH | 1700 | 353 | | | | |
| Volume to Capacity | 0.70 | 0.72 | | | | |
| Queue Length 95th (ft) | 0 | 136 | | | | |
| Control Delay (s) | 0.0 | 37.8 | | | | |
| Lane LOS | E | | | | | |
| Approach Delay (s) | 0.0 | 37.8 | | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 18.9 | | | |
| Intersection Capacity Utilization | | | 110.9% | ICU Level of Service | H | |
| Analysis Period (min) | | | 15 | | | |

203: Vaughan St & Green St
 2032 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|-------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↘ | | | |
| Traffic Vol, veh/h | 0 | 107 | 274 | 100 | 0 | 0 |
| Future Vol, veh/h | 0 | 107 | 274 | 100 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 16979 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 115 | 338 | 123 | 0 | 0 |

| Major/Minor | Minor1 | Major1 | | |
|----------------------|--------|--------|---|---|
| Conflicting Flow All | - | 400 | 0 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | 6.22 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | 3.318 | - | - |
| Pot Cap-1 Maneuver | 0 | 650 | - | - |
| Stage 1 | 0 | - | - | - |
| Stage 2 | 0 | - | - | - |
| Platoon blocked, % | | | - | - |
| Mov Cap-1 Maneuver | - | 650 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | WB | NB |
|----------------------|------|----|
| HCM Control Delay, s | 11.7 | 0 |
| HCM LOS | B | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 |
|-----------------------|-----|----------|
| Capacity (veh/h) | - | 650 |
| HCM Lane V/C Ratio | - | 0.177 |
| HCM Control Delay (s) | - | 11.7 |
| HCM Lane LOS | - | B |
| HCM 95th %tile Q(veh) | - | 0.6 |

204: Deer St & Russell St
2032 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 46.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 422 | 61 | 75 | 52 | 46 | 631 |
| Future Vol, veh/h | 422 | 61 | 75 | 52 | 46 | 631 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 469 | 68 | 85 | 59 | 51 | 701 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 144 | 0 | - | 0 | 1121 115 |
| Stage 1 | - | - | - | - | 115 - |
| Stage 2 | - | - | - | - | 1006 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1438 | - | - | - | 228 937 |
| Stage 1 | - | - | - | - | 910 - |
| Stage 2 | - | - | - | - | 353 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1438 | - | - | - | 151 937 |
| Mov Cap-2 Maneuver | - | - | - | - | 151 - |
| Stage 1 | - | - | - | - | 602 - |
| Stage 2 | - | - | - | - | 353 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.6 | 0 | 83.9 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1438 | - | - | - | 692 |
| HCM Lane V/C Ratio | 0.326 | - | - | - | 1.087 |
| HCM Control Delay (s) | 8.7 | 0 | - | - | 83.9 |
| HCM Lane LOS | A | A | - | - | F |
| HCM 95th %tile Q(veh) | 1.4 | - | - | - | 21 |

205: Russell St & Green St
2032 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 17.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 96 | 8 | 8 | 499 | 608 | 102 |
| Future Vol, veh/h | 96 | 8 | 8 | 499 | 608 | 102 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 166 | 14 | 9 | 587 | 724 | 121 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1390 | 785 | 845 | 0 | - | 0 |
| Stage 1 | 785 | - | - | - | - | - |
| Stage 2 | 605 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | ~ 157 | 393 | 792 | - | - | - |
| Stage 1 | 449 | - | - | - | - | - |
| Stage 2 | 545 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 154 | 393 | 792 | - | - | - |
| Mov Cap-2 Maneuver | ~ 154 | - | - | - | - | - |
| Stage 1 | 441 | - | - | - | - | - |
| Stage 2 | 545 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|-----|----|
| HCM Control Delay, s | 159.2 | 0.2 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 792 | - | 162 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 1.107 | - | - |
| HCM Control Delay (s) | 9.6 | 0 | 159.2 | - | - |
| HCM Lane LOS | A | A | F | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 9.4 | - | - |

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

206: Market St & Russell St
2032 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 264.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | ↗ |
| Traffic Vol, veh/h | 564 | 8 | 0 | 505 | 361 | 675 |
| Future Vol, veh/h | 564 | 8 | 0 | 505 | 361 | 675 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 696 | 10 | 0 | 711 | 430 | 804 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1141 | 430 | - | 0 | - | 0 |
| Stage 1 | 430 | - | - | - | - | - |
| Stage 2 | 711 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 222 | 625 | 0 | - | - | - |
| Stage 1 | ~ 656 | - | 0 | - | - | - |
| Stage 2 | ~ 487 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 222 | 625 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 222 | - | - | - | - | - |
| Stage 1 | ~ 656 | - | - | - | - | - |
| Stage 2 | ~ 487 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|--------|----|----|
| HCM Control Delay, s | \$ 992 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|--------|-------|-----|-----|
| Capacity (veh/h) | - | 222 | 625 | - | - |
| HCM Lane V/C Ratio | - | 3.136 | 0.016 | - | - |
| HCM Control Delay (s) | \$ | 1005.9 | 10.9 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 63.4 | 0 | - | - |

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

301: Raynes Ave & Site Driveway
 2032 Build Weekday PM Peak

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | ↶ | | | ↷ |
| Traffic Vol, veh/h | 0 | 0 | 366 | 71 | 0 | 51 |
| Future Vol, veh/h | 0 | 0 | 366 | 71 | 0 | 51 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 398 | 77 | 0 | 55 |

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

| Approach | WB | SB |
|----------------------|----|------|
| HCM Control Delay, s | 0 | 11.4 |
| HCM LOS | | B |

| Minor Lane/Major Mvmt | WBT | WBR | SBLn1 |
|-----------------------|-----|-----|-------|
| Capacity (veh/h) | - | - | 620 |
| HCM Lane V/C Ratio | - | - | 0.089 |
| HCM Control Delay (s) | - | - | 11.4 |
| HCM Lane LOS | - | - | B |
| HCM 95th %tile Q(veh) | - | - | 0.3 |

101: Maplewood Ave & Deer St
 2032 Build Saturday Midday

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 128 | 57 | 68 | 238 | 82 | 95 | 48 | 458 | 198 | 101 | 386 | 137 |
| Future Volume (vph) | 128 | 57 | 68 | 238 | 82 | 95 | 48 | 458 | 198 | 101 | 386 | 137 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.918 | | | 0.920 | | | | 0.850 | | 0.961 | |
| Fl _t Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1652 | 1767 | 0 | 1770 | 1828 | 0 | 1711 | 1801 | 1636 | 1711 | 1730 | 0 |
| Fl _t Permitted | 0.527 | | | 0.609 | | | 0.219 | | | 0.263 | | |
| Satd. Flow (perm) | 916 | 1767 | 0 | 1134 | 1828 | 0 | 394 | 1801 | 1636 | 474 | 1730 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 52 | | | 51 | | | | 220 | | | 20 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.78 | 0.78 | 0.78 | 0.86 | 0.86 | 0.86 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 164 | 73 | 87 | 277 | 95 | 110 | 53 | 509 | 220 | 111 | 424 | 151 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 164 | 160 | 0 | 277 | 205 | 0 | 53 | 509 | 220 | 111 | 575 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Prot | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 29.0 | 29.0 | 11.0 | 28.0 | |
| Total Split (s) | 14.0 | 34.0 | | 14.0 | 34.0 | | 11.0 | 51.0 | 51.0 | 11.0 | 51.0 | |
| Total Split (%) | 12.7% | 30.9% | | 12.7% | 30.9% | | 10.0% | 46.4% | 46.4% | 10.0% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | Max | | None | None | | None | C-Max | C-Max | None | C-Max | |
| Act Effct Green (s) | 36.0 | 28.0 | | 36.0 | 28.0 | | 50.0 | 45.0 | 45.0 | 51.2 | 47.2 | |
| Actuated g/C Ratio | 0.33 | 0.25 | | 0.33 | 0.25 | | 0.45 | 0.41 | 0.41 | 0.47 | 0.43 | |
| v/c Ratio | 0.46 | 0.33 | | 0.66 | 0.41 | | 0.22 | 0.69 | 0.28 | 0.40 | 0.76 | |
| Control Delay | 29.3 | 24.3 | | 36.7 | 28.1 | | 16.2 | 32.8 | 3.7 | 19.5 | 34.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 29.3 | 24.3 | | 36.7 | 28.1 | | 16.2 | 32.8 | 3.7 | 19.5 | 34.6 | |
| LOS | C | C | | D | C | | B | C | A | B | C | |
| Approach Delay | | 26.8 | | | 33.0 | | | 23.5 | | | 32.2 | |
| Approach LOS | | C | | | C | | | C | | | C | |
| Queue Length 50th (ft) | 78 | 61 | | 142 | 89 | | 18 | 291 | 0 | 40 | 340 | |

101: Maplewood Ave & Deer St
 2032 Build Saturday Middy

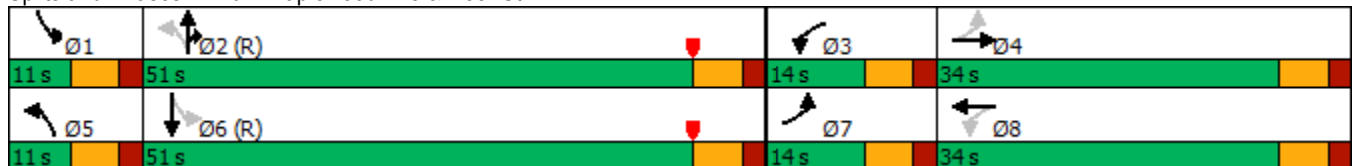


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Queue Length 95th (ft) | 110 | 97 | | 204 | 149 | | 39 | 416 | 46 | 71 | #494 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 353 | 488 | | 417 | 503 | | 238 | 736 | 799 | 276 | 753 | |
| 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 | 0.46 | 0.33 | | 0.66 | 0.41 | | 0.22 | 0.69 | 0.28 | 0.40 | 0.76 | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 28.6
 Intersection LOS: C
 Intersection Capacity Utilization 73.2%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 101: Maplewood Ave & Deer St



201: Maplewood Ave & Raynes Ave
 2032 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↘ | ↗ | ↑ | | | ↑ |
| Traffic Vol, veh/h | 130 | 89 | 520 | 0 | 0 | 670 |
| Future Vol, veh/h | 130 | 89 | 520 | 0 | 0 | 670 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 50 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 81 | 81 | 91 | 91 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 160 | 110 | 571 | 0 | 0 | 728 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1299 | 571 | 0 | - | - | - |
| Stage 1 | 571 | - | - | - | - | - |
| Stage 2 | 728 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | 178 | 520 | - | 0 | 0 | - |
| Stage 1 | 565 | - | - | 0 | 0 | - |
| Stage 2 | 478 | - | - | 0 | 0 | - |
| Platoon blocked, % | | | - | | | - |
| Mov Cap-1 Maneuver | 178 | 520 | - | - | - | - |
| Mov Cap-2 Maneuver | 178 | - | - | - | - | - |
| Stage 1 | 565 | - | - | - | - | - |
| Stage 2 | 478 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 62.8 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBTWBLn1 | WBLn2 | SBT |
|-----------------------|----------|-------------|-----|
| Capacity (veh/h) | - | 178 520 | - |
| HCM Lane V/C Ratio | - | 0.902 0.211 | - |
| HCM Control Delay (s) | - | 96.3 13.8 | - |
| HCM Lane LOS | - | F B | - |
| HCM 95th %tile Q(veh) | - | 6.7 0.8 | - |

202: Maplewood Ave & Vaughan St
 2032 Build Saturday Midday



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|-----------------------------------|-------------|-------------|-------|----------------------|------|------|
| Lane Configurations | | | ↔ | | | ↔ |
| Traffic Volume (veh/h) | 0 | 0 | 520 | 99 | 137 | 659 |
| Future Volume (Veh/h) | 0 | 0 | 520 | 99 | 137 | 659 |
| Sign Control | Stop | | Free | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.90 | 0.90 | 0.93 | 0.93 |
| Hourly flow rate (vph) | 0 | 0 | 578 | 110 | 147 | 709 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | 231 | | | | | |
| pX, platoon unblocked | 0.70 | 0.70 | | | 0.70 | |
| vC, conflicting volume | 1636 | 633 | | | 688 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1693 | 268 | | | 346 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 100 | 100 | | | 83 | |
| cM capacity (veh/h) | 60 | 542 | | | 853 | |
| Direction, Lane # | NB 1 | SB 1 | | | | |
| Volume Total | 688 | 856 | | | | |
| Volume Left | 0 | 147 | | | | |
| Volume Right | 110 | 0 | | | | |
| cSH | 1700 | 853 | | | | |
| Volume to Capacity | 0.40 | 0.17 | | | | |
| Queue Length 95th (ft) | 0 | 15 | | | | |
| Control Delay (s) | 0.0 | 4.2 | | | | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 0.0 | 4.2 | | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 2.3 | | | |
| Intersection Capacity Utilization | | | 82.3% | ICU Level of Service | E | |
| Analysis Period (min) | | | 15 | | | |

203: Vaughan St & Green St
 2032 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | ↗ | ↘ | | | |
| Traffic Vol, veh/h | 0 | 82 | 181 | 65 | 0 | 0 |
| Future Vol, veh/h | 0 | 82 | 181 | 65 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 67 | 67 | 78 | 78 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 122 | 232 | 83 | 0 | 0 |

| Major/Minor | Minor1 | Major1 | | |
|----------------------|--------|--------|---|---|
| Conflicting Flow All | - | 274 | 0 | 0 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | - | 6.22 | - | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | - | 3.318 | - | - |
| Pot Cap-1 Maneuver | 0 | 765 | - | - |
| Stage 1 | 0 | - | - | - |
| Stage 2 | 0 | - | - | - |
| Platoon blocked, % | | | - | - |
| Mov Cap-1 Maneuver | - | 765 | - | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | WB | NB |
|----------------------|------|----|
| HCM Control Delay, s | 10.6 | 0 |
| HCM LOS | B | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 |
|-----------------------|-----|----------|
| Capacity (veh/h) | - | - 765 |
| HCM Lane V/C Ratio | - | - 0.16 |
| HCM Control Delay (s) | - | - 10.6 |
| HCM Lane LOS | - | - B |
| HCM 95th %tile Q(veh) | - | - 0.6 |

204: Deer St & Russell St
2032 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 250 | 85 | 103 | 65 | 40 | 375 |
| Future Vol, veh/h | 250 | 85 | 103 | 65 | 40 | 375 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 81 | 81 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 275 | 93 | 127 | 80 | 45 | 421 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 207 | 0 | - | 0 | 810 167 |
| Stage 1 | - | - | - | - | 167 - |
| Stage 2 | - | - | - | - | 643 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1364 | - | - | - | 349 877 |
| Stage 1 | - | - | - | - | 863 - |
| Stage 2 | - | - | - | - | 523 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1364 | - | - | - | 275 877 |
| Mov Cap-2 Maneuver | - | - | - | - | 275 - |
| Stage 1 | - | - | - | - | 679 - |
| Stage 2 | - | - | - | - | 523 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.2 | 0 | 18.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1364 | - | - | - | 724 |
| HCM Lane V/C Ratio | 0.201 | - | - | - | 0.644 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 18.5 |
| HCM Lane LOS | A | A | - | - | C |
| HCM 95th %tile Q(veh) | 0.8 | - | - | - | 4.7 |

205: Russell St & Green St
 2032 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 61 | 4 | 7 | 309 | 344 | 77 |
| Future Vol, veh/h | 61 | 4 | 7 | 309 | 344 | 77 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 75 | 75 | 83 | 83 | 93 | 93 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 81 | 5 | 8 | 372 | 370 | 83 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 800 | 412 | 453 | 0 | - | 0 |
| Stage 1 | 412 | - | - | - | - | - |
| Stage 2 | 388 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 354 | 640 | 1108 | - | - | - |
| Stage 1 | 669 | - | - | - | - | - |
| Stage 2 | 686 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 351 | 640 | 1108 | - | - | - |
| Mov Cap-2 Maneuver | 351 | - | - | - | - | - |
| Stage 1 | 663 | - | - | - | - | - |
| Stage 2 | 686 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 18.1 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1108 | - | 361 | - | - |
| HCM Lane V/C Ratio | 0.008 | - | 0.24 | - | - |
| HCM Control Delay (s) | 8.3 | 0 | 18.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.9 | - | - |

206: Market St & Russell St
2032 Build Saturday MIDDAY

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 37.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↖ | ↗ | | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 351 | 20 | 0 | 281 | 489 | 421 |
| Future Vol, veh/h | 351 | 20 | 0 | 281 | 489 | 421 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 85 | 85 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 399 | 23 | 0 | 331 | 537 | 463 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 868 | 537 | - | 0 | - | 0 |
| Stage 1 | 537 | - | - | - | - | - |
| Stage 2 | 331 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 323 | 544 | 0 | - | - | - |
| Stage 1 | 586 | - | 0 | - | - | - |
| Stage 2 | 728 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 323 | 544 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 323 | - | - | - | - | - |
| Stage 1 | 586 | - | - | - | - | - |
| Stage 2 | 728 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 155.6 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 323 | 544 | - | - |
| HCM Lane V/C Ratio | - | 1.235 | 0.042 | - | - |
| HCM Control Delay (s) | - | 163.8 | 11.9 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 17.9 | 0.1 | - | - |

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

301: Raynes Ave & Site Driveway
 2032 Build Saturday Midday

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | ↶ | | | ↷ |
| Traffic Vol, veh/h | 0 | 0 | 131 | 108 | 0 | 87 |
| Future Vol, veh/h | 0 | 0 | 131 | 108 | 0 | 87 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 1 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 142 | 117 | 0 | 95 |

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

| Approach | WB | SB |
|----------------------|----|-----|
| HCM Control Delay, s | 0 | 9.8 |
| HCM LOS | | A |

| Minor Lane/Major Mvmt | WBT | WBR | SBLn1 |
|-----------------------|-----|-----|-------|
| Capacity (veh/h) | - | - | 840 |
| HCM Lane V/C Ratio | - | - | 0.113 |
| HCM Control Delay (s) | - | - | 9.8 |
| HCM Lane LOS | - | - | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 |

APPENDIX F
Trip Generation

| NCHRP 8-51 Internal Trip Capture Estimation Tool | | | | | |
|--|---------------------|--|--|---------------|--|
| Project Name: | Raynes Ave Hotel | | | Organization: | |
| Project Location: | Portsmouth, NH | | | Performed By: | |
| Scenario Description: | | | | Date: | |
| Analysis Year: | 2020/2030 | | | Checked By: | |
| Analysis Period: | PM Street Peak Hour | | | Date: | |

| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) | | | | | | |
|--|---|----------|-------|-------------------------|-----------|-----------|
| Land Use | Development Data (For Information Only) | | | Estimated Vehicle-Trips | | |
| | ITE LUCs ¹ | Quantity | Units | Total | Entering | Exiting |
| Office | | | | 0 | | |
| Retail | | | | 20 | 10 | 10 |
| Restaurant | | | | 34 | 23 | 11 |
| Cinema/Entertainment | | | | 0 | | |
| Residential | | | | 26 | 16 | 10 |
| Hotel | | | | 70 | 36 | 34 |
| All Other Land Uses ² | | | | 0 | | |
| Total | | | | 150 | 85 | 65 |

| Table 2-P: Mode Split and Vehicle Occupancy Estimates | | | | | | |
|---|----------------|-----------|-----------------|---------------|-----------|-----------------|
| Land Use | Entering Trips | | | Exiting Trips | | |
| | Veh. Occ. | % Transit | % Non-Motorized | Veh. Occ. | % Transit | % Non-Motorized |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |
| All Other Land Uses ² | | | | | | |

| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

| Table 4-P: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 3 | 0 | 3 | 1 |
| Restaurant | 0 | 5 | | 0 | 2 | 1 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 1 | 2 | 0 | | 0 |
| Hotel | 0 | 0 | 1 | 0 | 0 | |

| Table 5-P: Computations Summary | | | |
|---|-------|----------|---------|
| | Total | Entering | Exiting |
| All Person-Trips | 150 | 85 | 65 |
| Internal Capture Percentage | 25% | 22% | 29% |
| External Vehicle-Trips ³ | 112 | 66 | 46 |
| External Transit-Trips ⁴ | 0 | 0 | 0 |
| External Non-Motorized Trips ⁴ | 0 | 0 | 0 |

| Table 6-P: Internal Trip Capture Percentages by Land Use | | |
|--|----------------|---------------|
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | 60% | 70% |
| Restaurant | 26% | 73% |
| Cinema/Entertainment | N/A | N/A |
| Residential | 31% | 30% |
| Hotel | 6% | 3% |

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

| | |
|-------------------------|---------------------|
| Project Name: | Raynes Ave Hotel |
| Analysis Period: | PM Street Peak Hour |

| Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends | | | | | | |
|--|-------------------------------|---------------|---------------|------------------------------|---------------|---------------|
| Land Use | Table 7-P (D): Entering Trips | | | Table 7-P (O): Exiting Trips | | |
| | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Retail | 1.00 | 10 | 10 | 1.00 | 10 | 10 |
| Restaurant | 1.00 | 23 | 23 | 1.00 | 11 | 11 |
| Cinema/Entertainment | 1.00 | 0 | 0 | 1.00 | 0 | 0 |
| Residential | 1.00 | 16 | 16 | 1.00 | 10 | 10 |
| Hotel | 1.00 | 36 | 36 | 1.00 | 34 | 34 |

| Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 3 | 0 | 3 | 1 |
| Restaurant | 0 | 5 | | 1 | 2 | 1 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 4 | 2 | 0 | | 0 |
| Hotel | 0 | 5 | 23 | 0 | 1 | |

| Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 1 | 0 | 0 | 1 | 0 |
| Retail | 0 | | 7 | 0 | 7 | 6 |
| Restaurant | 0 | 5 | | 0 | 3 | 26 |
| Cinema/Entertainment | 0 | 0 | 1 | | 1 | 0 |
| Residential | 0 | 1 | 3 | 0 | | 4 |
| Hotel | 0 | 0 | 1 | 0 | 0 | |

| Table 9-P (D): Internal and External Trips Summary (Entering Trips) | | | | | | |
|---|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Destination Land Use | Person-Trip Estimates | | | External Trips by Mode* | | |
| | Internal | External | Total | Vehicles ¹ | Transit ² | Non-Motorized ² |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 6 | 4 | 10 | 4 | 0 | 0 |
| Restaurant | 6 | 17 | 23 | 17 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 5 | 11 | 16 | 11 | 0 | 0 |
| Hotel | 2 | 34 | 36 | 34 | 0 | 0 |
| All Other Land Uses ³ | 0 | 0 | 0 | 0 | 0 | 0 |

| Table 9-P (O): Internal and External Trips Summary (Exiting Trips) | | | | | | |
|--|-----------------------|----------|-------|-------------------------|----------------------|----------------------------|
| Origin Land Use | Person-Trip Estimates | | | External Trips by Mode* | | |
| | Internal | External | Total | Vehicles ¹ | Transit ² | Non-Motorized ² |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 7 | 3 | 10 | 3 | 0 | 0 |
| Restaurant | 8 | 3 | 11 | 3 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 3 | 7 | 10 | 7 | 0 | 0 |
| Hotel | 1 | 33 | 34 | 33 | 0 | 0 |
| All Other Land Uses ³ | 0 | 0 | 0 | 0 | 0 | 0 |

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX G
111 Maplewood Avenue Traffic Evaluation

Proposed Office Building 111 Maplewood Avenue Portsmouth, NH

To: Eric Eby, PE
Parking and Transportation Engineer
Department of Public Works
City of Portsmouth, NH

FROM: Vinod Kalikiri, PE, PTOE

DATE: March 18, 2019

Tighe & Bond has prepared this *Traffic Evaluation* to summarize the projected changes in the traffic operations related to the construction of an approximately 74,000 square foot (sf) office building with ancillary commercial space (the Project) to be located at 111 Maplewood Avenue in Portsmouth, New Hampshire (the Site).

The 111 Maplewood Avenue property will be subdivided into two parcels. The proposed development will be located on the northern parcel, which is bounded by Maplewood Avenue on the south, Raynes Avenue on the north, and Vaughan Street on the east. The Site is currently developed with paved parking spaces that are used by the existing building located on the south parcel, and lawn/landscaping.

Vehicular access to the Site will be provided by a driveway located at the general location of the existing curb cut, along the south side of Vaughan Street. As part of the Project, 37 parking spaces will be provided on the north parcel for use by the proposed office and commercial uses. The site plan also shows an additional 13 spaces on the south parcel that can be accessed via the site driveway. The Project will also install curb extensions to better define the on-street parking along the perimeter of the Site. A copy of the site plan is included in the Appendix.

The trip generation analysis indicates that the Project can be expected to generate approximately 180 trips during the weekday evening peak hour (approximately 50 entering trips + 130 exiting trips). Approximately 60 percent of the Site traffic will be oriented to/from the north on Maplewood Avenue; 20 percent via Market Street and the remaining 20 percent to/from the south on Maplewood Avenue.

Detailed weekday evening peak hour traffic operations analysis was prepared for the study locations. The analysis was conducted for four different scenarios:

- 2020 No-Build scenario – includes an annual background traffic growth rate
- 2020 Build scenario – adds the Project-generated traffic volumes to the 2020 No-Build scenario
- 2030 No-Build scenario – includes an annual background traffic growth rate and traffic from nearby proposed development projects.
- 2030 Build scenario – adds the Project-generated traffic volumes to the 2030 No-Build scenario

The remainder of the report summarizes the evaluation which includes a description of the study area, traffic volume counts during the weekday evening commuter peak period, trip generation estimates for the Project, estimated trip distribution patterns for the new Project-related trips, traffic volume projections for each of the analysis scenarios, traffic operations analysis for the study area intersections, and a summary of the study findings.

Study Methodology

This traffic evaluation and its supporting analyses were conducted in accordance with New Hampshire Department of Transportation (NH DOT) and the City of Portsmouth guidelines and are described below. The study area and the peak analysis period included in the study were reviewed with City staff during a scoping meeting prior to initiating the traffic analysis.

An inventory of existing conditions was conducted and includes a description of the roadway and intersection geometries and the collection of existing traffic volumes. Existing vehicular traffic counts were collected at the study area intersections during the weekday evening commuter peak period. The traffic data collection effort forms the basis for the operations analysis conducted as part of this traffic evaluation.

The future conditions analyses evaluate traffic-related impacts associated with additional development and traffic growth, with and without the Project. An opening year evaluation was conducted for the year 2020 (with and without the Project) and a long-term evaluation was conducted for the year 2030 (with and without the Project).

Existing Conditions

This section includes a description of existing study area roadway geometry, intersection geometry, intersection traffic control, and data collection efforts within the study area. **Figure 1** shows the location of the Site in context with the surrounding roadway network and study area.

Roadway Descriptions

Maplewood Avenue is a two-lane roadway (one lane in each direction) that runs east-west between Woodbury Avenue and Congress Street. On-street parallel parking, bike lanes and sidewalks are provided on both sides of Maplewood Avenue in the vicinity of the Project. The roadway has a posted speed limit of 25 miles per hour (mph) near the site.

The other study area roadways (Raynes Avenue, Vaughan Street, Deer Street, Russell Street, and Market Street) within the study area have similar urban characteristics: two-lane roadway, on-street parallel parking, sidewalks, and low speed limits (25 mph or less). Land uses near the Site are a mix of commercial businesses, restaurants, hotels and residential.

Intersection Descriptions

Maplewood Avenue/Raynes Avenue

Raynes Avenue intersects Maplewood Avenue from the east to form a three-way unsignalized intersection. All approaches at this intersection provide a single general-purpose lane. Sidewalks are provided on both sides of Maplewood Avenue. On-street parallel parking is provided on both sides of Maplewood Avenue and Raynes Avenue. Maplewood Avenue

operates with the right of way while the minor street approach of Raynes Avenue operates under stop control. A bike lane is striped along both sides of Maplewood Avenue.

Maplewood Avenue/Vaughan Street

Vaughan Street and a private driveway intersect Maplewood Avenue from the east and the west, respectively, to form a four-way unsignalized intersection. All approaches at this intersection provide a single general-purpose lane. Sidewalks are provided on both sides of Maplewood Avenue, but no crosswalks are provided at the intersection. On-street parallel parking is provided on both sides of Maplewood Avenue west of Vaughan Street and on both sides of Vaughan Street. A bike lane is striped along both sides of Maplewood Avenue north of the intersection and along Maplewood Avenue northbound approach south of the intersection. Maplewood Avenue operates with the right of way while the minor street approaches of Vaughan Street and the private driveway operate as the stop-controlled approaches.

Maplewood Avenue/Deer Street

Deer Street intersects Maplewood Avenue from the east and west to form a four-way signalized intersection. Maplewood Avenue southbound approach consists of left turn only lane and a right/through shared lane. Maplewood Avenue northbound approach consists of an exclusive left turn lane, exclusive through lane and an exclusive right turn lane. Deer Street eastbound approach consists of a single general-purpose lane. Deer Street westbound approach consists of an exclusive left turn lane and a right and through shared lane. The intersection is equipped with an exclusive actuated pedestrian phase. Each leg of the intersection has painted crosswalks.

Vaughan Street/111 Maplewood Avenue North Driveway

111 Maplewood Ave driveway intersects Vaughan Street from the west to form a three-way unsignalized intersection. All approaches at this intersection provide a single general-purpose lane. Sidewalks and on-street parallel parking are provided on both sides of the Vaughan Street.

Vaughan Street/Green Street

Green Street intersects Vaughan Street from the east, forming a three-way unsignalized intersection. Both roadways provide a single lane of travel in each direction. Vehicles exiting from Green Street operate under stop control. The width of Green Street ranges between 17 and 24 feet of pavement with no delineation of travel lanes or shoulders. A brick paver sidewalk exists on the east side of Green Street, south of the railroad tracks. On-street parking is allowed on the south side of Vaughan Street at the intersection.

Deer Street/Russell Street

Russell Street intersects Deer Street from the north to form a three-way unsignalized intersection. The southbound approach on Russell Street provides a single general-purpose lane that operates under a stop control. The westbound and eastbound approaches on Deer Street both provide a single general-purpose lane. The intersection provides sidewalks on all sides of the intersection approaches. A crosswalk is available for pedestrians crossing Deer Street east of Russell Street. On Street parking is available on all approaches.

Russell Street/Green Street

Green Street intersects Russell Street from the west to form a three-way unsignalized intersection. The eastbound approach of Green Street provides a single general-purpose lane that operates under stop control. The northbound and southbound approaches on Russell Street also both provide a single multi-use lane. Sidewalk is provided on both sides of Russell

Street, but no crosswalks are provided at the intersection. On-street metered parking is provided on Russell Street south of Green Street.

Market Street/Russell Street

Russell Street intersects Market Street from the south, forming a three-way unsignalized intersection. Market Street eastbound consists of a through lane and a channelized right turn lane that operates as free flow movements. The westbound approach consists of a single through lane. The intersection geometry is designed to prohibit westbound left turns from Market Street to Russell Street. The Russell Street approach is a single lane that is wide enough for right turning vehicles to bypass waiting left turning vehicles. The Russell Street approach operates under stop control. Pedestrian crosswalks are provided along Russell Street and the westbound Market Street approach with sidewalks provided on all approaches. It is noted that the intersection is fully signalized with mast arms, vehicular and pedestrian signal heads, etc. However, the signal indications are in flashing mode, with yellow indications facing Market Street and red indication facing Russell Street.

Existing Traffic Data

Evaluation of the traffic impacts related to the Project requires the quantification of existing roadway and traffic conditions throughout the study area. Traffic conditions were determined by conducting manual turning movement and vehicle classification counts (TMCs) at the study area intersections during the weekday evening peak period (4:00 PM to 6:00 PM) in January 2019. A review of the data indicates that the weekday evening peak hour occurs between 5:00 PM and 6:00 PM. The traffic count data is provided in the Appendix.

Seasonal Variation

The counts were seasonally adjusted to peak month conditions based on nearby traffic volume count stations located in proximity to Portsmouth. Specifically, based on data available from the Urban Highway (Group 4) continuous count stations for years 2014 to 2016, a seasonal adjustment factor of 19 percent was used in the analysis. Detailed calculations are provided in the Appendix.

Future Conditions

The Project's impacts were evaluated for the years 2020 (opening year) and 2030 (10 years from opening year), in accordance with NHDOT traffic assessment guidelines. No-Build conditions (without Project-generated traffic) and Build conditions (with Project-generated traffic) were evaluated for both analysis years.

No-Build Conditions

The following section describes the estimation of traffic volumes in the study area for the No-Build scenarios. The No-Build scenarios will serve as the baseline for comparison purposes to measure the impacts of the Project.

Planned Roadway and Intersection Projects

Information obtain from the City traffic department staff was used to identify planned roadway development projects in the area that could affect future traffic conditions. The following improvements, described in record studies prepared for other projects in the area, were considered when developing the No-Build conditions analysis.

- *US Route 1 Bypass Bridge Project:* As a result of the US Route 1 By-pass bridge closure, vehicles accessing Downtown Portsmouth via Maplewood Avenue from the by-pass have migrated to alternate routes. To reflect the restored traffic volumes after the bridge construction is completed, estimated traffic volumes associated with the rerouting were obtained from record studies¹ and included in the analysis.
- *Market Street/Russell Street reconstruction:* The City is in the early planning stages for the construction of a roundabout at the intersection of Market Street/Russell Street. At this time, no detailed plans have been developed. Therefore, this improvement is not included in the future conditions presented in this study. It is anticipated that a roundabout configuration would have a beneficial effect on the traffic operations and safety at the intersection.
- *North End Portsmouth Development (also referred to as the "Harbor Corp Project") Off-Site Improvements:* The time table for this project is currently unknown. However, since the development related traffic volumes are included in the No-Build analysis, traffic improvements proposed for this development were also take into consideration, where applicable.
- *Maplewood Avenue Corridor Project:* The Maplewood Avenue corridor improvement project includes full depth pavement construction/reclamation, sidewalk construction, drainage/water/sewer improvements, traffic calming measures, pavement striping, and improvements to bicycle accommodations. The Project extends between Woodbury Avenue to the west and Dennett Street to the east. Construction will be completed in 2019.
- *Maplewood Avenue Road Diet:* The City has conducted preliminary planning for a possible Maplewood Avenue Road Diet Project. The concept of the road diet would consider one through travel lane along Maplewood Avenue with auxiliary turn lanes provided, where necessary, at the intersections with Deer Street, Hanover Street, and Islington Street. This would present an opportunity for landscaped islands and/or improved bicycle accommodations. These improvements were not included in the future-year conditions as the construction timetable undetermined.
- *Maplewood Avenue Railroad Crossing:* NHDOT has been designing improvements for several rail crossings in the State. As part of the project, the DOT is seeking to reconstruct the at-grade crossing along Maplewood Avenue immediately north of Deer Street, as well as the railroad crossing on Green Street immediately west of Russell Street. The improvements are set to include new signage, railroad gates and signals where appropriate. However, this project has been delayed and implementation dates are currently unknown.

Traffic Growth

To develop future base line traffic volume conditions, two components of traffic growth were considered. The first component to determining traffic growth is to estimate an annual average traffic growth rate. Based on a review of recent studies¹ in the vicinity of the Project, a one percent per year background traffic growth rate was assumed in the analysis.

¹ Traffic Impact Assessment for *Proposed Hotel at 299 Vaughan Street (March 2017)* and Traffic Impact and Access Study for *Deer Street Parking Garage & Deer Street Associates Development (December 2016)*

The second component to determining traffic growth is identifying any proposed development projects that are near or within the study area. Based on discussions with the City of Portsmouth staff, it was determined that the following projects are either planned, under construction, or partially occupied. Traffic volumes related to these projects were obtained from record studies¹ and distributed through the study area.

- *Deer Street Garage and Mixed-Use Development:* This project will be located in the northwest corner of the Maplewood Avenue/Deer Street intersection. The traffic study for the project indicates that the full build-out of the project consists of a 600-stall municipal public parking garage with 4,700 sf of integral retail; and four mixed-use buildings. The four mixed-use buildings include a combination of 80 residential apartments, 108 hotel rooms, 41,300 sf of office, 20,000 sf of retail, 9,900 sf of restaurants, a 4,700 sf bar, and a 2,700 sf bank.
- *299 Vaughan Street:* This project is located at the corner of the intersection Vaughan Street and Green Street. It involves the demolition of an auto parts store and construction of a 143-room hotel with approximately 2,900 square feet of leasable commercial/retail space. This project is not yet occupied.
- *40 Bridge Street:* This project consists of constructing a 4,025 sf restaurant and six residential condos. The project has been constructed.
- *75 Congress Street:* This project consists of constructing 10 residential condos. Due to the low traffic-generating nature of this land use and the limited number of units, traffic generated by the development was assumed to be included as part of the 1.0 percent annual background growth rate.
- *Harbor Corp Redevelopment:* This project consists of constructing a 98-room hotel and conference center, 14 condominium units, a 40,000 sf grocery store, and a 540-space parking garage.
- *172 Hanover Street:* The project consists of renovating a 7,000 sf restaurant that has been vacant for several years.
- *30 Maplewood Avenue:* The vacancy assumptions for this development that were included in the Deer Street garage traffic study were used in the current study as well.
- *46-64 Maplewood Avenue:* This project consists of constructing 22 residential apartments and 13,475 sf of retail space. The project is under construction.
- *173-175 Market Street:* This project consists of constructing 3,331 sf of commercial space, 1,759 sf of office space, and six residential condos. The project is currently under construction.

It is assumed that other smaller developments or small vacancies in existing developments are captured by the background traffic growth rate assumptions used in the analysis.

No-Build Traffic Volumes

The 2020 and 2030 No-Build weekday evening peak hour traffic volumes were developed by applying the one percent annual traffic growth rate to the seasonally adjusted 2019 traffic volumes. In addition, volumes from the background projects were added to the traffic networks. The resulting 2020 and 2030 No-Build weekday evening peak hour traffic volumes are shown in **Figure 2** and **Figure 3**, respectively.

Build Conditions

The Project will consist of a new 74,000 sf office building with ancillary commercial space. Limited parking will be available on the Site. Additional parking demand for the Site would be

handled by off-site parking areas, including potentially the Foundry Place parking garage accessed via Deer Street and Bridge Street. The following sections describe the methodology to estimate the total number of Project-generated trips and their distribution within the study area roadway network.

Trip Generation

To develop the trip generation characteristics of the new Project, data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* were used. ITE provides data to estimate the total number of vehicular trips associated with a site based on the specific land uses. To estimate the trip generation for the Project, ITE Land Use Code (LUC) 710 – Office and LUC 820 – Retail/Shopping Center were used. The weekday daily and the morning and evening peak hour trip generation estimates for the Project are presented in Table 1.

Table 1: Weekday Evening Trip Generation

| Time Period | Office ¹ | Retail ² | Total |
|-----------------------------|---------------------|---------------------|------------|
| Weekday PM Peak Hour | | | |
| Enter | 23 | 26 | 49 |
| Exit | <u>106</u> | <u>26</u> | <u>132</u> |
| Total | 129 | 52 | 181 |

1 Based on ITE LUC 710 – Office for 70,000 sf
 2 Based on ITE LUC 820 – Shopping Center for 4,000 sf

As shown in Table 1, weekday pm office and retail site generates 49 entering trips and 132 trips.

Trip Distribution

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project site. Trip distribution patterns for the Project were based on a review of traffic studies conducted for nearby projects² and Journey to Work data published by the United States Census.

For analysis purposes, it was assumed that approximately 25% of the proposed office traffic will travel to the Site. The remaining 75% of the office traffic was assumed to park in off-site parking areas in the area, most notably the Foundry Place garage. During the evening peak hour, since the office usage of the parking will be minimal, it was assumed that all commercial traffic would travel to the Site. In addition to Site generated traffic, traffic volume redistribution resulting from the elimination of the south parcel driveway on Maplewood Avenue was also taken into consideration. The trip distribution patterns are shown in **Figure 4**. The vehicular trips associated with the Project were assigned to the study area and are shown in **Figure 5** for the weekday evening peak hour.

² Traffic Impact and Access Study for *Deer Street Parking Garage & Deer Street Associates Development (December 2016)*

Build Traffic Volumes

The 2020 and 2030 Build traffic volume networks were developed by adding the Project-generated trips to the 2020 and 2030 No-Build traffic volume networks. The Build conditions traffic volume networks are shown in **Figure 6** and **Figure 7**, respectively.

Traffic Operations Analysis

Intersection capacity analyses were performed for the study area intersections based on the criteria published in the Highway Capacity Manual. Level of service (LOS) is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing the best operating conditions and LOS F representing congested conditions. The results are summarized in Table 2 and 3. Analysis worksheets are provided in the Appendix.

The analysis for the Maplewood Avenue/Deer Street signalized intersection indicates that when all planned development projects are constructed, fully occupied and are generating traffic at the levels projected in the individual studies, traffic operations at the intersection during the weekday evening peak hour, especially for the left turn movements from the Deer Street approaches and the southbound through movement on Maplewood Avenue can be expected to be congested. A review of the traffic volumes indicates that the proposed office development at 111 Maplewood Avenue would not substantially affect the operations of the intersection but would add to the future volumes at the intersection. When the geometric improvement at the intersection proposed by others are designed, additional refinements may be necessary to operate the intersection at optimal levels.

A review of the unsignalized intersections' analyses indicates that, as expected in busy urban corridors and shown in other studies prepared in the area, side street approaches at the Maplewood Avenue at Raynes Avenue and Maplewood Avenue at Vaughan Street intersections are projected to experience some delay. The intersection of Market Street at Russell Street also shows congested operations in the future without the implementation of major infrastructure improvements, like the proposed roundabout. All other unsignalized intersections in the study area generally show acceptable operations.

Conclusions

The Project is estimated to generate approximately 180 trips during the weekday evening peak hour (approximately 50 entering trips + 130 exiting trips). Approximately 60 percent of the Site traffic will be oriented to/from the north on Maplewood Avenue; 20 percent via Market Street and the remaining 20 percent to/from the south on Maplewood Avenue.

Capacity analysis indicates that when planned background projects in the area are all constructed, substantial traffic volumes will be added to the study area network which in turn could add delays and congestion at certain locations along Maplewood Avenue, especially for the side street movements. Site generated traffic represents a relatively small percentage of the cumulative traffic volume expected to be generated by the planned background projects.

As the planned projects get implemented, and the traffic improvements associated with the projects are design, additional consideration should be given to accommodate side street movements. System-wide traffic improvement measures, such as promotion of reduced automobile usage, enhanced transit services to the area and promotion of remote/under utilized parking areas can also be considered by the City to reduce the volume of vehicular traffic generated within the downtown street network during peak times.

TABLE 2: Signalized Intersection Operations Summary

| Intersection / Lane Group | 2020 No Build | | | | | 2020 Build | | | | | 2030 No Build | | | | | 2030 Build | | | | |
|--------------------------------|---------------|------|-----|--------------------|--------------------|------------|------|-----|--------------------|--------------------|---------------|------|-----|--------------------|--------------------|------------|------|-----|--------------------|--------------------|
| | V/C | Del | LOS | 50 th Q | 95 th Q | V/C | Del | LOS | 50 th Q | 95 th Q | V/C | Del | LOS | 50 th Q | 95 th Q | V/C | Del | LOS | 50 th Q | 95 th Q |
| Maplewood Ave / Deer St | | | | | | | | | | | | | | | | | | | | |
| Deer St EBL | >1.2 | >120 | F | ~181 | #165 | >1.2 | >120 | F | ~273 | #266 | >1.2 | >120 | F | ~205 | #194 | >1.2 | >120 | F | ~261 | #253 |
| Deer St EBT/R | 0.77 | 43 | D | 153 | 153 | 0.82 | 43 | D | 172 | 177 | 0.78 | 43 | D | 161 | 162 | 0.84 | 47 | D | 183 | 186 |
| Deer St WBL | >1.2 | >120 | F | ~212 | #258 | >1.2 | >120 | F | ~213 | #285 | >1.2 | >120 | F | ~247 | #298 | >1.2 | >120 | F | ~260 | #340 |
| Deer St WBT/R | 0.70 | 39 | D | 139 | 171 | 0.65 | 34 | C | 134 | 174 | 0.73 | 40 | D | 151 | 185 | 0.69 | 37 | D | 148 | 188 |
| Maplewood Ave NBL | 0.32 | 19 | B | 16 | 37 | 0.37 | 22 | C | 18 | 39 | 0.33 | 21 | C | 16 | 38 | 0.37 | 22 | C | 18 | 40 |
| Maplewood Ave NBT | 0.76 | 32 | C | 270 | #429 | 0.83 | 37 | D | 272 | #438 | 0.84 | 38 | D | 313 | #492 | 0.88 | 42 | D | 318 | #501 |
| Maplewood Ave NBR | 0.15 | 19 | B | 0 | 45 | 0.15 | 19 | B | 0 | 45 | 0.17 | 19 | B | 0 | 46 | 0.17 | 20 | B | 0 | 46 |
| Maplewood Ave SBL | 0.32 | 17 | B | 24 | 48 | 0.41 | 19 | B | 26 | 48 | 0.42 | 19 | B | 27 | 51 | 0.48 | 21 | C | 29 | 51 |
| Maplewood Ave SBT/R | 0.96 | 53 | D | ~394 | #537 | 1.08 | 88 | F | ~430 | #566 | 1.05 | 78 | E | ~470 | #604 | 1.13 | 105 | F | ~512 | #633 |
| <i>Overall Intersection</i> | 1.09 | 83 | F | | | 1.19 | 97 | F | | | 1.20 | 100 | F | | | >1.2 | >120 | F | | |

LOS level-of-service
 Del Average intersection delay, measured in seconds
 v/c Volume to capacity ratio
 50th Q and 95th Q Percentile queues measured in feet
 # 95th percentile volume exceeds capacity, queue may be longer
 ~ Volume exceeds capacity. Queues are shown after two signal cycles

TABLE 3: Unsignalized Intersection Operations Summary

| Intersection / Lane Group | 2020 No Build | | | | 2020 Build | | | | 2030 No Build | | | | 2030 Build | | | |
|---|---------------|------|-----|--------------------|------------|------|-----|--------------------|---------------|------|-----|--------------------|------------|------|-----|--------------------|
| | V/C | Del | LOS | 95 th Q | V/C | Del | LOS | 95 th Q | V/C | Del | LOS | 95 th Q | V/C | Del | LOS | 95 th Q |
| Maplewood Ave / Raynes Ave: | | | | | | | | | | | | | | | | |
| Maplewood Ave SBL/T | 0.1 | 10 | A | 0.2 | 0.1 | 10 | B | 0.4 | 0.1 | 10 | B | 0.3 | 0.1 | 11 | B | 0.4 |
| Raynes Ave WBL/R | 0.6 | 45 | E | 3.1 | 0.9 | 90 | F | 6.8 | 0.7 | 71 | F | 4.7 | 1.1 | >120 | F | 9.6 |
| Maplewood Ave / Kennebunk Bank Driveway: | | | | | | | | | | | | | | | | |
| Maplewood Ave SBL/T | 0.0 | 10 | A | 0 | NA | NA | NA | NA | 0.0 | 10 | A | 0 | NA | NA | NA | NA |
| Kennebunk Bank WBL/R | 0.1 | 24 | C | 0.3 | NA | NA | NA | NA | 0.1 | 27 | D | 0.4 | NA | NA | NA | NA |
| Maplewood Ave / Vaughan St: | | | | | | | | | | | | | | | | |
| Maplewood Ave SBL/T | 0.0 | 10 | A | 0.1 | 0.0 | 10 | B | 0.1 | 0.0 | 10 | B | 0.1 | 0.0 | 11 | B | 0.1 |
| Vaughan St WBL/R | 0.4 | 51 | F | 1.9 | 0.7 | 90 | F | 4.2 | 0.6 | 72 | F | 2.7 | 0.9 | >120 | F | 5.5 |
| Vaughan St / Kennebunk Bank Driveway: | | | | | | | | | | | | | | | | |
| Vaughan St EBL/T | 0.0 | 7 | A | 0 | 0.2 | 10 | B | 0.5 | 0.0 | 7 | A | 0 | 0.0 | 8 | A | 0 |
| Kennebunk Bank SBL/R | 0.0 | 9 | A | 0 | 0.0 | 8 | A | 0 | 0.0 | 9 | A | 0 | 0.1 | 10 | A | 0.3 |
| Vaughan St / Green St: | | | | | | | | | | | | | | | | |
| Vaughan St SBL/T | 0.0 | 7 | A | 0.1 | 0.0 | 8 | A | 0.1 | 0.0 | 7 | A | 0.1 | 0.0 | 7 | A | 0 |
| Green St WBL/R | 0.1 | 9 | A | 0.2 | 0.1 | 9 | A | 0.2 | 0.1 | 9 | A | 0.2 | 0.1 | 9 | A | 0.2 |
| Vaughan St / Site Driveway: | | | | | | | | | | | | | | | | |
| Vaughan St NBL/T | 0.0 | 7 | A | 0 | 0.0 | 8 | A | 0 | 0.0 | 8 | A | 0 | 0.0 | 8 | A | 0 |
| Site Driveway EBL/R | 0.0 | 10 | A | 0.1 | 0.2 | 10 | B | 0.5 | 0.0 | 10 | A | 0.1 | 0.2 | 11 | B | 0.6 |
| Deer St / Russell St: | | | | | | | | | | | | | | | | |
| Deer St EBL/T | 0.3 | 8 | A | 1.1 | 0.3 | 8 | A | 1.1 | 0.3 | 9 | A | 1.2 | 0.3 | 9 | A | 1.3 |
| Russell St SBL/R | 0.8 | 29 | D | 9.6 | 0.9 | 32 | D | 10.2 | 0.9 | 43 | E | 13.1 | 1.0 | 47 | E | 14 |
| Green St / Russell St: | | | | | | | | | | | | | | | | |
| Russell St NBL/T | 0.0 | 9 | A | 0 | 0.0 | 9 | A | 0 | 0.0 | 9 | A | 0 | 0.0 | 9 | A | 0 |
| Green St EBL/R | 0.3 | 27 | D | 1.4 | 0.4 | 32 | D | 2.1 | 0.4 | 32 | D | 1.9 | 0.5 | 39 | E | 2.7 |
| Russell St / Market St: | | | | | | | | | | | | | | | | |
| Russell St EBL | >1.2 | >120 | F | 38.6 | >1.2 | >120 | F | 42.4 | >1.2 | >120 | F | 47.5 | >1.2 | >120 | F | 51.4 |
| Russell St EBR | 0.0 | 11 | B | 0 | 0.0 | 11 | B | 0 | 0.0 | 11 | B | 0 | 0.0 | 11 | B | 0 |

LOS level-of-service
 Del Average intersection delay, measured in seconds
 v/c Volume to capacity ratio
 95th Q Percentile queues measured in vehicles



Legend



Study Area Location

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

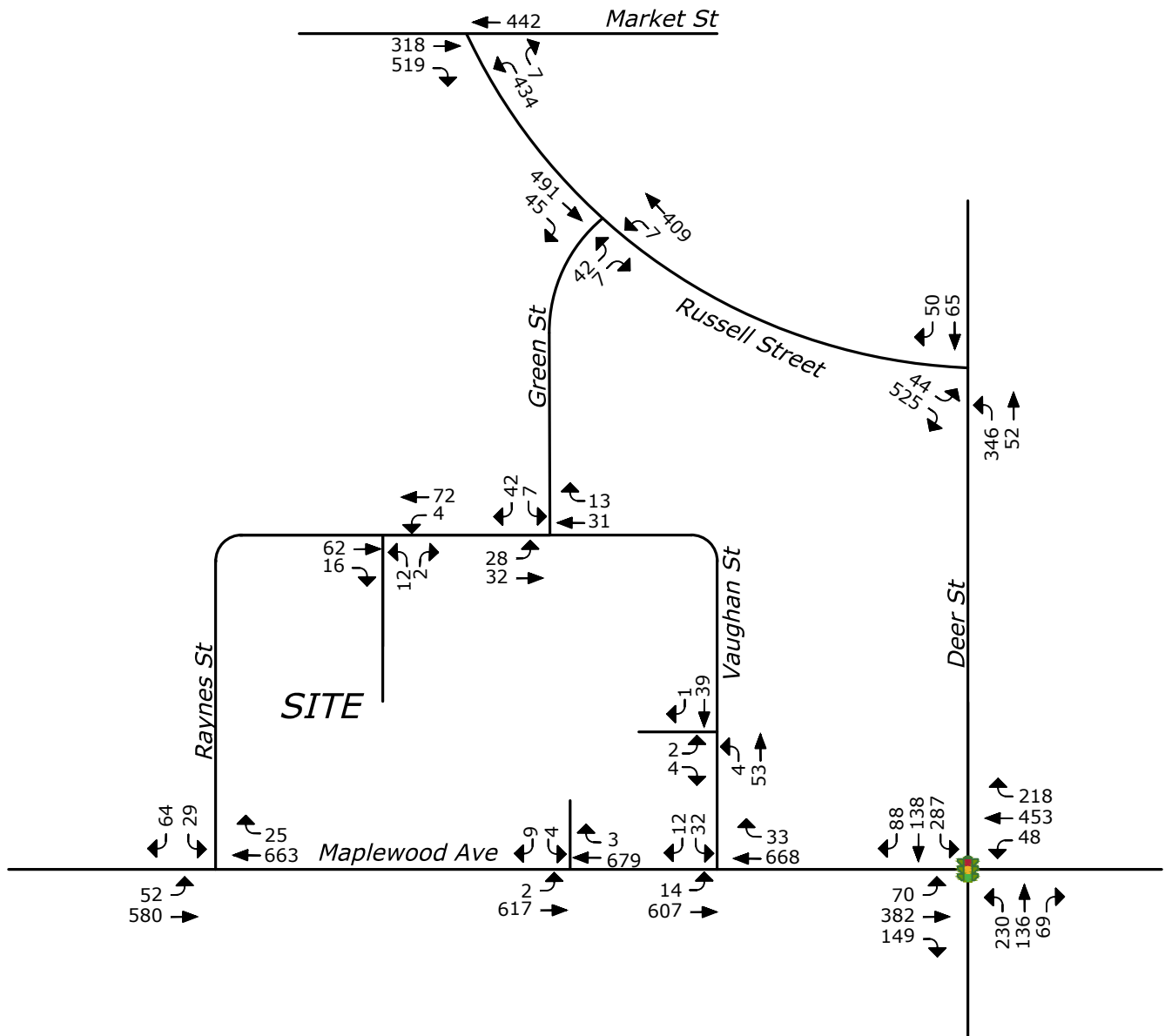
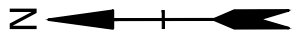
Study Area

DATE: 03/18/2019

SCALE: 1" = 200'

FIGURE 1

Tighe & Bond
www.tighebond.com

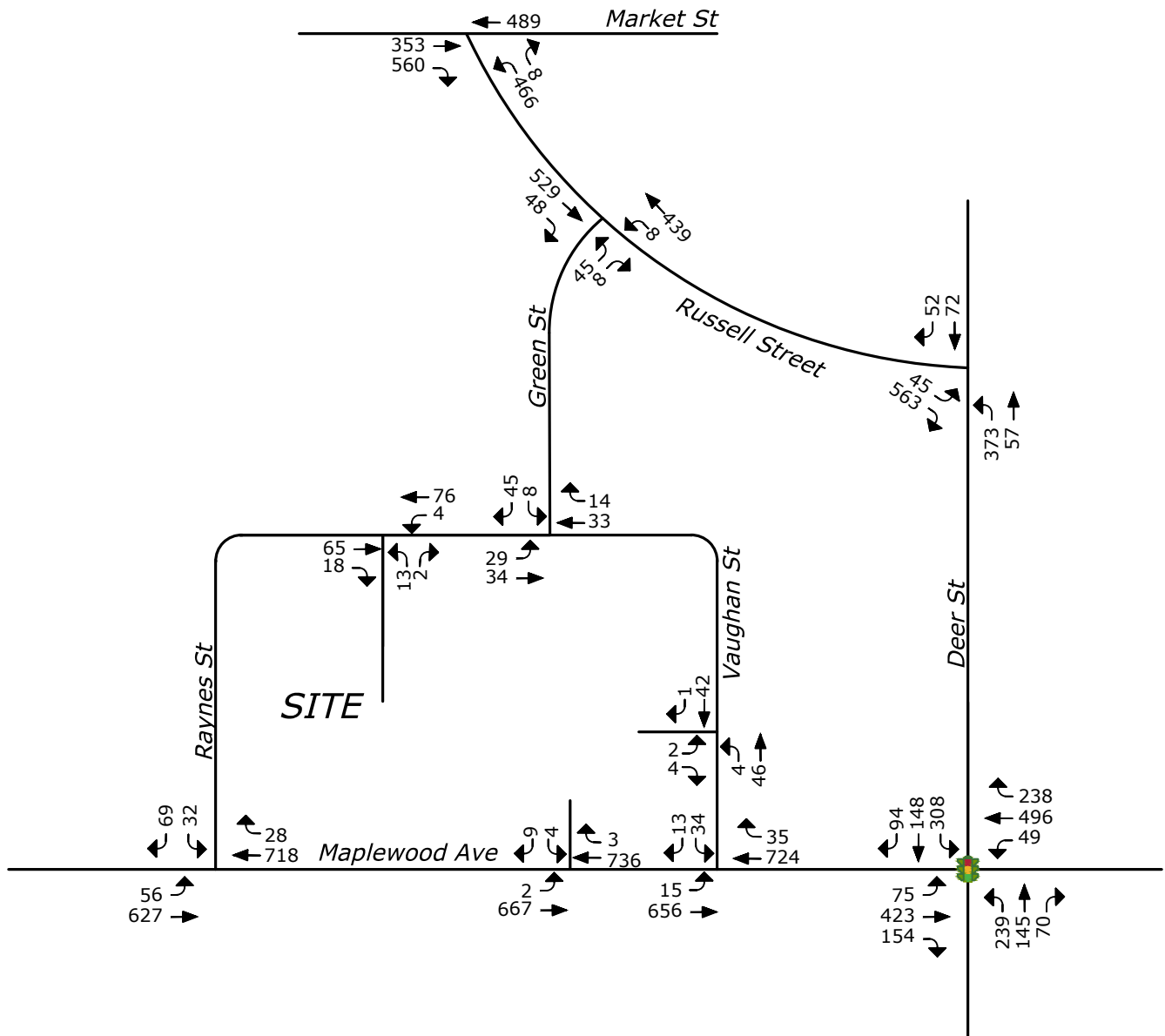
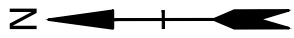


LEGEND



TRAFFIC SIGNAL

| | |
|--|-----------------------|
| <p>Proposed Office Building 111 Maplewood Avenue, Portsmouth NH</p> | |
| <p>2020 No Build Peak Hour Traffic Volumes</p> | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 2 | |

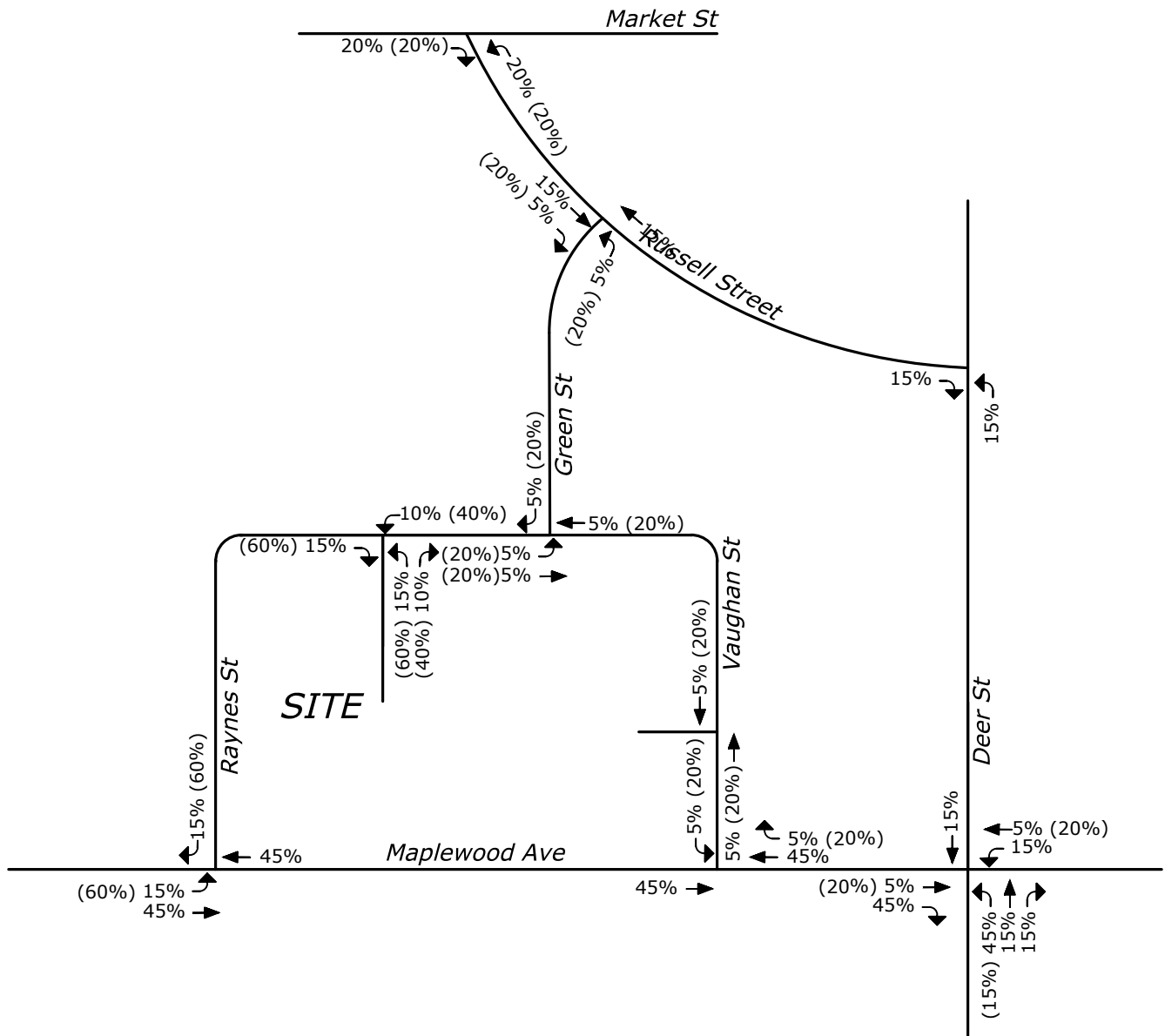
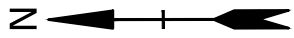


LEGEND



TRAFFIC SIGNAL

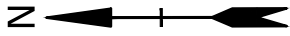
| | |
|--|-----------------------|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2030 No Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 3 | |



LEGEND

- XX Office Trips
- (XX) Retail Trips

| | |
|--|--|
| <p>Proposed Office Building 111 Maplewood Avenue, Portsmouth NH</p> | |
| <p>Trip Distribution</p> | |
| <p>DATE: 03/18/2019</p> | |
| <p>SCALE: No Scale</p> | |
| <p>FIGURE 4</p> | |

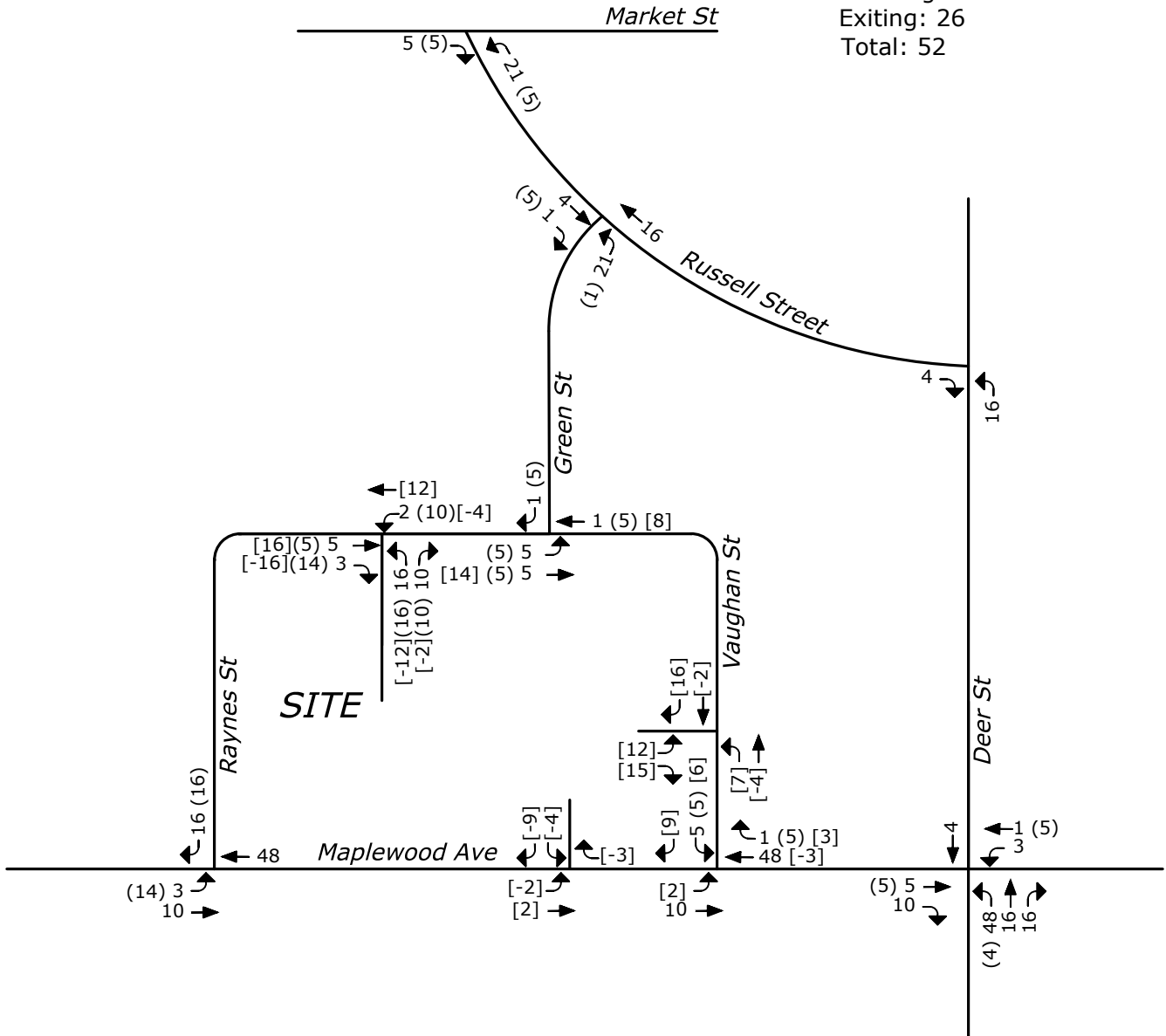


Office Generated Trips

Entering: 23
 Exiting: 106
 Total: 129


Retail Generated Trips

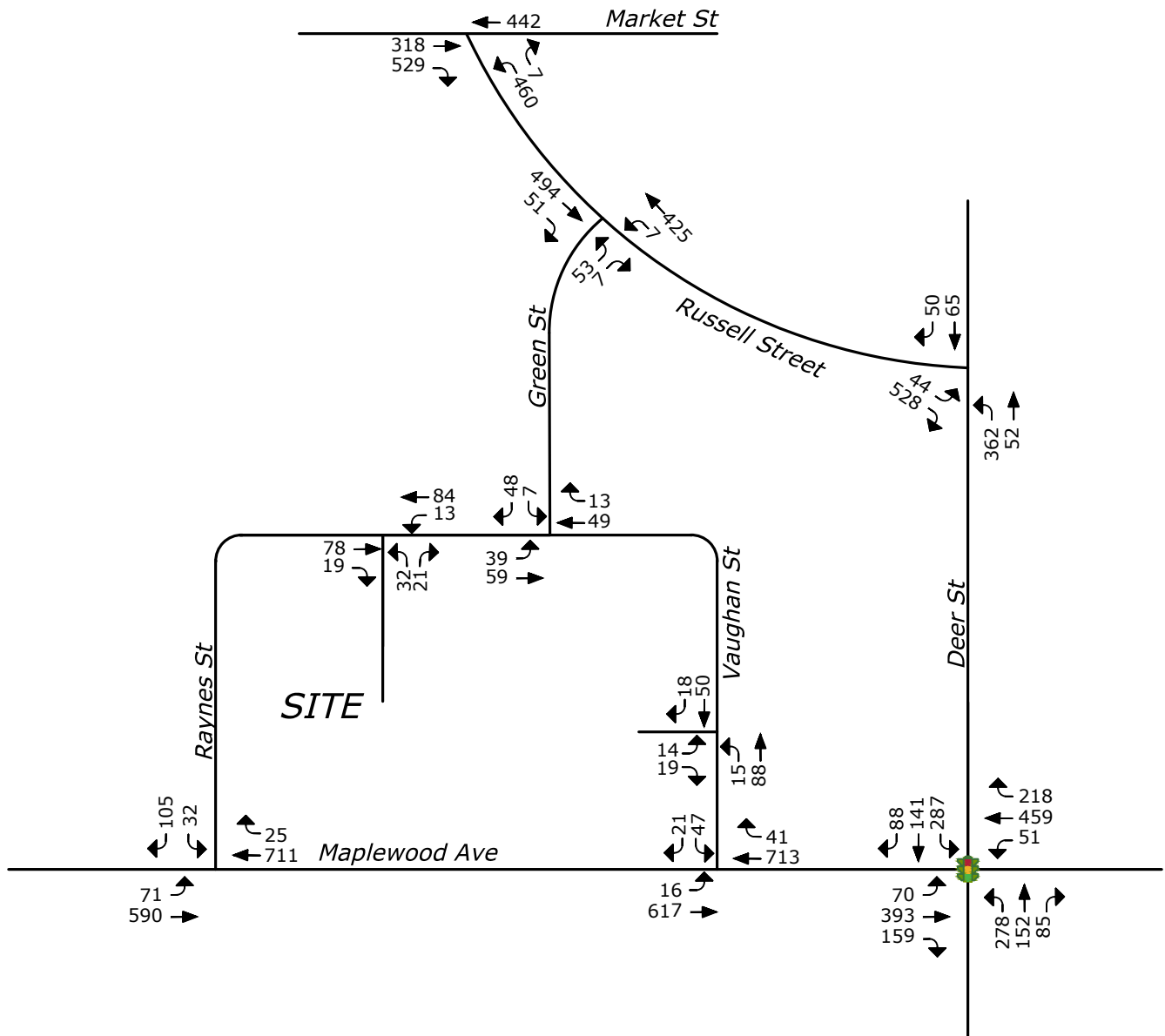
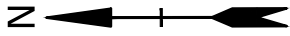
Entering: 26
 Exiting: 26
 Total: 52



LEGEND

- XX Office Trips
- (XX) Retail Trips
- [XX] Driveway Redistribution

| | |
|--|---|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| Site Generated Trips | |
| DATE: 03/18/2019 |  www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 5 | |

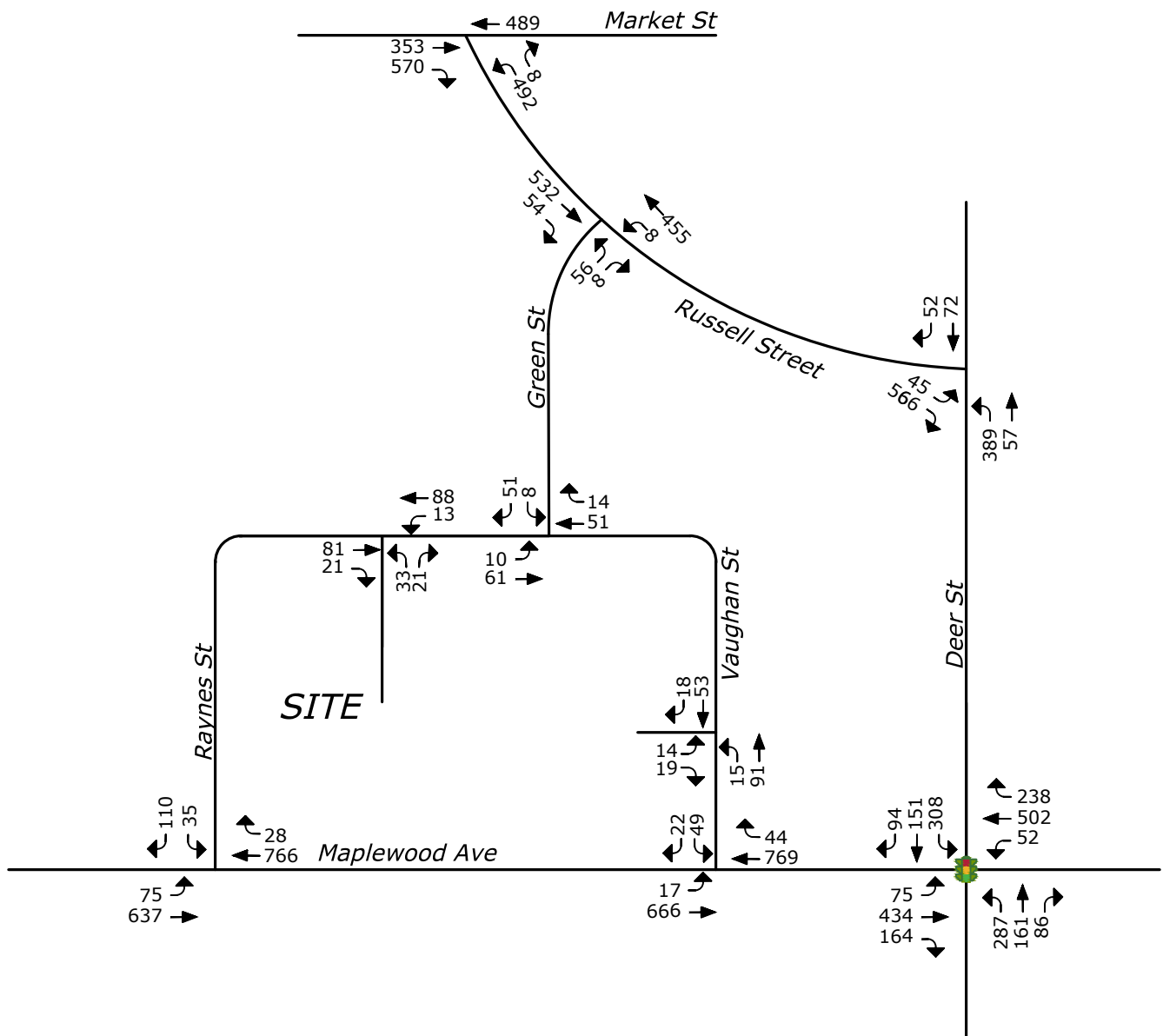
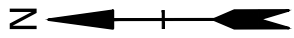


LEGEND



TRAFFIC SIGNAL

| | |
|--|--|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2020 Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 6 | |



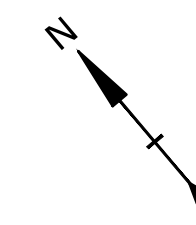
LEGEND



TRAFFIC SIGNAL

| | |
|--|-----------------------|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2030 Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 7 | |

Site Plan



SITE DATA:
LOCATION: TAX MAP 124. LOT 8 OWNER: RJF-MAPLEWOOD, LLC
30 TEMPLE STREET, SUITE 400
NASHUA, NH 03060

ZONING DISTRICT: CHARACTER DISTRICT 5 (CD5)
DOWNTOWN OVERLAY DISTRICT
NORTH END INCENTIVE OVERLAY DISTRICT
HISTORIC DISTRICT

PROPOSED USE: OFFICE

PROPOSED LOT SIZE: ±0.98 ACRES (±42,794 SF)

PARKING REQUIREMENTS

| PARKING SPACES REQUIRED: | OFFICE | DOWNTOWN OVERLAY DISTRICT | TOTAL MINIMUM PARKING SPACES REQUIRED = |
|--------------------------|------------|---------------------------|---|
| | ±74,000 SF | 0 SPACES | 0 SPACES |

TOTAL PARKING SPACES PROVIDED:
TOTAL PARKING SPACES PROVIDED = 37 SPACES

TWO (2) ADA ACCESSIBLE SPACES REQUIRED

| PARKING STALL SIZE: | REQUIRED | PROVIDED |
|---------------------|------------|------------|
| DRIVE AISLE: | 8.5' X 19' | 8.5' X 19' |
| | ***22' | 22' |

***ZONING ORDINANCE 10.1114.21 ALLOWS MINIMUM 22' AISLE WIDTH FOR 90 DEGREE PARKING IN A PARKING STRUCTURE

| BIKE SPACES REQUIRED: | 1 BIKE SPACE / 10 PARKING SPACES | 4 SPACES | 4 SPACES |
|-----------------------|----------------------------------|----------|----------|
|-----------------------|----------------------------------|----------|----------|

DEVELOPMENT STANDARDS

| BUILDING PLACEMENT (PRINCIPAL BUILDING): | REQUIRED | PROPOSED |
|--|----------|----------|
| MAXIMUM PRINCIPAL FRONT YARD: | 5 FT | ±12 FT |
| MAXIMUM SECONDARY FRONT YARD: | 5 FT | ±7 FT |
| SIDE YARD: | NR | N/A |
| MINIMUM REAR YARD: | 5 FT | N/A |
| MINIMUM FRONT LOT LINE BUILDOUT: | 80% | ±90.7% |

| BUILDING AND LOT OCCUPATION: | REQUIRED | PROPOSED |
|-------------------------------------|------------|-----------|
| MAXIMUM BUILDING BLOCK LENGTH: | 225 FT | 194 FT |
| MAXIMUM FACADE MODULATION LENGTH: | 100 FT | <100 FT |
| MAXIMUM ENTRANCE SPACING: | 50 FT | <50 FT |
| MAXIMUM BUILDING COVERAGE: | 95% | ±49.1% |
| MAXIMUM BUILDING FOOTPRINT: | *30,000 SF | 21,000 SF |
| MINIMUM LOT AREA: | NR | NR |
| MINIMUM LOT AREA PER DWELLING UNIT: | NR | 17.6% |
| MINIMUM OPEN SPACE: | 5% | 5% |
| MAXIMUM GROUND FLOOR GFA PER USE: | 15,000 SF | 11,301 SF |

*ZONING ORDINANCE 10.5A46.20 ALLOWS 30,000SF BUILDING FOOTPRINT WITH 20% COMMUNITY SPACE.

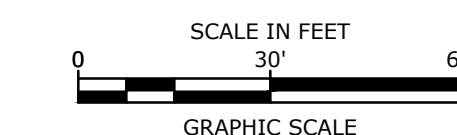
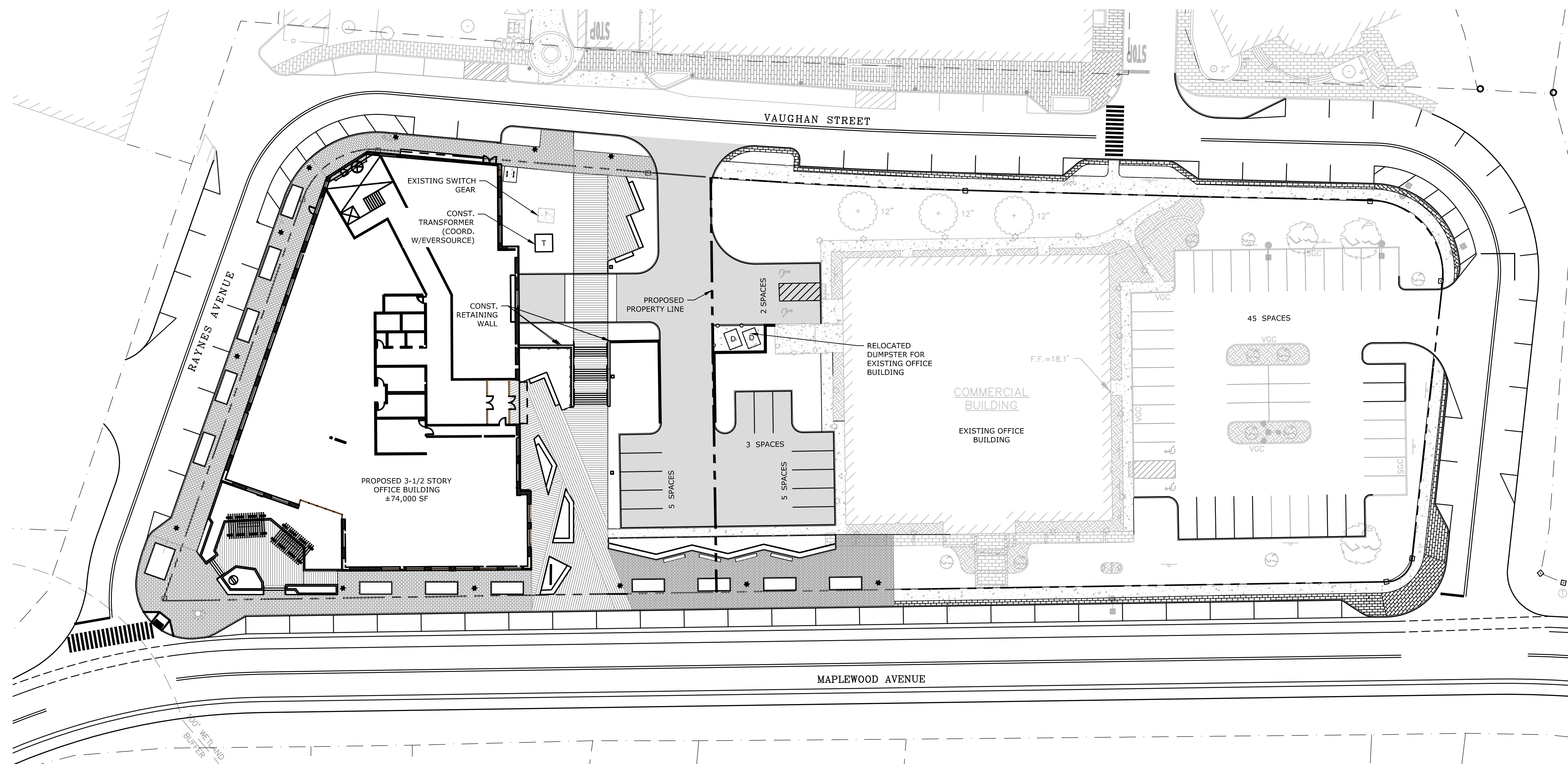
| BUILDING FORM (PRINCIPAL BUILDING): | REQUIRED | PROVIDED |
|--|------------------------------------|-----------|
| BUILDING HEIGHT: | **60 FT | 55 FT |
| MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE: | 36 IN | 12 FT |
| MINIMUM GROUND STORY HEIGHT: | 12 FT | 10 FT |
| MINIMUM SECOND STORY HEIGHT: | 10 FT | 10 FT |
| FACADE GLAZING: | STOOP FACADE TYPE | 20% - 50% |
| ALLOWED ROOF TYPES: | FLAT, GABLE, HIP, GAMBREL, MANSARD | FLAT |

**ZONING ORDINANCE 10.5A46.20 ALLOWS A 1-STORY, UP TO 10' HEIGHT INCREASE WITH 20% COMMUNITY SPACE.

| COMMUNITY SPACE: | 8,559 SF | 11,367 SF |
|------------------|----------|-----------|
| | 20% | 26.6% |

LEGEND

- PROPERTY LINE
- - - PROPOSED PROPERTY LINE
- ===== PROPOSED EDGE OF PAVEMENT
- ===== PROPOSED CURB
- [Hatched Box] PROPOSED BUILDING
- [Hatched Box] PROPOSED PAVEMENT SECTION
- [Dotted Box] PROPOSED CONCRETE SIDEWALK
- [Brick Box] PROPOSED BRICK SIDEWALK
- PROPOSED BOLLARD
- BLDG TYP BUILDING
- COORD COORDINATE
- 30'R PROPOSED CURB RADIUS
- VGC PROPOSED VERTICAL GRANITE CURB
- SGC PROPOSED SLOPED GRANITE CURB



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

| MARK | DATE | DESCRIPTION |
|------|-----------|----------------|
| A | 3/18/2019 | TAC Submission |

PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019_C-SITE.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Traffic Data

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------|------------------|------|-------|--------|-------|---------------|------|-------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 76 | 10 | 0 | 86 | 4 | 0 | 4 | 0 | 8 | 2 | 83 | 0 | 0 | 85 | 1 | 0 | 0 | 0 | 1 | 180 |
| 4:15 PM | 0 | 66 | 7 | 0 | 73 | 6 | 0 | 4 | 0 | 10 | 4 | 105 | 0 | 0 | 109 | 0 | 0 | 0 | 0 | 0 | 192 |
| 4:30 PM | 0 | 65 | 2 | 0 | 67 | 6 | 0 | 6 | 2 | 14 | 4 | 96 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 181 |
| 4:45 PM | 0 | 90 | 8 | 0 | 98 | 9 | 0 | 1 | 0 | 10 | 2 | 101 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 211 |
| Total | 0 | 297 | 27 | 0 | 324 | 25 | 0 | 15 | 2 | 42 | 12 | 385 | 0 | 0 | 397 | 1 | 0 | 0 | 0 | 1 | 764 |
| 5:00 PM | 0 | 80 | 10 | 0 | 90 | 15 | 0 | 6 | 0 | 21 | 7 | 137 | 0 | 0 | 144 | 0 | 0 | 0 | 0 | 0 | 255 |
| 5:15 PM | 0 | 89 | 9 | 0 | 98 | 11 | 0 | 5 | 0 | 16 | 9 | 105 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 228 |
| 5:30 PM | 0 | 107 | 6 | 0 | 113 | 11 | 0 | 10 | 0 | 21 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 242 |
| 5:45 PM | 0 | 95 | 7 | 0 | 102 | 6 | 0 | 3 | 0 | 9 | 1 | 96 | 0 | 0 | 97 | 0 | 0 | 0 | 0 | 0 | 208 |
| Total | 0 | 371 | 32 | 0 | 403 | 43 | 0 | 24 | 0 | 67 | 21 | 442 | 0 | 0 | 463 | 0 | 0 | 0 | 0 | 0 | 933 |
| Grand Total | 0 | 668 | 59 | 0 | 727 | 68 | 0 | 39 | 2 | 109 | 33 | 827 | 0 | 0 | 860 | 1 | 0 | 0 | 0 | 1 | 1697 |
| Approach % | 0.0 | 91.9 | 8.1 | 0.0 | | 62.4 | 0.0 | 35.8 | 1.8 | | 3.8 | 96.2 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 39.4 | 3.5 | 0.0 | 42.8 | 4.0 | 0.0 | 2.3 | 0.1 | 6.4 | 1.9 | 48.7 | 0.0 | 0.0 | 50.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | |
| Exiting Leg Total | 895 | | | | | 94 | | | | | 708 | | | | | 0 | | | | | 1697 |
| Cars | 0 | 664 | 59 | 0 | 723 | 68 | 0 | 39 | 2 | 109 | 33 | 820 | 0 | 0 | 853 | 1 | 0 | 0 | 0 | 1 | 1686 |
| % Cars | 0.0 | 99.4 | 100.0 | 0.0 | 99.4 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.2 | 0.0 | 0.0 | 99.2 | 100.0 | 0.0 | 0.0 | 0.0 | 100.0 | 99.4 |
| Exiting Leg Total | 888 | | | | | 94 | | | | | 704 | | | | | 0 | | | | | 1686 |
| Heavy Vehicles | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 |
| % Heavy Vehicles | 0.0 | 0.6 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| Exiting Leg Total | 7 | | | | | 0 | | | | | 4 | | | | | 0 | | | | | 11 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:45 PM | 0 | 90 | 8 | 0 | 98 | 9 | 0 | 1 | 0 | 10 | 2 | 101 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 211 |
| 5:00 PM | 0 | 80 | 10 | 0 | 90 | 15 | 0 | 6 | 0 | 21 | 7 | 137 | 0 | 0 | 144 | 0 | 0 | 0 | 0 | 0 | 255 |
| 5:15 PM | 0 | 89 | 9 | 0 | 98 | 11 | 0 | 5 | 0 | 16 | 9 | 105 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 228 |
| 5:30 PM | 0 | 107 | 6 | 0 | 113 | 11 | 0 | 10 | 0 | 21 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 242 |
| Total Volume | 0 | 366 | 33 | 0 | 399 | 46 | 0 | 22 | 0 | 68 | 22 | 447 | 0 | 0 | 469 | 0 | 0 | 0 | 0 | 0 | 936 |
| % Approach Total | 0.0 | 91.7 | 8.3 | 0.0 | | 67.6 | 0.0 | 32.4 | 0.0 | | 4.7 | 95.3 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.855 | 0.825 | 0.000 | 0.883 | 0.767 | 0.000 | 0.550 | 0.000 | 0.810 | 0.611 | 0.816 | 0.000 | 0.000 | 0.814 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.918 |
| Cars | 0 | 366 | 33 | 0 | 399 | 46 | 0 | 22 | 0 | 68 | 22 | 444 | 0 | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 933 |
| Cars % | 0.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 99.3 | 0.0 | 0.0 | 99.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 99.7 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| Cars Enter Leg | 0 | 366 | 33 | 0 | 399 | 46 | 0 | 22 | 0 | 68 | 22 | 444 | 0 | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 933 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total Entering Leg | 0 | 366 | 33 | 0 | 399 | 46 | 0 | 22 | 0 | 68 | 22 | 447 | 0 | 0 | 469 | 0 | 0 | 0 | 0 | 0 | 936 |
| Cars Exiting Leg | 490 | | | | | 55 | | | | | 388 | | | | | 0 | | | | | 933 |
| Heavy Exiting Leg | 3 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 3 |
| Total Exiting Leg | 493 | | | | | 55 | | | | | 388 | | | | | 0 | | | | | 936 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars-Combined (Motorcycles, Cars, Light Goods)

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|------|------|--------|-------|---------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 72 | 10 | 0 | 82 | 4 | 0 | 4 | 0 | 8 | 2 | 81 | 0 | 0 | 83 | 1 | 0 | 0 | 0 | 1 | 174 |
| 4:15 PM | 0 | 66 | 7 | 0 | 73 | 6 | 0 | 4 | 0 | 10 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 191 |
| 4:30 PM | 0 | 65 | 2 | 0 | 67 | 6 | 0 | 6 | 2 | 14 | 4 | 96 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 181 |
| 4:45 PM | 0 | 90 | 8 | 0 | 98 | 9 | 0 | 1 | 0 | 10 | 2 | 99 | 0 | 0 | 101 | 0 | 0 | 0 | 0 | 0 | 209 |
| Total | 0 | 293 | 27 | 0 | 320 | 25 | 0 | 15 | 2 | 42 | 12 | 380 | 0 | 0 | 392 | 1 | 0 | 0 | 0 | 1 | 755 |
| 5:00 PM | 0 | 80 | 10 | 0 | 90 | 15 | 0 | 6 | 0 | 21 | 7 | 136 | 0 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 254 |
| 5:15 PM | 0 | 89 | 9 | 0 | 98 | 11 | 0 | 5 | 0 | 16 | 9 | 105 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 228 |
| 5:30 PM | 0 | 107 | 6 | 0 | 113 | 11 | 0 | 10 | 0 | 21 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 242 |
| 5:45 PM | 0 | 95 | 7 | 0 | 102 | 6 | 0 | 3 | 0 | 9 | 1 | 95 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 207 |
| Total | 0 | 371 | 32 | 0 | 403 | 43 | 0 | 24 | 0 | 67 | 21 | 440 | 0 | 0 | 461 | 0 | 0 | 0 | 0 | 0 | 931 |
| Grand Total | 0 | 664 | 59 | 0 | 723 | 68 | 0 | 39 | 2 | 109 | 33 | 820 | 0 | 0 | 853 | 1 | 0 | 0 | 0 | 1 | 1686 |
| Approach % | 0.0 | 91.8 | 8.2 | 0.0 | | 62.4 | 0.0 | 35.8 | 1.8 | | 3.9 | 96.1 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 39.4 | 3.5 | 0.0 | 42.9 | 4.0 | 0.0 | 2.3 | 0.1 | 6.5 | 2.0 | 48.6 | 0.0 | 0.0 | 50.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | |
| Exiting Leg Total | 888 | | | | | 94 | | | | | 704 | | | | | 0 | | | | | 1686 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|---------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:45 PM | 0 | 90 | 8 | 0 | 98 | 9 | 0 | 1 | 0 | 10 | 2 | 99 | 0 | 0 | 101 | 0 | 0 | 0 | 0 | 0 | 209 |
| 5:00 PM | 0 | 80 | 10 | 0 | 90 | 15 | 0 | 6 | 0 | 21 | 7 | 136 | 0 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 254 |
| 5:15 PM | 0 | 89 | 9 | 0 | 98 | 11 | 0 | 5 | 0 | 16 | 9 | 105 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 228 |
| 5:30 PM | 0 | 107 | 6 | 0 | 113 | 11 | 0 | 10 | 0 | 21 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 242 |
| Total Volume | 0 | 366 | 33 | 0 | 399 | 46 | 0 | 22 | 0 | 68 | 22 | 444 | 0 | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 933 |
| % Approach Total | 0.0 | 91.7 | 8.3 | 0.0 | | 67.6 | 0.0 | 32.4 | 0.0 | | 4.7 | 95.3 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.855 | 0.825 | 0.000 | 0.883 | 0.767 | 0.000 | 0.550 | 0.000 | 0.810 | 0.611 | 0.816 | 0.000 | 0.000 | 0.815 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.918 |
| Entering Leg | 0 | 366 | 33 | 0 | 399 | 46 | 0 | 22 | 0 | 68 | 22 | 444 | 0 | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 933 |
| Exiting Leg | 490 | | | | | 55 | | | | | 388 | | | | | 0 | | | | | 933 |
| Total | 889 | | | | | 123 | | | | | 854 | | | | | 0 | | | | | 1866 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|-------|------|--------|-------|---------------|------|------|--------|-------|------------------|-------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Grand Total | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 36.4 | 0.0 | 0.0 | 36.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.6 | 0.0 | 0.0 | 63.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 7 | | | | | 0 | | | | | 4 | | | | | 0 | | | | | 11 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| % Buses | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 36.4 |
| Exiting Leg Total | 2 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 4 |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 7 |
| % Single-Unit | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.6 |
| Exiting Leg Total | 5 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|---------------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Volume | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.625 | 0.000 | 0.000 | 0.625 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Buses % | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| Single-Unit % | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 66.7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| Buses | 1 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 3 |
| Single-Unit Trucks | 4 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 6 |
| Articulated Trucks | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |
| Total Exiting Leg | 5 | | | | | 0 | | | | | 4 | | | | | 0 | | | | | 9 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | |
|-------------------|------------------|------|------|--------|-------|---------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 61 | 7 | 0 | 68 | 2 | 0 | 4 | 0 | 6 | 2 | 69 | 0 | 0 | 71 | 1 | 0 | 0 | 0 | 1 | 146 | |
| 4:15 PM | 0 | 59 | 7 | 0 | 66 | 6 | 0 | 2 | 0 | 8 | 3 | 95 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 172 | |
| 4:30 PM | 0 | 51 | 0 | 0 | 51 | 5 | 0 | 6 | 2 | 13 | 4 | 78 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 146 | |
| 4:45 PM | 0 | 86 | 7 | 0 | 93 | 8 | 0 | 0 | 0 | 8 | 2 | 91 | 0 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 194 | |
| Total | 0 | 257 | 21 | 0 | 278 | 21 | 0 | 12 | 2 | 35 | 11 | 333 | 0 | 0 | 344 | 1 | 0 | 0 | 0 | 1 | 658 | |
| 5:00 PM | 0 | 73 | 9 | 0 | 82 | 13 | 0 | 6 | 0 | 19 | 7 | 125 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 233 | |
| 5:15 PM | 0 | 83 | 7 | 0 | 90 | 11 | 0 | 5 | 0 | 16 | 8 | 98 | 0 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 212 | |
| 5:30 PM | 0 | 104 | 6 | 0 | 110 | 9 | 0 | 8 | 0 | 17 | 4 | 91 | 0 | 0 | 95 | 0 | 0 | 0 | 0 | 0 | 222 | |
| 5:45 PM | 0 | 90 | 6 | 0 | 96 | 6 | 0 | 3 | 0 | 9 | 1 | 88 | 0 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 194 | |
| Total | 0 | 350 | 28 | 0 | 378 | 39 | 0 | 22 | 0 | 61 | 20 | 402 | 0 | 0 | 422 | 0 | 0 | 0 | 0 | 0 | 861 | |
| Grand Total | 0 | 607 | 49 | 0 | 656 | 60 | 0 | 34 | 2 | 96 | 31 | 735 | 0 | 0 | 766 | 1 | 0 | 0 | 0 | 1 | 1519 | |
| Approach % | 0.0 | 92.5 | 7.5 | 0.0 | | 62.5 | 0.0 | 35.4 | 2.1 | | 4.0 | 96.0 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 40.0 | 3.2 | 0.0 | 43.2 | 3.9 | 0.0 | 2.2 | 0.1 | 6.3 | 2.0 | 48.4 | 0.0 | 0.0 | 50.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | | |
| Exiting Leg Total | | | | | | 795 | | | | | 82 | | | | | 642 | | | | | 0 | 1519 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | |
|------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | |
| 4:45 PM | 0 | 86 | 7 | 0 | 93 | 8 | 0 | 0 | 0 | 8 | 2 | 91 | 0 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 194 | |
| 5:00 PM | 0 | 73 | 9 | 0 | 82 | 13 | 0 | 6 | 0 | 19 | 7 | 125 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 233 | |
| 5:15 PM | 0 | 83 | 7 | 0 | 90 | 11 | 0 | 5 | 0 | 16 | 8 | 98 | 0 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 212 | |
| 5:30 PM | 0 | 104 | 6 | 0 | 110 | 9 | 0 | 8 | 0 | 17 | 4 | 91 | 0 | 0 | 95 | 0 | 0 | 0 | 0 | 0 | 222 | |
| Total Volume | 0 | 346 | 29 | 0 | 375 | 41 | 0 | 19 | 0 | 60 | 21 | 405 | 0 | 0 | 426 | 0 | 0 | 0 | 0 | 0 | 861 | |
| % Approach Total | 0.0 | 92.3 | 7.7 | 0.0 | | 68.3 | 0.0 | 31.7 | 0.0 | | 4.9 | 95.1 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.832 | 0.806 | 0.000 | 0.852 | 0.788 | 0.000 | 0.594 | 0.000 | 0.789 | 0.656 | 0.810 | 0.000 | 0.000 | 0.807 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.924 | |
| Entering Leg | 0 | 346 | 29 | 0 | 375 | 41 | 0 | 19 | 0 | 60 | 21 | 405 | 0 | 0 | 426 | 0 | 0 | 0 | 0 | 0 | 861 | |
| Exiting Leg | | | | | | 446 | | | | | 50 | | | | | 365 | | | | | 0 | 861 |
| Total | | | | | | 821 | | | | | 110 | | | | | 791 | | | | | 0 | 1722 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Light Goods Vehicle

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|------|------|--------|-------|---------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 11 | 3 | 0 | 14 | 2 | 0 | 0 | 0 | 2 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 28 |
| 4:15 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 2 | 1 | 9 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 19 |
| 4:30 PM | 0 | 14 | 2 | 0 | 16 | 1 | 0 | 0 | 0 | 1 | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 35 |
| 4:45 PM | 0 | 4 | 1 | 0 | 5 | 1 | 0 | 1 | 0 | 2 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 15 |
| Total | 0 | 36 | 6 | 0 | 42 | 4 | 0 | 3 | 0 | 7 | 1 | 47 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 97 |
| 5:00 PM | 0 | 7 | 1 | 0 | 8 | 2 | 0 | 0 | 0 | 2 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 21 |
| 5:15 PM | 0 | 6 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 16 |
| 5:30 PM | 0 | 3 | 0 | 0 | 3 | 2 | 0 | 2 | 0 | 4 | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 20 |
| 5:45 PM | 0 | 5 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 13 |
| Total | 0 | 21 | 4 | 0 | 25 | 4 | 0 | 2 | 0 | 6 | 1 | 38 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 70 |
| Grand Total | 0 | 57 | 10 | 0 | 67 | 8 | 0 | 5 | 0 | 13 | 2 | 85 | 0 | 0 | 87 | 0 | 0 | 0 | 0 | 0 | 167 |
| Approach % | 0.0 | 85.1 | 14.9 | 0.0 | | 61.5 | 0.0 | 38.5 | 0.0 | | 2.3 | 97.7 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 34.1 | 6.0 | 0.0 | 40.1 | 4.8 | 0.0 | 3.0 | 0.0 | 7.8 | 1.2 | 50.9 | 0.0 | 0.0 | 52.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 93 | | | | | 12 | | | | | 62 | | | | | 0 | | | | | 167 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 11 | 3 | 0 | 14 | 2 | 0 | 0 | 0 | 2 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 28 |
| 4:15 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 2 | 1 | 9 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 19 |
| 4:30 PM | 0 | 14 | 2 | 0 | 16 | 1 | 0 | 0 | 0 | 1 | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 35 |
| 4:45 PM | 0 | 4 | 1 | 0 | 5 | 1 | 0 | 1 | 0 | 2 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 15 |
| Total Volume | 0 | 36 | 6 | 0 | 42 | 4 | 0 | 3 | 0 | 7 | 1 | 47 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 97 |
| % Approach Total | 0.0 | 85.7 | 14.3 | 0.0 | | 57.1 | 0.0 | 42.9 | 0.0 | | 2.1 | 97.9 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.643 | 0.500 | 0.000 | 0.656 | 0.500 | 0.000 | 0.375 | 0.000 | 0.875 | 0.250 | 0.653 | 0.000 | 0.000 | 0.667 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.693 |
| Entering Leg | 0 | 36 | 6 | 0 | 42 | 4 | 0 | 3 | 0 | 7 | 1 | 47 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 97 |
| Exiting Leg | 51 | | | | | 7 | | | | | 39 | | | | | 0 | | | | | 97 |
| Total | 93 | | | | | 14 | | | | | 87 | | | | | 0 | | | | | 194 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Buses

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|-------|------|--------|-------|---------------|------|------|--------|-------|------------------|-------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grand Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 2 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 4 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 |
| Entering Leg | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Exiting Leg | 1 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 3 |
| Total | 3 | | | | | 0 | | | | | 3 | | | | | 0 | | | | | 6 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Single-Unit Trucks

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | |
|--------------------|------------------|-------|------|--------|-------|---------------|------|------|--------|-------|------------------|-------|------|--------|-------|-----------|------|------|--------|-------|-------|---|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Grand Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 28.6 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | | | | | | 5 | | | | | 0 | | | | | 2 | | | | | 0 | 7 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | |
|-------------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|----|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Total Volume | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | |
| Entering Leg | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Exiting Leg | | | | | | 4 | | | | | 0 | | | | | 2 | | | | | 0 | 6 |
| Total | | | | | | 6 | | | | | 0 | | | | | 6 | | | | | 0 | 12 |

PDI File #: **196718 A**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Raynes Avenue W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------|------------------|------|------|--------|-------|---------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Raynes Avenue | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|---------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |
| Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

PDI File #: 196718 A
 Location: N: Maplewood Avenue S: Maplewood Avenue
 Location: E: Raynes Avenue W: Driveway
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Maplewood Avenue | | | | | | | Raynes Avenue | | | | | | | Maplewood Avenue | | | | | | | Driveway | | | | | | | Total |
|-------------------|------------------|------|------|--------|-------|-------|-------|---------------|------|-------|--------|-------|-------|-------|------------------|-------|------|--------|-------|-------|-------|-----------|------|------|--------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | | from South | | | | | | | from West | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | 1 | | | | | | | 0 | | | | | | | 1 | | | | | | | 0 | | | | | | | 2 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | | | Raynes Avenue | | | | | | | Maplewood Avenue | | | | | | | Driveway | | | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------|-------|---------------|-------|-------|--------|-------|-------|-------|------------------|-------|-------|--------|-------|-------|-------|-----------|-------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | | from South | | | | | | | from West | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | | | |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| Exiting Leg | 1 | | | | | | | 0 | | | | | | | 1 | | | | | | | 0 | | | | | | | 2 |
| Total | 1 | | | | | | | 1 | | | | | | | 2 | | | | | | | 0 | | | | | | | 4 |

PDI File #: 196718 A
 Location: N: Maplewood Avenue S: Maplewood Avenue
 Location: E: Raynes Avenue W: Driveway
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

| | Maplewood Avenue | | | | | | | Raynes Avenue | | | | | | | Maplewood Avenue | | | | | | | Driveway | | | | | | | Total |
|-------------------|------------------|------|------|--------|-------|-------|-------|---------------|------|------|--------|-------|-------|-------|------------------|------|------|--------|-------|-------|-------|-----------|------|------|--------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | | from South | | | | | | | from West | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 8 | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | | |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 11 | | |
| Approach % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42.9 | 57.1 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | | | |
| Total % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27.3 | 36.4 | 63.6 | 0 | 0 | 0 | 0 | 0 | 9.09 | 9.09 | 0 | 0 | 0 | 27.3 | 0 | 27.3 | | | |
| Exiting Leg Total | 0 | | | | | | | 7 | | | | | | | 1 | | | | | | | 3 | | | | | | | 11 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | | | Raynes Avenue | | | | | | | Maplewood Avenue | | | | | | | Driveway | | | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------|-------|---------------|-------|-------|--------|-------|-------|-------|------------------|-------|-------|--------|-------|-------|-------|-----------|-------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | | from South | | | | | | | from West | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | | |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 8 | | |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.0 | 40.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 | 0.250 | 0.625 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 | 0.000 | 0.750 | 1.000 | | | |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 8 | | | |
| Exiting Leg | 0 | | | | | | | 5 | | | | | | | 0 | | | | | | | 3 | | | | | | | 8 |
| Total | 0 | | | | | | | 10 | | | | | | | 0 | | | | | | | 6 | | | | | | | 16 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars and Heavy Vehicles (Combined)

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|-------------------|------------------|----------|----------|------------|---------------------------------|----------|----------|-----------|------------------|------------|----------|------------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 79 | 0 | 0 | 79 | 3 | 4 | 0 | 7 | 2 | 81 | 0 | 83 | 169 |
| 4:15 PM | 73 | 1 | 0 | 74 | 5 | 2 | 0 | 7 | 0 | 101 | 0 | 101 | 182 |
| 4:30 PM | 71 | 0 | 0 | 71 | 1 | 2 | 0 | 3 | 2 | 100 | 0 | 102 | 176 |
| 4:45 PM | 92 | 0 | 0 | 92 | 0 | 1 | 0 | 1 | 1 | 97 | 0 | 98 | 191 |
| Total | 315 | 1 | 0 | 316 | 9 | 9 | 0 | 18 | 5 | 379 | 0 | 384 | 718 |
| 5:00 PM | 89 | 0 | 0 | 89 | 1 | 0 | 0 | 1 | 1 | 146 | 0 | 147 | 237 |
| 5:15 PM | 92 | 1 | 0 | 93 | 3 | 2 | 0 | 5 | 1 | 105 | 0 | 106 | 204 |
| 5:30 PM | 119 | 0 | 0 | 119 | 0 | 2 | 0 | 2 | 0 | 109 | 0 | 109 | 230 |
| 5:45 PM | 102 | 1 | 0 | 103 | 5 | 0 | 1 | 6 | 1 | 95 | 0 | 96 | 205 |
| Total | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 455 | 0 | 458 | 876 |
| Grand Total | 717 | 3 | 0 | 720 | 18 | 13 | 1 | 32 | 8 | 834 | 0 | 842 | 1594 |
| Approach % | 99.6 | 0.4 | 0.0 | | 56.3 | 40.6 | 3.1 | | 1.0 | 99.0 | 0.0 | | |
| Total % | 45.0 | 0.2 | 0.0 | 45.2 | 1.1 | 0.8 | 0.1 | 2.0 | 0.5 | 52.3 | 0.0 | 52.8 | |
| Exiting Leg Total | | | | 852 | | | | 12 | | | | 730 | 1594 |
| Cars | 713 | 3 | 0 | 716 | 18 | 13 | 1 | 32 | 8 | 827 | 0 | 835 | 1583 |
| % Cars | 99.4 | 100.0 | 0.0 | 99.4 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.2 | 0.0 | 99.2 | 99.3 |
| Exiting Leg Total | | | | 845 | | | | 12 | | | | 726 | 1583 |
| Heavy Vehicles | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 11 |
| % Heavy Vehicles | 0.6 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 0.7 |
| Exiting Leg Total | | | | 7 | | | | 0 | | | | 4 | 11 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|--------------------|------------------|-------|--------|-------|---------------------------------|-------|--------|-------|------------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 89 | 0 | 0 | 89 | 1 | 0 | 0 | 1 | 1 | 146 | 0 | 147 | 237 |
| 5:15 PM | 92 | 1 | 0 | 93 | 3 | 2 | 0 | 5 | 1 | 105 | 0 | 106 | 204 |
| 5:30 PM | 119 | 0 | 0 | 119 | 0 | 2 | 0 | 2 | 0 | 109 | 0 | 109 | 230 |
| 5:45 PM | 102 | 1 | 0 | 103 | 5 | 0 | 1 | 6 | 1 | 95 | 0 | 96 | 205 |
| Total Volume | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 455 | 0 | 458 | 876 |
| % Approach Total | 99.5 | 0.5 | 0.0 | | 64.3 | 28.6 | 7.1 | | 0.7 | 99.3 | 0.0 | | |
| PHF | 0.845 | 0.500 | 0.000 | 0.849 | 0.450 | 0.500 | 0.250 | 0.583 | 0.750 | 0.779 | 0.000 | 0.779 | 0.924 |
| Cars | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 453 | 0 | 456 | 874 |
| Cars % | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.6 | 0.0 | 99.6 | 99.8 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.4 | 0.2 |
| Cars Enter Leg | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 453 | 0 | 456 | 874 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Total Entering Leg | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 455 | 0 | 458 | 876 |
| Cars Exiting Leg | | | | 462 | | | | 6 | | | | 406 | 874 |
| Heavy Exiting Leg | | | | 2 | | | | 0 | | | | 0 | 2 |
| Total Exiting Leg | | | | 464 | | | | 6 | | | | 406 | 876 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|-------------------|------------------|----------|----------|------------|---------------------------------|----------|----------|-----------|------------------|------------|----------|------------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 77 | 0 | 0 | 77 | 3 | 4 | 0 | 7 | 2 | 79 | 0 | 81 | 165 |
| 4:15 PM | 71 | 1 | 0 | 72 | 5 | 2 | 0 | 7 | 0 | 100 | 0 | 100 | 179 |
| 4:30 PM | 71 | 0 | 0 | 71 | 1 | 2 | 0 | 3 | 2 | 100 | 0 | 102 | 176 |
| 4:45 PM | 92 | 0 | 0 | 92 | 0 | 1 | 0 | 1 | 1 | 95 | 0 | 96 | 189 |
| Total | 311 | 1 | 0 | 312 | 9 | 9 | 0 | 18 | 5 | 374 | 0 | 379 | 709 |
| 5:00 PM | 89 | 0 | 0 | 89 | 1 | 0 | 0 | 1 | 1 | 145 | 0 | 146 | 236 |
| 5:15 PM | 92 | 1 | 0 | 93 | 3 | 2 | 0 | 5 | 1 | 105 | 0 | 106 | 204 |
| 5:30 PM | 119 | 0 | 0 | 119 | 0 | 2 | 0 | 2 | 0 | 109 | 0 | 109 | 230 |
| 5:45 PM | 102 | 1 | 0 | 103 | 5 | 0 | 1 | 6 | 1 | 94 | 0 | 95 | 204 |
| Total | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 453 | 0 | 456 | 874 |
| Grand Total | 713 | 3 | 0 | 716 | 18 | 13 | 1 | 32 | 8 | 827 | 0 | 835 | 1583 |
| Approach % | 99.6 | 0.4 | 0.0 | | 56.3 | 40.6 | 3.1 | | 1.0 | 99.0 | 0.0 | | |
| Total % | 45.0 | 0.2 | 0.0 | 45.2 | 1.1 | 0.8 | 0.1 | 2.0 | 0.5 | 52.2 | 0.0 | 52.7 | |
| Exiting Leg Total | | | | 845 | | | | 12 | | | | 726 | 1583 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|------------------|------------------|-------|--------|------------|---------------------------------|-------|--------|-----------|------------------|-------|--------|------------|-------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 89 | 0 | 0 | 89 | 1 | 0 | 0 | 1 | 1 | 145 | 0 | 146 | 236 |
| 5:15 PM | 92 | 1 | 0 | 93 | 3 | 2 | 0 | 5 | 1 | 105 | 0 | 106 | 204 |
| 5:30 PM | 119 | 0 | 0 | 119 | 0 | 2 | 0 | 2 | 0 | 109 | 0 | 109 | 230 |
| 5:45 PM | 102 | 1 | 0 | 103 | 5 | 0 | 1 | 6 | 1 | 94 | 0 | 95 | 204 |
| Total Volume | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 453 | 0 | 456 | 874 |
| % Approach Total | 99.5 | 0.5 | 0.0 | | 64.3 | 28.6 | 7.1 | | 0.7 | 99.3 | 0.0 | | |
| PHF | 0.845 | 0.500 | 0.000 | 0.849 | 0.450 | 0.500 | 0.250 | 0.583 | 0.750 | 0.781 | 0.000 | 0.781 | 0.926 |
| Entering Leg | 402 | 2 | 0 | 404 | 9 | 4 | 1 | 14 | 3 | 453 | 0 | 456 | 874 |
| Exiting Leg | | | | 462 | | | | 6 | | | | 406 | 874 |
| Total | | | | 866 | | | | 20 | | | | 862 | 1748 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|--------------------|------------------|----------|----------|----------|---------------------------------|----------|----------|----------|------------------|----------|----------|----------|-----------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 |
| 4:15 PM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Total | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Grand Total | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 11 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| Total % | 36.4 | 0.0 | 0.0 | 36.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.6 | 0.0 | 63.6 | |
| Exiting Leg Total | | | | 7 | | | | 0 | | | | 4 | 11 |
| Buses | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 |
| % Buses | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 0.0 | 28.6 | 36.4 |
| Exiting Leg Total | | | | 2 | | | | 0 | | | | 2 | 4 |
| Single-Unit Trucks | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 7 |
| % Single-Unit | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 0.0 | 71.4 | 63.6 |
| Exiting Leg Total | | | | 5 | | | | 0 | | | | 2 | 7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|---------------------------|------------------|----------|----------|----------|---------------------------------|----------|----------|----------|------------------|----------|----------|----------|----------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 |
| 4:15 PM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Total Volume | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 9 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| PHF | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.625 | 0.000 | 0.625 | 0.563 |
| Buses | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| Buses % | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 20.0 | 33.3 |
| Single-Unit Trucks | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 6 |
| Single-Unit % | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 80.0 | 66.7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| Single-Unit Trucks | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 6 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 9 |
| Buses | | | | 1 | | | | 0 | | | | 2 | 3 |
| Single-Unit Trucks | | | | 4 | | | | 0 | | | | 2 | 6 |
| Articulated Trucks | | | | 0 | | | | 0 | | | | 0 | 0 |
| Total Exiting Leg | | | | 5 | | | | 0 | | | | 4 | 9 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|-------------------|------------------|----------|----------|------------|---------------------------------|----------|----------|-----------|------------------|------------|----------|------------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 65 | 0 | 0 | 65 | 3 | 3 | 0 | 6 | 2 | 67 | 0 | 69 | 140 |
| 4:15 PM | 59 | 0 | 0 | 59 | 5 | 1 | 0 | 6 | 0 | 89 | 0 | 89 | 154 |
| 4:30 PM | 57 | 0 | 0 | 57 | 1 | 2 | 0 | 3 | 2 | 82 | 0 | 84 | 144 |
| 4:45 PM | 87 | 0 | 0 | 87 | 0 | 1 | 0 | 1 | 0 | 88 | 0 | 88 | 176 |
| Total | 268 | 0 | 0 | 268 | 9 | 7 | 0 | 16 | 4 | 326 | 0 | 330 | 614 |
| 5:00 PM | 82 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 1 | 135 | 0 | 136 | 218 |
| 5:15 PM | 86 | 1 | 0 | 87 | 3 | 0 | 0 | 3 | 0 | 98 | 0 | 98 | 188 |
| 5:30 PM | 110 | 0 | 0 | 110 | 0 | 2 | 0 | 2 | 0 | 96 | 0 | 96 | 208 |
| 5:45 PM | 94 | 1 | 0 | 95 | 5 | 0 | 1 | 6 | 1 | 88 | 0 | 89 | 190 |
| Total | 372 | 2 | 0 | 374 | 8 | 2 | 1 | 11 | 2 | 417 | 0 | 419 | 804 |
| Grand Total | 640 | 2 | 0 | 642 | 17 | 9 | 1 | 27 | 6 | 743 | 0 | 749 | 1418 |
| Approach % | 99.7 | 0.3 | 0.0 | | 63.0 | 33.3 | 3.7 | | 0.8 | 99.2 | 0.0 | | |
| Total % | 45.1 | 0.1 | 0.0 | 45.3 | 1.2 | 0.6 | 0.1 | 1.9 | 0.4 | 52.4 | 0.0 | 52.8 | |
| Exiting Leg Total | | | | 760 | | | | 9 | | | | 649 | 1418 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|------------------|------------------|-------|--------|------------|---------------------------------|-------|--------|-----------|------------------|-------|--------|------------|-------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 82 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 1 | 135 | 0 | 136 | 218 |
| 5:15 PM | 86 | 1 | 0 | 87 | 3 | 0 | 0 | 3 | 0 | 98 | 0 | 98 | 188 |
| 5:30 PM | 110 | 0 | 0 | 110 | 0 | 2 | 0 | 2 | 0 | 96 | 0 | 96 | 208 |
| 5:45 PM | 94 | 1 | 0 | 95 | 5 | 0 | 1 | 6 | 1 | 88 | 0 | 89 | 190 |
| Total Volume | 372 | 2 | 0 | 374 | 8 | 2 | 1 | 11 | 2 | 417 | 0 | 419 | 804 |
| % Approach Total | 99.5 | 0.5 | 0.0 | | 72.7 | 18.2 | 9.1 | | 0.5 | 99.5 | 0.0 | | |
| PHF | 0.845 | 0.500 | 0.000 | 0.850 | 0.400 | 0.250 | 0.250 | 0.458 | 0.500 | 0.772 | 0.000 | 0.770 | 0.922 |
| Entering Leg | 372 | 2 | 0 | 374 | 8 | 2 | 1 | 11 | 2 | 417 | 0 | 419 | 804 |
| Exiting Leg | | | | 425 | | | | 5 | | | | 374 | 804 |
| Total | | | | 799 | | | | 16 | | | | 793 | 1608 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Light Goods Vehicle

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|--------------------|------------------|----------|----------|-----------|---------------------------------|----------|----------|----------|------------------|-----------|----------|-----------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 12 | 0 | 0 | 12 | 0 | 1 | 0 | 1 | 0 | 12 | 0 | 12 | 25 |
| 4:15 PM | 12 | 1 | 0 | 13 | 0 | 1 | 0 | 1 | 0 | 11 | 0 | 11 | 25 |
| 4:30 PM | 14 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 18 | 32 |
| 4:45 PM | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 13 |
| Total | 43 | 1 | 0 | 44 | 0 | 2 | 0 | 2 | 1 | 48 | 0 | 49 | 95 |
| 5:00 PM | 7 | 0 | 0 | 7 | 1 | 0 | 0 | 1 | 0 | 10 | 0 | 10 | 18 |
| 5:15 PM | 6 | 0 | 0 | 6 | 0 | 2 | 0 | 2 | 1 | 7 | 0 | 8 | 16 |
| 5:30 PM | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 13 | 22 |
| 5:45 PM | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 14 |
| Total | 30 | 0 | 0 | 30 | 1 | 2 | 0 | 3 | 1 | 36 | 0 | 37 | 70 |
| Grand Total | 73 | 1 | 0 | 74 | 1 | 4 | 0 | 5 | 2 | 84 | 0 | 86 | 165 |
| Approach % | 98.6 | 1.4 | 0.0 | | 20.0 | 80.0 | 0.0 | | 2.3 | 97.7 | 0.0 | | |
| Total % | 44.2 | 0.6 | 0.0 | 44.8 | 0.6 | 2.4 | 0.0 | 3.0 | 1.2 | 50.9 | 0.0 | 52.1 | |
| Exiting Leg Total | | | | 85 | | | | 3 | | | | 77 | 165 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total |
|------------------|------------------|-------|--------|-----------|---------------------------------|-------|--------|----------|------------------|-------|--------|-----------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 12 | 0 | 0 | 12 | 0 | 1 | 0 | 1 | 0 | 12 | 0 | 12 | 25 |
| 4:15 PM | 12 | 1 | 0 | 13 | 0 | 1 | 0 | 1 | 0 | 11 | 0 | 11 | 25 |
| 4:30 PM | 14 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 18 | 32 |
| 4:45 PM | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 13 |
| Total Volume | 43 | 1 | 0 | 44 | 0 | 2 | 0 | 2 | 1 | 48 | 0 | 49 | 95 |
| % Approach Total | 97.7 | 2.3 | 0.0 | | 0.0 | 100.0 | 0.0 | | 2.0 | 98.0 | 0.0 | | |
| PHF | 0.768 | 0.250 | 0.000 | 0.786 | 0.000 | 0.500 | 0.000 | 0.500 | 0.250 | 0.667 | 0.000 | 0.681 | 0.742 |
| Entering Leg | 43 | 1 | 0 | 44 | 0 | 2 | 0 | 2 | 1 | 48 | 0 | 49 | 95 |
| Exiting Leg | | | | 48 | | | | 2 | | | | 45 | 95 |
| Total | | | | 92 | | | | 4 | | | | 94 | 190 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Buses

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total | |
|--------------------|------------------|----------|----------|----------|---------------------------------|----------|----------|----------|------------------|----------|----------|----------|----------|----------|
| | from North | | | | from East | | | | from South | | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 | 1 | 0 | 1 | 1 |
| Grand Total | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | | |
| Total % | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 50.0 | | |
| Exiting Leg Total | | | | 2 | | | | 0 | | | | | 2 | 4 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total | |
|-------------------------|------------------|------------|------------|----------|---------------------------------|------------|------------|----------|------------------|--------------|------------|----------|----------|----------|
| | from North | | | | from East | | | | from South | | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | | |
| PHF | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.375 |
| Entering Leg | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| Exiting Leg | | | | 1 | | | | 0 | | | | | 2 | 3 |
| Total | | | | 3 | | | | 0 | | | | | 3 | 6 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Single-Unit Trucks

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total | |
|--------------------|------------------|----------|----------|----------|---------------------------------|----------|----------|----------|------------------|----------|----------|----------|----------|----------|
| | from North | | | | from East | | | | from South | | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Total | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 6 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Grand Total | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 7 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | | |
| Total % | 28.6 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 0.0 | 71.4 | | |
| Exiting Leg Total | | | | 5 | | | | 0 | | | | | 2 | 7 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total | |
|-------------------------|------------------|------------|------------|----------|---------------------------------|------------|------------|----------|------------------|--------------|------------|----------|----------|-----------|
| | from North | | | | from East | | | | from South | | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Total Volume | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 6 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | | |
| PHF | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.500 | 0.750 |
| Entering Leg | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 6 |
| Exiting Leg | | | | 4 | | | | 0 | | | | | 2 | 6 |
| Total | | | | 6 | | | | 0 | | | | | 6 | 12 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Articulated Trucks

| | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total | |
|-------------------|------------------|------|--------|-------|---------------------------------|------|--------|-------|------------------|------|--------|-------|-------|---|
| | from North | | | | from East | | | | from South | | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Maplewood Avenue | | | | Kennebunk Savings Bank Driveway | | | | Maplewood Avenue | | | | Total | |
|------------------|------------------|-------|--------|-------|---------------------------------|-------|--------|-------|------------------|-------|--------|-------|-------|-------|
| | from North | | | | from East | | | | from South | | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | | | | 0 | | | | 0 | | | | | 0 | 0 |
| Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

PDI File #: 196718 B
 Location: N: Maplewood Avenue S: Maplewood Avenue
 Location: E: Kennebunk Savings Bank Driveway
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Maplewood Avenue | | | | | | Kennebunk Savings Bank Driveway | | | | | | Maplewood Avenue | | | | | | Total |
|-------------------|------------------|------|--------|-------|-------|-------|---------------------------------|------|--------|-------|-------|-------|------------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from East | | | | | | from South | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Total | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Grand Total | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Approach % | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 33.3 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 33.3 | 0.0 | 33.3 | 0.0 | 0.0 | 0.0 | 33.3 | |
| Exiting Leg Total | 1 | | | | | | 1 | | | | | | 1 | | | | | | 3 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | | Kennebunk Savings Bank Driveway | | | | | | Maplewood Avenue | | | | | | Total |
|------------------|------------------|-------|--------|-------|-------|-------|---------------------------------|-------|--------|-------|-------|-------|------------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from East | | | | | | from South | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Total Volume | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| % Approach Total | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 |
| Entering Leg | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 3 |
| Exiting Leg | 1 | | | | | | 1 | | | | | | 1 | | | | | | 3 |
| Total | 2 | | | | | | 2 | | | | | | 2 | | | | | | 6 |

PDI File #: **196718 B**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Kennebunk Savings Bank Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

| | Maplewood Avenue | | | | | | Kennebunk Savings Bank Driveway | | | | | | Maplewood Avenue | | | | | | Total |
|-------------------|------------------|------|--------|--------|-------|--------|---------------------------------|------|--------|--------|--------|--------|------------------|------|--------|-------|-------|-------|-------|
| | from North | | | | | | from East | | | | | | from South | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Total | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 9 | 13 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 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 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Grand Total | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 13 | 17 | 0 | 0 | 0 | 0 | 0 | 18 | |
| Approach % | 0 | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 23.529 | 76.471 | | 0 | 0 | 0 | 0 | 0 | | |
| Total % | 0 | 0 | 0 | 5.5556 | 0 | 5.5556 | 0 | 0 | 0 | 22.222 | 72.222 | 94.444 | 0 | 0 | 0 | 0 | 0 | | |
| Exiting Leg Total | 1 | | | | | | 17 | | | | | | 0 | | | | | | 18 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Maplewood Avenue | | | | | | Kennebunk Savings Bank Driveway | | | | | | Maplewood Avenue | | | | | | Total |
|------------------|------------------|-------|--------|-------|-------|-------|---------------------------------|-------|--------|-------|-------|-------|------------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from East | | | | | | from South | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Total Volume | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 9 | 13 | 0 | 0 | 0 | 0 | 0 | 14 | |
| % Approach Total | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 30.8 | 69.2 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.333 | 0.563 | 0.813 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.875 | |
| Entering Leg | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 9 | 13 | 0 | 0 | 0 | 0 | 0 | 14 | |
| Exiting Leg | 1 | | | | | | 13 | | | | | | 0 | | | | | | 14 |
| Total | 2 | | | | | | 26 | | | | | | 0 | | | | | | 28 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------|------------------|------|-------|--------|-------|----------------|------|-------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 79 | 3 | 0 | 82 | 0 | 0 | 7 | 0 | 7 | 4 | 84 | 0 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 177 |
| 4:15 PM | 0 | 76 | 1 | 0 | 77 | 1 | 0 | 3 | 0 | 4 | 7 | 100 | 0 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 188 |
| 4:30 PM | 0 | 72 | 1 | 0 | 73 | 3 | 0 | 4 | 0 | 7 | 7 | 99 | 0 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 186 |
| 4:45 PM | 0 | 94 | 1 | 0 | 95 | 2 | 0 | 1 | 0 | 3 | 3 | 97 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 198 |
| Total | 0 | 321 | 6 | 0 | 327 | 6 | 0 | 15 | 0 | 21 | 21 | 380 | 0 | 0 | 401 | 0 | 0 | 0 | 0 | 0 | 749 |
| 5:00 PM | 0 | 85 | 4 | 0 | 89 | 3 | 0 | 5 | 0 | 8 | 3 | 143 | 0 | 1 | 147 | 0 | 0 | 0 | 0 | 0 | 244 |
| 5:15 PM | 0 | 90 | 3 | 1 | 94 | 2 | 0 | 7 | 0 | 9 | 3 | 104 | 0 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 210 |
| 5:30 PM | 0 | 119 | 2 | 0 | 121 | 4 | 0 | 3 | 0 | 7 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 236 |
| 5:45 PM | 0 | 99 | 3 | 0 | 102 | 1 | 0 | 2 | 0 | 3 | 8 | 95 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 208 |
| Total | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 446 | 0 | 1 | 465 | 0 | 0 | 0 | 0 | 0 | 898 |
| Grand Total | 0 | 714 | 18 | 1 | 733 | 16 | 0 | 32 | 0 | 48 | 39 | 826 | 0 | 1 | 866 | 0 | 0 | 0 | 0 | 0 | 1647 |
| Approach % | 0.0 | 97.4 | 2.5 | 0.1 | | 33.3 | 0.0 | 66.7 | 0.0 | | 4.5 | 95.4 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 43.4 | 1.1 | 0.1 | 44.5 | 1.0 | 0.0 | 1.9 | 0.0 | 2.9 | 2.4 | 50.2 | 0.0 | 0.1 | 52.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 843 | | | | | 57 | | | | | 747 | | | | | 0 | | | | | 1647 |
| Cars | 0 | 710 | 18 | 1 | 729 | 16 | 0 | 32 | 0 | 48 | 39 | 819 | 0 | 1 | 859 | 0 | 0 | 0 | 0 | 0 | 1636 |
| % Cars | 0.0 | 99.4 | 100.0 | 100.0 | 99.5 | 100.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 99.2 | 0.0 | 100.0 | 99.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 99.3 |
| Exiting Leg Total | 836 | | | | | 57 | | | | | 743 | | | | | 0 | | | | | 1636 |
| Heavy Vehicles | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 |
| % Heavy Vehicles | 0.0 | 0.6 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| Exiting Leg Total | 7 | | | | | 0 | | | | | 4 | | | | | 0 | | | | | 11 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 5:00 PM | 0 | 85 | 4 | 0 | 89 | 3 | 0 | 5 | 0 | 8 | 3 | 143 | 0 | 1 | 147 | 0 | 0 | 0 | 0 | 0 | 244 |
| 5:15 PM | 0 | 90 | 3 | 1 | 94 | 2 | 0 | 7 | 0 | 9 | 3 | 104 | 0 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 210 |
| 5:30 PM | 0 | 119 | 2 | 0 | 121 | 4 | 0 | 3 | 0 | 7 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 236 |
| 5:45 PM | 0 | 99 | 3 | 0 | 102 | 1 | 0 | 2 | 0 | 3 | 8 | 95 | 0 | 0 | 103 | 0 | 0 | 0 | 0 | 0 | 208 |
| Total Volume | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 446 | 0 | 1 | 465 | 0 | 0 | 0 | 0 | 0 | 898 |
| % Approach Total | 0.0 | 96.8 | 3.0 | 0.2 | | 37.0 | 0.0 | 63.0 | 0.0 | | 3.9 | 95.9 | 0.0 | 0.2 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.826 | 0.750 | 0.250 | 0.839 | 0.625 | 0.000 | 0.607 | 0.000 | 0.750 | 0.563 | 0.780 | 0.000 | 0.250 | 0.791 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.920 |
| Cars | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 444 | 0 | 1 | 463 | 0 | 0 | 0 | 0 | 0 | 896 |
| Cars % | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 99.6 | 0.0 | 100.0 | 99.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 99.8 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Cars Enter Leg | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 444 | 0 | 1 | 463 | 0 | 0 | 0 | 0 | 0 | 896 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Entering Leg | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 446 | 0 | 1 | 465 | 0 | 0 | 0 | 0 | 0 | 898 |
| Cars Exiting Leg | 455 | | | | | 30 | | | | | 411 | | | | | 0 | | | | | 896 |
| Heavy Exiting Leg | 2 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 2 |
| Total Exiting Leg | 457 | | | | | 30 | | | | | 411 | | | | | 0 | | | | | 898 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars-Combined (Motorcycles, Cars, Light Goods)

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------|------------------|------|------|--------|-------|----------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 77 | 3 | 0 | 80 | 0 | 0 | 7 | 0 | 7 | 4 | 82 | 0 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 173 |
| 4:15 PM | 0 | 74 | 1 | 0 | 75 | 1 | 0 | 3 | 0 | 4 | 7 | 99 | 0 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 185 |
| 4:30 PM | 0 | 72 | 1 | 0 | 73 | 3 | 0 | 4 | 0 | 7 | 7 | 99 | 0 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 186 |
| 4:45 PM | 0 | 94 | 1 | 0 | 95 | 2 | 0 | 1 | 0 | 3 | 3 | 95 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 196 |
| Total | 0 | 317 | 6 | 0 | 323 | 6 | 0 | 15 | 0 | 21 | 21 | 375 | 0 | 0 | 396 | 0 | 0 | 0 | 0 | 0 | 740 |
| 5:00 PM | 0 | 85 | 4 | 0 | 89 | 3 | 0 | 5 | 0 | 8 | 3 | 142 | 0 | 1 | 146 | 0 | 0 | 0 | 0 | 0 | 243 |
| 5:15 PM | 0 | 90 | 3 | 1 | 94 | 2 | 0 | 7 | 0 | 9 | 3 | 104 | 0 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 210 |
| 5:30 PM | 0 | 119 | 2 | 0 | 121 | 4 | 0 | 3 | 0 | 7 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 236 |
| 5:45 PM | 0 | 99 | 3 | 0 | 102 | 1 | 0 | 2 | 0 | 3 | 8 | 94 | 0 | 0 | 102 | 0 | 0 | 0 | 0 | 0 | 207 |
| Total | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 444 | 0 | 1 | 463 | 0 | 0 | 0 | 0 | 0 | 896 |
| Grand Total | 0 | 710 | 18 | 1 | 729 | 16 | 0 | 32 | 0 | 48 | 39 | 819 | 0 | 1 | 859 | 0 | 0 | 0 | 0 | 0 | 1636 |
| Approach % | 0.0 | 97.4 | 2.5 | 0.1 | | 33.3 | 0.0 | 66.7 | 0.0 | | 4.5 | 95.3 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 43.4 | 1.1 | 0.1 | 44.6 | 1.0 | 0.0 | 2.0 | 0.0 | 2.9 | 2.4 | 50.1 | 0.0 | 0.1 | 52.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 836 | | | | | 57 | | | | | 743 | | | | | 0 | | | | | 1636 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|---------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 5:00 PM | 0 | 85 | 4 | 0 | 89 | 3 | 0 | 5 | 0 | 8 | 3 | 142 | 0 | 1 | 146 | 0 | 0 | 0 | 0 | 0 | 243 |
| 5:15 PM | 0 | 90 | 3 | 1 | 94 | 2 | 0 | 7 | 0 | 9 | 3 | 104 | 0 | 0 | 107 | 0 | 0 | 0 | 0 | 0 | 210 |
| 5:30 PM | 0 | 119 | 2 | 0 | 121 | 4 | 0 | 3 | 0 | 7 | 4 | 104 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 236 |
| 5:45 PM | 0 | 99 | 3 | 0 | 102 | 1 | 0 | 2 | 0 | 3 | 8 | 94 | 0 | 0 | 102 | 0 | 0 | 0 | 0 | 0 | 207 |
| Total Volume | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 444 | 0 | 1 | 463 | 0 | 0 | 0 | 0 | 0 | 896 |
| % Approach Total | 0.0 | 96.8 | 3.0 | 0.2 | | 37.0 | 0.0 | 63.0 | 0.0 | | 3.9 | 95.9 | 0.0 | 0.2 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.826 | 0.750 | 0.250 | 0.839 | 0.625 | 0.000 | 0.607 | 0.000 | 0.750 | 0.563 | 0.782 | 0.000 | 0.250 | 0.793 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.922 |
| Entering Leg | 0 | 393 | 12 | 1 | 406 | 10 | 0 | 17 | 0 | 27 | 18 | 444 | 0 | 1 | 463 | 0 | 0 | 0 | 0 | 0 | 896 |
| Exiting Leg | 455 | | | | | 30 | | | | | 411 | | | | | 0 | | | | | 896 |
| Total | 861 | | | | | 57 | | | | | 874 | | | | | 0 | | | | | 1792 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|-------|------|--------|-------|----------------|------|------|--------|-------|------------------|-------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Grand Total | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total % | 0.0 | 36.4 | 0.0 | 0.0 | 36.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.6 | 0.0 | 0.0 | 63.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 7 | | | | | 0 | | | | | 4 | | | | | 0 | | | | | 11 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| % Buses | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 36.4 |
| Exiting Leg Total | 2 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 4 |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 7 |
| % Single-Unit | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.6 |
| Exiting Leg Total | 5 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|---------------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Volume | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PHF | 0.000 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.625 | 0.000 | 0.000 | 0.625 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.563 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Buses % | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| Single-Unit % | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 66.7 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| Single-Unit Trucks | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| Buses | 1 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 3 |
| Single-Unit Trucks | 4 | | | | | 0 | | | | | 2 | | | | | 0 | | | | | 6 |
| Articulated Trucks | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |
| Total Exiting Leg | 5 | | | | | 0 | | | | | 4 | | | | | 0 | | | | | 9 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------|------------------|------|------|--------|-------|----------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 64 | 3 | 0 | 67 | 0 | 0 | 7 | 0 | 7 | 3 | 70 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 147 |
| 4:15 PM | 0 | 61 | 1 | 0 | 62 | 1 | 0 | 3 | 0 | 4 | 7 | 88 | 0 | 0 | 95 | 0 | 0 | 0 | 0 | 0 | 161 |
| 4:30 PM | 0 | 59 | 0 | 0 | 59 | 3 | 0 | 4 | 0 | 7 | 6 | 83 | 0 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 155 |
| 4:45 PM | 0 | 89 | 1 | 0 | 90 | 2 | 0 | 0 | 0 | 2 | 3 | 87 | 0 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 182 |
| Total | 0 | 273 | 5 | 0 | 278 | 6 | 0 | 14 | 0 | 20 | 19 | 328 | 0 | 0 | 347 | 0 | 0 | 0 | 0 | 0 | 645 |
| 5:00 PM | 0 | 78 | 4 | 0 | 82 | 2 | 0 | 4 | 0 | 6 | 3 | 133 | 0 | 1 | 137 | 0 | 0 | 0 | 0 | 0 | 225 |
| 5:15 PM | 0 | 83 | 3 | 1 | 87 | 2 | 0 | 6 | 0 | 8 | 3 | 97 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 195 |
| 5:30 PM | 0 | 110 | 2 | 0 | 112 | 3 | 0 | 3 | 0 | 6 | 4 | 92 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 214 |
| 5:45 PM | 0 | 92 | 2 | 0 | 94 | 1 | 0 | 2 | 0 | 3 | 8 | 89 | 0 | 0 | 97 | 0 | 0 | 0 | 0 | 0 | 194 |
| Total | 0 | 363 | 11 | 1 | 375 | 8 | 0 | 15 | 0 | 23 | 18 | 411 | 0 | 1 | 430 | 0 | 0 | 0 | 0 | 0 | 828 |
| Grand Total | 0 | 636 | 16 | 1 | 653 | 14 | 0 | 29 | 0 | 43 | 37 | 739 | 0 | 1 | 777 | 0 | 0 | 0 | 0 | 0 | 1473 |
| Approach % | 0.0 | 97.4 | 2.5 | 0.2 | | 32.6 | 0.0 | 67.4 | 0.0 | | 4.8 | 95.1 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 43.2 | 1.1 | 0.1 | 44.3 | 1.0 | 0.0 | 2.0 | 0.0 | 2.9 | 2.5 | 50.2 | 0.0 | 0.1 | 52.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 754 | | | | | 53 | | | | | 666 | | | | | 0 | | | | | 1473 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 5:00 PM | 0 | 78 | 4 | 0 | 82 | 2 | 0 | 4 | 0 | 6 | 3 | 133 | 0 | 1 | 137 | 0 | 0 | 0 | 0 | 0 | 225 |
| 5:15 PM | 0 | 83 | 3 | 1 | 87 | 2 | 0 | 6 | 0 | 8 | 3 | 97 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 195 |
| 5:30 PM | 0 | 110 | 2 | 0 | 112 | 3 | 0 | 3 | 0 | 6 | 4 | 92 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 214 |
| 5:45 PM | 0 | 92 | 2 | 0 | 94 | 1 | 0 | 2 | 0 | 3 | 8 | 89 | 0 | 0 | 97 | 0 | 0 | 0 | 0 | 0 | 194 |
| Total Volume | 0 | 363 | 11 | 1 | 375 | 8 | 0 | 15 | 0 | 23 | 18 | 411 | 0 | 1 | 430 | 0 | 0 | 0 | 0 | 0 | 828 |
| % Approach Total | 0.0 | 96.8 | 2.9 | 0.3 | | 34.8 | 0.0 | 65.2 | 0.0 | | 4.2 | 95.6 | 0.0 | 0.2 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.825 | 0.688 | 0.250 | 0.837 | 0.667 | 0.000 | 0.625 | 0.000 | 0.719 | 0.563 | 0.773 | 0.000 | 0.250 | 0.785 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.920 |
| Entering Leg | 0 | 363 | 11 | 1 | 375 | 8 | 0 | 15 | 0 | 23 | 18 | 411 | 0 | 1 | 430 | 0 | 0 | 0 | 0 | 0 | 828 |
| Exiting Leg | 420 | | | | | 29 | | | | | 379 | | | | | 0 | | | | | 828 |
| Total | 795 | | | | | 52 | | | | | 809 | | | | | 0 | | | | | 1656 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Light Goods Vehicle

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|--------------------|------------------|------|------|--------|-------|----------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 26 |
| 4:15 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 24 |
| 4:30 PM | 0 | 13 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 31 |
| 4:45 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 14 |
| Total | 0 | 44 | 1 | 0 | 45 | 0 | 0 | 1 | 0 | 1 | 2 | 47 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 95 |
| 5:00 PM | 0 | 7 | 0 | 0 | 7 | 1 | 0 | 1 | 0 | 2 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 18 |
| 5:15 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 15 |
| 5:30 PM | 0 | 9 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 22 |
| 5:45 PM | 0 | 7 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 13 |
| Total | 0 | 30 | 1 | 0 | 31 | 2 | 0 | 2 | 0 | 4 | 0 | 33 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 68 |
| Grand Total | 0 | 74 | 2 | 0 | 76 | 2 | 0 | 3 | 0 | 5 | 2 | 80 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 163 |
| Approach % | 0.0 | 97.4 | 2.6 | 0.0 | | 40.0 | 0.0 | 60.0 | 0.0 | | 2.4 | 97.6 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 45.4 | 1.2 | 0.0 | 46.6 | 1.2 | 0.0 | 1.8 | 0.0 | 3.1 | 1.2 | 49.1 | 0.0 | 0.0 | 50.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 82 | | | | | 4 | | | | | 77 | | | | | 0 | | | | | 163 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|---------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 26 |
| 4:15 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 24 |
| 4:30 PM | 0 | 13 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 31 |
| 4:45 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 14 |
| Total Volume | 0 | 44 | 1 | 0 | 45 | 0 | 0 | 1 | 0 | 1 | 2 | 47 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 95 |
| % Approach Total | 0.0 | 97.8 | 2.2 | 0.0 | | 0.0 | 0.0 | 100.0 | 0.0 | | 4.1 | 95.9 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.846 | 0.250 | 0.000 | 0.804 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.500 | 0.734 | 0.000 | 0.000 | 0.721 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.766 |
| Entering Leg | 0 | 44 | 1 | 0 | 45 | 0 | 0 | 1 | 0 | 1 | 2 | 47 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 95 |
| Exiting Leg | 47 | | | | | 3 | | | | | 45 | | | | | 0 | | | | | 95 |
| Total | 92 | | | | | 4 | | | | | 94 | | | | | 0 | | | | | 190 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Buses

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | |
|--------------------|------------------|-------|------|--------|-------|----------------|------|------|--------|-------|------------------|-------|------|--------|-------|-----------|------|------|--------|-------|-------|---|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Grand Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | | | | | | 2 | | | | | 0 | | | | | 2 | | | | | 0 | 4 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | |
|-------------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|---|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Volume | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | |
| Entering Leg | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Exiting Leg | | | | | | 1 | | | | | 0 | | | | | 2 | | | | | 0 | 3 |
| Total | | | | | | 3 | | | | | 0 | | | | | 3 | | | | | 0 | 6 |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Single-Unit Trucks

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | | | | | |
|--------------------|------------------|-------|------|--------|-------|----------------|------|------|--------|-------|------------------|-------|------|--------|-------|-----------|------|------|--------|-------|-------|-----|-----|-----|-----|---|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | | | | | |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grand Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 28.6 | 0.0 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 71.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | | | | | | 5 | | | | | 0 | | | | | 2 | | | | | 7 | | | | | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total | | | | | |
|-------------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|-------|-------|-------|-------|---|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | | | | | |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Volume | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 | |
| Entering Leg | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Exiting Leg | | | | | | 4 | | | | | 0 | | | | | 2 | | | | | 6 | | | | | |
| Total | | | | | | 6 | | | | | 0 | | | | | 6 | | | | | 12 | | | | | |

PDI File #: **196718 C**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Vaughan Street W: Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|-------------------|------------------|------|------|--------|-------|----------------|------|------|--------|-------|------------------|------|------|--------|-------|-----------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Vaughan Street | | | | | Maplewood Avenue | | | | | Driveway | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|----------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-----------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |
| Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

PDI File #: 196718 C
 Location: N: Maplewood Avenue S: Maplewood Avenue
 Location: E: Vaughan Street W: Driveway
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Maplewood Avenue | | | | | | | Vaughan Street | | | | | | | Maplewood Avenue | | | | | | | Driveway | | | | | | | Total |
|-------------------|------------------|-------|------|--------|-------|-------|-------|----------------|------|------|--------|-------|-------|-------|------------------|------|------|--------|-------|-------|-------|-----------|------|------|--------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | | from South | | | | | | | from West | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 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 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Grand Total | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 66.7 | 33.3 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total % | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 1 | | | | | | | 2 | | | | | | | 1 | | | | | | | 0 | | | | | | | 4 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Maplewood Avenue | | | | | | | Vaughan Street | | | | | | | Maplewood Avenue | | | | | | | Driveway | | | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------|-------|----------------|-------|-------|--------|-------|-------|-------|------------------|-------|-------|--------|-------|-------|-------|-----------|-------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | | from South | | | | | | | from West | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Volume | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 66.7 | 33.3 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PHF | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.333 | |
| Entering Leg | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Exiting Leg | 1 | | | | | | | 2 | | | | | | | 1 | | | | | | | 0 | | | | | | | 4 |
| Total | 2 | | | | | | | 2 | | | | | | | 4 | | | | | | | 0 | | | | | | | 8 |

PDI File #: 196718 C
 Location: N: Maplewood Avenue S: Maplewood Avenue
 Location: E: Vaughan Street W: Driveway
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

| | Maplewood Avenue | | | | | | | | Vaughan Street | | | | | | | | Maplewood Avenue | | | | | | | | Driveway | | | | | | | | Total |
|-------------------|------------------|------|------|--------|-------|-------|-------|----|----------------|------|------|--------|-------|-------|-------|---|------------------|------|------|--------|-------|-------|-------|---|-----------|------|------|--------|-------|-------|-------|----|-------|
| | from North | | | | | | | | from East | | | | | | | | from South | | | | | | | | from West | | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 4 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 10 | |
| Total | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 | 10 | 14 | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 7 | 24 | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 10 | | |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 5 | 16 | 21 | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 10 | 34 | | |
| Approach % | 0 | 0 | 0 | 0 | 0 | 100 | | 0 | 0 | 0 | 0 | 23.8 | 76.2 | | 0 | 0 | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | 70 | 30 | | | | | | |
| Total % | 0 | 0 | 0 | 0 | 0 | 5.88 | 5.88 | 0 | 0 | 0 | 0 | 14.7 | 47.1 | 61.8 | | 0 | 0 | 0 | 0 | 2.94 | 0 | 2.94 | | 0 | 0 | 0 | 0 | 20.6 | 8.82 | 29.4 | | | |
| Exiting Leg Total | 2 | | | | | | | 21 | | | | | | | 1 | | | | | | | 10 | | | | | | | 34 | | | | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | | | | Vaughan Street | | | | | | | | Maplewood Avenue | | | | | | | | Driveway | | | | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------|-------|-------|----------------|-------|-------|--------|-------|-------|-------|-------|------------------|-------|-------|--------|-------|-------|-------|-------|-----------|-------|-------|--------|-------|-------|-------|----|-------|
| | from North | | | | | | | | from East | | | | | | | | from South | | | | | | | | from West | | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 4 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 10 | |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 | 10 | 14 | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 7 | 24 | | |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 71.4 | | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 85.7 | 14.3 | | | | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.333 | 0.500 | 0.700 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.250 | 0.583 | 0.600 | | |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 | 10 | 14 | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 7 | 24 | | |
| Exiting Leg | 2 | | | | | | | 14 | | | | | | | 1 | | | | | | | 7 | | | | | | | 24 | | | | |
| Total | 4 | | | | | | | 28 | | | | | | | 2 | | | | | | | 14 | | | | | | | 48 | | | | |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|-------------------|------------------|------|-------|--------|-------|-------------|-------|------|--------|-------|------------------|------|------|--------|-------|-------------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 13 | 57 | 11 | 0 | 81 | 10 | 9 | 29 | 0 | 48 | 43 | 66 | 1 | 0 | 110 | 1 | 18 | 12 | 0 | 31 | 270 |
| 4:15 PM | 14 | 57 | 12 | 0 | 83 | 11 | 13 | 25 | 0 | 49 | 39 | 78 | 3 | 0 | 120 | 2 | 14 | 17 | 0 | 33 | 285 |
| 4:30 PM | 13 | 57 | 7 | 0 | 77 | 8 | 18 | 24 | 0 | 50 | 50 | 81 | 4 | 0 | 135 | 3 | 7 | 17 | 0 | 27 | 289 |
| 4:45 PM | 11 | 70 | 12 | 0 | 93 | 8 | 12 | 43 | 0 | 63 | 31 | 76 | 3 | 0 | 110 | 3 | 14 | 16 | 0 | 33 | 299 |
| Total | 51 | 241 | 42 | 0 | 334 | 37 | 52 | 121 | 0 | 210 | 163 | 301 | 11 | 0 | 475 | 9 | 53 | 62 | 0 | 124 | 1143 |
| 5:00 PM | 10 | 71 | 7 | 0 | 88 | 13 | 27 | 37 | 0 | 77 | 45 | 99 | 2 | 0 | 146 | 1 | 21 | 36 | 0 | 58 | 369 |
| 5:15 PM | 11 | 77 | 8 | 0 | 96 | 15 | 14 | 34 | 0 | 63 | 39 | 79 | 1 | 0 | 119 | 1 | 21 | 12 | 0 | 34 | 312 |
| 5:30 PM | 10 | 95 | 19 | 0 | 124 | 13 | 22 | 63 | 0 | 98 | 37 | 82 | 2 | 0 | 121 | 0 | 23 | 13 | 0 | 36 | 379 |
| 5:45 PM | 9 | 81 | 10 | 0 | 100 | 8 | 18 | 35 | 0 | 61 | 41 | 83 | 0 | 0 | 124 | 4 | 8 | 12 | 0 | 24 | 309 |
| Total | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 169 | 0 | 299 | 162 | 343 | 5 | 0 | 510 | 6 | 73 | 73 | 0 | 152 | 1369 |
| Grand Total | 91 | 565 | 86 | 0 | 742 | 86 | 133 | 290 | 0 | 509 | 325 | 644 | 16 | 0 | 985 | 15 | 126 | 135 | 0 | 276 | 2512 |
| Approach % | 12.3 | 76.1 | 11.6 | 0.0 | | 16.9 | 26.1 | 57.0 | 0.0 | | 33.0 | 65.4 | 1.6 | 0.0 | | 5.4 | 45.7 | 48.9 | 0.0 | | |
| Total % | 3.6 | 22.5 | 3.4 | 0.0 | 29.5 | 3.4 | 5.3 | 11.5 | 0.0 | 20.3 | 12.9 | 25.6 | 0.6 | 0.0 | 39.2 | 0.6 | 5.0 | 5.4 | 0.0 | 11.0 | |
| Exiting Leg Total | 865 | | | | | 537 | | | | | 870 | | | | | 240 | | | | | 2512 |
| Cars | 90 | 562 | 86 | 0 | 738 | 86 | 133 | 284 | 0 | 503 | 318 | 638 | 14 | 0 | 970 | 15 | 125 | 134 | 0 | 274 | 2485 |
| % Cars | 98.9 | 99.5 | 100.0 | 0.0 | 99.5 | 100.0 | 100.0 | 97.9 | 0.0 | 98.8 | 97.8 | 99.1 | 87.5 | 0.0 | 98.5 | 100.0 | 99.2 | 99.3 | 0.0 | 99.3 | 98.9 |
| Exiting Leg Total | 858 | | | | | 529 | | | | | 861 | | | | | 237 | | | | | 2485 |
| Heavy Vehicles | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 6 | 0 | 6 | 7 | 6 | 2 | 0 | 15 | 0 | 1 | 1 | 0 | 2 | 27 |
| % Heavy Vehicles | 1.1 | 0.5 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 2.1 | 0.0 | 1.2 | 2.2 | 0.9 | 12.5 | 0.0 | 1.5 | 0.0 | 0.8 | 0.7 | 0.0 | 0.7 | 1.1 |
| Exiting Leg Total | 7 | | | | | 8 | | | | | 9 | | | | | 3 | | | | | 27 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|--------------------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 5:00 PM | 10 | 71 | 7 | 0 | 88 | 13 | 27 | 37 | 0 | 77 | 45 | 99 | 2 | 0 | 146 | 1 | 21 | 36 | 0 | 58 | 369 |
| 5:15 PM | 11 | 77 | 8 | 0 | 96 | 15 | 14 | 34 | 0 | 63 | 39 | 79 | 1 | 0 | 119 | 1 | 21 | 12 | 0 | 34 | 312 |
| 5:30 PM | 10 | 95 | 19 | 0 | 124 | 13 | 22 | 63 | 0 | 98 | 37 | 82 | 2 | 0 | 121 | 0 | 23 | 13 | 0 | 36 | 379 |
| 5:45 PM | 9 | 81 | 10 | 0 | 100 | 8 | 18 | 35 | 0 | 61 | 41 | 83 | 0 | 0 | 124 | 4 | 8 | 12 | 0 | 24 | 309 |
| Total Volume | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 169 | 0 | 299 | 162 | 343 | 5 | 0 | 510 | 6 | 73 | 73 | 0 | 152 | 1369 |
| % Approach Total | 9.8 | 79.4 | 10.8 | 0.0 | | 16.4 | 27.1 | 56.5 | 0.0 | | 31.8 | 67.3 | 1.0 | 0.0 | | 3.9 | 48.0 | 48.0 | 0.0 | | |
| PHF | 0.909 | 0.853 | 0.579 | 0.000 | 0.823 | 0.817 | 0.750 | 0.671 | 0.000 | 0.763 | 0.900 | 0.866 | 0.625 | 0.000 | 0.873 | 0.375 | 0.793 | 0.507 | 0.000 | 0.655 | 0.903 |
| Cars | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 166 | 0 | 296 | 158 | 341 | 5 | 0 | 504 | 6 | 73 | 73 | 0 | 152 | 1360 |
| Cars % | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 98.2 | 0.0 | 99.0 | 97.5 | 99.4 | 100.0 | 0.0 | 98.8 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 99.3 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 | 1.0 | 2.5 | 0.6 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| Cars Enter Leg | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 166 | 0 | 296 | 158 | 341 | 5 | 0 | 504 | 6 | 73 | 73 | 0 | 152 | 1360 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 169 | 0 | 299 | 162 | 343 | 5 | 0 | 510 | 6 | 73 | 73 | 0 | 152 | 1369 |
| Cars Exiting Leg | 463 | | | | | 275 | | | | | 496 | | | | | 126 | | | | | 1360 |
| Heavy Exiting Leg | 2 | | | | | 4 | | | | | 3 | | | | | 0 | | | | | 9 |
| Total Exiting Leg | 465 | | | | | 279 | | | | | 499 | | | | | 126 | | | | | 1369 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars-Combined (Motorcycles, Cars, Light Goods)

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|-------------------|------------------|------|------|--------|-------|-------------|------|------|--------|-------|------------------|------|------|--------|-------|-------------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 12 | 56 | 11 | 0 | 79 | 10 | 9 | 28 | 0 | 47 | 42 | 64 | 1 | 0 | 107 | 1 | 18 | 12 | 0 | 31 | 264 |
| 4:15 PM | 14 | 55 | 12 | 0 | 81 | 11 | 13 | 25 | 0 | 49 | 38 | 78 | 2 | 0 | 118 | 2 | 14 | 16 | 0 | 32 | 280 |
| 4:30 PM | 13 | 57 | 7 | 0 | 77 | 8 | 18 | 23 | 0 | 49 | 50 | 81 | 4 | 0 | 135 | 3 | 7 | 17 | 0 | 27 | 288 |
| 4:45 PM | 11 | 70 | 12 | 0 | 93 | 8 | 12 | 42 | 0 | 62 | 30 | 74 | 2 | 0 | 106 | 3 | 13 | 16 | 0 | 32 | 293 |
| Total | 50 | 238 | 42 | 0 | 330 | 37 | 52 | 118 | 0 | 207 | 160 | 297 | 9 | 0 | 466 | 9 | 52 | 61 | 0 | 122 | 1125 |
| 5:00 PM | 10 | 71 | 7 | 0 | 88 | 13 | 27 | 36 | 0 | 76 | 44 | 98 | 2 | 0 | 144 | 1 | 21 | 36 | 0 | 58 | 366 |
| 5:15 PM | 11 | 77 | 8 | 0 | 96 | 15 | 14 | 34 | 0 | 63 | 38 | 79 | 1 | 0 | 118 | 1 | 21 | 12 | 0 | 34 | 311 |
| 5:30 PM | 10 | 95 | 19 | 0 | 124 | 13 | 22 | 61 | 0 | 96 | 37 | 82 | 2 | 0 | 121 | 0 | 23 | 13 | 0 | 36 | 377 |
| 5:45 PM | 9 | 81 | 10 | 0 | 100 | 8 | 18 | 35 | 0 | 61 | 39 | 82 | 0 | 0 | 121 | 4 | 8 | 12 | 0 | 24 | 306 |
| Total | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 166 | 0 | 296 | 158 | 341 | 5 | 0 | 504 | 6 | 73 | 73 | 0 | 152 | 1360 |
| Grand Total | 90 | 562 | 86 | 0 | 738 | 86 | 133 | 284 | 0 | 503 | 318 | 638 | 14 | 0 | 970 | 15 | 125 | 134 | 0 | 274 | 2485 |
| Approach % | 12.2 | 76.2 | 11.7 | 0.0 | | 17.1 | 26.4 | 56.5 | 0.0 | | 32.8 | 65.8 | 1.4 | 0.0 | | 5.5 | 45.6 | 48.9 | 0.0 | | |
| Total % | 3.6 | 22.6 | 3.5 | 0.0 | 29.7 | 3.5 | 5.4 | 11.4 | 0.0 | 20.2 | 12.8 | 25.7 | 0.6 | 0.0 | 39.0 | 0.6 | 5.0 | 5.4 | 0.0 | 11.0 | |
| Exiting Leg Total | 858 | | | | | 529 | | | | | 861 | | | | | 237 | | | | | 2485 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 5:00 PM | 10 | 71 | 7 | 0 | 88 | 13 | 27 | 36 | 0 | 76 | 44 | 98 | 2 | 0 | 144 | 1 | 21 | 36 | 0 | 58 | 366 |
| 5:15 PM | 11 | 77 | 8 | 0 | 96 | 15 | 14 | 34 | 0 | 63 | 38 | 79 | 1 | 0 | 118 | 1 | 21 | 12 | 0 | 34 | 311 |
| 5:30 PM | 10 | 95 | 19 | 0 | 124 | 13 | 22 | 61 | 0 | 96 | 37 | 82 | 2 | 0 | 121 | 0 | 23 | 13 | 0 | 36 | 377 |
| 5:45 PM | 9 | 81 | 10 | 0 | 100 | 8 | 18 | 35 | 0 | 61 | 39 | 82 | 0 | 0 | 121 | 4 | 8 | 12 | 0 | 24 | 306 |
| Total Volume | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 166 | 0 | 296 | 158 | 341 | 5 | 0 | 504 | 6 | 73 | 73 | 0 | 152 | 1360 |
| % Approach Total | 9.8 | 79.4 | 10.8 | 0.0 | | 16.6 | 27.4 | 56.1 | 0.0 | | 31.3 | 67.7 | 1.0 | 0.0 | | 3.9 | 48.0 | 48.0 | 0.0 | | |
| PHF | 0.909 | 0.853 | 0.579 | 0.000 | 0.823 | 0.817 | 0.750 | 0.680 | 0.000 | 0.771 | 0.898 | 0.870 | 0.625 | 0.000 | 0.875 | 0.375 | 0.793 | 0.507 | 0.000 | 0.655 | 0.902 |
| Entering Leg | 40 | 324 | 44 | 0 | 408 | 49 | 81 | 166 | 0 | 296 | 158 | 341 | 5 | 0 | 504 | 6 | 73 | 73 | 0 | 152 | 1360 |
| Exiting Leg | 463 | | | | | 275 | | | | | 496 | | | | | 126 | | | | | 1360 |
| Total | 871 | | | | | 571 | | | | | 1000 | | | | | 278 | | | | | 2720 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|--------------------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|------------------|----------|----------|----------|-----------|-------------|----------|----------|----------|----------|-----------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 5 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 4 | 0 | 1 | 0 | 0 | 1 | 6 |
| Total | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 3 | 3 | 4 | 2 | 0 | 9 | 0 | 1 | 1 | 0 | 2 | 18 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| Grand Total | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 6 | 0 | 6 | 7 | 6 | 2 | 0 | 15 | 0 | 1 | 1 | 0 | 2 | 27 |
| Approach % | 25.0 | 75.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 100.0 | 0.0 | | 46.7 | 40.0 | 13.3 | 0.0 | | 0.0 | 50.0 | 50.0 | 0.0 | | |
| Total % | 3.7 | 11.1 | 0.0 | 0.0 | 14.8 | 0.0 | 0.0 | 22.2 | 0.0 | 22.2 | 25.9 | 22.2 | 7.4 | 0.0 | 55.6 | 0.0 | 3.7 | 3.7 | 0.0 | 7.4 | |
| Exiting Leg Total | 7 | | | | | 8 | | | | | 9 | | | | | 3 | | | | | 27 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | 6 | 7 | 2 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 17 |
| % Buses | 0.0 | 66.7 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 33.3 | 0.0 | 0.0 | 60.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.0 |
| Exiting Leg Total | 2 | | | | | 7 | | | | | 8 | | | | | 0 | | | | | 17 |
| Single-Unit Trucks | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 6 | 0 | 1 | 1 | 0 | 2 | 10 |
| % Single-Unit | 100.0 | 33.3 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 66.7 | 100.0 | 0.0 | 40.0 | 0.0 | 100.0 | 100.0 | 0.0 | 100.0 | 37.0 |
| Exiting Leg Total | 5 | | | | | 1 | | | | | 1 | | | | | 3 | | | | | 10 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|---------------------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|-----------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:15 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 5 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 4 | 0 | 1 | 0 | 0 | 1 | 6 |
| Total Volume | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 3 | 3 | 4 | 2 | 0 | 9 | 0 | 1 | 1 | 0 | 2 | 18 |
| % Approach Total | 25.0 | 75.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 100.0 | 0.0 | | 33.3 | 44.4 | 22.2 | 0.0 | | 0.0 | 50.0 | 50.0 | 0.0 | | |
| PHF | 0.250 | 0.375 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.750 | 0.000 | 0.750 | 0.750 | 0.500 | 0.500 | 0.000 | 0.563 | 0.000 | 0.250 | 0.250 | 0.000 | 0.500 | 0.750 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 3 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| Buses % | 0.0 | 66.7 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 25.0 | 0.0 | 0.0 | 44.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 |
| Single-Unit Trucks | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | 9 |
| Single-Unit % | 100.0 | 33.3 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 | 100.0 | 0.0 | 55.6 | 0.0 | 100.0 | 100.0 | 0.0 | 100.0 | 50.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 3 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| Single-Unit Trucks | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | 9 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 3 | 3 | 4 | 2 | 0 | 9 | 0 | 1 | 1 | 0 | 2 | 18 |
| Buses | 1 | | | | | 3 | | | | | 5 | | | | | 0 | | | | | 9 |
| Single-Unit Trucks | 4 | | | | | 1 | | | | | 3 | | | | | 3 | | | | | 9 |
| Articulated Trucks | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |
| Total Exiting Leg | 5 | | | | | 4 | | | | | 6 | | | | | 3 | | | | | 18 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total | | | | | |
|-------------------|------------------|------------|-----------|----------|------------|-------------|-----------|------------|----------|------------|------------------|------------|----------|----------|------------|-------------|-----------|-----------|----------|------------|-------------|--|--|--|--|------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | | | | | |
| 4:00 PM | 11 | 52 | 8 | 0 | 71 | 7 | 7 | 25 | 0 | 39 | 39 | 54 | 1 | 0 | 94 | 1 | 15 | 12 | 0 | 28 | 232 | | | | | |
| 4:15 PM | 11 | 47 | 9 | 0 | 67 | 10 | 11 | 22 | 0 | 43 | 33 | 67 | 2 | 0 | 102 | 2 | 11 | 16 | 0 | 29 | 241 | | | | | |
| 4:30 PM | 12 | 44 | 7 | 0 | 63 | 6 | 17 | 23 | 0 | 46 | 45 | 68 | 4 | 0 | 117 | 2 | 7 | 15 | 0 | 24 | 250 | | | | | |
| 4:45 PM | 11 | 66 | 10 | 0 | 87 | 6 | 11 | 36 | 0 | 53 | 26 | 69 | 2 | 0 | 97 | 3 | 11 | 15 | 0 | 29 | 266 | | | | | |
| Total | 45 | 209 | 34 | 0 | 288 | 29 | 46 | 106 | 0 | 181 | 143 | 258 | 9 | 0 | 410 | 8 | 44 | 58 | 0 | 110 | 989 | | | | | |
| 5:00 PM | 9 | 64 | 7 | 0 | 80 | 12 | 24 | 30 | 0 | 66 | 40 | 92 | 2 | 0 | 134 | 1 | 19 | 35 | 0 | 55 | 335 | | | | | |
| 5:15 PM | 10 | 70 | 7 | 0 | 87 | 15 | 11 | 31 | 0 | 57 | 34 | 75 | 1 | 0 | 110 | 1 | 19 | 9 | 0 | 29 | 283 | | | | | |
| 5:30 PM | 9 | 89 | 18 | 0 | 116 | 12 | 19 | 57 | 0 | 88 | 36 | 75 | 2 | 0 | 113 | 0 | 20 | 9 | 0 | 29 | 346 | | | | | |
| 5:45 PM | 8 | 75 | 10 | 0 | 93 | 7 | 17 | 30 | 0 | 54 | 38 | 77 | 0 | 0 | 115 | 3 | 6 | 12 | 0 | 21 | 283 | | | | | |
| Total | 36 | 298 | 42 | 0 | 376 | 46 | 71 | 148 | 0 | 265 | 148 | 319 | 5 | 0 | 472 | 5 | 64 | 65 | 0 | 134 | 1247 | | | | | |
| Grand Total | 81 | 507 | 76 | 0 | 664 | 75 | 117 | 254 | 0 | 446 | 291 | 577 | 14 | 0 | 882 | 13 | 108 | 123 | 0 | 244 | 2236 | | | | | |
| Approach % | 12.2 | 76.4 | 11.4 | 0.0 | | 16.8 | 26.2 | 57.0 | 0.0 | | 33.0 | 65.4 | 1.6 | 0.0 | | 5.3 | 44.3 | 50.4 | 0.0 | | | | | | | |
| Total % | 3.6 | 22.7 | 3.4 | 0.0 | 29.7 | 3.4 | 5.2 | 11.4 | 0.0 | 19.9 | 13.0 | 25.8 | 0.6 | 0.0 | 39.4 | 0.6 | 4.8 | 5.5 | 0.0 | 10.9 | | | | | | |
| Exiting Leg Total | | | | | | 775 | | | | | 475 | | | | | 774 | | | | | 212 | | | | | 2236 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total | | | | | |
|------------------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|-------|------|--|--|--|------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | | | | | |
| 5:00 PM | 9 | 64 | 7 | 0 | 80 | 12 | 24 | 30 | 0 | 66 | 40 | 92 | 2 | 0 | 134 | 1 | 19 | 35 | 0 | 55 | 335 | | | | | |
| 5:15 PM | 10 | 70 | 7 | 0 | 87 | 15 | 11 | 31 | 0 | 57 | 34 | 75 | 1 | 0 | 110 | 1 | 19 | 9 | 0 | 29 | 283 | | | | | |
| 5:30 PM | 9 | 89 | 18 | 0 | 116 | 12 | 19 | 57 | 0 | 88 | 36 | 75 | 2 | 0 | 113 | 0 | 20 | 9 | 0 | 29 | 346 | | | | | |
| 5:45 PM | 8 | 75 | 10 | 0 | 93 | 7 | 17 | 30 | 0 | 54 | 38 | 77 | 0 | 0 | 115 | 3 | 6 | 12 | 0 | 21 | 283 | | | | | |
| Total Volume | 36 | 298 | 42 | 0 | 376 | 46 | 71 | 148 | 0 | 265 | 148 | 319 | 5 | 0 | 472 | 5 | 64 | 65 | 0 | 134 | 1247 | | | | | |
| % Approach Total | 9.6 | 79.3 | 11.2 | 0.0 | | 17.4 | 26.8 | 55.8 | 0.0 | | 31.4 | 67.6 | 1.1 | 0.0 | | 3.7 | 47.8 | 48.5 | 0.0 | | | | | | | |
| PHF | 0.900 | 0.837 | 0.583 | 0.000 | 0.810 | 0.767 | 0.740 | 0.649 | 0.000 | 0.753 | 0.925 | 0.867 | 0.625 | 0.000 | 0.881 | 0.417 | 0.800 | 0.464 | 0.000 | 0.609 | 0.901 | | | | | |
| Entering Leg | 36 | 298 | 42 | 0 | 376 | 46 | 71 | 148 | 0 | 265 | 148 | 319 | 5 | 0 | 472 | 5 | 64 | 65 | 0 | 134 | 1247 | | | | | |
| Exiting Leg | | | | | | 430 | | | | | 254 | | | | | 451 | | | | | 112 | 1247 | | | | |
| Total | | | | | | 806 | | | | | 519 | | | | | 923 | | | | | 246 | | | | | 2494 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Light Goods Vehicle

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|--------------------|------------------|-----------|-----------|----------|-----------|-------------|-----------|-----------|----------|-----------|------------------|-----------|----------|----------|-----------|-------------|-----------|-----------|----------|-----------|------------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 1 | 4 | 3 | 0 | 8 | 3 | 2 | 3 | 0 | 8 | 3 | 10 | 0 | 0 | 13 | 0 | 3 | 0 | 0 | 3 | 32 |
| 4:15 PM | 3 | 8 | 3 | 0 | 14 | 1 | 2 | 3 | 0 | 6 | 5 | 11 | 0 | 0 | 16 | 0 | 3 | 0 | 0 | 3 | 39 |
| 4:30 PM | 1 | 13 | 0 | 0 | 14 | 2 | 1 | 0 | 0 | 3 | 5 | 13 | 0 | 0 | 18 | 1 | 0 | 2 | 0 | 3 | 38 |
| 4:45 PM | 0 | 4 | 2 | 0 | 6 | 2 | 1 | 6 | 0 | 9 | 4 | 5 | 0 | 0 | 9 | 0 | 2 | 1 | 0 | 3 | 27 |
| Total | 5 | 29 | 8 | 0 | 42 | 8 | 6 | 12 | 0 | 26 | 17 | 39 | 0 | 0 | 56 | 1 | 8 | 3 | 0 | 12 | 136 |
| 5:00 PM | 1 | 7 | 0 | 0 | 8 | 1 | 3 | 6 | 0 | 10 | 4 | 6 | 0 | 0 | 10 | 0 | 2 | 1 | 0 | 3 | 31 |
| 5:15 PM | 1 | 7 | 1 | 0 | 9 | 0 | 3 | 3 | 0 | 6 | 4 | 4 | 0 | 0 | 8 | 0 | 2 | 3 | 0 | 5 | 28 |
| 5:30 PM | 1 | 6 | 1 | 0 | 8 | 1 | 3 | 4 | 0 | 8 | 1 | 7 | 0 | 0 | 8 | 0 | 3 | 4 | 0 | 7 | 31 |
| 5:45 PM | 1 | 6 | 0 | 0 | 7 | 1 | 1 | 5 | 0 | 7 | 1 | 5 | 0 | 0 | 6 | 1 | 2 | 0 | 0 | 3 | 23 |
| Total | 4 | 26 | 2 | 0 | 32 | 3 | 10 | 18 | 0 | 31 | 10 | 22 | 0 | 0 | 32 | 1 | 9 | 8 | 0 | 18 | 113 |
| Grand Total | 9 | 55 | 10 | 0 | 74 | 11 | 16 | 30 | 0 | 57 | 27 | 61 | 0 | 0 | 88 | 2 | 17 | 11 | 0 | 30 | 249 |
| Approach % | 12.2 | 74.3 | 13.5 | 0.0 | | 19.3 | 28.1 | 52.6 | 0.0 | | 30.7 | 69.3 | 0.0 | 0.0 | | 6.7 | 56.7 | 36.7 | 0.0 | | |
| Total % | 3.6 | 22.1 | 4.0 | 0.0 | 29.7 | 4.4 | 6.4 | 12.0 | 0.0 | 22.9 | 10.8 | 24.5 | 0.0 | 0.0 | 35.3 | 0.8 | 6.8 | 4.4 | 0.0 | 12.0 | |
| Exiting Leg Total | 83 | | | | | 54 | | | | | 87 | | | | | 25 | | | | | 249 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|---------------------|------------------|-----------|----------|----------|-----------|-------------|----------|-----------|----------|-----------|------------------|-----------|----------|----------|-----------|-------------|----------|----------|----------|-----------|------------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 1 | 4 | 3 | 0 | 8 | 3 | 2 | 3 | 0 | 8 | 3 | 10 | 0 | 0 | 13 | 0 | 3 | 0 | 0 | 3 | 32 |
| 4:15 PM | 3 | 8 | 3 | 0 | 14 | 1 | 2 | 3 | 0 | 6 | 5 | 11 | 0 | 0 | 16 | 0 | 3 | 0 | 0 | 3 | 39 |
| 4:30 PM | 1 | 13 | 0 | 0 | 14 | 2 | 1 | 0 | 0 | 3 | 5 | 13 | 0 | 0 | 18 | 1 | 0 | 2 | 0 | 3 | 38 |
| 4:45 PM | 0 | 4 | 2 | 0 | 6 | 2 | 1 | 6 | 0 | 9 | 4 | 5 | 0 | 0 | 9 | 0 | 2 | 1 | 0 | 3 | 27 |
| Total Volume | 5 | 29 | 8 | 0 | 42 | 8 | 6 | 12 | 0 | 26 | 17 | 39 | 0 | 0 | 56 | 1 | 8 | 3 | 0 | 12 | 136 |
| % Approach Total | 11.9 | 69.0 | 19.0 | 0.0 | | 30.8 | 23.1 | 46.2 | 0.0 | | 30.4 | 69.6 | 0.0 | 0.0 | | 8.3 | 66.7 | 25.0 | 0.0 | | |
| PHF | 0.417 | 0.558 | 0.667 | 0.000 | 0.750 | 0.667 | 0.750 | 0.500 | 0.000 | 0.722 | 0.850 | 0.750 | 0.000 | 0.000 | 0.778 | 0.250 | 0.667 | 0.375 | 0.000 | 1.000 | 0.872 |
| Entering Leg | 5 | 29 | 8 | 0 | 42 | 8 | 6 | 12 | 0 | 26 | 17 | 39 | 0 | 0 | 56 | 1 | 8 | 3 | 0 | 12 | 136 |
| Exiting Leg | 50 | | | | | 33 | | | | | 42 | | | | | 11 | | | | | 136 |
| Total | 92 | | | | | 59 | | | | | 98 | | | | | 23 | | | | | 272 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Buses

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|--------------------|------------------|-------|------|--------|-------|-------------|------|-------|--------|-------|------------------|------|------|--------|-------|-------------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 3 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 8 |
| Grand Total | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | 6 | 7 | 2 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 17 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 100.0 | 0.0 | | 77.8 | 22.2 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 11.8 | 0.0 | 0.0 | 11.8 | 0.0 | 0.0 | 35.3 | 0.0 | 35.3 | 41.2 | 11.8 | 0.0 | 0.0 | 52.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 2 | | | | | 7 | | | | | 8 | | | | | 0 | | | | | 17 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|-------------------------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Volume | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 3 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 100.0 | 0.0 | | 75.0 | 25.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.750 | 0.000 | 0.750 | 0.750 | 0.250 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.563 |
| Entering Leg | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 3 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| Exiting Leg | 1 | | | | | 3 | | | | | 5 | | | | | 0 | | | | | 9 |
| Total | 3 | | | | | 6 | | | | | 9 | | | | | 0 | | | | | 18 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total | | | | | |
|--------------------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | | | | | |
| 4:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 4 |
| Total | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 2 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grand Total | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 6 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 2 | 10 |
| Approach % | 50.0 | 50.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 66.7 | 33.3 | 0.0 | | 0.0 | 50.0 | 50.0 | 0.0 | | | | | | | |
| Total % | 10.0 | 10.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40.0 | 20.0 | 0.0 | 60.0 | 0.0 | 10.0 | 10.0 | 0.0 | 20.0 | | | | | | |
| Exiting Leg Total | | | | | | 5 | | | | | 1 | | | | | 1 | | | | | 3 | | 10 | | | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total | | | | | |
|---------------------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|------------------|----------|----------|----------|----------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | | | | | | |
| 4:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 4 |
| Total Volume | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 2 | 9 |
| % Approach Total | 50.0 | 50.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 60.0 | 40.0 | 0.0 | | 0.0 | 50.0 | 50.0 | 0.0 | | | | | | | |
| PHF | 0.250 | 0.250 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | 0.500 | 0.000 | 0.417 | 0.000 | 0.250 | 0.250 | 0.000 | 0.500 | | | | | | 0.563 |
| Entering Leg | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | | | | | | 9 |
| Exiting Leg | | | | | | 4 | | | | | 1 | | | | | 1 | | | | | 3 | | 9 | | | |
| Total | | | | | | 6 | | | | | 1 | | | | | 6 | | | | | 5 | | 18 | | | |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|-------------------|------------------|------|------|--------|-------|-------------|------|------|--------|-------|------------------|------|------|--------|-------|-------------|------|------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | Deer Street | | | | | Maplewood Avenue | | | | | Deer Street | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|------------------|-------|-------|--------|-------|-------------|-------|-------|--------|-------|-------|
| | from North | | | | | from East | | | | | from South | | | | | from West | | | | | |
| | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | Right | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |
| Total | 0 | | | | | 0 | | | | | 0 | | | | | 0 | | | | | 0 |

PDI File #: **196718 D**
 Location: **N: Maplewood Avenue S: Maplewood Avenue**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

| | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Total | | | | | | | | | | | |
|-------------------|------------------|------|------|--------|-------|-------|-------|-----|-------------|------|------|--------|-------|-------|-------|-----|------------------|------|------|--------|-------|-------|-------|-----|-------------|------|------|--------|-------|-------|-------|-----|-------|-------|-----|-----|-----|------|-----|-------|-----|-----|-----|------|
| | from North | | | | | | | | from East | | | | | | | | from South | | | | | | | | from West | | | | | | | | | | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | | | | | | | | | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | |
| Total | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | |
| Grand Total | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | |
| Approach % | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total % | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 25.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 25.0 |
| Exiting Leg Total | 3 | | | | | | | 0 | | | | | | | 0 | | | | | | | 1 | | | | | | | 4 | | | | | | | | | | | | | | | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Total | | | | | | | | | | | |
|------------------|------------------|-------|-------|--------|-------|-------|-------|-------|-------------|-------|-------|--------|-------|-------|-------|-------|------------------|-------|-------|--------|-------|-------|-------|-------|-------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-----|-----|-----|-----|
| | from North | | | | | | | | from East | | | | | | | | from South | | | | | | | | from West | | | | | | | | | | | | | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | | | | | | | | | | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | |
| Total Volume | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | |
| % Approach Total | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PHF | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.250 | 0.333 | | | | | | |
| Entering Leg | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | |
| Exiting Leg | 3 | | | | | | | 0 | | | | | | | 0 | | | | | | | 1 | | | | | | | 4 | | | | | | | | | | | | | | | |
| Total | 4 | | | | | | | 0 | | | | | | | 2 | | | | | | | 2 | | | | | | | 8 | | | | | | | | | | | | | | | |

PDI File #: 196718 D
 Location: N: Maplewood Avenue S: Maplewood Avenue
 Location: E: Deer Street W: Deer Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

| | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Total |
|-------------------|------------------|------|------|--------|-------|-------|-------|----|-------------|------|------|--------|-------|-------|-------|---|------------------|------|------|--------|-------|-------|-------|---|-------------|------|------|--------|-------|-------|-------|--|-------|
| | from North | | | | | | | | from East | | | | | | | | from South | | | | | | | | from West | | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 6 | | | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | | | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | | | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 11 | | | | |
| Total | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 1 | 12 | 13 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 27 | | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | | | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | | | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | | | | |
| Total | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 14 | | | | |
| Grand Total | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 0 | 0 | 0 | 0 | 2 | 15 | 17 | 0 | 0 | 0 | 0 | 5 | 6 | 11 | 0 | 0 | 0 | 0 | 4 | 3 | 7 | 41 | | | | |
| Approach % | 0 | 0 | 0 | 0 | 33.3 | 66.7 | | 0 | 0 | 0 | 0 | 11.8 | 88.2 | | 0 | 0 | 0 | 0 | 45.5 | 54.5 | | 0 | 0 | 0 | 0 | 57.1 | 42.9 | | | | | | |
| Total % | 0 | 0 | 0 | 0 | 4.88 | 9.76 | 14.6 | 0 | 0 | 0 | 0 | 4.88 | 36.6 | 41.5 | 0 | 0 | 0 | 0 | 12.2 | 14.6 | 26.8 | 0 | 0 | 0 | 0 | 9.76 | 7.32 | 17.1 | | | | | |
| Exiting Leg Total | 6 | | | | | | | 17 | | | | | | | 11 | | | | | | | 7 | | | | | | | 41 | | | | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Maplewood Avenue | | | | | | | | Deer Street | | | | | | | | Total |
|------------------|------------------|-------|-------|--------|-------|-------|-------|-------|-------------|-------|-------|--------|-------|-------|-------|-------|------------------|-------|-------|--------|-------|-------|-------|-------|-------------|-------|-------|--------|-------|-------|-------|--|-------|
| | from North | | | | | | | | from East | | | | | | | | from South | | | | | | | | from West | | | | | | | | |
| | Right | Thru | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | Left | U-Turn | CW-SB | CW-NB | Total | | Right | Thru | Left | U-Turn | CW-WB | CW-EB | Total | | Right | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 6 | | | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | | | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | | | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 11 | | | | |
| Total Volume | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 1 | 12 | 13 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 27 | | | | |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 20.0 | 80.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 7.7 | 92.3 | | 0.0 | 0.0 | 0.0 | 0.0 | 40.0 | 60.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 | 25.0 | | | | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.500 | 0.625 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.600 | 0.650 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.375 | 0.417 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | 0.250 | 0.500 | 0.614 | | | | |
| Entering Leg | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 1 | 12 | 13 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 27 | | | | |
| Exiting Leg | 5 | | | | | | | 13 | | | | | | | 5 | | | | | | | 4 | | | | | | | 27 | | | | |
| Total | 10 | | | | | | | 26 | | | | | | | 10 | | | | | | | 8 | | | | | | | 54 | | | | |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars and Heavy Vehicles (Combined)

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|-------------------|---------------------------------|----------|----------|----------|----------------|-----------|----------|-----------|----------------|----------|----------|-----------|-----------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 2 | 2 | 0 | 4 | 0 | 4 | 0 | 4 | 7 | 0 | 0 | 7 | 15 |
| 4:15 PM | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 3 | 6 | 2 | 0 | 8 | 12 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 8 | 0 | 0 | 8 | 16 |
| 4:45 PM | 2 | 0 | 0 | 2 | 0 | 2 | 1 | 3 | 4 | 0 | 0 | 4 | 9 |
| Total | 5 | 2 | 0 | 7 | 2 | 15 | 1 | 18 | 25 | 2 | 0 | 27 | 52 |
| 5:00 PM | 1 | 0 | 0 | 1 | 1 | 7 | 0 | 8 | 7 | 0 | 0 | 7 | 16 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 1 | 0 | 6 | 15 |
| 5:30 PM | 2 | 1 | 0 | 3 | 0 | 5 | 0 | 5 | 5 | 1 | 0 | 6 | 14 |
| 5:45 PM | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 9 | 2 | 0 | 11 | 15 |
| Total | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| Grand Total | 9 | 4 | 0 | 13 | 3 | 38 | 1 | 42 | 51 | 6 | 0 | 57 | 112 |
| Approach % | 69.2 | 30.8 | 0.0 | | 7.1 | 90.5 | 2.4 | | 89.5 | 10.5 | 0.0 | | |
| Total % | 8.0 | 3.6 | 0.0 | 11.6 | 2.7 | 33.9 | 0.9 | 37.5 | 45.5 | 5.4 | 0.0 | 50.9 | |
| Exiting Leg Total | | | | 9 | | | | 56 | | | | 47 | 112 |
| Cars | 9 | 4 | 0 | 13 | 3 | 38 | 1 | 42 | 51 | 6 | 0 | 57 | 112 |
| % Cars | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Exiting Leg Total | | | | 9 | | | | 56 | | | | 47 | 112 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Heavy Vehicles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|--------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 1 | 0 | 0 | 1 | 1 | 7 | 0 | 8 | 7 | 0 | 0 | 7 | 16 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 1 | 0 | 6 | 15 |
| 5:30 PM | 2 | 1 | 0 | 3 | 0 | 5 | 0 | 5 | 5 | 1 | 0 | 6 | 14 |
| 5:45 PM | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 9 | 2 | 0 | 11 | 15 |
| Total Volume | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| % Approach Total | 66.7 | 33.3 | 0.0 | | 4.2 | 95.8 | 0.0 | | 86.7 | 13.3 | 0.0 | | |
| PHF | 0.500 | 0.500 | 0.000 | 0.500 | 0.250 | 0.639 | 0.000 | 0.667 | 0.722 | 0.500 | 0.000 | 0.682 | 0.938 |
| Cars | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| Cars % | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cars Enter Leg | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| Cars Exiting Leg | | | | 5 | | | | 28 | | | | 27 | 60 |
| Heavy Exiting Leg | | | | 0 | | | | 0 | | | | 0 | 0 |
| Total Exiting Leg | | | | 5 | | | | 28 | | | | 27 | 60 |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|-------------------|---------------------------------|------|--------|-------|----------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 2 | 2 | 0 | 4 | 0 | 4 | 0 | 4 | 7 | 0 | 0 | 7 | 15 |
| 4:15 PM | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 3 | 6 | 2 | 0 | 8 | 12 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 8 | 0 | 0 | 8 | 16 |
| 4:45 PM | 2 | 0 | 0 | 2 | 0 | 2 | 1 | 3 | 4 | 0 | 0 | 4 | 9 |
| Total | 5 | 2 | 0 | 7 | 2 | 15 | 1 | 18 | 25 | 2 | 0 | 27 | 52 |
| 5:00 PM | 1 | 0 | 0 | 1 | 1 | 7 | 0 | 8 | 7 | 0 | 0 | 7 | 16 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 1 | 0 | 6 | 15 |
| 5:30 PM | 2 | 1 | 0 | 3 | 0 | 5 | 0 | 5 | 5 | 1 | 0 | 6 | 14 |
| 5:45 PM | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 9 | 2 | 0 | 11 | 15 |
| Total | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| Grand Total | 9 | 4 | 0 | 13 | 3 | 38 | 1 | 42 | 51 | 6 | 0 | 57 | 112 |
| Approach % | 69.2 | 30.8 | 0.0 | | 7.1 | 90.5 | 2.4 | | 89.5 | 10.5 | 0.0 | | |
| Total % | 8.0 | 3.6 | 0.0 | 11.6 | 2.7 | 33.9 | 0.9 | 37.5 | 45.5 | 5.4 | 0.0 | 50.9 | |
| Exiting Leg Total | 9 | | | | 56 | | | | 47 | | | | 112 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 1 | 0 | 0 | 1 | 1 | 7 | 0 | 8 | 7 | 0 | 0 | 7 | 16 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 1 | 0 | 6 | 15 |
| 5:30 PM | 2 | 1 | 0 | 3 | 0 | 5 | 0 | 5 | 5 | 1 | 0 | 6 | 14 |
| 5:45 PM | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 9 | 2 | 0 | 11 | 15 |
| Total Volume | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| % Approach Total | 66.7 | 33.3 | 0.0 | | 4.2 | 95.8 | 0.0 | | 86.7 | 13.3 | 0.0 | | |
| PHF | 0.500 | 0.500 | 0.000 | 0.500 | 0.250 | 0.639 | 0.000 | 0.667 | 0.722 | 0.500 | 0.000 | 0.682 | 0.938 |
| Entering Leg | 4 | 2 | 0 | 6 | 1 | 23 | 0 | 24 | 26 | 4 | 0 | 30 | 60 |
| Exiting Leg | 5 | | | | 28 | | | | 27 | | | | 60 |
| Total | 11 | | | | 52 | | | | 57 | | | | 120 |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|--------------------|---------------------------------|------|--------|-------|----------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Single-Unit | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|---------------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses | 0 | | | | 0 | | | | 0 | | | | 0 |
| Single-Unit Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Articulated Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|-------------------|---------------------------------|----------|----------|----------|----------------|-----------|----------|-----------|----------------|----------|----------|-----------|-----------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 2 | 2 | 0 | 4 | 0 | 4 | 0 | 4 | 6 | 0 | 0 | 6 | 14 |
| 4:15 PM | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 3 | 6 | 2 | 0 | 8 | 12 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 6 | 0 | 0 | 6 | 14 |
| 4:45 PM | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 4 | 0 | 0 | 4 | 7 |
| Total | 4 | 2 | 0 | 6 | 2 | 15 | 0 | 17 | 22 | 2 | 0 | 24 | 47 |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 5 | 7 | 0 | 0 | 7 | 13 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 5 | 1 | 0 | 6 | 14 |
| 5:30 PM | 2 | 1 | 0 | 3 | 0 | 4 | 0 | 4 | 5 | 1 | 0 | 6 | 13 |
| 5:45 PM | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 9 | 2 | 0 | 11 | 15 |
| Total | 4 | 2 | 0 | 6 | 0 | 19 | 0 | 19 | 26 | 4 | 0 | 30 | 55 |
| Grand Total | 8 | 4 | 0 | 12 | 2 | 34 | 0 | 36 | 48 | 6 | 0 | 54 | 102 |
| Approach % | 66.7 | 33.3 | 0.0 | | 5.6 | 94.4 | 0.0 | | 88.9 | 11.1 | 0.0 | | |
| Total % | 7.8 | 3.9 | 0.0 | 11.8 | 2.0 | 33.3 | 0.0 | 35.3 | 47.1 | 5.9 | 0.0 | 52.9 | |
| Exiting Leg Total | | | | 8 | | | | 52 | | | | 42 | 102 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|------------------|---------------------------------|-------|--------|-----------|----------------|-------|--------|-----------|----------------|-------|--------|-----------|------------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 5 | 7 | 0 | 0 | 7 | 13 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 5 | 1 | 0 | 6 | 14 |
| 5:30 PM | 2 | 1 | 0 | 3 | 0 | 4 | 0 | 4 | 5 | 1 | 0 | 6 | 13 |
| 5:45 PM | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 9 | 2 | 0 | 11 | 15 |
| Total Volume | 4 | 2 | 0 | 6 | 0 | 19 | 0 | 19 | 26 | 4 | 0 | 30 | 55 |
| % Approach Total | 66.7 | 33.3 | 0.0 | | 0.0 | 100.0 | 0.0 | | 86.7 | 13.3 | 0.0 | | |
| PHF | 0.500 | 0.500 | 0.000 | 0.500 | 0.000 | 0.594 | 0.000 | 0.594 | 0.722 | 0.500 | 0.000 | 0.682 | 0.917 |
| Entering Leg | 4 | 2 | 0 | 6 | 0 | 19 | 0 | 19 | 26 | 4 | 0 | 30 | 55 |
| Exiting Leg | | | | 4 | | | | 28 | | | | 23 | 55 |
| Total | | | | 10 | | | | 47 | | | | 53 | 110 |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class: **Light Goods Vehicle**

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total | |
|-------------------|---------------------------------|------|--------|-------|----------------|------|--------|-------|----------------|-------|--------|-------|-------|----|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 |
| 4:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| Total | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 0 | 3 | 5 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 5 |
| Grand Total | 1 | 0 | 0 | 1 | 1 | 4 | 1 | 6 | 6 | 3 | 0 | 0 | 3 | 10 |
| Approach % | 100.0 | 0.0 | 0.0 | | 16.7 | 66.7 | 16.7 | | | 100.0 | 0.0 | 0.0 | | |
| Total % | 10.0 | 0.0 | 0.0 | 10.0 | 10.0 | 40.0 | 10.0 | 60.0 | 60.0 | 30.0 | 0.0 | 0.0 | 30.0 | |
| Exiting Leg Total | | | | 1 | | | | 4 | 4 | | | | 5 | 10 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total | |
|------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|-------|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 |
| 4:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total Volume | 1 | 0 | 0 | 1 | 1 | 3 | 1 | 5 | 5 | 2 | 0 | 0 | 2 | 8 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 20.0 | 60.0 | 20.0 | | | 100.0 | 0.0 | 0.0 | | |
| PHF | 0.250 | 0.000 | 0.000 | 0.250 | 0.250 | 0.375 | 0.250 | 0.417 | 0.417 | 0.250 | 0.000 | 0.000 | 0.250 | 0.667 |
| Entering Leg | 1 | 0 | 0 | 1 | 1 | 3 | 1 | 5 | 5 | 2 | 0 | 0 | 2 | 8 |
| Exiting Leg | | | | 1 | | | | 3 | 3 | | | | 4 | 8 |
| Total | | | | 2 | | | | 8 | 8 | | | | 6 | 16 |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Buses

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|-------------------|---------------------------------|------|--------|-------|----------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total |
|------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Single-Unit Trucks

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total | |
|-------------------|---------------------------------|------|--------|-------|----------------|------|--------|-------|----------------|------|--------|-------|-------|---|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total | |
|------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|-------|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 | |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total | |
|-------------------|---------------------------------|------|--------|-------|----------------|------|--------|-------|----------------|------|--------|-------|-------|---|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Kennebunk Savings Bank Driveway | | | | Vaughan Street | | | | Vaughan Street | | | | Total | |
|------------------|---------------------------------|-------|--------|-------|----------------|-------|--------|-------|----------------|-------|--------|-------|-------|-------|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 | |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

PDI File #: 196718 E
 Location: N: Kennebunk Savings Bank Driveway
 Location: E: Vaughan Street W: Vaughan Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Kennebunk Savings Bank Driveway | | | | | | | Vaughan Street | | | | | | Vaughan Street | | | | | | Total | | | | | | | | | | | |
|-------------------|---------------------------------|------|--------|-------|-------|-------|-----|----------------|------|--------|-------|-------|-------|----------------|------|--------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-------|-------|---|
| | from North | | | | | | | from East | | | | | | from West | | | | | | | | | | | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | | | | | | | | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | |
| Exiting Leg Total | 0 | | | | | | | 2 | | | | | | 0 | | | | | | 2 | | | | | | | | | | | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Kennebunk Savings Bank Driveway | | | | | | | Vaughan Street | | | | | | Vaughan Street | | | | | | Total | | | | | | | | | | | |
|------------------|---------------------------------|-------|--------|-------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| | from North | | | | | | | from East | | | | | | from West | | | | | | | | | | | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | | | | | | | | | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.500 | 0.500 | |
| Entering Leg | 0 | | | | | | | 0 | | | | | | 2 | | | | | | 2 | | | | | | | | | | | |
| Exiting Leg | 0 | | | | | | | 2 | | | | | | 0 | | | | | | 2 | | | | | | | | | | | |
| Total | 0 | | | | | | | 2 | | | | | | 2 | | | | | | 4 | | | | | | | | | | | |

PDI File #: **196718 E**
 Location: **N: Kennebunk Savings Bank Driveway**
 Location: **E: Vaughan Street W: Vaughan Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

| | Kennebunk Savings Bank Driveway | | | | | | | Vaughan Street | | | | | | Vaughan Street | | | | | | Total | |
|-------------------|---------------------------------|------|--------|--------|--------|-------|----|----------------|------|--------|-------|-------|-------|----------------|------|--------|-------|-------|-------|-------|---|
| | from North | | | | | | | from East | | | | | | from West | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Grand Total | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Approach % | 0 | 0 | 0 | 33.333 | 66.667 | | | 0 | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total % | 0 | 0 | 0 | 25 | 50 | 75 | 75 | 0 | 0 | 0 | 25 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg Total | 3 | | | | | | | 1 | | | | | | 0 | | | | | | 4 | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Kennebunk Savings Bank Driveway | | | | | | | Vaughan Street | | | | | | Vaughan Street | | | | | | Total | |
|------------------|---------------------------------|-------|--------|-------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|-------|---|
| | from North | | | | | | | from East | | | | | | from West | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | |
| Entering Leg | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Exiting Leg | 1 | | | | | | | 1 | | | | | | 0 | | | | | | 2 | |
| Total | 2 | | | | | | | 2 | | | | | | 0 | | | | | | 4 | |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars and Heavy Vehicles (Combined)

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|-------------------|----------------|----------|----------|-----------|--------------|----------|----------|-----------|----------------|-----------|----------|-----------|-----------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 2 | 5 | 0 | 7 | 2 | 2 | 0 | 4 | 5 | 5 | 0 | 10 | 21 |
| 4:15 PM | 2 | 0 | 0 | 2 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 15 |
| 4:30 PM | 6 | 2 | 0 | 8 | 3 | 2 | 0 | 5 | 2 | 7 | 1 | 10 | 23 |
| 4:45 PM | 2 | 2 | 0 | 4 | 4 | 0 | 0 | 4 | 3 | 3 | 0 | 6 | 14 |
| Total | 12 | 9 | 0 | 21 | 14 | 5 | 0 | 19 | 13 | 19 | 1 | 33 | 73 |
| 5:00 PM | 7 | 4 | 0 | 11 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 24 |
| 5:15 PM | 4 | 4 | 0 | 8 | 2 | 4 | 0 | 6 | 1 | 3 | 0 | 4 | 18 |
| 5:30 PM | 4 | 0 | 1 | 5 | 6 | 1 | 0 | 7 | 4 | 3 | 0 | 7 | 19 |
| 5:45 PM | 2 | 1 | 0 | 3 | 7 | 0 | 0 | 7 | 3 | 5 | 0 | 8 | 18 |
| Total | 17 | 9 | 1 | 27 | 20 | 6 | 0 | 26 | 11 | 15 | 0 | 26 | 79 |
| Grand Total | 29 | 18 | 1 | 48 | 34 | 11 | 0 | 45 | 24 | 34 | 1 | 59 | 152 |
| Approach % | 60.4 | 37.5 | 2.1 | | 75.6 | 24.4 | 0.0 | | 40.7 | 57.6 | 1.7 | | |
| Total % | 19.1 | 11.8 | 0.7 | 31.6 | 22.4 | 7.2 | 0.0 | 29.6 | 15.8 | 22.4 | 0.7 | 38.8 | |
| Exiting Leg Total | | | | 69 | | | | 42 | | | | 41 | 152 |
| Cars | 29 | 18 | 1 | 48 | 34 | 11 | 0 | 45 | 24 | 34 | 1 | 59 | 152 |
| % Cars | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Exiting Leg Total | | | | 69 | | | | 42 | | | | 41 | 152 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Heavy Vehicles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:30 PM | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|--------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:30 PM | 6 | 2 | 0 | 8 | 3 | 2 | 0 | 5 | 2 | 7 | 1 | 10 | 23 |
| 4:45 PM | 2 | 2 | 0 | 4 | 4 | 0 | 0 | 4 | 3 | 3 | 0 | 6 | 14 |
| 5:00 PM | 7 | 4 | 0 | 11 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 24 |
| 5:15 PM | 4 | 4 | 0 | 8 | 2 | 4 | 0 | 6 | 1 | 3 | 0 | 4 | 18 |
| Total Volume | 19 | 12 | 0 | 31 | 14 | 7 | 0 | 21 | 9 | 17 | 1 | 27 | 79 |
| % Approach Total | 61.3 | 38.7 | 0.0 | | 66.7 | 33.3 | 0.0 | | 33.3 | 63.0 | 3.7 | | |
| PHF | 0.679 | 0.750 | 0.000 | 0.705 | 0.700 | 0.438 | 0.000 | 0.875 | 0.750 | 0.607 | 0.250 | 0.675 | 0.823 |
| Cars | 19 | 12 | 0 | 31 | 14 | 7 | 0 | 21 | 9 | 17 | 1 | 27 | 79 |
| Cars % | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cars Enter Leg | 19 | 12 | 0 | 31 | 14 | 7 | 0 | 21 | 9 | 17 | 1 | 27 | 79 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 19 | 12 | 0 | 31 | 14 | 7 | 0 | 21 | 9 | 17 | 1 | 27 | 79 |
| Cars Exiting Leg | | | | 31 | | | | 21 | | | | 27 | 79 |
| Heavy Exiting Leg | | | | 0 | | | | 0 | | | | 0 | 0 |
| Total Exiting Leg | | | | 31 | | | | 21 | | | | 27 | 79 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|-------------------|----------------|------|--------|-------|--------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 2 | 5 | 0 | 7 | 2 | 2 | 0 | 4 | 5 | 5 | 0 | 10 | 21 |
| 4:15 PM | 2 | 0 | 0 | 2 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 15 |
| 4:30 PM | 6 | 2 | 0 | 8 | 3 | 2 | 0 | 5 | 2 | 7 | 1 | 10 | 23 |
| 4:45 PM | 2 | 2 | 0 | 4 | 4 | 0 | 0 | 4 | 3 | 3 | 0 | 6 | 14 |
| Total | 12 | 9 | 0 | 21 | 14 | 5 | 0 | 19 | 13 | 19 | 1 | 33 | 73 |
| 5:00 PM | 7 | 4 | 0 | 11 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 24 |
| 5:15 PM | 4 | 4 | 0 | 8 | 2 | 4 | 0 | 6 | 1 | 3 | 0 | 4 | 18 |
| 5:30 PM | 4 | 0 | 1 | 5 | 6 | 1 | 0 | 7 | 4 | 3 | 0 | 7 | 19 |
| 5:45 PM | 2 | 1 | 0 | 3 | 7 | 0 | 0 | 7 | 3 | 5 | 0 | 8 | 18 |
| Total | 17 | 9 | 1 | 27 | 20 | 6 | 0 | 26 | 11 | 15 | 0 | 26 | 79 |
| Grand Total | 29 | 18 | 1 | 48 | 34 | 11 | 0 | 45 | 24 | 34 | 1 | 59 | 152 |
| Approach % | 60.4 | 37.5 | 2.1 | | 75.6 | 24.4 | 0.0 | | 40.7 | 57.6 | 1.7 | | |
| Total % | 19.1 | 11.8 | 0.7 | 31.6 | 22.4 | 7.2 | 0.0 | 29.6 | 15.8 | 22.4 | 0.7 | 38.8 | |
| Exiting Leg Total | | | | 69 | | | | 42 | | | | 41 | 152 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:30 PM | 6 | 2 | 0 | 8 | 3 | 2 | 0 | 5 | 2 | 7 | 1 | 10 | 23 |
| 4:45 PM | 2 | 2 | 0 | 4 | 4 | 0 | 0 | 4 | 3 | 3 | 0 | 6 | 14 |
| 5:00 PM | 7 | 4 | 0 | 11 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 24 |
| 5:15 PM | 4 | 4 | 0 | 8 | 2 | 4 | 0 | 6 | 1 | 3 | 0 | 4 | 18 |
| Total Volume | 19 | 12 | 0 | 31 | 14 | 7 | 0 | 21 | 9 | 17 | 1 | 27 | 79 |
| % Approach Total | 61.3 | 38.7 | 0.0 | | 66.7 | 33.3 | 0.0 | | 33.3 | 63.0 | 3.7 | | |
| PHF | 0.679 | 0.750 | 0.000 | 0.705 | 0.700 | 0.438 | 0.000 | 0.875 | 0.750 | 0.607 | 0.250 | 0.675 | 0.823 |
| Entering Leg | 19 | 12 | 0 | 31 | 14 | 7 | 0 | 21 | 9 | 17 | 1 | 27 | 79 |
| Exiting Leg | | | | 31 | | | | 21 | | | | 27 | 79 |
| Total | | | | 62 | | | | 42 | | | | 54 | 158 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|--------------------|----------------|------|--------|-------|--------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Single-Unit | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|--------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses | 0 | | | | 0 | | | | 0 | | | | 0 |
| Single-Unit Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Articulated Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|--------------------|----------------|----------|----------|-----------|--------------|----------|----------|-----------|----------------|-----------|----------|-----------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 2 | 1 | 0 | 3 | 2 | 2 | 0 | 4 | 5 | 4 | 0 | 9 | 16 |
| 4:15 PM | 2 | 0 | 0 | 2 | 5 | 1 | 0 | 6 | 3 | 4 | 0 | 7 | 15 |
| 4:30 PM | 6 | 1 | 0 | 7 | 2 | 2 | 0 | 4 | 1 | 6 | 1 | 8 | 19 |
| 4:45 PM | 1 | 1 | 0 | 2 | 3 | 0 | 0 | 3 | 2 | 3 | 0 | 5 | 10 |
| Total | 11 | 3 | 0 | 14 | 12 | 5 | 0 | 17 | 11 | 17 | 1 | 29 | 60 |
| 5:00 PM | 5 | 2 | 0 | 7 | 5 | 0 | 0 | 5 | 3 | 4 | 0 | 7 | 19 |
| 5:15 PM | 4 | 3 | 0 | 7 | 1 | 3 | 0 | 4 | 1 | 3 | 0 | 4 | 15 |
| 5:30 PM | 4 | 0 | 1 | 5 | 5 | 0 | 0 | 5 | 4 | 2 | 0 | 6 | 16 |
| 5:45 PM | 2 | 0 | 0 | 2 | 6 | 0 | 0 | 6 | 2 | 5 | 0 | 7 | 15 |
| Total | 15 | 5 | 1 | 21 | 17 | 3 | 0 | 20 | 10 | 14 | 0 | 24 | 65 |
| Grand Total | 26 | 8 | 1 | 35 | 29 | 8 | 0 | 37 | 21 | 31 | 1 | 53 | 125 |
| Approach % | 74.3 | 22.9 | 2.9 | | 78.4 | 21.6 | 0.0 | | 39.6 | 58.5 | 1.9 | | |
| Total % | 20.8 | 6.4 | 0.8 | 28.0 | 23.2 | 6.4 | 0.0 | 29.6 | 16.8 | 24.8 | 0.8 | 42.4 | |
| Exiting Leg Total | | | | 61 | | | | 29 | | | | 35 | 125 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|-------------------------|----------------|-------------|------------|-----------|--------------|-------------|------------|-----------|----------------|-------------|------------|-----------|------------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 5 | 2 | 0 | 7 | 5 | 0 | 0 | 5 | 3 | 4 | 0 | 7 | 19 |
| 5:15 PM | 4 | 3 | 0 | 7 | 1 | 3 | 0 | 4 | 1 | 3 | 0 | 4 | 15 |
| 5:30 PM | 4 | 0 | 1 | 5 | 5 | 0 | 0 | 5 | 4 | 2 | 0 | 6 | 16 |
| 5:45 PM | 2 | 0 | 0 | 2 | 6 | 0 | 0 | 6 | 2 | 5 | 0 | 7 | 15 |
| Total Volume | 15 | 5 | 1 | 21 | 17 | 3 | 0 | 20 | 10 | 14 | 0 | 24 | 65 |
| % Approach Total | 71.4 | 23.8 | 4.8 | | 85.0 | 15.0 | 0.0 | | 41.7 | 58.3 | 0.0 | | |
| PHF | 0.750 | 0.417 | 0.250 | 0.750 | 0.708 | 0.250 | 0.000 | 0.833 | 0.625 | 0.700 | 0.000 | 0.857 | 0.855 |
| Entering Leg | 15 | 5 | 1 | 21 | 17 | 3 | 0 | 20 | 10 | 14 | 0 | 24 | 65 |
| Exiting Leg | | | | 32 | | | | 15 | | | | 18 | 65 |
| Total | | | | 53 | | | | 35 | | | | 42 | 130 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class:

Light Goods Vehicle

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|-------------------|----------------|------|--------|-------|--------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 4 |
| 4:45 PM | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 4 |
| Total | 1 | 6 | 0 | 7 | 2 | 0 | 0 | 2 | 2 | 2 | 0 | 4 | 13 |
| 5:00 PM | 2 | 2 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 5:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 3 |
| 5:45 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 3 |
| Total | 2 | 4 | 0 | 6 | 3 | 3 | 0 | 6 | 1 | 1 | 0 | 2 | 14 |
| Grand Total | 3 | 10 | 0 | 13 | 5 | 3 | 0 | 8 | 3 | 3 | 0 | 6 | 27 |
| Approach % | 23.1 | 76.9 | 0.0 | | 62.5 | 37.5 | 0.0 | | 50.0 | 50.0 | 0.0 | | |
| Total % | 11.1 | 37.0 | 0.0 | 48.1 | 18.5 | 11.1 | 0.0 | 29.6 | 11.1 | 11.1 | 0.0 | 22.2 | |
| Exiting Leg Total | | | | 8 | | | | 13 | | | | 6 | 27 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:30 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 4 |
| 4:45 PM | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 4 |
| 5:00 PM | 2 | 2 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| Total Volume | 3 | 5 | 0 | 8 | 3 | 2 | 0 | 5 | 2 | 1 | 0 | 3 | 16 |
| % Approach Total | 37.5 | 62.5 | 0.0 | | 60.0 | 40.0 | 0.0 | | 66.7 | 33.3 | 0.0 | | |
| PHF | 0.375 | 0.625 | 0.000 | 0.500 | 0.750 | 0.500 | 0.000 | 0.625 | 0.500 | 0.250 | 0.000 | 0.375 | 0.800 |
| Entering Leg | 3 | 5 | 0 | 8 | 3 | 2 | 0 | 5 | 2 | 1 | 0 | 3 | 16 |
| Exiting Leg | | | | 4 | | | | 7 | | | | 5 | 16 |
| Total | | | | 12 | | | | 12 | | | | 8 | 32 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Buses

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|-------------------|----------------|------|--------|-------|--------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Single-Unit Trucks

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|--------------------|----------------|------|--------|-------|--------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Articulated Trucks

| | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|-------------------|----------------|------|--------|-------|--------------|------|--------|-------|----------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Vaughan Street | | | | Green Street | | | | Vaughan Street | | | | Total |
|------------------|----------------|-------|--------|-------|--------------|-------|--------|-------|----------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from South | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: 196718 F
 Location: N: Vaughan Street S: Vaughan Street
 Location: E: Green Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Vaughan Street | | | | | | Green Street | | | | | | Vaughan Street | | | | | | Total |
|-------------------|----------------|-------|--------|-------|-------|-------|--------------|------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from East | | | | | | from South | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| Total | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 3 |
| Grand Total | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 3 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 33.3 | 0.0 | 0.0 | 0.0 | 33.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | 66.7 | |
| Exiting Leg Total | 2 | | | | | | 1 | | | | | | 0 | | | | | | 3 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | | | Green Street | | | | | | Vaughan Street | | | | | | Total |
|------------------|----------------|-------|--------|-------|-------|-------|--------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from East | | | | | | from South | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| Total Volume | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 3 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.500 | 0.375 |
| Entering Leg | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 3 |
| Exiting Leg | 2 | | | | | | 1 | | | | | | 0 | | | | | | 3 |
| Total | 3 | | | | | | 1 | | | | | | 2 | | | | | | 6 |

PDI File #: **196718 F**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **E: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

| | Vaughan Street | | | | | | Green Street | | | | | | Vaughan Street | | | | | | Total | | | |
|--------------------------|----------------|----------|----------|---------------|---------------|---------------|--------------|----------|----------|---------------|---------------|---------------|----------------|----------|----------|---------------|---------------|--------------|-----------|-----------|----------|-----------|
| | from North | | | | | | from East | | | | | | from South | | | | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 4:15 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | | |
| Total | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 5 | 0 | 5 | 10 | | | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | | | |
| Total | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 1 | 7 | 8 | 0 | 0 | 0 | 5 | 1 | 6 | 17 | | | |
| Grand Total | 0 | 0 | 0 | 1 | 7 | 8 | 0 | 0 | 0 | 2 | 13 | 15 | 0 | 0 | 0 | 5 | 1 | 6 | 29 | | | |
| Approach % | 0 | 0 | 0 | 12.5 | 87.5 | | 0 | 0 | 0 | 13.333 | 86.667 | | 0 | 0 | 0 | 83.333 | 16.667 | | | | | |
| Total % | 0 | 0 | 0 | 3.4483 | 24.138 | 27.586 | 0 | 0 | 0 | 6.8966 | 44.828 | 51.724 | 0 | 0 | 0 | 17.241 | 3.4483 | 20.69 | | | | |
| Exiting Leg Total | | | | | | | | | | | | | | | | | | | 8 | 15 | 6 | 29 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:15 PM | Vaughan Street | | | | | | Green Street | | | | | | Vaughan Street | | | | | | Total | | | |
|-------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|-----------|-----------|
| | from North | | | | | | from East | | | | | | from South | | | | | | | | | |
| | Thru | Left | U-Turn | CW-EB | CW-WB | Total | Right | Left | U-Turn | CW-SB | CW-NB | Total | Right | Thru | U-Turn | CW-WB | CW-EB | Total | | | | |
| 4:15 PM | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 5 | 0 | 5 | 10 | | | |
| Total Volume | 0 | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 2 | 8 | 10 | 0 | 0 | 0 | 5 | 0 | 5 | 22 | | | |
| % Approach Total | 0.0 | 0.0 | 0.0 | 14.3 | 85.7 | | 0.0 | 0.0 | 0.0 | 20.0 | 80.0 | | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | | | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.250 | 0.500 | 0.583 | 0.000 | 0.000 | 0.000 | 0.500 | 0.500 | 0.625 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.550 | | | |
| Entering Leg | 0 | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 2 | 8 | 10 | 0 | 0 | 0 | 5 | 0 | 5 | 22 | | | |
| Exiting Leg | | | | | | | | | | | | | | | | | | | 7 | 10 | 5 | 22 |
| Total | | | | | | | | | | | | | | | | | | | 14 | 20 | 10 | 44 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars and Heavy Vehicles (Combined)

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|-------------------|----------------|-----------|----------|-----------|----------------|----------|----------|-----------|-----------------|-----------|----------|-----------|-----------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 1 | 7 | 0 | 8 | 6 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 15 |
| 4:15 PM | 0 | 2 | 0 | 2 | 9 | 0 | 0 | 9 | 0 | 1 | 0 | 1 | 12 |
| 4:30 PM | 0 | 5 | 0 | 5 | 9 | 0 | 1 | 10 | 1 | 0 | 0 | 1 | 16 |
| 4:45 PM | 2 | 4 | 1 | 7 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 14 |
| Total | 3 | 18 | 1 | 22 | 29 | 1 | 1 | 31 | 1 | 3 | 0 | 4 | 57 |
| 5:00 PM | 6 | 6 | 0 | 12 | 8 | 1 | 2 | 11 | 1 | 7 | 0 | 8 | 31 |
| 5:15 PM | 4 | 10 | 0 | 14 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 21 |
| 5:30 PM | 2 | 5 | 0 | 7 | 8 | 1 | 0 | 9 | 0 | 2 | 0 | 2 | 18 |
| 5:45 PM | 4 | 2 | 0 | 6 | 10 | 2 | 0 | 12 | 1 | 1 | 0 | 2 | 20 |
| Total | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| Grand Total | 19 | 41 | 1 | 61 | 60 | 5 | 3 | 68 | 3 | 15 | 0 | 18 | 147 |
| Approach % | 31.1 | 67.2 | 1.6 | | 88.2 | 7.4 | 4.4 | | 16.7 | 83.3 | 0.0 | | |
| Total % | 12.9 | 27.9 | 0.7 | 41.5 | 40.8 | 3.4 | 2.0 | 46.3 | 2.0 | 10.2 | 0.0 | 12.2 | |
| Exiting Leg Total | | | | 76 | | | | 47 | | | | 24 | 147 |
| Cars | 19 | 41 | 1 | 61 | 60 | 5 | 3 | 68 | 3 | 15 | 0 | 18 | 147 |
| % Cars | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Exiting Leg Total | | | | 76 | | | | 47 | | | | 24 | 147 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Heavy Vehicles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|---------------------------|----------------|-----------|----------|-----------|----------------|----------|----------|-----------|-----------------|-----------|----------|-----------|-----------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 6 | 6 | 0 | 12 | 8 | 1 | 2 | 11 | 1 | 7 | 0 | 8 | 31 |
| 5:15 PM | 4 | 10 | 0 | 14 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 21 |
| 5:30 PM | 2 | 5 | 0 | 7 | 8 | 1 | 0 | 9 | 0 | 2 | 0 | 2 | 18 |
| 5:45 PM | 4 | 2 | 0 | 6 | 10 | 2 | 0 | 12 | 1 | 1 | 0 | 2 | 20 |
| Total Volume | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| % Approach Total | 41.0 | 59.0 | 0.0 | | 83.8 | 10.8 | 5.4 | | 14.3 | 85.7 | 0.0 | | |
| PHF | 0.667 | 0.575 | 0.000 | 0.696 | 0.775 | 0.500 | 0.250 | 0.771 | 0.500 | 0.429 | 0.000 | 0.438 | 0.726 |
| Cars | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| Cars % | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cars Enter Leg | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| Cars Exiting Leg | | | | 43 | | | | 27 | | | | 20 | 90 |
| Heavy Exiting Leg | | | | 0 | | | | 0 | | | | 0 | 0 |
| Total Exiting Leg | | | | 43 | | | | 27 | | | | 20 | 90 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|-------------------|----------------|-----------|----------|-----------|----------------|----------|----------|-----------|-----------------|-----------|----------|-----------|-----------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 1 | 7 | 0 | 8 | 6 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 15 |
| 4:15 PM | 0 | 2 | 0 | 2 | 9 | 0 | 0 | 9 | 0 | 1 | 0 | 1 | 12 |
| 4:30 PM | 0 | 5 | 0 | 5 | 9 | 0 | 1 | 10 | 1 | 0 | 0 | 1 | 16 |
| 4:45 PM | 2 | 4 | 1 | 7 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 14 |
| Total | 3 | 18 | 1 | 22 | 29 | 1 | 1 | 31 | 1 | 3 | 0 | 4 | 57 |
| 5:00 PM | 6 | 6 | 0 | 12 | 8 | 1 | 2 | 11 | 1 | 7 | 0 | 8 | 31 |
| 5:15 PM | 4 | 10 | 0 | 14 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 21 |
| 5:30 PM | 2 | 5 | 0 | 7 | 8 | 1 | 0 | 9 | 0 | 2 | 0 | 2 | 18 |
| 5:45 PM | 4 | 2 | 0 | 6 | 10 | 2 | 0 | 12 | 1 | 1 | 0 | 2 | 20 |
| Total | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| Grand Total | 19 | 41 | 1 | 61 | 60 | 5 | 3 | 68 | 3 | 15 | 0 | 18 | 147 |
| Approach % | 31.1 | 67.2 | 1.6 | | 88.2 | 7.4 | 4.4 | | 16.7 | 83.3 | 0.0 | | |
| Total % | 12.9 | 27.9 | 0.7 | 41.5 | 40.8 | 3.4 | 2.0 | 46.3 | 2.0 | 10.2 | 0.0 | 12.2 | |
| Exiting Leg Total | | | | 76 | | | | 47 | | | | 24 | 147 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|------------------|----------------|-------|--------|-----------|----------------|-------|--------|-----------|-----------------|-------|--------|-----------|------------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 6 | 6 | 0 | 12 | 8 | 1 | 2 | 11 | 1 | 7 | 0 | 8 | 31 |
| 5:15 PM | 4 | 10 | 0 | 14 | 5 | 0 | 0 | 5 | 0 | 2 | 0 | 2 | 21 |
| 5:30 PM | 2 | 5 | 0 | 7 | 8 | 1 | 0 | 9 | 0 | 2 | 0 | 2 | 18 |
| 5:45 PM | 4 | 2 | 0 | 6 | 10 | 2 | 0 | 12 | 1 | 1 | 0 | 2 | 20 |
| Total Volume | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| % Approach Total | 41.0 | 59.0 | 0.0 | | 83.8 | 10.8 | 5.4 | | 14.3 | 85.7 | 0.0 | | |
| PHF | 0.667 | 0.575 | 0.000 | 0.696 | 0.775 | 0.500 | 0.250 | 0.771 | 0.500 | 0.429 | 0.000 | 0.438 | 0.726 |
| Entering Leg | 16 | 23 | 0 | 39 | 31 | 4 | 2 | 37 | 2 | 12 | 0 | 14 | 90 |
| Exiting Leg | | | | 43 | | | | 27 | | | | 20 | 90 |
| Total | | | | 82 | | | | 64 | | | | 34 | 180 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|--------------------|----------------|------|--------|-------|----------------|------|--------|-------|-----------------|------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Single-Unit | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|--------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|-----------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buses | 0 | | | | 0 | | | | 0 | | | | 0 |
| Single-Unit Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Articulated Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|-------------------|----------------|-----------|----------|-----------|----------------|----------|----------|-----------|-----------------|-----------|----------|-----------|-----------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 1 | 3 | 0 | 4 | 5 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 10 |
| 4:15 PM | 0 | 2 | 0 | 2 | 9 | 0 | 0 | 9 | 0 | 1 | 0 | 1 | 12 |
| 4:30 PM | 0 | 4 | 0 | 4 | 7 | 0 | 1 | 8 | 1 | 0 | 0 | 1 | 13 |
| 4:45 PM | 2 | 2 | 1 | 5 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 11 |
| Total | 3 | 11 | 1 | 15 | 25 | 1 | 1 | 27 | 1 | 3 | 0 | 4 | 46 |
| 5:00 PM | 6 | 3 | 0 | 9 | 8 | 1 | 2 | 11 | 1 | 7 | 0 | 8 | 28 |
| 5:15 PM | 4 | 9 | 0 | 13 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 19 |
| 5:30 PM | 2 | 5 | 0 | 7 | 7 | 0 | 0 | 7 | 0 | 1 | 0 | 1 | 15 |
| 5:45 PM | 3 | 1 | 0 | 4 | 9 | 2 | 0 | 11 | 1 | 1 | 0 | 2 | 17 |
| Total | 15 | 18 | 0 | 33 | 28 | 3 | 2 | 33 | 2 | 11 | 0 | 13 | 79 |
| Grand Total | 18 | 29 | 1 | 48 | 53 | 4 | 3 | 60 | 3 | 14 | 0 | 17 | 125 |
| Approach % | 37.5 | 60.4 | 2.1 | | 88.3 | 6.7 | 5.0 | | 17.6 | 82.4 | 0.0 | | |
| Total % | 14.4 | 23.2 | 0.8 | 38.4 | 42.4 | 3.2 | 2.4 | 48.0 | 2.4 | 11.2 | 0.0 | 13.6 | |
| Exiting Leg Total | | | | 68 | | | | 35 | | | | 22 | 125 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|------------------|----------------|-------|--------|-----------|----------------|-------|--------|-----------|-----------------|-------|--------|-----------|------------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 6 | 3 | 0 | 9 | 8 | 1 | 2 | 11 | 1 | 7 | 0 | 8 | 28 |
| 5:15 PM | 4 | 9 | 0 | 13 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 19 |
| 5:30 PM | 2 | 5 | 0 | 7 | 7 | 0 | 0 | 7 | 0 | 1 | 0 | 1 | 15 |
| 5:45 PM | 3 | 1 | 0 | 4 | 9 | 2 | 0 | 11 | 1 | 1 | 0 | 2 | 17 |
| Total Volume | 15 | 18 | 0 | 33 | 28 | 3 | 2 | 33 | 2 | 11 | 0 | 13 | 79 |
| % Approach Total | 45.5 | 54.5 | 0.0 | | 84.8 | 9.1 | 6.1 | | 15.4 | 84.6 | 0.0 | | |
| PHF | 0.625 | 0.500 | 0.000 | 0.635 | 0.778 | 0.375 | 0.250 | 0.750 | 0.500 | 0.393 | 0.000 | 0.406 | 0.705 |
| Entering Leg | 15 | 18 | 0 | 33 | 28 | 3 | 2 | 33 | 2 | 11 | 0 | 13 | 79 |
| Exiting Leg | | | | 39 | | | | 22 | | | | 18 | 79 |
| Total | | | | 72 | | | | 55 | | | | 31 | 158 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



PRECISION
 DATA
 INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class:

Light Goods Vehicle

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|-----------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 4 | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Total | 0 | 7 | 0 | 7 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 11 |
| 5:00 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 5:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 3 |
| 5:45 PM | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Total | 1 | 5 | 0 | 6 | 3 | 1 | 0 | 4 | 0 | 1 | 0 | 1 | 11 |
| Grand Total | 1 | 12 | 0 | 13 | 7 | 1 | 0 | 8 | 0 | 1 | 0 | 1 | 22 |
| Approach % | 7.7 | 92.3 | 0.0 | | 87.5 | 12.5 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| Total % | 4.5 | 54.5 | 0.0 | 59.1 | 31.8 | 4.5 | 0.0 | 36.4 | 0.0 | 4.5 | 0.0 | 4.5 | |
| Exiting Leg Total | | | | 8 | | | | 12 | | | | 2 | 22 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|-----------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 4 | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Total Volume | 0 | 7 | 0 | 7 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 11 |
| % Approach Total | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.438 | 0.000 | 0.438 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.550 |
| Entering Leg | 0 | 7 | 0 | 7 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 11 |
| Exiting Leg | | | | 4 | | | | 7 | | | | 0 | 11 |
| Total | | | | 11 | | | | 11 | | | | 0 | 22 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Buses

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total | |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|-----------------|------|--------|-------|-------|---|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total | |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|-----------------|-------|--------|-------|-------|-------|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 | |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Single-Unit Trucks

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total | |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|-----------------|------|--------|-------|-------|---|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total | |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|-----------------|-------|--------|-------|-------|-------|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | | | | 0 | | | | 0 | | | | | 0 | 0 |
| Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Articulated Trucks

| | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total | |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|-----------------|------|--------|-------|-------|---|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Vaughan Street | | | | Vaughan Street | | | | Office Driveway | | | | Total | |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|-----------------|-------|--------|-------|-------|-------|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | | | | 0 | | | | 0 | | | | | 0 | 0 |
| Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

| | Vaughan Street | | | | | | Vaughan Street | | | | | | Office Driveway | | | | | | Total |
|-------------------|----------------|-------|--------|-------|-------|-------|----------------|------|--------|-------|-------|-------|-----------------|------|--------|-------|-------|-------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Grand Total | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Approach % | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 50.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 1 | | | | | | 1 | | | | | | 0 | | | | | | 2 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Vaughan Street | | | | | | Vaughan Street | | | | | | Office Driveway | | | | | | Total |
|---------------------|----------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|-----------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Volume | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| % Approach Total | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
| Entering Leg | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Exiting Leg | 1 | | | | | | 1 | | | | | | 0 | | | | | | 2 |
| Total | 2 | | | | | | 2 | | | | | | 0 | | | | | | 4 |

PDI File #: **196718 G**
 Location: **N: Vaughan Street S: Vaughan Street**
 Location: **W: Office Driveway**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

| | Vaughan Street | | | | | | Vaughan Street | | | | | | Office Driveway | | | | | | Total |
|-------------------|----------------|------|--------|--------|--------|-------|----------------|------|--------|-------|--------|--------|-----------------|------|--------|--------|--------|--------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| Total | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 5 | 6 | 11 | 16 |
| 5:00 PM | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 10 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 6 |
| 5:45 PM | 0 | 0 | 0 | 9 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 16 |
| Total | 0 | 0 | 0 | 16 | 2 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 2 | 14 | 32 |
| Grand Total | 0 | 0 | 0 | 18 | 3 | 21 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 17 | 8 | 25 | 48 |
| Approach % | 0 | 0 | 0 | 85.714 | 14.286 | | 0 | 0 | 0 | 0 | 100 | | 0 | 0 | 0 | 68 | 32 | | |
| Total % | 0 | 0 | 0 | 37.5 | 6.25 | 43.75 | 0 | 0 | 0 | 0 | 4.1667 | 4.1667 | 0 | 0 | 0 | 35.417 | 16.667 | 52.083 | |
| Exiting Leg Total | 21 | | | | | | 2 | | | | | | 25 | | | | | | 48 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Vaughan Street | | | | | | Vaughan Street | | | | | | Office Driveway | | | | | | Total |
|------------------|----------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|-----------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 5:00 PM | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 10 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 6 |
| 5:45 PM | 0 | 0 | 0 | 9 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 16 |
| Total Volume | 0 | 0 | 0 | 16 | 2 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 2 | 14 | 32 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 88.9 | 11.1 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 85.7 | 14.3 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.444 | 0.250 | 0.409 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.600 | 0.500 | 0.700 | 0.500 |
| Entering Leg | 0 | 0 | 0 | 16 | 2 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 2 | 14 | 32 |
| Exiting Leg | 18 | | | | | | 0 | | | | | | 14 | | | | | | 32 |
| Total | 36 | | | | | | 0 | | | | | | 28 | | | | | | 64 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|-------------------|----------------|-----------|----------|------------|-------------|-----------|----------|-----------|-------------|------------|----------|------------|------------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 48 | 2 | 0 | 50 | 4 | 8 | 0 | 12 | 5 | 55 | 0 | 60 | 122 |
| 4:15 PM | 40 | 3 | 0 | 43 | 4 | 16 | 1 | 21 | 8 | 50 | 0 | 58 | 122 |
| 4:30 PM | 51 | 7 | 0 | 58 | 5 | 9 | 0 | 14 | 9 | 50 | 0 | 59 | 131 |
| 4:45 PM | 52 | 3 | 0 | 55 | 6 | 18 | 0 | 24 | 15 | 36 | 0 | 51 | 130 |
| Total | 191 | 15 | 0 | 206 | 19 | 51 | 1 | 71 | 37 | 191 | 0 | 228 | 505 |
| 5:00 PM | 76 | 6 | 0 | 82 | 7 | 9 | 0 | 16 | 8 | 63 | 0 | 71 | 169 |
| 5:15 PM | 65 | 0 | 1 | 66 | 3 | 16 | 0 | 19 | 10 | 51 | 0 | 61 | 146 |
| 5:30 PM | 86 | 2 | 0 | 88 | 3 | 16 | 0 | 19 | 15 | 54 | 0 | 69 | 176 |
| 5:45 PM | 79 | 2 | 0 | 81 | 2 | 11 | 0 | 13 | 9 | 46 | 1 | 56 | 150 |
| Total | 306 | 10 | 1 | 317 | 15 | 52 | 0 | 67 | 42 | 214 | 1 | 257 | 641 |
| Grand Total | 497 | 25 | 1 | 523 | 34 | 103 | 1 | 138 | 79 | 405 | 1 | 485 | 1146 |
| Approach % | 95.0 | 4.8 | 0.2 | | 24.6 | 74.6 | 0.7 | | 16.3 | 83.5 | 0.2 | | |
| Total % | 43.4 | 2.2 | 0.1 | 45.6 | 3.0 | 9.0 | 0.1 | 12.0 | 6.9 | 35.3 | 0.1 | 42.3 | |
| Exiting Leg Total | | | | 440 | | | | 105 | | | | 601 | 1146 |
| Cars | 488 | 25 | 1 | 514 | 34 | 103 | 1 | 138 | 79 | 398 | 1 | 478 | 1130 |
| % Cars | 98.2 | 100.0 | 100.0 | 98.3 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 98.3 | 100.0 | 98.6 | 98.6 |
| Exiting Leg Total | | | | 433 | | | | 105 | | | | 592 | 1130 |
| Heavy Vehicles | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 16 |
| % Heavy Vehicles | 1.8 | 0.0 | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 0.0 | 1.4 | 1.4 |
| Exiting Leg Total | | | | 7 | | | | 0 | | | | 9 | 16 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|--------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 76 | 6 | 0 | 82 | 7 | 9 | 0 | 16 | 8 | 63 | 0 | 71 | 169 |
| 5:15 PM | 65 | 0 | 1 | 66 | 3 | 16 | 0 | 19 | 10 | 51 | 0 | 61 | 146 |
| 5:30 PM | 86 | 2 | 0 | 88 | 3 | 16 | 0 | 19 | 15 | 54 | 0 | 69 | 176 |
| 5:45 PM | 79 | 2 | 0 | 81 | 2 | 11 | 0 | 13 | 9 | 46 | 1 | 56 | 150 |
| Total Volume | 306 | 10 | 1 | 317 | 15 | 52 | 0 | 67 | 42 | 214 | 1 | 257 | 641 |
| % Approach Total | 96.5 | 3.2 | 0.3 | | 22.4 | 77.6 | 0.0 | | 16.3 | 83.3 | 0.4 | | |
| PHF | 0.890 | 0.417 | 0.250 | 0.901 | 0.536 | 0.813 | 0.000 | 0.882 | 0.700 | 0.849 | 0.250 | 0.905 | 0.911 |
| Cars | 301 | 10 | 1 | 312 | 15 | 52 | 0 | 67 | 42 | 210 | 1 | 253 | 632 |
| Cars % | 98.4 | 100.0 | 100.0 | 98.4 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 98.1 | 100.0 | 98.4 | 98.6 |
| Heavy Vehicles | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Heavy Vehicles % | 1.6 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 | 1.6 | 1.4 |
| Cars Enter Leg | 301 | 10 | 1 | 312 | 15 | 52 | 0 | 67 | 42 | 210 | 1 | 253 | 632 |
| Heavy Enter Leg | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Total Entering Leg | 306 | 10 | 1 | 317 | 15 | 52 | 0 | 67 | 42 | 214 | 1 | 257 | 641 |
| Cars Exiting Leg | | | | 226 | | | | 52 | | | | 354 | 632 |
| Heavy Exiting Leg | | | | 4 | | | | 0 | | | | 5 | 9 |
| Total Exiting Leg | | | | 230 | | | | 52 | | | | 359 | 641 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars-Combined (Motorcycles, Cars, Light Goods)

Class:

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|-------------------|----------------|-----------|----------|------------|-------------|-----------|----------|-----------|-------------|------------|----------|------------|------------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 47 | 2 | 0 | 49 | 4 | 8 | 0 | 12 | 5 | 54 | 0 | 59 | 120 |
| 4:15 PM | 38 | 3 | 0 | 41 | 4 | 16 | 1 | 21 | 8 | 49 | 0 | 57 | 119 |
| 4:30 PM | 51 | 7 | 0 | 58 | 5 | 9 | 0 | 14 | 9 | 50 | 0 | 59 | 131 |
| 4:45 PM | 51 | 3 | 0 | 54 | 6 | 18 | 0 | 24 | 15 | 35 | 0 | 50 | 128 |
| Total | 187 | 15 | 0 | 202 | 19 | 51 | 1 | 71 | 37 | 188 | 0 | 225 | 498 |
| 5:00 PM | 75 | 6 | 0 | 81 | 7 | 9 | 0 | 16 | 8 | 62 | 0 | 70 | 167 |
| 5:15 PM | 65 | 0 | 1 | 66 | 3 | 16 | 0 | 19 | 10 | 50 | 0 | 60 | 145 |
| 5:30 PM | 83 | 2 | 0 | 85 | 3 | 16 | 0 | 19 | 15 | 54 | 0 | 69 | 173 |
| 5:45 PM | 78 | 2 | 0 | 80 | 2 | 11 | 0 | 13 | 9 | 44 | 1 | 54 | 147 |
| Total | 301 | 10 | 1 | 312 | 15 | 52 | 0 | 67 | 42 | 210 | 1 | 253 | 632 |
| Grand Total | 488 | 25 | 1 | 514 | 34 | 103 | 1 | 138 | 79 | 398 | 1 | 478 | 1130 |
| Approach % | 94.9 | 4.9 | 0.2 | | 24.6 | 74.6 | 0.7 | | 16.5 | 83.3 | 0.2 | | |
| Total % | 43.2 | 2.2 | 0.1 | 45.5 | 3.0 | 9.1 | 0.1 | 12.2 | 7.0 | 35.2 | 0.1 | 42.3 | |
| Exiting Leg Total | | | | 433 | | | | 105 | | | | 592 | 1130 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 75 | 6 | 0 | 81 | 7 | 9 | 0 | 16 | 8 | 62 | 0 | 70 | 167 |
| 5:15 PM | 65 | 0 | 1 | 66 | 3 | 16 | 0 | 19 | 10 | 50 | 0 | 60 | 145 |
| 5:30 PM | 83 | 2 | 0 | 85 | 3 | 16 | 0 | 19 | 15 | 54 | 0 | 69 | 173 |
| 5:45 PM | 78 | 2 | 0 | 80 | 2 | 11 | 0 | 13 | 9 | 44 | 1 | 54 | 147 |
| Total Volume | 301 | 10 | 1 | 312 | 15 | 52 | 0 | 67 | 42 | 210 | 1 | 253 | 632 |
| % Approach Total | 96.5 | 3.2 | 0.3 | | 22.4 | 77.6 | 0.0 | | 16.6 | 83.0 | 0.4 | | |
| PHF | 0.907 | 0.417 | 0.250 | 0.918 | 0.536 | 0.813 | 0.000 | 0.882 | 0.700 | 0.847 | 0.250 | 0.904 | 0.913 |
| Entering Leg | 301 | 10 | 1 | 312 | 15 | 52 | 0 | 67 | 42 | 210 | 1 | 253 | 632 |
| Exiting Leg | | | | 226 | | | | 52 | | | | 354 | 632 |
| Total | | | | 538 | | | | 119 | | | | 607 | 1264 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|--------------------|----------------|----------|----------|----------|-------------|----------|----------|----------|-------------|----------|----------|----------|----------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Total | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 7 |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| Total | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Grand Total | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 16 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| Total % | 56.3 | 0.0 | 0.0 | 56.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 43.8 | 0.0 | 43.8 | |
| Exiting Leg Total | | | | 7 | | | | 0 | | | | 9 | 16 |
| Buses | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 16 |
| % Buses | 100.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Exiting Leg Total | | | | 7 | | | | 0 | | | | 9 | 16 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Single-Unit | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | 0 | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|--------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| Total Volume | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| PHF | 0.417 | 0.000 | 0.000 | 0.417 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.500 | 0.750 |
| Buses | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Buses % | 100.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Buses | | | | 4 | | | | 0 | | | | 5 | 9 |
| Single-Unit Trucks | | | | 0 | | | | 0 | | | | 0 | 0 |
| Articulated Trucks | | | | 0 | | | | 0 | | | | 0 | 0 |
| Total Exiting Leg | | | | 4 | | | | 0 | | | | 5 | 9 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|-------------------|----------------|------|--------|-------|-------------|------|--------|-------|-------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 42 | 1 | 0 | 43 | 3 | 6 | 0 | 9 | 4 | 47 | 0 | 51 | 103 |
| 4:15 PM | 31 | 3 | 0 | 34 | 4 | 16 | 1 | 21 | 7 | 41 | 0 | 48 | 103 |
| 4:30 PM | 48 | 6 | 0 | 54 | 4 | 6 | 0 | 10 | 9 | 46 | 0 | 55 | 119 |
| 4:45 PM | 45 | 2 | 0 | 47 | 6 | 16 | 0 | 22 | 12 | 31 | 0 | 43 | 112 |
| Total | 166 | 12 | 0 | 178 | 17 | 44 | 1 | 62 | 32 | 165 | 0 | 197 | 437 |
| 5:00 PM | 67 | 6 | 0 | 73 | 7 | 8 | 0 | 15 | 7 | 58 | 0 | 65 | 153 |
| 5:15 PM | 57 | 0 | 1 | 58 | 3 | 16 | 0 | 19 | 10 | 45 | 0 | 55 | 132 |
| 5:30 PM | 75 | 2 | 0 | 77 | 3 | 15 | 0 | 18 | 15 | 48 | 0 | 63 | 158 |
| 5:45 PM | 72 | 2 | 0 | 74 | 2 | 10 | 0 | 12 | 9 | 41 | 1 | 51 | 137 |
| Total | 271 | 10 | 1 | 282 | 15 | 49 | 0 | 64 | 41 | 192 | 1 | 234 | 580 |
| Grand Total | 437 | 22 | 1 | 460 | 32 | 93 | 1 | 126 | 73 | 357 | 1 | 431 | 1017 |
| Approach % | 95.0 | 4.8 | 0.2 | | 25.4 | 73.8 | 0.8 | | 16.9 | 82.8 | 0.2 | | |
| Total % | 43.0 | 2.2 | 0.1 | 45.2 | 3.1 | 9.1 | 0.1 | 12.4 | 7.2 | 35.1 | 0.1 | 42.4 | |
| Exiting Leg Total | | | | 390 | | | | 96 | | | | 531 | 1017 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 67 | 6 | 0 | 73 | 7 | 8 | 0 | 15 | 7 | 58 | 0 | 65 | 153 |
| 5:15 PM | 57 | 0 | 1 | 58 | 3 | 16 | 0 | 19 | 10 | 45 | 0 | 55 | 132 |
| 5:30 PM | 75 | 2 | 0 | 77 | 3 | 15 | 0 | 18 | 15 | 48 | 0 | 63 | 158 |
| 5:45 PM | 72 | 2 | 0 | 74 | 2 | 10 | 0 | 12 | 9 | 41 | 1 | 51 | 137 |
| Total Volume | 271 | 10 | 1 | 282 | 15 | 49 | 0 | 64 | 41 | 192 | 1 | 234 | 580 |
| % Approach Total | 96.1 | 3.5 | 0.4 | | 23.4 | 76.6 | 0.0 | | 17.5 | 82.1 | 0.4 | | |
| PHF | 0.903 | 0.417 | 0.250 | 0.916 | 0.536 | 0.766 | 0.000 | 0.842 | 0.683 | 0.828 | 0.250 | 0.900 | 0.918 |
| Entering Leg | 271 | 10 | 1 | 282 | 15 | 49 | 0 | 64 | 41 | 192 | 1 | 234 | 580 |
| Exiting Leg | | | | 208 | | | | 51 | | | | 321 | 580 |
| Total | | | | 490 | | | | 115 | | | | 555 | 1160 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



**PRECISION
D A T A
INDUSTRIES, LLC**

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class:

Light Goods Vehicle

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|--------------------|----------------|----------|----------|-----------|-------------|-----------|----------|-----------|-------------|-----------|----------|-----------|------------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 5 | 1 | 0 | 6 | 1 | 2 | 0 | 3 | 1 | 7 | 0 | 8 | 17 |
| 4:15 PM | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 1 | 8 | 0 | 9 | 16 |
| 4:30 PM | 3 | 1 | 0 | 4 | 1 | 3 | 0 | 4 | 0 | 4 | 0 | 4 | 12 |
| 4:45 PM | 6 | 1 | 0 | 7 | 0 | 2 | 0 | 2 | 3 | 4 | 0 | 7 | 16 |
| Total | 21 | 3 | 0 | 24 | 2 | 7 | 0 | 9 | 5 | 23 | 0 | 28 | 61 |
| 5:00 PM | 8 | 0 | 0 | 8 | 0 | 1 | 0 | 1 | 1 | 4 | 0 | 5 | 14 |
| 5:15 PM | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 13 |
| 5:30 PM | 8 | 0 | 0 | 8 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 6 | 15 |
| 5:45 PM | 6 | 0 | 0 | 6 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 3 | 10 |
| Total | 30 | 0 | 0 | 30 | 0 | 3 | 0 | 3 | 1 | 18 | 0 | 19 | 52 |
| Grand Total | 51 | 3 | 0 | 54 | 2 | 10 | 0 | 12 | 6 | 41 | 0 | 47 | 113 |
| Approach % | 94.4 | 5.6 | 0.0 | | 16.7 | 83.3 | 0.0 | | 12.8 | 87.2 | 0.0 | | |
| Total % | 45.1 | 2.7 | 0.0 | 47.8 | 1.8 | 8.8 | 0.0 | 10.6 | 5.3 | 36.3 | 0.0 | 41.6 | |
| Exiting Leg Total | | | | 43 | | | | 9 | | | | 61 | 113 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|-------------------------|----------------|-------------|------------|-----------|-------------|-------------|------------|-----------|-------------|-------------|------------|-----------|------------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 5 | 1 | 0 | 6 | 1 | 2 | 0 | 3 | 1 | 7 | 0 | 8 | 17 |
| 4:15 PM | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 1 | 8 | 0 | 9 | 16 |
| 4:30 PM | 3 | 1 | 0 | 4 | 1 | 3 | 0 | 4 | 0 | 4 | 0 | 4 | 12 |
| 4:45 PM | 6 | 1 | 0 | 7 | 0 | 2 | 0 | 2 | 3 | 4 | 0 | 7 | 16 |
| Total Volume | 21 | 3 | 0 | 24 | 2 | 7 | 0 | 9 | 5 | 23 | 0 | 28 | 61 |
| % Approach Total | 87.5 | 12.5 | 0.0 | | 22.2 | 77.8 | 0.0 | | 17.9 | 82.1 | 0.0 | | |
| PHF | 0.750 | 0.750 | 0.000 | 0.857 | 0.500 | 0.583 | 0.000 | 0.563 | 0.417 | 0.719 | 0.000 | 0.778 | 0.897 |
| Entering Leg | 21 | 3 | 0 | 24 | 2 | 7 | 0 | 9 | 5 | 23 | 0 | 28 | 61 |
| Exiting Leg | | | | 25 | | | | 8 | | | | 28 | 61 |
| Total | | | | 49 | | | | 17 | | | | 56 | 122 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Buses

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|-------------------|----------------|----------|----------|----------|-------------|----------|----------|----------|-------------|----------|----------|----------|----------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 4:15 PM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Total | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 7 |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| Total | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Grand Total | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 16 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| Total % | 56.3 | 0.0 | 0.0 | 56.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 43.8 | 0.0 | 43.8 | |
| Exiting Leg Total | | | | 7 | | | | 0 | | | | 9 | 16 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| Total Volume | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| PHF | 0.417 | 0.000 | 0.000 | 0.417 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.500 | 0.750 |
| Entering Leg | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 9 |
| Exiting Leg | | | | 4 | | | | 0 | | | | 5 | 9 |
| Total | | | | 9 | | | | 0 | | | | 9 | 18 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Single-Unit Trucks

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|-------------------|----------------|------|--------|-------|-------------|------|--------|-------|-------------|------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total |
|------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|
| | from North | | | | from East | | | | from West | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 H**
 Location: **N: Russell Street**
 Location: **E: Deer Street W: Deer Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total | |
|-------------------|----------------|------|--------|-------|-------------|------|--------|-------|-------------|------|--------|-------|-------|---|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Russell Street | | | | Deer Street | | | | Deer Street | | | | Total | |
|------------------|----------------|-------|--------|-------|-------------|-------|--------|-------|-------------|-------|--------|-------|-------|-------|
| | from North | | | | from East | | | | from West | | | | | |
| | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | | | | 0 | | | | 0 | | | | | 0 | 0 |
| Total | | | | 0 | | | | 0 | | | | | 0 | 0 |

PDI File #: 196718 H
 Location: N: Russell Street
 Location: E: Deer Street W: Deer Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Russell Street | | | | | | | Deer Street | | | | | | Deer Street | | | | | | Total | |
|-------------------|----------------|------|--------|-------|-------|-------|-----|-------------|------|--------|-------|-------|-------|-------------|------|--------|-------|-------|-------|-------|-----|
| | from North | | | | | | | from East | | | | | | from West | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | | | 0 | | | | | | 0 | | | | | | 0 | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Russell Street | | | | | | | Deer Street | | | | | | Deer Street | | | | | | Total | |
|------------------|----------------|-------|--------|-------|-------|-------|-------|-------------|-------|--------|-------|-------|-------|-------------|-------|--------|-------|-------|-------|-------|-------|
| | from North | | | | | | | from East | | | | | | from West | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | | | | 0 | | | | | | 0 | | | | | | 0 | |
| Total | 0 | | | | | | | 0 | | | | | | 0 | | | | | | 0 | |

PDI File #: 196718 H
 Location: N: Russell Street
 Location: E: Deer Street W: Deer Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

| | Russell Street | | | | | | Deer Street | | | | | | Deer Street | | | | | | Total | |
|-------------------|----------------|------|--------|-------|--------|--------|-------------|------|--------|--------|--------|--------|-------------|------|--------|--------|--------|--------|-------|----|
| | from North | | | | | | from East | | | | | | from West | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 7 |
| Total | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 6 | 10 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 13 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 6 | 8 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 11 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 10 | 14 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 18 |
| Grand Total | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 8 | 16 | 24 | 0 | 0 | 0 | 2 | 1 | 3 | 3 | 31 |
| Approach % | 0 | 0 | 0 | 0 | 100 | | 0 | 0 | 0 | 33.333 | 66.667 | | 0 | 0 | 0 | 66.667 | 33.333 | | | |
| Total % | 0 | 0 | 0 | 0 | 12.903 | 12.903 | 0 | 0 | 0 | 25.806 | 51.613 | 77.419 | 0 | 0 | 0 | 6.4516 | 3.2258 | 9.6774 | | |
| Exiting Leg Total | | | | | | | | | | | | | | | | | | | 3 | 31 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:15 PM | Russell Street | | | | | | Deer Street | | | | | | Deer Street | | | | | | Total | |
|------------------|----------------|-------|--------|-------|-------|-------|-------------|-------|--------|-------|-------|-------|-------------|-------|--------|-------|-------|-------|-------|----|
| | from North | | | | | | from East | | | | | | from West | | | | | | | |
| | Right | Left | U-Turn | CW-EB | CW-WB | Total | Right | Thru | U-Turn | CW-SB | CW-NB | Total | Thru | Left | U-Turn | CW-NB | CW-SB | Total | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 6 | 8 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 11 |
| Total Volume | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 5 | 12 | 17 | 0 | 0 | 0 | 2 | 1 | 3 | 3 | 23 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | 29.4 | 70.6 | | 0.0 | 0.0 | 0.0 | 66.7 | 33.3 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 | 0.750 | 0.000 | 0.000 | 0.000 | 0.625 | 0.500 | 0.531 | 0.000 | 0.000 | 0.000 | 0.500 | 0.250 | 0.375 | 0.523 | |
| Entering Leg | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 5 | 12 | 17 | 0 | 0 | 0 | 2 | 1 | 3 | 3 | 23 |
| Exiting Leg | | | | | | | | | | | | | | | | | | | 3 | 23 |
| Total | | | | | | | | | | | | | | | | | | | 6 | 46 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|-------------------|----------------|------------|----------|------------|----------------|----------|----------|------------|--------------|-----------|----------|-----------|------------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 2 | 46 | 0 | 48 | 59 | 2 | 0 | 61 | 1 | 9 | 0 | 10 | 119 |
| 4:15 PM | 8 | 46 | 0 | 54 | 51 | 1 | 0 | 52 | 2 | 4 | 0 | 6 | 112 |
| 4:30 PM | 4 | 55 | 0 | 59 | 51 | 1 | 0 | 52 | 3 | 9 | 0 | 12 | 123 |
| 4:45 PM | 4 | 55 | 0 | 59 | 47 | 2 | 0 | 49 | 2 | 7 | 0 | 9 | 117 |
| Total | 18 | 202 | 0 | 220 | 208 | 6 | 0 | 214 | 8 | 29 | 0 | 37 | 471 |
| 5:00 PM | 5 | 76 | 0 | 81 | 70 | 1 | 0 | 71 | 3 | 10 | 0 | 13 | 165 |
| 5:15 PM | 2 | 64 | 0 | 66 | 58 | 1 | 0 | 59 | 0 | 5 | 0 | 5 | 130 |
| 5:30 PM | 5 | 93 | 0 | 98 | 60 | 1 | 0 | 61 | 1 | 4 | 0 | 5 | 164 |
| 5:45 PM | 11 | 73 | 0 | 84 | 48 | 1 | 0 | 49 | 1 | 6 | 0 | 7 | 140 |
| Total | 23 | 306 | 0 | 329 | 236 | 4 | 0 | 240 | 5 | 25 | 0 | 30 | 599 |
| Grand Total | 41 | 508 | 0 | 549 | 444 | 10 | 0 | 454 | 13 | 54 | 0 | 67 | 1070 |
| Approach % | 7.5 | 92.5 | 0.0 | | 97.8 | 2.2 | 0.0 | | 19.4 | 80.6 | 0.0 | | |
| Total % | 3.8 | 47.5 | 0.0 | 51.3 | 41.5 | 0.9 | 0.0 | 42.4 | 1.2 | 5.0 | 0.0 | 6.3 | |
| Exiting Leg Total | | | | 498 | | | | 521 | | | | 51 | 1070 |
| Cars | 41 | 499 | 0 | 540 | 437 | 10 | 0 | 447 | 13 | 54 | 0 | 67 | 1054 |
| % Cars | 100.0 | 98.2 | 0.0 | 98.4 | 98.4 | 100.0 | 0.0 | 98.5 | 100.0 | 100.0 | 0.0 | 100.0 | 98.5 |
| Exiting Leg Total | | | | 491 | | | | 512 | | | | 51 | 1054 |
| Heavy Vehicles | 0 | 9 | 0 | 9 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 16 |
| % Heavy Vehicles | 0.0 | 1.8 | 0.0 | 1.6 | 1.6 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 |
| Exiting Leg Total | | | | 7 | | | | 9 | | | | 0 | 16 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|--------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 5 | 76 | 0 | 81 | 70 | 1 | 0 | 71 | 3 | 10 | 0 | 13 | 165 |
| 5:15 PM | 2 | 64 | 0 | 66 | 58 | 1 | 0 | 59 | 0 | 5 | 0 | 5 | 130 |
| 5:30 PM | 5 | 93 | 0 | 98 | 60 | 1 | 0 | 61 | 1 | 4 | 0 | 5 | 164 |
| 5:45 PM | 11 | 73 | 0 | 84 | 48 | 1 | 0 | 49 | 1 | 6 | 0 | 7 | 140 |
| Total Volume | 23 | 306 | 0 | 329 | 236 | 4 | 0 | 240 | 5 | 25 | 0 | 30 | 599 |
| % Approach Total | 7.0 | 93.0 | 0.0 | | 98.3 | 1.7 | 0.0 | | 16.7 | 83.3 | 0.0 | | |
| PHF | 0.523 | 0.823 | 0.000 | 0.839 | 0.843 | 1.000 | 0.000 | 0.845 | 0.417 | 0.625 | 0.000 | 0.577 | 0.908 |
| Cars | 23 | 301 | 0 | 324 | 232 | 4 | 0 | 236 | 5 | 25 | 0 | 30 | 590 |
| Cars % | 100.0 | 98.4 | 0.0 | 98.5 | 98.3 | 100.0 | 0.0 | 98.3 | 100.0 | 100.0 | 0.0 | 100.0 | 98.5 |
| Heavy Vehicles | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Heavy Vehicles % | 0.0 | 1.6 | 0.0 | 1.5 | 1.7 | 0.0 | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 |
| Cars Enter Leg | 23 | 301 | 0 | 324 | 232 | 4 | 0 | 236 | 5 | 25 | 0 | 30 | 590 |
| Heavy Enter Leg | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Total Entering Leg | 23 | 306 | 0 | 329 | 236 | 4 | 0 | 240 | 5 | 25 | 0 | 30 | 599 |
| Cars Exiting Leg | | | | 257 | | | | 306 | | | | 27 | 590 |
| Heavy Exiting Leg | | | | 4 | | | | 5 | | | | 0 | 9 |
| Total Exiting Leg | | | | 261 | | | | 311 | | | | 27 | 599 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars-Combined (Motorcycles, Cars, Light Goods)

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|-------------------|----------------|------------|----------|------------|----------------|----------|----------|------------|--------------|-----------|----------|-----------|------------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 2 | 45 | 0 | 47 | 58 | 2 | 0 | 60 | 1 | 9 | 0 | 10 | 117 |
| 4:15 PM | 8 | 44 | 0 | 52 | 50 | 1 | 0 | 51 | 2 | 4 | 0 | 6 | 109 |
| 4:30 PM | 4 | 55 | 0 | 59 | 51 | 1 | 0 | 52 | 3 | 9 | 0 | 12 | 123 |
| 4:45 PM | 4 | 54 | 0 | 58 | 46 | 2 | 0 | 48 | 2 | 7 | 0 | 9 | 115 |
| Total | 18 | 198 | 0 | 216 | 205 | 6 | 0 | 211 | 8 | 29 | 0 | 37 | 464 |
| 5:00 PM | 5 | 75 | 0 | 80 | 69 | 1 | 0 | 70 | 3 | 10 | 0 | 13 | 163 |
| 5:15 PM | 2 | 64 | 0 | 66 | 57 | 1 | 0 | 58 | 0 | 5 | 0 | 5 | 129 |
| 5:30 PM | 5 | 90 | 0 | 95 | 60 | 1 | 0 | 61 | 1 | 4 | 0 | 5 | 161 |
| 5:45 PM | 11 | 72 | 0 | 83 | 46 | 1 | 0 | 47 | 1 | 6 | 0 | 7 | 137 |
| Total | 23 | 301 | 0 | 324 | 232 | 4 | 0 | 236 | 5 | 25 | 0 | 30 | 590 |
| Grand Total | 41 | 499 | 0 | 540 | 437 | 10 | 0 | 447 | 13 | 54 | 0 | 67 | 1054 |
| Approach % | 7.6 | 92.4 | 0.0 | | 97.8 | 2.2 | 0.0 | | 19.4 | 80.6 | 0.0 | | |
| Total % | 3.9 | 47.3 | 0.0 | 51.2 | 41.5 | 0.9 | 0.0 | 42.4 | 1.2 | 5.1 | 0.0 | 6.4 | |
| Exiting Leg Total | | | | 491 | | | | 512 | | | | 51 | 1054 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|------------------|----------------|-------|--------|------------|----------------|-------|--------|------------|--------------|-------|--------|-----------|-------------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 5 | 75 | 0 | 80 | 69 | 1 | 0 | 70 | 3 | 10 | 0 | 13 | 163 |
| 5:15 PM | 2 | 64 | 0 | 66 | 57 | 1 | 0 | 58 | 0 | 5 | 0 | 5 | 129 |
| 5:30 PM | 5 | 90 | 0 | 95 | 60 | 1 | 0 | 61 | 1 | 4 | 0 | 5 | 161 |
| 5:45 PM | 11 | 72 | 0 | 83 | 46 | 1 | 0 | 47 | 1 | 6 | 0 | 7 | 137 |
| Total Volume | 23 | 301 | 0 | 324 | 232 | 4 | 0 | 236 | 5 | 25 | 0 | 30 | 590 |
| % Approach Total | 7.1 | 92.9 | 0.0 | | 98.3 | 1.7 | 0.0 | | 16.7 | 83.3 | 0.0 | | |
| PHF | 0.523 | 0.836 | 0.000 | 0.853 | 0.841 | 1.000 | 0.000 | 0.843 | 0.417 | 0.625 | 0.000 | 0.577 | 0.905 |
| Entering Leg | 23 | 301 | 0 | 324 | 232 | 4 | 0 | 236 | 5 | 25 | 0 | 30 | 590 |
| Exiting Leg | | | | 257 | | | | 306 | | | | 27 | 590 |
| Total | | | | 581 | | | | 542 | | | | 57 | 1180 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|--------------------|----------------|----------|----------|----------|----------------|----------|----------|----------|--------------|----------|----------|----------|----------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Total | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 7 |
| 5:00 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| Total | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Grand Total | 0 | 9 | 0 | 9 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 16 |
| Approach % | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 56.3 | 0.0 | 56.3 | 43.8 | 0.0 | 0.0 | 43.8 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | | | | 7 | | | | 9 | | | | | 16 |
| Buses | 0 | 9 | 0 | 9 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 16 |
| % Buses | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Exiting Leg Total | | | | 7 | | | | 9 | | | | | 16 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Single-Unit | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | | | | 0 | | | | 0 | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|--------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| Total Volume | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| % Approach Total | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.417 | 0.000 | 0.417 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 |
| Buses | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Buses % | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Single-Unit % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Buses | | | | 4 | | | | 5 | | | | | 9 |
| Single-Unit Trucks | | | | 0 | | | | 0 | | | | | 0 |
| Articulated Trucks | | | | 0 | | | | 0 | | | | | 0 |
| Total Exiting Leg | | | | 4 | | | | 5 | | | | | 9 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|--------------|------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 1 | 40 | 0 | 41 | 50 | 2 | 0 | 52 | 1 | 6 | 0 | 7 | 100 |
| 4:15 PM | 8 | 38 | 0 | 46 | 41 | 1 | 0 | 42 | 1 | 4 | 0 | 5 | 93 |
| 4:30 PM | 3 | 52 | 0 | 55 | 46 | 1 | 0 | 47 | 2 | 7 | 0 | 9 | 111 |
| 4:45 PM | 3 | 47 | 0 | 50 | 41 | 2 | 0 | 43 | 1 | 4 | 0 | 5 | 98 |
| Total | 15 | 177 | 0 | 192 | 178 | 6 | 0 | 184 | 5 | 21 | 0 | 26 | 402 |
| 5:00 PM | 2 | 68 | 0 | 70 | 64 | 1 | 0 | 65 | 3 | 6 | 0 | 9 | 144 |
| 5:15 PM | 1 | 54 | 0 | 55 | 53 | 1 | 0 | 54 | 0 | 3 | 0 | 3 | 112 |
| 5:30 PM | 3 | 83 | 0 | 86 | 54 | 1 | 0 | 55 | 1 | 4 | 0 | 5 | 146 |
| 5:45 PM | 10 | 65 | 0 | 75 | 42 | 1 | 0 | 43 | 1 | 4 | 0 | 5 | 123 |
| Total | 16 | 270 | 0 | 286 | 213 | 4 | 0 | 217 | 5 | 17 | 0 | 22 | 525 |
| Grand Total | 31 | 447 | 0 | 478 | 391 | 10 | 0 | 401 | 10 | 38 | 0 | 48 | 927 |
| Approach % | 6.5 | 93.5 | 0.0 | | 97.5 | 2.5 | 0.0 | | 20.8 | 79.2 | 0.0 | | |
| Total % | 3.3 | 48.2 | 0.0 | 51.6 | 42.2 | 1.1 | 0.0 | 43.3 | 1.1 | 4.1 | 0.0 | 5.2 | |
| Exiting Leg Total | | | | 429 | | | | 457 | | | | 41 | 927 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 2 | 68 | 0 | 70 | 64 | 1 | 0 | 65 | 3 | 6 | 0 | 9 | 144 |
| 5:15 PM | 1 | 54 | 0 | 55 | 53 | 1 | 0 | 54 | 0 | 3 | 0 | 3 | 112 |
| 5:30 PM | 3 | 83 | 0 | 86 | 54 | 1 | 0 | 55 | 1 | 4 | 0 | 5 | 146 |
| 5:45 PM | 10 | 65 | 0 | 75 | 42 | 1 | 0 | 43 | 1 | 4 | 0 | 5 | 123 |
| Total Volume | 16 | 270 | 0 | 286 | 213 | 4 | 0 | 217 | 5 | 17 | 0 | 22 | 525 |
| % Approach Total | 5.6 | 94.4 | 0.0 | | 98.2 | 1.8 | 0.0 | | 22.7 | 77.3 | 0.0 | | |
| PHF | 0.400 | 0.813 | 0.000 | 0.831 | 0.832 | 1.000 | 0.000 | 0.835 | 0.417 | 0.708 | 0.000 | 0.611 | 0.899 |
| Entering Leg | 16 | 270 | 0 | 286 | 213 | 4 | 0 | 217 | 5 | 17 | 0 | 22 | 525 |
| Exiting Leg | | | | 230 | | | | 275 | | | | 20 | 525 |
| Total | | | | 516 | | | | 492 | | | | 42 | 1050 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Light Goods Vehicle

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|--------------|------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 1 | 5 | 0 | 6 | 8 | 0 | 0 | 8 | 0 | 3 | 0 | 3 | 17 |
| 4:15 PM | 0 | 6 | 0 | 6 | 9 | 0 | 0 | 9 | 1 | 0 | 0 | 1 | 16 |
| 4:30 PM | 1 | 3 | 0 | 4 | 5 | 0 | 0 | 5 | 1 | 2 | 0 | 3 | 12 |
| 4:45 PM | 1 | 7 | 0 | 8 | 5 | 0 | 0 | 5 | 1 | 3 | 0 | 4 | 17 |
| Total | 3 | 21 | 0 | 24 | 27 | 0 | 0 | 27 | 3 | 8 | 0 | 11 | 62 |
| 5:00 PM | 3 | 7 | 0 | 10 | 5 | 0 | 0 | 5 | 0 | 4 | 0 | 4 | 19 |
| 5:15 PM | 1 | 10 | 0 | 11 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 17 |
| 5:30 PM | 2 | 7 | 0 | 9 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 15 |
| 5:45 PM | 1 | 7 | 0 | 8 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 14 |
| Total | 7 | 31 | 0 | 38 | 19 | 0 | 0 | 19 | 0 | 8 | 0 | 8 | 65 |
| Grand Total | 10 | 52 | 0 | 62 | 46 | 0 | 0 | 46 | 3 | 16 | 0 | 19 | 127 |
| Approach % | 16.1 | 83.9 | 0.0 | | 100.0 | 0.0 | 0.0 | | 15.8 | 84.2 | 0.0 | | |
| Total % | 7.9 | 40.9 | 0.0 | 48.8 | 36.2 | 0.0 | 0.0 | 36.2 | 2.4 | 12.6 | 0.0 | 15.0 | |
| Exiting Leg Total | | | | 62 | | | | 55 | | | | 10 | 127 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:45 PM | 1 | 7 | 0 | 8 | 5 | 0 | 0 | 5 | 1 | 3 | 0 | 4 | 17 |
| 5:00 PM | 3 | 7 | 0 | 10 | 5 | 0 | 0 | 5 | 0 | 4 | 0 | 4 | 19 |
| 5:15 PM | 1 | 10 | 0 | 11 | 4 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 17 |
| 5:30 PM | 2 | 7 | 0 | 9 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 15 |
| Total Volume | 7 | 31 | 0 | 38 | 20 | 0 | 0 | 20 | 1 | 9 | 0 | 10 | 68 |
| % Approach Total | 18.4 | 81.6 | 0.0 | | 100.0 | 0.0 | 0.0 | | 10.0 | 90.0 | 0.0 | | |
| PHF | 0.583 | 0.775 | 0.000 | 0.864 | 0.833 | 0.000 | 0.000 | 0.833 | 0.250 | 0.563 | 0.000 | 0.625 | 0.895 |
| Entering Leg | 7 | 31 | 0 | 38 | 20 | 0 | 0 | 20 | 1 | 9 | 0 | 10 | 68 |
| Exiting Leg | | | | 29 | | | | 32 | | | | 7 | 68 |
| Total | | | | 67 | | | | 52 | | | | 17 | 136 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class:

Buses

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total | |
|--------------------|----------------|-------|--------|-------|----------------|------|--------|-------|--------------|------|--------|-------|-------|----|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | |
| 4:15 PM | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | |
| Total | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 7 | |
| 5:00 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| 5:30 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 5:45 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | |
| Total | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 | |
| Grand Total | 0 | 9 | 0 | 9 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 16 | |
| Approach % | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 56.3 | 0.0 | 56.3 | 43.8 | 0.0 | 0.0 | 43.8 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | | | | 7 | | | | 9 | | | | | 0 | 16 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|-------------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 5:00 PM | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| Total Volume | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| % Approach Total | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.417 | 0.000 | 0.417 | 0.500 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 |
| Entering Leg | 0 | 5 | 0 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 9 |
| Exiting Leg | | | | 4 | | | | 5 | | | | | 9 |
| Total | | | | 9 | | | | 9 | | | | | 18 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Single-Unit Trucks

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|--------------|------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Russell Street | | | | Russell Street | | | | Green Street | | | | Total |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|
| | from North | | | | from South | | | | from West | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: **196718 I**
 Location: **N: Russell Street S: Russell Street**
 Location: **W: Green Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Russell Street | | | | Russell Street | | | | Green Street | | | | Total | |
|-------------------|----------------|------|--------|-------|----------------|------|--------|-------|--------------|------|--------|-------|-------|---|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Russell Street | | | | Russell Street | | | | Green Street | | | | Total | |
|------------------|----------------|-------|--------|-------|----------------|-------|--------|-------|--------------|-------|--------|-------|-------|-------|
| | from North | | | | from South | | | | from West | | | | | |
| | Right | Thru | U-Turn | Total | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 | |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 | |

PDI File #: 196718 I
 Location: N: Russell Street S: Russell Street
 Location: W: Green Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

| | Russell Street | | | | | | Russell Street | | | | | | Green Street | | | | | | Total |
|-------------------|----------------|------|--------|-------|-------|-------|----------------|------|--------|-------|-------|-------|--------------|------|--------|-------|-------|-------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | | | 0 | | | | | | 0 | | | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Russell Street | | | | | | Russell Street | | | | | | Green Street | | | | | | Total |
|------------------|----------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|--------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | | | 0 | | | | | | 0 | | | | | | 0 |
| Total | 0 | | | | | | 0 | | | | | | 0 | | | | | | 0 |

PDI File #: 196718 I
 Location: N: Russell Street S: Russell Street
 Location: W: Green Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



Pedestrians

| | Russell Street | | | | | | Russell Street | | | | | | Green Street | | | | | | Total |
|-------------------|----------------|------|--------|-------|-------|-------|----------------|------|--------|--------|--------|--------|--------------|------|--------|--------|-------|--------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 5 |
| 4:45 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 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 6 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 |
| Total | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 2 | 3 | 9 |
| Grand Total | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 1 | 3 | 4 | 15 |
| Approach % | 0 | 0 | 0 | 50 | 50 | | 0 | 0 | 0 | 20 | 80 | | 0 | 0 | 0 | 25 | 75 | | |
| Total % | 0 | 0 | 0 | 20 | 20 | 40 | 0 | 0 | 0 | 6.6667 | 26.667 | 33.333 | 0 | 0 | 0 | 6.6667 | 20 | 26.667 | |
| Exiting Leg Total | 6 | | | | | | 5 | | | | | | 4 | | | | | | 15 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:15 PM | Russell Street | | | | | | Russell Street | | | | | | Green Street | | | | | | Total |
|------------------|----------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|--------------|-------|--------|-------|-------|-------|-------|
| | from North | | | | | | from South | | | | | | from West | | | | | | |
| | Right | Thru | U-Turn | CW-EB | CW-WB | Total | Thru | Left | U-Turn | CW-WB | CW-EB | Total | Right | Left | U-Turn | CW-NB | CW-SB | Total | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 5 |
| Total Volume | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 2 | 2 | 11 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 50.0 | 50.0 | | 0.0 | 0.0 | 0.0 | 20.0 | 80.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.500 | 0.500 | 0.500 | 0.000 | 0.000 | 0.000 | 0.250 | 0.500 | 0.625 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.500 | 0.550 |
| Entering Leg | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 2 | 2 | 11 |
| Exiting Leg | 4 | | | | | | 5 | | | | | | 2 | | | | | | 11 |
| Total | 8 | | | | | | 10 | | | | | | 4 | | | | | | 22 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|-------------------|---------------|----------|----------|------------|----------------|------------|----------|------------|---------------|------------|----------|------------|-------------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 72 | 0 | 0 | 72 | 2 | 62 | 0 | 64 | 48 | 39 | 0 | 87 | 223 |
| 4:15 PM | 78 | 0 | 0 | 78 | 0 | 57 | 0 | 57 | 54 | 53 | 0 | 107 | 242 |
| 4:30 PM | 88 | 0 | 0 | 88 | 4 | 54 | 0 | 58 | 62 | 60 | 1 | 123 | 269 |
| 4:45 PM | 86 | 0 | 0 | 86 | 2 | 53 | 0 | 55 | 55 | 71 | 0 | 126 | 267 |
| Total | 324 | 0 | 0 | 324 | 8 | 226 | 0 | 234 | 219 | 223 | 1 | 443 | 1001 |
| 5:00 PM | 132 | 0 | 0 | 132 | 3 | 78 | 0 | 81 | 81 | 63 | 0 | 144 | 357 |
| 5:15 PM | 84 | 0 | 0 | 84 | 0 | 64 | 0 | 64 | 69 | 59 | 0 | 128 | 276 |
| 5:30 PM | 78 | 0 | 0 | 78 | 3 | 54 | 0 | 57 | 95 | 84 | 0 | 179 | 314 |
| 5:45 PM | 81 | 0 | 0 | 81 | 0 | 60 | 0 | 60 | 84 | 69 | 0 | 153 | 294 |
| Total | 375 | 0 | 0 | 375 | 6 | 256 | 0 | 262 | 329 | 275 | 0 | 604 | 1241 |
| Grand Total | 699 | 0 | 0 | 699 | 14 | 482 | 0 | 496 | 548 | 498 | 1 | 1047 | 2242 |
| Approach % | 100.0 | 0.0 | 0.0 | | 2.8 | 97.2 | 0.0 | | 52.3 | 47.6 | 0.1 | | |
| Total % | 31.2 | 0.0 | 0.0 | 31.2 | 0.6 | 21.5 | 0.0 | 22.1 | 24.4 | 22.2 | 0.0 | 46.7 | |
| Exiting Leg Total | | | | 512 | | | | 548 | | | | 1182 | 2242 |
| Cars | 697 | 0 | 0 | 697 | 14 | 475 | 0 | 489 | 539 | 495 | 1 | 1035 | 2221 |
| % Cars | 99.7 | 0.0 | 0.0 | 99.7 | 100.0 | 98.5 | 0.0 | 98.6 | 98.4 | 99.4 | 100.0 | 98.9 | 99.1 |
| Exiting Leg Total | | | | 509 | | | | 539 | | | | 1173 | 2221 |
| Heavy Vehicles | 2 | 0 | 0 | 2 | 0 | 7 | 0 | 7 | 9 | 3 | 0 | 12 | 21 |
| % Heavy Vehicles | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 1.5 | 0.0 | 1.4 | 1.6 | 0.6 | 0.0 | 1.1 | 0.9 |
| Exiting Leg Total | | | | 3 | | | | 9 | | | | 9 | 21 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|--------------------|---------------|-------|--------|-------|----------------|-------|--------|-------|---------------|-------|--------|-------|-------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 132 | 0 | 0 | 132 | 3 | 78 | 0 | 81 | 81 | 63 | 0 | 144 | 357 |
| 5:15 PM | 84 | 0 | 0 | 84 | 0 | 64 | 0 | 64 | 69 | 59 | 0 | 128 | 276 |
| 5:30 PM | 78 | 0 | 0 | 78 | 3 | 54 | 0 | 57 | 95 | 84 | 0 | 179 | 314 |
| 5:45 PM | 81 | 0 | 0 | 81 | 0 | 60 | 0 | 60 | 84 | 69 | 0 | 153 | 294 |
| Total Volume | 375 | 0 | 0 | 375 | 6 | 256 | 0 | 262 | 329 | 275 | 0 | 604 | 1241 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 2.3 | 97.7 | 0.0 | | 54.5 | 45.5 | 0.0 | | |
| PHF | 0.710 | 0.000 | 0.000 | 0.710 | 0.500 | 0.821 | 0.000 | 0.809 | 0.866 | 0.818 | 0.000 | 0.844 | 0.869 |
| Cars | 375 | 0 | 0 | 375 | 6 | 252 | 0 | 258 | 324 | 273 | 0 | 597 | 1230 |
| Cars % | 100.0 | 0.0 | 0.0 | 100.0 | 100.0 | 98.4 | 0.0 | 98.5 | 98.5 | 99.3 | 0.0 | 98.8 | 99.1 |
| Heavy Vehicles | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 2 | 0 | 7 | 11 |
| Heavy Vehicles % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 | 1.5 | 1.5 | 0.7 | 0.0 | 1.2 | 0.9 |
| Cars Enter Leg | 375 | 0 | 0 | 375 | 6 | 252 | 0 | 258 | 324 | 273 | 0 | 597 | 1230 |
| Heavy Enter Leg | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 2 | 0 | 7 | 11 |
| Total Entering Leg | 375 | 0 | 0 | 375 | 6 | 256 | 0 | 262 | 329 | 275 | 0 | 604 | 1241 |
| Cars Exiting Leg | | | | 279 | | | | 324 | | | | 627 | 1230 |
| Heavy Exiting Leg | | | | 2 | | | | 5 | | | | 4 | 11 |
| Total Exiting Leg | | | | 281 | | | | 329 | | | | 631 | 1241 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|-------------------|---------------|------|--------|-------|----------------|------|--------|-------|---------------|------|--------|-------|-------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 72 | 0 | 0 | 72 | 2 | 61 | 0 | 63 | 47 | 39 | 0 | 86 | 221 |
| 4:15 PM | 76 | 0 | 0 | 76 | 0 | 56 | 0 | 56 | 52 | 53 | 0 | 105 | 237 |
| 4:30 PM | 88 | 0 | 0 | 88 | 4 | 54 | 0 | 58 | 62 | 59 | 1 | 122 | 268 |
| 4:45 PM | 86 | 0 | 0 | 86 | 2 | 52 | 0 | 54 | 54 | 71 | 0 | 125 | 265 |
| Total | 322 | 0 | 0 | 322 | 8 | 223 | 0 | 231 | 215 | 222 | 1 | 438 | 991 |
| 5:00 PM | 132 | 0 | 0 | 132 | 3 | 77 | 0 | 80 | 80 | 63 | 0 | 143 | 355 |
| 5:15 PM | 84 | 0 | 0 | 84 | 0 | 63 | 0 | 63 | 69 | 58 | 0 | 127 | 274 |
| 5:30 PM | 78 | 0 | 0 | 78 | 3 | 54 | 0 | 57 | 92 | 84 | 0 | 176 | 311 |
| 5:45 PM | 81 | 0 | 0 | 81 | 0 | 58 | 0 | 58 | 83 | 68 | 0 | 151 | 290 |
| Total | 375 | 0 | 0 | 375 | 6 | 252 | 0 | 258 | 324 | 273 | 0 | 597 | 1230 |
| Grand Total | 697 | 0 | 0 | 697 | 14 | 475 | 0 | 489 | 539 | 495 | 1 | 1035 | 2221 |
| Approach % | 100.0 | 0.0 | 0.0 | | 2.9 | 97.1 | 0.0 | | 52.1 | 47.8 | 0.1 | | |
| Total % | 31.4 | 0.0 | 0.0 | 31.4 | 0.6 | 21.4 | 0.0 | 22.0 | 24.3 | 22.3 | 0.0 | 46.6 | |
| Exiting Leg Total | | | | 509 | | | | 539 | | | | 1173 | 2221 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|------------------|---------------|-------|--------|-------|----------------|-------|--------|-------|---------------|-------|--------|-------|-------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 132 | 0 | 0 | 132 | 3 | 77 | 0 | 80 | 80 | 63 | 0 | 143 | 355 |
| 5:15 PM | 84 | 0 | 0 | 84 | 0 | 63 | 0 | 63 | 69 | 58 | 0 | 127 | 274 |
| 5:30 PM | 78 | 0 | 0 | 78 | 3 | 54 | 0 | 57 | 92 | 84 | 0 | 176 | 311 |
| 5:45 PM | 81 | 0 | 0 | 81 | 0 | 58 | 0 | 58 | 83 | 68 | 0 | 151 | 290 |
| Total Volume | 375 | 0 | 0 | 375 | 6 | 252 | 0 | 258 | 324 | 273 | 0 | 597 | 1230 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 2.3 | 97.7 | 0.0 | | 54.3 | 45.7 | 0.0 | | |
| PHF | 0.710 | 0.000 | 0.000 | 0.710 | 0.500 | 0.818 | 0.000 | 0.806 | 0.880 | 0.813 | 0.000 | 0.848 | 0.866 |
| Entering Leg | 375 | 0 | 0 | 375 | 6 | 252 | 0 | 258 | 324 | 273 | 0 | 597 | 1230 |
| Exiting Leg | | | | 279 | | | | 324 | | | | 627 | 1230 |
| Total | | | | 654 | | | | 582 | | | | 1224 | 2460 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|--------------------|---------------|----------|----------|----------|----------------|----------|----------|----------|---------------|----------|----------|----------|-----------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| 4:15 PM | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 5 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| Total | 2 | 0 | 0 | 2 | 0 | 3 | 0 | 3 | 4 | 1 | 0 | 5 | 10 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 2 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 1 | 0 | 2 | 4 |
| Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 2 | 0 | 7 | 11 |
| Grand Total | 2 | 0 | 0 | 2 | 0 | 7 | 0 | 7 | 9 | 3 | 0 | 12 | 21 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | 75.0 | 25.0 | 0.0 | | |
| Total % | 9.5 | 0.0 | 0.0 | 9.5 | 0.0 | 33.3 | 0.0 | 33.3 | 42.9 | 14.3 | 0.0 | 57.1 | |
| Exiting Leg Total | 3 | | | | 9 | | | | 9 | | | | 21 |
| Buses | 1 | 0 | 0 | 1 | 0 | 7 | 0 | 7 | 9 | 0 | 0 | 9 | 17 |
| % Buses | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 75.0 | 81.0 |
| Exiting Leg Total | 0 | | | | 9 | | | | 8 | | | | 17 |
| Single-Unit Trucks | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 |
| % Single-Unit | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 25.0 | 19.0 |
| Exiting Leg Total | 3 | | | | 0 | | | | 1 | | | | 4 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Articulated | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|--------------------|---------------|-------|--------|-------|----------------|-------|--------|-------|---------------|-------|--------|-------|-------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 2 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 1 | 0 | 2 | 4 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 2 | 0 | 7 | 11 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | 71.4 | 28.6 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.500 | 0.417 | 0.500 | 0.000 | 0.583 | 0.688 |
| Buses | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 0 | 5 | 9 |
| Buses % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 71.4 | 81.8 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Single-Unit % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 28.6 | 18.2 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Articulated % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Buses | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 0 | 5 | 9 |
| Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Entering Leg | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 2 | 0 | 7 | 11 |
| Buses | 0 | | | | 5 | | | | 4 | | | | 9 |
| Single-Unit Trucks | 2 | | | | 0 | | | | 0 | | | | 2 |
| Articulated Trucks | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total Exiting Leg | 2 | | | | 5 | | | | 4 | | | | 11 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Cars

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|-------------------|---------------|----------|----------|------------|----------------|------------|----------|------------|---------------|------------|----------|------------|-------------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 67 | 0 | 0 | 67 | 1 | 53 | 0 | 54 | 42 | 37 | 0 | 79 | 200 |
| 4:15 PM | 67 | 0 | 0 | 67 | 0 | 47 | 0 | 47 | 46 | 49 | 0 | 95 | 209 |
| 4:30 PM | 82 | 0 | 0 | 82 | 4 | 48 | 0 | 52 | 59 | 53 | 1 | 113 | 247 |
| 4:45 PM | 75 | 0 | 0 | 75 | 2 | 43 | 0 | 45 | 48 | 64 | 0 | 112 | 232 |
| Total | 291 | 0 | 0 | 291 | 7 | 191 | 0 | 198 | 195 | 203 | 1 | 399 | 888 |
| 5:00 PM | 117 | 0 | 0 | 117 | 2 | 69 | 0 | 71 | 69 | 54 | 0 | 123 | 311 |
| 5:15 PM | 82 | 0 | 0 | 82 | 0 | 56 | 0 | 56 | 58 | 54 | 0 | 112 | 250 |
| 5:30 PM | 78 | 0 | 0 | 78 | 3 | 49 | 0 | 52 | 84 | 82 | 0 | 166 | 296 |
| 5:45 PM | 80 | 0 | 0 | 80 | 0 | 50 | 0 | 50 | 75 | 68 | 0 | 143 | 273 |
| Total | 357 | 0 | 0 | 357 | 5 | 224 | 0 | 229 | 286 | 258 | 0 | 544 | 1130 |
| Grand Total | 648 | 0 | 0 | 648 | 12 | 415 | 0 | 427 | 481 | 461 | 1 | 943 | 2018 |
| Approach % | 100.0 | 0.0 | 0.0 | | 2.8 | 97.2 | 0.0 | | 51.0 | 48.9 | 0.1 | | |
| Total % | 32.1 | 0.0 | 0.0 | 32.1 | 0.6 | 20.6 | 0.0 | 21.2 | 23.8 | 22.8 | 0.0 | 46.7 | |
| Exiting Leg Total | | | | 473 | | | | 481 | | | | 1064 | 2018 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|------------------|---------------|-------|--------|------------|----------------|-------|--------|------------|---------------|-------|--------|-------------|-------------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 117 | 0 | 0 | 117 | 2 | 69 | 0 | 71 | 69 | 54 | 0 | 123 | 311 |
| 5:15 PM | 82 | 0 | 0 | 82 | 0 | 56 | 0 | 56 | 58 | 54 | 0 | 112 | 250 |
| 5:30 PM | 78 | 0 | 0 | 78 | 3 | 49 | 0 | 52 | 84 | 82 | 0 | 166 | 296 |
| 5:45 PM | 80 | 0 | 0 | 80 | 0 | 50 | 0 | 50 | 75 | 68 | 0 | 143 | 273 |
| Total Volume | 357 | 0 | 0 | 357 | 5 | 224 | 0 | 229 | 286 | 258 | 0 | 544 | 1130 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 2.2 | 97.8 | 0.0 | | 52.6 | 47.4 | 0.0 | | |
| PHF | 0.763 | 0.000 | 0.000 | 0.763 | 0.417 | 0.812 | 0.000 | 0.806 | 0.851 | 0.787 | 0.000 | 0.819 | 0.908 |
| Entering Leg | 357 | 0 | 0 | 357 | 5 | 224 | 0 | 229 | 286 | 258 | 0 | 544 | 1130 |
| Exiting Leg | | | | 263 | | | | 286 | | | | 581 | 1130 |
| Total | | | | 620 | | | | 515 | | | | 1125 | 2260 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class: **Light Goods Vehicle**

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|--------------------|---------------|----------|----------|-----------|----------------|-----------|----------|-----------|---------------|-----------|----------|-----------|------------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 5 | 0 | 0 | 5 | 1 | 8 | 0 | 9 | 5 | 2 | 0 | 7 | 21 |
| 4:15 PM | 9 | 0 | 0 | 9 | 0 | 9 | 0 | 9 | 6 | 4 | 0 | 10 | 28 |
| 4:30 PM | 6 | 0 | 0 | 6 | 0 | 6 | 0 | 6 | 3 | 6 | 0 | 9 | 21 |
| 4:45 PM | 11 | 0 | 0 | 11 | 0 | 9 | 0 | 9 | 6 | 7 | 0 | 13 | 33 |
| Total | 31 | 0 | 0 | 31 | 1 | 32 | 0 | 33 | 20 | 19 | 0 | 39 | 103 |
| 5:00 PM | 15 | 0 | 0 | 15 | 1 | 8 | 0 | 9 | 11 | 9 | 0 | 20 | 44 |
| 5:15 PM | 2 | 0 | 0 | 2 | 0 | 7 | 0 | 7 | 11 | 4 | 0 | 15 | 24 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 8 | 2 | 0 | 10 | 15 |
| 5:45 PM | 1 | 0 | 0 | 1 | 0 | 8 | 0 | 8 | 8 | 0 | 0 | 8 | 17 |
| Total | 18 | 0 | 0 | 18 | 1 | 28 | 0 | 29 | 38 | 15 | 0 | 53 | 100 |
| Grand Total | 49 | 0 | 0 | 49 | 2 | 60 | 0 | 62 | 58 | 34 | 0 | 92 | 203 |
| Approach % | 100.0 | 0.0 | 0.0 | | 3.2 | 96.8 | 0.0 | | 63.0 | 37.0 | 0.0 | | |
| Total % | 24.1 | 0.0 | 0.0 | 24.1 | 1.0 | 29.6 | 0.0 | 30.5 | 28.6 | 16.7 | 0.0 | 45.3 | |
| Exiting Leg Total | | | | 36 | | | | 58 | | | | 109 | 203 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|-------------------------|---------------|------------|------------|-----------|----------------|-------------|------------|-----------|---------------|-------------|------------|------------|------------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:15 PM | 9 | 0 | 0 | 9 | 0 | 9 | 0 | 9 | 6 | 4 | 0 | 10 | 28 |
| 4:30 PM | 6 | 0 | 0 | 6 | 0 | 6 | 0 | 6 | 3 | 6 | 0 | 9 | 21 |
| 4:45 PM | 11 | 0 | 0 | 11 | 0 | 9 | 0 | 9 | 6 | 7 | 0 | 13 | 33 |
| 5:00 PM | 15 | 0 | 0 | 15 | 1 | 8 | 0 | 9 | 11 | 9 | 0 | 20 | 44 |
| Total Volume | 41 | 0 | 0 | 41 | 1 | 32 | 0 | 33 | 26 | 26 | 0 | 52 | 126 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 3.0 | 97.0 | 0.0 | | 50.0 | 50.0 | 0.0 | | |
| PHF | 0.683 | 0.000 | 0.000 | 0.683 | 0.250 | 0.889 | 0.000 | 0.917 | 0.591 | 0.722 | 0.000 | 0.650 | 0.716 |
| Entering Leg | 41 | 0 | 0 | 41 | 1 | 32 | 0 | 33 | 26 | 26 | 0 | 52 | 126 |
| Exiting Leg | | | | 27 | | | | 26 | | | | 73 | 126 |
| Total | | | | 68 | | | | 59 | | | | 125 | 252 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Buses

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|--------------------|---------------|----------|----------|----------|----------------|----------|----------|----------|---------------|----------|----------|----------|-----------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| Total | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 4 | 0 | 0 | 4 | 8 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 3 |
| Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 0 | 5 | 9 |
| Grand Total | 1 | 0 | 0 | 1 | 0 | 7 | 0 | 7 | 9 | 0 | 0 | 9 | 17 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | |
| Total % | 5.9 | 0.0 | 0.0 | 5.9 | 0.0 | 41.2 | 0.0 | 41.2 | 52.9 | 0.0 | 0.0 | 52.9 | |
| Exiting Leg Total | | | | 0 | | | | 9 | | | | 8 | 17 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 5:00 PM | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|---------------------|---------------|----------|----------|----------|----------------|----------|----------|----------|---------------|----------|----------|----------|-----------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 | 3 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 0 | 5 | 9 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | 100.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.500 | 0.417 | 0.000 | 0.000 | 0.417 | 0.750 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 0 | 5 | 9 |
| Exiting Leg | | | | 0 | | | | 5 | | | | 4 | 9 |
| Total | | | | 0 | | | | 9 | | | | 9 | 18 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Single-Unit Trucks

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|--------------------|---------------|----------|----------|----------|----------------|----------|----------|----------|---------------|----------|----------|----------|----------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Grand Total | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 |
| Approach % | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| Total % | 25.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75.0 | 0.0 | 75.0 | |
| Exiting Leg Total | | | | 3 | | | | 0 | | | | 1 | 4 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|-------------------------|---------------|------------|------------|----------|----------------|------------|------------|----------|---------------|--------------|------------|----------|----------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| % Approach Total | 100.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 | | |
| PHF | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.500 |
| Entering Leg | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Exiting Leg | | | | 1 | | | | 0 | | | | 1 | 2 |
| Total | | | | 2 | | | | 0 | | | | 2 | 4 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Articulated Trucks

| | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|-------------------|---------------|------|--------|-------|----------------|------|--------|-------|---------------|------|--------|-------|-------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 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 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approach % | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | 0 | | | | 0 | | | | 0 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Market Street | | | | Russell Street | | | | Market Street | | | | Total |
|------------------|---------------|-------|--------|-------|----------------|-------|--------|-------|---------------|-------|--------|-------|-------|
| | from East | | | | from South | | | | from West | | | | |
| | Thru | Left | U-Turn | Total | Right | Left | U-Turn | Total | Right | Thru | U-Turn | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 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 |
| % Approach Total | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Entering Leg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exiting Leg | 0 | | | | 0 | | | | 0 | | | | 0 |
| Total | 0 | | | | 0 | | | | 0 | | | | 0 |

PDI File #: 196718 J
 Location: S: Russell Street
 Location: E: Market Street W: Market Street
 City, State: Portsmouth, NH
 Client: Tighe & Bond/ M. Santos
 Site Code: 200076019
 Count Date: Thursday, January 31, 2019
 Start Time: 4:00 PM
 End Time: 6:00 PM



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Bicycles (on Roadway and Crosswalks)

| | Market Street | | | | | | Russell Street | | | | | | Market Street | | | | | | Total |
|--------------------|---------------|----------|----------|----------|----------|----------|----------------|----------|----------|----------|----------|----------|---------------|----------|----------|----------|----------|----------|----------|
| | from East | | | | | | from South | | | | | | from West | | | | | | |
| | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Approach % | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total % | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Exiting Leg Total | 0 | | | | | | 0 | | | | | | 0 | | | | | | 1 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:00 PM | Market Street | | | | | | Russell Street | | | | | | Market Street | | | | | | Total |
|-------------------------|---------------|------------|------------|------------|------------|----------|----------------|------------|------------|------------|------------|----------|---------------|------------|------------|------------|------------|----------|----------|
| | from East | | | | | | from South | | | | | | from West | | | | | | |
| | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Volume | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| % Approach Total | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 |
| Entering Leg | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Exiting Leg | 0 | | | | | | 0 | | | | | | 0 | | | | | | 1 |
| Total | 1 | | | | | | 0 | | | | | | 0 | | | | | | 2 |

PDI File #: **196718 J**
 Location: **S: Russell Street**
 Location: **E: Market Street W: Market Street**
 City, State: **Portsmouth, NH**
 Client: **Tighe & Bond/ M. Santos**
 Site Code: **200076019**
 Count Date: **Thursday, January 31, 2019**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

| | Market Street | | | | | | Russell Street | | | | | | Market Street | | | | | | Total |
|-------------------|---------------|------|--------|-------|--------|--------|----------------|------|--------|--------|-------|--------|---------------|------|--------|-------|-------|-------|-------|
| | from East | | | | | | from South | | | | | | from West | | | | | | |
| | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | U-Turn | CW-NB | CW-SB | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 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 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 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 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grand Total | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Approach % | 0 | 0 | 0 | 0 | 100 | | 0 | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | 0 | | |
| Total % | 0 | 0 | 0 | 0 | 66.667 | 66.667 | 0 | 0 | 0 | 33.333 | 0 | 33.333 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Exiting Leg Total | 2 | | | | | | 1 | | | | | | 0 | | | | | | 3 |

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

| 4:15 PM | Market Street | | | | | | Russell Street | | | | | | Market Street | | | | | | Total |
|------------------|---------------|-------|--------|-------|-------|-------|----------------|-------|--------|-------|-------|-------|---------------|-------|--------|-------|-------|-------|-------|
| | from East | | | | | | from South | | | | | | from West | | | | | | |
| | Thru | Left | U-Turn | CW-SB | CW-NB | Total | Right | Left | U-Turn | CW-WB | CW-EB | Total | Right | Thru | U-Turn | CW-NB | CW-SB | Total | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Volume | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| % Approach Total | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| PHF | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.500 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 |
| Entering Leg | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Exiting Leg | 2 | | | | | | 1 | | | | | | 0 | | | | | | 3 |
| Total | 4 | | | | | | 2 | | | | | | 0 | | | | | | 6 |

Seasonal Adjustment Factors

Group 4 Peak Adjustment Factor

| | | | |
|-------------|------|----------|----------|
| Year | 2014 | 2015 | 2016 |
| Adj. Factor | 1.25 | 1.179865 | 1.151118 |

Average 1.19

| <u>GROUP</u> | <u>COUNTER</u> | <u>TOWN</u> | <u>LOCATION</u> |
|--------------|----------------|-------------|--|
| 04 | 02051003 | BOW | NH 3A south of Robinson Rd |
| 04 | 02089001 | CHICHESTE | NH 28 (Suncook Valley Rd) north of Bear Hill Rd |
| 04 | 02091001 | CLAREMON | NH 12/103 east of Vermont SL |
| 04 | 62099056 | CONCORD | NH 106 (Sheep Davis Rd) at Loudon TL (north of Ashby Rd) |
| 04 | 72099278 | CONCORD | US 3 (Fisherville Rd) north of Sewalls Falls Rd |
| 04 | 02125001 | DOVER | Dover Point Rd south of Thornwood Ln |
| 04 | 02133021 | DURHAM | US 4 east of NH 108 |
| 04 | 82197076 | HAMPTON | US 1 (Lafayette Rd) south of Ramp to NH 101 |
| 04 | 02229022 | HUDSON | Circumferential Hwy east of Nashua TL |
| 04 | 02253025 | LEBANON | 0 |
| 04 | 02255001 | LEE | NH 125 (Calef Hwy) north of Pinkham Rd |
| 04 | 02287001 | MARLBOR | (NH 12 at Swanzey TL |
| 04 | 02297001 | MERRIMAC | US 3 (Daniel Webster Hwy) north of Hilton Dr |
| 04 | 02303001 | MILFORD | NH 101A at Amherst TL (west of Overlook Dr) |
| 04 | 02315051 | NASHUA | 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 HA | US 1 (Lafayette Rd) north of North Rd |
| 04 | 62387052 | RINDGE | US 202 at Jaffrey TL (north of County Rd) |
| 04 | 62389040 | ROCHESTE | NH 16 (Spaulding TPK) between Exit 12-13 |
| 04 | 02445001 | TEMPLE | NH 101 at Wilton TL (west of Old County Farm Rd) |
| 04 | 02489001 | WINDHAM | NH 28 at Derry TL (north of Northland Rd) |

Trip Generation

| Land Use | Size | Units | Daily | | | AM Peak Hour | | | PM Peak Hour | | |
|--------------------------------|-------|-------|------------|------------|-------------|--------------|-----------|------------|--------------|------------|------------|
| | | | Enter | Exit | Total | Enter | Exit | Total | Enter | Exit | Total |
| Office (710) | 70 | ksf | 376 | 376 | 752 | 106 | 15 | 121 | 25 | 117 | 142 |
| Retail (820) | 4 | ksf | 337 | 337 | 674 | 47 | 41 | 88 | 28 | 28 | 56 |
| TOTAL | | | 713 | 713 | 1426 | 153 | 56 | 209 | 53 | 145 | 198 |
| Office Trip Generation (710) | | | | | | | | | | | |
| Transit Trips | 1.50% | | 6 | 6 | 12 | 2 | 0 | 2 | 0 | 2 | 2 |
| Walk/Bike Trips | 8.0% | | <u>30</u> | <u>30</u> | 60 | <u>8</u> | <u>1</u> | 9 | <u>2</u> | <u>9</u> | 11 |
| Total New Vehicle Trips | | | 340 | 340 | 680 | 96 | 14 | 110 | 23 | 106 | 129 |
| Retail Trip Generation (710) | | | | | | | | | | | |
| Transit Trips | 1.50% | | 5 | 5 | 10 | 1 | 1 | 2 | 0 | 0 | 0 |
| Walk/Bike Trips | 8.0% | | <u>27</u> | <u>27</u> | 54 | <u>4</u> | <u>3</u> | 7 | <u>2</u> | <u>2</u> | 4 |
| Total New Vehicle Trips | | | 305 | 305 | 610 | 42 | 37 | 79 | 26 | 26 | 52 |
| Net New Trip Generation | | | 645 | 645 | 1290 | 138 | 51 | 189 | 49 | 132 | 181 |

ITE Trip Generation 10, Office, Weekday Daily

Query Filter

DATA SOURCE:

SEARCH BY LAND USE CODE:

LAND USE CATEGORY:

LAND USE :

INDEPENDENT VARIABLE (IV):

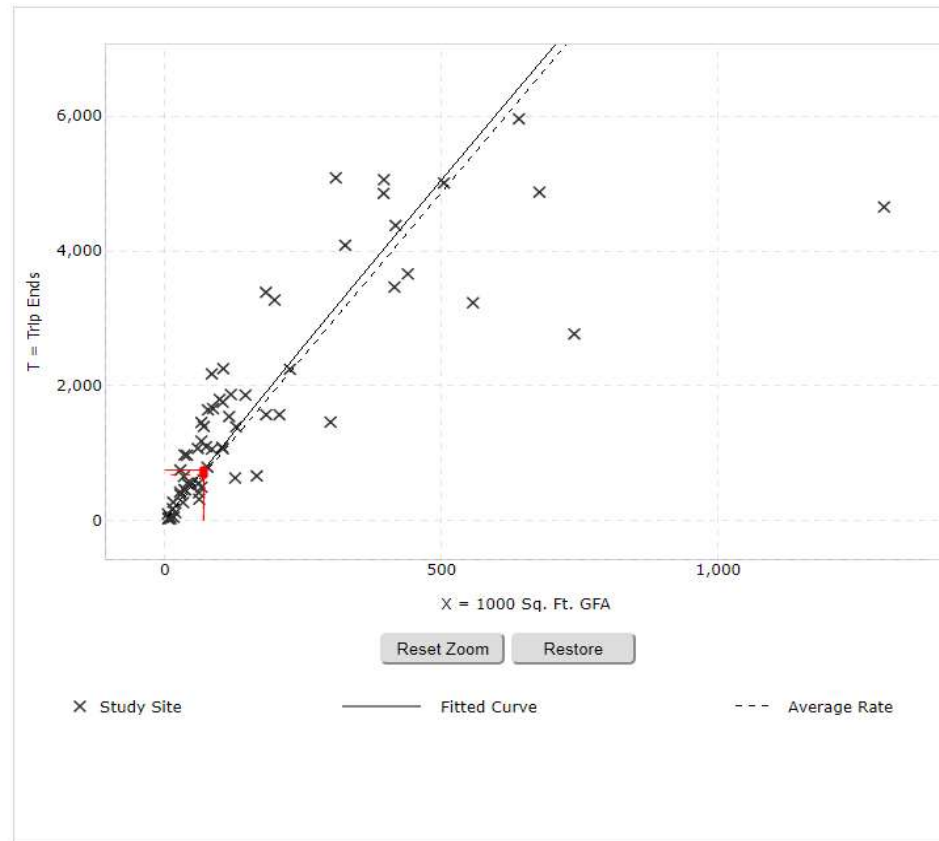
TIME PERIOD:

SETTING/LOCATION:

TRIP TYPE:

ENTER IV VALUE TO CALCULATE TRIPS:

Data Plot and Equation



DATA STATISTICS

| | |
|----------------------------------|--|
| Land Use: | General Office Building (710) Click for more details |
| Independent Variable: | 1000 Sq. Ft. GFA |
| Time Period: | Weekday |
| Setting/Location: | General Urban/Suburban |
| Trip Type: | Vehicle |
| Number of Studies: | 66 |
| Avg. 1000 Sq. Ft. GFA: | 171 |
| Average Rate: | 9.74 |
| Range of Rates: | 2.71 - 27.56 |
| Standard Deviation: | 5.15 |
| Fitted Curve Equation: | $\ln(T) = 0.97 \ln(X) + 2.50$ |
| R²: | 0.83 |
| Directional Distribution: | 50% entering, 50% exiting |
| Calculated Trip Ends: | Average Rate: 682 (Total), 341 (Entry), 341 (Exit) Fitted Curve: 751 (Total), 375 (Entry), 376 (Exit) |

ITE Trip Generation 10, Retail, Weekday Daily

Query Filter

DATA SOURCE:
 Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
 820

LAND USE CATEGORY:
 (800-899) Retail

LAND USE:
 820 - Shopping Center

INDEPENDENT VARIABLE (IV):
 1000 Sq. Ft. GLA

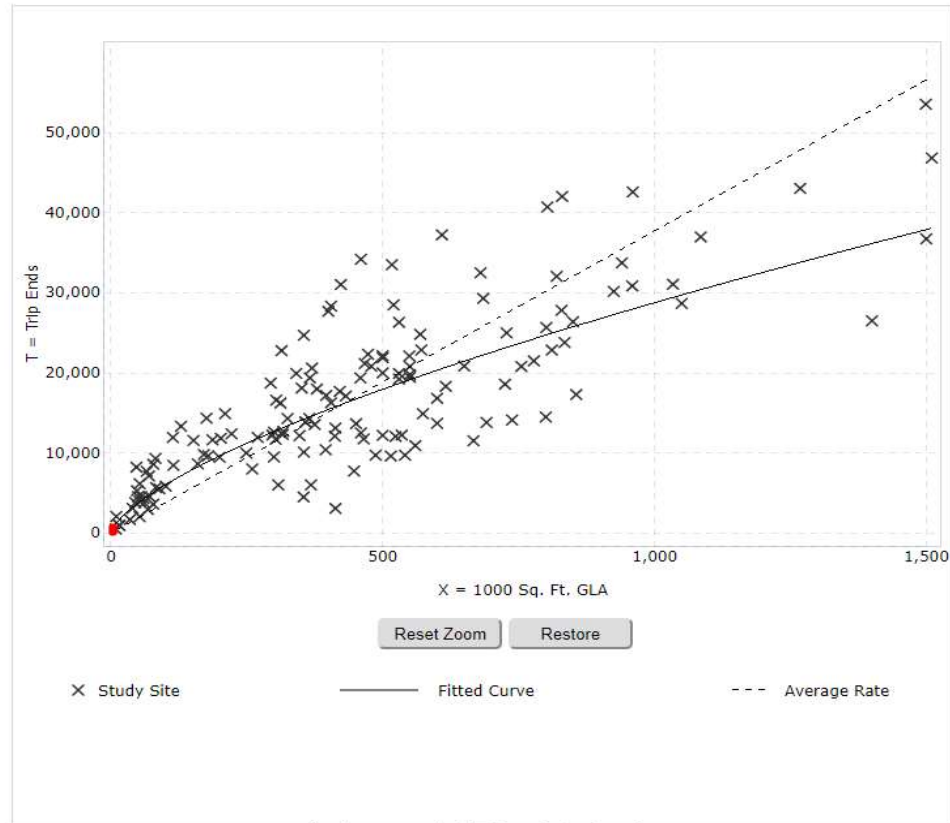
TIME PERIOD:
 Weekday

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 4 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: | Shopping Center (820) Click for more details |
| Independent Variable: | 1000 Sq. Ft. GLA |
| Time Period: | Weekday |
| Setting/Location: | General Urban/Suburban |
| Trip Type: | Vehicle |
| Number of Studies: | 147 |
| Avg. 1000 Sq. Ft. GLA: | 453 |
| Average Rate: | 37.75 |
| Range of Rates: | 7.42 - 207.98 |
| Standard Deviation: | 16.41 |
| Fitted Curve Equation: | $\ln(T) = 0.68 \ln(X) + 5.57$ |
| R ² : | 0.76 |
| Directional Distribution: | 50% entering, 50% exiting |
| Calculated Trip Ends: | Average Rate: 151 (Total), 75 (Entry), 76 (Exit) Fitted Curve: 674 (Total), 337 (Entry), 337 (Exit) |

ITE Trip Generation 10, Office, Weekday AM Peak Hour

Query Filter

DATA SOURCE:
 Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
 710

LAND USE CATEGORY:
 (700-799) Office

LAND USE:
 710 - General Office Building

INDEPENDENT VARIABLE (IV):
 1000 Sq. Ft. GFA

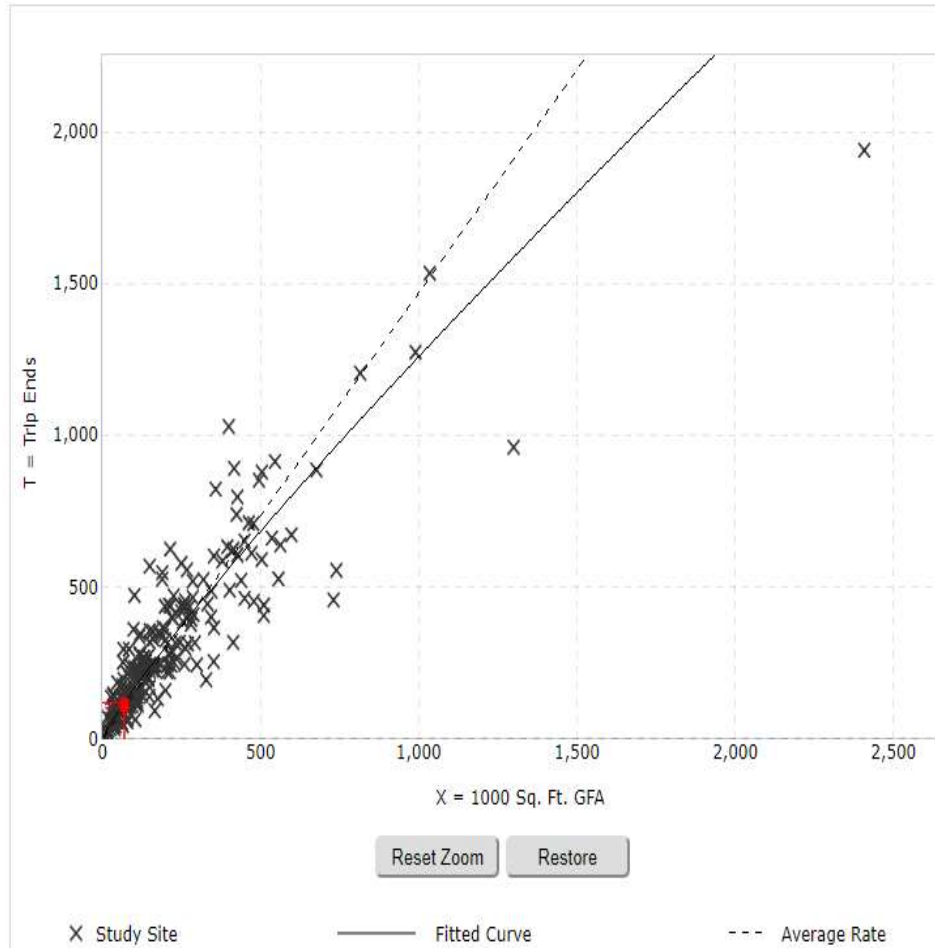
TIME PERIOD:
 Weekday, AM Peak Hour of Generator

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 70 Calculate

Data Plot and Equation



DATA STATISTICS

| | |
|----------------------------------|---|
| Land Use: | General Office Building (710) Click for more details |
| Independent Variable: | 1000 Sq. Ft. GFA |
| Time Period: | Weekday AM Peak Hour of Generator |
| Setting/Location: | General Urban/Suburban |
| Trip Type: | Vehicle |
| Number of Studies: | 228 |
| Avg. 1000 Sq. Ft. GFA: | 209 |
| Average Rate: | 1.47 |
| Range of Rates: | 0.57 - 4.93 |
| Standard Deviation: | 0.60 |
| Fitted Curve Equation: | $\ln(T) = 0.88 \ln(X) + 1.06$ |
| R²: | 0.84 |
| Directional Distribution: | 88% entering, 12% exiting |
| Calculated Trip Ends: | Average Rate: 103 (Total), 91 (Entry), 12 (Exit) Fitted Curve: 121 (Total), 106 (Entry), 15 (Exit) |

ITE Trip Generation 10, Retail, Weekday AM Peak Hour

Query **Filter**

DATA SOURCE:
 Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
 820

LAND USE CATEGORY:
 (800-899) Retail

LAND USE:
 820 - Shopping Center

INDEPENDENT VARIABLE (IV):
 1000 Sq. Ft. GLA

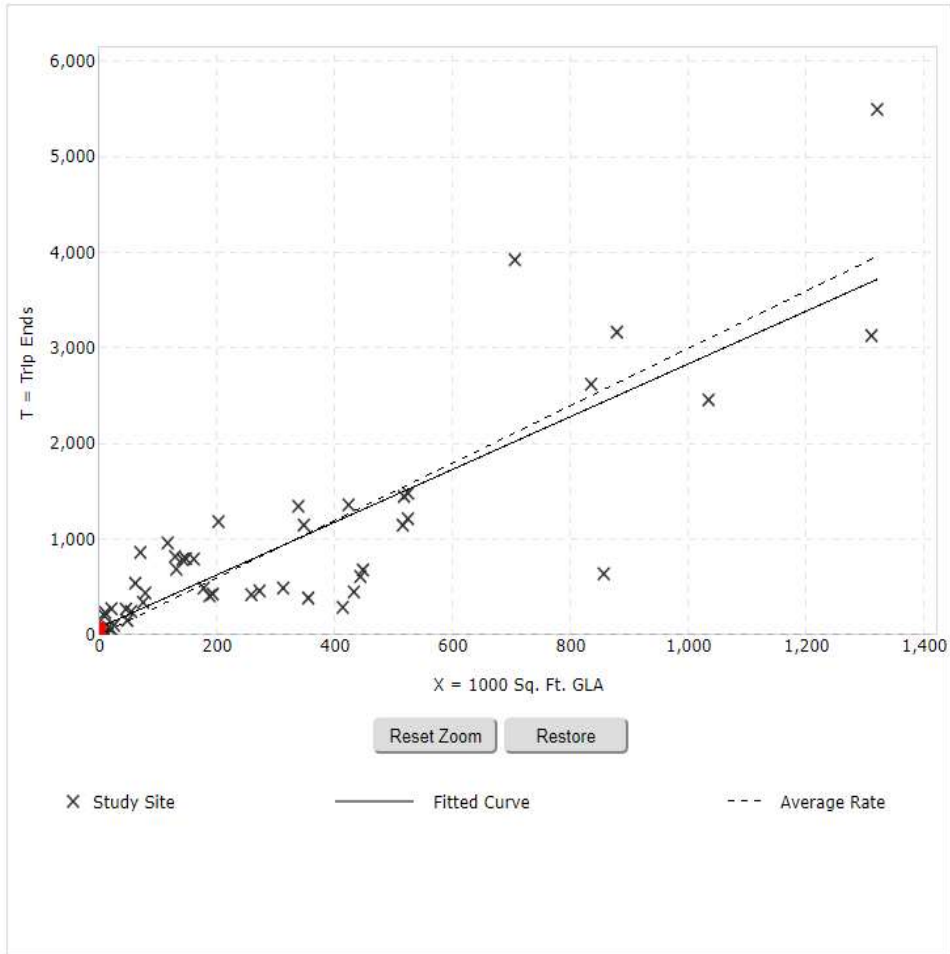
TIME PERIOD:
 Weekday, AM Peak Hour of Generator

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 4 **Calculate**

Data Plot and Equation



DATA STATISTICS

| | |
|----------------------------------|--|
| Land Use: | Shopping Center (820) Click for more details |
| Independent Variable: | 1000 Sq. Ft. GLA |
| Time Period: | Weekday AM Peak Hour of Generator |
| Setting/Location: | General Urban/Suburban |
| Trip Type: | Vehicle |
| Number of Studies: | 47 |
| Avg. 1000 Sq. Ft. GLA: | 323 |
| Average Rate: | 3.00 |
| Range of Rates: | 0.70 - 23.74 |
| Standard Deviation: | 1.85 |
| Fitted Curve Equation: | $T = 2.76(X) + 77.28$ |
| R²: | 0.71 |
| Directional Distribution: | 54% entering, 46% exiting |
| Calculated Trip Ends: | Average Rate: 12 (Total), 6 (Entry), 6 (Exit) Fitted Curve: 88 (Total), 47 (Entry), 41 (Exit) |

ITE Trip Generation 10, Office, Weekday PM Peak Hour

Query **Filter**

DATA SOURCE:
Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
710

LAND USE CATEGORY:
(700-799) Office

LAND USE:
710 - General Office Building

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

TIME PERIOD:
Weekday, PM Peak Hour of Generator

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
70 **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:
General Office Building (710) [Click for more details](#)

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
243

Avg. 1000 Sq. Ft. GFA:
205

Average Rate:
1.42

Range of Rates:
0.49 - 6.20

Standard Deviation:
0.61

Fitted Curve Equation:
 $T = 1.10(X) + 65.39$

R²:
0.82

Directional Distribution:
18% entering, 82% exiting

Calculated Trip Ends:
Average Rate: 99 (Total), 17 (Entry), 82 (Exit)
Fitted Curve: 142 (Total), 25 (Entry), 117 (Exit)

ITE Trip Generation 10, Retail, Weekday PM Peak Hour

Query Filter

DATA SOURCE:
 Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
 820

LAND USE CATEGORY:
 (800-899) Retail

LAND USE :
 820 - Shopping Center

INDEPENDENT VARIABLE (IV):
 1000 Sq. Ft. GLA

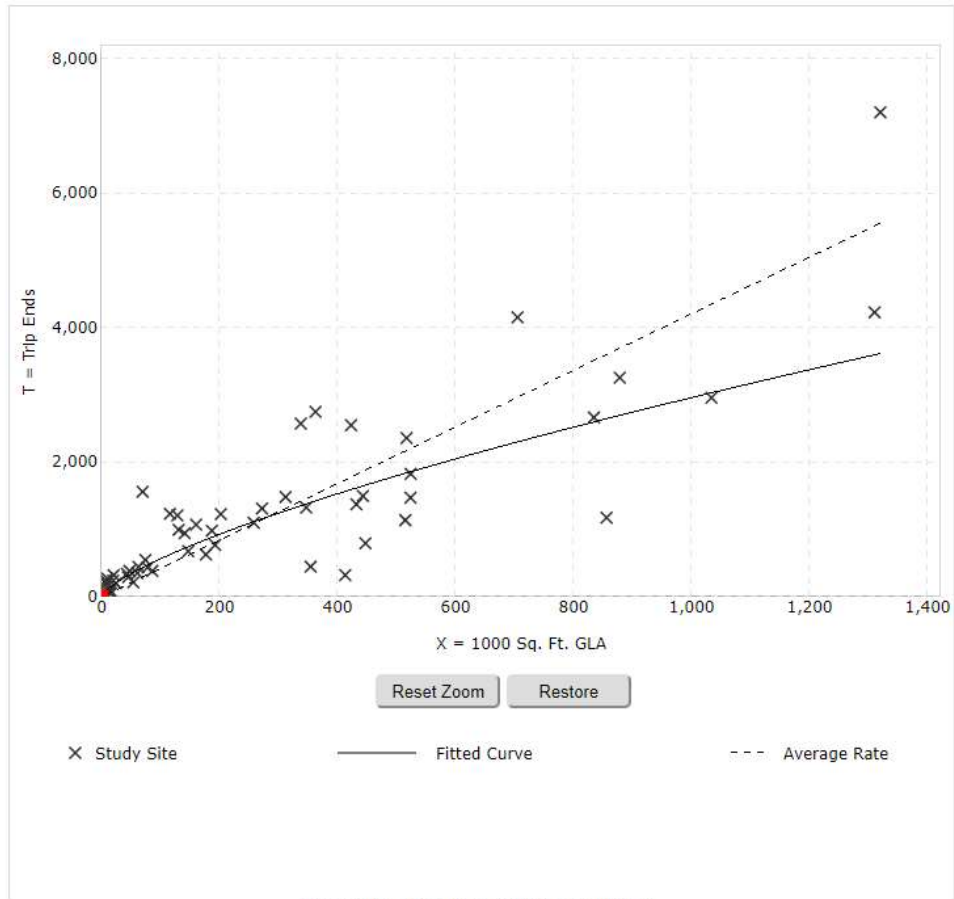
TIME PERIOD:
 Weekday, PM Peak Hour of Generator

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 4 Calculate

Data Plot and Equation



DATA STATISTICS

| | |
|----------------------------------|--|
| Land Use: | Shopping Center (820) Click for more details |
| Independent Variable: | 1000 Sq. Ft. GLA |
| Time Period: | Weekday PM Peak Hour of Generator |
| Setting/Location: | General Urban/Suburban |
| Trip Type: | Vehicle |
| Number of Studies: | 53 |
| Avg. 1000 Sq. Ft. GLA: | 298 |
| Average Rate: | 4.21 |
| Range of Rates: | 0.78 - 27.27 |
| Standard Deviation: | 2.47 |
| Fitted Curve Equation: | $\ln(T) = 0.72 \ln(X) + 3.02$ |
| R²: | 0.76 |
| Directional Distribution: | 50% entering, 50% exiting |
| Calculated Trip Ends: | Average Rate: 17 (Total), 8 (Entry), 9 (Exit) Fitted Curve: 56 (Total), 28 (Entry), 28 (Exit) |

Trip Distribution

Deer Street Associates Development Trip Distribution

The distribution of the retail-based site-generated traffic volumes for the Deer Street Development was based upon average traffic volumes at five (5) gateway locations into the Downtown Portsmouth roadway network: Maplewood Avenue, Market Street, Congress Street, Islington Street, and Middle Street. The resulting primary trip distribution is shown in Table 8.

Table 8 – Retail-Based Trip Distribution Summary

| Direction | Entering % | Exiting % |
|---------------------------------|-------------------|------------------|
| Maplewood Ave to/from Northwest | 30% | 30% |
| Market St to/from Northwest | 15% | 15% |
| Congress St to/from Northeast | 20% | 20% |
| Islington St to/from Southwest | 10% | 10% |
| <u>Middle St to/from South</u> | <u>25%</u> | <u>25%</u> |
| Total | 100% | 100% |

The distribution of the residential-based site-generated traffic volumes for the Deer Street Development was based upon Journey to Work data obtained from the United States Census Bureau, 2000. The resulting primary trip distribution is shown in Table 9.

Table 9 – Residential-Based Trip Distribution Summary

| Direction | Entering % | Exiting % |
|---------------------------------|-------------------|------------------|
| Maplewood Ave to/from Northwest | 55% | 55% |
| Market St to/from Northwest | 10% | 10% |
| Congress St to/from Northeast | 15% | 15% |
| Islington St to/from Southwest | 5% | 5% |
| <u>Middle St to/from South</u> | <u>15%</u> | <u>15%</u> |
| Total | 100% | 100% |

The distribution of the office-based site-generated traffic volumes for the Deer Street Development was based upon Journey to Home data obtained from the United States Census Bureau, 2000. The resulting primary trip distribution is shown in Table 10.























Table 10 – Office-Based Trip Distribution Summary

| Direction | Entering % | Exiting % |
|---------------------------------|-------------------|------------------|
| Maplewood Ave to/from Northwest | 60% | 60% |
| Market St to/from Northwest | 20% | 20% |
| Congress St to/from Northeast | 10% | 10% |
| Islington St to/from Southwest | 5% | 5% |
| <u>Middle St to/from South</u> | <u>5%</u> | <u>5%</u> |
| Total | 100% | 100% |

The resulting site-generated traffic-volume networks for the Deer Street Development during the weekday morning, weekday evening, and Saturday peak periods are presented in Figure 14 (A through C).

Capacity Analysis Worksheets

HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2020 No Build

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 230 | 136 | 69 | 287 | 138 | 88 | 48 | 453 | 218 | 70 | 382 | 149 |
| Future Volume (vph) | 230 | 136 | 69 | 287 | 138 | 88 | 48 | 453 | 218 | 70 | 382 | 149 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1652 | 1827 | | 1770 | 1871 | | 1711 | 1801 | 1636 | 1711 | 1725 | |
| Flt Permitted | 0.32 | 1.00 | | 0.30 | 1.00 | | 0.12 | 1.00 | 1.00 | 0.24 | 1.00 | |
| Satd. Flow (perm) | 564 | 1827 | | 554 | 1871 | | 210 | 1801 | 1636 | 432 | 1725 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 348 | 206 | 105 | 378 | 182 | 116 | 55 | 521 | 251 | 85 | 466 | 182 |
| RTOR Reduction (vph) | 0 | 21 | 0 | 0 | 27 | 0 | 0 | 0 | 155 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 348 | 290 | 0 | 378 | 271 | 0 | 55 | 521 | 96 | 85 | 634 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | 26.6 | 18.6 | | 26.6 | 18.6 | | 39.1 | 34.3 | 34.3 | 39.7 | 34.6 | |
| Effective Green, g (s) | 26.6 | 18.6 | | 26.6 | 18.6 | | 39.1 | 34.3 | 34.3 | 39.7 | 34.6 | |
| Actuated g/C Ratio | 0.30 | 0.21 | | 0.30 | 0.21 | | 0.43 | 0.38 | 0.38 | 0.44 | 0.38 | |
| 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 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 263 | 377 | | 271 | 386 | | 171 | 686 | 623 | 263 | 663 | |
| v/s Ratio Prot | 0.12 | 0.16 | | c0.12 | 0.14 | | 0.02 | 0.29 | | c0.02 | c0.37 | |
| v/s Ratio Perm | 0.27 | | | c0.29 | | | 0.12 | | 0.06 | 0.12 | | |
| v/c Ratio | 1.32 | 0.77 | | 1.39 | 0.70 | | 0.32 | 0.76 | 0.15 | 0.32 | 0.96 | |
| Uniform Delay, d1 | 30.1 | 33.7 | | 29.8 | 33.1 | | 18.6 | 24.3 | 18.3 | 16.6 | 27.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 169.5 | 9.1 | | 198.7 | 6.1 | | 1.1 | 7.7 | 0.5 | 0.7 | 25.7 | |
| Delay (s) | 199.6 | 42.7 | | 228.5 | 39.2 | | 19.7 | 32.0 | 18.8 | 17.3 | 52.6 | |
| Level of Service | F | D | | F | D | | B | C | B | B | D | |
| Approach Delay (s) | | 125.6 | | | 145.1 | | | 27.2 | | | 48.5 | |
| Approach LOS | | F | | | F | | | C | | | D | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 82.5 | | | | HCM 2000 Level of Service | | | F | | |
| HCM 2000 Volume to Capacity ratio | | | 1.09 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 90.0 | | | | Sum of lost time (s) | | | 24.0 | | |
| Intersection Capacity Utilization | | | 80.6% | | | | ICU Level of Service | | | D | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | 4 | 4 | | 4 | |
| Traffic Vol, veh/h | 4 | 53 | 39 | 1 | 2 | 4 |
| Future Vol, veh/h | 4 | 53 | 39 | 1 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 6 | 78 | 58 | 1 | 4 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 59 | 0 | - | 0 | 149 59 |
| Stage 1 | - | - | - | - | 59 - |
| Stage 2 | - | - | - | - | 90 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1545 | - | - | - | 843 1007 |
| Stage 1 | - | - | - | - | 964 - |
| Stage 2 | - | - | - | - | 934 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1545 | - | - | - | 840 1007 |
| Mov Cap-2 Maneuver | - | - | - | - | 840 - |
| Stage 1 | - | - | - | - | 960 - |
| Stage 2 | - | - | - | - | 934 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.5 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1545 | - | - | - | 944 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.013 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 18.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 346 | 52 | 65 | 50 | 44 | 525 |
| Future Vol, veh/h | 346 | 52 | 65 | 50 | 44 | 525 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 384 | 58 | 74 | 57 | 49 | 583 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 131 | 0 | - | 0 | 929 103 |
| Stage 1 | - | - | - | - | 103 - |
| Stage 2 | - | - | - | - | 826 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1454 | - | - | - | 297 952 |
| Stage 1 | - | - | - | - | 921 - |
| Stage 2 | - | - | - | - | 430 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1454 | - | - | - | 216 952 |
| Mov Cap-2 Maneuver | - | - | - | - | 216 - |
| Stage 1 | - | - | - | - | 670 - |
| Stage 2 | - | - | - | - | 430 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.3 | 0 | 29.4 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1454 | - | - | - | 753 |
| HCM Lane V/C Ratio | 0.264 | - | - | - | 0.84 |
| HCM Control Delay (s) | 8.4 | 0 | - | - | 29.4 |
| HCM Lane LOS | A | A | - | - | D |
| HCM 95th %tile Q(veh) | 1.1 | - | - | - | 9.6 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | W | T | T | T | T |
| Traffic Vol, veh/h | 4 | 9 | 679 | 3 | 2 | 617 |
| Future Vol, veh/h | 4 | 9 | 679 | 3 | 2 | 617 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 58 | 58 | 78 | 78 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 16 | 871 | 4 | 2 | 726 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1603 | 873 | 0 | 0 | 875 |
| Stage 1 | 873 | - | - | - | - |
| Stage 2 | 730 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 116 | 349 | - | - | 771 |
| Stage 1 | 409 | - | - | - | - |
| Stage 2 | 477 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 116 | 349 | - | - | 771 |
| Mov Cap-2 Maneuver | 116 | - | - | - | - |
| Stage 1 | 407 | - | - | - | - |
| Stage 2 | 477 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 23.6 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 216 | 771 |
| HCM Lane V/C Ratio | - | - | 0.104 | 0.003 |
| HCM Control Delay (s) | - | - | 23.6 | 9.7 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0 |

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 121.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 434 | 7 | 0 | 442 | 318 | 519 |
| Future Vol, veh/h | 434 | 7 | 0 | 442 | 318 | 519 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 536 | 9 | 0 | 623 | 379 | 618 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1002 | 379 | - | 0 | - |
| Stage 1 | 379 | - | - | - | - |
| Stage 2 | 623 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - |
| Pot Cap-1 Maneuver | ~ 269 | 668 | 0 | - | - |
| Stage 1 | 692 | - | 0 | - | - |
| Stage 2 | ~ 535 | - | 0 | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | ~ 269 | 668 | - | - | - |
| Mov Cap-2 Maneuver | ~ 269 | - | - | - | - |
| Stage 1 | 692 | - | - | - | - |
| Stage 2 | ~ 535 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 482.5 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 269 | 668 | - | - |
| HCM Lane V/C Ratio | - | 1.992 | 0.013 | - | - |
| HCM Control Delay (s) | - | 490.1 | 10.5 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 38.6 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 64 | 663 | 25 | 52 | 580 |
| Future Vol, veh/h | 29 | 64 | 663 | 25 | 52 | 580 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 36 | 80 | 829 | 31 | 58 | 652 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1613 | 845 | 0 | 0 | 860 |
| Stage 1 | 845 | - | - | - | - |
| Stage 2 | 768 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 115 | 363 | - | - | 781 |
| Stage 1 | 421 | - | - | - | - |
| Stage 2 | 458 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 102 | 363 | - | - | 781 |
| Mov Cap-2 Maneuver | 102 | - | - | - | - |
| Stage 1 | 372 | - | - | - | - |
| Stage 2 | 458 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 44.5 | 0 | 0.8 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 202 | 781 |
| HCM Lane V/C Ratio | - | - | 0.575 | 0.075 |
| HCM Control Delay (s) | - | - | 44.5 | 10 |
| HCM Lane LOS | - | - | E | A |
| HCM 95th %tile Q(veh) | - | - | 3.1 | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 12 | 668 | 33 | 14 | 607 |
| Future Vol, veh/h | 32 | 12 | 668 | 33 | 14 | 607 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 43 | 16 | 846 | 42 | 17 | 723 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1624 | 867 | 0 | 0 | 888 |
| Stage 1 | 867 | - | - | - | - |
| Stage 2 | 757 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 113 | 352 | - | - | 763 |
| Stage 1 | 411 | - | - | - | - |
| Stage 2 | 463 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 109 | 352 | - | - | 763 |
| Mov Cap-2 Maneuver | 109 | - | - | - | - |
| Stage 1 | 396 | - | - | - | - |
| Stage 2 | 463 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 51.3 | 0 | 0.2 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 134 | 763 |
| HCM Lane V/C Ratio | - | - | 0.438 | 0.022 |
| HCM Control Delay (s) | - | - | 51.3 | 9.8 |
| HCM Lane LOS | - | - | F | A |
| HCM 95th %tile Q(veh) | - | - | 1.9 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 12 | 2 | 4 | 72 | 62 | 16 |
| Future Vol, veh/h | 12 | 2 | 4 | 72 | 62 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 27 | 5 | 5 | 94 | 89 | 23 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 205 | 101 | 112 | 0 | 0 |
| Stage 1 | 101 | - | - | - | - |
| Stage 2 | 104 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 783 | 954 | 1478 | - | - |
| Stage 1 | 923 | - | - | - | - |
| Stage 2 | 920 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 780 | 954 | 1478 | - | - |
| Mov Cap-2 Maneuver | 780 | - | - | - | - |
| Stage 1 | 919 | - | - | - | - |
| Stage 2 | 920 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.7 | 0.4 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1478 | - | 801 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | 0.04 | - | - |
| HCM Control Delay (s) | 7.4 | 0 | 9.7 | - | - |
| HCM Lane LOS | A | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 42 | 7 | 7 | 409 | 491 | 45 |
| Future Vol, veh/h | 42 | 7 | 7 | 409 | 491 | 45 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 72 | 12 | 8 | 481 | 585 | 54 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1109 | 612 | 639 | 0 | - | 0 |
| Stage 1 | 612 | - | - | - | - | - |
| Stage 2 | 497 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 232 | 493 | 945 | - | - | - |
| Stage 1 | 541 | - | - | - | - | - |
| Stage 2 | 611 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 229 | 493 | 945 | - | - | - |
| Mov Cap-2 Maneuver | 229 | - | - | - | - | - |
| Stage 1 | 535 | - | - | - | - | - |
| Stage 2 | 611 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 26.8 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 945 | - | 248 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.341 | - | - |
| HCM Control Delay (s) | 8.8 | 0 | 26.8 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.4 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | W | T | T | T | T |
| Traffic Vol, veh/h | 7 | 42 | 31 | 13 | 28 | 32 |
| Future Vol, veh/h | 7 | 42 | 31 | 13 | 28 | 32 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 45 | 38 | 16 | 46 | 52 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 190 | 46 | 0 | 0 | 54 |
| Stage 1 | 46 | - | - | - | - |
| Stage 2 | 144 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 799 | 1023 | - | - | 1551 |
| Stage 1 | 976 | - | - | - | - |
| Stage 2 | 883 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | 774 | 1023 | - | - | 1551 |
| Mov Cap-2 Maneuver | 774 | - | - | - | - |
| Stage 1 | 946 | - | - | - | - |
| Stage 2 | 883 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.9 | 0 | 3.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 978 | 1551 |
| HCM Lane V/C Ratio | - | - | 0.054 | 0.03 |
| HCM Control Delay (s) | - | - | 8.9 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2020 Build



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 278 | 152 | 85 | 287 | 141 | 88 | 51 | 459 | 218 | 70 | 393 | 159 |
| Future Volume (vph) | 278 | 152 | 85 | 287 | 141 | 88 | 51 | 459 | 218 | 70 | 393 | 159 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 421 | 359 | 0 | 378 | 302 | 0 | 59 | 528 | 251 | 85 | 673 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 28.0 | 28.0 | 11.0 | 25.0 | |
| Total Split (s) | 14.0 | 29.0 | | 14.0 | 29.0 | | 11.0 | 36.0 | 36.0 | 11.0 | 36.0 | |
| Total Split (%) | 15.6% | 32.2% | | 15.6% | 32.2% | | 12.2% | 40.0% | 40.0% | 12.2% | 40.0% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | | None | None | | None | Max | Max | None | Max | |
| v/c Ratio | 1.40 | 0.82 | | 1.37 | 0.67 | | 0.32 | 0.81 | 0.34 | 0.37 | 1.06 | |
| Control Delay | 224.5 | 44.6 | | 213.2 | 34.2 | | 18.6 | 38.5 | 4.4 | 18.7 | 82.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 224.5 | 44.6 | | 213.2 | 34.2 | | 18.6 | 38.5 | 4.4 | 18.7 | 82.0 | |
| Queue Length 50th (ft) | ~273 | 172 | | ~213 | 134 | | 18 | 272 | 0 | 26 | ~430 | |
| Queue Length 95th (ft) | #266 | 177 | | #285 | 174 | | 39 | #438 | 45 | 48 | #566 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 300 | 523 | | 275 | 540 | | 184 | 648 | 749 | 231 | 635 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.40 | 0.69 | | 1.37 | 0.56 | | 0.32 | 0.81 | 0.34 | 0.37 | 1.06 | |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 84.3

Natural Cycle: 130

Control Type: Actuated-Uncoordinated

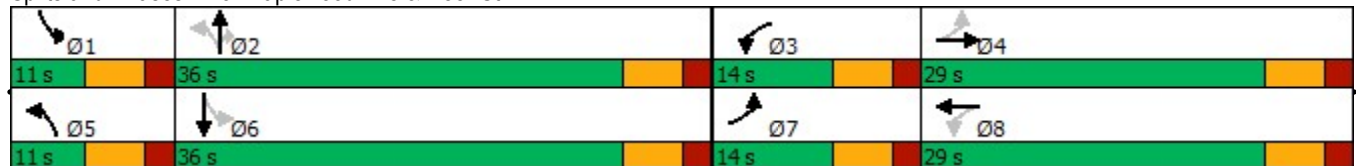
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.























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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St



HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2020 Build

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 278 | 152 | 85 | 287 | 141 | 88 | 51 | 459 | 218 | 70 | 393 | 159 |
| Future Volume (vph) | 278 | 152 | 85 | 287 | 141 | 88 | 51 | 459 | 218 | 70 | 393 | 159 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1652 | 1821 | | 1770 | 1872 | | 1711 | 1801 | 1636 | 1711 | 1723 | |
| Flt Permitted | 0.36 | 1.00 | | 0.25 | 1.00 | | 0.13 | 1.00 | 1.00 | 0.21 | 1.00 | |
| Satd. Flow (perm) | 620 | 1821 | | 465 | 1872 | | 238 | 1801 | 1636 | 372 | 1723 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 421 | 230 | 129 | 378 | 186 | 116 | 59 | 528 | 251 | 85 | 479 | 194 |
| RTOR Reduction (vph) | 0 | 23 | 0 | 0 | 26 | 0 | 0 | 0 | 162 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 421 | 336 | 0 | 378 | 276 | 0 | 59 | 528 | 89 | 85 | 658 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | 27.4 | 19.3 | | 27.4 | 19.3 | | 34.1 | 30.3 | 30.3 | 34.1 | 30.3 | |
| Effective Green, g (s) | 27.4 | 19.3 | | 27.4 | 19.3 | | 34.1 | 30.3 | 30.3 | 34.1 | 30.3 | |
| Actuated g/C Ratio | 0.32 | 0.23 | | 0.32 | 0.23 | | 0.40 | 0.35 | 0.35 | 0.40 | 0.35 | |
| 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 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 296 | 411 | | 272 | 422 | | 160 | 638 | 579 | 207 | 610 | |
| v/s Ratio Prot | c0.13 | 0.18 | | 0.13 | 0.15 | | 0.02 | 0.29 | | c0.02 | c0.38 | |
| v/s Ratio Perm | c0.32 | | | 0.31 | | | 0.13 | | 0.05 | 0.14 | | |
| v/c Ratio | 1.42 | 0.82 | | 1.39 | 0.65 | | 0.37 | 0.83 | 0.15 | 0.41 | 1.08 | |
| Uniform Delay, d1 | 27.6 | 31.4 | | 26.7 | 30.1 | | 20.2 | 25.2 | 18.8 | 18.1 | 27.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 208.7 | 11.9 | | 196.4 | 4.0 | | 1.4 | 11.8 | 0.6 | 1.3 | 59.2 | |
| Delay (s) | 236.3 | 43.3 | | 223.1 | 34.1 | | 21.6 | 37.0 | 19.4 | 19.4 | 86.8 | |
| Level of Service | F | D | | F | C | | C | D | B | B | F | |
| Approach Delay (s) | | 147.5 | | | 139.1 | | | 30.6 | | | 79.3 | |
| Approach LOS | | F | | | F | | | C | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 96.7 | | | | HCM 2000 Level of Service | | | F | | |
| HCM 2000 Volume to Capacity ratio | | | 1.19 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 85.5 | | | | Sum of lost time (s) | | | 24.0 | | |
| Intersection Capacity Utilization | | | 83.6% | | | | ICU Level of Service | | | E | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 15 | 88 | 50 | 18 | 14 | 19 |
| Future Vol, veh/h | 15 | 88 | 50 | 18 | 14 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 22 | 129 | 75 | 27 | 28 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 102 | 0 | - | 0 | 262 89 |
| Stage 1 | - | - | - | - | 89 - |
| Stage 2 | - | - | - | - | 173 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1490 | - | - | - | 727 969 |
| Stage 1 | - | - | - | - | 934 - |
| Stage 2 | - | - | - | - | 857 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1490 | - | - | - | 715 969 |
| Mov Cap-2 Maneuver | - | - | - | - | 715 - |
| Stage 1 | - | - | - | - | 919 - |
| Stage 2 | - | - | - | - | 857 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.1 | 0 | 9.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1490 | - | - | - | 842 |
| HCM Lane V/C Ratio | 0.015 | - | - | - | 0.078 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 9.6 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 19.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 362 | 52 | 65 | 50 | 44 | 528 |
| Future Vol, veh/h | 362 | 52 | 65 | 50 | 44 | 528 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 402 | 58 | 74 | 57 | 49 | 587 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 131 | 0 | - | 0 | 965 103 |
| Stage 1 | - | - | - | - | 103 - |
| Stage 2 | - | - | - | - | 862 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1454 | - | - | - | 283 952 |
| Stage 1 | - | - | - | - | 921 - |
| Stage 2 | - | - | - | - | 414 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1454 | - | - | - | 202 952 |
| Mov Cap-2 Maneuver | - | - | - | - | 202 - |
| Stage 1 | - | - | - | - | 658 - |
| Stage 2 | - | - | - | - | 414 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.4 | 0 | 31.7 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1454 | - | - | - | 741 |
| HCM Lane V/C Ratio | 0.277 | - | - | - | 0.858 |
| HCM Control Delay (s) | 8.4 | 0 | - | - | 31.7 |
| HCM Lane LOS | A | A | - | - | D |
| HCM 95th %tile Q(veh) | 1.1 | - | - | - | 10.2 |

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 139.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 460 | 7 | 0 | 442 | 318 | 529 |
| Future Vol, veh/h | 460 | 7 | 0 | 442 | 318 | 529 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 568 | 9 | 0 | 623 | 379 | 630 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1002 | 379 | - | 0 | - | 0 |
| Stage 1 | 379 | - | - | - | - | - |
| Stage 2 | 623 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 269 | 668 | 0 | - | - | - |
| Stage 1 | 692 | - | 0 | - | - | - |
| Stage 2 | ~ 535 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 269 | 668 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 269 | - | - | - | - | - |
| Stage 1 | 692 | - | - | - | - | - |
| Stage 2 | ~ 535 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 534.7 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 269 | 668 | - | - |
| HCM Lane V/C Ratio | - | 2.111 | 0.013 | - | - |
| HCM Control Delay (s) | - | 542.7 | 10.5 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 42.4 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.8 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 105 | 711 | 25 | 71 | 590 |
| Future Vol, veh/h | 32 | 105 | 711 | 25 | 71 | 590 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 40 | 131 | 889 | 31 | 80 | 663 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1728 | 905 | 0 | 0 | 920 |
| Stage 1 | 905 | - | - | - | - |
| Stage 2 | 823 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 97 | 335 | - | - | 742 |
| Stage 1 | 395 | - | - | - | - |
| Stage 2 | 431 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 80 | 335 | - | - | 742 |
| Mov Cap-2 Maneuver | 80 | - | - | - | - |
| Stage 1 | 327 | - | - | - | - |
| Stage 2 | 431 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 89.5 | 0 | 1.1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 192 | 742 |
| HCM Lane V/C Ratio | - | - | 0.892 | 0.108 |
| HCM Control Delay (s) | - | - | 89.5 | 10.4 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 6.8 | 0.4 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 47 | 21 | 713 | 41 | 16 | 617 |
| Future Vol, veh/h | 47 | 21 | 713 | 41 | 16 | 617 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 63 | 28 | 903 | 52 | 19 | 735 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1702 | 929 | 0 | 0 | 955 |
| Stage 1 | 929 | - | - | - | - |
| Stage 2 | 773 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 101 | 324 | - | - | 720 |
| Stage 1 | 385 | - | - | - | - |
| Stage 2 | 455 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 96 | 324 | - | - | 720 |
| Mov Cap-2 Maneuver | 96 | - | - | - | - |
| Stage 1 | 368 | - | - | - | - |
| Stage 2 | 455 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 90 | 0 | 0.3 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 123 | 720 |
| HCM Lane V/C Ratio | - | - | 0.737 | 0.026 |
| HCM Control Delay (s) | - | - | 90 | 10.1 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 4.2 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 32 | 21 | 13 | 84 | 78 | 19 |
| Future Vol, veh/h | 32 | 21 | 13 | 84 | 78 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 73 | 48 | 17 | 109 | 111 | 27 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 268 | 125 | 138 | 0 | 0 |
| Stage 1 | 125 | - | - | - | - |
| Stage 2 | 143 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 721 | 926 | 1446 | - | - |
| Stage 1 | 901 | - | - | - | - |
| Stage 2 | 884 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 712 | 926 | 1446 | - | - |
| Mov Cap-2 Maneuver | 712 | - | - | - | - |
| Stage 1 | 889 | - | - | - | - |
| Stage 2 | 884 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.4 | 1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1446 | - | 784 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.154 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.4 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.5 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 53 | 7 | 7 | 425 | 494 | 51 |
| Future Vol, veh/h | 53 | 7 | 7 | 425 | 494 | 51 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 91 | 12 | 8 | 500 | 588 | 61 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1135 | 619 | 649 | 0 | - | 0 |
| Stage 1 | 619 | - | - | - | - | - |
| Stage 2 | 516 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 224 | 489 | 937 | - | - | - |
| Stage 1 | 537 | - | - | - | - | - |
| Stage 2 | 599 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 221 | 489 | 937 | - | - | - |
| Mov Cap-2 Maneuver | 221 | - | - | - | - | - |
| Stage 1 | 531 | - | - | - | - | - |
| Stage 2 | 599 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 31.6 | 0.1 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 937 | - | 236 | - | - |
| HCM Lane V/C Ratio | 0.009 | - | 0.438 | - | - |
| HCM Control Delay (s) | 8.9 | 0 | 31.6 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 2.1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 7 | 48 | 49 | 13 | 39 | 59 |
| Future Vol, veh/h | 7 | 48 | 49 | 13 | 39 | 59 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 52 | 60 | 16 | 64 | 97 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 293 | 68 | 0 | 0 | 76 |
| Stage 1 | 68 | - | - | - | - |
| Stage 2 | 225 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 698 | 995 | - | - | 1523 |
| Stage 1 | 955 | - | - | - | - |
| Stage 2 | 812 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | 667 | 995 | - | - | 1523 |
| Mov Cap-2 Maneuver | 667 | - | - | - | - |
| Stage 1 | 913 | - | - | - | - |
| Stage 2 | 812 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 9.1 | 0 | 3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 936 | 1523 |
| HCM Lane V/C Ratio | - | - | 0.063 | 0.042 |
| HCM Control Delay (s) | - | - | 9.1 | 7.5 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2030 No Build

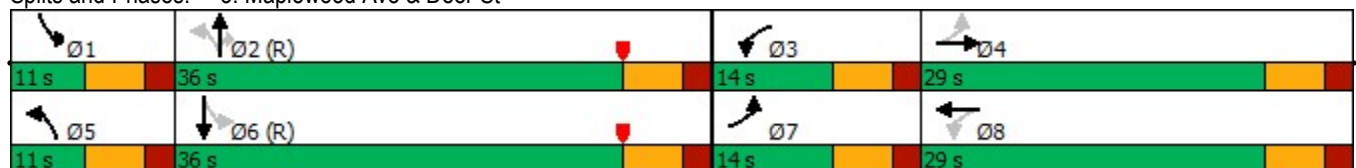


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 239 | 145 | 70 | 308 | 148 | 94 | 49 | 496 | 238 | 75 | 423 | 154 |
| Future Volume (vph) | 239 | 145 | 70 | 308 | 148 | 94 | 49 | 496 | 238 | 75 | 423 | 154 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 362 | 326 | 0 | 405 | 319 | 0 | 56 | 570 | 274 | 91 | 704 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 28.0 | 28.0 | 11.0 | 25.0 | |
| Total Split (s) | 14.0 | 29.0 | | 14.0 | 29.0 | | 11.0 | 36.0 | 36.0 | 11.0 | 36.0 | |
| Total Split (%) | 15.6% | 32.2% | | 15.6% | 32.2% | | 12.2% | 40.0% | 40.0% | 12.2% | 40.0% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | None | C-Max | |
| v/c Ratio | 1.41 | 0.79 | | 1.51 | 0.75 | | 0.30 | 0.82 | 0.34 | 0.38 | 1.02 | |
| Control Delay | 233.3 | 44.9 | | 271.3 | 40.5 | | 17.7 | 38.7 | 4.2 | 18.3 | 69.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 233.3 | 44.9 | | 271.3 | 40.5 | | 17.7 | 38.7 | 4.2 | 18.3 | 69.6 | |
| Queue Length 50th (ft) | ~205 | 161 | | ~247 | 151 | | 16 | 313 | 0 | 27 | ~470 | |
| Queue Length 95th (ft) | #194 | 162 | | #298 | 185 | | 38 | #492 | 46 | 51 | #604 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 256 | 487 | | 268 | 503 | | 189 | 699 | 803 | 242 | 691 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.41 | 0.67 | | 1.51 | 0.63 | | 0.30 | 0.82 | 0.34 | 0.38 | 1.02 | |

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St



HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2030 No Build

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------|-------|-------|-------|-------|------|---------------------------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 239 | 145 | 70 | 308 | 148 | 94 | 49 | 496 | 238 | 75 | 423 | 154 |
| Future Volume (vph) | 239 | 145 | 70 | 308 | 148 | 94 | 49 | 496 | 238 | 75 | 423 | 154 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1652 | 1831 | | 1770 | 1871 | | 1711 | 1801 | 1636 | 1711 | 1729 | |
| Flt Permitted | 0.29 | 1.00 | | 0.28 | 1.00 | | 0.12 | 1.00 | 1.00 | 0.18 | 1.00 | |
| Satd. Flow (perm) | 511 | 1831 | | 522 | 1871 | | 213 | 1801 | 1636 | 327 | 1729 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 362 | 220 | 106 | 405 | 195 | 124 | 56 | 570 | 274 | 91 | 516 | 188 |
| RTOR Reduction (vph) | 0 | 20 | 0 | 0 | 27 | 0 | 0 | 0 | 171 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 362 | 306 | 0 | 405 | 292 | 0 | 56 | 570 | 103 | 91 | 690 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | 27.2 | 19.2 | | 27.2 | 19.2 | | 38.5 | 33.8 | 33.8 | 39.1 | 34.1 | |
| Effective Green, g (s) | 27.2 | 19.2 | | 27.2 | 19.2 | | 38.5 | 33.8 | 33.8 | 39.1 | 34.1 | |
| Actuated g/C Ratio | 0.30 | 0.21 | | 0.30 | 0.21 | | 0.43 | 0.38 | 0.38 | 0.43 | 0.38 | |
| 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 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 255 | 390 | | 268 | 399 | | 169 | 676 | 614 | 218 | 655 | |
| v/s Ratio Prot | 0.13 | 0.17 | | c0.13 | 0.16 | | 0.02 | 0.32 | | c0.02 | c0.40 | |
| v/s Ratio Perm | 0.30 | | | c0.32 | | | 0.12 | | 0.06 | 0.16 | | |
| v/c Ratio | 1.42 | 0.78 | | 1.51 | 0.73 | | 0.33 | 0.84 | 0.17 | 0.42 | 1.05 | |
| Uniform Delay, d1 | 29.5 | 33.4 | | 29.4 | 33.0 | | 20.3 | 25.7 | 18.7 | 17.8 | 27.9 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 210.3 | 9.9 | | 248.4 | 7.2 | | 1.2 | 12.2 | 0.6 | 1.3 | 50.2 | |
| Delay (s) | 239.8 | 43.3 | | 277.8 | 40.3 | | 21.4 | 37.9 | 19.3 | 19.1 | 78.2 | |
| Level of Service | F | D | | F | D | | C | D | B | B | E | |
| Approach Delay (s) | | 146.7 | | | 173.1 | | | 31.2 | | | 71.4 | |
| Approach LOS | | F | | | F | | | C | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 100.1 | | | | HCM 2000 Level of Service | | | F | | |
| HCM 2000 Volume to Capacity ratio | | | 1.20 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 90.0 | | | | Sum of lost time (s) | | | 24.0 | | |
| Intersection Capacity Utilization | | | 84.8% | | | | ICU Level of Service | | | E | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 4 | 46 | 42 | 1 | 2 | 4 |
| Future Vol, veh/h | 4 | 46 | 42 | 1 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 6 | 68 | 63 | 1 | 4 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 64 | 0 | - | 0 | 144 |
| Stage 1 | - | - | - | - | 64 |
| Stage 2 | - | - | - | - | 80 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1538 | - | - | - | 849 |
| Stage 1 | - | - | - | - | 959 |
| Stage 2 | - | - | - | - | 943 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1538 | - | - | - | 846 |
| Mov Cap-2 Maneuver | - | - | - | - | 846 |
| Stage 1 | - | - | - | - | 955 |
| Stage 2 | - | - | - | - | 943 |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.6 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1538 | - | - | - | 943 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.013 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 24.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | 4 | 1 | | W | |
| Traffic Vol, veh/h | 373 | 57 | 72 | 52 | 45 | 563 |
| Future Vol, veh/h | 373 | 57 | 72 | 52 | 45 | 563 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 414 | 63 | 82 | 59 | 50 | 626 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 141 | 0 | - | 0 | 1003 112 |
| Stage 1 | - | - | - | - | 112 - |
| Stage 2 | - | - | - | - | 891 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1442 | - | - | - | 268 941 |
| Stage 1 | - | - | - | - | 913 - |
| Stage 2 | - | - | - | - | 401 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1442 | - | - | - | 188 941 |
| Mov Cap-2 Maneuver | - | - | - | - | 188 - |
| Stage 1 | - | - | - | - | 641 - |
| Stage 2 | - | - | - | - | 401 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.4 | 0 | 42.5 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1442 | - | - | - | 726 |
| HCM Lane V/C Ratio | 0.287 | - | - | - | 0.931 |
| HCM Control Delay (s) | 8.5 | 0 | - | - | 42.5 |
| HCM Lane LOS | A | A | - | - | E |
| HCM 95th %tile Q(veh) | 1.2 | - | - | - | 13.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 4 | 9 | 736 | 3 | 2 | 667 |
| Future Vol, veh/h | 4 | 9 | 736 | 3 | 2 | 667 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 58 | 58 | 78 | 78 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 17 | 944 | 4 | 2 | 785 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 1735 | 946 | 0 | 0 | 948 | 0 |
| Stage 1 | 946 | - | - | - | - | - |
| Stage 2 | 789 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 96 | 317 | - | - | 724 | - |
| Stage 1 | 377 | - | - | - | - | - |
| Stage 2 | 448 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 96 | 317 | - | - | 724 | - |
| Mov Cap-2 Maneuver | 96 | - | - | - | - | - |
| Stage 1 | 375 | - | - | - | - | - |
| Stage 2 | 448 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 26.6 | 0 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 191 | 724 |
| HCM Lane V/C Ratio | - | - | 0.126 | 0.003 |
| HCM Control Delay (s) | - | - | 26.6 | 10 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0 |

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 173.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 466 | 8 | 0 | 489 | 353 | 560 |
| Future Vol, veh/h | 466 | 8 | 0 | 489 | 353 | 560 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 575 | 10 | 0 | 689 | 420 | 667 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1109 | 420 | - | 0 | - |
| Stage 1 | 420 | - | - | - | - |
| Stage 2 | 689 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - |
| Pot Cap-1 Maneuver | ~ 232 | 633 | 0 | - | - |
| Stage 1 | 663 | - | 0 | - | - |
| Stage 2 | ~ 498 | - | 0 | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | ~ 232 | 633 | - | - | - |
| Mov Cap-2 Maneuver | ~ 232 | - | - | - | - |
| Stage 1 | 663 | - | - | - | - |
| Stage 2 | ~ 498 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 699.7 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 232 | 633 | - | - |
| HCM Lane V/C Ratio | - | 2.48 | 0.016 | - | - |
| HCM Control Delay (s) | - | 711.5 | 10.8 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 47.5 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 69 | 718 | 28 | 56 | 627 |
| Future Vol, veh/h | 32 | 69 | 718 | 28 | 56 | 627 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 40 | 86 | 898 | 35 | 63 | 704 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1746 | 916 | 0 | 0 | 933 |
| Stage 1 | 916 | - | - | - | - |
| Stage 2 | 830 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 95 | 330 | - | - | 734 |
| Stage 1 | 390 | - | - | - | - |
| Stage 2 | 428 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 82 | 330 | - | - | 734 |
| Mov Cap-2 Maneuver | 82 | - | - | - | - |
| Stage 1 | 335 | - | - | - | - |
| Stage 2 | 428 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 71.4 | 0 | 0.8 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 169 | 734 |
| HCM Lane V/C Ratio | - | - | 0.747 | 0.086 |
| HCM Control Delay (s) | - | - | 71.4 | 10.4 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 4.7 | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 34 | 13 | 724 | 35 | 15 | 656 |
| Future Vol, veh/h | 34 | 13 | 724 | 35 | 15 | 656 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 45 | 17 | 916 | 44 | 18 | 781 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1755 | 938 | 0 | 0 | 960 |
| Stage 1 | 938 | - | - | - | - |
| Stage 2 | 817 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 94 | 321 | - | - | 717 |
| Stage 1 | 381 | - | - | - | - |
| Stage 2 | 434 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | 90 | 321 | - | - | 717 |
| Mov Cap-2 Maneuver | 90 | - | - | - | - |
| Stage 1 | 364 | - | - | - | - |
| Stage 2 | 434 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 71.9 | 0 | 0.2 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|------|-------|
| Capacity (veh/h) | - | - | 112 | 717 |
| HCM Lane V/C Ratio | - | - | 0.56 | 0.025 |
| HCM Control Delay (s) | - | - | 71.9 | 10.1 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 2.7 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 2 | 4 | 76 | 65 | 18 |
| Future Vol, veh/h | 13 | 2 | 4 | 76 | 65 | 18 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 30 | 5 | 5 | 99 | 93 | 26 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 215 | 106 | 119 | 0 | 0 |
| Stage 1 | 106 | - | - | - | - |
| Stage 2 | 109 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 773 | 948 | 1469 | - | - |
| Stage 1 | 918 | - | - | - | - |
| Stage 2 | 916 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 770 | 948 | 1469 | - | - |
| Mov Cap-2 Maneuver | 770 | - | - | - | - |
| Stage 1 | 914 | - | - | - | - |
| Stage 2 | 916 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.8 | 0.4 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1469 | - | 790 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | 0.043 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 9.8 | - | - |
| HCM Lane LOS | A | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 45 | 8 | 8 | 439 | 529 | 48 |
| Future Vol, veh/h | 45 | 8 | 8 | 439 | 529 | 48 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 78 | 14 | 9 | 516 | 630 | 57 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1193 | 659 | 687 | 0 | - | 0 |
| Stage 1 | 659 | - | - | - | - | - |
| Stage 2 | 534 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 206 | 464 | 907 | - | - | - |
| Stage 1 | 515 | - | - | - | - | - |
| Stage 2 | 588 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 203 | 464 | 907 | - | - | - |
| Mov Cap-2 Maneuver | 203 | - | - | - | - | - |
| Stage 1 | 508 | - | - | - | - | - |
| Stage 2 | 588 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 32.1 | 0.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 907 | - | 222 | - | - |
| HCM Lane V/C Ratio | 0.01 | - | 0.412 | - | - |
| HCM Control Delay (s) | 9 | 0 | 32.1 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.9 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 8 | 45 | 33 | 14 | 29 | 34 |
| Future Vol, veh/h | 8 | 45 | 33 | 14 | 29 | 34 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 48 | 41 | 17 | 48 | 56 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 202 | 50 | 0 | 0 | 58 |
| Stage 1 | 50 | - | - | - | - |
| Stage 2 | 152 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 787 | 1018 | - | - | 1546 |
| Stage 1 | 972 | - | - | - | - |
| Stage 2 | 876 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 762 | 1018 | - | - | 1546 |
| Mov Cap-2 Maneuver | 762 | - | - | - | - |
| Stage 1 | 941 | - | - | - | - |
| Stage 2 | 876 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.9 | 0 | 3.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 969 | 1546 |
| HCM Lane V/C Ratio | - | - | 0.059 | 0.031 |
| HCM Control Delay (s) | - | - | 8.9 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2030 Build

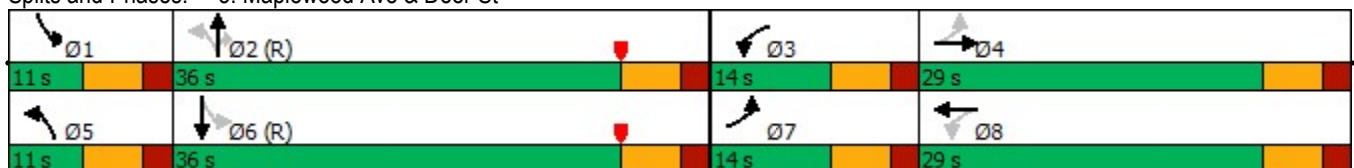


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 287 | 161 | 86 | 308 | 151 | 94 | 52 | 502 | 238 | 75 | 434 | 164 |
| Future Volume (vph) | 287 | 161 | 86 | 308 | 151 | 94 | 52 | 502 | 238 | 75 | 434 | 164 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 435 | 374 | 0 | 405 | 323 | 0 | 60 | 577 | 274 | 91 | 729 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 28.0 | 28.0 | 11.0 | 25.0 | |
| Total Split (s) | 14.0 | 29.0 | | 14.0 | 29.0 | | 11.0 | 36.0 | 36.0 | 11.0 | 36.0 | |
| Total Split (%) | 15.6% | 32.2% | | 15.6% | 32.2% | | 12.2% | 40.0% | 40.0% | 12.2% | 40.0% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | None | C-Max | |
| v/c Ratio | 1.60 | 0.85 | | 1.61 | 0.71 | | 0.33 | 0.85 | 0.35 | 0.43 | 1.09 | |
| Control Delay | 308.5 | 48.6 | | 313.0 | 37.3 | | 18.9 | 41.8 | 4.2 | 20.7 | 91.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 308.5 | 48.6 | | 313.0 | 37.3 | | 18.9 | 41.8 | 4.2 | 20.7 | 91.7 | |
| Queue Length 50th (ft) | ~261 | 183 | | ~260 | 148 | | 18 | 318 | 0 | 29 | ~512 | |
| Queue Length 95th (ft) | #253 | 186 | | #340 | 188 | | 40 | #501 | 46 | 51 | #633 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 272 | 487 | | 252 | 502 | | 183 | 680 | 788 | 212 | 669 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.60 | 0.77 | | 1.61 | 0.64 | | 0.33 | 0.85 | 0.35 | 0.43 | 1.09 | |























Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St



HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2030 Build

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 287 | 161 | 86 | 308 | 151 | 94 | 52 | 502 | 238 | 75 | 434 | 164 |
| Future Volume (vph) | 287 | 161 | 86 | 308 | 151 | 94 | 52 | 502 | 238 | 75 | 434 | 164 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1652 | 1824 | | 1770 | 1873 | | 1711 | 1801 | 1636 | 1711 | 1727 | |
| Flt Permitted | 0.32 | 1.00 | | 0.22 | 1.00 | | 0.12 | 1.00 | 1.00 | 0.16 | 1.00 | |
| Satd. Flow (perm) | 548 | 1824 | | 414 | 1873 | | 220 | 1801 | 1636 | 288 | 1727 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 435 | 244 | 130 | 405 | 199 | 124 | 60 | 577 | 274 | 91 | 529 | 200 |
| RTOR Reduction (vph) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 174 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 435 | 352 | 0 | 405 | 298 | 0 | 60 | 577 | 100 | 91 | 714 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | 28.7 | 20.7 | | 28.7 | 20.7 | | 37.1 | 32.8 | 32.8 | 37.5 | 33.0 | |
| Effective Green, g (s) | 28.7 | 20.7 | | 28.7 | 20.7 | | 37.1 | 32.8 | 32.8 | 37.5 | 33.0 | |
| Actuated g/C Ratio | 0.32 | 0.23 | | 0.32 | 0.23 | | 0.41 | 0.36 | 0.36 | 0.42 | 0.37 | |
| 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 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 272 | 419 | | 252 | 430 | | 161 | 656 | 596 | 191 | 633 | |
| v/s Ratio Prot | 0.14 | 0.19 | | c0.14 | 0.16 | | 0.02 | 0.32 | | c0.02 | c0.41 | |
| v/s Ratio Perm | 0.37 | | | c0.37 | | | 0.14 | | 0.06 | 0.17 | | |
| v/c Ratio | 1.60 | 0.84 | | 1.61 | 0.69 | | 0.37 | 0.88 | 0.17 | 0.48 | 1.13 | |
| Uniform Delay, d1 | 29.0 | 33.1 | | 28.0 | 31.7 | | 20.9 | 26.8 | 19.4 | 19.0 | 28.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 286.3 | 13.7 | | 291.0 | 5.1 | | 1.5 | 15.6 | 0.6 | 1.9 | 76.7 | |
| Delay (s) | 315.3 | 46.8 | | 318.9 | 36.9 | | 22.3 | 42.3 | 20.0 | 20.9 | 105.2 | |
| Level of Service | F | D | | F | D | | C | D | B | C | F | |
| Approach Delay (s) | | 191.2 | | | 193.8 | | | 34.3 | | | 95.9 | |
| Approach LOS | | F | | | F | | | C | | | F | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 124.1 | | | HCM 2000 Level of Service | | | F | | | |
| HCM 2000 Volume to Capacity ratio | | | 1.29 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 90.0 | | | Sum of lost time (s) | | | 24.0 | | | |
| Intersection Capacity Utilization | | | 87.8% | | | ICU Level of Service | | | E | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 15 | 91 | 53 | 18 | 14 | 19 |
| Future Vol, veh/h | 15 | 91 | 53 | 18 | 14 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 22 | 134 | 79 | 27 | 28 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 106 | 0 | - | 0 | 271 93 |
| Stage 1 | - | - | - | - | 93 - |
| Stage 2 | - | - | - | - | 178 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1485 | - | - | - | 718 964 |
| Stage 1 | - | - | - | - | 931 - |
| Stage 2 | - | - | - | - | 853 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1485 | - | - | - | 707 964 |
| Mov Cap-2 Maneuver | - | - | - | - | 707 - |
| Stage 1 | - | - | - | - | 916 - |
| Stage 2 | - | - | - | - | 853 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.1 | 0 | 9.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1485 | - | - | - | 835 |
| HCM Lane V/C Ratio | 0.015 | - | - | - | 0.079 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 9.7 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 27.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 389 | 57 | 72 | 52 | 45 | 566 |
| Future Vol, veh/h | 389 | 57 | 72 | 52 | 45 | 566 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 432 | 63 | 82 | 59 | 50 | 629 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 141 | 0 | - | 0 | 1039 112 |
| Stage 1 | - | - | - | - | 112 - |
| Stage 2 | - | - | - | - | 927 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1442 | - | - | - | 255 941 |
| Stage 1 | - | - | - | - | 913 - |
| Stage 2 | - | - | - | - | 385 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1442 | - | - | - | 176 941 |
| Mov Cap-2 Maneuver | - | - | - | - | 176 - |
| Stage 1 | - | - | - | - | 629 - |
| Stage 2 | - | - | - | - | 385 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 7.5 | 0 | 47 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1442 | - | - | - | 713 |
| HCM Lane V/C Ratio | 0.3 | - | - | - | 0.952 |
| HCM Control Delay (s) | 8.6 | 0 | - | - | 47 |
| HCM Lane LOS | A | A | - | - | E |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 14 |

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 195.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 492 | 8 | 0 | 489 | 353 | 570 |
| Future Vol, veh/h | 492 | 8 | 0 | 489 | 353 | 570 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 607 | 10 | 0 | 689 | 420 | 679 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 1109 | 420 | - | 0 | - |
| Stage 1 | 420 | - | - | - | - |
| Stage 2 | 689 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - |
| Pot Cap-1 Maneuver | ~ 232 | 633 | 0 | - | - |
| Stage 1 | 663 | - | 0 | - | - |
| Stage 2 | ~ 498 | - | 0 | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | ~ 232 | 633 | - | - | - |
| Mov Cap-2 Maneuver | ~ 232 | - | - | - | - |
| Stage 1 | 663 | - | - | - | - |
| Stage 2 | ~ 498 | - | - | - | - |

| Approach | EB | NB | SB |
|-------------------------|-------|----|----|
| HCM Control Delay, s/\$ | 760.8 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|--------|-------|-----|-----|
| Capacity (veh/h) | - | 232 | 633 | - | - |
| HCM Lane V/C Ratio | - | 2.618 | 0.016 | - | - |
| HCM Control Delay (s) | - | \$ 773 | 10.8 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 51.4 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 15.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 35 | 110 | 766 | 28 | 75 | 637 |
| Future Vol, veh/h | 35 | 110 | 766 | 28 | 75 | 637 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 44 | 138 | 958 | 35 | 84 | 716 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1860 | 976 | 0 | 0 | 993 |
| Stage 1 | 976 | - | - | - | - |
| Stage 2 | 884 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 81 | 305 | - | - | 696 |
| Stage 1 | 365 | - | - | - | - |
| Stage 2 | 404 | - | - | - | - |
| Platoon blocked, % | | | | | |
| Mov Cap-1 Maneuver | 65 | 305 | - | - | 696 |
| Mov Cap-2 Maneuver | 65 | - | - | - | - |
| Stage 1 | 292 | - | - | - | - |
| Stage 2 | 404 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 165.8 | 0 | 1.1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 161 | 696 |
| HCM Lane V/C Ratio | - | - | 1.126 | 0.121 |
| HCM Control Delay (s) | - | - | 165.8 | 10.9 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 9.6 | 0.4 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 49 | 22 | 769 | 44 | 17 | 666 |
| Future Vol, veh/h | 49 | 22 | 769 | 44 | 17 | 666 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 65 | 29 | 973 | 56 | 20 | 793 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1834 | 1001 | 0 | 0 | 1029 |
| Stage 1 | 1001 | - | - | - | - |
| Stage 2 | 833 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 84 | 295 | - | - | 675 |
| Stage 1 | 355 | - | - | - | - |
| Stage 2 | 427 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 80 | 295 | - | - | 675 |
| Mov Cap-2 Maneuver | 80 | - | - | - | - |
| Stage 1 | 336 | - | - | - | - |
| Stage 2 | 427 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 143.4 | 0 | 0.3 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 103 | 675 |
| HCM Lane V/C Ratio | - | - | 0.919 | 0.03 |
| HCM Control Delay (s) | - | - | 143.4 | 10.5 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 5.5 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 33 | 21 | 13 | 88 | 81 | 21 |
| Future Vol, veh/h | 33 | 21 | 13 | 88 | 81 | 21 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 75 | 48 | 17 | 114 | 116 | 30 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 279 | 131 | 146 | 0 | 0 |
| Stage 1 | 131 | - | - | - | - |
| Stage 2 | 148 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 711 | 919 | 1436 | - | - |
| Stage 1 | 895 | - | - | - | - |
| Stage 2 | 880 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 702 | 919 | 1436 | - | - |
| Mov Cap-2 Maneuver | 702 | - | - | - | - |
| Stage 1 | 883 | - | - | - | - |
| Stage 2 | 880 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 10.5 | 1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1436 | - | 773 | - | - |
| HCM Lane V/C Ratio | 0.012 | - | 0.159 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.5 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.6 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 56 | 8 | 8 | 455 | 532 | 54 |
| Future Vol, veh/h | 56 | 8 | 8 | 455 | 532 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 97 | 14 | 9 | 535 | 633 | 64 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1218 | 665 | 697 | 0 | - | 0 |
| Stage 1 | 665 | - | - | - | - | - |
| Stage 2 | 553 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 199 | 460 | 899 | - | - | - |
| Stage 1 | 511 | - | - | - | - | - |
| Stage 2 | 576 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 196 | 460 | 899 | - | - | - |
| Mov Cap-2 Maneuver | 196 | - | - | - | - | - |
| Stage 1 | 504 | - | - | - | - | - |
| Stage 2 | 576 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 39.4 | 0.2 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 899 | - | 211 | - | - |
| HCM Lane V/C Ratio | 0.01 | - | 0.523 | - | - |
| HCM Control Delay (s) | 9 | 0 | 39.4 | - | - |
| HCM Lane LOS | A | A | E | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 2.7 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 8 | 51 | 51 | 14 | 10 | 61 |
| Future Vol, veh/h | 8 | 51 | 51 | 14 | 10 | 61 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 55 | 63 | 17 | 16 | 100 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 204 | 72 | 0 | 0 | 80 | 0 |
| Stage 1 | 72 | - | - | - | - | - |
| Stage 2 | 132 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 784 | 990 | - | - | 1518 | - |
| Stage 1 | 951 | - | - | - | - | - |
| Stage 2 | 894 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 775 | 990 | - | - | 1518 | - |
| Mov Cap-2 Maneuver | 775 | - | - | - | - | - |
| Stage 1 | 941 | - | - | - | - | - |
| Stage 2 | 894 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 9 | 0 | 1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 954 | 1518 |
| HCM Lane V/C Ratio | - | - | 0.066 | 0.011 |
| HCM Control Delay (s) | - | - | 9 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 |

APPENDIX H

111 Maplewood Avenue Traffic Evaluation
Response to Comments

Responses to TAC Traffic Comments Proposed Office Building at 111 Maplewood Avenue Portsmouth, NH

To: Eric Eby, PE
Parking and Transportation Engineer
Department of Public Works
City of Portsmouth, NH

FROM: Vinod Kalikiri, PE, PTOE

DATE: April 18, 2019

Tighe & Bond prepared a detailed traffic evaluation dated March 18, 2019 for the above referenced project as part of the Site Review and Subdivision submittal to the City of Portsmouth Technical Advisory Committee (TAC). This memorandum includes revised analysis based on feedback provided by the City Traffic Engineer on the original traffic study.

Specifically, the following revisions were made to the original analysis and the underlying analytical assumptions.

- Traffic diversion assumptions related to the US Route 1 Bypass Bridge project were removed from the No-Build and Build analysis.
- Future conditions traffic associated with the Deer Street Associates (DSA) development and the Harbor Corp Redevelopment, as well as any traffic improvements by the two projects within the study area were assumed to be in place only in the 2030 analysis.
- Trip distribution assumptions for the commercial component of the project were revised to be consistent with the corresponding assumptions included in the DSA traffic study.
- In addition, newly available permanent traffic count station data from NHDOT were reviewed to confirm if the seasonal adjustment factor used in the original study was too high. The seasonal adjustment factor was not revised based on the review of the new permanent count station data.

Revised capacity analysis summary tabulation is presented in Tables 1 and 2 for signalized and unsignalized study intersections, respectively. Also included in the attachment to this memorandum are revised traffic volume networks and Synchro analysis worksheets resulting from the above outlined revisions.

Overall, while the revisions to the analytical assumptions changed some of the traffic volumes, the overall finding of the original study that certain movements at the study locations are expected to be constrained with or without the project related traffic remains valid. A review of the analysis results indicated that the exclusive pedestrian phase at the intersection significantly contributes to the reduced capacity. As part of the Maplewood Avenue corridor road diet project, newer signal timing may be implemented by the City's signal design consultant which may be better suited for the future conditions. Since new signal timings are not yet available, analysis of the 2020 No-Build and Build conditions were based on existing timings provided by the City. It is unclear if the road diet project will also include replacement of the exclusive pedestrian phase with a concurrent phase. Signal timing changes and/or phasing changes as part of the road diet project has the potential to provide some capacity enhancement at the intersection in the short term. As discussed in the original study, signal

phasing and geometric improvements are also proposed by other private development projects in the longer term, which will provide additional capacity at the intersection.

Compared to the area roadway traffic volumes, the additional traffic estimated for the project at the various study intersections, including the Maplewood Avenue/Deer Street signalized intersection, is nominal. The Site Plans show the elimination of one of the unsignalized curb cuts for the east parcel, which promotes access management. Further, as shown in the Site Plans, the project will implement significant enhancements to the pedestrian accommodations around the Site. The limited additional traffic estimated for the project do not warrant any significant capacity enhancements at study intersections. The proponent will continue to work with the City staff during the project review to further refine the proposed pedestrian and streetscape enhancements to the area.

\\tighebond.com\data\Data\Projects\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Traffic\Memos\2019-04-16 Traffic Responses.docx

TABLE 1: Signalized Intersection Operations Summary

| Intersection / Lane Group | 2020 No Build | | | | | 2020 Build | | | | | 2030 No Build | | | | | 2030 Build | | | | | |
|--------------------------------|---------------|------|-----|--------------------|--------------------|------------|------|-----|--------------------|--------------------|---------------|------|-----|--------------------|--------------------|------------|------|-----|--------------------|--------------------|----|
| | V/C | Del | LOS | 50 th Q | 95 th Q | V/C | Del | LOS | 50 th Q | 95 th Q | V/C | Del | LOS | 50 th Q | 95 th Q | V/C | Del | LOS | 50 th Q | 95 th Q | |
| Maplewood Ave / Deer St | | | | | | | | | | | | | | | | | | | | | |
| Deer St EBL/T/R | 1.14 | >120 | F | ~274 | #274 | >1.2 | >120 | F | ~465 | #430 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Deer St EBL | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | >1.2 | >120 | F | ~205 | #194 | >1.2 | >120 | F | ~261 | #253 | |
| Deer St EBT/R | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.78 | 43 | D | 161 | 162 | 0.84 | 47 | D | 183 | 186 | |
| Deer St WBL | >1.2 | >120 | F | ~264 | #340 | >1.2 | >120 | F | ~306 | #381 | >1.2 | >120 | F | ~280 | #328 | >1.2 | >120 | F | ~335 | #405 | |
| Deer St WBT/R | 0.41 | 36 | D | 109 | 146 | 0.42 | 36 | D | 113 | 149 | 0.73 | 40 | D | 151 | 185 | 0.69 | 37 | D | 148 | 188 | |
| Maplewood Ave NBL | 0.04 | 12 | B | 5 | 16 | 0.05 | 12 | B | 7 | 19 | 0.33 | 21 | C | 16 | 38 | 0.37 | 22 | C | 18 | 40 | |
| Maplewood Ave NBT | 0.50 | 18 | B | 210 | 296 | 0.51 | 18 | B | 220 | 309 | 0.84 | 38 | D | 313 | #492 | 0.89 | 44 | D | 327 | #514 | |
| Maplewood Ave NBR | 0.14 | 13 | B | 0 | 33 | 0.14 | 13 | B | 2 | 35 | 0.17 | 19 | B | 0 | 46 | 0.17 | 20 | B | 0 | 46 | |
| Maplewood Ave SBL | 0.14 | 9 | A | 15 | 28 | 0.14 | 9 | A | 15 | 28 | 0.42 | 19 | B | 27 | 51 | 0.49 | 21 | C | 29 | 51 | |
| Maplewood Ave SBT/R | 0.48 | 11 | B | 178 | 220 | 0.49 | 12 | B | 183 | 226 | 1.02 | 67 | E | ~439 | #573 | 1.07 | 84 | F | ~463 | #585 | |
| <i>Overall Intersection</i> | 0.77 | 60 | E | | | 0.88 | 111 | F | | | >1.2 | 106 | F | | | >1.2 | >120 | F | | | |

LOS level-of-service
 Del Average intersection delay, measured in seconds
 v/c Volume to capacity ratio
 50th Q and 95th Q Percentile queues measured in feet
 # 95th percentile volume exceeds capacity, queue may be longer
 ~ Volume exceeds capacity. Queues are shown after two signal cycles

TABLE 2: Unsignalized Intersection Operations Summary

| Intersection / Lane Group | 2020 No Build | | | | 2020 Build | | | | 2030 No Build | | | | 2030 Build | | | |
|---|---------------|------|-----|--------------------|------------|------|-----|--------------------|---------------|------|-----|--------------------|------------|------|-----|--------------------|
| | V/C | Del | LOS | 95 th Q | V/C | Del | LOS | 95 th Q | V/C | Del | LOS | 95 th Q | V/C | Del | LOS | 95 th Q |
| Maplewood Ave / Raynes Ave: | | | | | | | | | | | | | | | | |
| Maplewood Ave SBL/T | 0.1 | 10 | A | 0.2 | 0.1 | 10 | A | 0.3 | 0.1 | 10 | B | 0.3 | 0.1 | 11 | B | 0.4 |
| Raynes Ave WBL/R | 0.4 | 26 | D | 1.9 | 0.5 | 32 | D | 2.9 | 0.7 | 70 | F | 4.6 | 0.9 | 107 | F | 7.0 |
| Maplewood Ave / Kennebunk Bank Driveway: | | | | | | | | | | | | | | | | |
| Maplewood Ave SBL/T | 0.0 | 9 | A | 0.0 | NA | NA | NA | NA | 0.0 | 10 | A | 0.0 | NA | NA | NA | NA |
| Kennebunk Bank WBL/R | 0.1 | 18 | C | 0.2 | NA | NA | NA | NA | 0.1 | 27 | D | 0.4 | NA | NA | NA | NA |
| Maplewood Ave / Vaughan St: | | | | | | | | | | | | | | | | |
| Maplewood Ave SBL/T | 0.0 | 9 | A | 0.1 | 0.0 | 10 | A | 0.1 | 0.0 | 10 | B | 0.1 | 0.0 | 11 | B | 0.1 |
| Vaughan St WBL/R | 0.3 | 30 | D | 1.2 | 0.6 | 47 | E | 2.9 | 0.5 | 68 | F | 2.6 | 1.0 | >120 | F | 6.5 |
| Vaughan St / Kennebunk Bank Driveway: | | | | | | | | | | | | | | | | |
| Vaughan St EBL/T | 0.0 | 7 | A | 0.0 | 0.0 | 8 | A | 0.0 | 0.0 | 7 | A | 0.0 | 0.0 | 8 | A | 0.0 |
| Kennebunk Bank SBL/R | 0.0 | 9 | A | 0.0 | 0.1 | 10 | A | 0.2 | 0.0 | 9 | A | 0.0 | 0.1 | 10 | A | 0.2 |
| Vaughan St / Green St: | | | | | | | | | | | | | | | | |
| Vaughan St SBL/T | 0.1 | 7 | A | 0.1 | 0.0 | 8 | A | 0.1 | 0.0 | 7 | A | 0.1 | 0.0 | 8 | A | 0.1 |
| Green St WBL/R | 0.2 | 9 | A | 0.2 | 0.1 | 9 | A | 0.2 | 0.1 | 9 | A | 0.2 | 0.1 | 9 | A | 0.2 |
| Vaughan St / Site Driveway: | | | | | | | | | | | | | | | | |
| Vaughan St NBL/T | 0.0 | 7 | A | 0.0 | 0.0 | 8 | A | 0.1 | 0.0 | 8 | A | 0.0 | 0.0 | 8 | A | 0.1 |
| Site Driveway EBL/R | 0.0 | 10 | A | 0.1 | 0.1 | 10.2 | B | 0.5 | 0.0 | 10 | A | 0.1 | 0.2 | 10 | B | 0.5 |
| Deer St / Russell St: | | | | | | | | | | | | | | | | |
| Deer St EBL/T | 0.2 | 8 | A | 0.7 | 0.2 | 8 | A | 0.8 | 0.3 | 9 | A | 1.2 | 0.3 | 9 | A | 1.3 |
| Russell St SBL/R | 0.5 | 13 | B | 2.8 | 0.5 | 14 | B | 3.4 | 1.0 | 47 | E | 14.3 | 1.0 | 58 | F | 17.0 |
| Green St / Russell St: | | | | | | | | | | | | | | | | |
| Russell St NBL/T | 0.0 | 9 | A | 0.0 | 0.0 | 9 | A | 0.0 | 0.0 | 9 | A | 0.0 | 0.0 | 9 | A | 0.0 |
| Green St EBL | 0.2 | 19 | C | 1.0 | 0.3 | 22 | C | 1.3 | 0.4 | 32 | D | 1.9 | 0.5 | 40 | E | 2.7 |
| Russell St / Market St: | | | | | | | | | | | | | | | | |
| Russell St EBL | >1.2 | >120 | F | 24.4 | >1.2 | >120 | F | 27.9 | >1.2 | >120 | F | 47.5 | >1.2 | >120 | F | 51.2 |
| Russell St EBR | 0.0 | 11 | B | 0.0 | 0.0 | 11 | B | 0.0 | 0.0 | 11 | B | 0.0 | 0.0 | 11 | B | 0.0 |

LOS level-of-service
 Del Average intersection delay, measured in seconds
 v/c Volume to capacity ratio
 95th Q Percentile queues measured in vehicles



Legend



Study Area Location

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

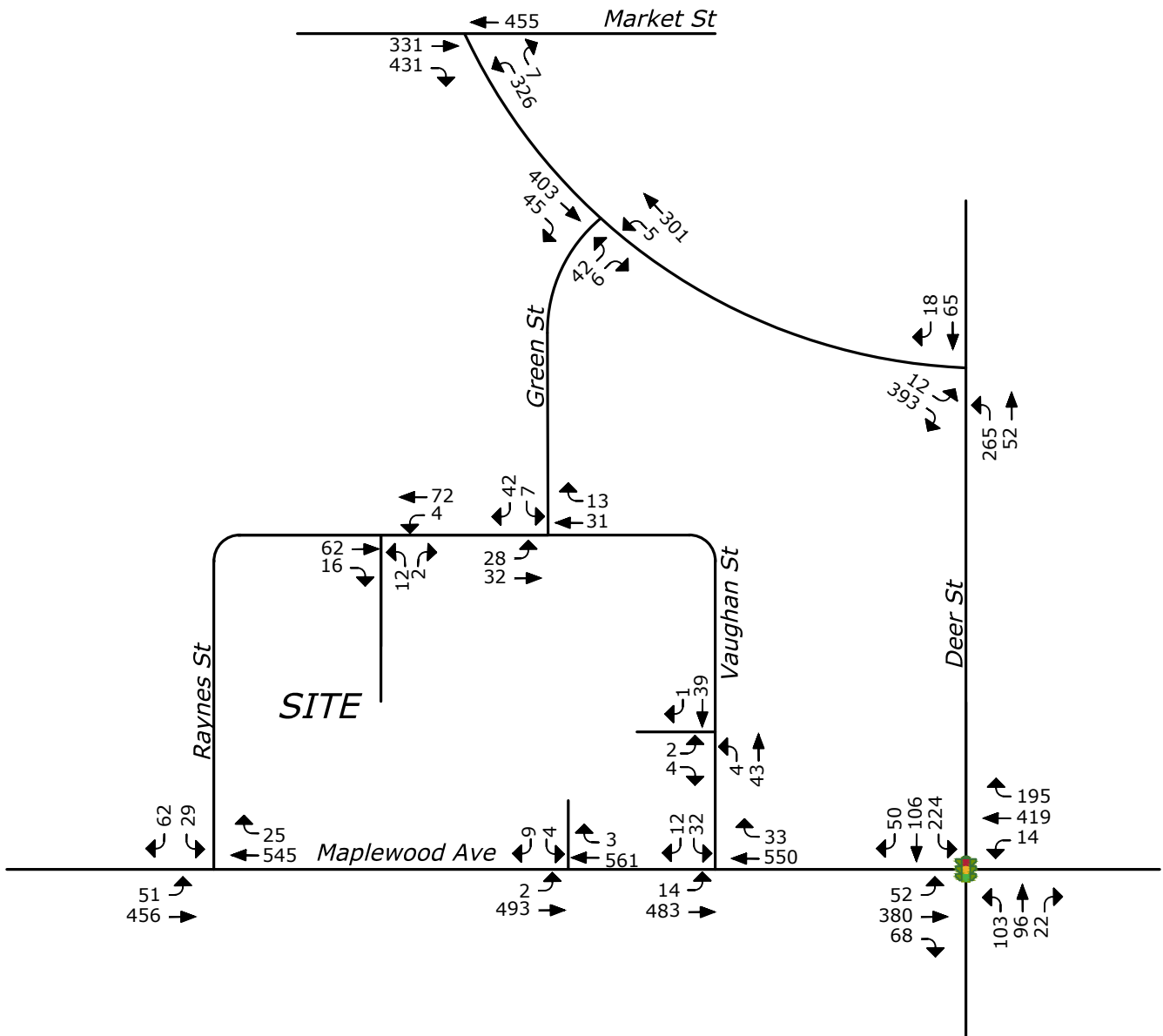
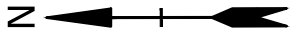
Study Area

DATE: 03/18/2019

SCALE: 1" = 200'

FIGURE 1

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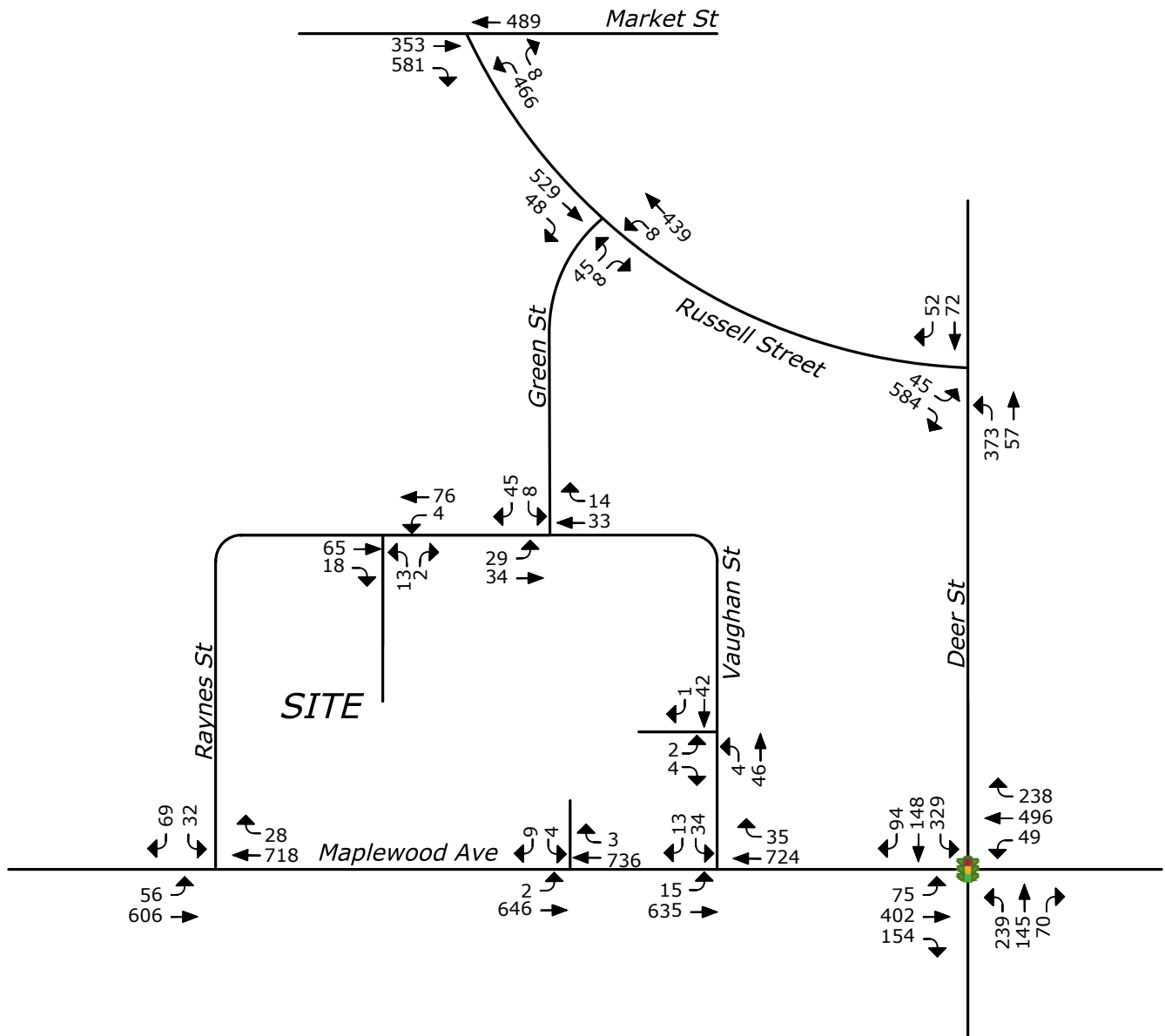
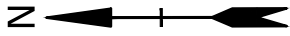


LEGEND



TRAFFIC SIGNAL

| | |
|--|--|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2020 No Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 2 | |

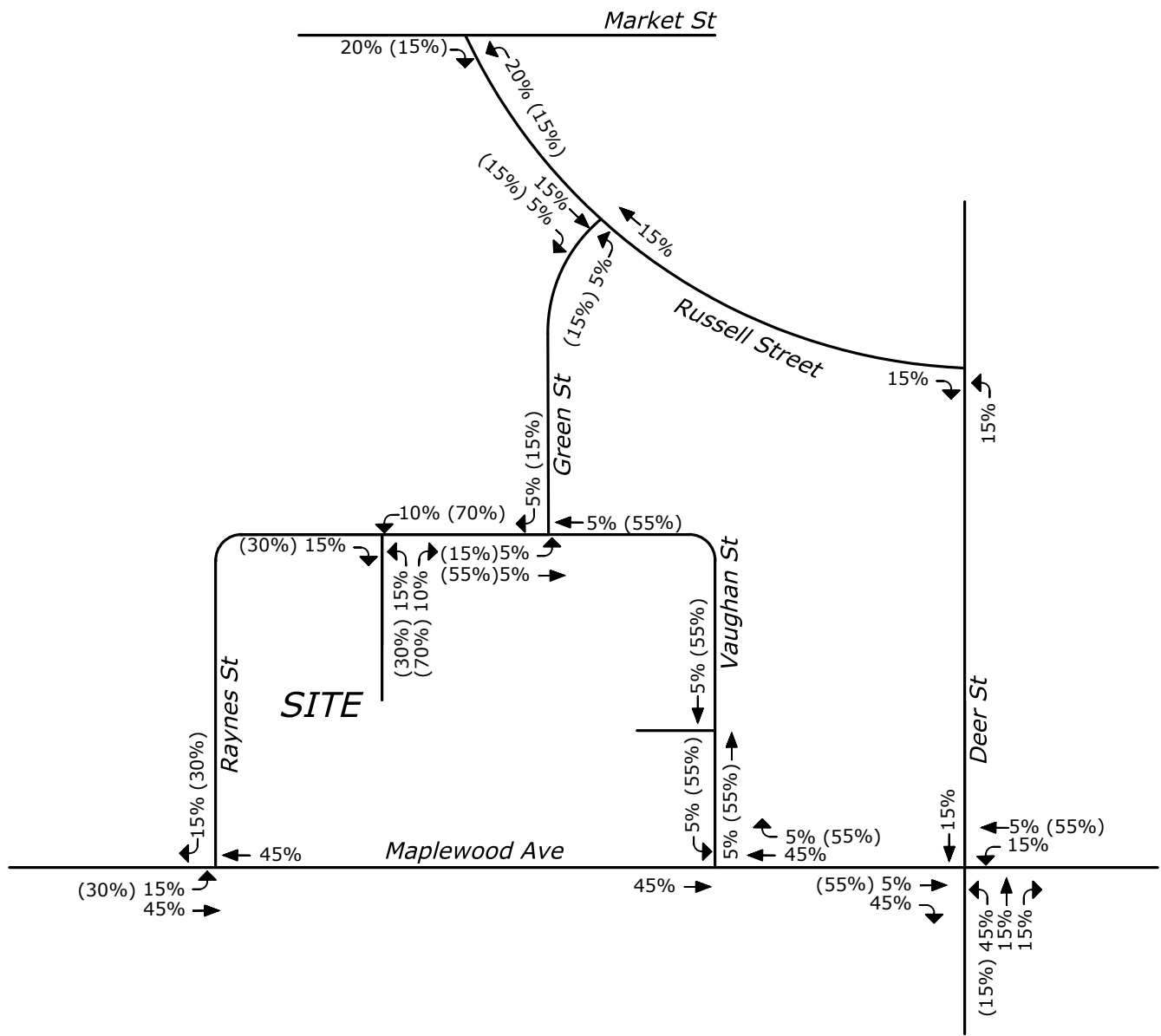
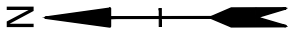


LEGEND



TRAFFIC SIGNAL

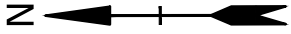
| | |
|--|--|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2030 No Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 3 | |



LEGEND

- XX Office Trips
- (XX) Retail Trips

| | |
|---|--------------------------|
| <p>Proposed Office Building 111 Maplewood Avenue, Portsmouth NH</p> | |
| <p>Trip Distribution</p> | |
| <p>DATE: 03/18/2019</p> | <p>www.tighebond.com</p> |
| <p>SCALE: No Scale</p> | |
| <p>FIGURE 4</p> | |

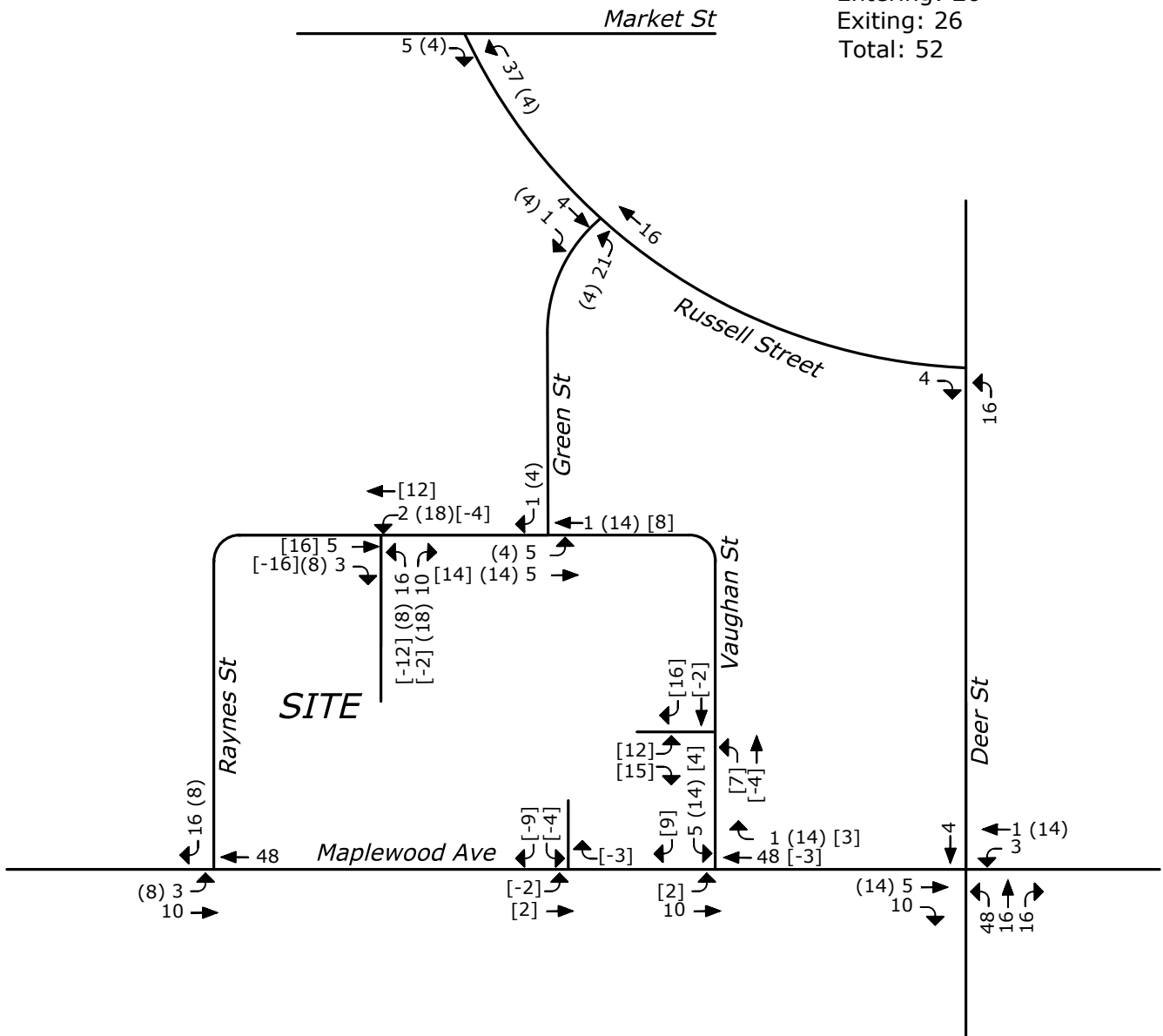


Office Generated Trips

Entering: 23
Exiting: 106
Total: 129


Retail Generated Trips

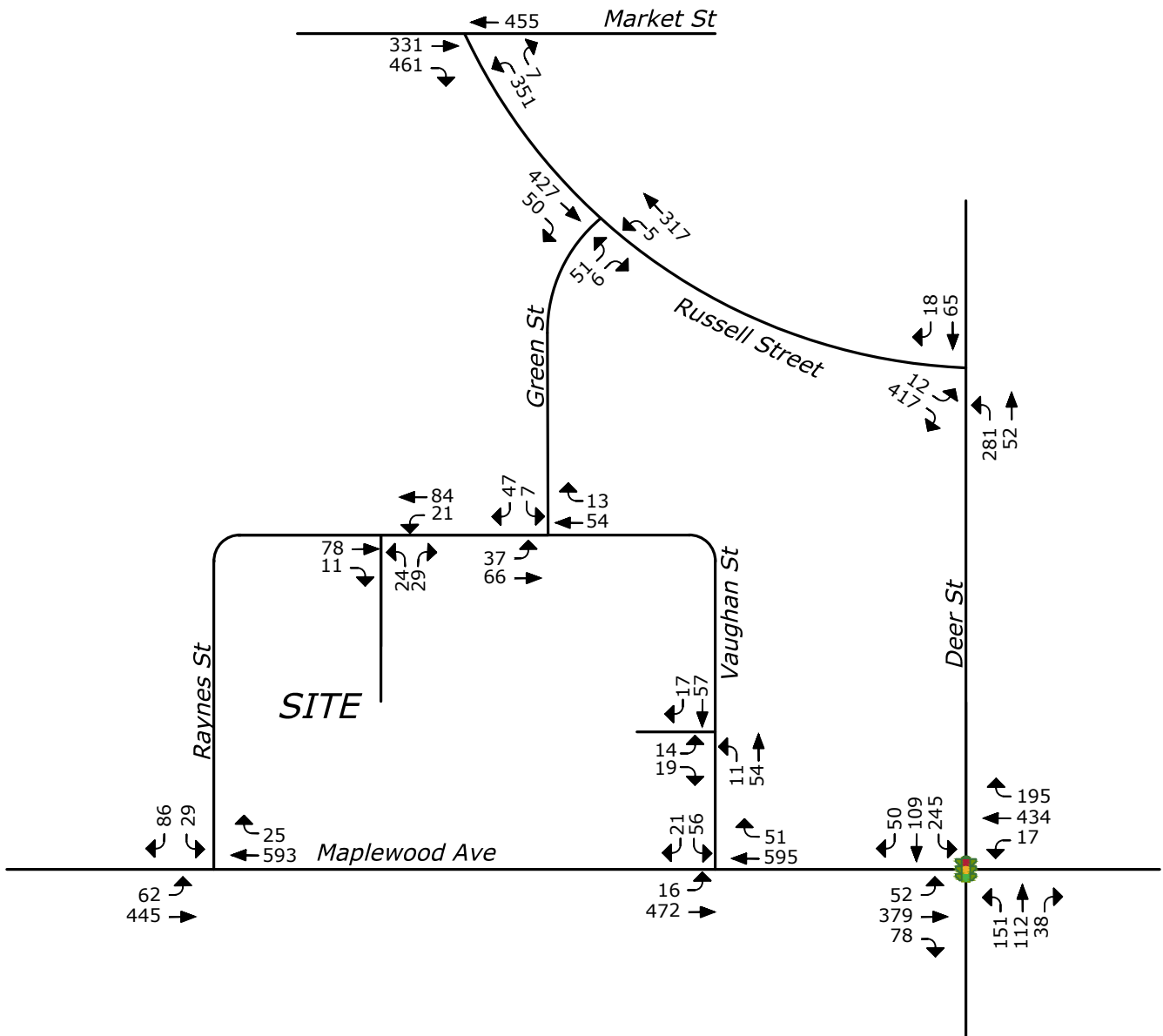
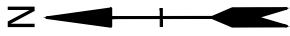
Entering: 26
Exiting: 26
Total: 52



LEGEND

- XX Office Trips
- (XX) Retail Trips
- [XX] Driveway Redistribution

| | |
|---|--|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| Site Generated Trips | |
| DATE: 03/18/2019 |  www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 5 | |

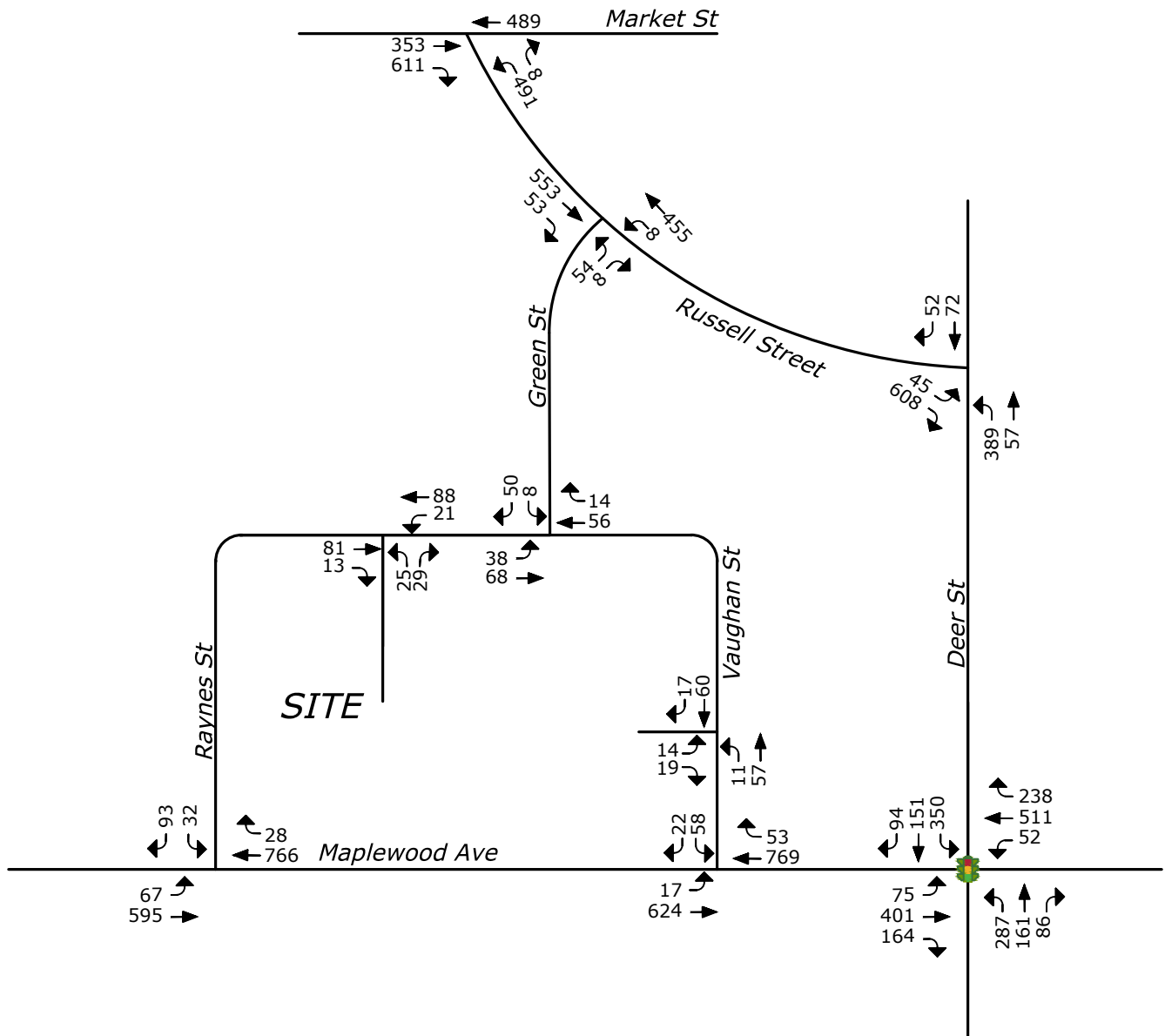
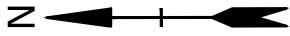


LEGEND



TRAFFIC SIGNAL

| | |
|--|--|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2020 Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 6 | |



LEGEND



TRAFFIC SIGNAL

| | |
|--|--|
| Proposed Office Building 111 Maplewood Avenue, Portsmouth NH | |
| 2030 Build Peak Hour Traffic Volumes | |
| DATE: 03/18/2019 | www.tighebond.com |
| SCALE: No Scale | |
| FIGURE 7 | |

Capacity Analysis Worksheets

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2020 No Build

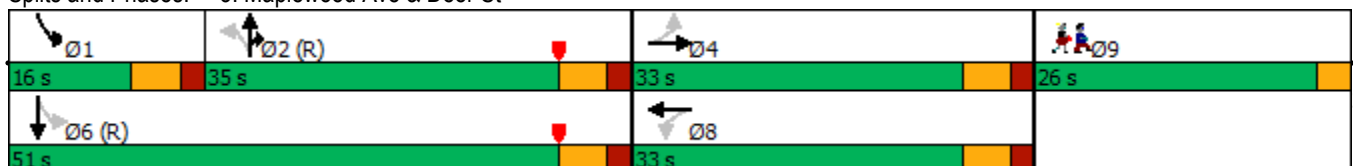


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | ↕ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 103 | 96 | 22 | 224 | 106 | 50 | 14 | 419 | 195 | 52 | 380 | 68 |
| Future Volume (vph) | 103 | 96 | 22 | 224 | 106 | 50 | 14 | 419 | 195 | 52 | 380 | 68 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 334 | 0 | 295 | 205 | 0 | 16 | 482 | 224 | 63 | 546 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | |
| Total Split (s) | 33.0 | 33.0 | | 33.0 | 33.0 | | 35.0 | 35.0 | 35.0 | 16.0 | 51.0 | |
| Total Split (%) | 30.0% | 30.0% | | 30.0% | 30.0% | | 31.8% | 31.8% | 31.8% | 14.5% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | Max | Max | | None | None | | C-Max | C-Max | C-Max | None | C-Max | |
| v/c Ratio | | 1.14 | | 1.27 | 0.43 | | 0.04 | 0.49 | 0.22 | 0.13 | 0.48 | |
| Control Delay | | 134.2 | | 187.5 | 34.5 | | 13.4 | 18.3 | 2.4 | 7.9 | 11.5 | |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 134.2 | | 187.5 | 34.5 | | 13.4 | 18.3 | 2.4 | 7.9 | 11.5 | |
| Queue Length 50th (ft) | | ~274 | | ~264 | 109 | | 5 | 210 | 0 | 15 | 178 | |
| Queue Length 95th (ft) | | #274 | | #340 | 146 | | 16 | 296 | 33 | 28 | 220 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 293 | | 232 | 480 | | 454 | 988 | 998 | 503 | 1138 | |
| Starvation Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 1.14 | | 1.27 | 0.43 | | 0.04 | 0.49 | 0.22 | 0.13 | 0.48 | |

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St



| | |
|-------------------------|------|
| Lane Group | Ø9 |
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Peak Hour Factor | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 26.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 24% |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |
| Intersection Summary | |

HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2020 No Build



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|-------|------|-------|-------|------|------|------|------|-------|-------|------|
| Lane Configurations | | ↕ | | ↖ | ↗ | | ↖ | ↗ | ↖ | ↗ | ↖ | ↗ |
| Traffic Volume (vph) | 103 | 96 | 22 | 224 | 106 | 50 | 14 | 419 | 195 | 52 | 380 | 68 |
| Future Volume (vph) | 103 | 96 | 22 | 224 | 106 | 50 | 14 | 419 | 195 | 52 | 380 | 68 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.99 | | 1.00 | 0.95 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | | 0.98 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1856 | | 1770 | 1891 | | 1711 | 1801 | 1636 | 1711 | 1760 | |
| Flt Permitted | | 0.62 | | 0.51 | 1.00 | | 0.46 | 1.00 | 1.00 | 0.35 | 1.00 | |
| Satd. Flow (perm) | | 1181 | | 947 | 1891 | | 829 | 1801 | 1636 | 629 | 1760 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 156 | 145 | 33 | 295 | 139 | 66 | 16 | 482 | 224 | 63 | 463 | 83 |
| RTOR Reduction (vph) | 0 | 4 | 0 | 0 | 16 | 0 | 0 | 0 | 103 | 0 | 4 | 0 |
| Lane Group Flow (vph) | 0 | 330 | 0 | 295 | 189 | 0 | 16 | 482 | 121 | 63 | 542 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 27.0 | | 27.0 | 27.0 | | 59.2 | 59.2 | 59.2 | 71.0 | 71.0 | |
| Effective Green, g (s) | | 27.0 | | 27.0 | 27.0 | | 59.2 | 59.2 | 59.2 | 71.0 | 71.0 | |
| Actuated g/C Ratio | | 0.25 | | 0.25 | 0.25 | | 0.54 | 0.54 | 0.54 | 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 | | 4.0 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 289 | | 232 | 464 | | 446 | 969 | 880 | 463 | 1136 | |
| v/s Ratio Prot | | | | | 0.10 | | | 0.27 | 0.07 | 0.01 | c0.31 | |
| v/s Ratio Perm | | 0.28 | | c0.31 | | | 0.02 | | | 0.08 | | |
| v/c Ratio | | 1.14 | | 1.27 | 0.41 | | 0.04 | 0.50 | 0.14 | 0.14 | 0.48 | |
| Uniform Delay, d1 | | 41.5 | | 41.5 | 34.8 | | 12.0 | 16.0 | 12.7 | 8.9 | 10.0 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 97.2 | | 151.5 | 0.8 | | 0.2 | 1.8 | 0.3 | 0.1 | 1.4 | |
| Delay (s) | | 138.7 | | 193.0 | 35.6 | | 12.1 | 17.8 | 13.0 | 9.0 | 11.4 | |
| Level of Service | | F | | F | D | | B | B | B | A | B | |
| Approach Delay (s) | | 138.7 | | | 128.5 | | | 16.2 | | | 11.2 | |
| Approach LOS | | F | | | F | | | B | | | B | |

| Intersection Summary | | |
|-----------------------------------|-------|---------------------------|
| HCM 2000 Control Delay | 59.6 | HCM 2000 Level of Service |
| HCM 2000 Volume to Capacity ratio | 0.77 | E |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) |
| Intersection Capacity Utilization | 77.0% | 21.0 |
| Analysis Period (min) | 15 | ICU Level of Service |
| | | D |
| c Critical Lane Group | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 4 | 43 | 39 | 1 | 2 | 4 |
| Future Vol, veh/h | 4 | 43 | 39 | 1 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 6 | 63 | 58 | 1 | 4 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 59 | 0 | - | 0 | 134 |
| Stage 1 | - | - | - | - | 59 |
| Stage 2 | - | - | - | - | 75 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1545 | - | - | - | 860 |
| Stage 1 | - | - | - | - | 964 |
| Stage 2 | - | - | - | - | 948 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1545 | - | - | - | 857 |
| Mov Cap-2 Maneuver | - | - | - | - | 857 |
| Stage 1 | - | - | - | - | 960 |
| Stage 2 | - | - | - | - | 948 |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.6 | 0 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1545 | - | - | - | 951 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.013 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 8.8 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 265 | 52 | 65 | 18 | 12 | 393 |
| Future Vol, veh/h | 265 | 52 | 65 | 18 | 12 | 393 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 294 | 58 | 74 | 20 | 13 | 437 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 94 | 0 | - | 0 | 730 84 |
| Stage 1 | - | - | - | - | 84 - |
| Stage 2 | - | - | - | - | 646 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1500 | - | - | - | 389 975 |
| Stage 1 | - | - | - | - | 939 - |
| Stage 2 | - | - | - | - | 522 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1500 | - | - | - | 310 975 |
| Mov Cap-2 Maneuver | - | - | - | - | 310 - |
| Stage 1 | - | - | - | - | 749 - |
| Stage 2 | - | - | - | - | 522 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 6.7 | 0 | 12.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1500 | - | - | - | 917 |
| HCM Lane V/C Ratio | 0.196 | - | - | - | 0.491 |
| HCM Control Delay (s) | 8 | 0 | - | - | 12.6 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.7 | - | - | - | 2.8 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | R | T | R | L | T |
| Traffic Vol, veh/h | 4 | 9 | 561 | 3 | 2 | 493 |
| Future Vol, veh/h | 4 | 9 | 561 | 3 | 2 | 493 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 58 | 58 | 78 | 78 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 16 | 719 | 4 | 2 | 580 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1305 | 721 | 0 | 0 | 723 |
| Stage 1 | 721 | - | - | - | - |
| Stage 2 | 584 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 177 | 427 | - | - | 879 |
| Stage 1 | 482 | - | - | - | - |
| Stage 2 | 557 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 176 | 427 | - | - | 879 |
| Mov Cap-2 Maneuver | 176 | - | - | - | - |
| Stage 1 | 481 | - | - | - | - |
| Stage 2 | 557 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 18.1 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 297 | 879 |
| HCM Lane V/C Ratio | - | - | 0.075 | 0.003 |
| HCM Control Delay (s) | - | - | 18.1 | 9.1 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 63.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 326 | 6 | 0 | 455 | 331 | 431 |
| Future Vol, veh/h | 326 | 6 | 0 | 455 | 331 | 431 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 402 | 7 | 0 | 641 | 394 | 513 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1035 | 394 | - | 0 | - | 0 |
| Stage 1 | 394 | - | - | - | - | - |
| Stage 2 | 641 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 257 | 655 | 0 | - | - | - |
| Stage 1 | 681 | - | 0 | - | - | - |
| Stage 2 | 525 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 257 | 655 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 257 | - | - | - | - | - |
| Stage 1 | 681 | - | - | - | - | - |
| Stage 2 | 525 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 302.5 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 257 | 655 | - | - |
| HCM Lane V/C Ratio | - | 1.566 | 0.011 | - | - |
| HCM Control Delay (s) | - | 307.9 | 10.6 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 24.4 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 62 | 545 | 25 | 51 | 456 |
| Future Vol, veh/h | 29 | 62 | 545 | 25 | 51 | 456 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 36 | 78 | 681 | 31 | 57 | 512 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1323 | 697 | 0 | 0 | 712 |
| Stage 1 | 697 | - | - | - | - |
| Stage 2 | 626 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 172 | 441 | - | - | 888 |
| Stage 1 | 494 | - | - | - | - |
| Stage 2 | 533 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 157 | 441 | - | - | 888 |
| Mov Cap-2 Maneuver | 157 | - | - | - | - |
| Stage 1 | 450 | - | - | - | - |
| Stage 2 | 533 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 26.4 | 0 | 0.9 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 280 | 888 |
| HCM Lane V/C Ratio | - | - | 0.406 | 0.065 |
| HCM Control Delay (s) | - | - | 26.4 | 9.3 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 1.9 | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 12 | 550 | 33 | 14 | 483 |
| Future Vol, veh/h | 32 | 12 | 550 | 33 | 14 | 483 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 43 | 16 | 696 | 42 | 17 | 575 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1326 | 717 | 0 | 0 | 738 |
| Stage 1 | 717 | - | - | - | - |
| Stage 2 | 609 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 172 | 430 | - | - | 868 |
| Stage 1 | 484 | - | - | - | - |
| Stage 2 | 543 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 167 | 430 | - | - | 868 |
| Mov Cap-2 Maneuver | 167 | - | - | - | - |
| Stage 1 | 470 | - | - | - | - |
| Stage 2 | 543 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 30.3 | 0 | 0.3 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 200 | 868 |
| HCM Lane V/C Ratio | - | - | 0.293 | 0.019 |
| HCM Control Delay (s) | - | - | 30.3 | 9.2 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 1.2 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.4 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 12 | 2 | 4 | 72 | 62 | 16 |
| Future Vol, veh/h | 12 | 2 | 4 | 72 | 62 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 27 | 5 | 5 | 94 | 89 | 23 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 205 | 101 | 112 | 0 | 0 |
| Stage 1 | 101 | - | - | - | - |
| Stage 2 | 104 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 783 | 954 | 1478 | - | - |
| Stage 1 | 923 | - | - | - | - |
| Stage 2 | 920 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 780 | 954 | 1478 | - | - |
| Mov Cap-2 Maneuver | 780 | - | - | - | - |
| Stage 1 | 919 | - | - | - | - |
| Stage 2 | 920 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.7 | 0.4 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1478 | - | 801 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | 0.04 | - | - |
| HCM Control Delay (s) | 7.4 | 0 | 9.7 | - | - |
| HCM Lane LOS | A | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 42 | 7 | 5 | 301 | 403 | 45 |
| Future Vol, veh/h | 42 | 7 | 5 | 301 | 403 | 45 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 72 | 12 | 6 | 354 | 480 | 54 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 873 | 507 | 534 | 0 | - | 0 |
| Stage 1 | 507 | - | - | - | - | - |
| Stage 2 | 366 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 321 | 566 | 1034 | - | - | - |
| Stage 1 | 605 | - | - | - | - | - |
| Stage 2 | 702 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 319 | 566 | 1034 | - | - | - |
| Mov Cap-2 Maneuver | 319 | - | - | - | - | - |
| Stage 1 | 601 | - | - | - | - | - |
| Stage 2 | 702 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 19.1 | 0.1 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1034 | - | 340 | - | - |
| HCM Lane V/C Ratio | 0.006 | - | 0.248 | - | - |
| HCM Control Delay (s) | 8.5 | 0 | 19.1 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | W | T | T | T | T |
| Traffic Vol, veh/h | 7 | 42 | 31 | 13 | 28 | 32 |
| Future Vol, veh/h | 7 | 42 | 31 | 13 | 28 | 32 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 45 | 38 | 16 | 46 | 52 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 190 | 46 | 0 | 0 | 54 | 0 |
| Stage 1 | 46 | - | - | - | - | - |
| Stage 2 | 144 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 799 | 1023 | - | - | 1551 | - |
| Stage 1 | 976 | - | - | - | - | - |
| Stage 2 | 883 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 774 | 1023 | - | - | 1551 | - |
| Mov Cap-2 Maneuver | 774 | - | - | - | - | - |
| Stage 1 | 946 | - | - | - | - | - |
| Stage 2 | 883 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.9 | 0 | 3.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 978 | 1551 |
| HCM Lane V/C Ratio | - | - | 0.054 | 0.03 |
| HCM Control Delay (s) | - | - | 8.9 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH

2020 Build

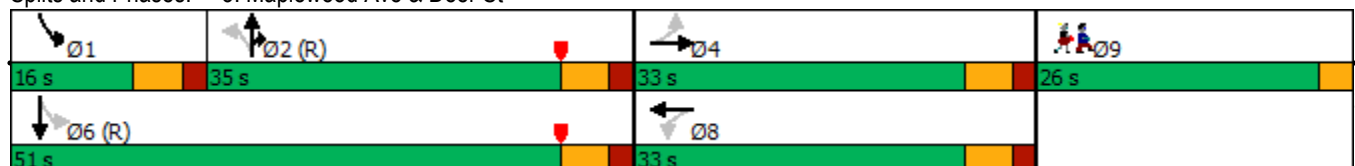


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | ↕ | | ↖ | ↗ | | ↖ | ↗ | ↖ | ↖ | ↗ | ↗ |
| Traffic Volume (vph) | 151 | 112 | 38 | 245 | 109 | 50 | 17 | 434 | 195 | 52 | 379 | 78 |
| Future Volume (vph) | 151 | 112 | 38 | 245 | 109 | 50 | 17 | 434 | 195 | 52 | 379 | 78 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 457 | 0 | 322 | 209 | 0 | 20 | 499 | 224 | 63 | 557 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 10.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 16.0 | 16.0 | 16.0 | 11.0 | 16.0 | |
| Total Split (s) | 33.0 | 33.0 | | 33.0 | 33.0 | | 35.0 | 35.0 | 35.0 | 16.0 | 51.0 | |
| Total Split (%) | 30.0% | 30.0% | | 30.0% | 30.0% | | 31.8% | 31.8% | 31.8% | 14.5% | 46.4% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | Lag | Lag | Lag | Lead | | |
| Lead-Lag Optimize? | | | | | | | Yes | Yes | Yes | Yes | | |
| Recall Mode | None | None | | None | None | | C-Max | C-Max | C-Max | None | C-Max | |
| v/c Ratio | | 1.61 | | 1.41 | 0.44 | | 0.04 | 0.51 | 0.22 | 0.14 | 0.49 | |
| Control Delay | | 319.7 | | 240.2 | 34.9 | | 13.5 | 18.7 | 2.6 | 7.9 | 11.7 | |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | | 319.7 | | 240.2 | 34.9 | | 13.5 | 18.7 | 2.6 | 7.9 | 11.7 | |
| Queue Length 50th (ft) | | ~465 | | ~306 | 113 | | 7 | 220 | 2 | 15 | 183 | |
| Queue Length 95th (ft) | | #430 | | #381 | 149 | | 19 | 309 | 35 | 28 | 226 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 284 | | 229 | 479 | | 450 | 988 | 996 | 492 | 1136 | |
| Starvation Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | | 1.61 | | 1.41 | 0.44 | | 0.04 | 0.51 | 0.22 | 0.13 | 0.49 | |

Intersection Summary

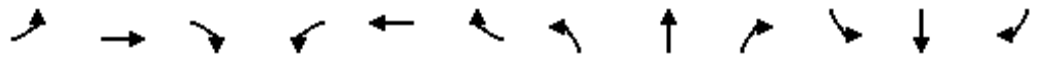
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St



| | |
|-------------------------|------|
| Lane Group | Ø9 |
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Peak Hour Factor | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 26.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 24% |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |
| Intersection Summary | |

HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2020 Build



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|-------|------|-------|-------|------|------|-------|------|-------|-------|------|
| Lane Configurations | | ↔ | | ↖ | ↗ | | ↖ | ↑ | ↗ | ↖ | ↗ | |
| Traffic Volume (vph) | 151 | 112 | 38 | 245 | 109 | 50 | 17 | 434 | 195 | 52 | 379 | 78 |
| Future Volume (vph) | 151 | 112 | 38 | 245 | 109 | 50 | 17 | 434 | 195 | 52 | 379 | 78 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.98 | | 1.00 | 0.95 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | |
| Flt Protected | | 0.98 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1846 | | 1770 | 1893 | | 1711 | 1801 | 1636 | 1711 | 1755 | |
| Flt Permitted | | 0.60 | | 0.50 | 1.00 | | 0.46 | 1.00 | 1.00 | 0.34 | 1.00 | |
| Satd. Flow (perm) | | 1140 | | 933 | 1893 | | 820 | 1801 | 1636 | 607 | 1755 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 229 | 170 | 58 | 322 | 143 | 66 | 20 | 499 | 224 | 63 | 462 | 95 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 15 | 0 | 0 | 0 | 101 | 0 | 4 | 0 |
| Lane Group Flow (vph) | 0 | 452 | 0 | 322 | 194 | 0 | 20 | 499 | 123 | 63 | 553 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Prot | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | 2 | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 27.0 | | 27.0 | 27.0 | | 59.2 | 59.2 | 59.2 | 71.0 | 71.0 | |
| Effective Green, g (s) | | 27.0 | | 27.0 | 27.0 | | 59.2 | 59.2 | 59.2 | 71.0 | 71.0 | |
| Actuated g/C Ratio | | 0.25 | | 0.25 | 0.25 | | 0.54 | 0.54 | 0.54 | 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) | | 279 | | 229 | 464 | | 441 | 969 | 880 | 450 | 1132 | |
| v/s Ratio Prot | | | | | 0.10 | | | c0.28 | 0.08 | 0.01 | c0.32 | |
| v/s Ratio Perm | | c0.40 | | 0.35 | | | 0.02 | | | 0.08 | | |
| v/c Ratio | | 1.62 | | 1.41 | 0.42 | | 0.05 | 0.51 | 0.14 | 0.14 | 0.49 | |
| Uniform Delay, d1 | | 41.5 | | 41.5 | 34.9 | | 12.0 | 16.2 | 12.7 | 9.0 | 10.1 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 295.7 | | 206.8 | 0.6 | | 0.2 | 2.0 | 0.3 | 0.1 | 1.5 | |
| Delay (s) | | 337.2 | | 248.3 | 35.5 | | 12.2 | 18.2 | 13.0 | 9.2 | 11.6 | |
| Level of Service | | F | | F | D | | B | B | B | A | B | |
| Approach Delay (s) | | 337.2 | | | 164.5 | | | 16.5 | | | 11.4 | |
| Approach LOS | | F | | | F | | | B | | | B | |

| Intersection Summary | | |
|-----------------------------------|-------|---------------------------|
| HCM 2000 Control Delay | 110.9 | HCM 2000 Level of Service |
| HCM 2000 Volume to Capacity ratio | 0.88 | F |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) |
| Intersection Capacity Utilization | 83.2% | 21.0 |
| Analysis Period (min) | 15 | ICU Level of Service |
| | | E |
| c Critical Lane Group | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 11 | 54 | 57 | 17 | 14 | 19 |
| Future Vol, veh/h | 11 | 54 | 57 | 17 | 14 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 16 | 79 | 85 | 25 | 28 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 110 | 0 | - | 0 | 209 98 |
| Stage 1 | - | - | - | - | 98 - |
| Stage 2 | - | - | - | - | 111 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1480 | - | - | - | 779 958 |
| Stage 1 | - | - | - | - | 926 - |
| Stage 2 | - | - | - | - | 914 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1480 | - | - | - | 770 958 |
| Mov Cap-2 Maneuver | - | - | - | - | 770 - |
| Stage 1 | - | - | - | - | 916 - |
| Stage 2 | - | - | - | - | 914 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.3 | 0 | 9.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1480 | - | - | - | 868 |
| HCM Lane V/C Ratio | 0.011 | - | - | - | 0.076 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 9.5 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 281 | 52 | 65 | 81 | 12 | 417 |
| Future Vol, veh/h | 281 | 52 | 65 | 81 | 12 | 417 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 312 | 58 | 74 | 92 | 13 | 463 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 166 | 0 | - | 0 | 802 120 |
| Stage 1 | - | - | - | - | 120 - |
| Stage 2 | - | - | - | - | 682 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1412 | - | - | - | 353 931 |
| Stage 1 | - | - | - | - | 905 - |
| Stage 2 | - | - | - | - | 502 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1412 | - | - | - | 273 931 |
| Mov Cap-2 Maneuver | - | - | - | - | 273 - |
| Stage 1 | - | - | - | - | 699 - |
| Stage 2 | - | - | - | - | 502 - |

| Approach | EB | WB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 7 | 0 | 14 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1412 | - | - | - | 872 |
| HCM Lane V/C Ratio | 0.221 | - | - | - | 0.547 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 14 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.8 | - | - | - | 3.4 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 76.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 351 | 7 | 0 | 455 | 331 | 461 |
| Future Vol, veh/h | 351 | 7 | 0 | 455 | 331 | 461 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 433 | 9 | 0 | 641 | 394 | 549 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1035 | 394 | - | 0 | - | 0 |
| Stage 1 | 394 | - | - | - | - | - |
| Stage 2 | 641 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 257 | 655 | 0 | - | - | - |
| Stage 1 | 681 | - | 0 | - | - | - |
| Stage 2 | 525 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 257 | 655 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 257 | - | - | - | - | - |
| Stage 1 | 681 | - | - | - | - | - |
| Stage 2 | 525 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 352.2 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|--------|-------|-----|-----|
| Capacity (veh/h) | - | 257 | 655 | - | - |
| HCM Lane V/C Ratio | - | 1.686 | 0.013 | - | - |
| HCM Control Delay (s) | - | \$ 359 | 10.6 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 27.9 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.6 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 86 | 593 | 25 | 62 | 445 |
| Future Vol, veh/h | 29 | 86 | 593 | 25 | 62 | 445 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 36 | 108 | 741 | 31 | 70 | 500 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1397 | 757 | 0 | 0 | 772 |
| Stage 1 | 757 | - | - | - | - |
| Stage 2 | 640 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 155 | 408 | - | - | 843 |
| Stage 1 | 463 | - | - | - | - |
| Stage 2 | 525 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 137 | 408 | - | - | 843 |
| Mov Cap-2 Maneuver | 137 | - | - | - | - |
| Stage 1 | 410 | - | - | - | - |
| Stage 2 | 525 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 32.2 | 0 | 1.2 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 272 | 843 |
| HCM Lane V/C Ratio | - | - | 0.528 | 0.083 |
| HCM Control Delay (s) | - | - | 32.2 | 9.7 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 2.9 | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 56 | 21 | 595 | 51 | 16 | 472 |
| Future Vol, veh/h | 56 | 21 | 595 | 51 | 16 | 472 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 75 | 28 | 753 | 65 | 19 | 562 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1386 | 786 | 0 | 0 | 818 |
| Stage 1 | 786 | - | - | - | - |
| Stage 2 | 600 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 158 | 392 | - | - | 810 |
| Stage 1 | 449 | - | - | - | - |
| Stage 2 | 548 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 153 | 392 | - | - | 810 |
| Mov Cap-2 Maneuver | 153 | - | - | - | - |
| Stage 1 | 434 | - | - | - | - |
| Stage 2 | 548 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 46.8 | 0 | 0.3 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 184 | 810 |
| HCM Lane V/C Ratio | - | - | 0.558 | 0.024 |
| HCM Control Delay (s) | - | - | 46.8 | 9.6 |
| HCM Lane LOS | - | - | E | A |
| HCM 95th %tile Q(veh) | - | - | 2.9 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | | T | | T |
| Traffic Vol, veh/h | 24 | 29 | 21 | 84 | 78 | 11 |
| Future Vol, veh/h | 24 | 29 | 21 | 84 | 78 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 55 | 66 | 27 | 109 | 111 | 16 |

| Major/Minor | Minor2 | Major1 | | Major2 | |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 282 | 119 | 127 | 0 | 0 |
| Stage 1 | 119 | - | - | - | - |
| Stage 2 | 163 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - |
| Pot Cap-1 Maneuver | 708 | 933 | 1459 | - | - |
| Stage 1 | 906 | - | - | - | - |
| Stage 2 | 866 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 694 | 933 | 1459 | - | - |
| Mov Cap-2 Maneuver | 694 | - | - | - | - |
| Stage 1 | 888 | - | - | - | - |
| Stage 2 | 866 | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.2 | 1.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1459 | - | 807 | - | - |
| HCM Lane V/C Ratio | 0.019 | - | 0.149 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.2 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.5 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 51 | 6 | 6 | 317 | 427 | 50 |
| Future Vol, veh/h | 51 | 6 | 6 | 317 | 427 | 50 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 88 | 10 | 7 | 373 | 508 | 60 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 925 | 538 | 568 | 0 | - | 0 |
| Stage 1 | 538 | - | - | - | - | - |
| Stage 2 | 387 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 299 | 543 | 1004 | - | - | - |
| Stage 1 | 585 | - | - | - | - | - |
| Stage 2 | 686 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 296 | 543 | 1004 | - | - | - |
| Mov Cap-2 Maneuver | 296 | - | - | - | - | - |
| Stage 1 | 580 | - | - | - | - | - |
| Stage 2 | 686 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 21.8 | 0.2 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1004 | - | 311 | - | - |
| HCM Lane V/C Ratio | 0.007 | - | 0.316 | - | - |
| HCM Control Delay (s) | 8.6 | 0 | 21.8 | - | - |
| HCM Lane LOS | A | A | C | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.3 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 7 | 47 | 54 | 13 | 37 | 66 |
| Future Vol, veh/h | 7 | 47 | 54 | 13 | 37 | 66 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 51 | 67 | 16 | 61 | 108 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 305 | 75 | 0 | 0 | 83 |
| Stage 1 | 75 | - | - | - | - |
| Stage 2 | 230 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 687 | 986 | - | - | 1514 |
| Stage 1 | 948 | - | - | - | - |
| Stage 2 | 808 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 657 | 986 | - | - | 1514 |
| Mov Cap-2 Maneuver | 657 | - | - | - | - |
| Stage 1 | 907 | - | - | - | - |
| Stage 2 | 808 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.1 | 0 | 2.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 926 | 1514 |
| HCM Lane V/C Ratio | - | - | 0.063 | 0.04 |
| HCM Control Delay (s) | - | - | 9.1 | 7.5 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2030 No Build



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 239 | 145 | 70 | 329 | 148 | 94 | 49 | 496 | 238 | 75 | 402 | 154 |
| Future Volume (vph) | 239 | 145 | 70 | 329 | 148 | 94 | 49 | 496 | 238 | 75 | 402 | 154 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | 0 | 0 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | | 30 |
| Link Distance (ft) | | 363 | | | 453 | | | 585 | | | | 231 |
| Travel Time (s) | | 9.9 | | | 12.4 | | | 16.0 | | | | 5.3 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 362 | 326 | 0 | 433 | 319 | 0 | 56 | 570 | 274 | 91 | 678 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 28.0 | 28.0 | 11.0 | 25.0 | |
| Total Split (s) | 14.0 | 29.0 | | 14.0 | 29.0 | | 11.0 | 36.0 | 36.0 | 11.0 | 36.0 | |
| Total Split (%) | 15.6% | 32.2% | | 15.6% | 32.2% | | 12.2% | 40.0% | 40.0% | 12.2% | 40.0% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | None | C-Max | |
| v/c Ratio | 1.41 | 0.79 | | 1.62 | 0.75 | | 0.30 | 0.82 | 0.34 | 0.38 | 0.98 | |
| Control Delay | 233.3 | 44.9 | | 315.9 | 40.5 | | 17.7 | 38.7 | 4.2 | 18.3 | 60.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 233.3 | 44.9 | | 315.9 | 40.5 | | 17.7 | 38.7 | 4.2 | 18.3 | 60.7 | |
| Queue Length 50th (ft) | ~205 | 161 | | ~280 | 151 | | 16 | 313 | 0 | 27 | ~439 | |
| Queue Length 95th (ft) | #194 | 162 | | #328 | 185 | | 38 | #492 | 46 | 51 | #573 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 256 | 487 | | 268 | 503 | | 189 | 699 | 803 | 242 | 690 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.41 | 0.67 | | 1.62 | 0.63 | | 0.30 | 0.82 | 0.34 | 0.38 | 0.98 | |

Intersection Summary
 Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90

Lanes, Volumes, Timings
 3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
 2030 No Build

Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated








~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.























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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St

| | | | |
|--|--|--|--|
|  Ø1 |  Ø2 (R) |  Ø3 |  Ø4 |
| 11 s | 36 s | 14 s | 29 s |
|  Ø5 |  Ø6 (R) |  Ø7 |  Ø8 |
| 11 s | 36 s | 14 s | 29 s |

HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2030 No Build

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (vph) | 239 | 145 | 70 | 329 | 148 | 94 | 49 | 496 | 238 | 75 | 402 | 154 |
| Future Volume (vph) | 239 | 145 | 70 | 329 | 148 | 94 | 49 | 496 | 238 | 75 | 402 | 154 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1652 | 1831 | | 1770 | 1871 | | 1711 | 1801 | 1636 | 1711 | 1726 | |
| Flt Permitted | 0.29 | 1.00 | | 0.28 | 1.00 | | 0.12 | 1.00 | 1.00 | 0.18 | 1.00 | |
| Satd. Flow (perm) | 511 | 1831 | | 522 | 1871 | | 213 | 1801 | 1636 | 327 | 1726 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 362 | 220 | 106 | 433 | 195 | 124 | 56 | 570 | 274 | 91 | 490 | 188 |
| RTOR Reduction (vph) | 0 | 20 | 0 | 0 | 27 | 0 | 0 | 0 | 171 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 362 | 306 | 0 | 433 | 292 | 0 | 56 | 570 | 103 | 91 | 664 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | 27.2 | 19.2 | | 27.2 | 19.2 | | 38.5 | 33.8 | 33.8 | 39.1 | 34.1 | |
| Effective Green, g (s) | 27.2 | 19.2 | | 27.2 | 19.2 | | 38.5 | 33.8 | 33.8 | 39.1 | 34.1 | |
| Actuated g/C Ratio | 0.30 | 0.21 | | 0.30 | 0.21 | | 0.43 | 0.38 | 0.38 | 0.43 | 0.38 | |
| 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 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 255 | 390 | | 268 | 399 | | 169 | 676 | 614 | 218 | 653 | |
| v/s Ratio Prot | 0.13 | 0.17 | | c0.14 | 0.16 | | 0.02 | 0.32 | | c0.02 | c0.38 | |
| v/s Ratio Perm | 0.30 | | | c0.34 | | | 0.12 | | 0.06 | 0.16 | | |
| v/c Ratio | 1.42 | 0.78 | | 1.62 | 0.73 | | 0.33 | 0.84 | 0.17 | 0.42 | 1.02 | |
| Uniform Delay, d1 | 29.5 | 33.4 | | 29.4 | 33.0 | | 19.6 | 25.7 | 18.7 | 17.8 | 27.9 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 210.3 | 9.9 | | 293.7 | 7.2 | | 1.2 | 12.2 | 0.6 | 1.3 | 39.4 | |
| Delay (s) | 239.8 | 43.3 | | 323.1 | 40.3 | | 20.8 | 37.9 | 19.3 | 19.1 | 67.3 | |
| Level of Service | F | D | | F | D | | C | D | B | B | E | |
| Approach Delay (s) | | 146.7 | | | 203.1 | | | 31.2 | | | 61.6 | |
| Approach LOS | | F | | | F | | | C | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 105.9 | | | | HCM 2000 Level of Service | | | F | | |
| HCM 2000 Volume to Capacity ratio | | | 1.22 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 90.0 | | | | Sum of lost time (s) | | | 24.0 | | |
| Intersection Capacity Utilization | | | 84.8% | | | | ICU Level of Service | | | E | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 4 | 46 | 42 | 1 | 2 | 4 |
| Future Vol, veh/h | 4 | 46 | 42 | 1 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 6 | 68 | 63 | 1 | 4 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 64 | 0 | - | 0 | 144 |
| Stage 1 | - | - | - | - | 64 |
| Stage 2 | - | - | - | - | 80 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1538 | - | - | - | 849 |
| Stage 1 | - | - | - | - | 959 |
| Stage 2 | - | - | - | - | 943 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1538 | - | - | - | 846 |
| Mov Cap-2 Maneuver | - | - | - | - | 846 |
| Stage 1 | - | - | - | - | 955 |
| Stage 2 | - | - | - | - | 943 |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.6 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1538 | - | - | - | 943 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.013 |
| HCM Control Delay (s) | 7.4 | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 27.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 373 | 57 | 72 | 52 | 45 | 584 |
| Future Vol, veh/h | 373 | 57 | 72 | 52 | 45 | 584 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 414 | 63 | 82 | 59 | 50 | 649 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 141 | 0 | - | 0 | 1003 112 |
| Stage 1 | - | - | - | - | 112 - |
| Stage 2 | - | - | - | - | 891 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1442 | - | - | - | 268 941 |
| Stage 1 | - | - | - | - | 913 - |
| Stage 2 | - | - | - | - | 401 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1442 | - | - | - | 188 941 |
| Mov Cap-2 Maneuver | - | - | - | - | 188 - |
| Stage 1 | - | - | - | - | 641 - |
| Stage 2 | - | - | - | - | 401 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.4 | 0 | 47.1 |
| HCM LOS | | | E |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1442 | - | - | - | 731 |
| HCM Lane V/C Ratio | 0.287 | - | - | - | 0.956 |
| HCM Control Delay (s) | 8.5 | 0 | - | - | 47.1 |
| HCM Lane LOS | A | A | - | - | E |
| HCM 95th %tile Q(veh) | 1.2 | - | - | - | 14.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | W | T | T | T | T |
| Traffic Vol, veh/h | 4 | 9 | 736 | 3 | 2 | 646 |
| Future Vol, veh/h | 4 | 9 | 736 | 3 | 2 | 646 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 58 | 58 | 78 | 78 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 16 | 944 | 4 | 2 | 760 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1710 | 946 | 0 | 0 | 948 |
| Stage 1 | 946 | - | - | - | - |
| Stage 2 | 764 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 100 | 317 | - | - | 724 |
| Stage 1 | 377 | - | - | - | - |
| Stage 2 | 460 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 100 | 317 | - | - | 724 |
| Mov Cap-2 Maneuver | 100 | - | - | - | - |
| Stage 1 | 375 | - | - | - | - |
| Stage 2 | 460 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 26.5 | 0 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 190 | 724 |
| HCM Lane V/C Ratio | - | - | 0.118 | 0.003 |
| HCM Control Delay (s) | - | - | 26.5 | 10 |
| HCM Lane LOS | - | - | D | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0 |

Intersection

Int Delay, s/veh 171.6

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 466 | 8 | 0 | 489 | 353 | 581 |
| Future Vol, veh/h | 466 | 8 | 0 | 489 | 353 | 581 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 575 | 10 | 0 | 689 | 420 | 692 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1109 | 420 | 0 |
| Stage 1 | 420 | - | - |
| Stage 2 | 689 | - | - |
| Critical Hdwy | 6.42 | 6.22 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - |
| Pot Cap-1 Maneuver | ~ 232 | 633 | 0 |
| Stage 1 | 663 | - | 0 |
| Stage 2 | ~ 498 | - | 0 |
| Platoon blocked, % | | | - |
| Mov Cap-1 Maneuver | ~ 232 | 633 | - |
| Mov Cap-2 Maneuver | ~ 232 | - | - |
| Stage 1 | 663 | - | - |
| Stage 2 | ~ 498 | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 699.7 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 232 | 633 | - | - |
| HCM Lane V/C Ratio | - | 2.48 | 0.016 | - | - |
| HCM Control Delay (s) | - | 711.5 | 10.8 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 47.5 | 0 | - | - |

Notes

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 69 | 718 | 28 | 56 | 606 |
| Future Vol, veh/h | 32 | 69 | 718 | 28 | 56 | 606 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 40 | 86 | 898 | 35 | 63 | 681 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1723 | 916 | 0 | 0 | 933 |
| Stage 1 | 916 | - | - | - | - |
| Stage 2 | 807 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 98 | 330 | - | - | 734 |
| Stage 1 | 390 | - | - | - | - |
| Stage 2 | 439 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 84 | 330 | - | - | 734 |
| Mov Cap-2 Maneuver | 84 | - | - | - | - |
| Stage 1 | 336 | - | - | - | - |
| Stage 2 | 439 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 69.5 | 0 | 0.9 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 171 | 734 |
| HCM Lane V/C Ratio | - | - | 0.738 | 0.086 |
| HCM Control Delay (s) | - | - | 69.5 | 10.4 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 4.6 | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 34 | 13 | 724 | 35 | 15 | 635 |
| Future Vol, veh/h | 34 | 13 | 724 | 35 | 15 | 635 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 45 | 17 | 916 | 44 | 18 | 756 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1730 | 938 | 0 | 0 | 960 |
| Stage 1 | 938 | - | - | - | - |
| Stage 2 | 792 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 97 | 321 | - | - | 717 |
| Stage 1 | 381 | - | - | - | - |
| Stage 2 | 446 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 93 | 321 | - | - | 717 |
| Mov Cap-2 Maneuver | 93 | - | - | - | - |
| Stage 1 | 365 | - | - | - | - |
| Stage 2 | 446 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|-----|
| HCM Control Delay, s | 67.7 | 0 | 0.2 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|------|-------|
| Capacity (veh/h) | - | - | 116 | 717 |
| HCM Lane V/C Ratio | - | - | 0.54 | 0.025 |
| HCM Control Delay (s) | - | - | 67.7 | 10.1 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 2.6 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | W | | | W | W | |
| Traffic Vol, veh/h | 13 | 2 | 4 | 76 | 65 | 18 |
| Future Vol, veh/h | 13 | 2 | 4 | 76 | 65 | 18 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 30 | 5 | 5 | 99 | 93 | 26 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 215 | 106 | 119 | 0 | - | 0 |
| Stage 1 | 106 | - | - | - | - | - |
| Stage 2 | 109 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 773 | 948 | 1469 | - | - | - |
| Stage 1 | 918 | - | - | - | - | - |
| Stage 2 | 916 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 770 | 948 | 1469 | - | - | - |
| Mov Cap-2 Maneuver | 770 | - | - | - | - | - |
| Stage 1 | 914 | - | - | - | - | - |
| Stage 2 | 916 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.8 | 0.4 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1469 | - | 790 | - | - |
| HCM Lane V/C Ratio | 0.004 | - | 0.043 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 9.8 | - | - |
| HCM Lane LOS | A | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 45 | 8 | 8 | 439 | 529 | 48 |
| Future Vol, veh/h | 45 | 8 | 8 | 439 | 529 | 48 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 78 | 14 | 9 | 516 | 630 | 57 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1193 | 659 | 687 | 0 | - | 0 |
| Stage 1 | 659 | - | - | - | - | - |
| Stage 2 | 534 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 206 | 464 | 907 | - | - | - |
| Stage 1 | 515 | - | - | - | - | - |
| Stage 2 | 588 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 203 | 464 | 907 | - | - | - |
| Mov Cap-2 Maneuver | 203 | - | - | - | - | - |
| Stage 1 | 508 | - | - | - | - | - |
| Stage 2 | 588 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 32.1 | 0.2 | 0 |
| HCM LOS | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 907 | - | 222 | - | - |
| HCM Lane V/C Ratio | 0.01 | - | 0.412 | - | - |
| HCM Control Delay (s) | 9 | 0 | 32.1 | - | - |
| HCM Lane LOS | A | A | D | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 1.9 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 45 | 33 | 14 | 29 | 34 |
| Future Vol, veh/h | 8 | 45 | 33 | 14 | 29 | 34 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 48 | 41 | 17 | 48 | 56 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 202 | 50 | 0 | 0 | 58 | 0 |
| Stage 1 | 50 | - | - | - | - | - |
| Stage 2 | 152 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 787 | 1018 | - | - | 1546 | - |
| Stage 1 | 972 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 762 | 1018 | - | - | 1546 | - |
| Mov Cap-2 Maneuver | 762 | - | - | - | - | - |
| Stage 1 | 941 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.9 | 0 | 3.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 969 | 1546 |
| HCM Lane V/C Ratio | - | - | 0.059 | 0.031 |
| HCM Control Delay (s) | - | - | 8.9 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2030 Build

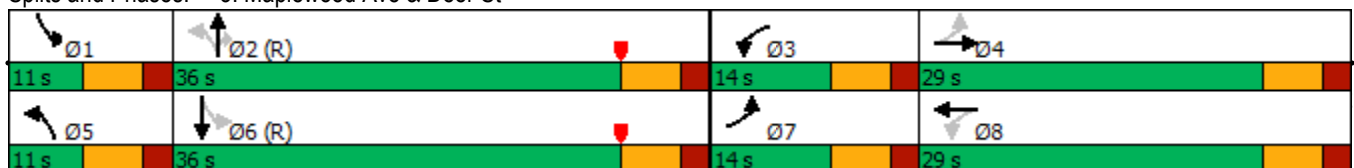


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 287 | 161 | 86 | 350 | 151 | 94 | 52 | 511 | 238 | 75 | 401 | 164 |
| Future Volume (vph) | 287 | 161 | 86 | 350 | 151 | 94 | 52 | 511 | 238 | 75 | 401 | 164 |
| Peak Hour Factor | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 435 | 374 | 0 | 461 | 323 | 0 | 60 | 587 | 274 | 91 | 689 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | 2 | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | |
| Minimum Split (s) | 11.0 | 29.0 | | 11.0 | 29.0 | | 11.0 | 28.0 | 28.0 | 11.0 | 25.0 | |
| Total Split (s) | 14.0 | 29.0 | | 14.0 | 29.0 | | 11.0 | 36.0 | 36.0 | 11.0 | 36.0 | |
| Total Split (%) | 15.6% | 32.2% | | 15.6% | 32.2% | | 12.2% | 40.0% | 40.0% | 12.2% | 40.0% | |
| Yellow Time (s) | 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 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | None | C-Max | |
| v/c Ratio | 1.60 | 0.85 | | 1.83 | 0.71 | | 0.33 | 0.86 | 0.35 | 0.44 | 1.03 | |
| Control Delay | 308.5 | 48.6 | | 409.1 | 37.3 | | 18.9 | 43.2 | 4.2 | 21.4 | 73.8 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 308.5 | 48.6 | | 409.1 | 37.3 | | 18.9 | 43.2 | 4.2 | 21.4 | 73.8 | |
| Queue Length 50th (ft) | ~261 | 183 | | ~335 | 148 | | 18 | 327 | 0 | 29 | ~463 | |
| Queue Length 95th (ft) | #253 | 186 | | #405 | 188 | | 40 | #514 | 46 | 51 | #585 | |
| Internal Link Dist (ft) | | 283 | | | 373 | | | 505 | | | 151 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | 272 | 487 | | 252 | 502 | | 183 | 680 | 788 | 205 | 668 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 1.60 | 0.77 | | 1.83 | 0.64 | | 0.33 | 0.86 | 0.35 | 0.44 | 1.03 | |

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St



HCM Signalized Intersection Capacity Analysis K0076-19 111 Maplewood Ave, Portsmouth HH
 3: Maplewood Ave & Deer St 2030 Build



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|------|-------|-------|------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 287 | 161 | 86 | 350 | 151 | 94 | 52 | 511 | 238 | 75 | 401 | 164 |
| Future Volume (vph) | 287 | 161 | 86 | 350 | 151 | 94 | 52 | 511 | 238 | 75 | 401 | 164 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 13 | 13 | 12 | 14 | 14 | 11 | 11 | 13 | 11 | 11 | 11 |
| Total Lost time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1652 | 1824 | | 1770 | 1873 | | 1711 | 1801 | 1636 | 1711 | 1722 | |
| Flt Permitted | 0.32 | 1.00 | | 0.22 | 1.00 | | 0.12 | 1.00 | 1.00 | 0.15 | 1.00 | |
| Satd. Flow (perm) | 548 | 1824 | | 414 | 1873 | | 220 | 1801 | 1636 | 269 | 1722 | |
| Peak-hour factor, PHF | 0.66 | 0.66 | 0.66 | 0.76 | 0.76 | 0.76 | 0.87 | 0.87 | 0.87 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 435 | 244 | 130 | 461 | 199 | 124 | 60 | 587 | 274 | 91 | 489 | 200 |
| RTOR Reduction (vph) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 174 | 0 | 16 | 0 |
| Lane Group Flow (vph) | 435 | 352 | 0 | 461 | 298 | 0 | 60 | 587 | 100 | 91 | 673 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | Perm | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | 28.7 | 20.7 | | 28.7 | 20.7 | | 37.1 | 32.8 | 32.8 | 37.5 | 33.0 | |
| Effective Green, g (s) | 28.7 | 20.7 | | 28.7 | 20.7 | | 37.1 | 32.8 | 32.8 | 37.5 | 33.0 | |
| Actuated g/C Ratio | 0.32 | 0.23 | | 0.32 | 0.23 | | 0.41 | 0.36 | 0.36 | 0.42 | 0.37 | |
| 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 | 4.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 272 | 419 | | 252 | 430 | | 161 | 656 | 596 | 184 | 631 | |
| v/s Ratio Prot | 0.14 | 0.19 | | c0.16 | 0.16 | | 0.02 | 0.33 | | c0.02 | c0.39 | |
| v/s Ratio Perm | 0.37 | | | c0.42 | | | 0.14 | | 0.06 | 0.18 | | |
| v/c Ratio | 1.60 | 0.84 | | 1.83 | 0.69 | | 0.37 | 0.89 | 0.17 | 0.49 | 1.07 | |
| Uniform Delay, d1 | 29.0 | 33.1 | | 28.0 | 31.7 | | 20.9 | 27.0 | 19.4 | 19.2 | 28.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 286.3 | 13.7 | | 388.4 | 5.1 | | 1.5 | 17.1 | 0.6 | 2.1 | 55.0 | |
| Delay (s) | 315.3 | 46.8 | | 416.3 | 36.9 | | 22.3 | 44.1 | 20.0 | 21.3 | 83.5 | |
| Level of Service | F | D | | F | D | | C | D | B | C | F | |
| Approach Delay (s) | | 191.2 | | | 260.0 | | | 35.5 | | | 76.2 | |
| Approach LOS | | F | | | F | | | D | | | E | |

| Intersection Summary | | |
|-----------------------------------|-------|-----------------------------|
| HCM 2000 Control Delay | 136.8 | HCM 2000 Level of Service F |
| HCM 2000 Volume to Capacity ratio | 1.36 | |
| Actuated Cycle Length (s) | 90.0 | Sum of lost time (s) 24.0 |
| Intersection Capacity Utilization | 88.4% | ICU Level of Service E |
| Analysis Period (min) | 15 | |
| c Critical Lane Group | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↔ | ↔ | | ↔ | |
| Traffic Vol, veh/h | 11 | 57 | 60 | 17 | 14 | 19 |
| Future Vol, veh/h | 11 | 57 | 60 | 17 | 14 | 19 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 68 | 68 | 67 | 67 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 16 | 84 | 90 | 25 | 28 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 115 | 0 | - | 0 | 219 |
| Stage 1 | - | - | - | - | 103 |
| Stage 2 | - | - | - | - | 116 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1474 | - | - | - | 769 |
| Stage 1 | - | - | - | - | 921 |
| Stage 2 | - | - | - | - | 909 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1474 | - | - | - | 761 |
| Mov Cap-2 Maneuver | - | - | - | - | 761 |
| Stage 1 | - | - | - | - | 911 |
| Stage 2 | - | - | - | - | 909 |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.2 | 0 | 9.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1474 | - | - | - | 860 |
| HCM Lane V/C Ratio | 0.011 | - | - | - | 0.077 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 9.5 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 33.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 389 | 57 | 72 | 52 | 45 | 608 |
| Future Vol, veh/h | 389 | 57 | 72 | 52 | 45 | 608 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 88 | 88 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 432 | 63 | 82 | 59 | 50 | 676 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 141 | 0 | - | 0 | 1039 112 |
| Stage 1 | - | - | - | - | 112 - |
| Stage 2 | - | - | - | - | 927 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1442 | - | - | - | 255 941 |
| Stage 1 | - | - | - | - | 913 - |
| Stage 2 | - | - | - | - | 385 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1442 | - | - | - | 176 941 |
| Mov Cap-2 Maneuver | - | - | - | - | 176 - |
| Stage 1 | - | - | - | - | 629 - |
| Stage 2 | - | - | - | - | 385 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 7.5 | 0 | 57.8 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1442 | - | - | - | 724 |
| HCM Lane V/C Ratio | 0.3 | - | - | - | 1.002 |
| HCM Control Delay (s) | 8.6 | 0 | - | - | 57.8 |
| HCM Lane LOS | A | A | - | - | F |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 16.6 |

| Intersection | | | | | | |
|--------------------------|-------|------|------|------|------|------|
| Int Delay, s/veh | 190.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | ↘ | ↗ | | ↑ | ↑ | ↗ |
| Traffic Vol, veh/h | 491 | 8 | 0 | 489 | 353 | 611 |
| Future Vol, veh/h | 491 | 8 | 0 | 489 | 353 | 611 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | 0 | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 81 | 81 | 71 | 71 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 606 | 10 | 0 | 689 | 420 | 727 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1109 | 420 | - | 0 | - | 0 |
| Stage 1 | 420 | - | - | - | - | - |
| Stage 2 | 689 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | ~ 232 | 633 | 0 | - | - | - |
| Stage 1 | 663 | - | 0 | - | - | - |
| Stage 2 | ~ 498 | - | 0 | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | ~ 232 | 633 | - | - | - | - |
| Mov Cap-2 Maneuver | ~ 232 | - | - | - | - | - |
| Stage 1 | 663 | - | - | - | - | - |
| Stage 2 | ~ 498 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|-------|----|----|
| HCM Control Delay, s | 758.4 | 0 | 0 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-----|-------|-------|-----|-----|
| Capacity (veh/h) | - | 232 | 633 | - | - |
| HCM Lane V/C Ratio | - | 2.613 | 0.016 | - | - |
| HCM Control Delay (s) | - | 770.6 | 10.8 | - | - |
| HCM Lane LOS | - | F | B | - | - |
| HCM 95th %tile Q(veh) | - | 51.2 | 0 | - | - |

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

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 32 | 93 | 766 | 28 | 67 | 595 |
| Future Vol, veh/h | 32 | 93 | 766 | 28 | 67 | 595 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 89 | 89 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 40 | 116 | 958 | 35 | 75 | 669 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1795 | 976 | 0 | 0 | 993 |
| Stage 1 | 976 | - | - | - | - |
| Stage 2 | 819 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 88 | 305 | - | - | 696 |
| Stage 1 | 365 | - | - | - | - |
| Stage 2 | 433 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 73 | 305 | - | - | 696 |
| Mov Cap-2 Maneuver | 73 | - | - | - | - |
| Stage 1 | 303 | - | - | - | - |
| Stage 2 | 433 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 106.7 | 0 | 1.1 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 168 | 696 |
| HCM Lane V/C Ratio | - | - | 0.93 | 0.108 |
| HCM Control Delay (s) | - | - | 106.7 | 10.8 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 7 | 0.4 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 9.7 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 58 | 22 | 769 | 53 | 17 | 624 |
| Future Vol, veh/h | 58 | 22 | 769 | 53 | 17 | 624 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 75 | 75 | 79 | 79 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 77 | 29 | 973 | 67 | 20 | 743 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1790 | 1007 | 0 | 0 | 1040 |
| Stage 1 | 1007 | - | - | - | - |
| Stage 2 | 783 | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 89 | 292 | - | - | 669 |
| Stage 1 | 353 | - | - | - | - |
| Stage 2 | 450 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 84 | 292 | - | - | 669 |
| Mov Cap-2 Maneuver | 84 | - | - | - | - |
| Stage 1 | 335 | - | - | - | - |
| Stage 2 | 450 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-------|----|-----|
| HCM Control Delay, s | 171.9 | 0 | 0.3 |
| HCM LOS | F | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 104 | 669 |
| HCM Lane V/C Ratio | - | - | 1.026 | 0.03 |
| HCM Control Delay (s) | - | - | 171.9 | 10.5 |
| HCM Lane LOS | - | - | F | B |
| HCM 95th %tile Q(veh) | - | - | 6.5 | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | | T | | T |
| Traffic Vol, veh/h | 25 | 29 | 21 | 88 | 81 | 13 |
| Future Vol, veh/h | 25 | 29 | 21 | 88 | 81 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 44 | 44 | 77 | 77 | 70 | 70 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 57 | 66 | 27 | 114 | 116 | 19 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 294 | 126 | 135 | 0 | - | 0 |
| Stage 1 | 126 | - | - | - | - | - |
| Stage 2 | 168 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 697 | 924 | 1449 | - | - | - |
| Stage 1 | 900 | - | - | - | - | - |
| Stage 2 | 862 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 683 | 924 | 1449 | - | - | - |
| Mov Cap-2 Maneuver | 683 | - | - | - | - | - |
| Stage 1 | 882 | - | - | - | - | - |
| Stage 2 | 862 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.4 | 1.5 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1449 | - | 794 | - | - |
| HCM Lane V/C Ratio | 0.019 | - | 0.155 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.4 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.5 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.2 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | T | | T | | T | |
| Traffic Vol, veh/h | 54 | 8 | 8 | 455 | 553 | 53 |
| Future Vol, veh/h | 54 | 8 | 8 | 455 | 553 | 53 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 58 | 58 | 85 | 85 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 93 | 14 | 9 | 535 | 658 | 63 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1243 | 690 | 721 | 0 | - | 0 |
| Stage 1 | 690 | - | - | - | - | - |
| Stage 2 | 553 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 193 | 445 | 881 | - | - | - |
| Stage 1 | 498 | - | - | - | - | - |
| Stage 2 | 576 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 190 | 445 | 881 | - | - | - |
| Mov Cap-2 Maneuver | 190 | - | - | - | - | - |
| Stage 1 | 491 | - | - | - | - | - |
| Stage 2 | 576 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 40.2 | 0.2 | 0 |
| HCM LOS | E | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 881 | - | 205 | - | - |
| HCM Lane V/C Ratio | 0.011 | - | 0.521 | - | - |
| HCM Control Delay (s) | 9.1 | 0 | 40.2 | - | - |
| HCM Lane LOS | A | A | E | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 2.7 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | T | | | T |
| Traffic Vol, veh/h | 8 | 50 | 56 | 14 | 38 | 68 |
| Future Vol, veh/h | 8 | 50 | 56 | 14 | 38 | 68 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 93 | 93 | 81 | 81 | 61 | 61 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 54 | 69 | 17 | 62 | 111 |

| Major/Minor | Minor1 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|-------|---|
| Conflicting Flow All | 313 | 78 | 0 | 0 | 86 | 0 |
| Stage 1 | 78 | - | - | - | - | - |
| Stage 2 | 235 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 680 | 983 | - | - | 1510 | - |
| Stage 1 | 945 | - | - | - | - | - |
| Stage 2 | 804 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 650 | 983 | - | - | 1510 | - |
| Mov Cap-2 Maneuver | 650 | - | - | - | - | - |
| Stage 1 | 903 | - | - | - | - | - |
| Stage 2 | 804 | - | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 9.2 | 0 | 2.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 918 | 1510 |
| HCM Lane V/C Ratio | - | - | 0.068 | 0.041 |
| HCM Control Delay (s) | - | - | 9.2 | 7.5 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 |

APPENDIX I

Raw Traffic Data
(June 2021)

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 1
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Raynes Avenue
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Eastbound | | | | Raynes Avenue Westbound | | | |
|------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------|------|------|-------|-------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 69 | 5 | 0 | 2 | 84 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 4 |
| 11:15 AM | 0 | 0 | 87 | 0 | 0 | 4 | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 12 |
| 11:30 AM | 0 | 0 | 93 | 2 | 0 | 7 | 102 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 7 |
| 11:45 AM | 0 | 0 | 72 | 2 | 0 | 8 | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 4 |
| 12:00 PM | 1 | 0 | 89 | 7 | 0 | 4 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 11 |
| 12:15 PM | 0 | 0 | 66 | 1 | 0 | 3 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 |
| 12:30 PM | 0 | 0 | 63 | 2 | 0 | 13 | 101 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 5 |
| 12:45 PM | 0 | 0 | 89 | 5 | 0 | 9 | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 5 |

| MID PEAK HOUR 11:15 AM to 12:15 PM | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Eastbound | | | | Raynes Avenue Westbound | | | |
|---|-----------------------------|-------------|-------------|-------------|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------------|-------------|-------------|-------------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 1 | 0 | 341 | 11 | 0 | 23 | 379 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 0 | 34 |
| PHF | 0.91 | | | | 0.92 | | | | 0.00 | | | | 0.81 | | | |
| HV % | 0.0% | 0.0% | 1.2% | 0.0% | 0.0% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 1
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Raynes Avenue
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F



HEAVY VEHICLES

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Eastbound | | | | Raynes Avenue Westbound | | | |
|------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------|------|------|-------|-------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 1 | 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 |
| 12:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:15 AM to 12:15 PM <i>PHF</i> | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Eastbound | | | | Raynes Avenue Westbound | | | |
|---|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-------------|------|------|-------|-------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.50 | | | | 0.25 | | | | 0.00 | | | | 0.00 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 1
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Raynes Avenue
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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PEDESTRIANS & BICYCLES

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Eastbound | | | | Raynes Avenue Westbound | | | |
|------------|-----------------------------|------|-------|-----|-----------------------------|------|-------|-----|-----------|------|-------|-----|-------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 11:45 AM | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 12:00 PM | 0 | 3 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:15 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:30 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 12:45 PM | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |

| MID PEAK HOUR 11:15 AM to 12:15 PM | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Eastbound | | | | Raynes Avenue Westbound | | | |
|---|-----------------------------|------|-------|-----|-----------------------------|------|-------|-----|-----------|------|-------|-----|-------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 5 | 0 | 1 | 0 | 9 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 2
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Vaughan Street & Drive
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
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 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Drive Eastbound | | | | Vaughan Street Westbound | | | |
|------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------|------|------|-------|--------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 72 | 5 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 11:15 AM | 0 | 0 | 86 | 2 | 0 | 0 | 92 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 |
| 11:30 AM | 0 | 0 | 94 | 6 | 0 | 3 | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 11:45 AM | 0 | 0 | 73 | 9 | 0 | 3 | 88 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 |
| 12:00 PM | 0 | 0 | 94 | 10 | 0 | 0 | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| 12:15 PM | 0 | 1 | 69 | 8 | 0 | 3 | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 12:30 PM | 0 | 0 | 61 | 6 | 0 | 13 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 |
| 12:45 PM | 0 | 0 | 94 | 10 | 0 | 3 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 |

| MID PEAK HOUR 11:15 AM to 12:15 PM | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Drive Eastbound | | | | Vaughan Street Westbound | | | |
|---------------------------------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------|------|------|-------|--------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 347 | 27 | 0 | 6 | 389 | 3 | 0 | 0 | 0 | 2 | 0 | 10 | 0 | 4 |
| PHF | 0.90 | | | | 0.93 | | | | 0.50 | | | | 0.88 | | | |
| HV % | 0.0% | 0.0% | 1.2% | 0.0% | 0.0% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 2
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Vaughan Street & Drive
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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 www.BostonTrafficData.com

HEAVY VEHICLES

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Drive Eastbound | | | | Vaughan Street Westbound | | | |
|------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------|------|------|-------|--------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 1 | 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 |
| 12:45 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:15 AM to 12:15 PM <i>PHF</i> | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Drive Eastbound | | | | Vaughan Street Westbound | | | |
|---|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------|------|------|-------|--------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.50 | | | | 0.25 | | | | 0.00 | | | | 0.00 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 2
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Vaughan Street & Drive
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PEDESTRIANS & BICYCLES

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Drive Eastbound | | | | Vaughan Street Westbound | | | |
|------------|-----------------------------|------|-------|-----|-----------------------------|------|-------|-----|-----------------|------|-------|-----|--------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 4 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 8 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| 11:45 AM | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| 12:00 PM | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 1 |
| 12:15 PM | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 4 |
| 12:30 PM | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 15 |
| 12:45 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 4 |

| MID PEAK HOUR 11:15 AM to 12:15 PM | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Drive Eastbound | | | | Vaughan Street Westbound | | | |
|---|-----------------------------|------|-------|-----|-----------------------------|------|-------|-----|-----------------|------|-------|-----|--------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 5 | 0 | 3 | 0 | 9 | 0 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 17 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 3
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Deer Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 2 | 62 | 43 | 0 | 14 | 70 | 10 | 0 | 4 | 4 | 1 | 0 | 34 | 6 | 10 |
| 11:15 AM | 0 | 1 | 69 | 33 | 0 | 15 | 72 | 7 | 0 | 9 | 5 | 2 | 0 | 28 | 7 | 9 |
| 11:30 AM | 0 | 3 | 86 | 36 | 0 | 17 | 89 | 4 | 0 | 8 | 5 | 0 | 0 | 46 | 5 | 6 |
| 11:45 AM | 0 | 1 | 63 | 41 | 0 | 13 | 71 | 5 | 0 | 5 | 3 | 2 | 0 | 27 | 7 | 14 |
| 12:00 PM | 0 | 0 | 81 | 37 | 0 | 25 | 76 | 6 | 0 | 6 | 2 | 3 | 0 | 35 | 9 | 17 |
| 12:15 PM | 0 | 1 | 60 | 43 | 0 | 14 | 78 | 5 | 0 | 4 | 5 | 2 | 0 | 22 | 8 | 13 |
| 12:30 PM | 0 | 3 | 52 | 50 | 0 | 15 | 71 | 11 | 0 | 5 | 7 | 2 | 0 | 27 | 9 | 10 |
| 12:45 PM | 0 | 4 | 90 | 27 | 0 | 19 | 67 | 8 | 0 | 4 | 4 | 2 | 0 | 33 | 8 | 10 |

| MID PEAK HOUR 11:15 AM to 12:15 PM | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|---|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 5 | 299 | 147 | 0 | 70 | 308 | 22 | 0 | 28 | 15 | 7 | 0 | 136 | 28 | 46 |
| PHF | 0.90 | | | | 0.91 | | | | 0.78 | | | | 0.86 | | | |
| HV % | 0.0% | 0.0% | 1.0% | 1.4% | 0.0% | 1.4% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.2% | 0.0% | 2.2% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 3
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Deer Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

HEAVY VEHICLES

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|------------|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 11:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| 12:00 PM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |

| MID PEAK HOUR 11:00 AM to 12:00 PM <i>PHF</i> | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|---|-----------------------------|------|------|-------|-----------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 1 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 1 |
| | 1.00 | | | | 0.38 | | | | 0.25 | | | | 0.42 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 3
 Location: Portsmouth, NH
 Street 1: Maplewood Avenue
 Street 2: Deer Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F



PEDESTRIANS & BICYCLES

| Start Time | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|------------|-----------------------------|------|-------|-----|-----------------------------|------|-------|-----|-----------------------|------|-------|-----|-----------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 8 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 10 |
| 11:15 AM | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 9 |
| 11:30 AM | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 11:45 AM | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 12:00 PM | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 6 |
| 12:15 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 12:30 PM | 0 | 1 | 0 | 5 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 10 |
| 12:45 PM | 0 | 1 | 0 | 13 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 9 |

| MID PEAK HOUR 11:15 AM to 12:15 PM | Maplewood Avenue Northbound | | | | Maplewood Avenue Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|---|-----------------------------|------|-------|-----|-----------------------------|------|-------|-----|-----------------------|------|-------|-----|-----------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 4 | 0 | 4 | 0 | 8 | 0 | 5 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 20 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 4
 Location: Portsmouth, NH
 Street 1: Deer Street
 Street 2: Russell Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Northbound | | | | Russell Street Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|------------|------------|------|------|-------|---------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 51 | 0 | 31 | 21 | 0 | 0 | 0 | 11 | 8 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 31 | 15 | 0 | 0 | 0 | 19 | 4 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 49 | 0 | 37 | 13 | 0 | 0 | 0 | 30 | 5 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 44 | 0 | 33 | 19 | 0 | 0 | 0 | 17 | 8 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 37 | 0 | 29 | 24 | 0 | 0 | 0 | 27 | 5 |
| 12:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 42 | 1 | 41 | 17 | 0 | 0 | 0 | 15 | 7 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 40 | 0 | 49 | 17 | 0 | 0 | 0 | 14 | 4 |
| 12:45 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 45 | 0 | 27 | 14 | 0 | 0 | 0 | 18 | 4 |

| MID PEAK HOUR 11:30 AM to 12:30 PM | Northbound | | | | Russell Street Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|---|-------------|------|------|-------|---------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 172 | 1 | 140 | 73 | 0 | 0 | 0 | 89 | 25 |
| PHF | 0.00 | | | | 0.89 | | | | 0.91 | | | | 0.81 | | | |
| HV % | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.9% | 0.0% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% | 1.1% | 12.0% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 4
 Location: Portsmouth, NH
 Street 1: Deer Street
 Street 2: Russell Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

HEAVY VEHICLES

| Start Time | Northbound | | | | Russell Street Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|------------|------------|------|------|-------|---------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:00 AM to 12:00 PM <i>PHF</i> | Northbound | | | | Russell Street Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|---|-------------|------|------|-------|---------------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 3 |
| | 0.00 | | | | 0.42 | | | | 0.50 | | | | 0.42 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 4
 Location: Portsmouth, NH
 Street 1: Deer Street
 Street 2: Russell Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
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 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PEDESTRIANS & BICYCLES

| Start Time | Northbound | | | | Russell Street Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|------------|------------|------|-------|-----|---------------------------|------|-------|-----|-----------------------|------|-------|-----|-----------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 1 | 0 | 6 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 9 | 0 | 0 | 0 | 8 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 9 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 6 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 8 |

| MID PEAK HOUR 11:30 AM to 12:30 PM | Northbound | | | | Russell Street Southbound | | | | Deer Street Eastbound | | | | Deer Street Westbound | | | |
|---|------------|------|-------|-----|---------------------------|------|-------|-----|-----------------------|------|-------|-----|-----------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 2 | 0 | 33 | 0 | 1 | 0 | 29 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 5
 Location: Portsmouth, NH
 Street 1: Vaughan Street
 Street 2: Green Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Vaughan Street Northbound | | | | Vaughan Street Southbound | | | | Eastbound | | | | Green Street Westbound | | | |
|------------|---------------------------|------|------|-------|---------------------------|------|------|-------|-----------|------|------|-------|------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 4 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 11:15 AM | 0 | 0 | 1 | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 |
| 11:30 AM | 1 | 0 | 5 | 2 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 11:45 AM | 0 | 0 | 8 | 3 | 3 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 |
| 12:00 PM | 0 | 0 | 8 | 1 | 2 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 |
| 12:15 PM | 1 | 0 | 10 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 12:30 PM | 1 | 0 | 9 | 5 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 12:45 PM | 0 | 0 | 10 | 2 | 2 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |

| MID PEAK HOUR 12:00 PM to 1:00 PM | Vaughan Street Northbound | | | | Vaughan Street Southbound | | | | Eastbound | | | | Green Street Westbound | | | |
|--|---------------------------|------|------|-------|---------------------------|------|------|-------|-----------|------|------|-------|------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 2 | 0 | 37 | 8 | 6 | 6 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 10 |
| <i>PHF</i> | 0.78 | | | | 0.62 | | | | 0.00 | | | | 0.67 | | | |
| <i>HV %</i> | 0.0% | 0.0% | 2.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 5
 Location: Portsmouth, NH
 Street 1: Vaughan Street
 Street 2: Green Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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HEAVY VEHICLES

| Start Time | Vaughan Street Northbound | | | | Vaughan Street Southbound | | | | Eastbound | | | | Green Street Westbound | | | |
|------------|---------------------------|------|------|-------|---------------------------|------|------|-------|-----------|------|------|-------|------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 12:00 PM to 1:00 PM <i>PHF</i> | Vaughan Street Northbound | | | | Vaughan Street Southbound | | | | Eastbound | | | | Green Street Westbound | | | |
|--|---------------------------|------|------|-------|---------------------------|------|------|-------|-------------|------|------|-------|------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.25 | | | | 0.00 | | | | 0.00 | | | | 0.00 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 5
 Location: Portsmouth, NH
 Street 1: Vaughan Street
 Street 2: Green Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F



PEDESTRIANS & BICYCLES

| Start Time | Vaughan Street Northbound | | | | Vaughan Street Southbound | | | | Eastbound | | | | Green Street Westbound | | | |
|------------|---------------------------|------|-------|-----|---------------------------|------|-------|-----|-----------|------|-------|-----|------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 11:30 AM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |

| MID PEAK HOUR 12:00 PM to 1:00 PM | Vaughan Street Northbound | | | | Vaughan Street Southbound | | | | Eastbound | | | | Green Street Westbound | | | |
|--|---------------------------|------|-------|-----|---------------------------|------|-------|-----|-----------|------|-------|-----|------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 6
 Location: Portsmouth, NH
 Street 1: Russell Street
 Street 2: Green Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Russell Street Northbound | | | | Russell Street Southbound | | | | Green Street Eastbound | | | | Westbound | | | |
|------------|---------------------------|------|------|-------|---------------------------|------|------|-------|------------------------|------|------|-------|-----------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 40 | 0 | 0 | 0 | 43 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 34 | 0 | 0 | 0 | 33 | 5 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 2 | 37 | 0 | 0 | 0 | 48 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 1 | 36 | 0 | 0 | 0 | 45 | 4 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 2 | 35 | 0 | 0 | 0 | 43 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 2 | 42 | 0 | 0 | 0 | 39 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 51 | 0 | 0 | 0 | 42 | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 6 | 26 | 0 | 0 | 0 | 43 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:45 AM to 12:45 PM | Russell Street Northbound | | | | Russell Street Southbound | | | | Green Street Eastbound | | | | Westbound | | | |
|---|---------------------------|------|------|-------|---------------------------|------|------|-------|------------------------|------|------|-------|-------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 5 | 164 | 0 | 0 | 0 | 169 | 13 | 0 | 7 | 0 | 2 | 0 | 0 | 0 | 0 |
| PHF | 0.83 | | | | 0.93 | | | | 0.75 | | | | 0.00 | | | |
| HV % | 0.0% | 0.0% | 3.0% | 0.0% | 0.0% | 0.0% | 3.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 6
 Location: Portsmouth, NH
 Street 1: Russell Street
 Street 2: Green Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

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 www.BostonTrafficData.com

HEAVY VEHICLES

| Start Time | Russell Street Northbound | | | | Russell Street Southbound | | | | Green Street Eastbound | | | | Westbound | | | |
|------------|---------------------------|------|------|-------|---------------------------|------|------|-------|------------------------|------|------|-------|-----------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:30 AM to 12:30 PM <i>PHF</i> | Russell Street Northbound | | | | Russell Street Southbound | | | | Green Street Eastbound | | | | Westbound | | | |
|---|---------------------------|------|------|-------|---------------------------|------|------|-------|------------------------|------|------|-------|-------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.63 | | | | 0.42 | | | | 0.00 | | | | 0.00 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 6
 Location: Portsmouth, NH
 Street 1: Russell Street
 Street 2: Green Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F



PEDESTRIANS & BICYCLES

| Start Time | Russell Street Northbound | | | | Russell Street Southbound | | | | Green Street Eastbound | | | | Westbound | | | |
|------------|---------------------------|------|-------|-----|---------------------------|------|-------|-----|------------------------|------|-------|-----|-----------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 12:15 PM | 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 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:45 AM to 12:45 PM | Russell Street Northbound | | | | Russell Street Southbound | | | | Green Street Eastbound | | | | Westbound | | | |
|---|---------------------------|------|-------|-----|---------------------------|------|-------|-----|------------------------|------|-------|-----|-----------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 7
 Location: Portsmouth, NH
 Street 1: Market Street
 Street 2: Russell Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

BOSTON TRAFFIC DATA

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 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

| Start Time | Russell Street Northbound | | | | Southbound | | | | Market Street Eastbound | | | | Market Street Westbound | | | |
|------------|---------------------------|------|------|-------|------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 38 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 44 | 0 | 0 | 67 | 0 |
| 11:15 AM | 0 | 34 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 93 | 38 | 0 | 0 | 43 | 0 |
| 11:30 AM | 0 | 36 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 122 | 51 | 0 | 0 | 58 | 0 |
| 11:45 AM | 0 | 35 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | 49 | 0 | 0 | 75 | 0 |
| 12:00 PM | 0 | 34 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 107 | 45 | 0 | 1 | 56 | 0 |
| 12:15 PM | 0 | 39 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 104 | 40 | 0 | 1 | 65 | 0 |
| 12:30 PM | 0 | 50 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | 46 | 0 | 0 | 57 | 0 |
| 12:45 PM | 0 | 25 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 44 | 0 | 0 | 58 | 0 |

| MID PEAK HOUR 11:30 AM to 12:30 PM | Russell Street Northbound | | | | Southbound | | | | Market Street Eastbound | | | | Market Street Westbound | | | |
|---|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------------|-------------|-------------|-------------|-------------------------|-------------|-------------|-------------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 144 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 443 | 185 | 0 | 2 | 254 | 0 |
| PHF | 0.88 | | | | 0.00 | | | | 0.91 | | | | 0.85 | | | |
| HV % | 0.0% | 3.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.2% | 2.7% | 0.0% | 0.0% | 2.0% | 0.0% |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTD #: Location 7
 Location: Portsmouth, NH
 Street 1: Market Street
 Street 2: Russell Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

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HEAVY VEHICLES

| Start Time | Russell Street Northbound | | | | Southbound | | | | Market Street Eastbound | | | | Market Street Westbound | | | |
|------------|---------------------------|------|------|-------|------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| 11:00 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 12:15 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 |
| 12:30 PM | 0 | 1 | 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 | 1 | 3 | 0 | 0 | 0 | 0 |

| MID PEAK HOUR 11:45 AM to 12:45 PM <i>PHF</i> | Russell Street Northbound | | | | Southbound | | | | Market Street Eastbound | | | | Market Street Westbound | | | |
|---|---------------------------|------|------|-------|------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right |
| | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 5 | 0 |
| | 0.75 | | | | 0.00 | | | | 0.50 | | | | 0.31 | | | |

Client: Matt Stoutz
 Project #: 699_001_TB
 BTM #: Location 7
 Location: Portsmouth, NH
 Street 1: Market Street
 Street 2: Russell Street
 Count Date: 6/12/2021
 Day of Week: Saturday
 Weather: Clouds & Sun, 70°F

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PEDESTRIANS & BICYCLES

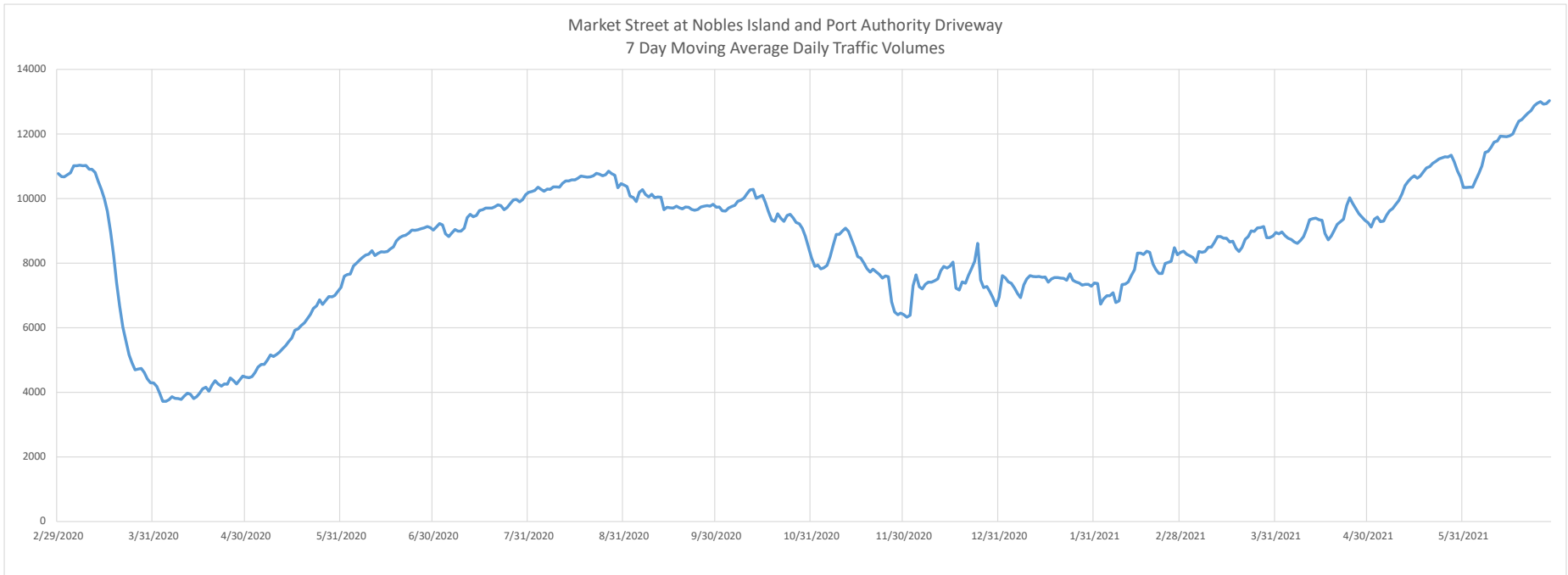
| Start Time | Russell Street Northbound | | | | Southbound | | | | Market Street Eastbound | | | | Market Street Westbound | | | |
|------------|---------------------------|------|-------|-----|------------|------|-------|-----|-------------------------|------|-------|-----|-------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| 11:00 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 1 |
| 11:15 AM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 11:30 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 11:45 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 |
| 12:00 PM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 |
| 12:15 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 12:45 PM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

| MID PEAK HOUR 11:30 AM to 12:30 PM | Russell Street Northbound | | | | Southbound | | | | Market Street Eastbound | | | | Market Street Westbound | | | |
|---|---------------------------|------|-------|-----|------------|------|-------|-----|-------------------------|------|-------|-----|-------------------------|------|-------|-----|
| | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED | Left | Thru | Right | PED |
| | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 0 | 10 |

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

APPENDIX J

Market Street at Nobles Island
Continuous Count Station Data
(February 2020 to June 2021)



Source: City of Portsmouth



December 3, 2020

Eben Tormey
Project Manager
XSS Hotels

Will Serve Letter for 1 Raynes Ave Portsmouth, NH 03801

Hi Eben,

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

Unitil hereby confirms natural gas is available on Raynes Ave to supply the proposed future development.

If you have any questions, please contact me at 603-534-2379.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave MacLean", is written over a light blue circular watermark.

Dave MacLean
Senior Business Development Rep



T 603.294.5261

M 603.534.2379

F 603.294.5264

Email macleand@unitil.com



December 3, 2020

Eben Tormey
Project Manager
XSS Hotels

Will Serve Letter for 31 Raynes Ave Portsmouth, NH 03801

Hi Eben,

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

Unitil hereby confirms natural gas is available on Raynes Ave to supply the proposed future development.

If you have any questions, please contact me at 603-534-2379.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave MacLean", is written over a light blue circular watermark.

Dave MacLean
Senior Business Development Rep



T 603.294.5261

M 603.534.2379

F 603.294.5264

Email macleand@unitil.com

March 16, 2021

City of Portsmouth Planning Board

GREEN BUILDING STATEMENT

Re: Proposed Mixed-Use Development, Raynes Avenue, Portsmouth, NH

The core and shell of the proposed mixed-use buildings at Raynes Avenue are being designed to meet or exceed current Energy Code requirements. A U.S. Department of Energy "COMcheck" will be submitted with the building permit application.

Currently the State of New Hampshire has adopted the 2015 International Energy Conservation Code with amendments, and the design of the new building will be built to current best practices and will exceed these requirements when appropriate.

- Foundation system: Cast in place concrete with continuous rigid insulation installed to depths required by the energy code. Continuous insulation to be provided under the concrete slab on grade for 2 feet along the exterior wall.
- Exterior walls: Continuous insulation outside the framing system and the continuous air barrier, to provide better overall thermal performance. Exterior skin of building to be a combination of brick, wood siding panels and metal wall panels that provide an air space in front of the insulation to allow for moisture management.
- Exterior windows: Thermally broken aluminum framing for common spaces and vinyl windows at apartment and hotel units. All glazing to be insulated, high-performance type to provide enhanced thermal performance and solar control.
- Roofing system: Light colored membrane roofing system over continuous rigid insulation that exceeds the base energy code requirements.
- HVAC systems: Apartment and hotel units to consist of high-efficiency, variable refrigerant flow, split system heat pumps. Ventilation to be provided by high-efficiency DX gas, dedicated outdoor units to provide fresh air to apartment and hotel units and common spaces. Bathroom exhaust to run through energy recovery heat exchanger to preheat incoming makeup air. Domestic hot water to be provided by high efficiency condensing boilers with variable frequency pumps. Apartment and hotel units to have individual temperature controls and common spaces to have digital controls with occupancy sensors.
- Plumbing: All fixtures to be low flow.
- Lighting: Exterior lighting to be LED cutoff fixtures for energy efficiency and to minimize light pollution. All interior lighting to be LED throughout using less than 1 watt / sf. Occupancy sensors to be utilized as required by code.
- Landscaping: Local species that are drought tolerant to be incorporated into plantings list.

Sincerely,



Christopher J. Lizotte AIA, NCARB, LEED AP
Senior Associate - Architecture and Engineering



City of Portsmouth, New Hampshire

Site Plan Application Checklist

This site plan application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. The checklist is required to be completed and uploaded to the Site Plan application in the City's online permitting system. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. 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 Responsibilities (Section 2.5.2): Applicable fees are due upon application submittal along with required attachments. The application shall be complete as submitted and provide adequate information for evaluation of the proposed site development. Waiver requests must be submitted in writing with appropriate justification.

Name of Applicant: North Mill Pond Holdings, LLC Date Submitted: May 19, 2021

Application # (in City's online permitting): LU 21-54

Site Address: Raynes Avenue Map: 123 Lot: 10, 12, 13 & 14

| Application Requirements | | | |
|-------------------------------------|--|--|---------------------|
| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page or Plan Sheet/Note #) | Waiver Requested |
| <input checked="" type="checkbox"/> | Complete application form submitted via the City's web-based permitting program (2.5.2.1(2.5.2.3A)) | Enclosed | N/A |
| <input checked="" type="checkbox"/> | All application documents, plans, supporting documentation and other materials uploaded to the application form in viewpoint in digital Portable Document Format (PDF). One hard copy of all plans and materials shall be submitted to the Planning Department by the published deadline. (2.5.2.8) | Enclosed | N/A |

| Site Plan Review Application Required Information | | | |
|---|---|---|---------------------|
| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
| <input checked="" type="checkbox"/> | Statement that lists and describes "green" building components and systems. (2.5.3.1B) | Enclosed | |
| <input checked="" type="checkbox"/> | Existing and proposed gross floor area and dimensions of all buildings and statement of uses and floor area for each floor. (2.5.3.1C) | Site Plan Sheet C-102 | N/A |
| <input checked="" type="checkbox"/> | Tax map and lot number, and current zoning of all parcels under Site Plan Review. (2.5.3.1D) | Site Plan Sheet C-102 | N/A |

| Site Plan Review Application Required Information | | | |
|--|---|--|-----------------------------|
| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
| <input checked="" type="checkbox"/> | Owner's name, address, telephone number, and signature. Name, address, and telephone number of applicant if different from owner. (2.5.3.1E) | Enclosed Existing Conditions Plan Sheet 1 of 3 | N/A |
| <input checked="" type="checkbox"/> | Names and addresses (including Tax Map and Lot number and zoning districts) of all direct abutting property owners (including properties located across abutting streets) and holders of existing conservation, preservation or agricultural preservation restrictions affecting the subject property. (2.5.3.1F) | Existing Conditions Plan Sheets | N/A |
| <input checked="" type="checkbox"/> | Names, addresses and telephone numbers of all professionals involved in the site plan design. (2.5.3.1G) | Cover Sheet | N/A |
| <input checked="" type="checkbox"/> | List of reference plans. (2.5.3.1H) | Existing Conditions Plan Sheet 1 of 3 | N/A |
| <input checked="" type="checkbox"/> | List of names and contact information of all public or private utilities servicing the site. (2.5.3.1I) | Utilities Plan Sheet C-104 | N/A |

| Site Plan Specifications | | | |
|-------------------------------------|---|--|-----------------------------|
| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
| <input checked="" type="checkbox"/> | Full size plans shall not be larger than 22 inches by 34 inches with match lines as required, unless approved by the Planning Director.. (2.5.4.1A) | Required on all plan sheets | N/A |
| <input checked="" type="checkbox"/> | Scale: Not less than 1 inch = 60 feet and a graphic bar scale shall be included on all plans. (2.5.4.1B) | Required on all plan sheets | N/A |
| <input checked="" type="checkbox"/> | GIS data should be referenced to the coordinate system New Hampshire State Plane, NAD83 (1996), with units in feet. (2.5.4.1C) | Existing Conditions Plan Sheet C-101 | N/A |
| <input checked="" type="checkbox"/> | Plans shall be drawn to scale and stamped by a NH licensed civil engineer. (2.5.4.1D) | Required on all plan sheets | N/A |
| <input checked="" type="checkbox"/> | Wetlands shall be delineated by a NH certified wetlands scientist and so stamped. (2.5.4.1E) | Existing Conditions Plan Sheet C-101 | N/A |
| <input checked="" type="checkbox"/> | Title (name of development project), north point, scale, legend. (2.5.4.2A) | Required on all plan sheets | N/A |
| <input checked="" type="checkbox"/> | Date plans first submitted, date and explanation of revisions. (2.5.4.2B) | Required on all plan sheets | N/A |
| <input checked="" type="checkbox"/> | Individual plan sheet title that clearly describes the information that is displayed. (2.5.4.2C) | Required on all plan sheets | N/A |
| <input checked="" type="checkbox"/> | Source and date of data displayed on the plan. (2.5.4.2D) | Required on all plan sheets | N/A |

Site Plan Specifications – Required Exhibits and Data

| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
|-------------------------------------|--|---|---------------------|
| <input checked="" type="checkbox"/> | <p>1. Existing Conditions: (2.5.4.3A)</p> <ul style="list-style-type: none"> • Surveyed plan of site showing existing natural and built features; • Existing building footprints and gross floor area; • Existing parking areas and number of parking spaces provided; • Zoning district boundaries; • Existing, required, and proposed dimensional zoning requirements including building and open space coverage, yards and/or setbacks, and dwelling units per acre; • Existing impervious and disturbed areas; • Limits and type of existing vegetation; • Wetland delineation, wetland function and value assessment (including vernal pools); • SFHA, 100-year flood elevation line and BFE data, as required. | Existing Conditions Plan Sheets | |
| <input checked="" type="checkbox"/> | <p>2. Buildings and Structures: (2.5.4.3B)</p> <ul style="list-style-type: none"> • Plan view: Use, size, dimensions, footings, overhangs, 1st fl. elevation; • Elevations: Height, massing, placement, materials, lighting, façade treatments; • Total Floor Area; • Number of Usable Floors; • Gross floor area by floor and use. | Site Plan Sheets C-102, C-102.1 | |
| <input checked="" type="checkbox"/> | <p>3. Access and Circulation: (2.5.4.3C)</p> <ul style="list-style-type: none"> • Location/width of access ways within site; • Location of curbing, right of ways, edge of pavement and sidewalks; • Location, type, size and design of traffic signing (pavement markings); • Names/layout of existing abutting streets; • Driveway curb cuts for abutting prop. and public roads; • If subdivision; Names of all roads, right of way lines and easements noted; • AASHTO truck turning templates, description of minimum vehicle allowed being a WB-50 (unless otherwise approved by TAC). | Site Plan Sheets C-102, C-102.1 | |
| <input checked="" type="checkbox"/> | <p>4. Parking and Loading: (2.5.4.3D)</p> <ul style="list-style-type: none"> • Location of off street parking/loading areas, landscaped areas/buffers; • Parking Calculations (# required and the # provided). | Site Plan Sheets C-102, C-102.1 | |
| <input checked="" type="checkbox"/> | <p>5. Water Infrastructure: (2.5.4.3E)</p> <ul style="list-style-type: none"> • Size, type and location of water mains, shut-offs, hydrants & Engineering data; • Location of wells and monitoring wells (include protective radii). | Utilities Plan Sheet C-104 | |
| <input checked="" type="checkbox"/> | <p>6. Sewer Infrastructure: (2.5.4.3F)</p> <ul style="list-style-type: none"> • Size, type and location of sanitary sewage facilities & Engineering data, including any onsite temporary facilities during construction period. | Utilities Plan Sheet C-104 | |

| | | | |
|-------------------------------------|--|---------------------------------------|--|
| <input checked="" type="checkbox"/> | 7. Utilities: (2.5.4.3G) <ul style="list-style-type: none"> The size, type and location of all above & below ground utilities; Size type and location of generator pads, transformers and other fixtures. | Utilities Plan Sheet C-104 | |
| <input checked="" type="checkbox"/> | 8. Solid Waste Facilities: (2.5.4.3H) <ul style="list-style-type: none"> The size, type and location of solid waste facilities. | Site Plan Sheet C-102.1 | |
| <input checked="" type="checkbox"/> | 9. Storm water Management: (2.5.4.3I) <ul style="list-style-type: none"> The location, elevation and layout of all storm-water drainage. The location of onsite snow storage areas and/or proposed off-site snow removal provisions. Location and containment measures for any salt storage facilities Location of proposed temporary and permanent material storage locations and distance from wetlands, water bodies, and stormwater structures. | Grading and Drainage Plan Sheet C-103 | |
| <input checked="" type="checkbox"/> | 10. Outdoor Lighting: (2.5.4.3J) <ul style="list-style-type: none"> Type and placement of all lighting (exterior of building, parking lot and any other areas of the site) and photometric plan. | Photometrics Plan | |
| <input checked="" type="checkbox"/> | 11. Indicate where dark sky friendly lighting measures have been implemented. (10.1) | Photometrics Plan | |
| <input checked="" type="checkbox"/> | 12. Landscaping: (2.5.4.3K) <ul style="list-style-type: none"> Identify all undisturbed area, existing vegetation and that which is to be retained; Location of any irrigation system and water source. | Landscaping Plan Sheets L-101 | |
| <input checked="" type="checkbox"/> | 13. Contours and Elevation: (2.5.4.3L) <ul style="list-style-type: none"> Existing/Proposed contours (2 foot minimum) and finished grade elevations. | Grading and Drainage Plan Sheet C-103 | |
| <input checked="" type="checkbox"/> | 14. Open Space: (2.5.4.3M) <ul style="list-style-type: none"> Type, extent and location of all existing/proposed open space. | Site Plan Sheet C-102 | |
| <input checked="" type="checkbox"/> | 15. All easements, deed restrictions and non-public rights of ways. (2.5.4.3N) | Existing Conditions Plan Sheets | |
| <input checked="" type="checkbox"/> | 16. Character/Civic District (All following information shall be included): (2.5.4.3P) <ul style="list-style-type: none"> Applicable Building Height (10.5A21.20 & 10.5A43.30); Applicable Special Requirements (10.5A21.30); Proposed building form/type (10.5A43); Proposed community space (10.5A46). | Site Plan Sheet C-102 | |
| <input checked="" type="checkbox"/> | 17. Special Flood Hazard Areas (2.5.4.3Q) <ul style="list-style-type: none"> The proposed development is consistent with the need to minimize flood damage; All public utilities and facilities are located and construction to minimize or eliminate flood damage; Adequate drainage is provided so as to reduce exposure to flood hazards. | N/A | |

Other Required Information


| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
|-------------------------------------|---|---|---------------------|
| <input checked="" type="checkbox"/> | Traffic Impact Study or Trip Generation Report, as required. (3.2.1-2) | Enclosed | |
| <input checked="" type="checkbox"/> | Indicate where Low Impact Development Design practices have been incorporated. (7.1) | Grading and Drainage Plan Sheet C-103 | |
| <input checked="" type="checkbox"/> | Indicate whether the proposed development is located in a wellhead protection or aquifer protection area. Such determination shall be approved by the Director of the Dept. of Public Works. (7.3.1) | N/A | |
| <input checked="" type="checkbox"/> | Stormwater Management and Erosion Control Plan. (7.4) | Enclosed | |
| <input checked="" type="checkbox"/> | Inspection and Maintenance Plan (7.6.5) | Enclosed | |

Final Site Plan Approval Required Information

| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
|-------------------------------------|--|---|---------------------|
| <input checked="" type="checkbox"/> | All local approvals, permits, easements and licenses required, including but not limited to: <ul style="list-style-type: none"> • Waivers; • Driveway permits; • Special exceptions; • Variances granted; • Easements; • Licenses. (2.5.3.2A) | Cover Sheet | |
| <input checked="" type="checkbox"/> | Exhibits, data, reports or studies that may have been required as part of the approval process, including but not limited to: <ul style="list-style-type: none"> • Calculations relating to stormwater runoff; • Information on composition and quantity of water demand and wastewater generated; • Information on air, water or land pollutants to be discharged, including standards, quantity, treatment and/or controls; • Estimates of traffic generation and counts pre- and post-construction; • Estimates of noise generation; • A Stormwater Management and Erosion Control Plan; • Endangered species and archaeological / historical studies; • Wetland and water body (coastal and inland) delineations; • Environmental impact studies. (2.5.3.2B) | Enclosed | |
| <input checked="" type="checkbox"/> | A document from each of the required private utility service providers indicating approval of the proposed site plan and indicating an ability to provide all required private utilities to the site. (2.5.3.2D) | Enclosed | |

Final Site Plan Approval Required Information

| <input checked="" type="checkbox"/> | Required Items for Submittal | Item Location (e.g. Page/line or Plan Sheet/Note #) | Waiver Requested |
|-------------------------------------|--|---|---------------------|
| <input checked="" type="checkbox"/> | A list of any required state and federal permit applications required for the project and the status of same. (2.5.3.2E) | Cover Sheet | |
| <input checked="" type="checkbox"/> | A note shall be provided on the Site Plan stating: "All conditions on this Plan shall remain in effect in perpetuity pursuant to the requirements of the Site Plan Review Regulations." (2.5.4.2E) | Site Plan Sheets C-102 & C-102.1 | N/A |
| <input checked="" type="checkbox"/> | For site plans that involve land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP) confirmation that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. (2.5.4.2F) | N/A | |
| <input checked="" type="checkbox"/> | Plan sheets submitted for recording shall include the following notes: a. "This Site Plan shall be recorded in the Rockingham County Registry of Deeds." b. "All improvements shown on this Site Plan shall be constructed and maintained in accordance with the Plan by the property owner and all future property owners. No changes shall be made to this Site Plan without the express approval of the Portsmouth Planning Director." (2.13.3) | Site Plan Sheets C-102.1 & C-102.2 | N/A |

Applicant's Signature:  Date: 5/19/21



3 Copley Place
Suite 3202
Boston, MA 02116
P: 617-426-0604
F: 617-426-0607
www.lazparking.com

May 20, 2021

Juliet Walker
Director of Planning
City of Portsmouth

Re: Redevelopment of 1 Raynes Ave, 31 Raynes Ave and 203 Maplewood

Dear Ms. Walker,

My name is Brian Haley and I am the Regional Vice President at LAZ Parking, LLC. LAZ is a national parking operator with over 2,500 facilities and over 200 hotels under parking management service agreements. Since 2014 in Portsmouth, we manage the parking operation for The Marriot Residence Inn, The Hampton Inn & Suites, and the Hilton Garden Inn for the applicant. We have recently begun operations for the AC Hotel since its opening.

We have reviewed the parking plans for the new mixed-use development incorporating a 128-room hotel along with a 60 unit residential dwelling. Based on historical data from the existing Portsmouth operations, the parking ratio to occupied rooms ranges from 65% to 70% based upon seasonality and we would expect to see up to 90 cars on peak nights. For similar residential units, the ratio of vehicles to units ranges from 52% to 57% for a parking demand average of 34 spaces. The property is providing 112 onsite spaces as well as an additional 25 spaces offsite. By utilizing an operating model of 100% valet, we will have the flexibility to fully maximize the tandem spaces and rotate cars as needed. The 137 total spaces available is sufficient to meet the parking demand.

Please let us know if you have any further questions.

Sincerely,

Brian Haley
Regional Vice President



April 30, 2021

City of Portsmouth Planning Department
Conservation Commission
1 Junkins Avenue, 3rd Floor
Portsmouth, NH 03801

Attention: Conservation Commission Board Members

Reference: Raynes Avenue Development Site
Mitigation of Subsurface Environmental Conditions and Feasibility of
Stormwater Recharge

Ladies and Gentlemen:

The purpose of this letter is to summarize measures that will be implemented to mitigate existing subsurface environmental conditions during construction of the Raynes Avenue development site as well as the feasibility of on-site recharge/infiltration of stormwater under the New Hampshire Alteration of Terrain regulations.

As a result of the historical site usage, soil and groundwater has been affected by varying levels of contamination which exceed the Site Remediation Standards and Ambient Groundwater Quality Standards contained in the New Hampshire Code of Administrative Rules Env-Or 600. As a result, elements of the Raynes Avenue development project have been designed to mitigate potential future exposure to the on-site contamination as well as to mitigate the potential for off-site migration of contamination. Given the presence of the soil and groundwater contamination, the on-site infiltration of stormwater runoff, such as the use of porous pavement, is prohibited under the provisions of the Alteration of Terrain (AoT) permit.

The Raynes Avenue development site, referenced herein as "project site", is comprised of four (4) contiguous parcels of land including 203 Maplewood Avenue, 31 Raynes Avenue, and 1 Raynes Avenue as well as a vacant parcel of land identified as 205 Maplewood Avenue (Map-Lot: 0123-10). The parcels are currently occupied by three (3) existing 1 to 3-story buildings, paved surface parking lots, and grassy or landscaped areas. Currently, the existing buildings are utilized as a fitness gym and storage space for a café and various dry goods. The existing building on 203 Maplewood Avenue is currently vacant.

The proposed project will require the demolition of the existing structures, and construction of two 5-story buildings which will occupy the southern and eastern portions of the project site. Asphalt paved parking lots and landscaped margins are proposed adjacent to the north of the proposed buildings. Additionally, a community greenway and pedestrian path are proposed along the banks of the North Mill Pond within the limits of the project site. Stormwater runoff from the redeveloped project site will be collected into an on-site storm drain system which will temporarily store and subsequently treat the runoff before leaving the site.



Over the past 100 years, the parcels of land that comprise of the project site were utilized for commercial and industrial purposes. Specifically, the 203 Maplewood Avenue building was utilized as a gasoline filling station between the 1930's and 1983 and a dry cleaner/laundromat between 1984 and 2018. The current 2-story office building was constructed at 31 Raynes Avenue in 1940 and subsequently, a storage shed was constructed on the parcel in 1994. The current fitness gym was originally constructed as a warehouse in 1955 at 1 Raynes Avenue and was formerly used as a garage for the New England Telephone Company as well as automotive body repair and painting shop.

The 203 Maplewood Avenue parcel has been assigned NH DES Site Number 199909083 due to presence of petroleum constituents. Over the past 20 years, the current and previous site owners have performed biannual assessments of soil and/or groundwater at the parcel, the results of which have been submitted to the New Hampshire Department of Environmental Services (DES). In 2012, a Groundwater Management Permit (GMP) was recorded for the site under which biannual assessment activities have been performed in accordance with ENV-OR 600, the New Hampshire Contaminated Site Management provisions.

The 205 Maplewood Avenue parcel was historically assigned NH DES Site Number 198810012 due to the elevated concentrations of a petroleum related volatile organic compounds (VOCs) within groundwater on site. The presence of petroleum related VOC was attributed to the former gasoline service station at 203 Maplewood Avenue site. Soil characterization within test pits indicated the presence of coal ash in fill material.

The 31 Raynes Avenue property has also been affected by the presence of chlorinated solvents, metals and petroleum hydrocarbons in soil and groundwater. The result of which indicate the presence of VOCs, metals, and petroleum constituents in certain areas of the project site. The source of these contaminants is likely attributable to historical fill that is typically used within this region of Portsmouth and possibly off-site properties. Additionally, the southern portion of the parcel is listed as an inactive Asbestos Disposal Site due to the presence of asbestos containing material (ACM) that was identified in soil. The DES was notified of the contamination in 2006 after which Site Number 200603011 was assigned to the parcel. Subsequently, remediation activities were performed at a portion of the parcel to remove an underground storage tank and associated contaminated soils. Post remediation assessment activities, which included soil and groundwater testing, were performed on a biannual basis for approximately 4 years after which a No Further Action Certification was issued by the DES in 2011. Between January 2020 and January 2021, McPhail performed soil testing across the site, the result of which indicate the presence of chlorinated solvents, metals, and petroleum constituents in certain areas of the project site. The presence of these contaminants is considered attributable to the historical site use as well as historical filling that is typical within this portion of Portsmouth.

Excavation activities will be performed under a Soil Management Plan (SMP) that will be prepared for the project. Due to the presence of contamination, the SMP will include measures to mitigate potential exposure to the surrounding public from contaminated soils. The excavation activities will involve the removal of shallow contaminated soil from across the area of the project site. Within localized areas of the project site, deeper contaminated



soil will be excavated and removed off-site. These mitigative measures will include limiting on-site stockpiling, segregation of contaminated soils, direct loading of contaminated soils for off-site disposal, dust suppression (i.e., wetting exposed soils, covering stockpiles, etc.) and in-situ treatment of contaminated soils. Temporary methods for protecting water quality including erosion, sediment, and runoff control will be implemented in accordance with Env-Wq 1505.05 as well as a Stormwater Pollution Prevention Plan (SWPPP) that will be prepared prior to the start of site development. In addition, temporary construction dewatering of groundwater will be controlled during redevelopment, including the collection and treatment of groundwater and surface water that may be encountered during the construction of building foundations and subsurface utilities.

As referenced above, the project design has incorporated mitigative elements to prevent potential future exposure to the on-site contamination as well as to prevent the potential for off-site migration of contamination. Specifically, the project design includes engineering controls such as capping of existing contaminated soil with clean fill, hardscaping, and impervious asphalt pavement or by the building foundation. Additionally, the area of contaminated groundwater is proposed to be covered by impervious asphalt pavement, hardscaping, and the building footprint. Furthermore, stormwater runoff will be collected and temporarily stored within two closed-system stormwater detention basins that are designed to prevent infiltration into the groundwater formation that would exacerbate the subsurface contamination. From these detention basins, the stormwater runoff will pass through a filtration system that will reduce particulate-bound pollutants prior to entering the City's storm drain system which discharges into the North Mill Pond.

The New Hampshire Code of Administrative Rules Chapter Env-Wq 1507 defines requirements for the protection of water quality during Alteration of Terrain (AoT) activities. In accordance with Env-Wq 1507.02C, no infiltration practice, filtering practice, groundwater recharge practice, treatment swale, or sediment forebay shall be located in any areas that (1) have contaminants in soil above site-specific soil standards developed pursuant to Env-Or 600, and/or (2) have contaminants in groundwater above the ambient groundwater quality standards established in Env-Or 603.03. Based upon the presence of contaminants in soil and groundwater at the development site which have been and/or are currently being managed in accordance with Env-Or 600, on-site recharge and/or infiltration of stormwater, such as the use of porous pavement, is prohibited pursuant to the provisions set forth within Env-Wq-1507.

In summary, an SMP will be implemented for on-site redevelopment activities. The SMP will include measures to mitigate potential exposure of contaminated soils to the surrounding public. Due to the historical presence of contamination on the project site, on-site recharge and/or infiltration of stormwater is prohibited. Temporary methods for protecting water quality will be implemented in accordance with Env-Wq 1505.05 and SWPPP during redevelopment. Subsequently, the excavations will be replaced by drainage structures or clean fill prior to the installation of the proposed building foundation or impervious surfaces in order to significantly mitigate the potential for off-site migration of the soil and groundwater contamination. Furthermore, stormwater runoff will be collected and filtered within two closed-system stormwater detention basins to reduce particulate-bound pollutants prior to entering North Mill Pond by the City's storm drain system.



Conservation Commission
April 30, 2021
Page 4

We trust that the above is sufficient for your present requirements. Should you have any questions concerning the above, please call us.

Very truly yours,

McPHAIL ASSOCIATES, LLC

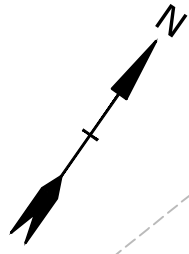
A handwritten signature in blue ink, appearing to read "Shakib Ahmed".

Shakib Ahmed, P.G.

A handwritten signature in blue ink, appearing to read "William J. Burns".

William J. Burns, L.S.P., L.E.P.

6872_Raynes Ave_Con Comm Let._042921.docx
SA/wjb



TEMPORARY COFFERDAM AS REQUIRED, LIMITS AND DESIGN BY CONTRACTOR

B

A

A

EXISTING TIMBER BULKHEAD TO BE REMOVED AND REPLACED IN KIND

5"



GRAPHIC SCALE

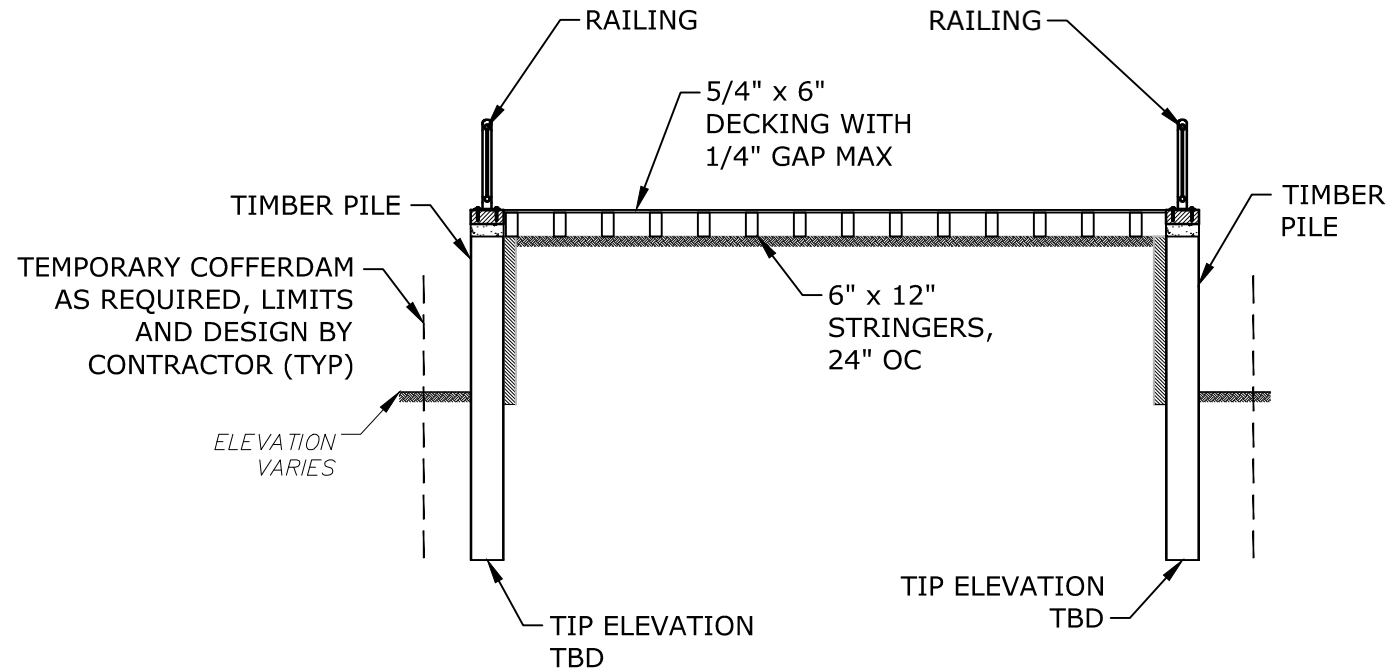
PROPOSED MIXED USE DEVELOPMENT
RAYNES AVE
PORTSMOUTH, NEW HAMPSHIRE

OPTIONAL PIER CONCEPT PLAN

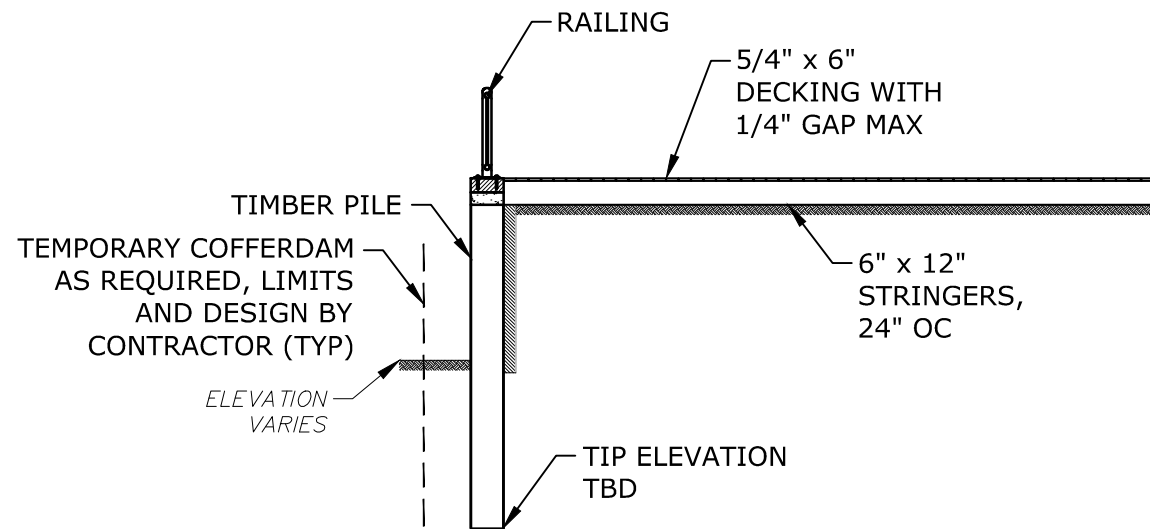
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|-----------|------------------------|
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| DRAWN BY: | JAK |
| CHECKED: | GM |
| APPROVED: | PMC |



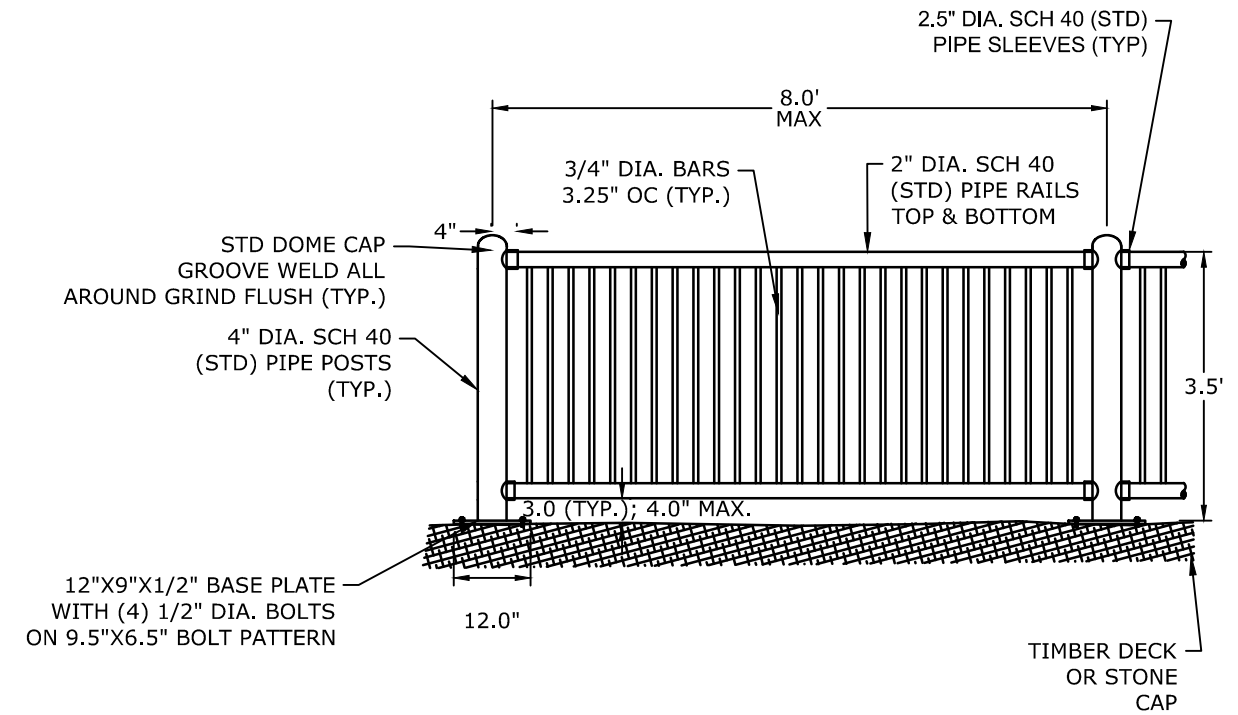
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Plot Date: Wednesday, May 26, 2021 Plotted By: Neil A. Hansen
R&B File Location: J:\P\0595 Pro Con General Proposals\0595-007 Raynes Ave Hotel\Drawings-Figures\AutoCAD\Sheet\0595-007-PIER-NAH.dwg Layout Tab: SHEET 1



SECTION A
NTS



SECTION B
NTS



RAILING NOTES:

1. FABRICATE THE RAILINGS AS SHOWN. EASE ALL EXPOSED EDGES AND GRIND SMOOTH WELDS (GRIND FLUSH AT GROOVE WELDS) PRIOR TO COATING. IF 3/4" VERTICAL RODS ARE SET INTO HORIZONTAL RAILS, THEN SEAL WELD ALL AROUND. IF 3/4" VERTICAL RODS ARE BUTTED UP TO HORIZONTAL RAILS, THEN 1/4" FILLET WELD ALL AROUND.
2. ON STONE: EPOXY GROUT THE BASED PLATE ANCHORS INTO STONE, PROVIDE 6" EMBEDMENT (TYP). ON TIMBER, PREDRILL FOR LAG BOLTS.
3. PLUMB POSTS, SET RAIL PANELS AND GROUT UNDER BASE PLATES (TYP).
4. FOR HOT DIP GALVANIZED COLOR GALV. COATING BASE BID, PROVIDE ADEQUATE VENTING OF PIPES WHERE HIDDEN FROM VIEW AND SO AS NOT TO TRAP WATER.

RAILING DETAIL

PROPOSED MIXED USE DEVELOPMENT
RAYNES AVE
PORTSMOUTH, NEW HAMPSHIRE

OPTIONAL PIER CONCEPT
SECTIONS & DETAILS

| | |
|-----------|------------------------|
| DATE: | 07/21/2021 |
| FILE: | P0595-007-PIER-NAH.DWG |
| DRAWN BY: | JAK |
| CHECKED: | GM |
| APPROVED: | PMC |

Tighe & Bond
Engineers | Environmental Specialists

Juliet T.H. Walker, AICP
Planning Director
City of Portsmouth Planning Department
City Hall, 3rd Floor
1 Junkins Avenue
Portsmouth, NH 03801

August 18, 2021

Ref. T1105

Re: Raynes Avenue Development – Mixed Use Proposal
Transportation Peer Review #3 – Response to Comments Review

Dear Ms. Walker:

On behalf of the City of Portsmouth, TEC, Inc. (TEC) has reviewed additional documents as part of the transportation engineering peer review of a proposed mixed used development located on the north side of Raynes Avenue in Portsmouth.

The following additional documents were received as part of our review:

- *Traffic Impact Study – Raynes Avenue Development*, prepared for North Mill Pond Holdings by Tighe & Bond – Revision dated August 2, 2021
- *Response to Peer Review Comments #2*, prepared by Tighe & Bond – August 2, 2021

The Response to Peer Review Comments #2 letter prepared by Tighe & Bond addressed three outstanding comments from TEC's July 28, 2021 review letter. Review responses are dated accordingly.

Transportation Impact Evaluation

4. 7-28-2021 TEC: Tighe & Bond (T&B) conducted Saturday midday peak hour capacity analyses. The reported site generated trips for the restaurant for the Saturday midday peak hour (16 (Total), 9 (Enter), 7 (Exit)) is significantly lower than the calculated ITE values for a Quality Restaurant (47 (Total), 28 (Enter), 19 (Exit)). While TEC understands that the additional trips, many of them potentially pass-by or internally captured trips, will not have a significant impact on the adjacent roadway system, the difference should be noted.

8-2-2021 Tighe & Bond: T&B has revised the proposed Saturday midday peak hour trip generation to accurately reflect the estimated trips for the restaurant use as outlined in the ITE Trip Generation Manual. The traffic analysis has been updated as required. The conclusions outlined in the previously submitted traffic study remain the same.

8-18-2021 TEC: TEC concurs with the conclusions within the revised study. No further response required.

7. 7-28-2021 TEC: With the conversion of the Raynes Avenue to one-way traffic flow, T&B states that the poor operations for vehicles exiting Raynes Avenue at Maplewood Avenue are offset by the improved operations at the intersection of Maplewood Avenue at Vaughan Street. TEC notes that the capacity and queue analysis results indicate that the southbound left turn movement from Maplewood Avenue into Vaughan Street is anticipated to decrease from a LOS of B in the 2032 No Build condition to a LOS of E in the 2032 Build condition with a potential maximum queue length of approximately 6 vehicles (136 feet). The Applicant should discuss whether a southbound left turn lane is warranted or necessary along Maplewood Avenue to remove delayed turning vehicles from the through traffic flow.

8-2-2021 Tighe & Bond: T&B concurs that vehicular queues at the southbound Maplewood Avenue approach will increase as a result of the conversion of Vaughan Street/ Raynes Avenue to one-way. Maplewood Avenue was recently resurfaced, and it will be desirable to maintain existing parking and bike facilities in each direction as well as minimizing the pedestrian crossing distance across Maplewood Avenue as geometric improvements are not feasible. Additionally, field observations indicate that vehicles at the Maplewood Avenue at Deer Street intersection often back up beyond Vaughan Street. The addition of a short southbound left turn lane is not likely to significantly improve operations at the intersection.

8-18-2021 TEC: TEC concurs with the observation that the queues from the intersection of Maplewood Avenue at Deer Street may extend past the Vaughan Street. While the implementation of a southbound left turn lane at Vaughan Street may not improve intersection operations, it may improve safety for queuing vehicles. However, TEC understands the City's desire to maintain on-street parking and bicycle facilities along Maplewood Avenue in this area. No further response required.

9. 7-28-2021 TEC: The TIS indicates that the recommendation of the exclusive turn lanes was based on the consolidation of the existing two exiting access points to Maplewood Avenue and the results of the capacity analyses. TEC notes that the 2022 Build analysis indicates a peak hour queue length of 24 vehicles on the westbound Raynes Avenue left turn movement. This queue length will block the site driveway access onto Raynes Avenue. The Applicant should discuss any signage or striping recommended at the site driveway to maintain access to the site when queues are present.

8-2-2021 Tighe & Bond: T&B concurs that the vehicular queues under the Build condition may block the site driveway on Raynes Avenue. However, because left turns from the site driveway will be restricted under the proposed one-way conversion of Raynes Avenue, there will not be a significant benefit of signage and/ or pavement markings. Right-turning vehicles will not have space to queue up because the queues are anticipated to extend past the site

driveway. Signage and pavement marking treatments used at driveways in other areas of the City allow both left and right turns out of their driveways. Additionally, the placement of signs and/ or pavement markings at the driveway may be difficult for drivers to process due to the curvature of the roadway on Vaughan Street approaching the site driveway as well as a high amount of existing and proposed signage in the area.

8-18-2021 TEC: TEC concurs with the conclusions presented. No further response required.

Please do not hesitate to contact me directly if you have any questions concerning this peer review at 603-601-8154. Thank you for your consideration.

Sincerely,
TEC, Inc.
"The Engineering Corporation"



Elizabeth Oldman, PE
Director of Transportation Planning