

PROPOSED OFFICE BUILDING

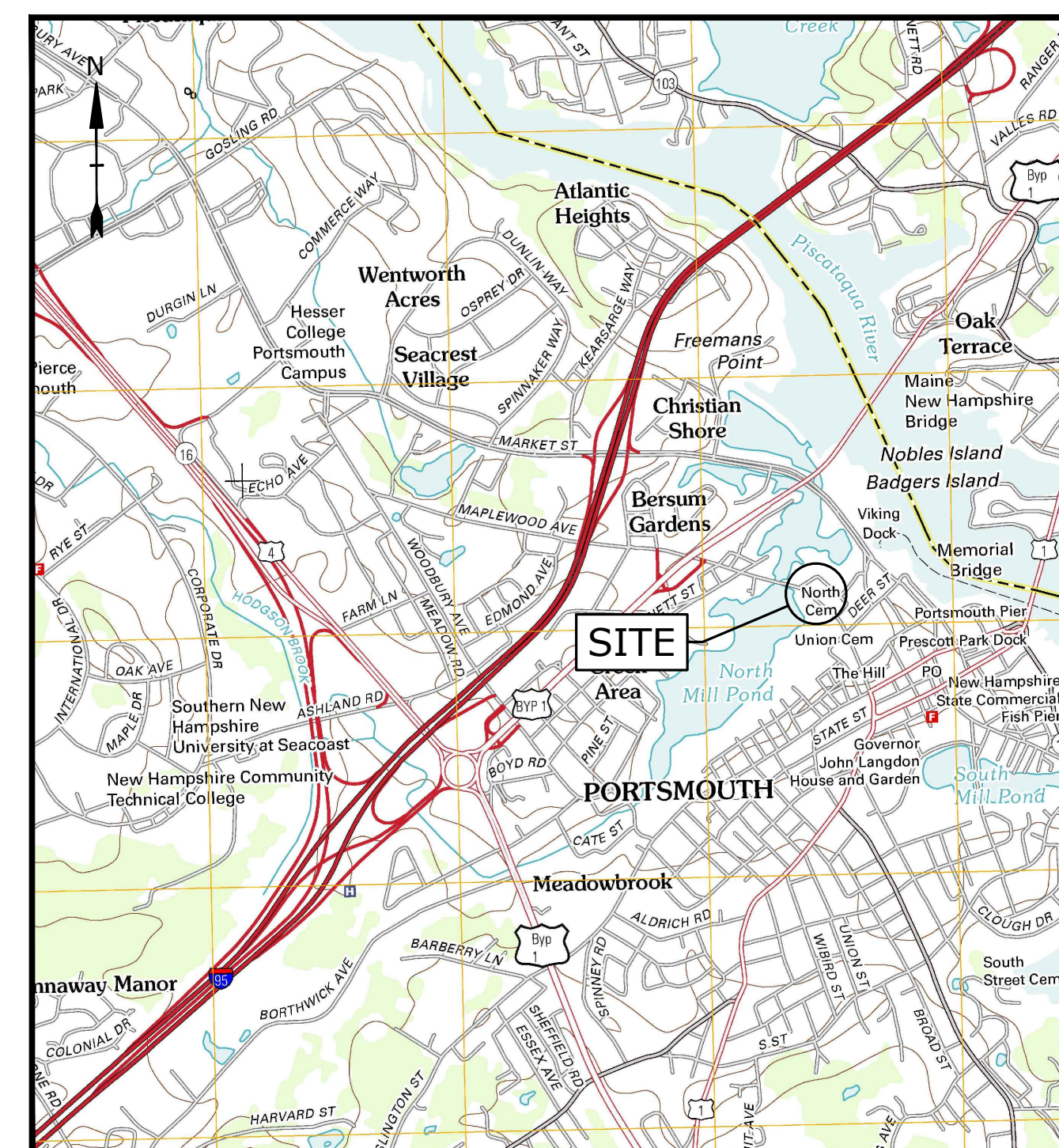
111 MAPLEWOOD AVENUE
PORTSMOUTH, NEW HAMPSHIRE

PROJECT NO: K-0076-019

MARCH 18, 2019

LAST REVISED: MAY 7, 2019

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	05/07/2019
1 of 2	SUBDIVISION PLAN	03/18/2019
2 of 2	SUBDIVISION PLAN	03/18/2019
C-101	OVERALL EXISTING CONDITIONS PLAN	05/07/2019
C-101.1	EXISTING CONDITIONS AND DEMOLITION PLAN	05/07/2019
C-101.2	EXISTING CONDITIONS AND DEMOLITION PLAN	05/07/2019
C-102	OVERALL SITE PLAN	05/07/2019
C-102.1	SITE PLAN	05/07/2019
C-102.2	SITE PLAN	05/07/2019
C-102.3	BASEMENT LEVEL FLOOR PLAN	05/07/2019
C-103.1	GRADING, DRAINAGE AND EROSIONS CONTROL PLAN	05/07/2019
C-103.2	GRADING, DRAINAGE AND EROSIONS CONTROL PLAN	05/07/2019
C-104.1	UTILITIES PLAN	05/07/2019
C-104.2	UTILITIES PLAN	05/07/2019
C-300	EASEMENT PLAN	05/07/2019
C-501	EROSION CONTROL NOTES & DETAILS	05/07/2019
C-502	DETAILS SHEET	05/07/2019
C-503	DETAILS SHEET	05/07/2019
C-504	DETAILS SHEET	05/07/2019
C-505	DETAILS SHEET	05/07/2019
C-506	DETAILS SHEET	05/07/2019
C-507	DETAILS SHEET	05/07/2019
L-101	LANDSCAPE PLAN	05/07/2019
L-501	LANDSCAPE DETAILS	05/07/2019
L-502	LANDSCAPE DETAILS	05/07/2019
LS-101	SITE LIGHT PHOTOMETRICS	05/07/2019
LS-102	LIGHTING FIXTURE SCHEDULE	05/07/2019
	BUILDING ELEVATION - ENTRY PASSAGE	04/12/2019
	BUILDING ELEVATION - MAPLEWOOD AVE	04/12/2019
	BUILDING ELEVATION - RAYNES AVE	04/12/2019
	BUILDING ELEVATION - VAUGHAN STREET	04/12/2019



LOCATION MAP
SCALE: 1" = 2,000'

LIST OF PERMITS		
LOCAL	STATUS	DATE
SITE PLAN REVIEW PERMIT	PENDING	
SUBDIVISION PERMIT	PENDING	
CONDITIONAL USE PERMIT	PENDING	
STATE		
NHDES - ALTERATION OF TERRAIN PERMIT	PENDING	
NHDES - SHORELAND PERMIT	APPROVED	4/17/2019
NHDES - SEWER CONNECTION PERMIT	PENDING	
FEDERAL		
EPA - NPDES CGP	PENDING	

PREPARED BY:

Tighe & Bond

177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
603-433-8818

OWNER:

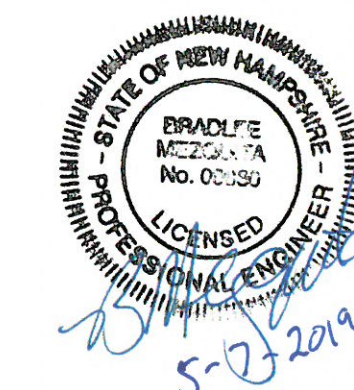
RJF-MAPLEWOOD, LLC
30 TEMPLE STREET, SUITE 400
NASHUA, NEW HAMPSHIRE 03060
603-672-0300

SURVEY CONSULTANT:

DOUCET SURVEY, INC.
102 KENT PLACE
NEWMARKET, NEW HAMPSHIRE 03110
603-659-6560

LANDSCAPE ARCHITECT:

HALVORSON DESIGN PARTNERSHIP, INC.
25 KINGSTON STREET, 5TH FLOOR
BOSTON, MASSACHUSETTS 02111
617-536-0380



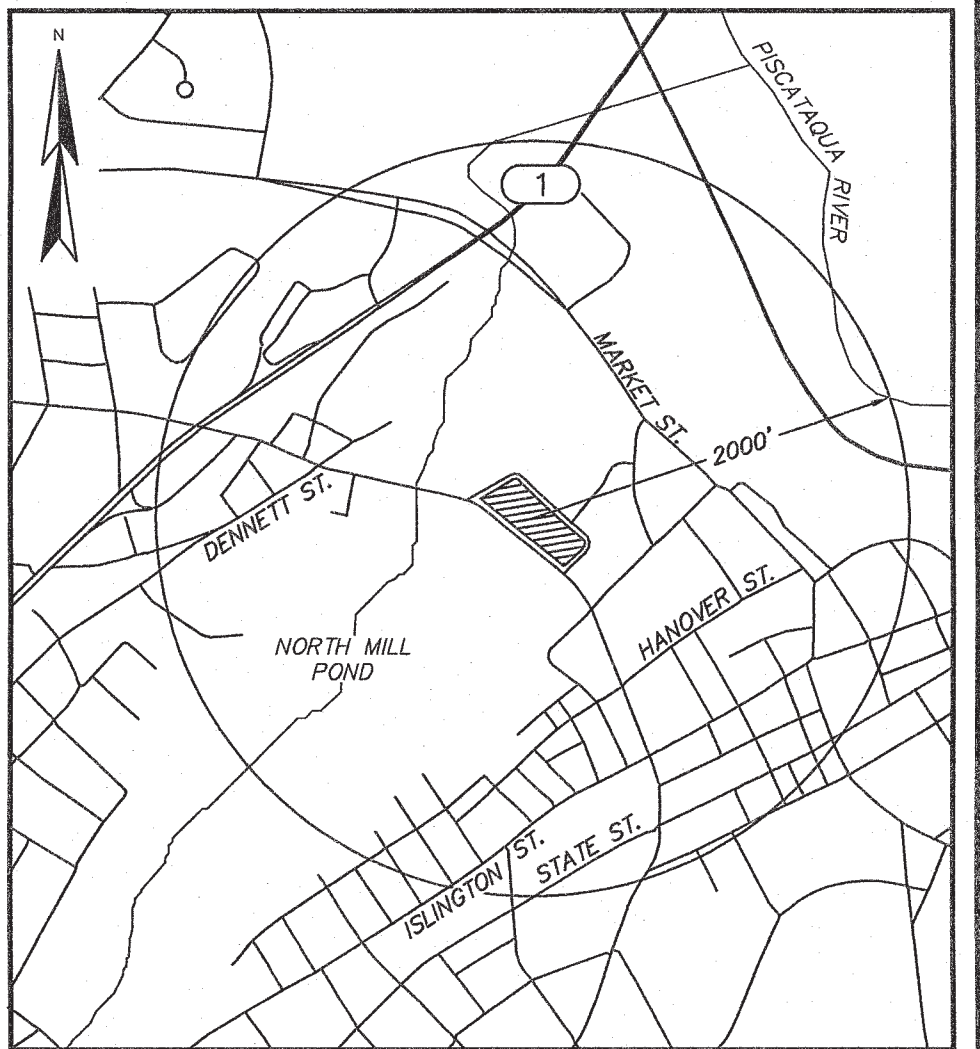
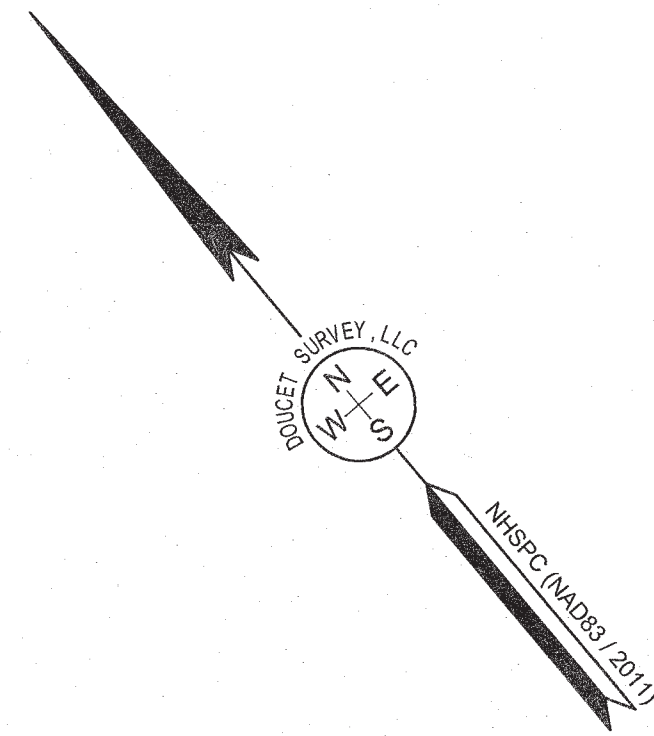
APPLICANT:

RW NORFOLK HOLDINGS, LLC
210 COMMERCE WAY, SUITE 300
PORTSMOUTH, NEW HAMPSHIRE 03801
603-430-4000

ARCHITECT:

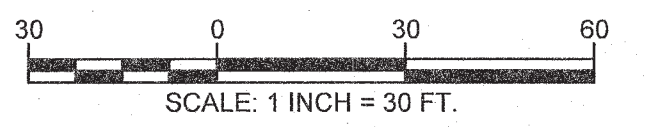
CBT ARCHITECTS
110 CANAL STREET
BOSTON, MASSACHUSETTS 02114
617-262-4354

**PLANNING BOARD SUBMISSION
COMPLETE SET 31 SHEETS**



LOCATION MAP
(SCALE 1"=1000') PER CHECKLIST

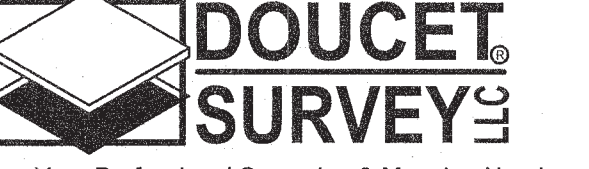
- LEGEND**
- LOT LINE
 - - - PROPOSED LOT LINE
 - · - · - APPROXIMATE ABUTTERS LOT LINE
 - ○ ○ CHAIN LINK FENCE
 - OHW
 - OVERHEAD WIRE
 - ▨ CONCRETE
 - ▨ CONCRETE
 - ▨ LANDSCAPED AREA
 - ▨ BRICK
 - BOUND FOUND
 - BOLLARD
 - FIRE HYDRANT
 - WATER GATE VALVE
 - SPIGOT
 - IRRIGATION CONTROL VALVE
 - GAS GATE VALVE
 - GAS SHUTOFF VALVE
 - ELECTRIC BOX
 - FIRE ALARM BOX
 - CATCH BASIN
 - DRAIN MANHOLE
 - MANHOLE
 - ELECTRIC MANHOLE
 - TELEPHONE MANHOLE
 - SEWER MANHOLE
 - TYP. GRAN.
 - GRAN.
 - CONC.
 - BND. FND.
 - ED
 - VCC
 - BC
 - SBB
 - SWL
 - AS



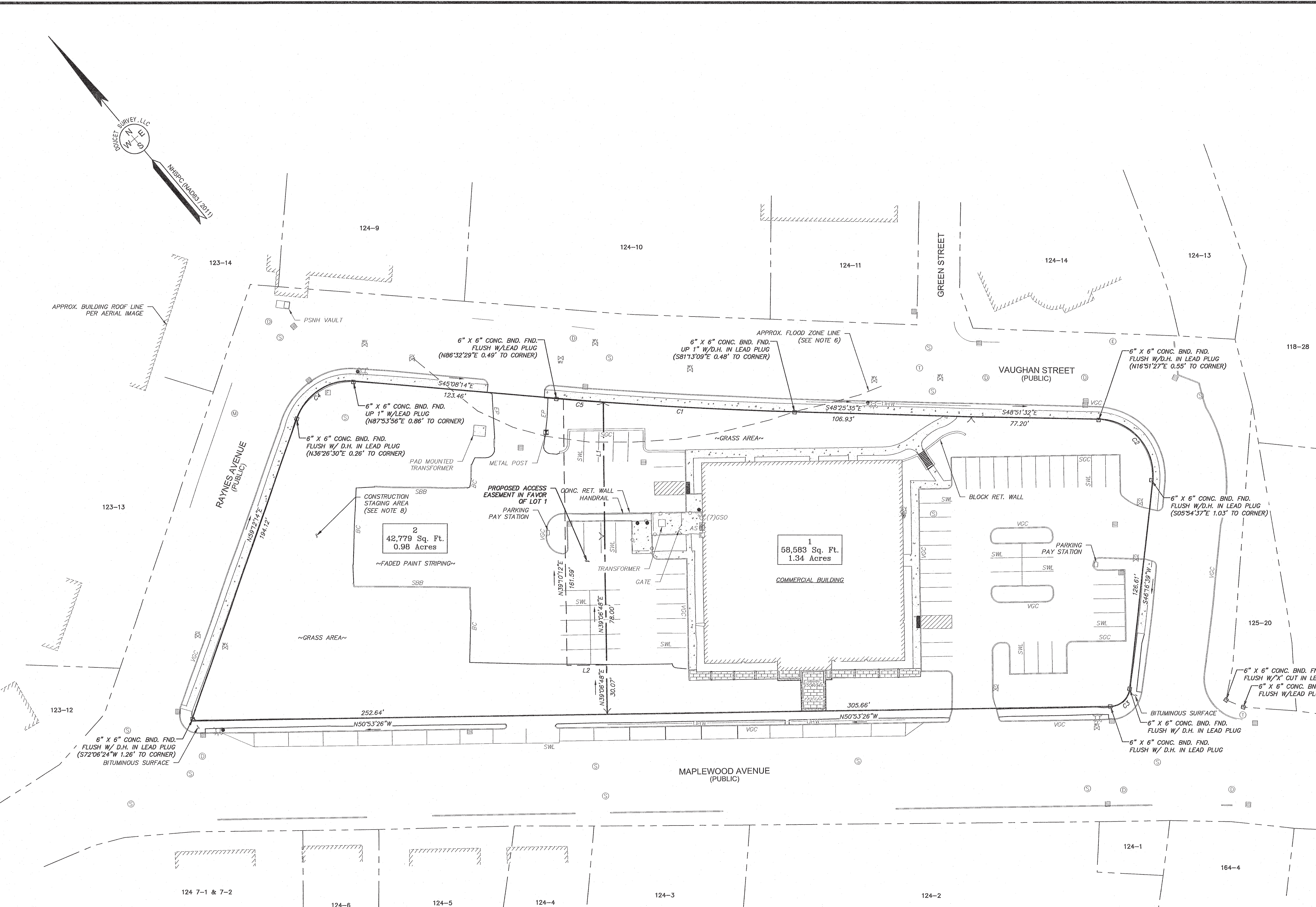
SUBDIVISION PLAN
LAND OF
RJF-MAPLEWOOD LLC
TAX MAP 124 LOT 8
MAPLEWOOD AVENUE, VAUGHAN STREET,
& RAYNES AVENUE
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

DRAWN BY:	W.D.C.	DATE:	MARCH 2019
CHECKED BY:	S.V.M.	DRAWING NO.	5882B
JOB NO.	5882	SHEET	2 OF 2

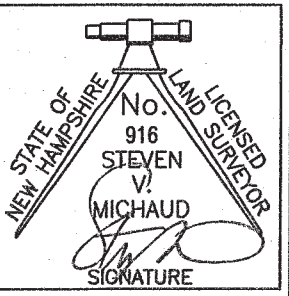


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 2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
 10 Storer Street (RiverView Suite) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>



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] L.L.S. #916
 3/18/19 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.

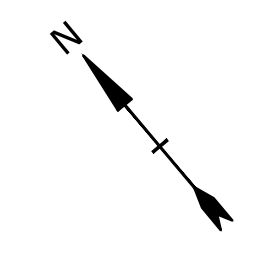
LINE TABLE

LINE	BEARING	DISTANCE
L1	N39°18'44"E	81.33'
L2	N50°49'48"W	24.04'

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	116.82'	2526.00'	002°38'59"	S47°06'05"E	116.81'
C2	56.46'	34.00'	095°08'41"	S01°17'12"E	50.19'
C3	17.35'	12.00'	082°50'25"	S87°41'51"W	15.88'
C4	44.90'	34.00'	075°39'51"	S82°57'51"E	41.71'
C5	28.19'	2526.00'	000°38'22"	S45°27'25"E	28.19'

FILE NAME: C:\Data_2019\124\124-8\124-8.dwg; PLOT DATE: 3/18/2019 10:11:10 AM; PLOTTER: HP DesignJet T1100; PLOT SCALE: 1"=30'; PLOT SHEET: 2 OF 2



DRAINAGE STRUCTURE TABLE

CB #1231 RIM ELEV. = 15.0' 12" R.C.P. = 11.4'	CB #1327 RIM ELEV. = 12.1' 12" R.C.P. = 9.4'	CB #1355 RIM ELEV. = 11.8' 12" R.C.P. = 9.1'	CB #1100 RIM ELEV.=7.0' 12" RCP INV.=4.2'	CB #1003 RIM ELEV.=9.3' 12" RCP INV.=5.5'	CB #5060 RIM ELEV. = 14.3' 12" HDPE = 9.2'	CB #5061 RIM ELEV. = 14.1' (A) 8" ABS. = 9.0' (B) 12" HDPE = 9.1'	CB #1149 RIM ELEV. = 10.3' BADLY SLOPING RIM (A) 8" ABS. = 7.0' (B) 12" R.C.P. = 6.0'	CB #1175 RIM ELEV.=7.9' 12" RCP INV.=5.3'	DMH #1166 RIM ELEV.=9.3' (A) 18" RCP INV.=4.5' (B) 12" RCP INV.=5.5' (C) 15" RCP INV.=4.5'	CB #1172 RIM ELEV.=10.3' 4" HDPE INV.=6.3' 12" RCP INV.=5.4' 12" RCP INV.=5.8'	CB #1006 RIM ELEV.=9.3' 12" RCP INV.=5.6'	DMH #1007 RIM ELEV.=9.7' (A) 24" RCP INV.=1.6' (B) 24" RCP INV.=1.3' (C) 18" RCP INV.=1.6' (D) 12" RCP INV.=5.5'	DMH #1096 RIM ELEV.=7.35' (1100) INV.=3.85' (1098) INV.=3.95' (PDMH) INV.=3.45' (1007) INV.=3.35'	MH #1764 RIM ELEV.=11.0' (A) 15" RCP INV.=2.3' (B) 24" RCP INV.=1.6' (C) 24" RCP INV.=1.7' (D) 12" RCP INV.=6.2'	CB #5476 RIM ELEV. = 12.8' 12" HDPE = 6.4'	CB #5550 RIM ELEV. = 11.0' (A) 10" CI = 3.8' (B) 4" HDPE = 5.7' (C) 4" P.V.C. = 4.5' (D) 10" ? = 3.8'	CB #5622 RIM ELEV. = 8.9' (A) 12" HDPE = 5.1' (B) 10" C.I. = 4.9'	CB #1098 RIM ELEV. = 7.1' (A) 10" C.I. = 4.1' (B) 10" C.I. = 4.1' (C) 12" R.C.P. = 4.2'	CB #5736 RIM ELEV. = 14.6' 12" R.C.P. = 11.4'
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SEWER STRUCTURE TABLE

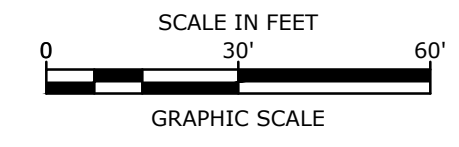
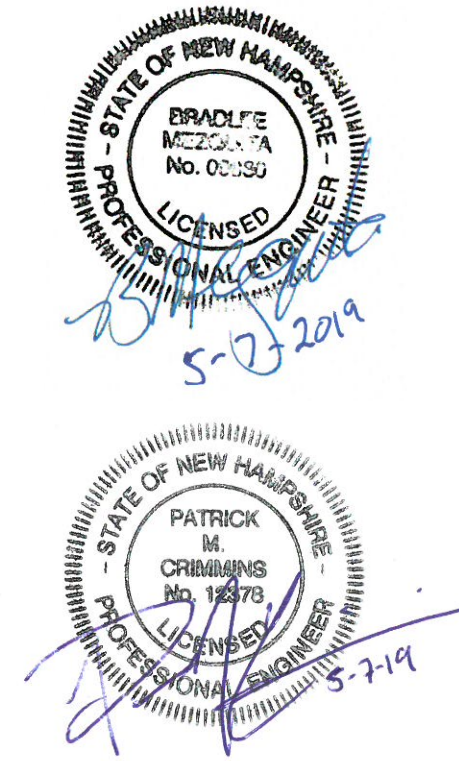
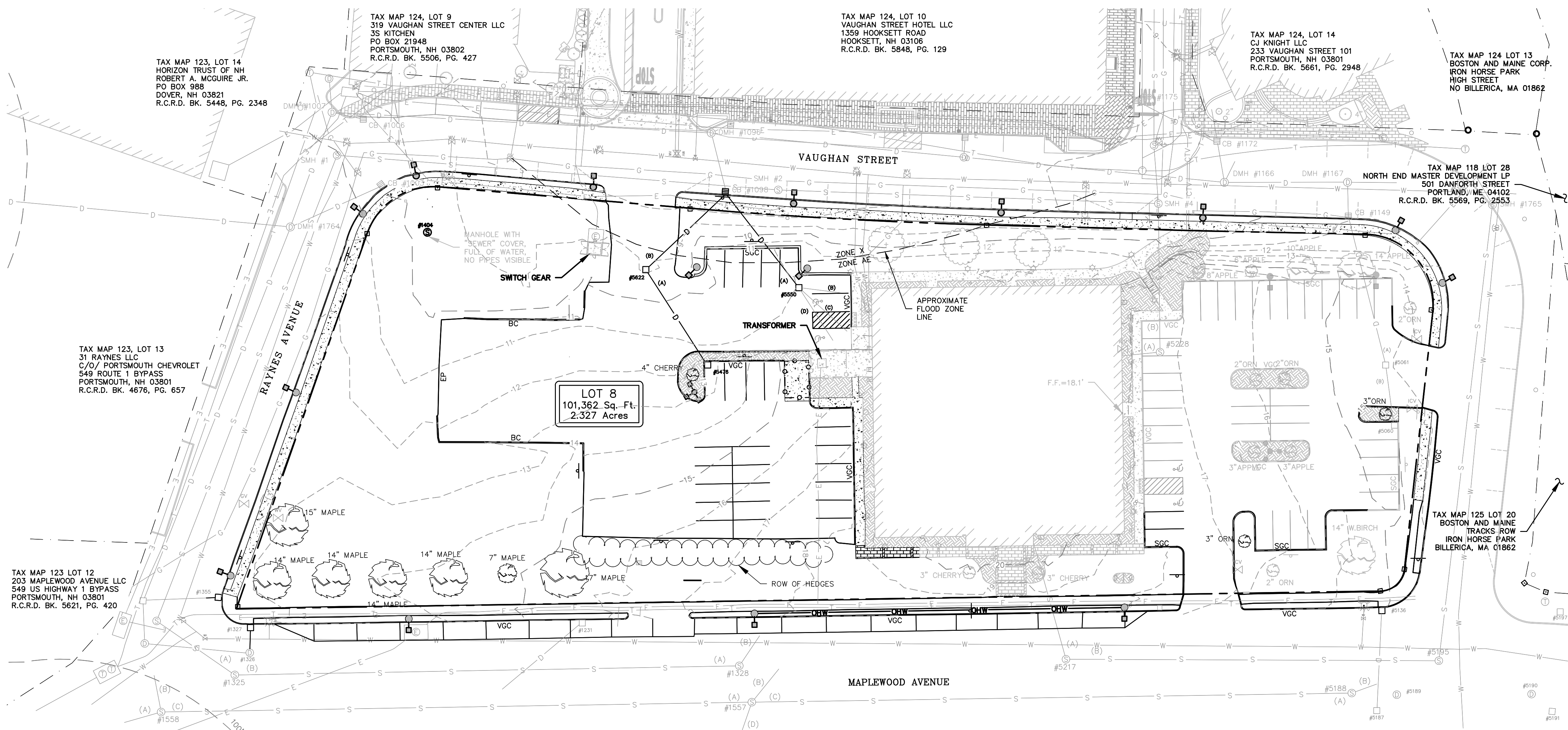
SMH #1 RIM ELEV. = 10.0' (1599) INV. 8" PVC = 3.65' INV. OUT 12" PVC = 3.13'	SMH #2 RIM ELEV. = 7.75' INV. IN 12" PVC = 2.95' INV. OUT 12" PVC = 2.85'	SMH #3 RIM ELEV. = 8.85' INV. IN 12" PVC = 2.15' INV. OUT 12" PVC = 2.05'
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EXISTING CONDITIONS PLAN NOTES:

- EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY PERFORMED BY DOUCET SURVEY INC. DURING 8/12. SEE REFERENCE PLAN #1.
- FLOOD HAZARD ZONE BASED ON REFERENCE PLAN #1.
- HORIZONTAL DATUM BASED ON REFERENCE PLAN #2.
- VERTICAL DATUM BASED ON REFERENCE PLAN #1.

REFERENCE PLANS:

- "EXISTING CONDITIONS PLAN FOR 111 MAPLEWOOD AVENUE" PREPARED BY TIGHE & BOND INC., DATED NOVEMBER 12, 2013.
- "EXISTING CONDITIONS PLAN OF TAX MAP 123, LOT 15 & TAX MAP 124, LOTS 10 & 11" PREPARED BY DOUCET SURVEY INC., DATED FEBRUARY 3, 2016.
- "UTILITIES PLAN" AC HOTEL AND COMMUNITY SPACE, PREPARED BY TIGHE & BOND INC., DATED JULY 23, 2018
- "DISPOSITION PLAN PARCEL 3" DATED 6/73 BY ANDERSON-NICHOLS & CO., INC., R.C.R.D. PLAN #D-4019.
- "PLAN OF LAND, VAUGHAN AND GREEN STREETS, PORTSMOUTH NH" DATED JULY 1955 BY JOHN W. DURGIN R.C.R.D. PLAN #02541.
- "SEVERING TRUCKING CO., INC. ELECTRIC DUCT BANK LOCATION PLAN" DATED MARCH 25, 2014.
- "EXISTING FEATURES PLAN, TAX MAP 118 - LOT 28, TAX MAP 119 - LOT 4, TAX MAP 124 - LOT 12 & TAX MAP 125 LOT 21" DATED NOVEMBER 27, 2013, REVISED 1/16/15 BY MSC CIVIL ENGINEERS & LAND SURVEYORS, INC.



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

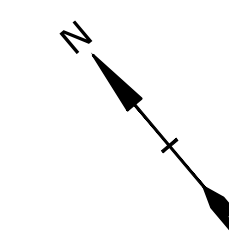
MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

OVERALL EXISTING CONDITIONS PLAN

SCALE: AS SHOWN

Last Save Date: May 7, 2019 11:18 AM By: MAHANSEN
 Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
 File Location: J:\K0076 The Kame Company - General Proposals\0076-019 Maplewood\Drawings\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: C-101

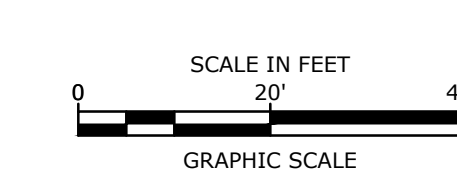
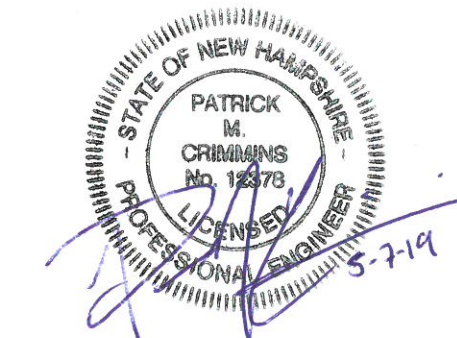
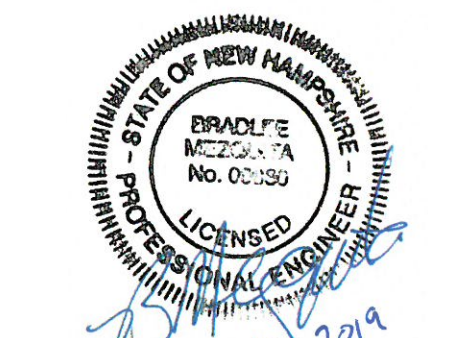


LEGEND

- APPROXIMATE LIMIT OF PROPOSED SAW CUT
- LIMIT OF WORK
- PROPOSED SILT SOCK
- APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
- PROPOSED CONSTRUCTION EXIT
- BUILDING TO BE REMOVED
- LOCATION OF PROPOSED BUILDING
- INLET PROTECTION SILT SOCK
- TBR TO BE REMOVED
- BLDG BUILDING
- TYP TYPICAL
- COORD COORDINATE

DEMOLITION NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
13. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
14. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
15. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
17. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SOCK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
18. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
20. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
21. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

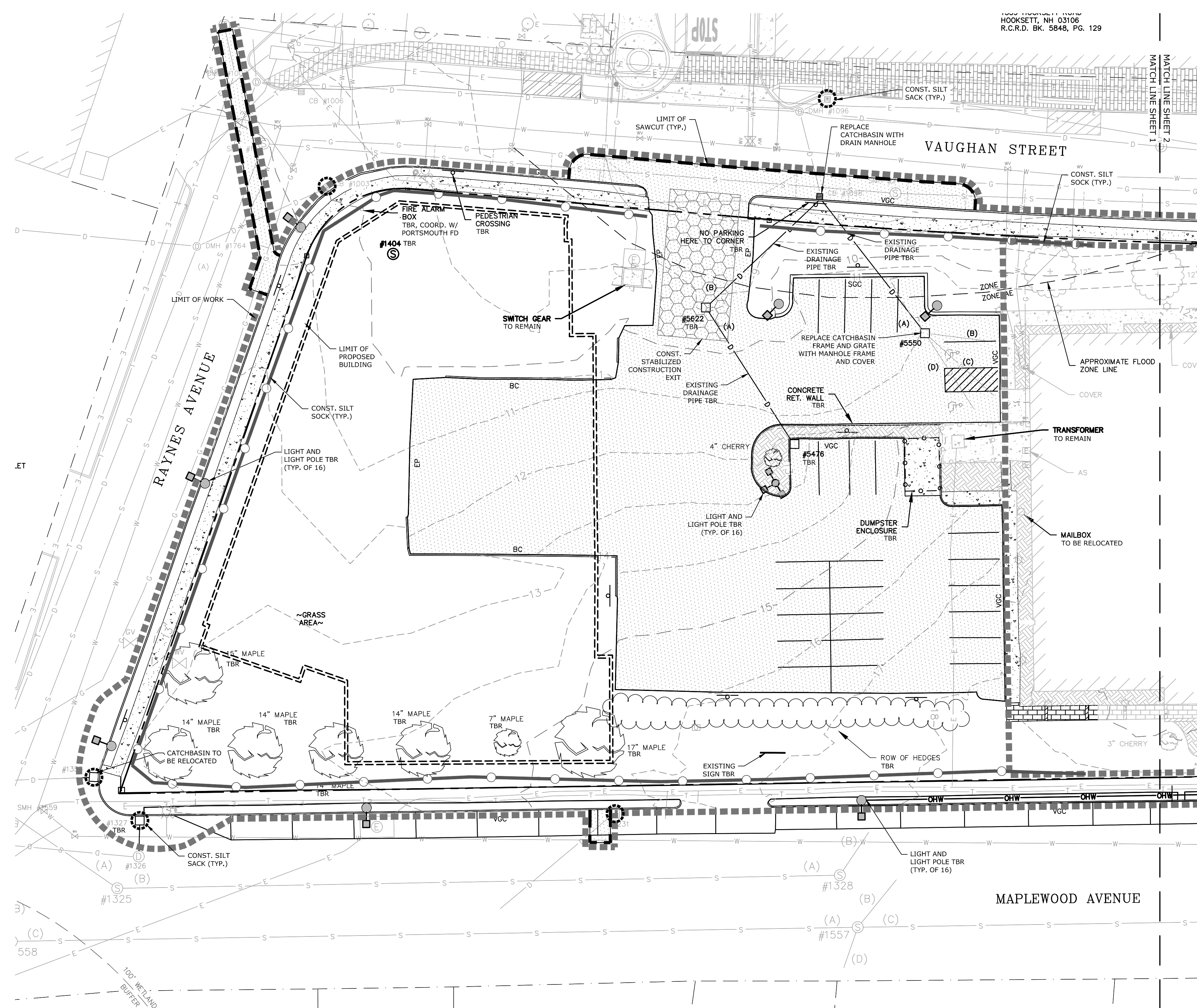
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CHECKED:	PMC
APPROVED:	BLM

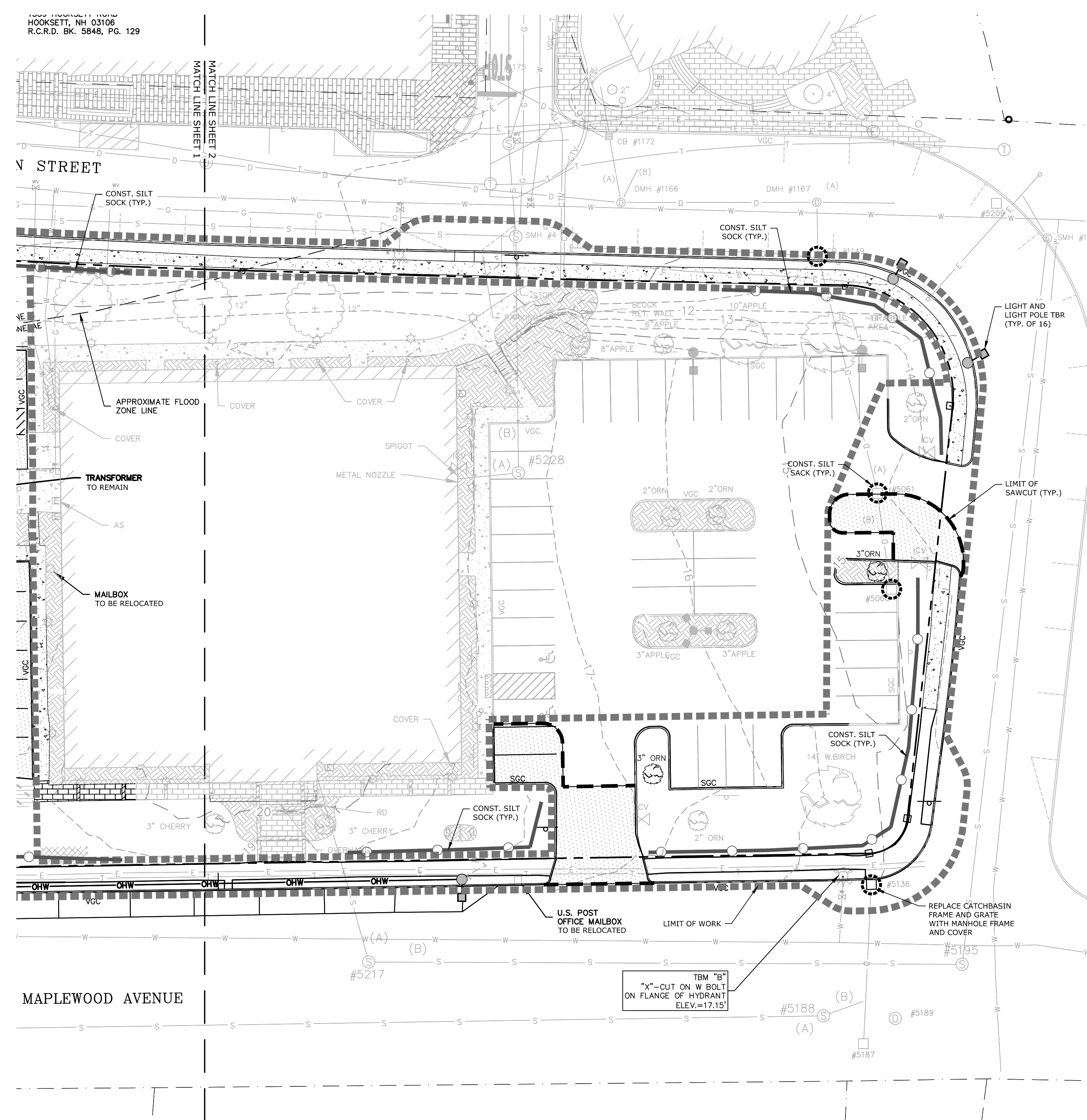
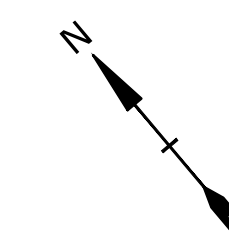
EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.1



Last Save Date: May 7, 2019 11:18 AM By: NAHANSEN
 Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
 P&E File Location: J:\K0076 The Kane Company - General Proposals\0076-019 Maplewood Drawings-AutoCAD\Work\K-0076-019_C-SITE.dwg Layout Tab: C-101.1

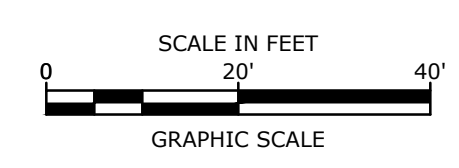
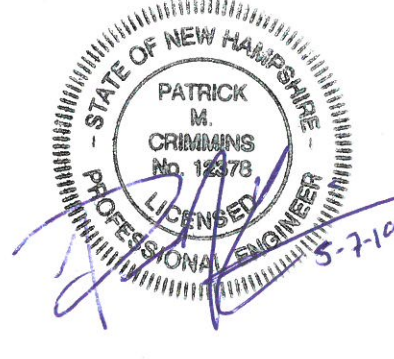
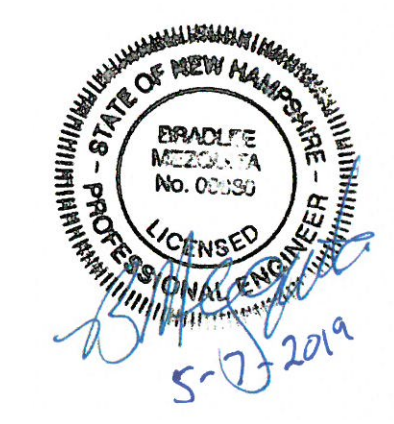


LEGEND

- APPROXIMATE LIMIT OF PROPOSED SAW CUT
- LIMIT OF WORK
- PROPOSED SILT SOCK
- ▨ APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
- ▧ PROPOSED CONSTRUCTION EXIT
- ▩ BUILDING TO BE REMOVED
- ▤ LOCATION OF PROPOSED BUILDING
- INLET PROTECTION SILT SOCK
- TBR TO BE REMOVED
- ▭ BLDG TO BE REMOVED
- ▭ TYP TYPICAL
- COORD COORDINATE

DEMOLITION NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
13. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
14. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
15. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
17. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SOCK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
18. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
20. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
21. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
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C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
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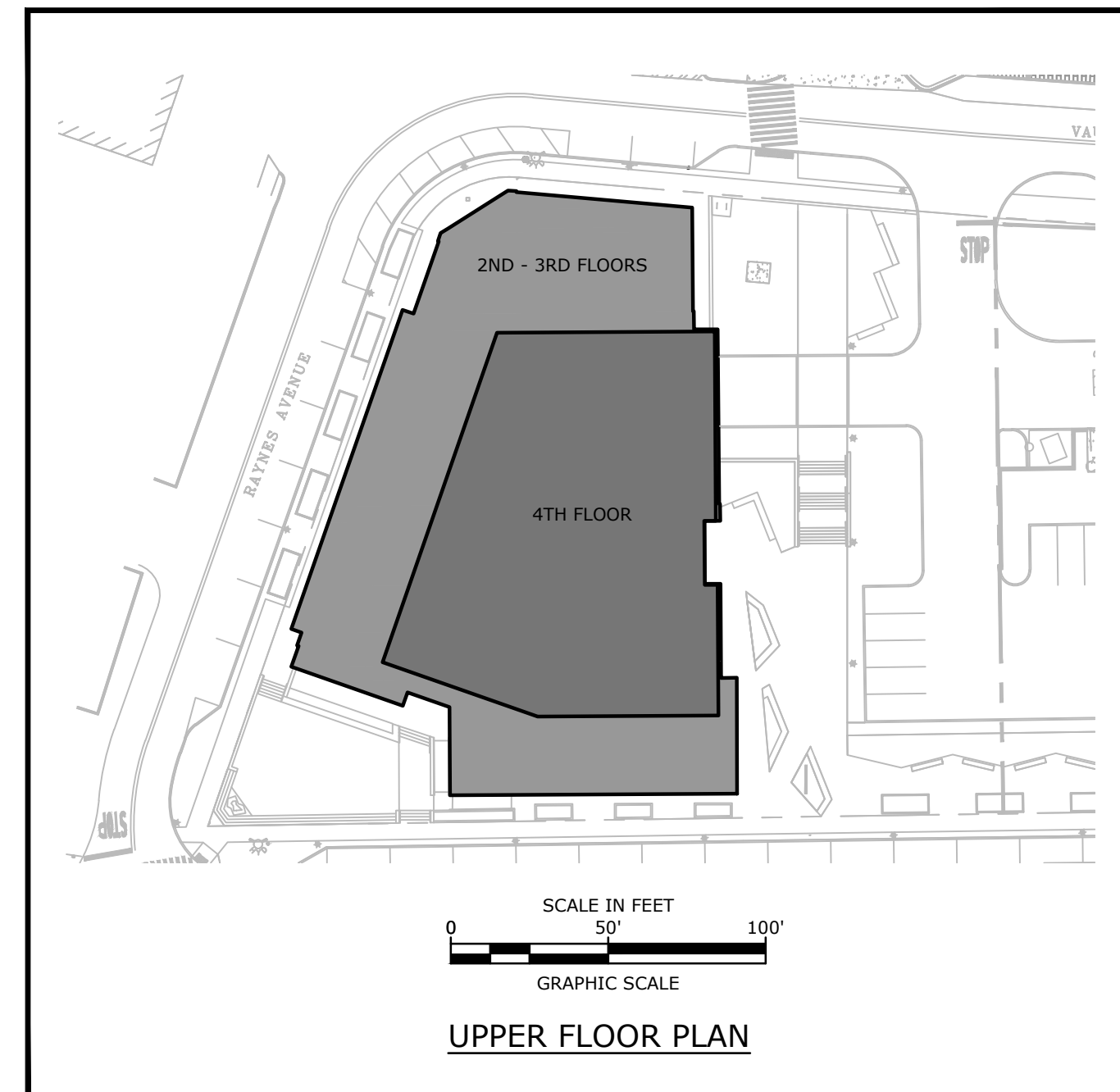
PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.2

Last Save Date: May 7, 2019 11:18 AM By: NAHANSEN
 Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
 P&E File Location: J:\K0076 - The Kane Company - General Proposals\0076-019 Maplewood\Drawings - Figures\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: C-101.2



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 (CDS)
DOWNTOWN OVERLAY DISTRICT
NORTH END INCENTIVE OVERLAY DISTRICT
HISTORIC DISTRICT

PROPOSED USE: OFFICE

PROPOSED LOT SIZE: ±0.98 ACRES (±42,778 SF)

PARKING REQUIREMENTS

PARKING SPACES REQUIRED:			
OFFICE	±59,000 SF	0 SPACES	
COMMERCIAL	±5,000 SF	0 SPACES	
DOWNTOWN OVERLAY DISTRICT		-4 SPACES	
TOTAL MINIMUM PARKING SPACES REQUIRED =		0 SPACES	
TOTAL PARKING SPACES PROVIDED:			36 SPACES
TOTAL PARKING SPACES PROVIDED =			36 SPACES

TWO (2) ADA ACCESSIBLE SPACES REQUIRED

PARKING STALL SIZE: 8.5' X 19'

DRIVE AISLE: 22'

***ZONING ORDINANCE 10.1114.21 ALLOWS MINIMUM 22' AISLE WIDTH FOR 90 DEGREE PARKING IN A PARKING STRUCTURE

BIKE SPACES REQUIRED: 4 SPACES

1 BIKE SPACE / 10 PARKING SPACES

PROPOSED GROSS FLOOR AREAS

FLOOR	OFFICE (SF)	COMMERCIAL (SF)	SERVICE/COMMON (SF)	TOTAL (SF)
BASEMENT	0	1,400	1,900	3,300
FIRST	0	13,300	6,600	19,900
SECOND	19,000	0	1,000	20,000
THIRD	19,000	0	1,000	20,000
FOURTH	9,500	0	1,000	10,500
TOTAL	47,500	14,700	11,500	73,700*

* EXCLUDES 15,540 SF OF BASEMENT LEVEL PARKING AREA

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
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% ±47.0%
MAXIMUM BUILDING FOOTPRINT:	*30,000 SF 20,117 SF
MINIMUM LOT AREA:	NR
MINIMUM LOT AREA PER DWELLING UNIT:	NR
MINIMUM OPEN SPACE:	5% 37.8%
MAXIMUM GROUND FLOOR GFA PER USE:	15,000 SF 13,300 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
MINIMUM GROUND STORY HEIGHT:	12 FT
MINIMUM SECOND STORY HEIGHT:	10 FT
FACADE GLAZING:	20% - 50%
STOOP FACADE TYPE	
ALLOWED ROOF TYPES	FLAT
FLAT, GABLE, HIP, GAMBREL, MANSARD	

**ZONING ORDINANCE 10.5A46.20 ALLOWS A 1-STORY, UP TO 10' HEIGHT INCREASE WITH 20% COMMUNITY SPACE.

COMMUNITY SPACE:

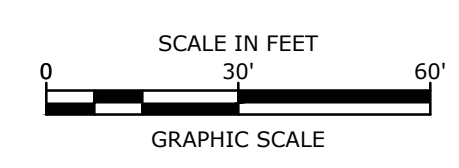
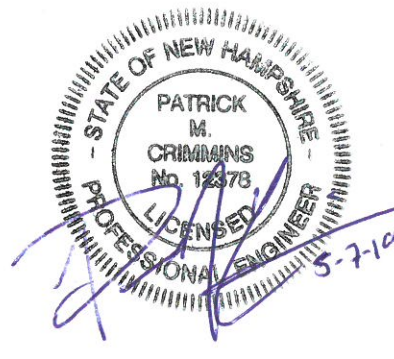
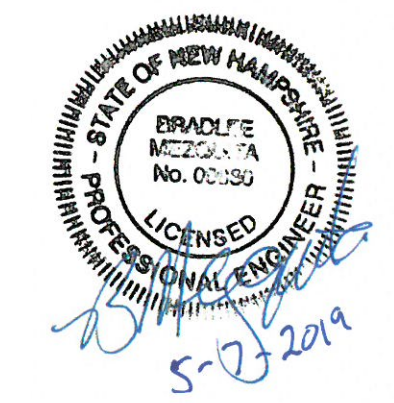
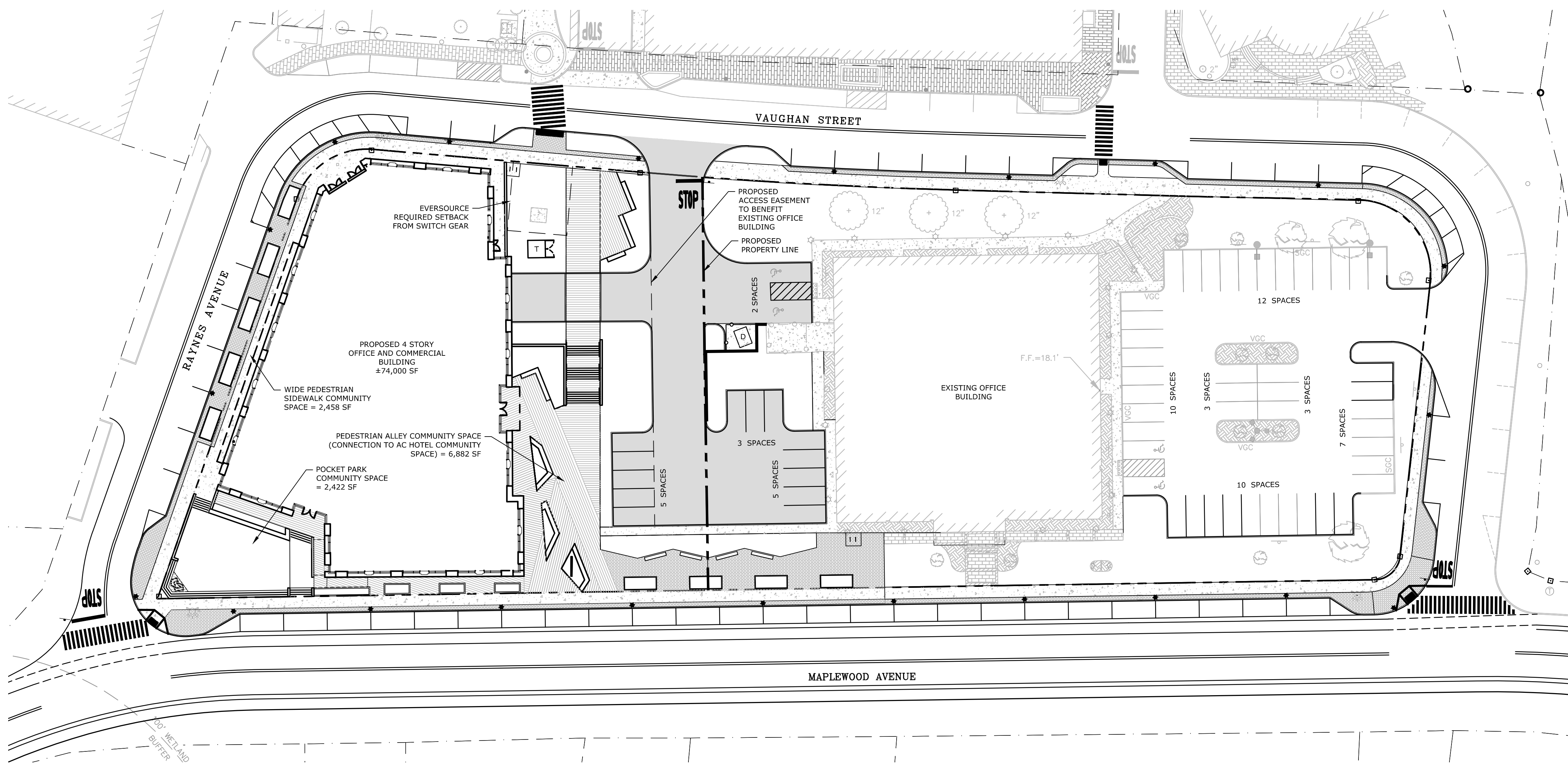
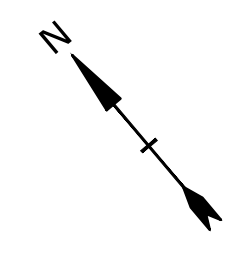
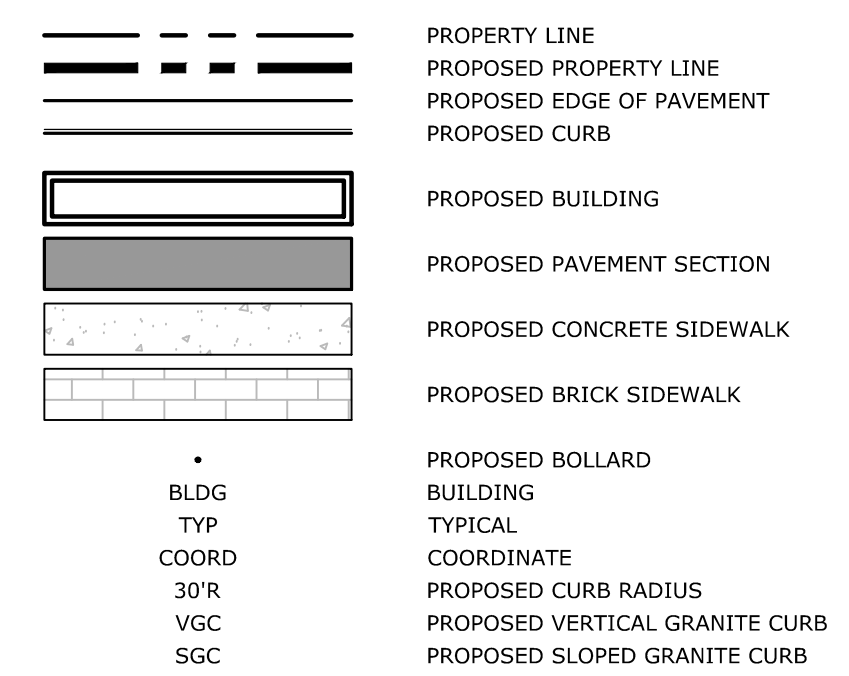
REQUIRED	PROVIDED
8,556 SF	11,762 SF
20%	27.5%

INCENTIVES TO DEVELOPMENT STANDARDS:

MAXIMUM BUILDING FOOTPRINT PLUS 1-STORY, MAX 10 FT	30,000 SF	20,117 SF
MINIMUM SIDEWALK WIDTH	**60 FT	55 FT
	***12 FT	12 FT

***ZONING ORDINANCE 10.5A46.10, FOOTNOTE 4 REQUIRES THE SIDEWALK WIDTH TO BE 10 FT PLUS AN EXTRA 2 FT FOR EACH STORY OF BUILDING HEIGHT ABOVE 3 STORIES.

LEGEND



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

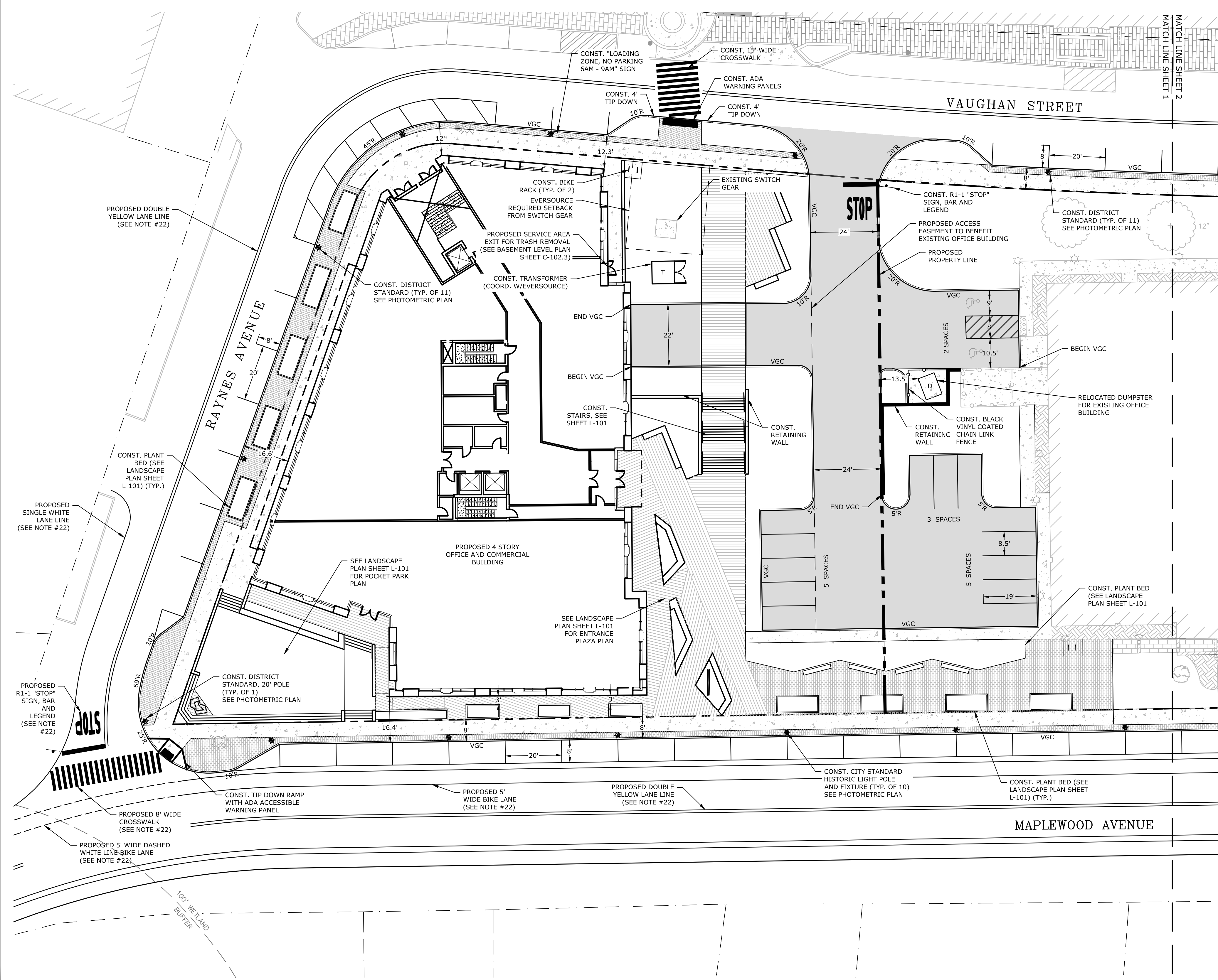
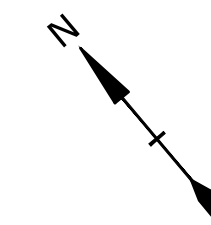
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PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019_C-SITE.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

OVERALL SITE PLAN

SCALE: AS SHOWN

Last Save Date: May 7, 2019 1:17 PM By: MAHANSEN
Plot Date: Wednesday, May 08, 2019 Plotted By: Neil A. Hansen
P&E File Location: J:\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings\Figures\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: C-102



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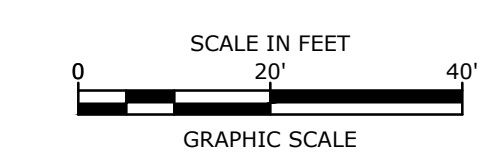
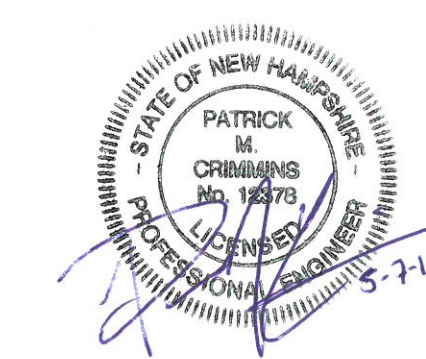
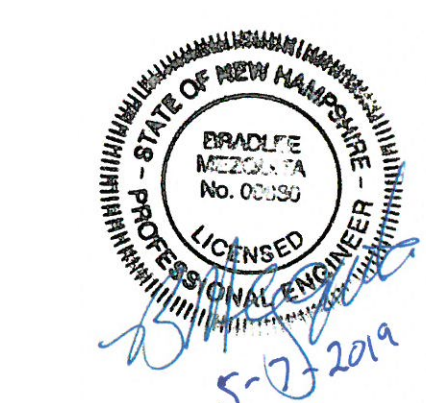
- PROPERTY LINE
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- PROPOSED CURB
- PROPOSED BUILDING
- PROPOSED PAVEMENT SECTION
- PROPOSED CONCRETE SIDEWALK
- PROPOSED BRICK SIDEWALK
- PROPOSED BOLLARD
- BLDG TYP COORD
- 30'R PROPOSED VERTICAL GRANITE CURB
- 5' R PROPOSED SLOPED GRANITE CURB

SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO M248. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
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3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
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9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.
17. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
18. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
19. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY.
20. THE PROPOSED LOADING ZONE SHALL BE REVIEWED BY THE PARKING & TRAFFIC SAFETY COMMITTEE FOR RECOMMENDATION TO CITY COUNCIL.
21. THE VALUE OF A FAIR CONTRIBUTION TOWARDS OFF-SITE PUBLIC IMPROVEMENT PROJECTS SHALL BE AGREED UPON BETWEEN THE APPLICANT AND CITY PRIOR TO PLANNING BOARD APPROVALS.
22. APPLICANT SHALL WORK WITH THE CITY TO CONFIRM PROJECT SCOPE AND TIMING AS IT RELATES TO THE CITY'S COMPLETE STREETS IMPROVEMENT PROJECT THAT IS BEING DESIGNED BY THE CITY'S CONSULTANT.
23. THE APPLICANT AGREES TO EXECUTE A PROSPECTIVE DEVELOPMENT INCENTIVE AGREEMENT FOR THE EXCESS COMMUNITY SPACE AREAS PRIOR TO CONSTRUCTION.
24. ALL TREES PLANTED ARE TO BE INSTALLED UNDER THE SUPERVISION OF THE CITY OF PORTSMOUTH DPW USING STANDARD INSTALLATION METHODS.
25. THE APPLICANT SHALL PREPARE A CONSTRUCTION MANAGEMENT AND MITIGATION PLAN (CMMP) FOR REVIEW AND APPROVAL BY THE CITY'S LEGAL AND PLANNING DEPARTMENTS.
26. A TEMPORARY SUPPORT OF EXCAVATION (SOE) PLAN SHALL BE PREPARED BY THE APPLICANT'S CONTRACTOR TO CONFIRM ANY TEMPORARY ENCUMBRANCES OF THE CITY'S RIGHT-OF-WAY. IF LICENSES ARE REQUIRED FOR THE SOE, THE APPLICANT WILL BE REQUIRED TO OBTAIN THESE FROM THE CITY PRIOR TO CONSTRUCTION.

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.



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Portsmouth, New Hampshire

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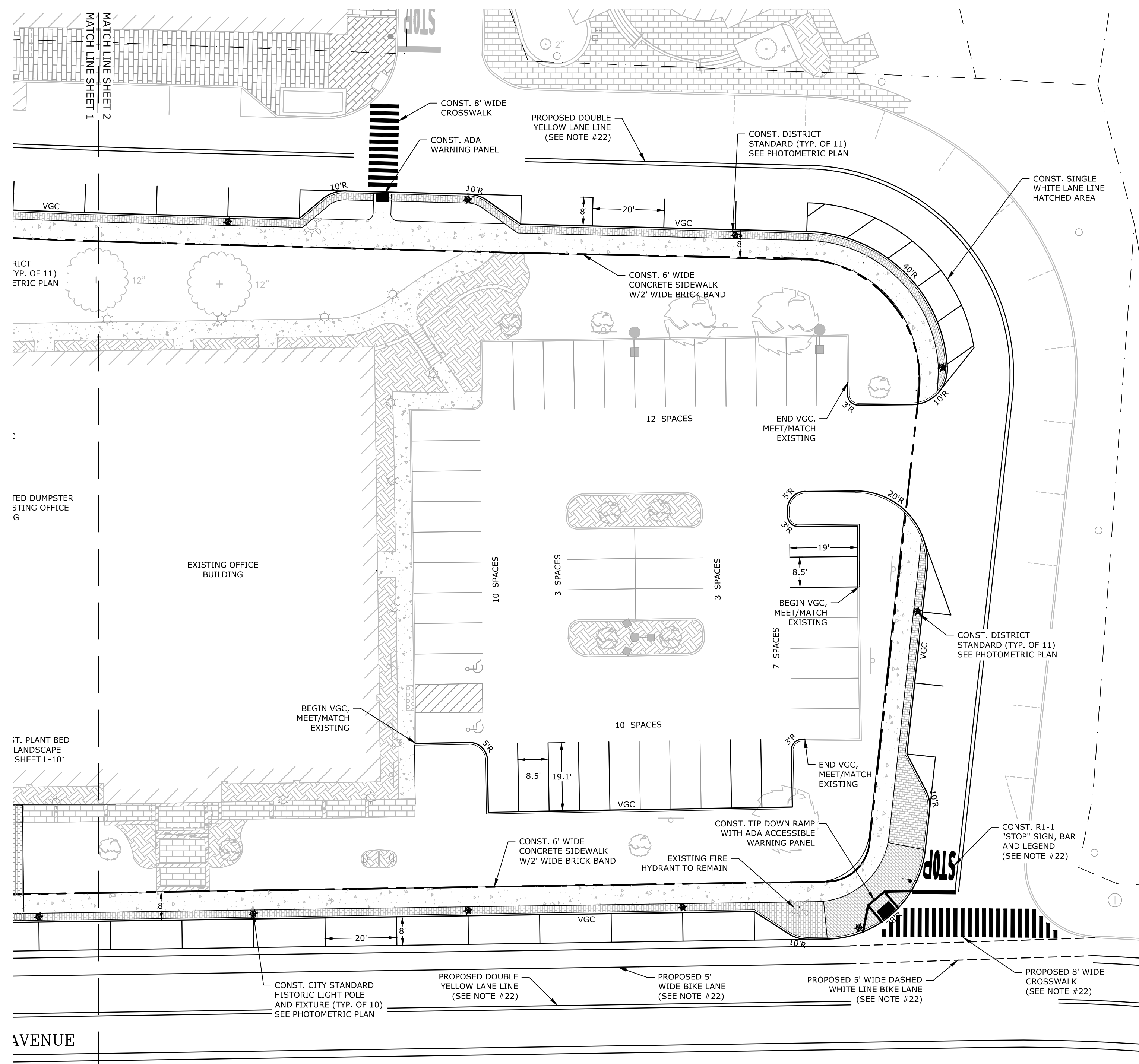
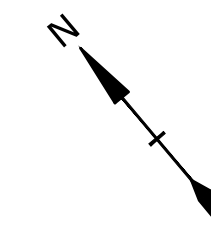
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SITE PLAN

SCALE: AS SHOWN

C-102.1

Last Save Date: May 7, 2019 11:36 AM By: MAHANSEN
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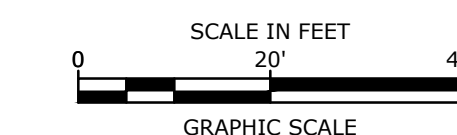
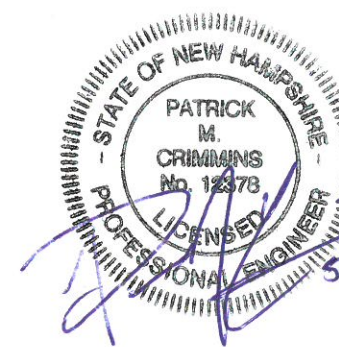
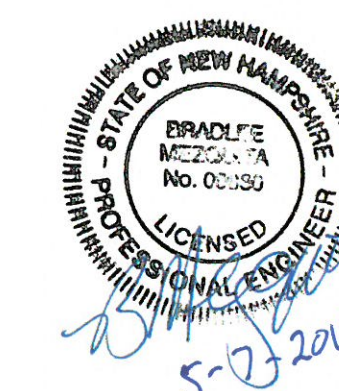
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12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.
17. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
18. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
19. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY.
20. THE PROPOSED LOADING ZONE SHALL BE REVIEWED BY THE PARKING & TRAFFIC SAFETY COMMITTEE FOR RECOMMENDATION TO CITY COUNCIL.
21. THE VALUE OF A FAIR CONTRIBUTION TOWARDS OFF-SITE PUBLIC IMPROVEMENT PROJECTS SHALL BE AGREED UPON BETWEEN THE APPLICANT AND CITY PRIOR TO PLANNING BOARD APPROVAL.
22. APPLICANT SHALL WORK WITH THE CITY TO CONFIRM PROJECT SCOPE AND TIMING AS IT RELATES TO THE CITY'S COMPLETE STREETS IMPROVEMENT PROJECT THAT IS BEING DESIGNED BY THE CITY'S CONSULTANT.
23. THE APPLICANT AGREES TO EXECUTE A PROSPECTIVE DEVELOPMENT INCENTIVE AGREEMENT FOR THE EXCESS COMMUNITY SPACE AREAS PRIOR TO CONSTRUCTION.
24. ALL TREES PLANTED ARE TO BE INSTALLED UNDER THE SUPERVISION OF THE CITY OF PORTSMOUTH DPW USING STANDARD INSTALLATION METHODS.
25. THE APPLICANT SHALL PREPARE A CONSTRUCTION MANAGEMENT AND MITIGATION PLAN (CMM) FOR REVIEW AND APPROVAL BY THE CITY'S LEGAL AND PLANNING DEPARTMENTS.
26. A TEMPORARY SUPPORT OF EXCAVATION (SOE) PLAN SHALL BE PREPARED BY THE APPLICANT'S CONTRACTOR TO CONFIRM ANY TEMPORARY ENCUMBRANCES OF THE CITY'S RIGHT-OF-WAY. IF LICENSES ARE REQUIRED FOR THE SOE, THE APPLICANT WILL BE REQUIRED TO OBTAIN THESE FROM THE CITY PRIOR TO CONSTRUCTION.

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.



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

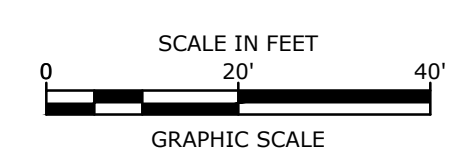
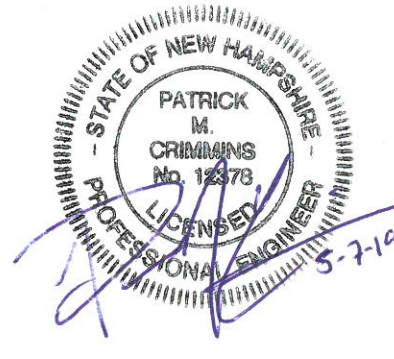
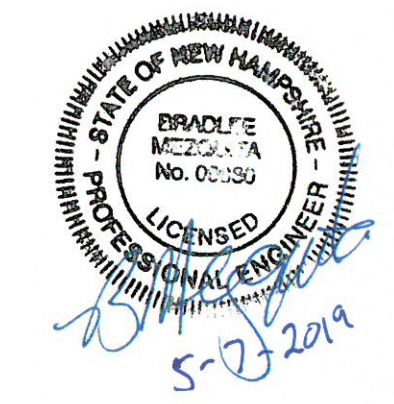
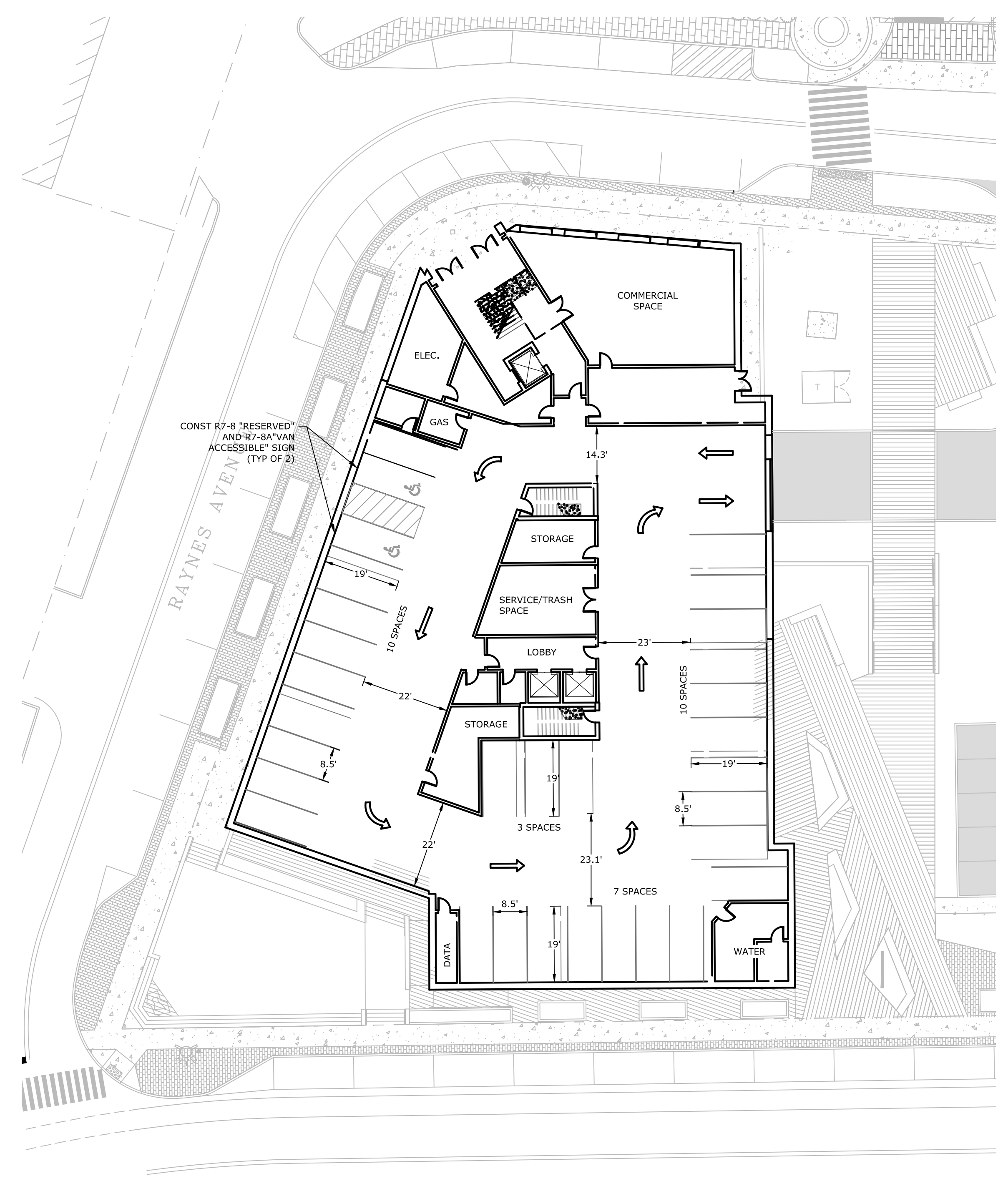
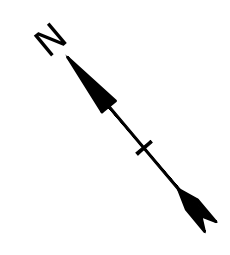
MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

SITE PLAN

SCALE: AS SHOWN

C-102.2



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
C	4/16/2019	Revised TAC Submission
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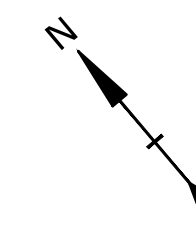
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DATE:	03/18/2019
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DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

BASEMENT LEVEL FLOOR PLAN

SCALE: AS SHOWN

C-102.3

Last Save Date: May 7, 2019 9:34 AM By: NAHANSEN
Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
P&E File Location: J:\K0076 - The Kane Company - General Proposals\0076-019 Maplewood\Drawings - Figures\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: C-102.3



LEGEND

- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
- PROPOSED CATCHBASIN
- PROPOSED DOUBLE GRATE CATCHBASIN
- PROPOSED DRAIN MANHOLE
- BLDG
- TYP
- COORD
- TC
- BC
- TW
- BW

GRADING AND DRAINAGE NOTES:

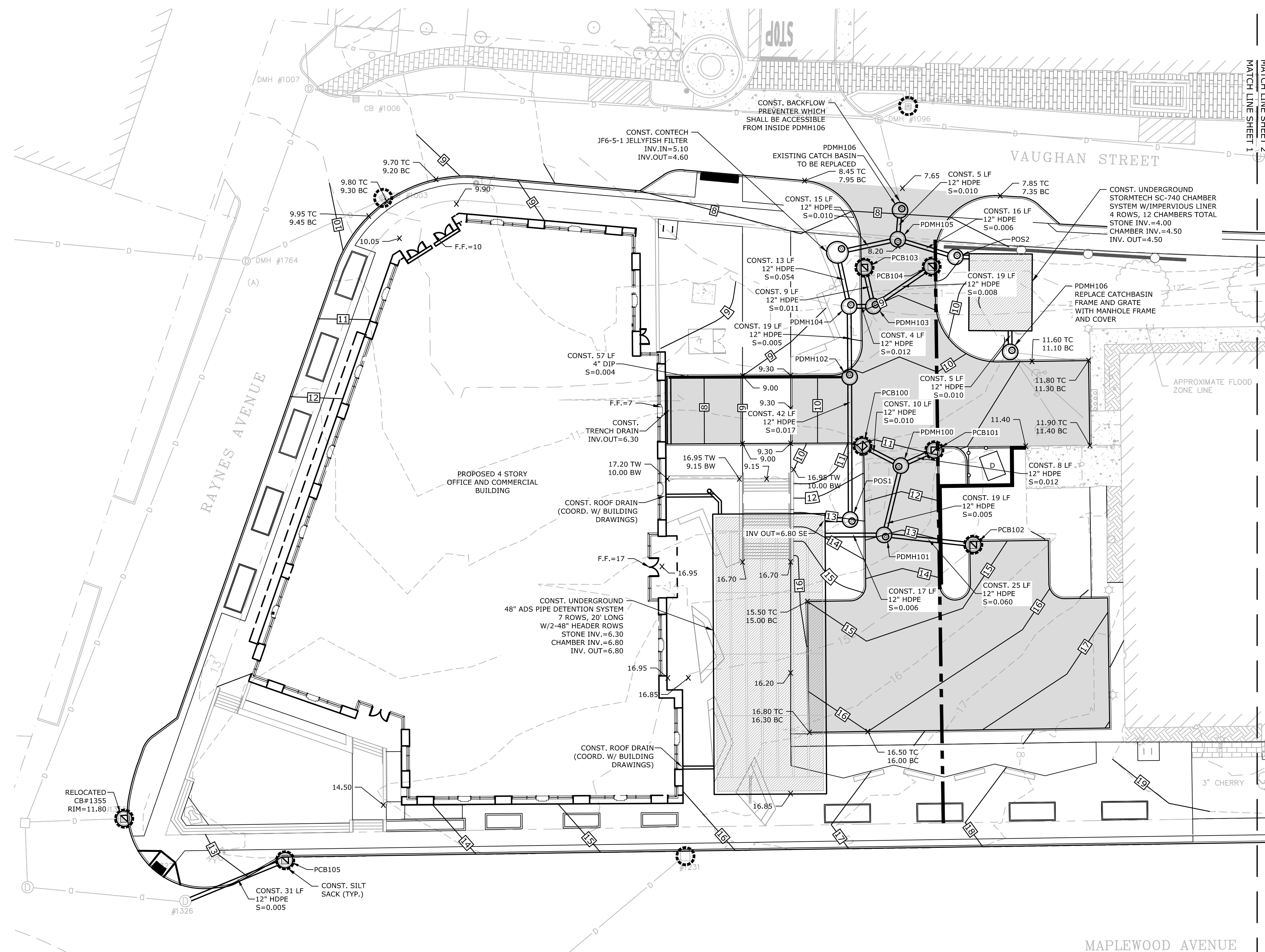
1. COMPACTION REQUIREMENTS:
BELOW PAVED OR CONCRETE AREAS 95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95%
BELOW LOAM AND SEED AREAS 90%
* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
12. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

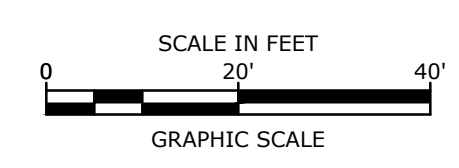
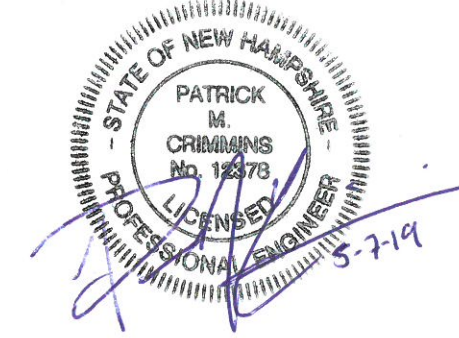
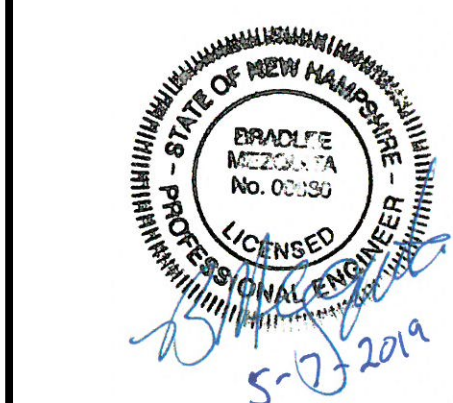
1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON "EROSION CONTROL NOTES & DETAILS SHEET".
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. MAINTAIN FOR THE DURATION OF THE PROJECT.
4. INSTALL STABILIZED CONSTRUCTION EXIT(S).
5. INSPECT INLET PROTECTION AND PERIMETER EROSION CONTROL MEASURES DAILY 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.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH PERIMETER CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDINGS. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS.
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DRAINAGE STRUCTURE TABLE

CB#1355 RIM=11.80	PCB104 RIM=8.50 INV.OUT=6.20	PDMH102 RIM=10.05 INV.IN=6.05 INV.OUT=6.00	PDMH107 RIM=11.00 INV.OUT=4.50
PCB100 RIM=11.00 INV.OUT=9.00	PCB105 RIM=12.70 INV.OUT=9.50	PDMH103 RIM=9.00 INV.IN=6.05 INV.IN=6.05 INV.OUT=5.95	PDMH200 RIM=15.00 INV.IN=11.25
PCB101 RIM=11.00 INV.OUT=9.00	PCB200 RIM=15.35 INV.OUT=11.35	POS1 RIM=13.00 INV.IN=6.80 INV.OUT=6.70	
PCB102 RIM=14.50 INV.OUT=10.50	PDMH100 RIM=11.50 INV.IN=8.90 INV.IN=8.90 INV.IN=8.70	PDMH104 RIM=9.55 RIM=9.00 RIM=9.00	POS2 RIM=9.00 INV.IN=4.50 INV.IN=4.50
PCB103 RIM=8.50 INV.OUT=6.15	PDMH101 RIM=13.00 INV.IN=9.00 INV.OUT=8.60 INV.OUT=8.80	PDMH105 RIM=8.20 INV.IN=4.40 INV.OUT=4.35 INV.OUT=4.60	PDMH106 RIM=8.00 INV.IN=4.30 INV.OUT=4.20



Last Save Date: May 7, 2019 11:18 AM By: MAHANSEN
 Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
 P&E File Location: J:\K0076 - The Kane Company - General Proposals\076-019 Maplewood Drawings - Figures\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: C-103.1



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

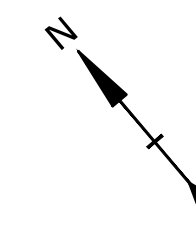
MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
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A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.1



LEGEND

- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
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- PROPOSED DOUBLE GRATE CATCHBASIN
- PROPOSED DRAIN MANHOLE
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GRADING AND DRAINAGE NOTES:

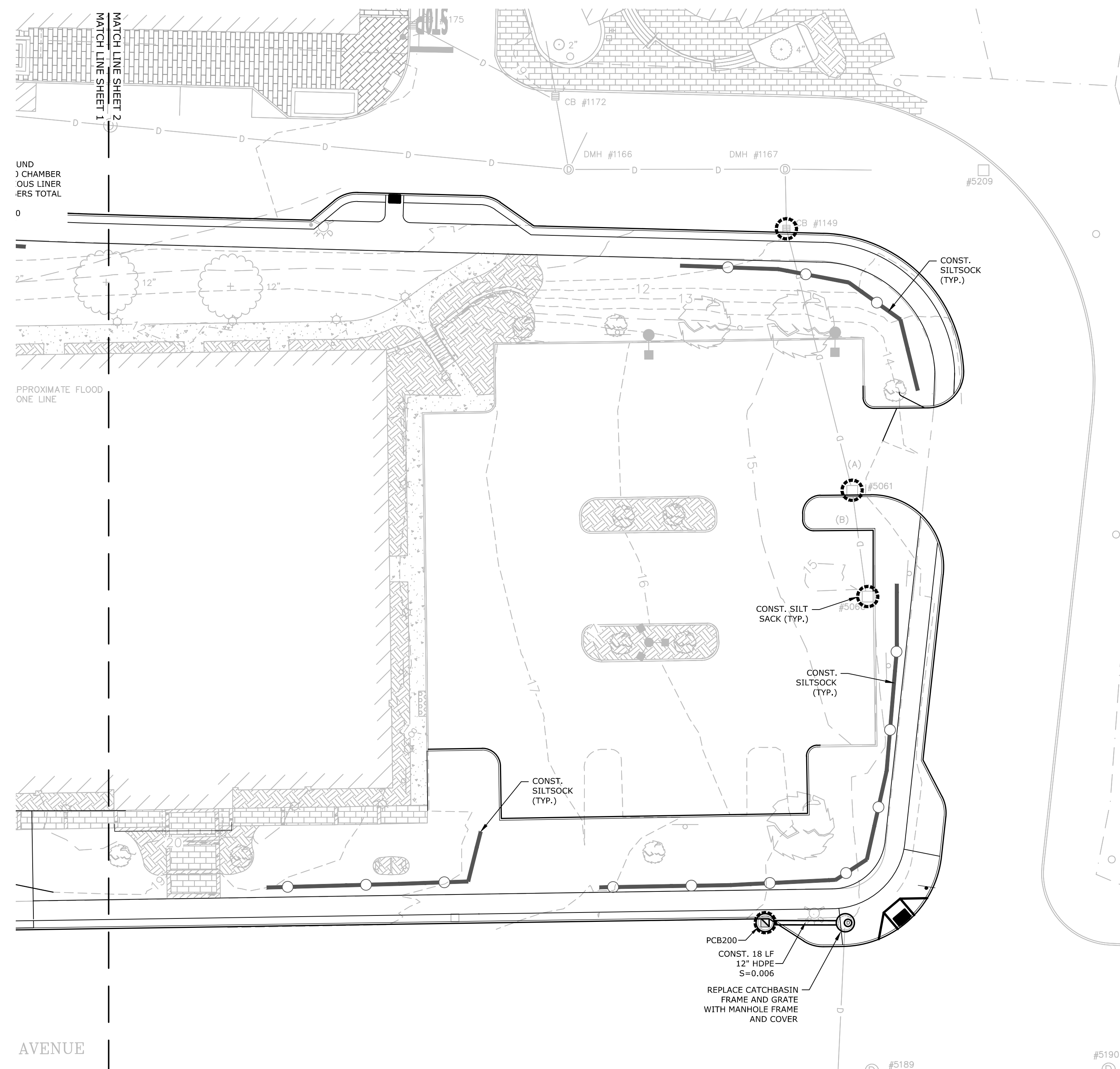
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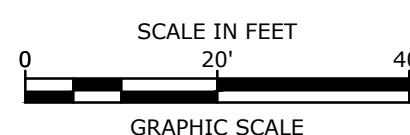
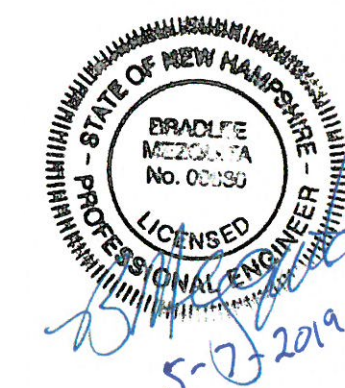
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PCB100 RIM=11.00 INV.OUT=9.00	PCB105 RIM=12.70 INV.OUT=9.50	PDMH200 RIM=15.00 INV.IN=11.25	
PCB101 RIM=11.00 INV.OUT=9.00	PCB200 RIM=15.35 INV.OUT=11.35	PDMH103 RIM=9.00 INV.IN=6.05 INV.OUT=5.95	POS1 RIM=13.00 INV.IN=6.80 INV.OUT=6.70
PCB102 RIM=14.50 INV.OUT=10.50	PDMH100 RIM=11.50 INV.IN=8.90	PDMH104 RIM=9.55 INV.IN=5.90	POS2 RIM=9.00 INV.IN=4.50 INV.OUT=4.50
PCB103 RIM=8.50 INV.OUT=6.15	PDMH101 RIM=13.00 INV.IN=9.00 INV.OUT=8.80	PDMH105 RIM=8.20 INV.IN=4.40 INV.OUT=4.35 INV.OUT=4.60	
	PDMH106 RIM=8.00 INV.IN=4.30 INV.OUT=4.20		



AVENUE



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

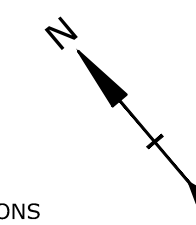
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FILE: K-0076-019_C-SITE.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.2



SEWER STRUCTURE TABLE

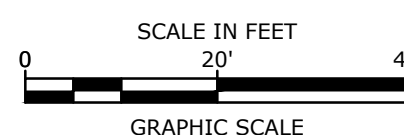
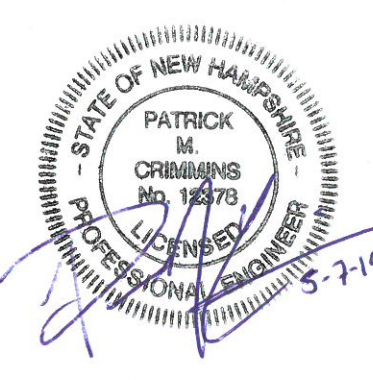
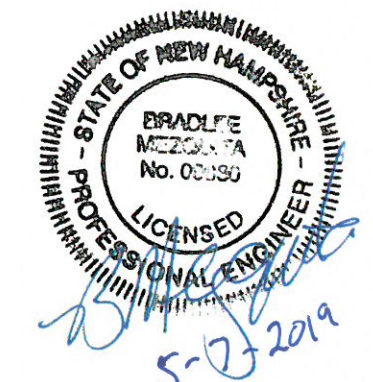
SMH #1
RIM ELEV. = 10.0'
(1559) INV. 8" PVC = 3.65'
INV. OUT 12" PVC = 3.13'

SMH #2
RIM ELEV. = 7.75'
INV. IN 12" PVC = 2.95'
INV. OUT 12" PVC = 2.85'

SMH #3
RIM ELEV. = 8.85'
INV. IN 12" PVC = 2.15'
INV. OUT 12" PVC = 2.05'

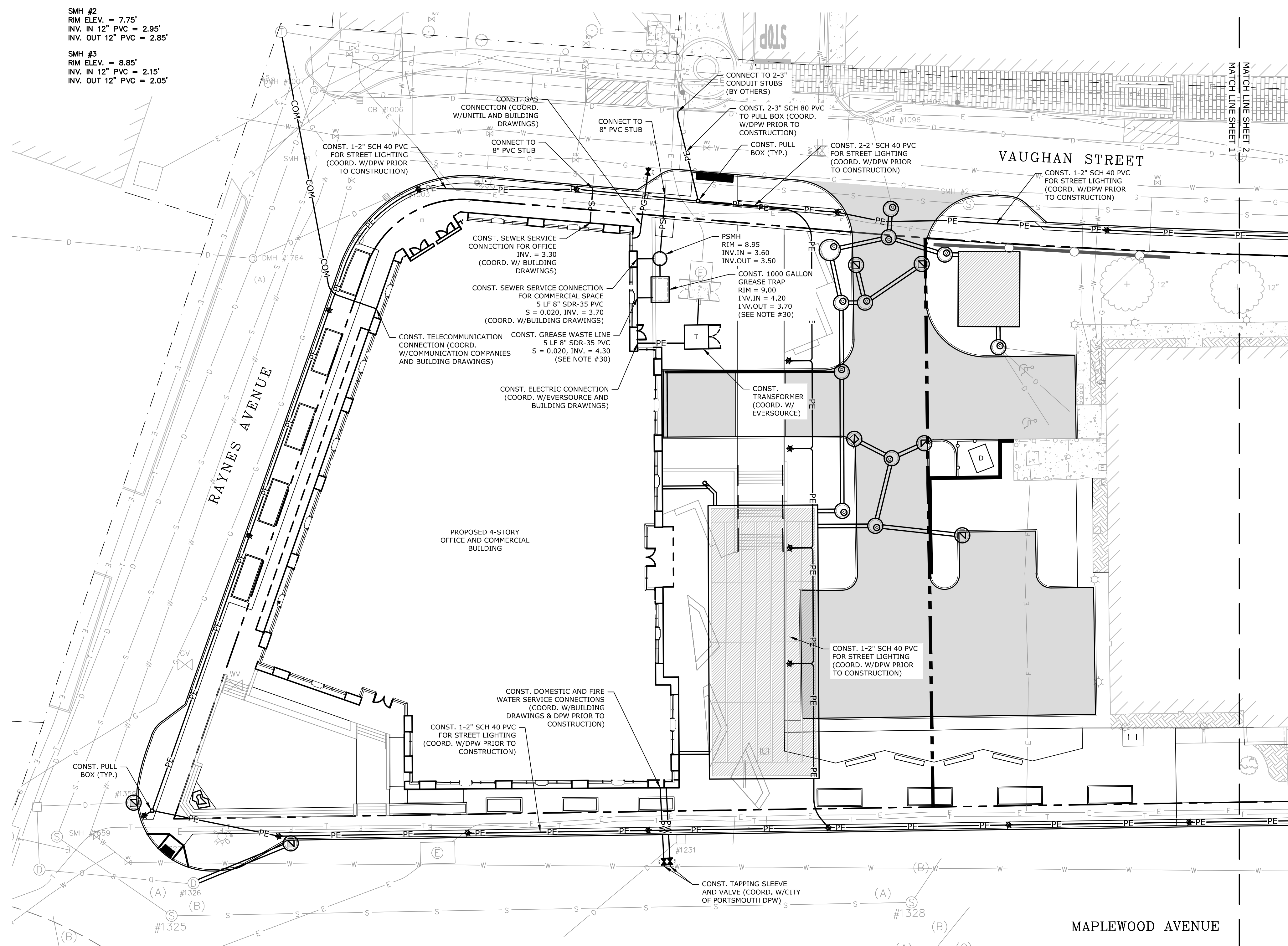
UTILITY NOTES:

- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
 - NATURAL GAS - UNITIL
 - WATER/SEWER - CITY OF PORTSMOUTH
 - ELECTRIC - EVERSOURCE
 - COMMUNICATIONS - COMCAST/CONSOLIDATED COMMUNICATIONS
- SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
- SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
- ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
- ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT.
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- ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
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- THE CONTRACTOR SHALL CONTACT "DIG-SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON SITE AT ALL TIMES.
- CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
- SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
- HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.
- COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
- ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAN 4' OF COVER IN UNPAVED AREAS SHALL BE INSULATED.
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- SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.
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- APPLICANT'S ENGINEER SHALL UPDATE THE CITY'S VAUGHAN STREET SEWER IMPROVEMNT PLANS TO INCLUDE LATERALS FOR THIS PROJECT'S SEWER SERVICES PRIOR TO SEWER CONSTRUCTION SCHEDULED FOR SPRING 2019.
- FINAL LOCATIONS OF ALL UTILITY LINES SHALL BE APPROVED BY THE CITY OF PORTSMOUTH DPW PRIOR TO CONSTRUCTION.



LEGEND

---	MATCH LINE
---	EXISTING STORM DRAIN
SS	EXISTING SANITARY SEWER
---	EXISTING SANITARY SEWER TO BE REMOVED
T-T	EXISTING UNDERGROUND TELECOMMUNICATION
---	EXISTING WATER
---	EXISTING GAS
---	EXISTING UNDERGROUND ELECTRIC
OH-W	EXISTING OVERHEAD UTILITY
---	PROPOSED STORM DRAIN
---	PROPOSED SANITARY SEWER
PW	PROPOSED WATER
G	PROPOSED GAS
PE	PROPOSED UNDERGROUND ELECTRIC
COM	PROPOSED UNDERGROUND TELECOMMUNICATION
⊞	EXISTING CATCHBASIN
⊙	EXISTING DRAIN MANHOLE
⊙	EXISTING SEWER MANHOLE
+	EXISTING HYDRANT
⊕	EXISTING WATER VALVE
⊕	EXISTING ELECTRIC MANHOLE
⊕	EXISTING TELEPHONE MANHOLE
⊕	PROPOSED CATCHBASIN
⊕	PROPOSED DRAIN MANHOLE
⊕	PROPOSED SEWER MANHOLE
⊕	PROPOSED WATER VALVE
⊕	PROPOSED HYDRANT
⊕	PROPOSED GAS VALVE
⊕	PROPOSED ELECTRIC MANHOLE
⊕	PROPOSED LIGHT POLE BASE
●	BUILDING
TYP	TYPICAL
COORD	COORDINATE
VIF	VERIFY IN FIELD



Last Save Date: May 7, 2019 11:18 AM By: MAHANSEN
 Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
 P&E File Location: J:\K0076-019 Maplewood\Drawings - Figures\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: C-104.1

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

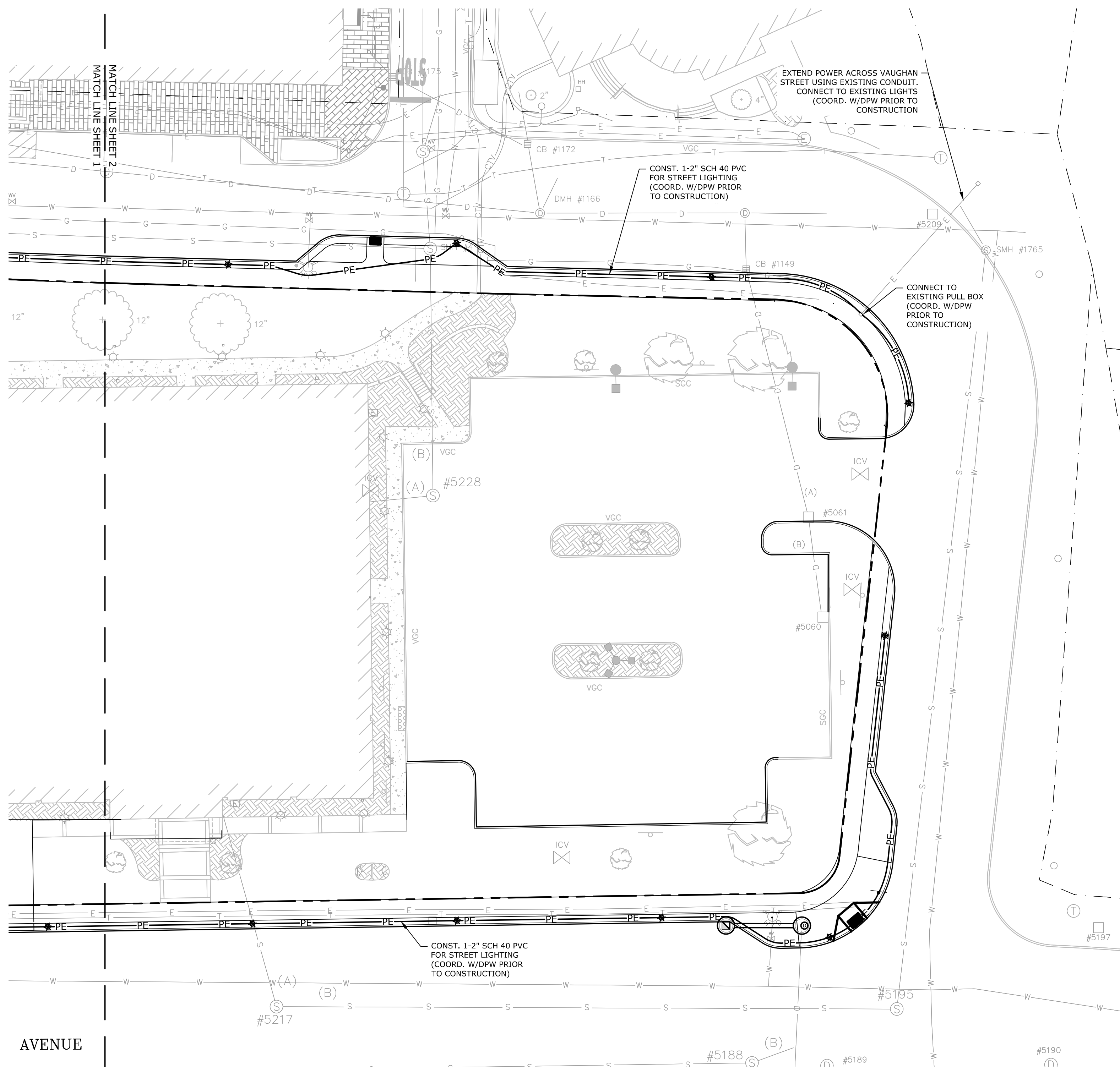
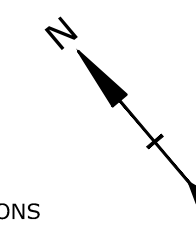
MARK	DATE	DESCRIPTION
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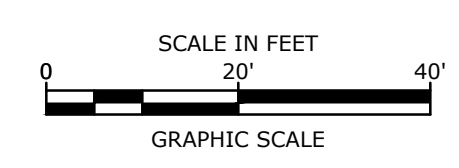
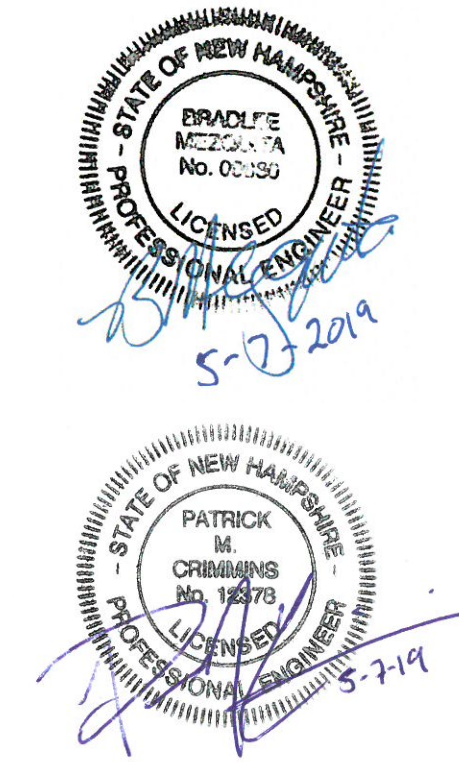
UTILITIES PLAN

SCALE: AS SHOWN

C-104.1



- UTILITY NOTES:**
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
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LEGEND

	MATCH LINE
	EXISTING STORM DRAIN
	EXISTING SANITARY SEWER
	EXISTING SANITARY SEWER TO BE REMOVED
	EXISTING UNDERGROUND TELECOMMUNICATION
	EXISTING WATER
	EXISTING GAS
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD UTILITY
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
	PROPOSED WATER
	PROPOSED GAS
	PROPOSED UNDERGROUND ELECTRIC
	PROPOSED UNDERGROUND TELECOMMUNICATION
	EXISTING CATCHBASIN
	EXISTING DRAIN MANHOLE
	EXISTING SEWER MANHOLE
	EXISTING HYDRANT
	EXISTING WATER VALVE
	EXISTING ELECTRIC MANHOLE
	EXISTING TELEPHONE MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED DRAIN MANHOLE
	PROPOSED SEWER MANHOLE
	PROPOSED WATER VALVE
	PROPOSED HYDRANT
	PROPOSED GAS VALVE
	PROPOSED ELECTRIC MANHOLE
	PROPOSED LIGHT POLE BASE
	BUILDING
	TYPICAL COORDINATE
	VERIFY IN FIELD

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

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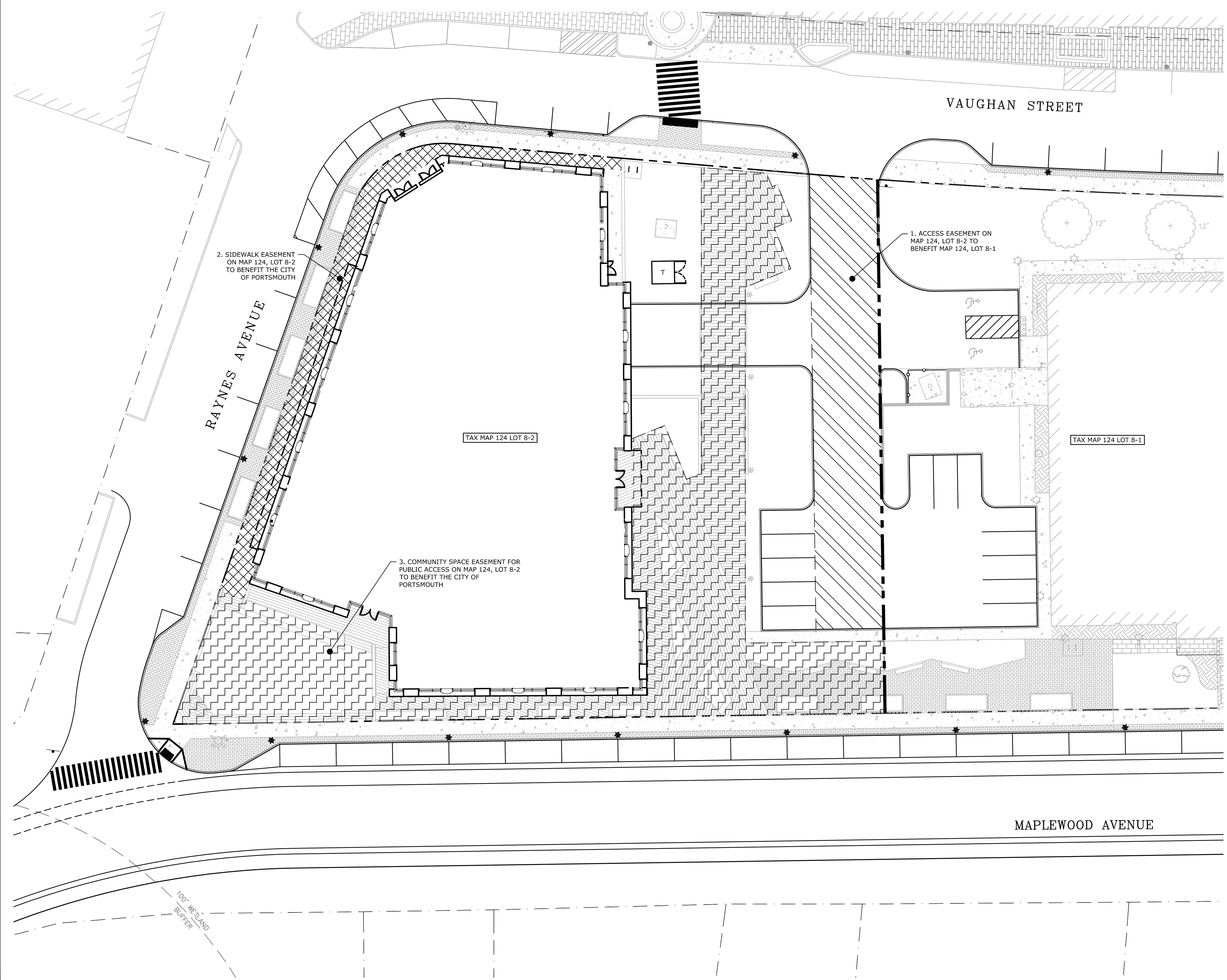
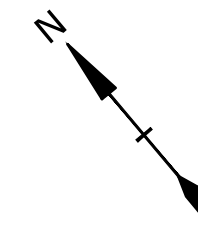
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DATE:	03/18/2019
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DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

UTILITIES PLAN

SCALE: AS SHOWN

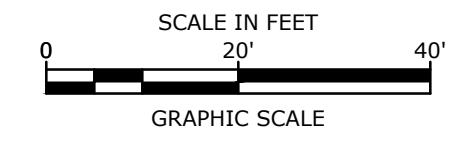
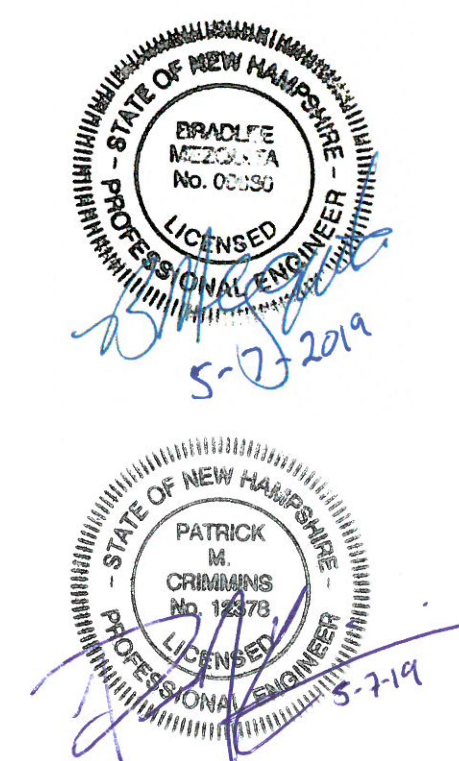
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 Plot Date: Tuesday, May 07, 2019 Plotted By: Neil A. Hansen
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- EASEMENTS**
1. ACCESS EASEMENT ON MAP 124, LOT 8-2 TO BENEFIT MAP 124, LOT 8-1
 2. SIDEWALK EASEMENT ON MAP 124, LOT 8-2 TO BENEFIT THE CITY OF PORTSMOUTH
 3. COMMUNITY SPACE EASEMENT FOR PUBLIC ACCESS ON MAP 124, LOT 8-2 TO BENEFIT THE 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 DEEDS PRIOR TO ISSUING BUILDING PERMITS.



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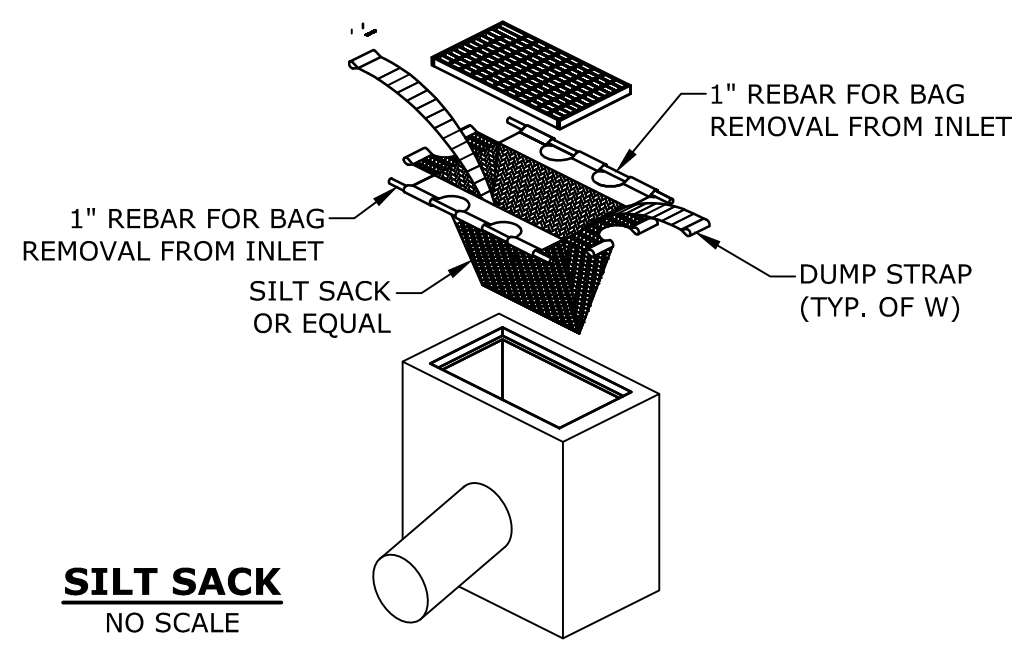
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EASEMENT PLAN

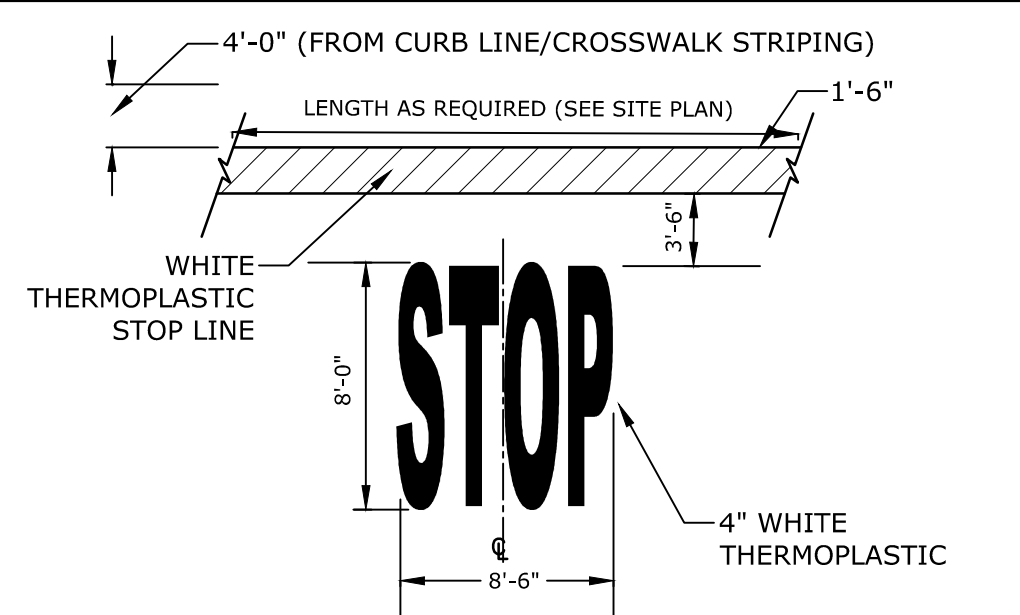
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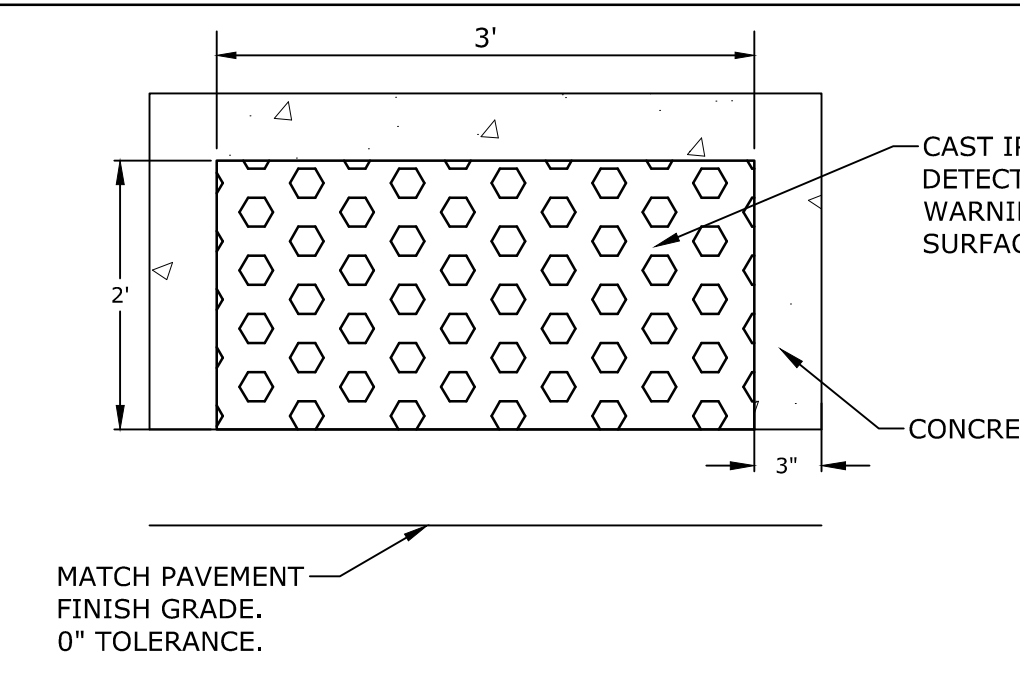


SILT SACK
NO SCALE



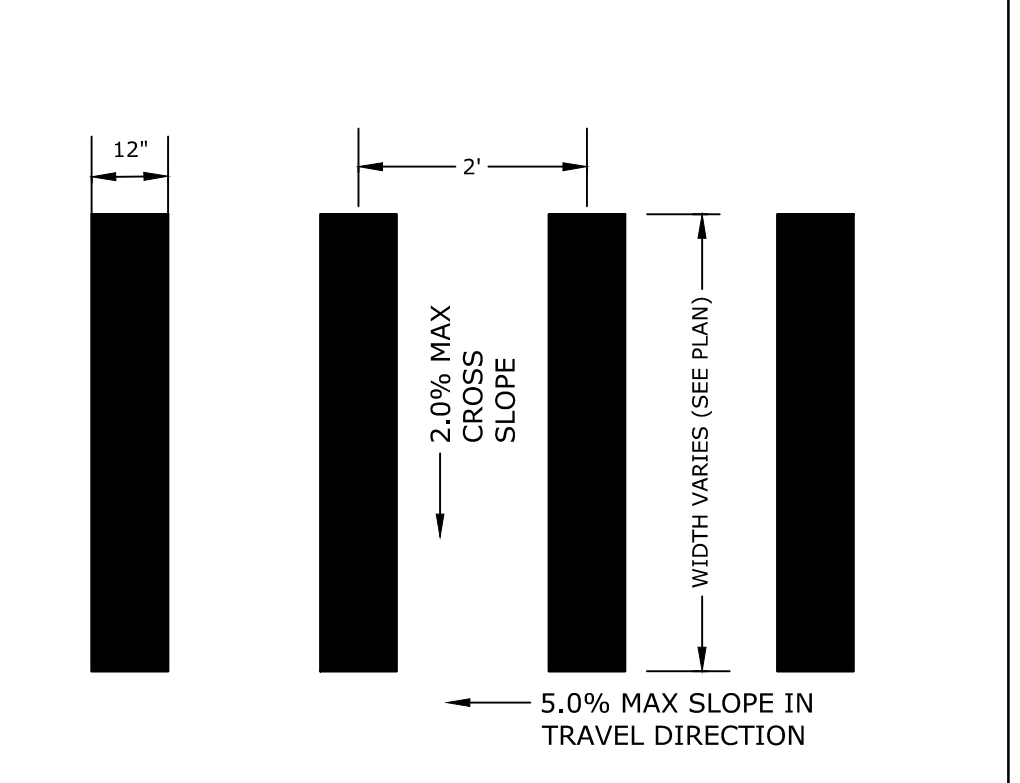
- NOTES:**
- PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
 - STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR AND LEGEND
NO SCALE



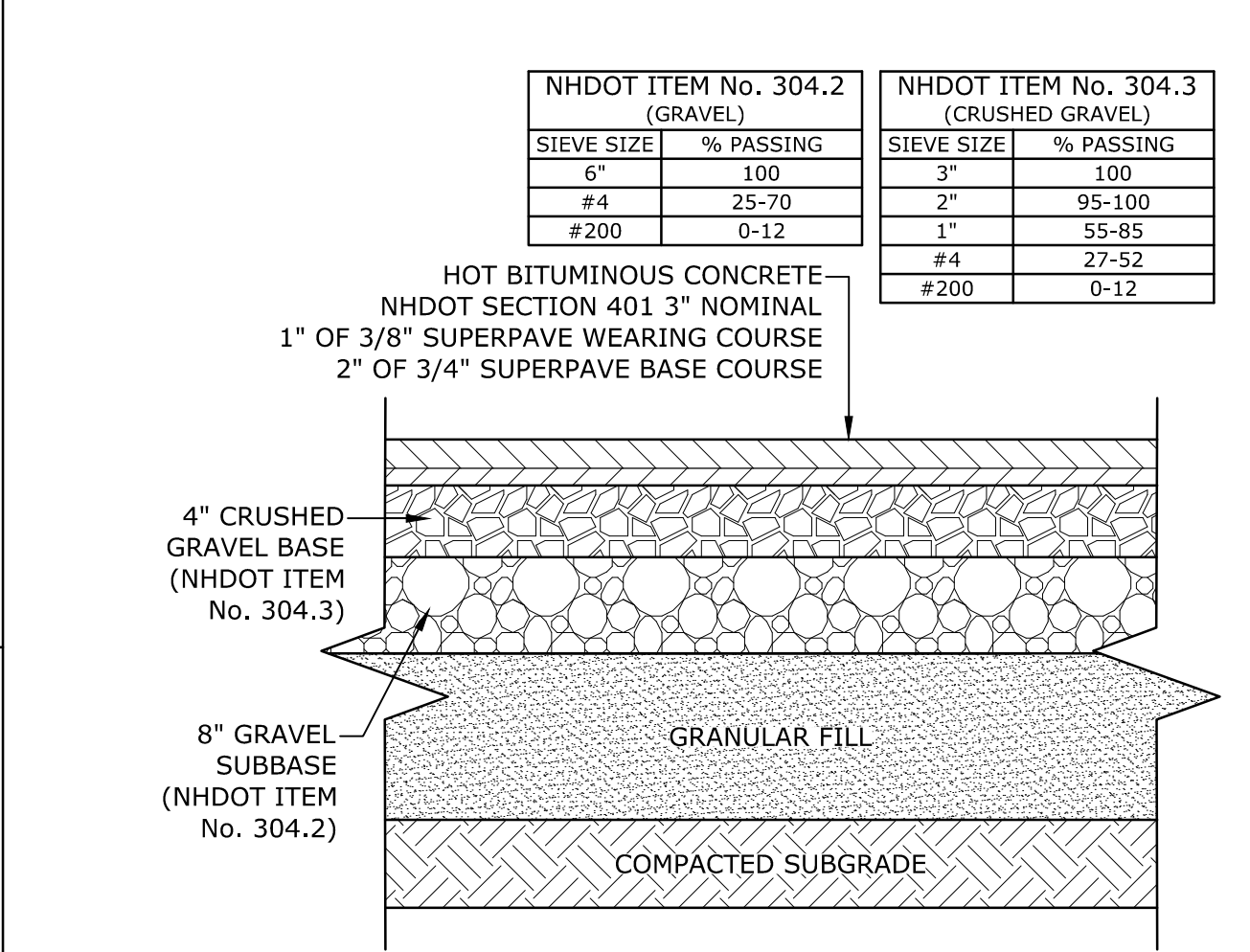
- NOTES:**
- DETECTABLE WARNING SURFACE SHALL BE 2' X 3' CAST IRON PANEL SET IN CONCRETE.
 - DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

CAST IRON DETECTABLE WARNING SURFACE
NO SCALE



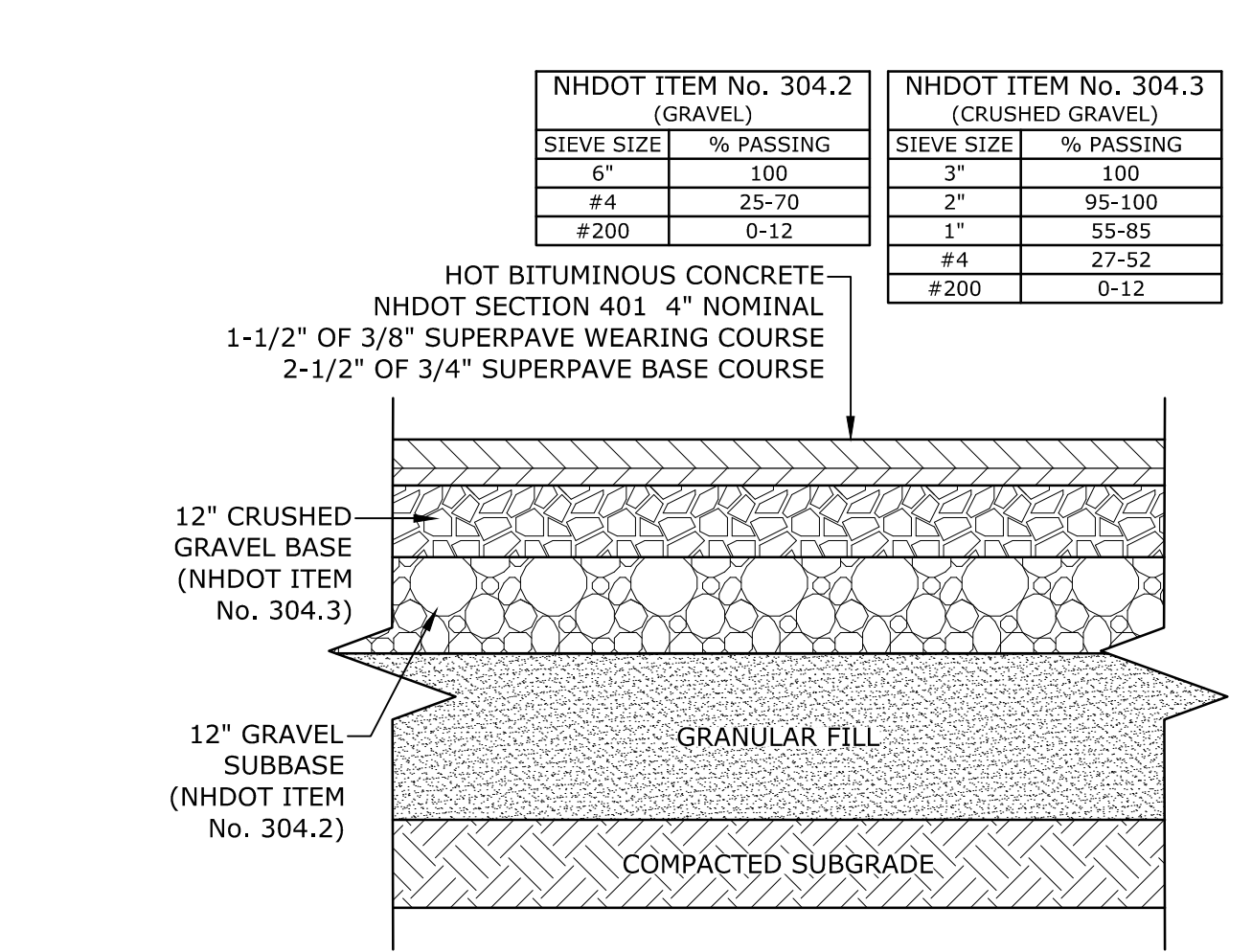
NOTE:
STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MEETING THE REQUIREMENTS OF ASTM D 4505

CROSSWALK STRIPING
NO SCALE



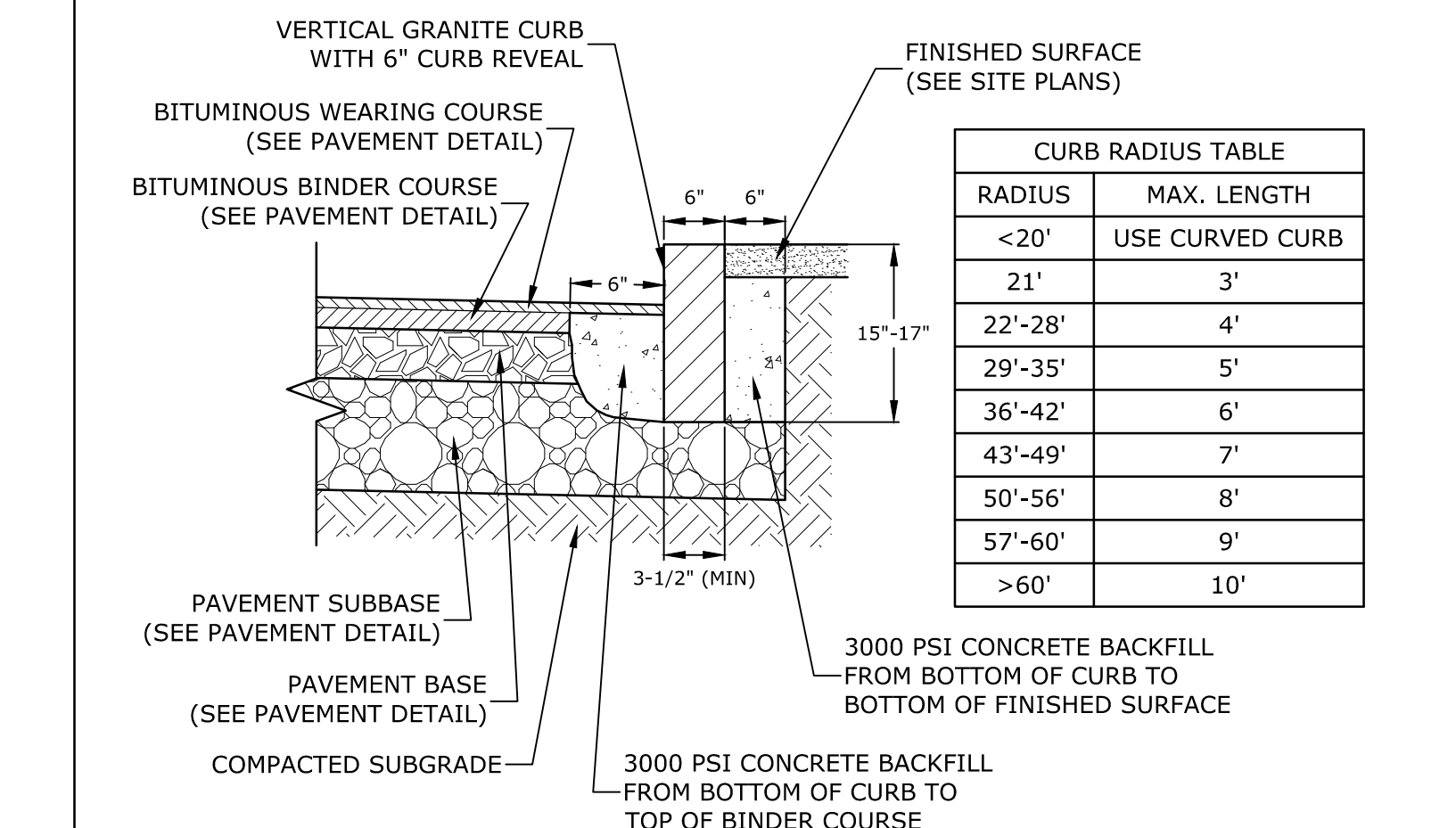
- NOTES:**
- SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 - SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 - A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
 - REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.

ON-SITE PAVEMENT SECTION
NO SCALE



- NOTES:**
- SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 - SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
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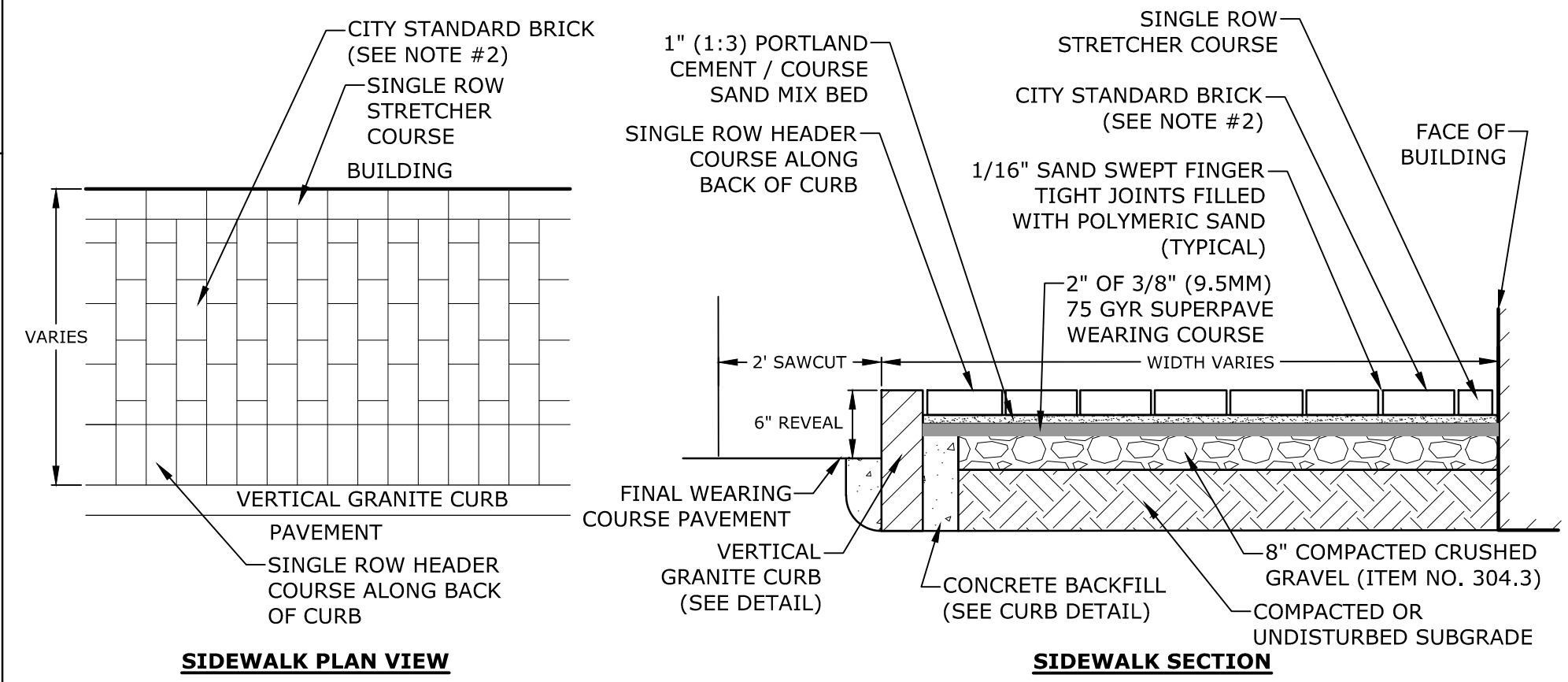
CITY RIGHT-OF-WAY PAVEMENT SECTION
NO SCALE



CURB RADIUS TABLE	
RADIUS	MAX. LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

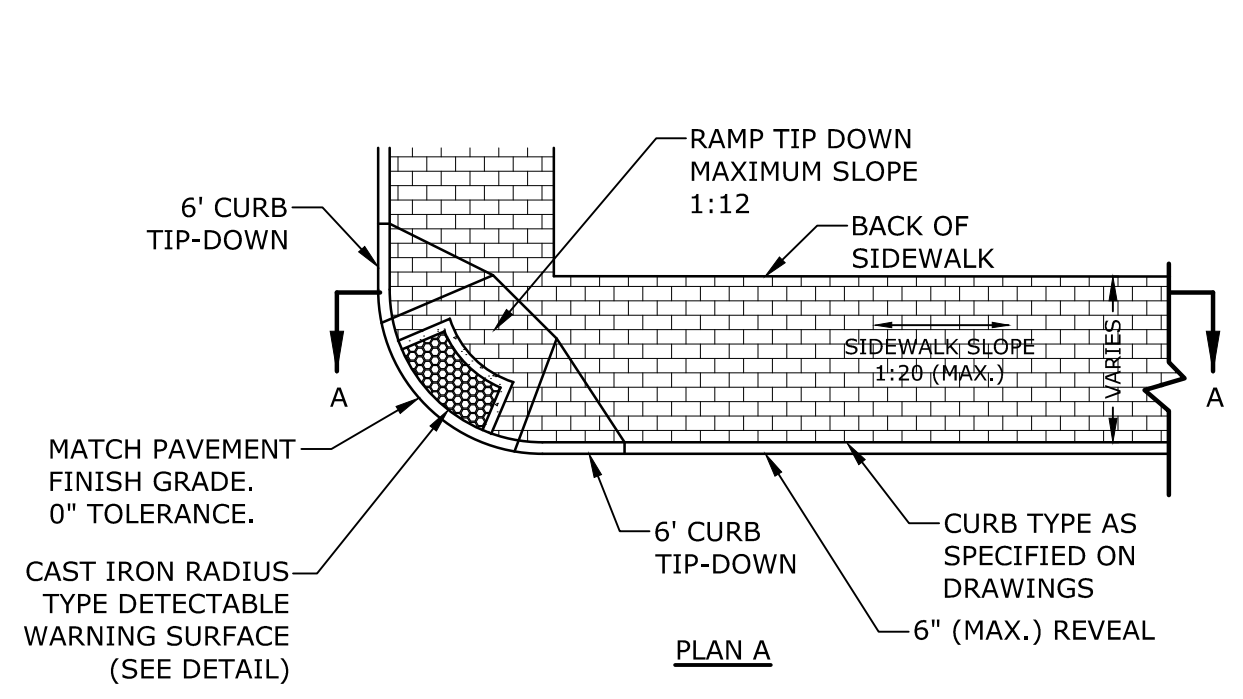
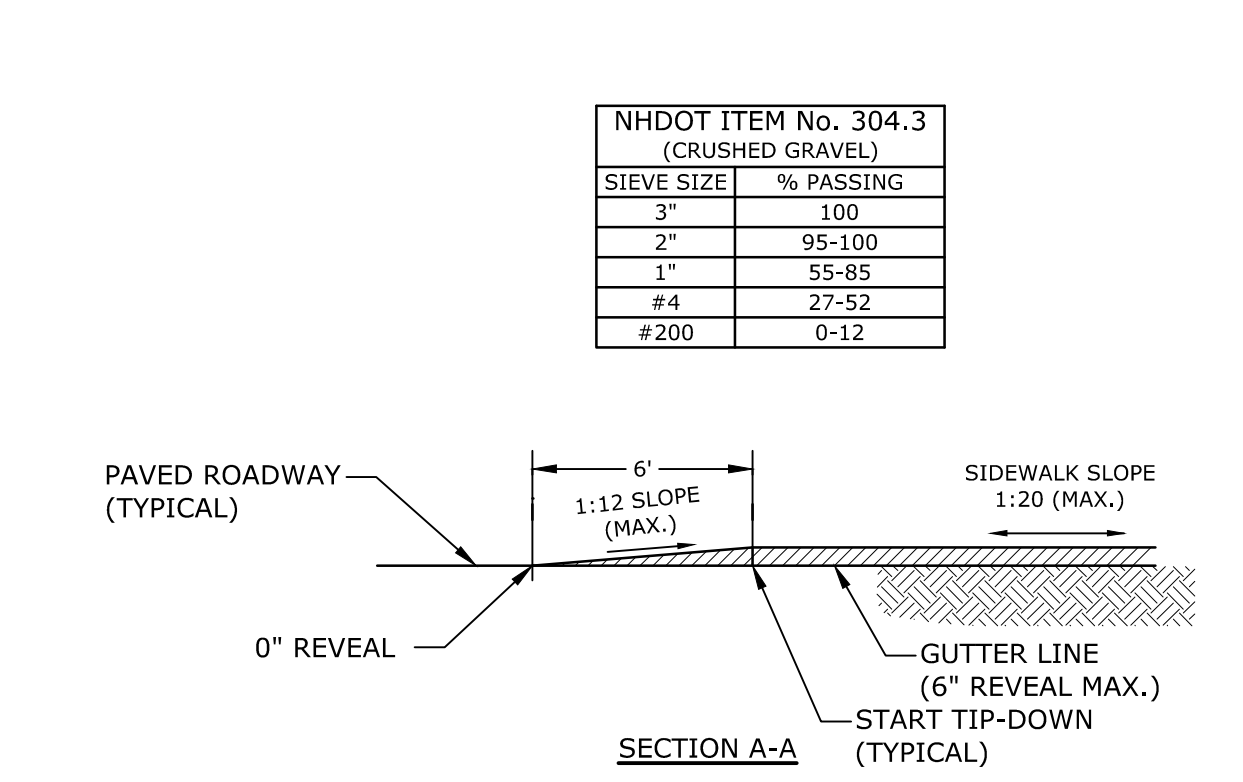
- NOTES:**
- SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
 - ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
 - MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
 - MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE 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



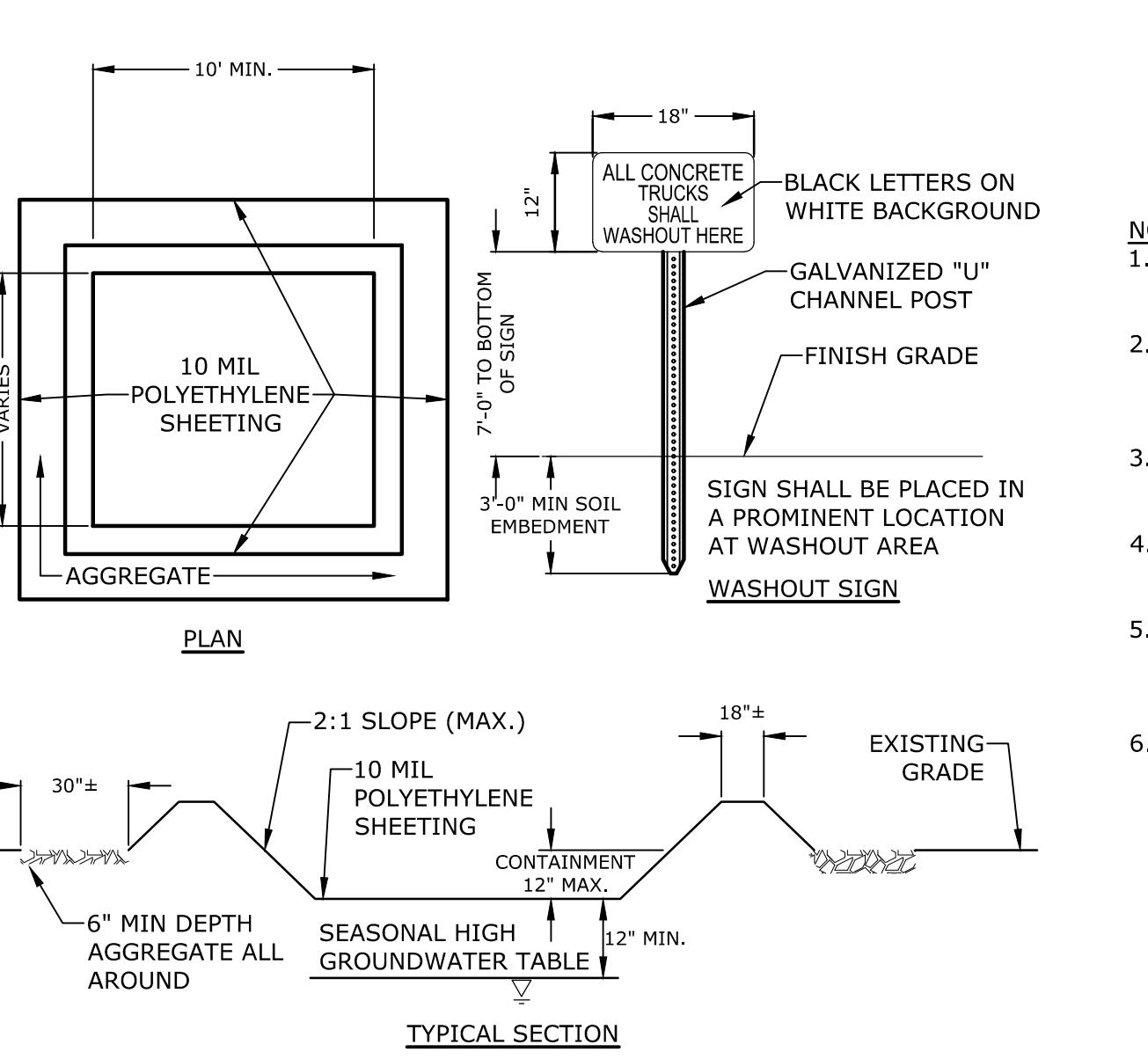
- NOTES:**
- BRICK SIDEWALK SHALL BE INSTALLED AS DETAILED AND PER CITY OF PORTSMOUTH REQUIREMENTS/SPECIFICATIONS AND SHALL INCLUDE A CONTINUOUS APPROVED PAVER EDGE RESTRAINT SYSTEM AT ALL LOCATIONS NOT ADJACENT TO CURB OR BUILDINGS.
 - CITY STANDARD BRICK SHALL BE TRADITIONAL EDGE, PATHWAY, FULL RANGE 2.25"x4"x8" PAVBR, BY PINE HALL BRICK, INC. BRICK MATERIAL SAMPLES SHALL BE PROVIDED TO DPW PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL.
 - 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/TYP II.

BRICK SIDEWALK
NO SCALE



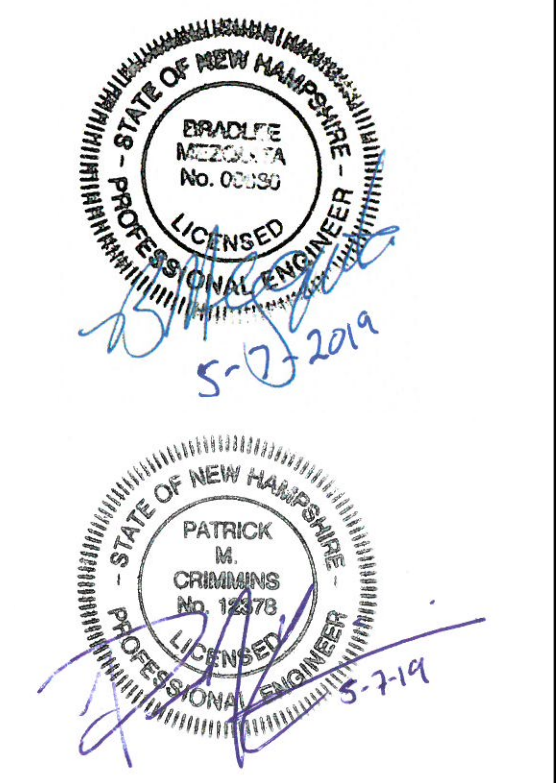
- NOTES:**
- RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
 - A 6" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
 - DETECTABLE WARNING PANEL SHALL BE CAST IRON SET IN CONCRETE (SEE DETAIL.)
 - 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 WHEELCHAIR ACCESSIBLE RAMP
NO SCALE



- NOTES:**
- CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
 - CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
 - WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
 - WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
 - ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
 - AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT AREA
NO SCALE



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Portsmouth, New Hampshire

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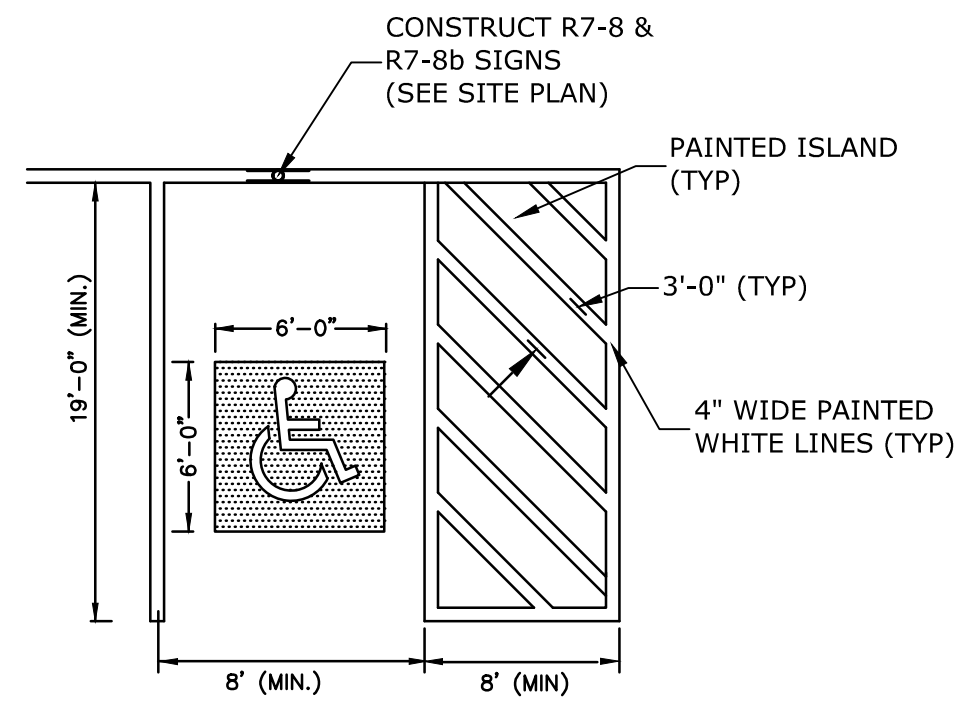
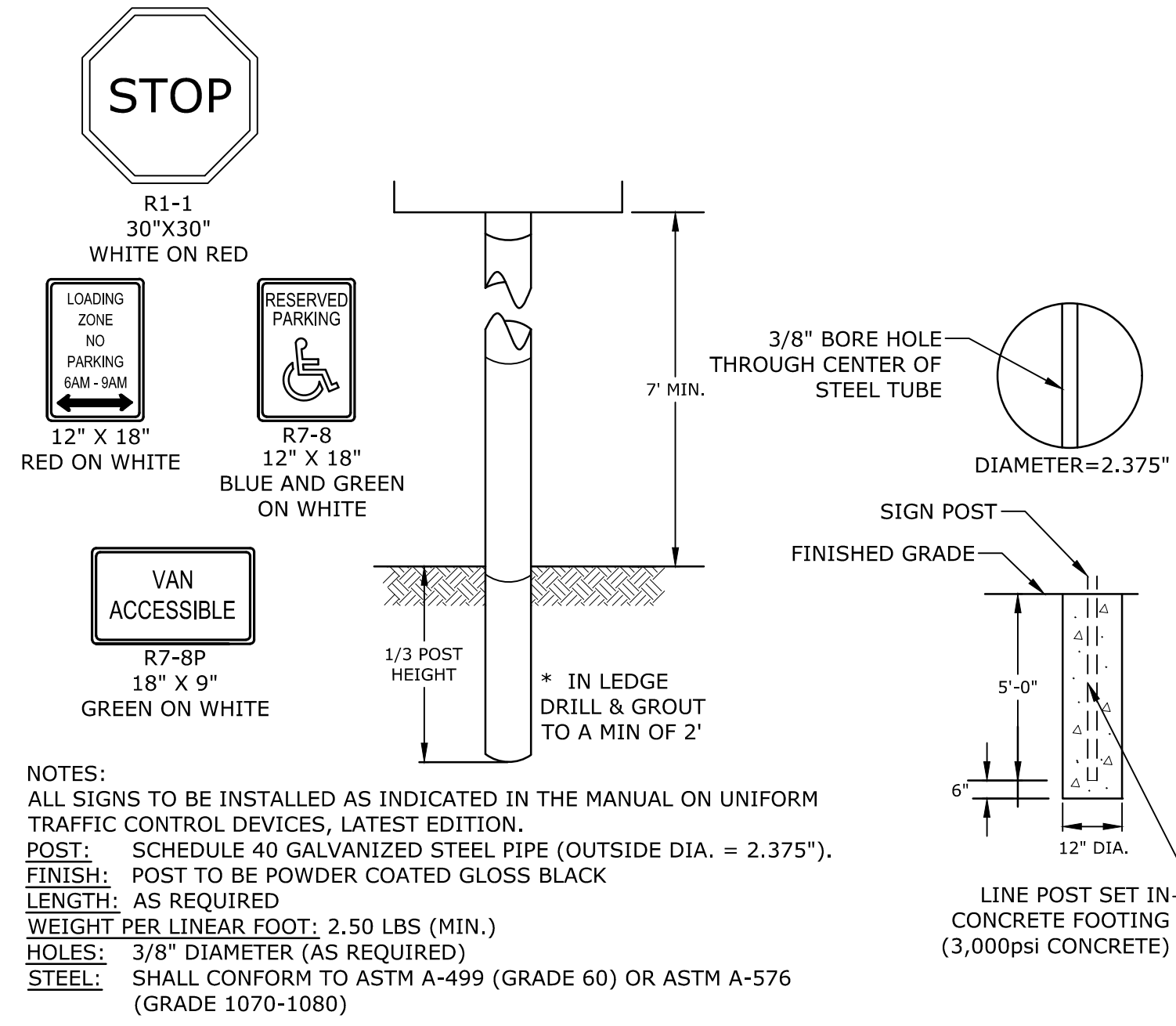
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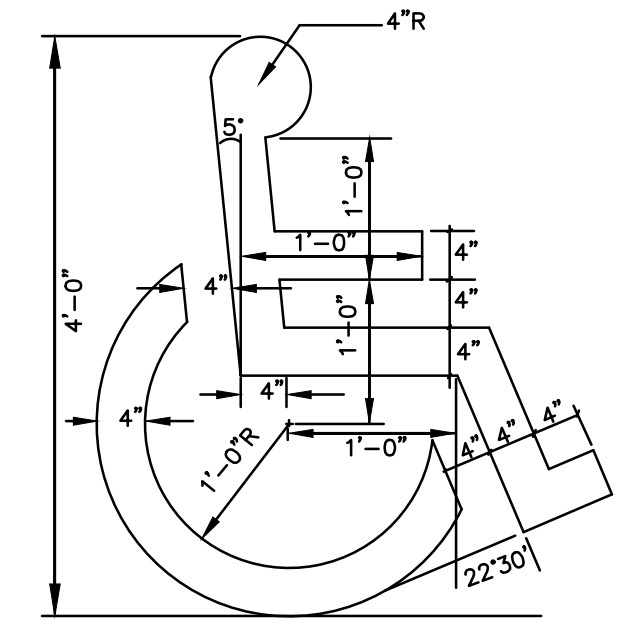
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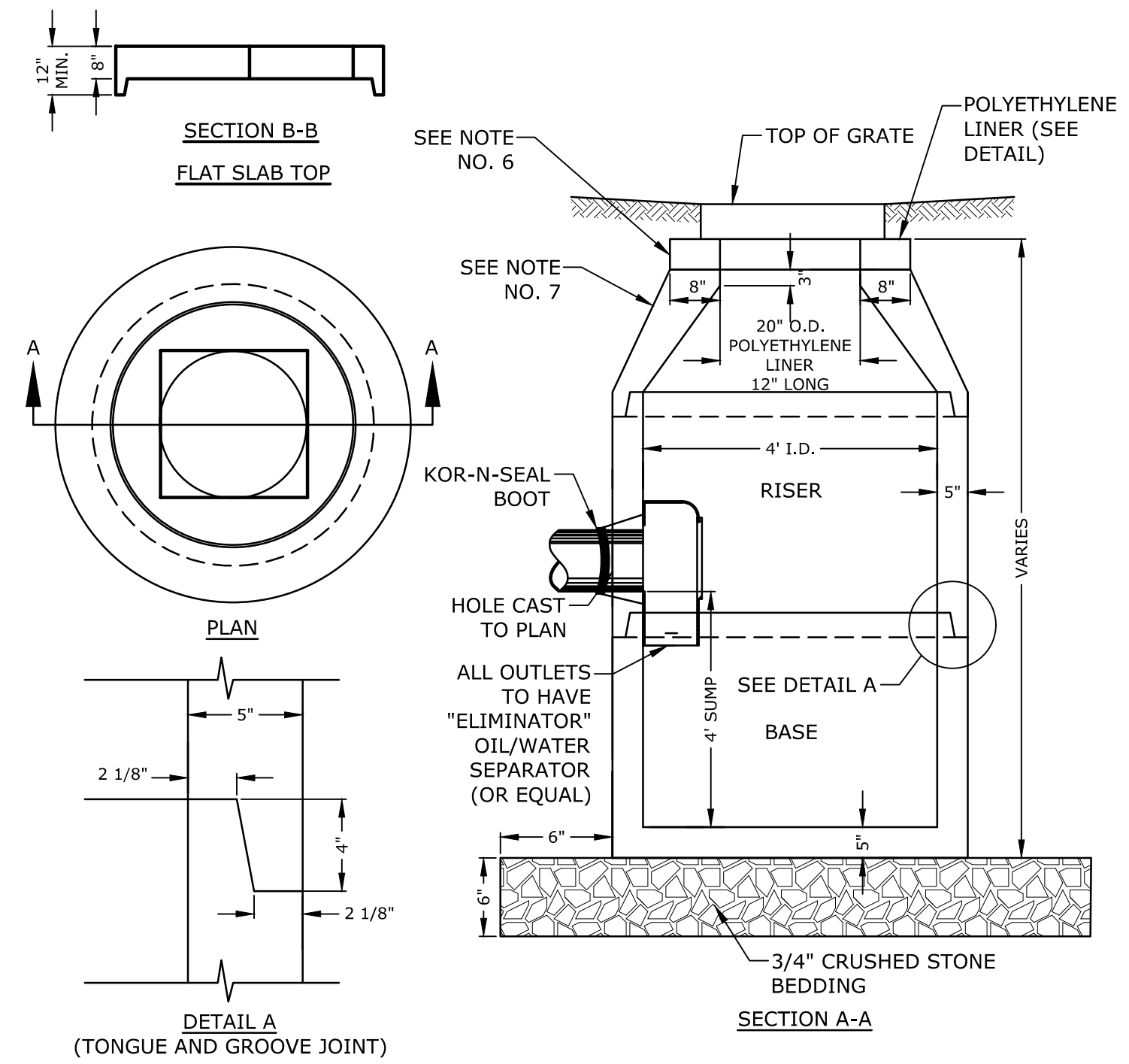
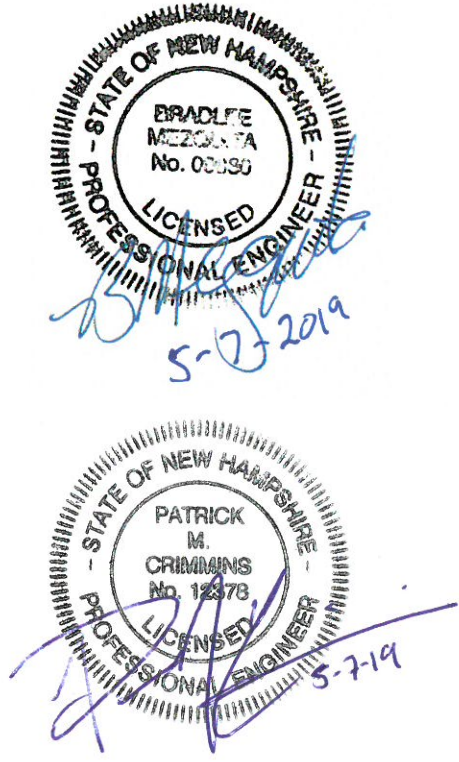
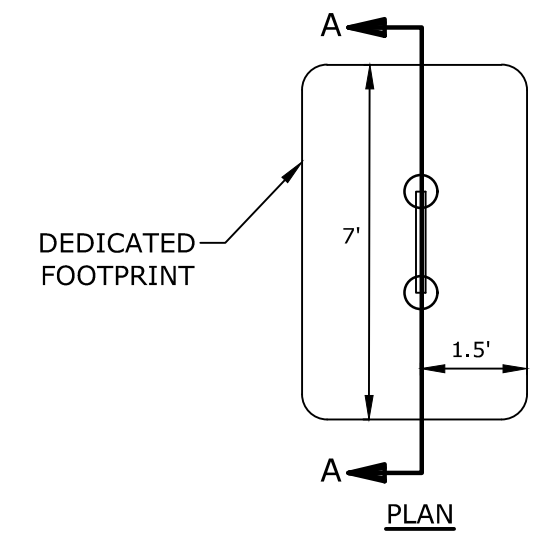
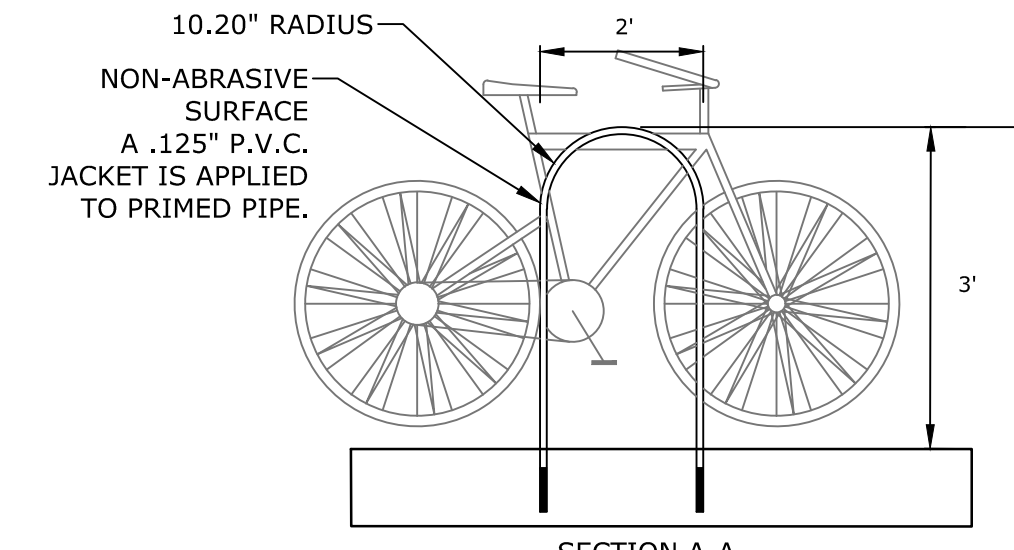
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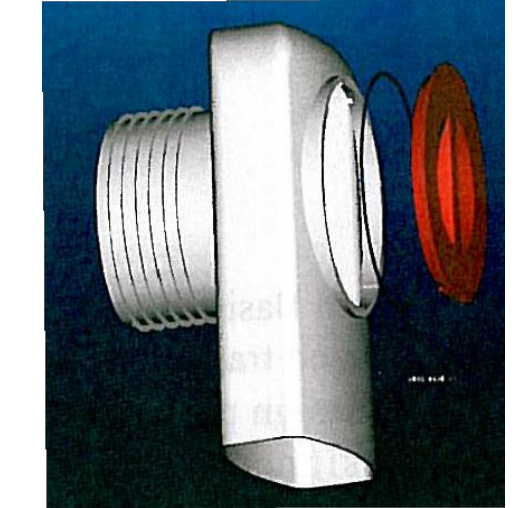
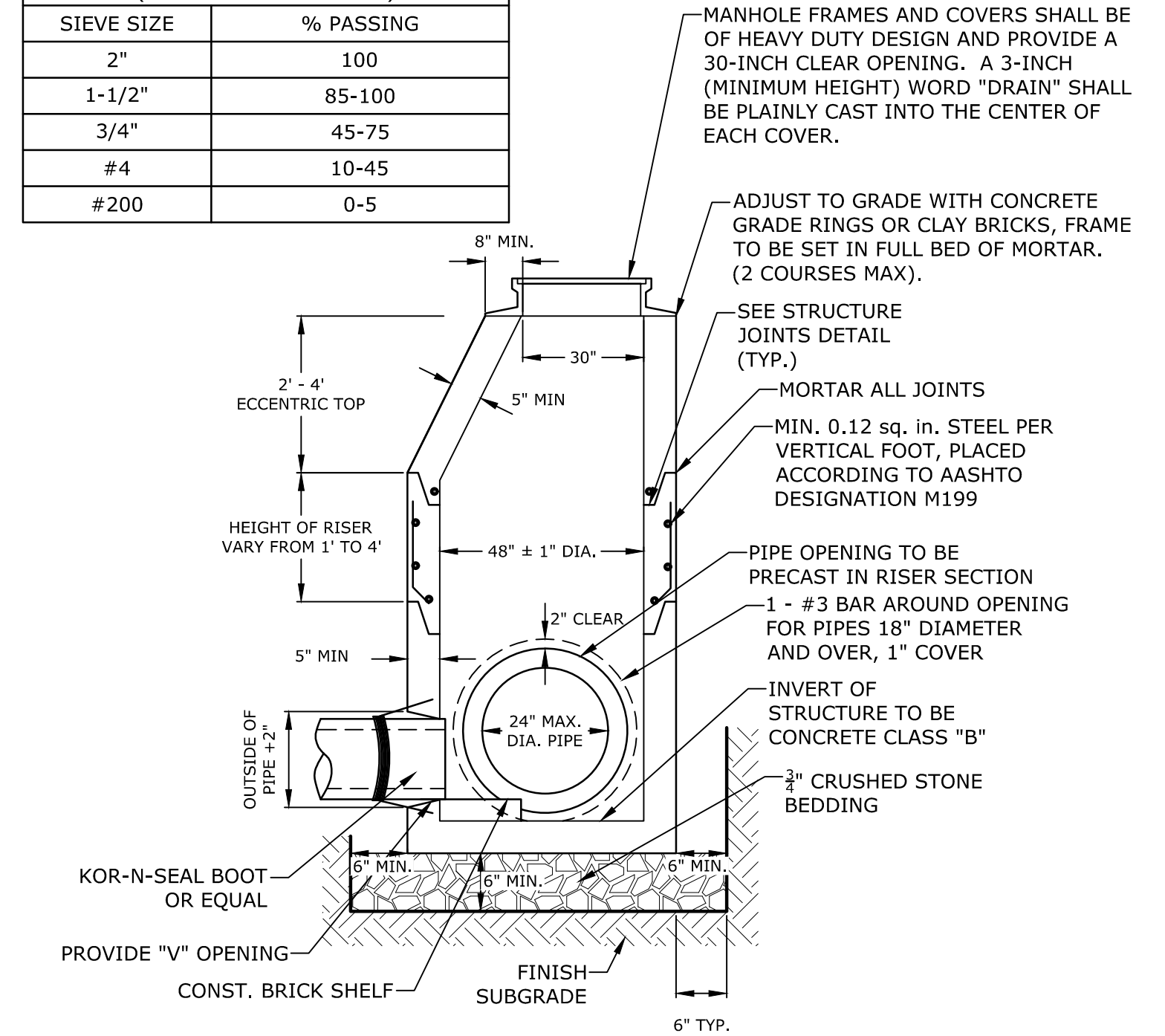
NOTES:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN W/DISABILITIES ACT.



NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING WHITE THERMOPLASTIC, REFLECTORIZED PAVEMENT PARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

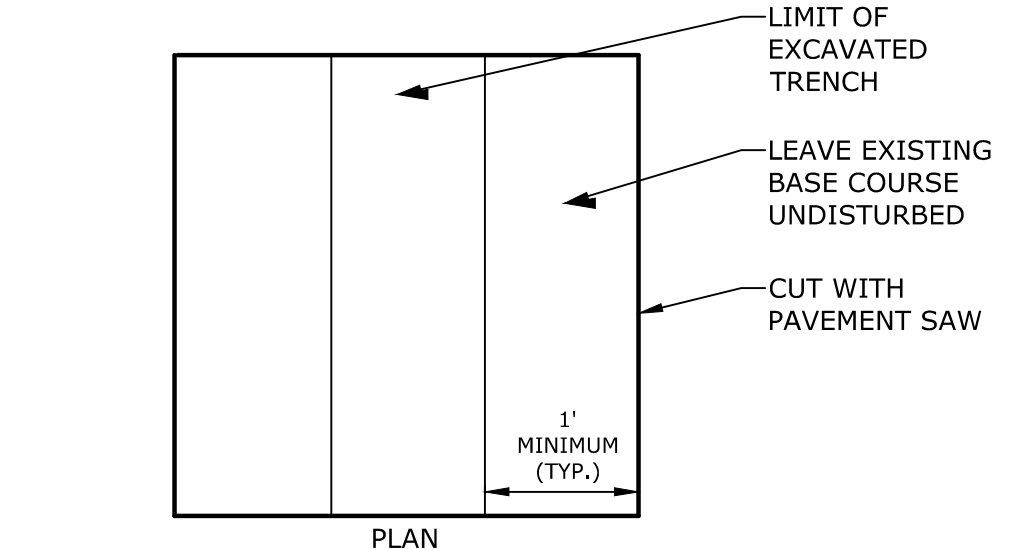
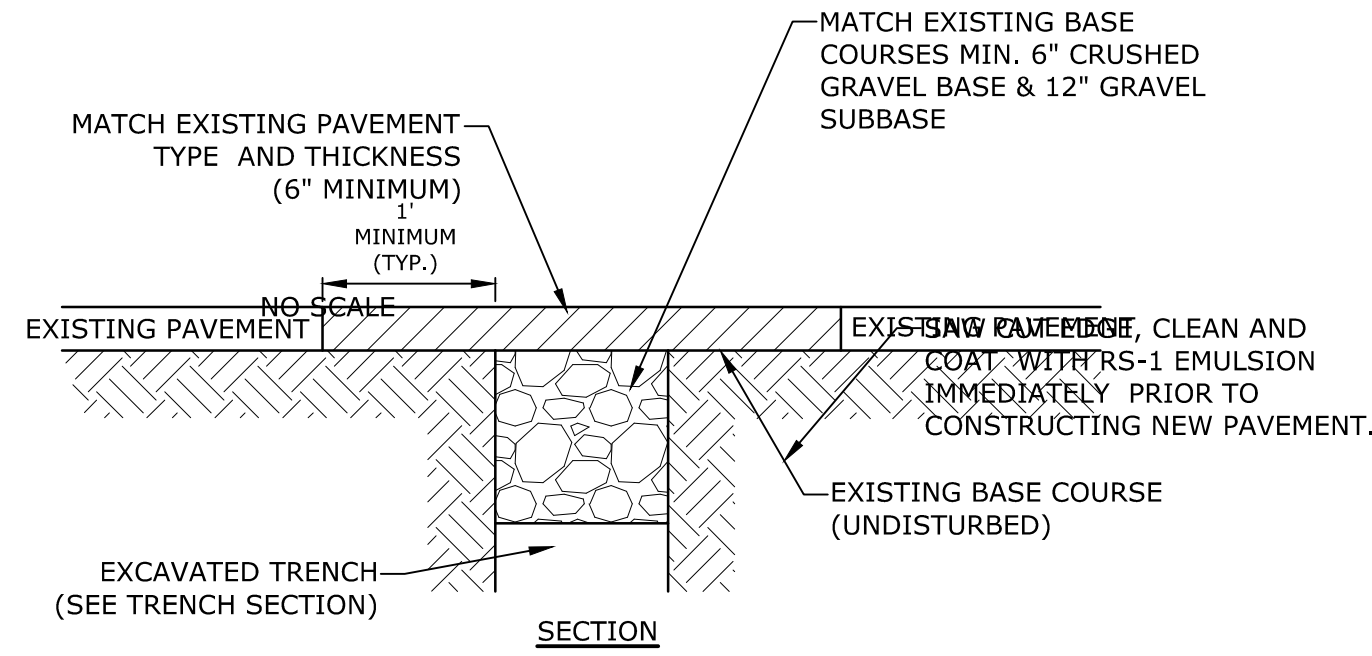


NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE)	
SIEVE SIZE	% PASSING
2"	100
1-1/2"	85-100
3/4"	45-75
#4	10-45
#200	0-5



NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)
2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP



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

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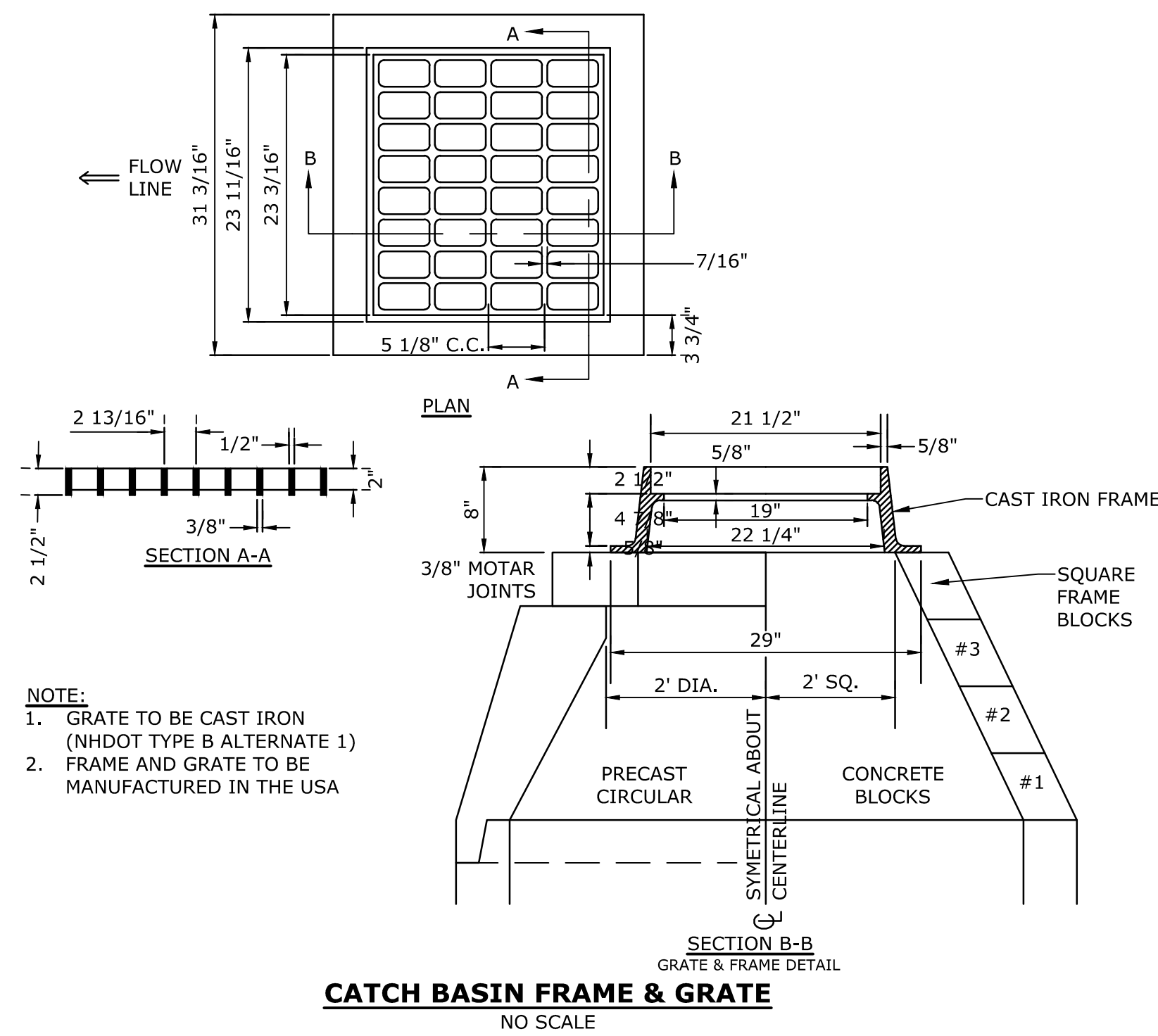
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APPROVED: BLM

DETAILS SHEET

SCALE: AS SHOWN

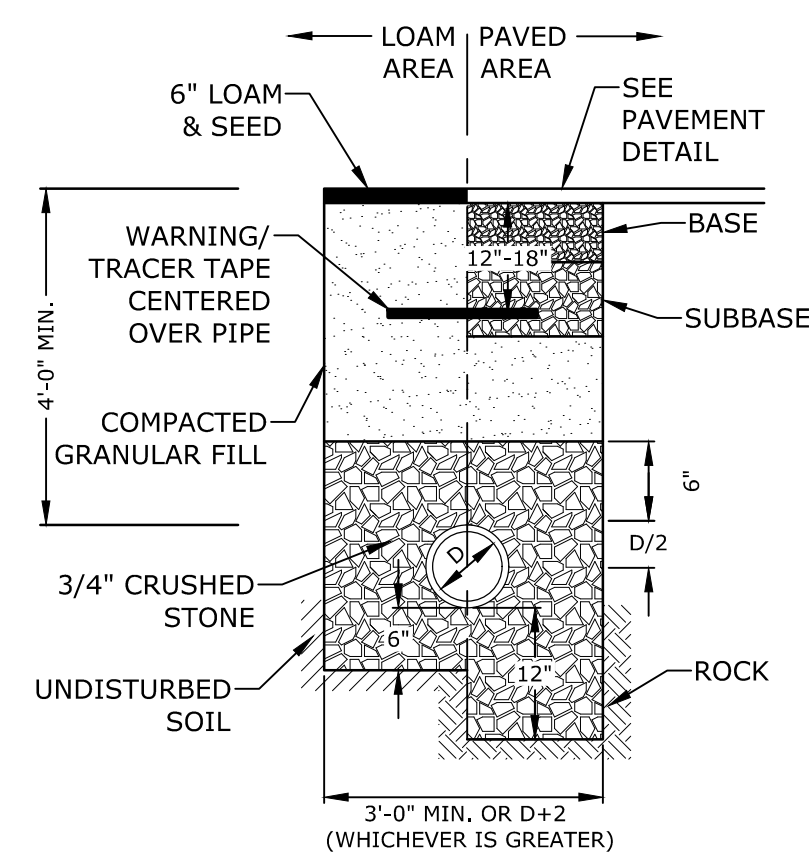
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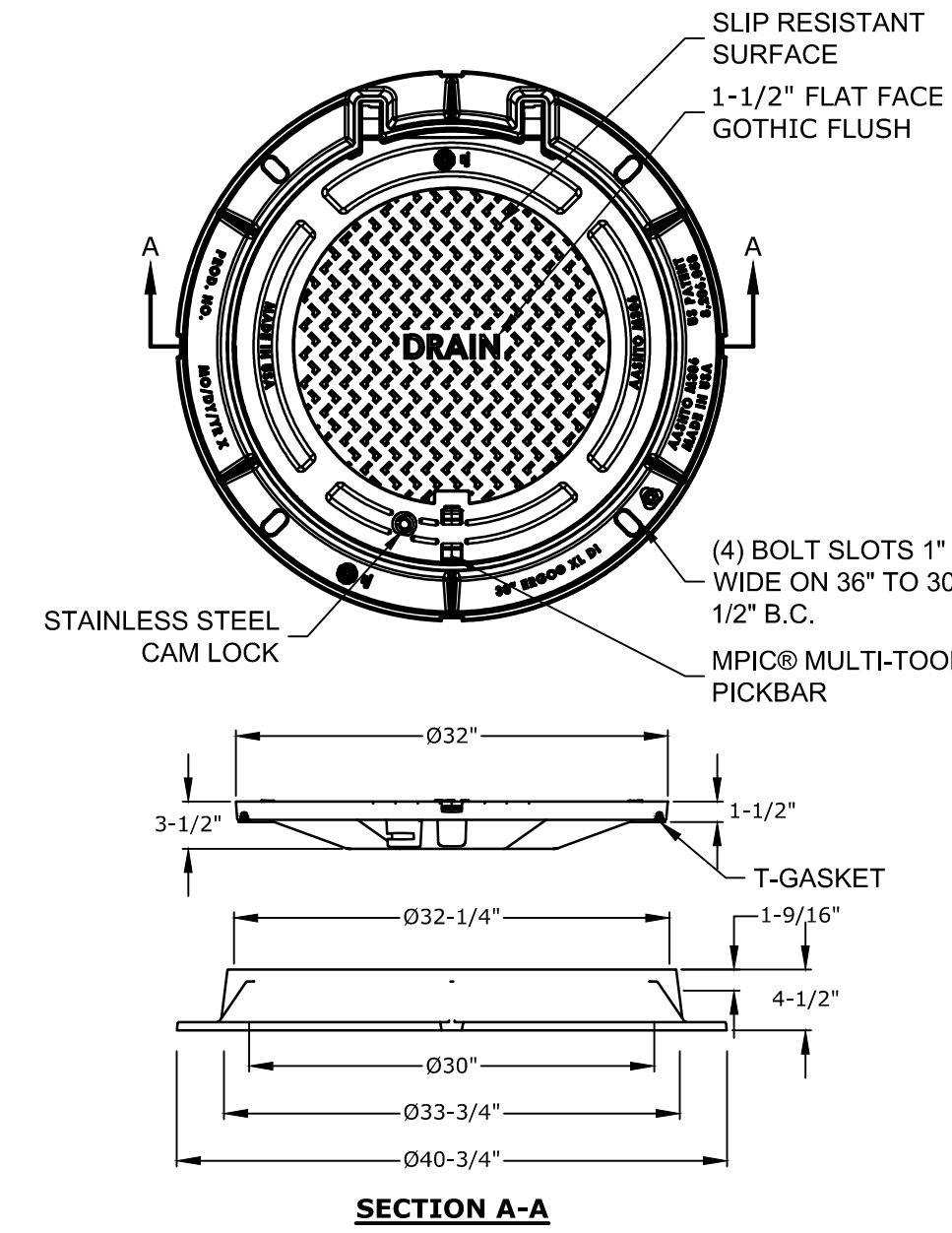
- NOTE:
1. GRATE TO BE CAST IRON (NHDOT TYPE B ALTERNATE 1)
2. FRAME AND GRATE TO BE MANUFACTURED IN THE USA

CATCH BASIN FRAME & GRATE
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

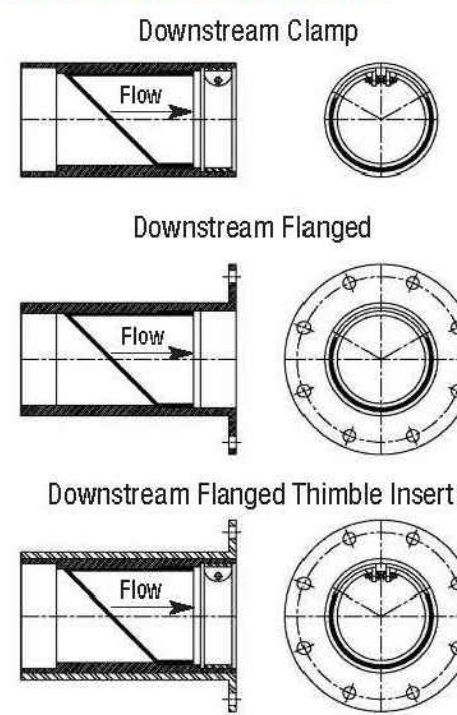


- NOTES:
1. MANHOLE FRAME AND COVER SHALL BE 32" HINGED ERGO XL BY EJ CO.
2. ALL DIMENSIONS ARE NOMINAL.
3. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN 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

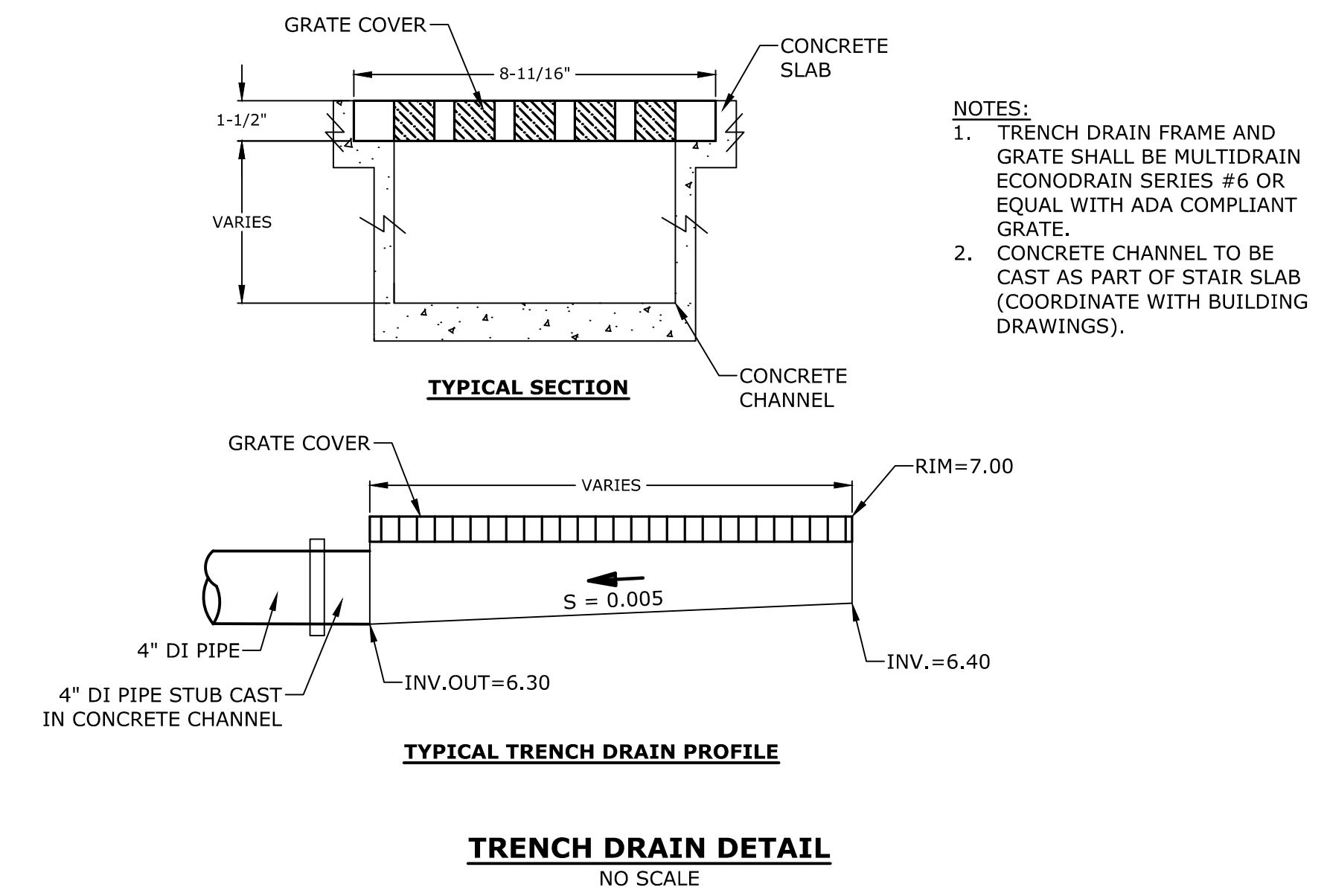
NOMINAL PIPE SIZE I.D.*		OVERALL LENGTH**		NUMBER OF CLAMPS	CUFF DEPTH		BACK PRESSURE RATING	
Inches	Millimeters	Inches	Millimeters		Inches	Millimeters	Feet	Meters
12	300	23	584	1	2	51	40	12

Mounting Styles and Configurations



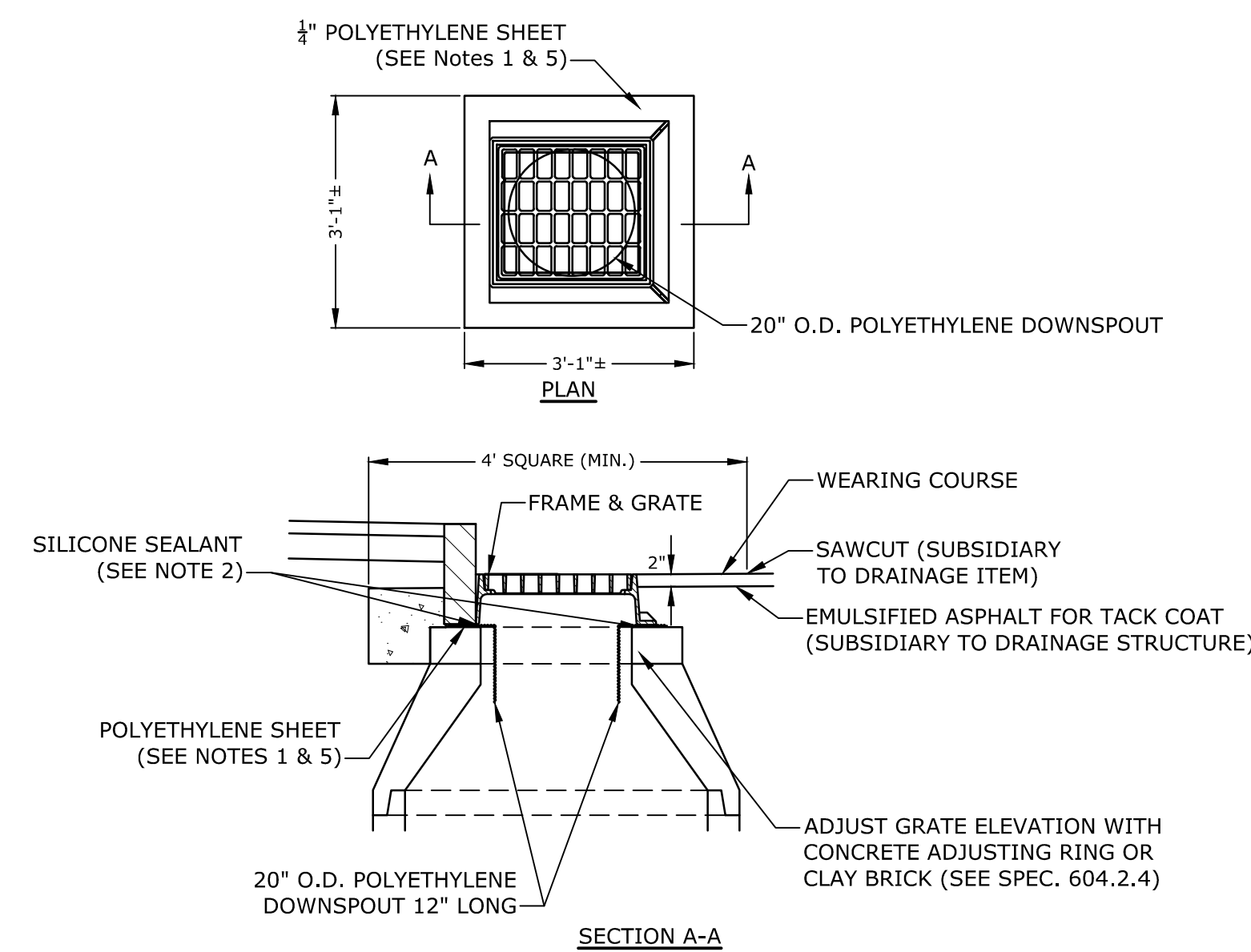
Flange shape and bolt pattern can be customized. Flangeless thimble inserts are available.

TYPICAL BACK FLOW PREVENTER
NO SCALE



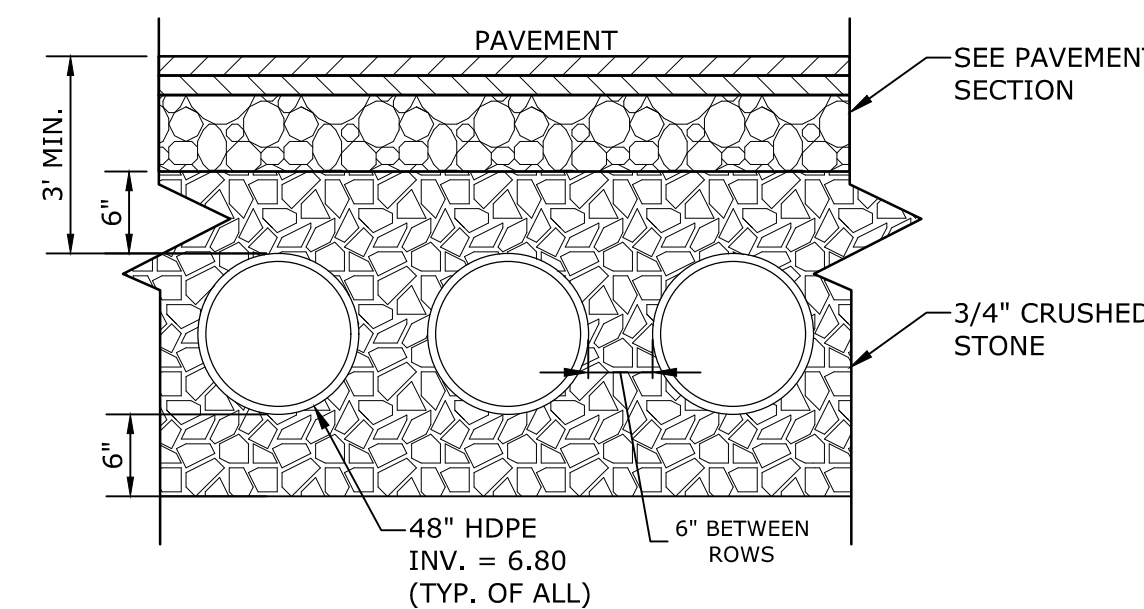
- NOTES:
1. TRENCH DRAIN FRAME AND GRATE SHALL BE MULTIDRAIN ECONODRAIN SERIES #6 OR EQUAL WITH ADA COMPLIANT GRATE.
2. CONCRETE CHANNEL TO BE CAST AS PART OF STAIR SLAB (COORDINATE WITH BUILDING DRAWINGS).

TRENCH DRAIN DETAIL
NO SCALE

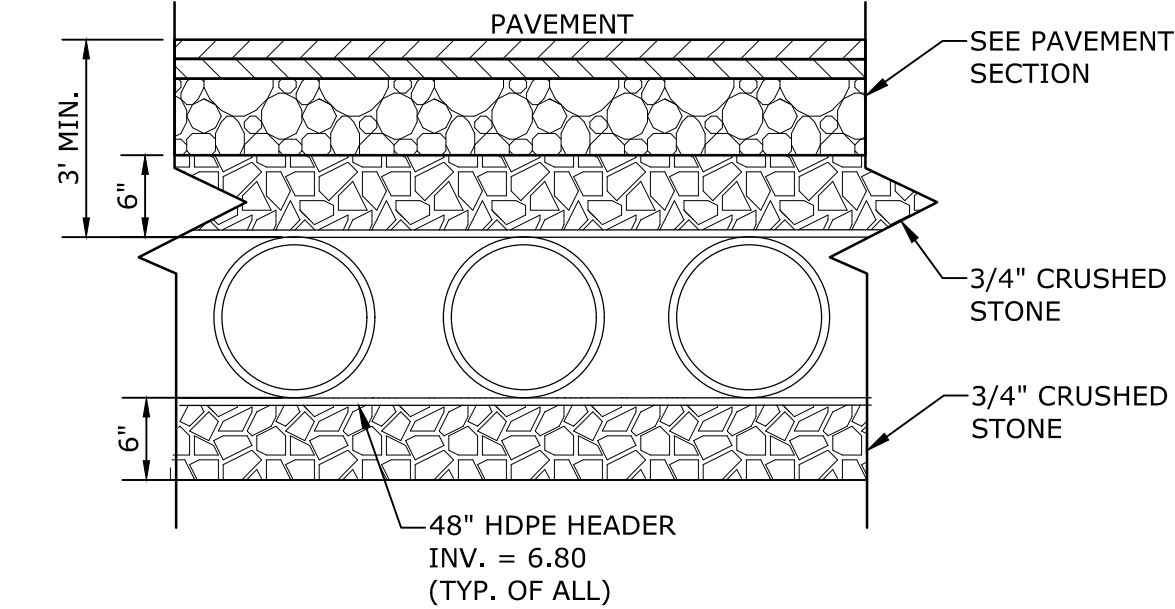


- NOTES:
1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
3. PLACE CLASS AA CONCRETE 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



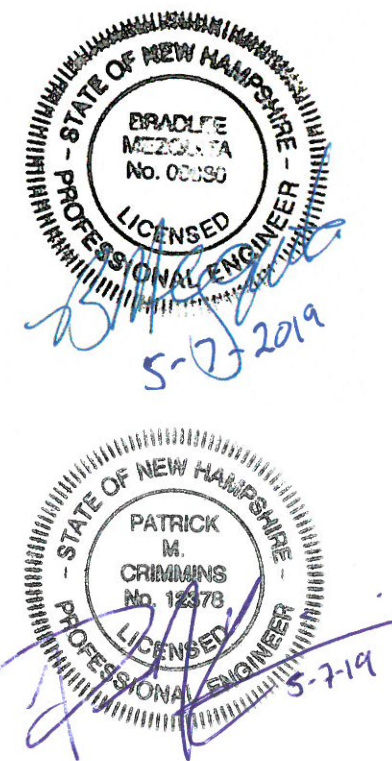
UNDERGROUND DETENTION AREA
NO SCALE



HEADER ROW
NO SCALE

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

UNDERGROUND DETENTION SYSTEM DETAIL
NO SCALE



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

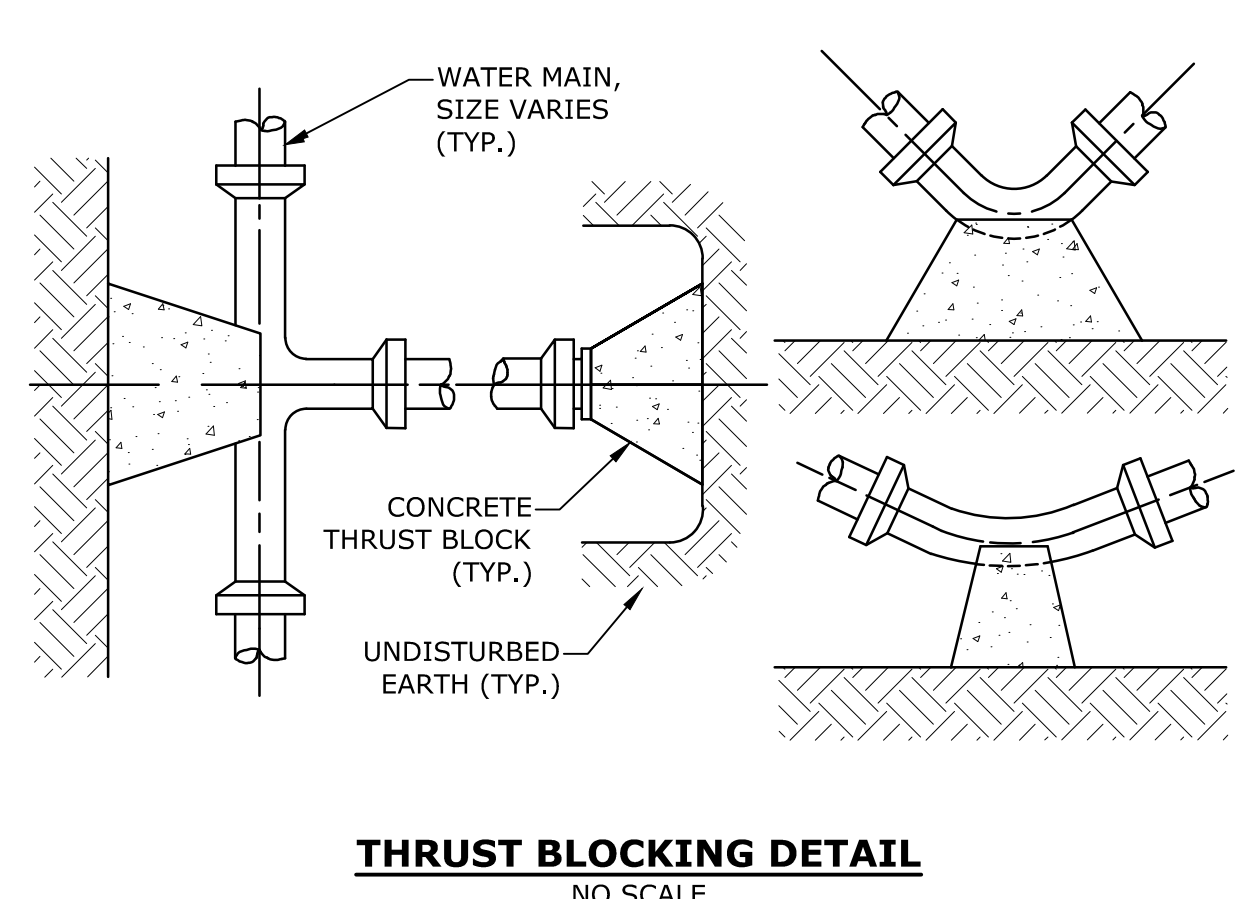
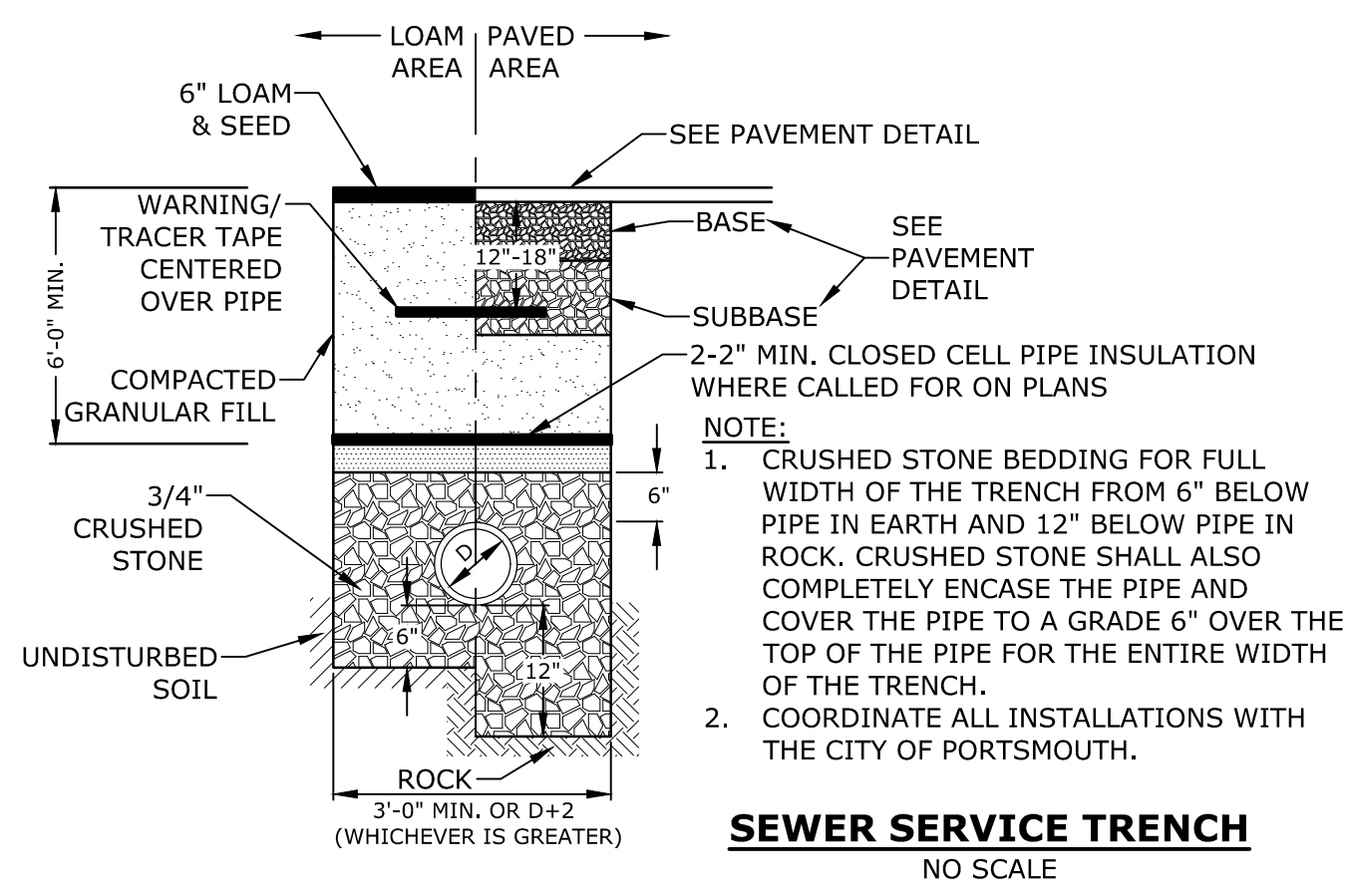
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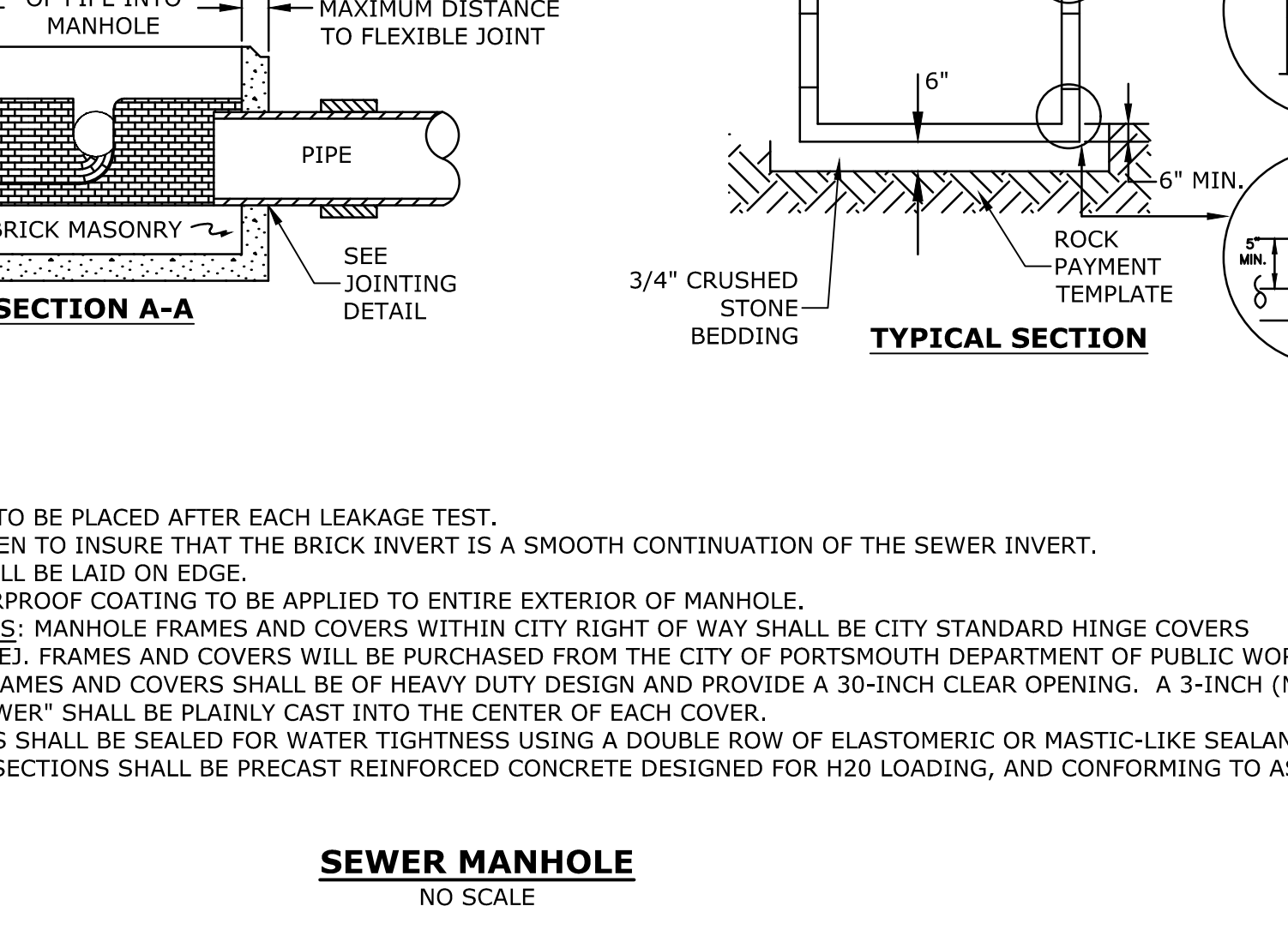
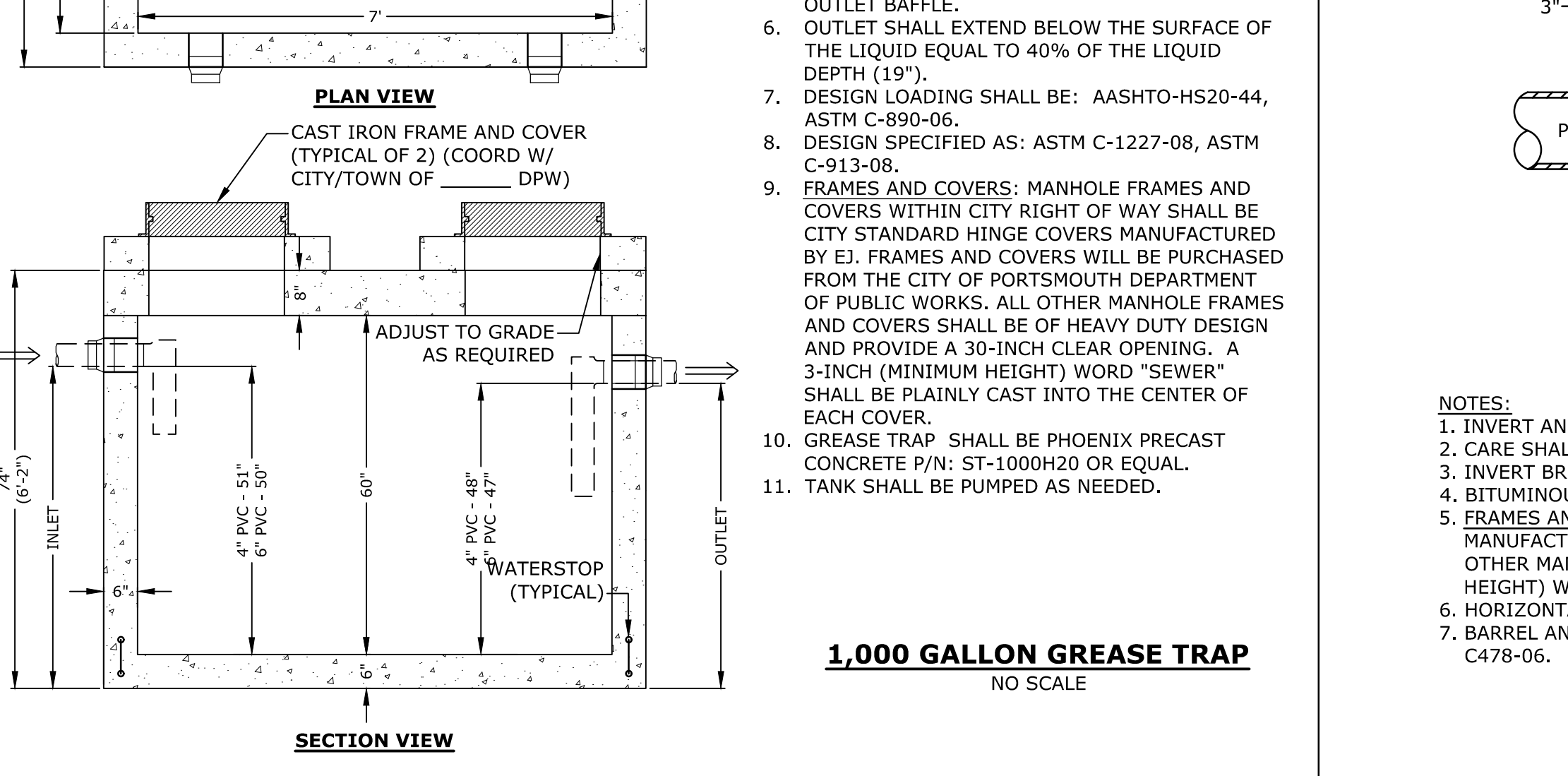
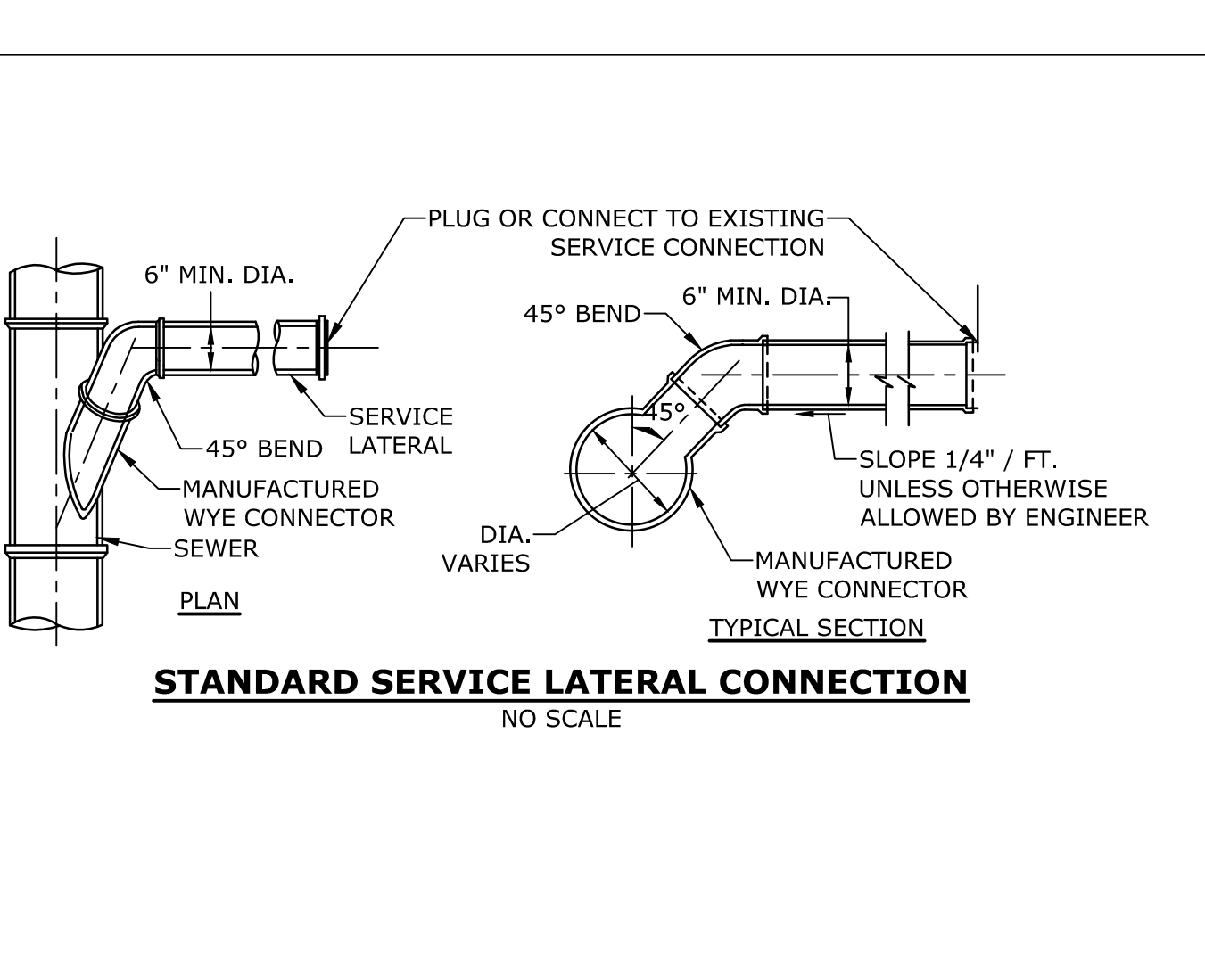
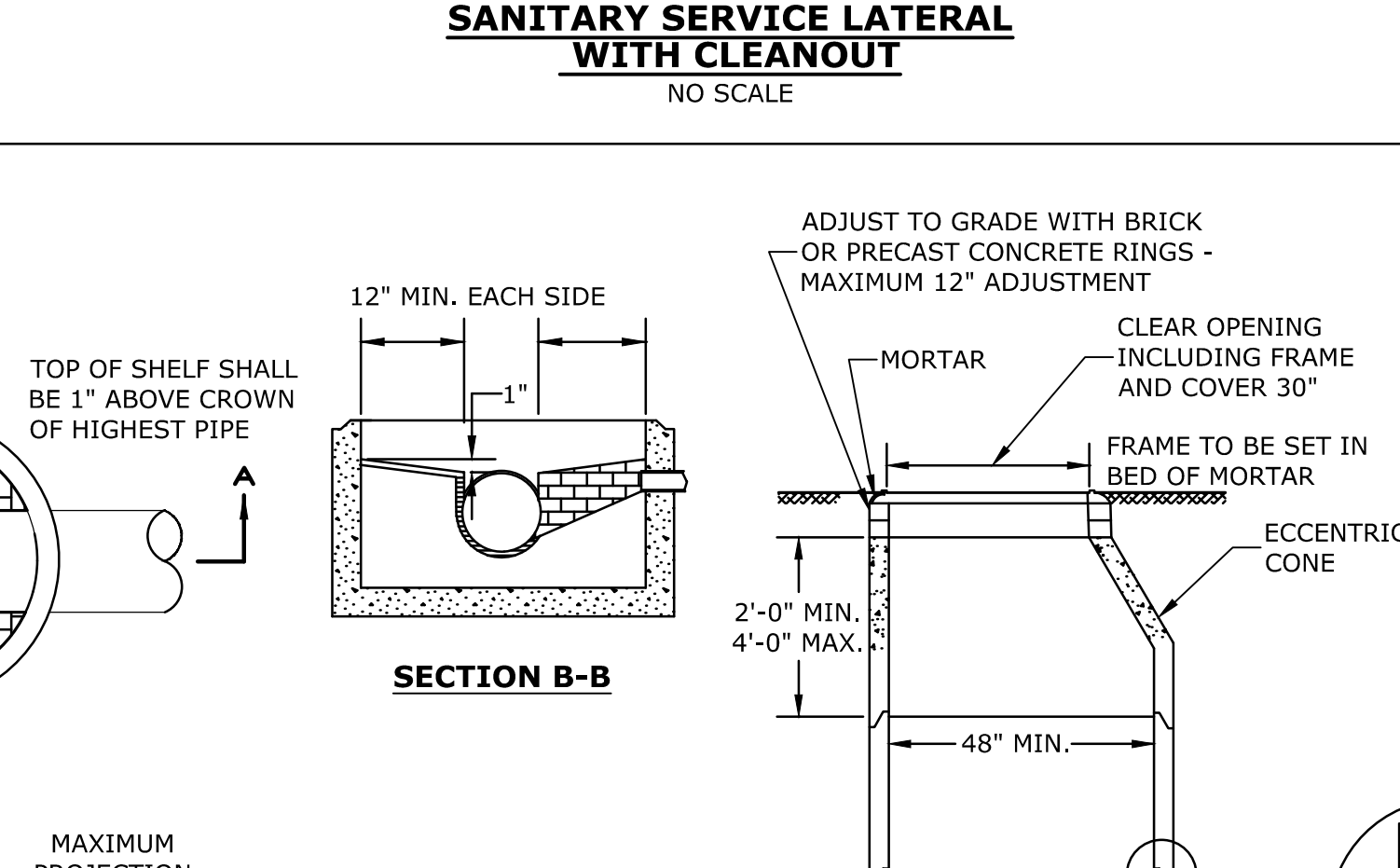
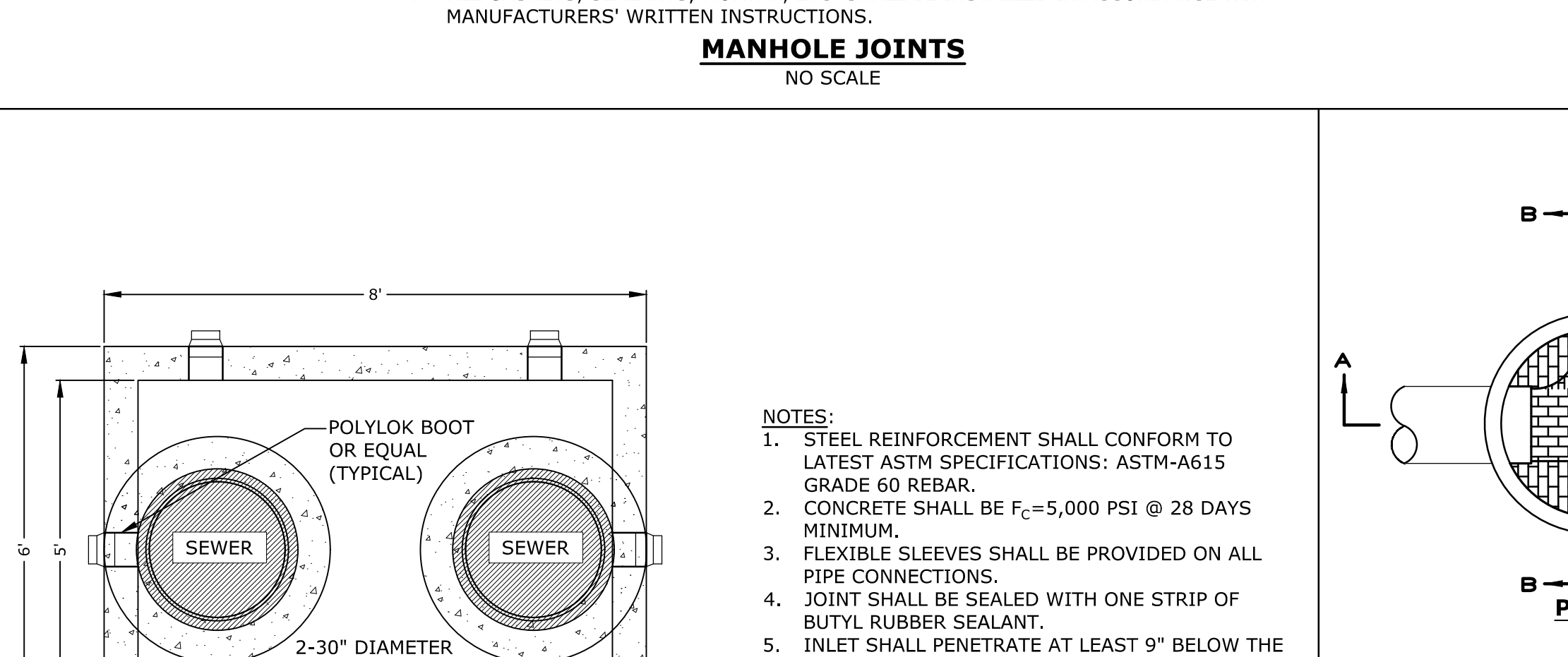
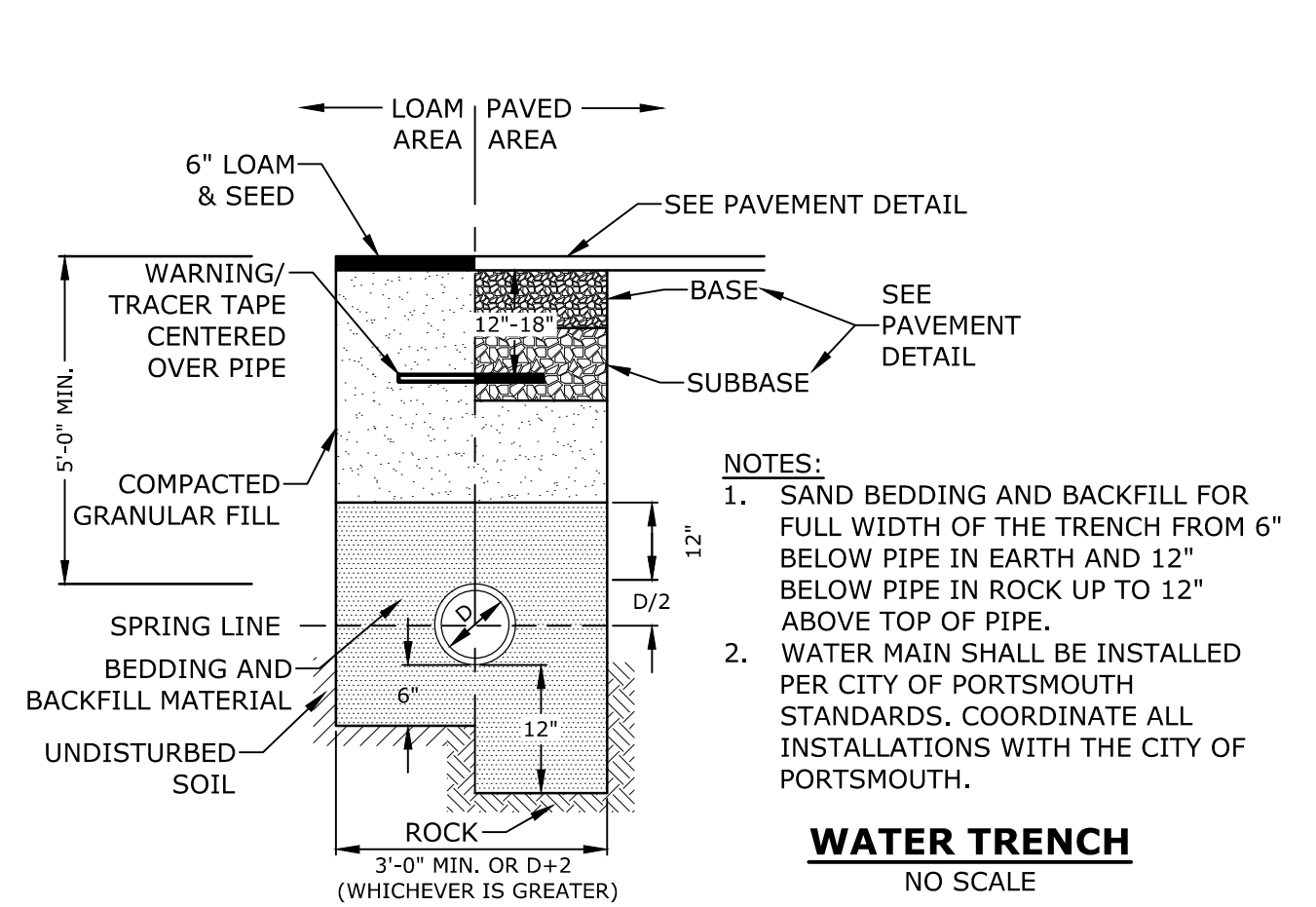
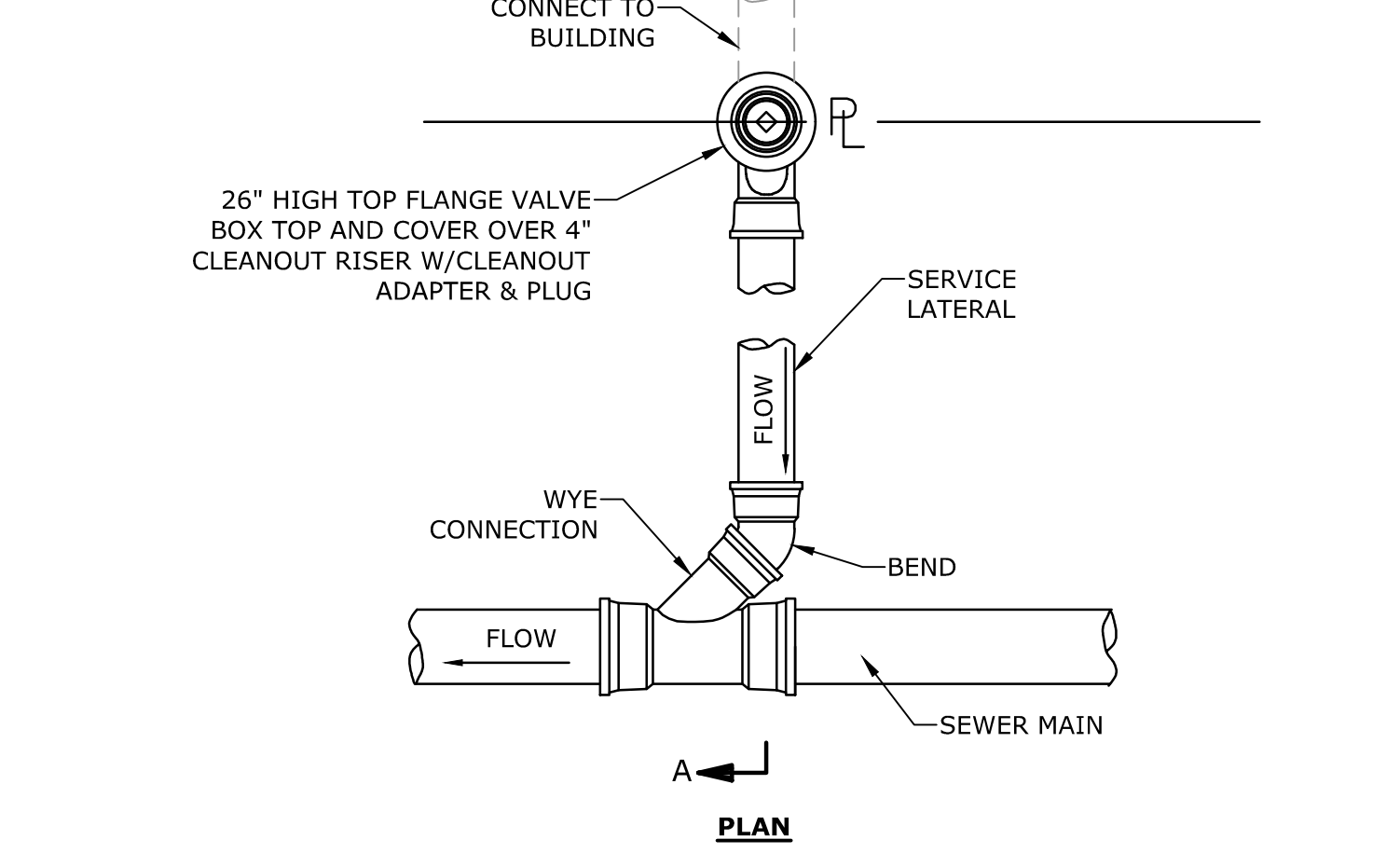
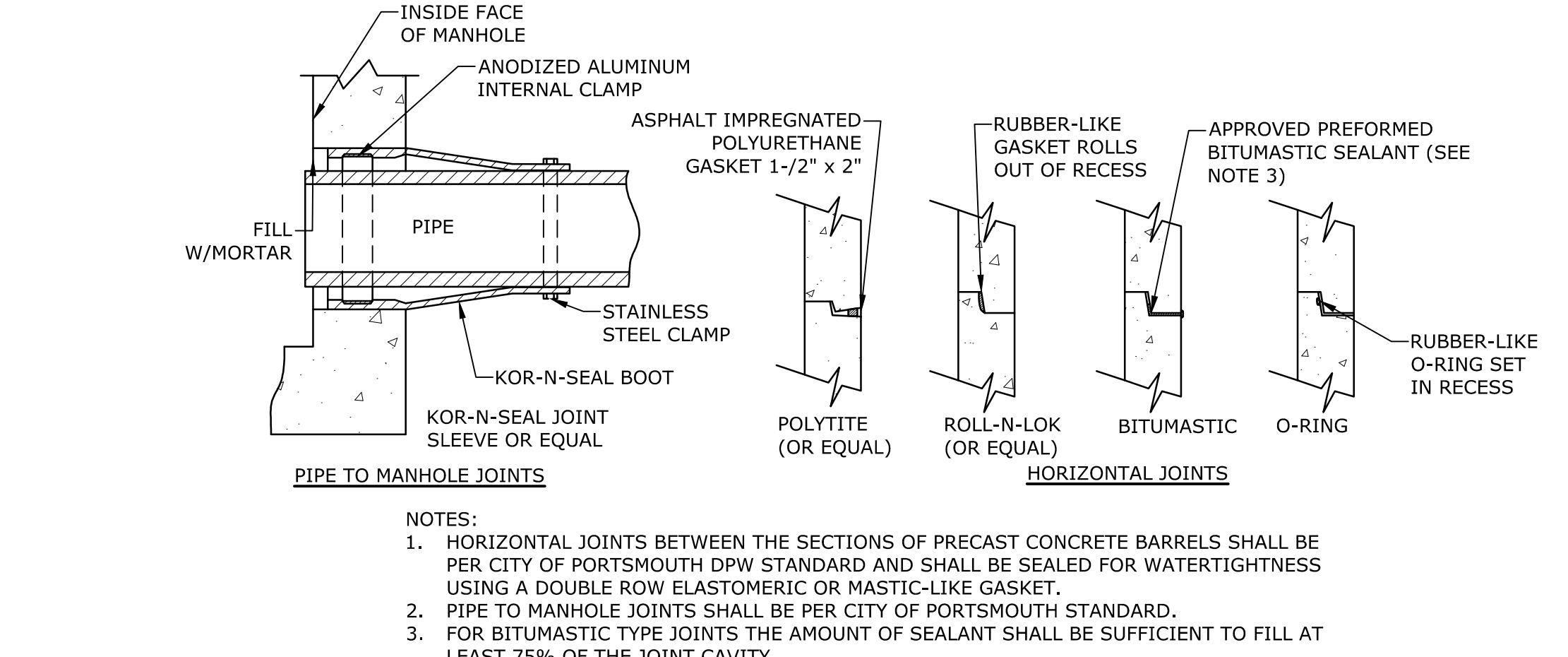
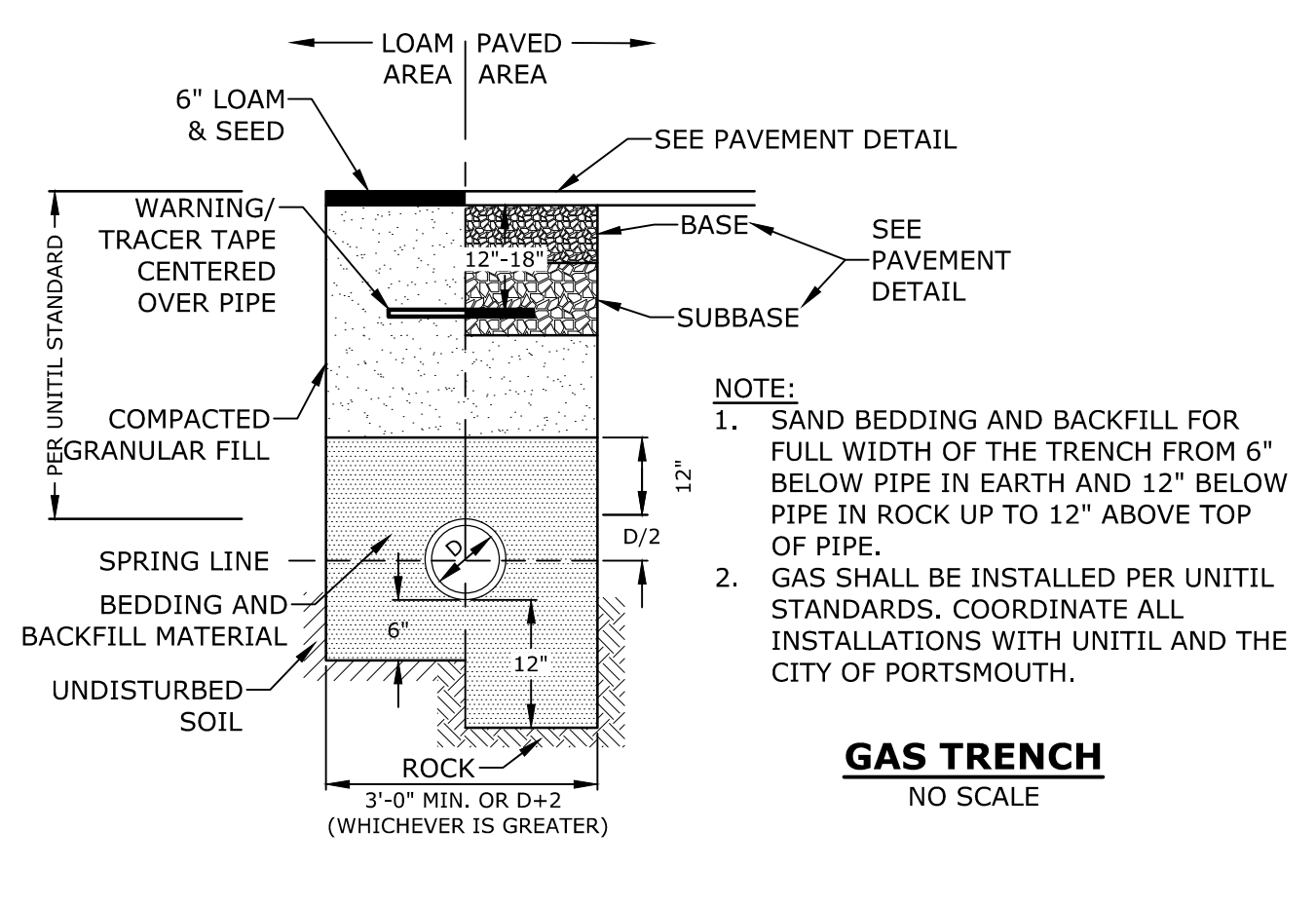
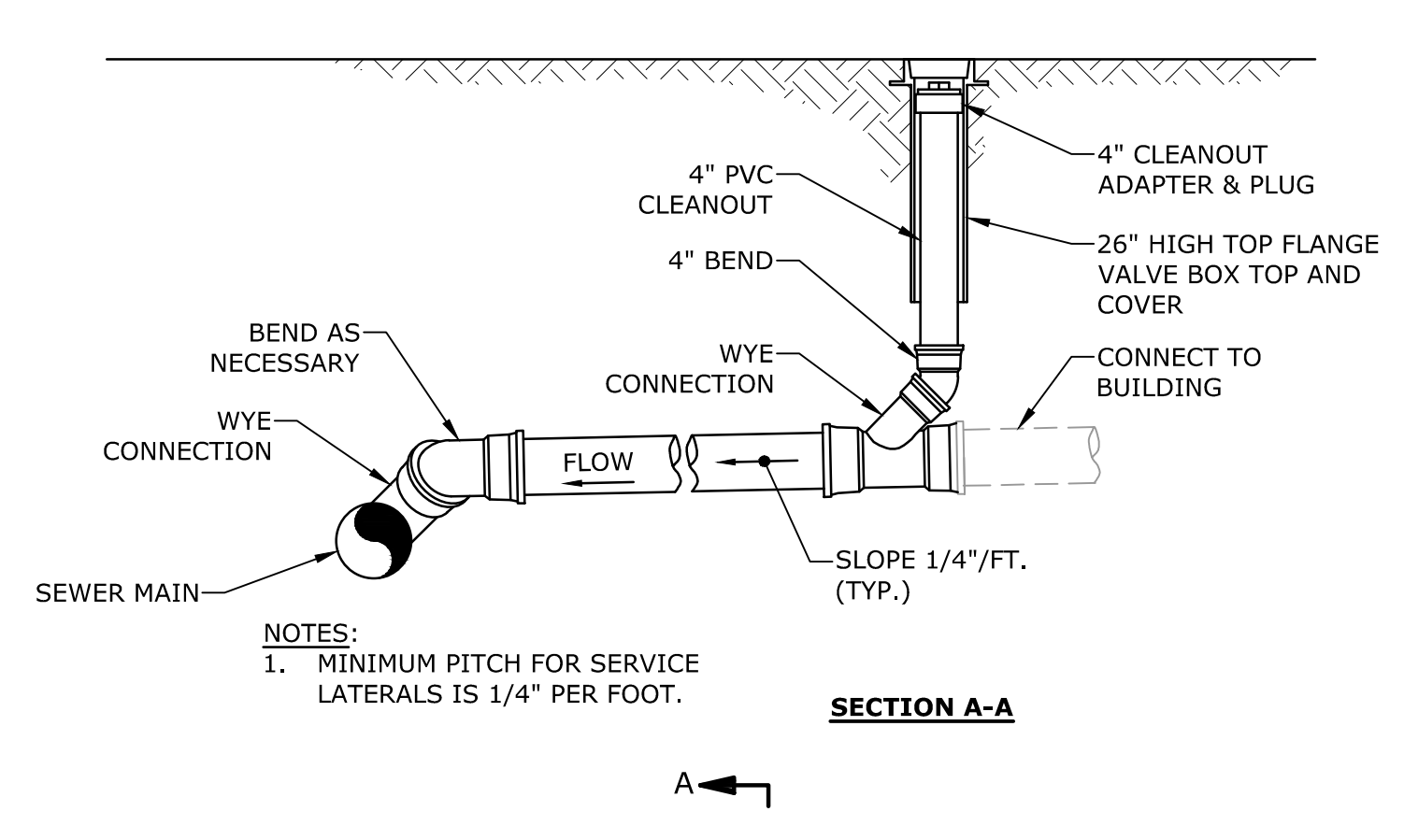
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REACTION TYPE	PIPE SIZE				
	4"	6"	8"	10"	12"
A 90°	0.89	2.19	3.82	11.14	17.24
B 180°	0.65	1.55	2.78	8.38	12.00
C 45°	0.48	1.19	2.12	6.02	9.32
D 22-1/2°	0.25	0.60	1.06	3.08	4.74
E 11-1/4°	0.13	0.30	0.54	1.54	2.38

TEST PRESSURE = 200psi

NOTES:
1. 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.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTINGS.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.



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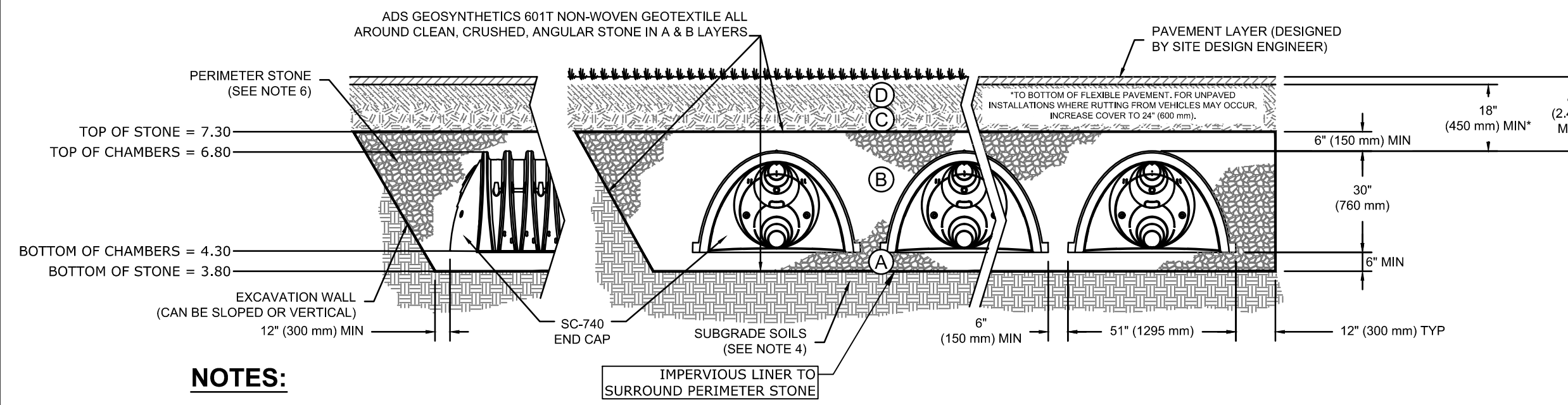
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ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{1,2}

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- PLACE MINIMUM 12" OF ADS GEOSYNTHETICS 315WTK WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

INSPECTION & MAINTENANCE

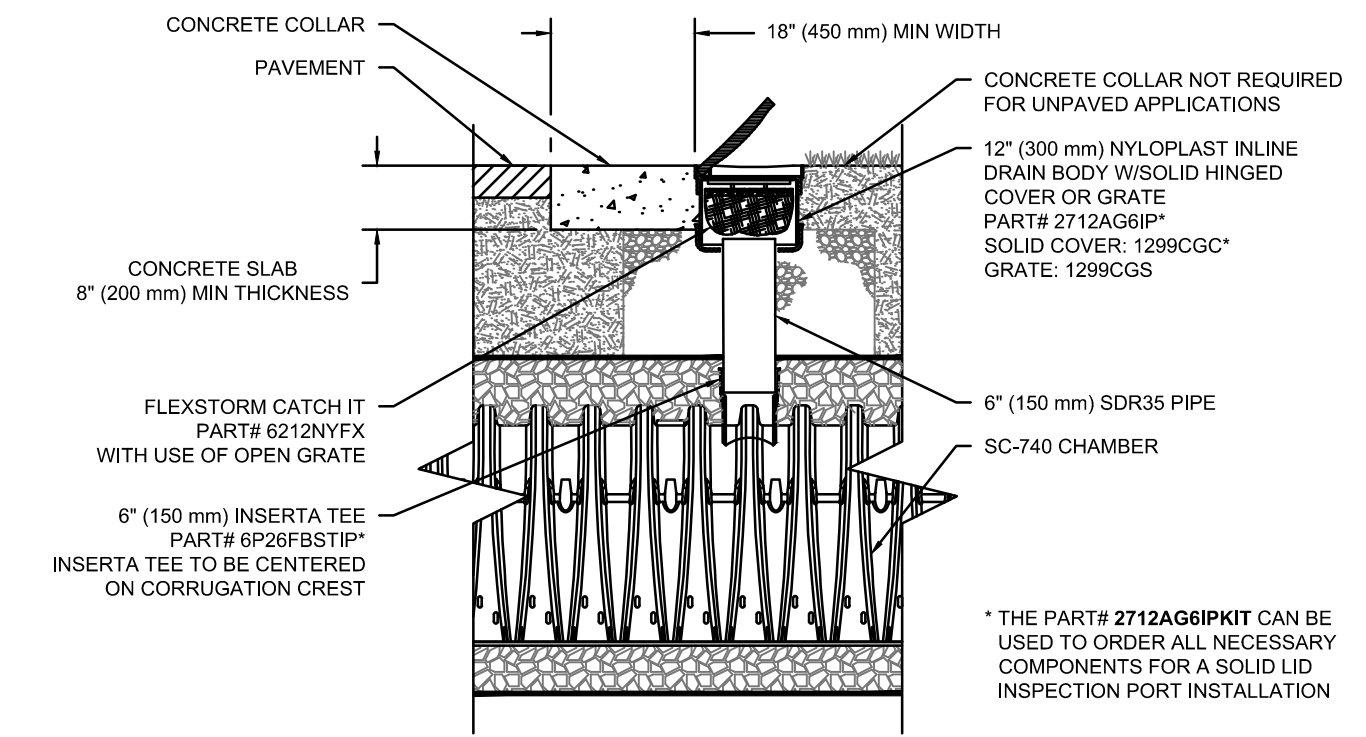
- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
- REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

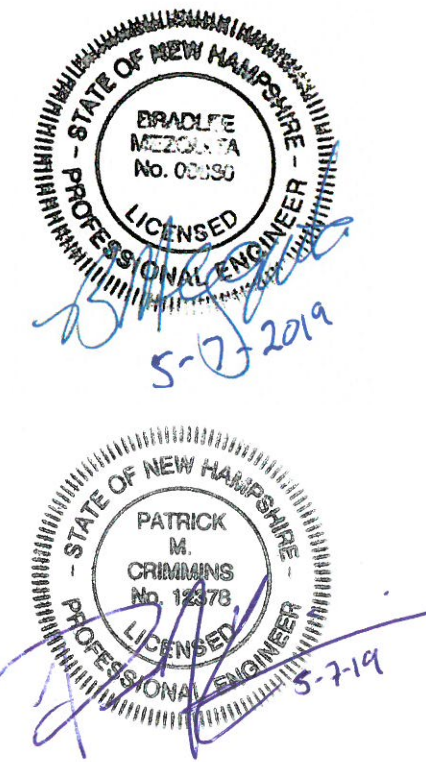
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS. ^J
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". ^J
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.



SC-740 6" INSPECTION PORT DETAIL
NTS



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
A	3/18/2019	TAC Submission

PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019-C-DTLS.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

DETAILS SHEET

SCALE: AS SHOWN

C-506

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN. 67" MANHOLE JELLYFISH PRETREAT CAPACITY IS 1.16 CFS, AND MAXIMUM BYPASS CAPACITY IS 4.00 CFS. IF THE SITE CONDITIONS EXCEED TOTAL CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION	54"	40"	27"	15"
CARTRIDGE DEPTH	7'-5"	6'-3"	5'-2"	4'-2"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-3"	5'-2"	4'-2"	4'-2"
FLOW RATE HIGH-FLO/ DRAINDOWN (cfs) (per cart)	0.18 / 0.09	0.13 / 0.065	0.09 / 0.045	0.05 / 0.025
MAX. CARTS HIGH-FLO/DRAINDOWN	6 / 1			
MAX. BYPASS (cfs)	4.00			
MAX. TREATMENT (cfs)	1.16	0.87	0.58	0.32
MAX. TREATMENT AND BYPASS (cfs) (TOTAL CAPACITY)	5.16	4.87	4.58	4.32

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	6"
WATER QUALITY FLOW RATE (cfs)	0.91
BYPASS FLOW RATE (cfs)	5.00
PEAK FLOW RATE (cfs)	4.42
RETURN PERIOD OF PEAK FLOW (yrs)	50
# OF CARTRIDGES REQUIRED (HF / DD)	511
CARTRIDGE SIZE	54"

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 M336 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
- STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
- INLET HGL NOT TO EXCEED 6" BELOW THE TOP OF THE M.A.W. DURING THE PEAK DESIGN STORM, OR 10-YEAR STORM (WHICHEVER IS GREATER).
- INLET PIPE INVERT ELEVATION VARIES FROM 0" TO 6" MAXIMUM ABOVE THE OUTLET PIPE INVERT.
- 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.
- THE DIFFERENCE IN THE INLET AND OUTLET PIPE ELEVATIONS FOR RETROFIT INSTALLATIONS TO EXISTING STORM DRAIN PIPES SHALL BE EQUAL TO THE SLOPE OVER THE DIAMETER OF THE MANHOLE; NOT THE EXCEED 6" IN VERTICAL DIFFERENTIAL BETWEEN INLET AND OUTLET PIPES.
- 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 WATERSTOP 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 JF6-5-1 ONLINE CONFIGURATION

NO SCALE

Jellyfish[®] Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENT NOS. 8,207,728; 8,221,818; 8,116,113; 8,116,114; 8,116,115; 8,116,116; 8,116,117; 8,116,118; 8,116,119; 8,116,120; 8,116,121; 8,116,122; 8,116,123; 8,116,124; 8,116,125; 8,116,126; 8,116,127; 8,116,128; 8,116,129; 8,116,130; 8,116,131; 8,116,132; 8,116,133; 8,116,134; 8,116,135; 8,116,136; 8,116,137; 8,116,138; 8,116,139; 8,116,140; 8,116,141; 8,116,142; 8,116,143; 8,116,144; 8,116,145; 8,116,146; 8,116,147; 8,116,148; 8,116,149; 8,116,150; 8,116,151; 8,116,152; 8,116,153; 8,116,154; 8,116,155; 8,116,156; 8,116,157; 8,116,158; 8,116,159; 8,116,160; 8,116,161; 8,116,162; 8,116,163; 8,116,164; 8,116,165; 8,116,166; 8,116,167; 8,116,168; 8,116,169; 8,116,170; 8,116,171; 8,116,172; 8,116,173; 8,116,174; 8,116,175; 8,116,176; 8,116,177; 8,116,178; 8,116,179; 8,116,180; 8,116,181; 8,116,182; 8,116,183; 8,116,184; 8,116,185; 8,116,186; 8,116,187; 8,116,188; 8,116,189; 8,116,190; 8,116,191; 8,116,192; 8,116,193; 8,116,194; 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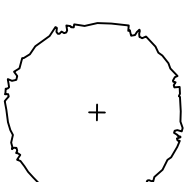
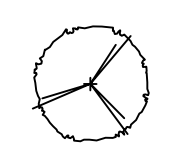
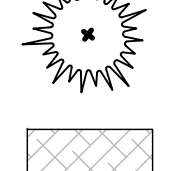


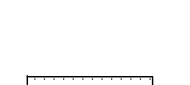


GENERAL NOTES

1. THE PROPERTY OWNER AND FUTURE PROPERTY OWNERS SHALL BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR AND REPLACEMENT OF SCREENING AND LANDSCAPE MATERIALS.
2. REQUIRED PLANT MATERIALS SHALL BE TENDED AND MAINTAINED IN A HEALTHY GROWING CONDITION, REPLACED WHEN NECESSARY, AND KEPT FREE OF REFUSE AND DEBRIS. REQUIRED FENCES AND WALLS SHALL BE MAINTAINED IN GOOD REPAIR.
3. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO REMOVE AND REPLACE DEAD OR DISEASED PLANT MATERIALS IMMEDIATELY WITH THE SAME TYPE, SIZE AND QUANTITY OF PLANT MATERIALS AS ORIGINALLY INSTALLED, UNLESS ALTERNATIVE PLANTINGS ARE REQUESTED, JUSTIFIED AND APPROVED BY THE PLANNING BOARD OR PLANNING DIRECTOR.

GENERAL MATERIALS NOTES

1. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR MATERIALS RELATED IN THE CONTRACT DOCUMENTS PRIOR TO PROCUREMENT.
2. SHOP DRAWINGS FOR CURBING, STAIRS, WALLS, AND PAVEMENT SHALL BE BASED ON FIELD MEASUREMENT AND LAYOUT VERIFICATION BY THE CONTRACTOR.
3. EXPANSION JOINT FILLER AND SEALANT SHALL BE PLACED WHERE PAVEMENT MEETS CURBING, WALLS, OR OTHER VERTICAL ELEMENTS, INCLUDING LIGHT BASES, HYDRANTS, BUILDINGS AND BUILDING COLUMNS, WALLS, AND OTHER CONDITIONS AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL REQUEST THE PRESENCE OF THE ARCHITECT TO REVIEW THE LAYOUT OF EXPANSION JOINTS PRIOR TO PLACING FINISHED WORK.

PLANTING LEGEND

-  DECIDUOUS STREET TREE
-  DECIDUOUS FLOWERING TREE
-  EVERGREEN TREE
-  PLANTING BED - MIXED COMPOSITION OF SHRUBS, GROUND COVERS, PERENNIALS AND GRASSES
-  PLANTING BED - GROUND COVER
-  SCREEN PLANTING OF EVERGREEN AND DECIDUOUS SHRUBS. 48" HEIGHT ADJACENT TO PARKING AREA AT MAPLEWOOD AVENUE AND 60" HEIGHT ADJACENT TO NEW UTILITIES AT VAUGHAN STREET.
-  LAWN
-  ROOF DECK PLANTING BED - MIXED COMPOSITION OF SHRUBS, GROUND COVERS, PERENNIALS AND GRASSES

TREE PLANTING NOTE

1. TREES ARE TO BE INSTALLED UNDER THE SUPERVISION OF CITY OF PORTSMOUTH DPW USING CITY STANDARD INSTALLATION METHODS.
2. SEE SHEET L-501 FOR ADDITIONAL PLANTING NOTES.

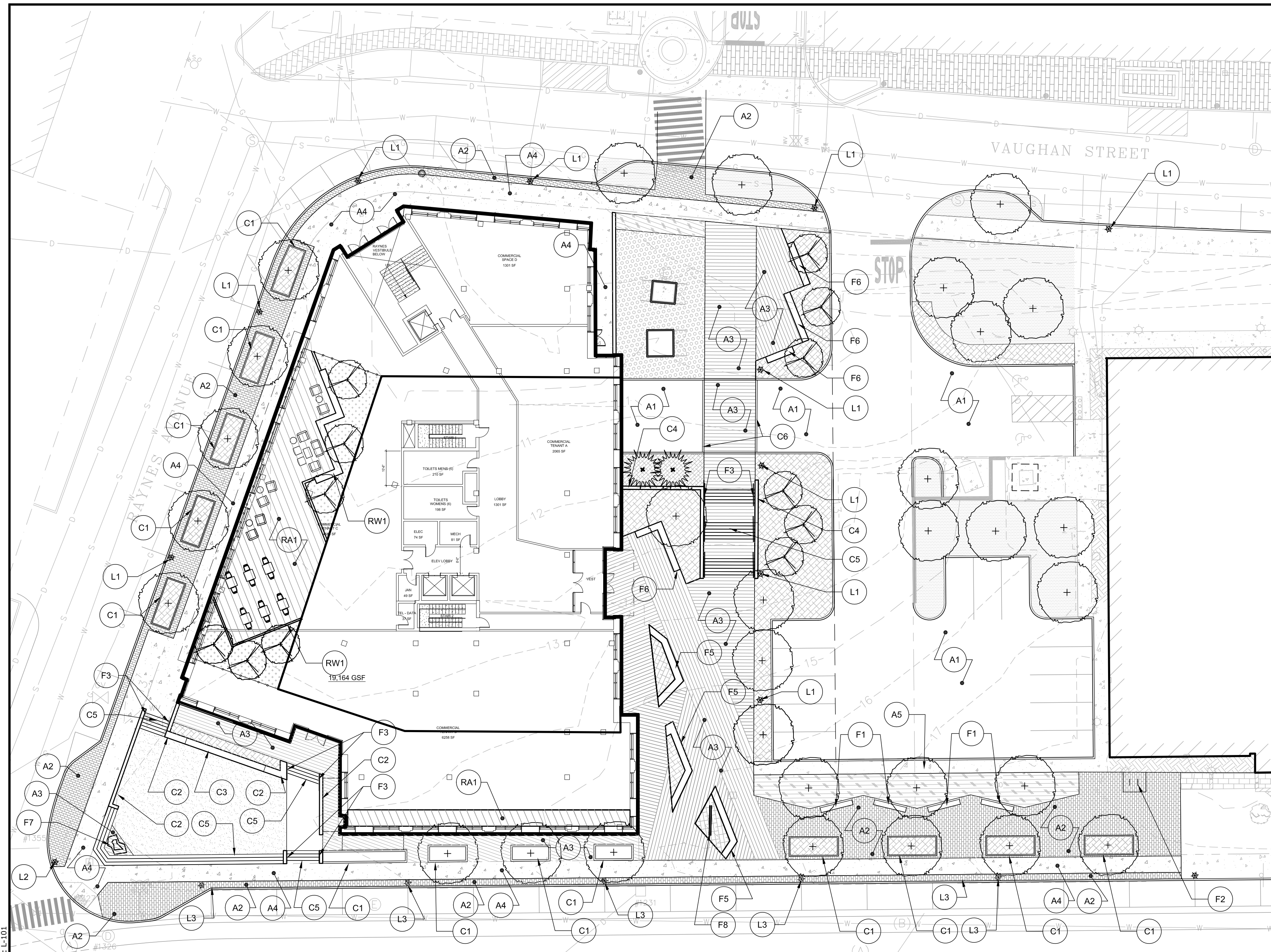
TREE PLANT LIST

DECIDUOUS STREET TREES
ACER RUBRUM 'KARPICK' - KARPICK MAPLE
QUERCUS BICOLOR - SWAMP WHITE OAK
ULMUS 'PATRIOT' - PATRIOT ELM

DECIDUOUS ORNAMENTAL TREES
BETULA NIGRA 'HERITAGE' - HERITAGE RIVER BIRCH
CRATAEGUS VIRIDIS 'WINTER KING' - WINTER KING HAWTHORN
HAMAMELIS X INTERMEDIA 'ARNOLD PROMISE' - ARNOLD PROMISE WITCH HAZEL

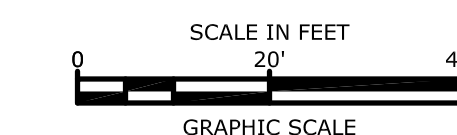
EVERGREEN TREES
PICEA ORIENTALIS 'GREEN KNIGHT' - GREEN KNIGHT ORIENTAL SPRUCE

NOTE: TREE SPECIES SELECTIONS MAY BE MODIFIED BASED ON AN UPCOMING MEETING WITH THE CITY OF PORTSMOUTH TO ALIGN WITH RECENTLY COMPLETED MAPLEWOOD AVENUE COMPLETE STREETS PACKAGE.



MATERIALS LEGEND

TAG	DESCRIPTION	DETAIL	TAG	DESCRIPTION	DETAIL	TAG	DESCRIPTION	DETAIL
A1	BITUMINOUS CONCRETE PAVING		F1	WOOD AND METAL BENCH		RA1	ROOF DECK - PRECAST CONCRETE PAVER ON PEDESTAL - 2 3/4" THICKNESS	
A2	BRICK PAVING - CITY OF PORTSMOUTH STANDARD - OVER SETTING BED ON COMPACTED CRUSHED STONE BASE IN PEDESTRIAN AREAS AND CONCRETE BASE IN VEHICULAR AREAS		F2	BICYCLE RACK, TYP. OF 4		RW1	PLANTER WITH BUILT-IN SEAT - WITH 30" SOIL DEPTH	
A3	PRECAST CONCRETE UNIT PAVERS OVER SETTING BED ON COMPACTED CRUSHED STONE BASE IN PEDESTRIAN AREAS AND CONCRETE BASE IN VEHICULAR AREAS		F3	STAIR HANDRAIL				
A4	CONCRETE PAVING - CITY OF PORTSMOUTH STANDARD		F5	LANDSCAPE PLANTER WITH INTEGRATED SEAT				
C1	ORNAMENTAL GRANITE CURB W/ PLANTER RAIL		F6	SEAT WALL				
C2	LANDSCAPE PLANTER WALL - HEIGHT AND WIDTH VARIES		F7	GATEWAY SCULPTURE				
C3	LANDSCAPE PLANTER WALL WITH SEAT		F8	BUILDING & ADDRESS SIGNAGE				
C4	LANDSCAPE TERRACE RETAINING WALL		L1	STREET LIGHT - CITY OF PORTSMOUTH DISTRICT STANDARD PEDESTRIAN LIGHT, SEE LIGHTING PLAN				
C5	GRANITE LANDSCAPE STAIRS		L2	STREET LIGHT TYPE 2 (MODIFIED POLE HEIGHT) - CITY OF PORTSMOUTH DISTRICT STANDARD PEDESTRIAN LIGHT, SEE LIGHTING PLAN				
C6	FLUSH GRANITE CURB		L3	STREET LIGHT TYPE 3 - CITY OF PORTSMOUTH STANDARD LANTERN FOR MAPLEWOOD AVENUE, SEE LIGHTING PLAN				



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
A	3/18/2019	TAC Submission

PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: L101 Material Plan.dwg
DRAWN BY:
CHECKED:
APPROVED:

LANDSCAPE PLAN

SCALE: AS SHOWN

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

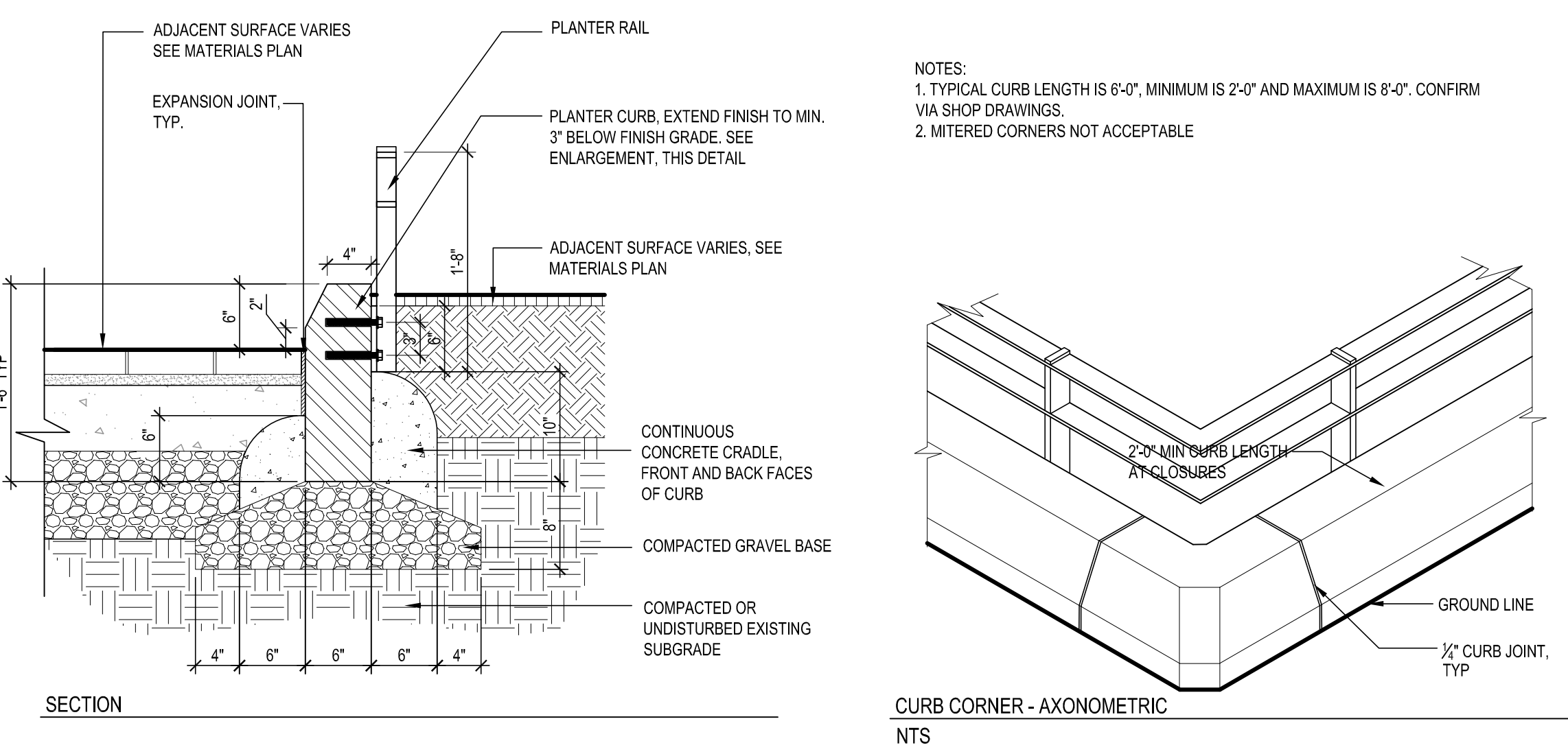
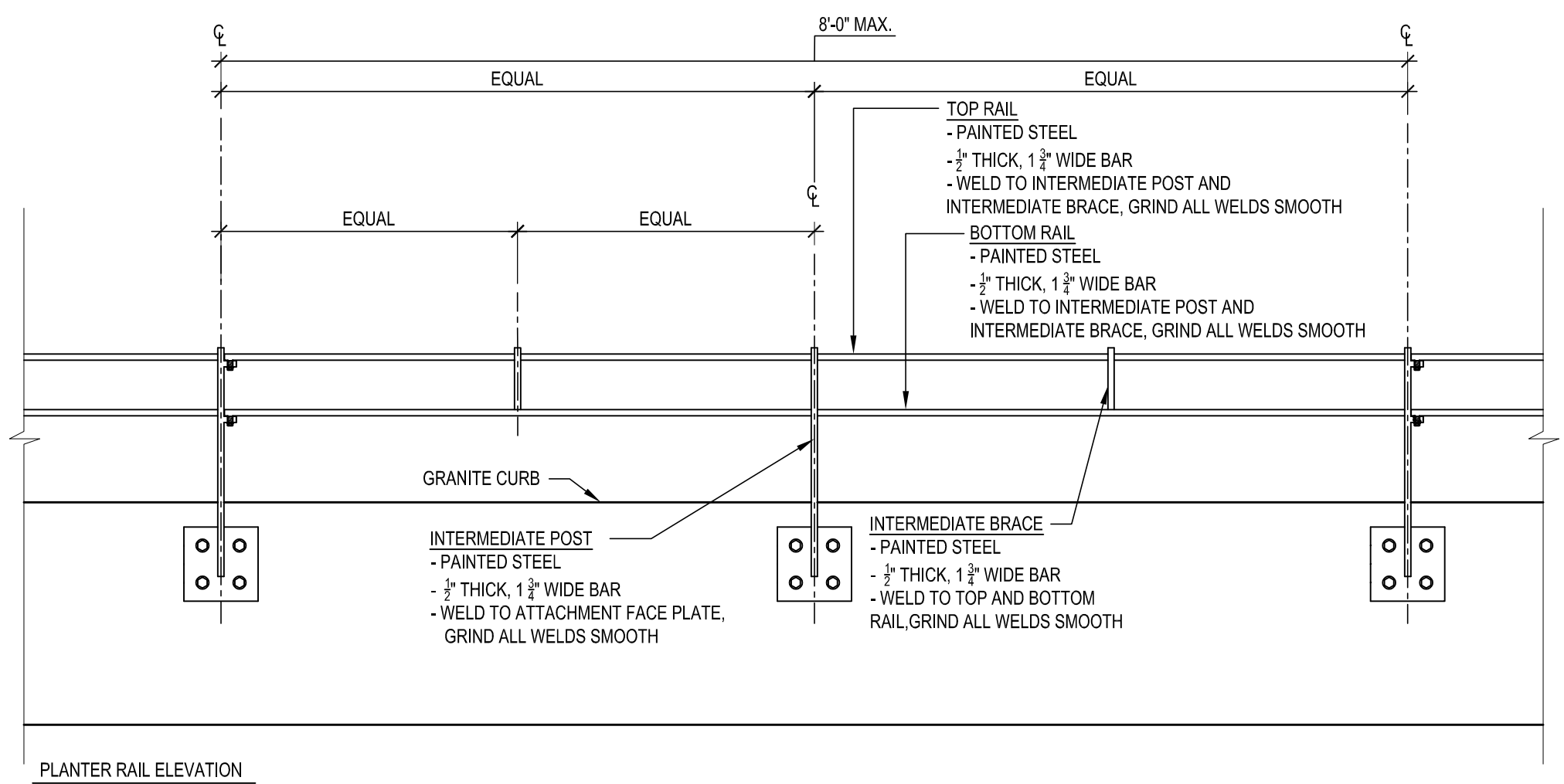
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PROJECT NO: K-0076-019
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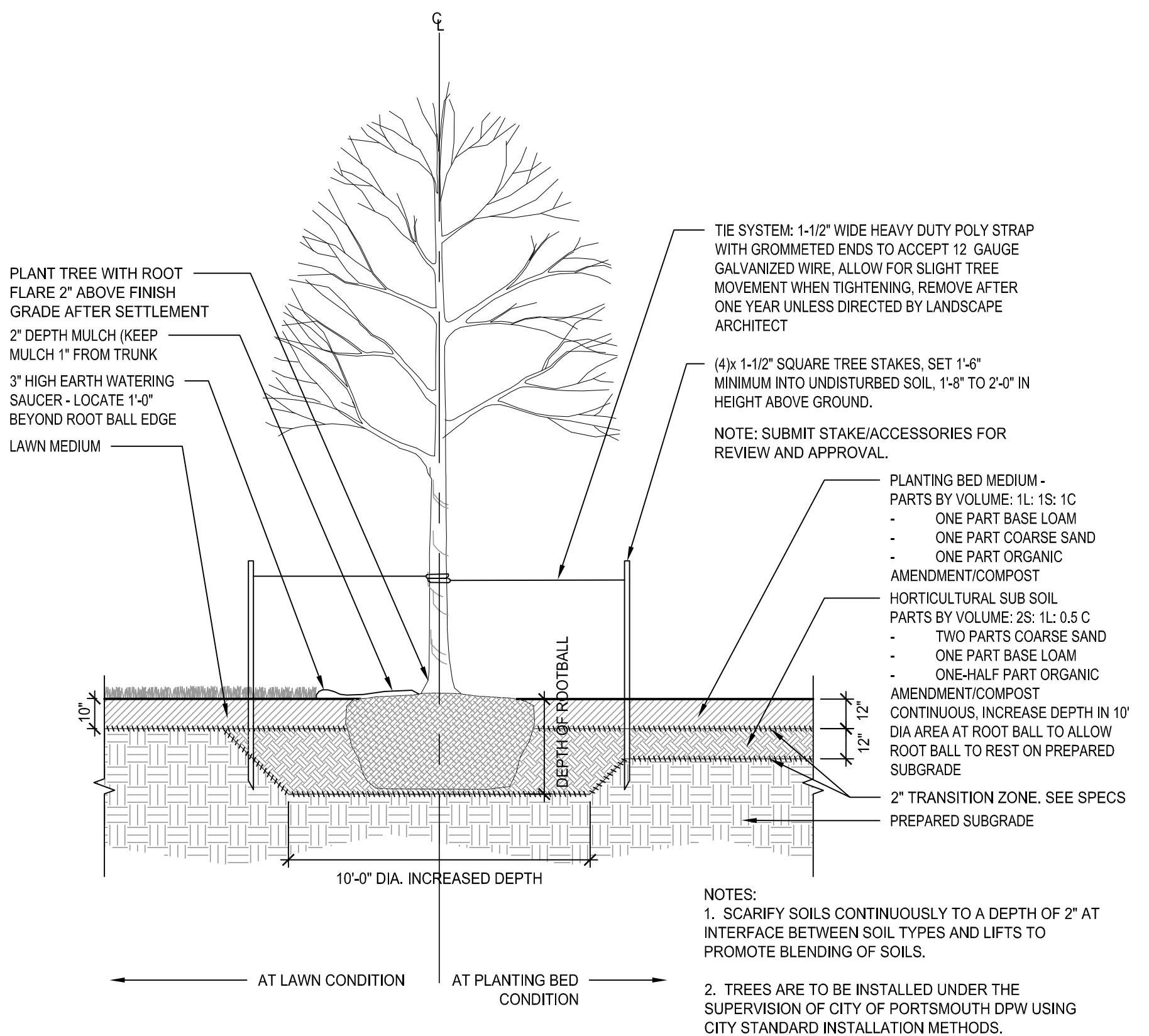
LANDSCAPE DETAILS

SCALE: AS SHOWN

L-501



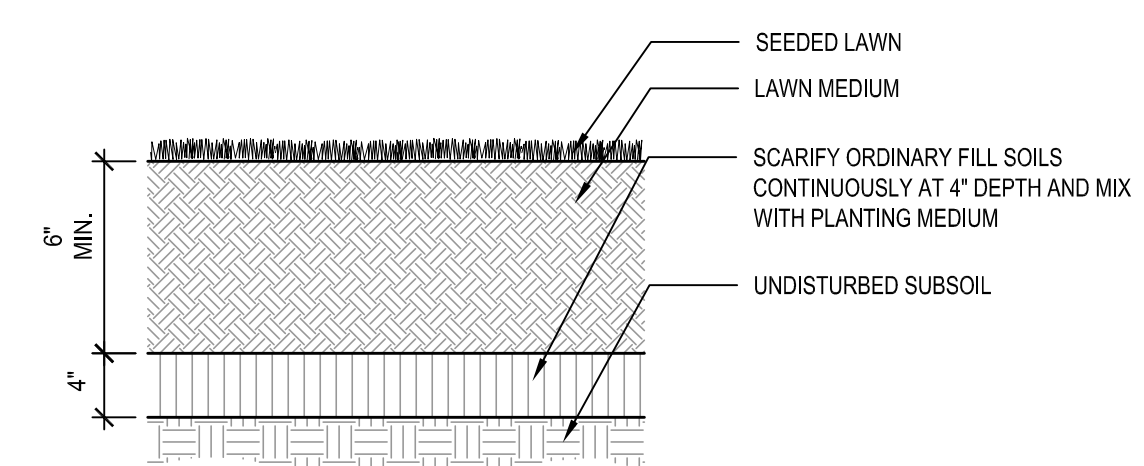
1 GRANITE PLANTER CURB W/ PLANTER RAIL
Scale: 1"=1'-0"



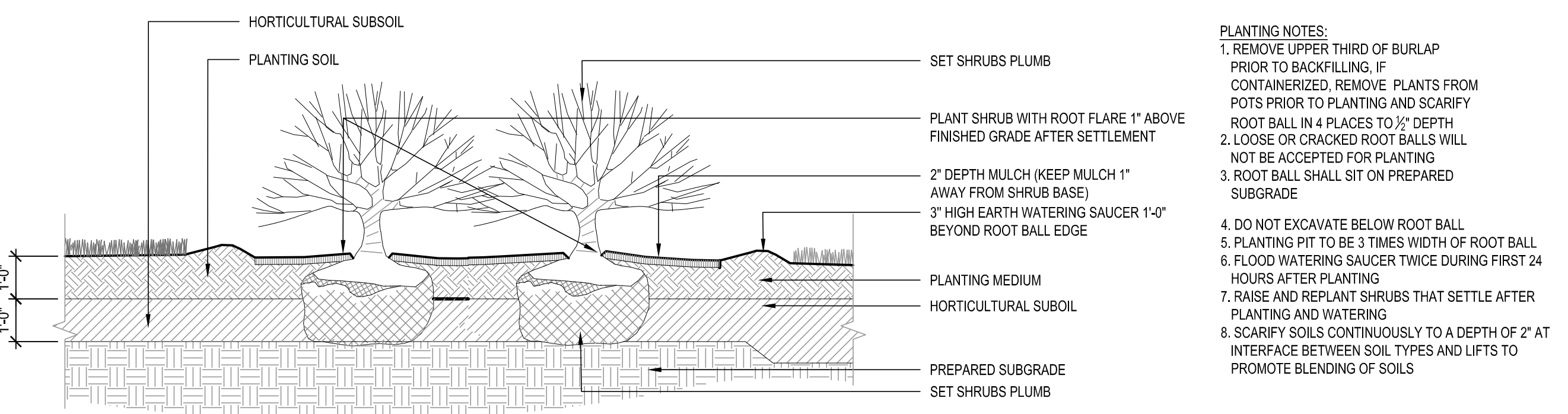
3 TREE PLANTING - IN LAWN OR PLANT BED AT GRADE
Scale: 1/4"=1'-0"

PLANTING NOTES

1. PLANT SPECIES SELECTIONS INCLUDING TREES TO BE COORDINATED WITH THE PORTSMOUTH PLANNING DEPARTMENT.
2. LOW PHOSPHORUS, SLOW RELEASE NITROGEN FERTILIZER TO BE USED FOR PLANTING BEDS.
3. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
4. PLANT MATERIAL SHALL CONFORM TO "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
5. NO SUBSTITUTIONS OF PLANT SPECIES WITHOUT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
6. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF AND FRUIT, COLOR AND TIME OF BLOOM, AS APPROVED BY LANDSCAPE ARCHITECT.
7. LOCATE AND VERIFY UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
8. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM ALL PLANTING AREAS.
9. NO PLANTING TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
10. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. REFER TO LAYOUT AND PLANTING SHEETS FOR LAYOUT INFORMATION. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF ALL PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
11. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE.
12. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
13. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
14. REPAIR DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK
15. SOAK PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION

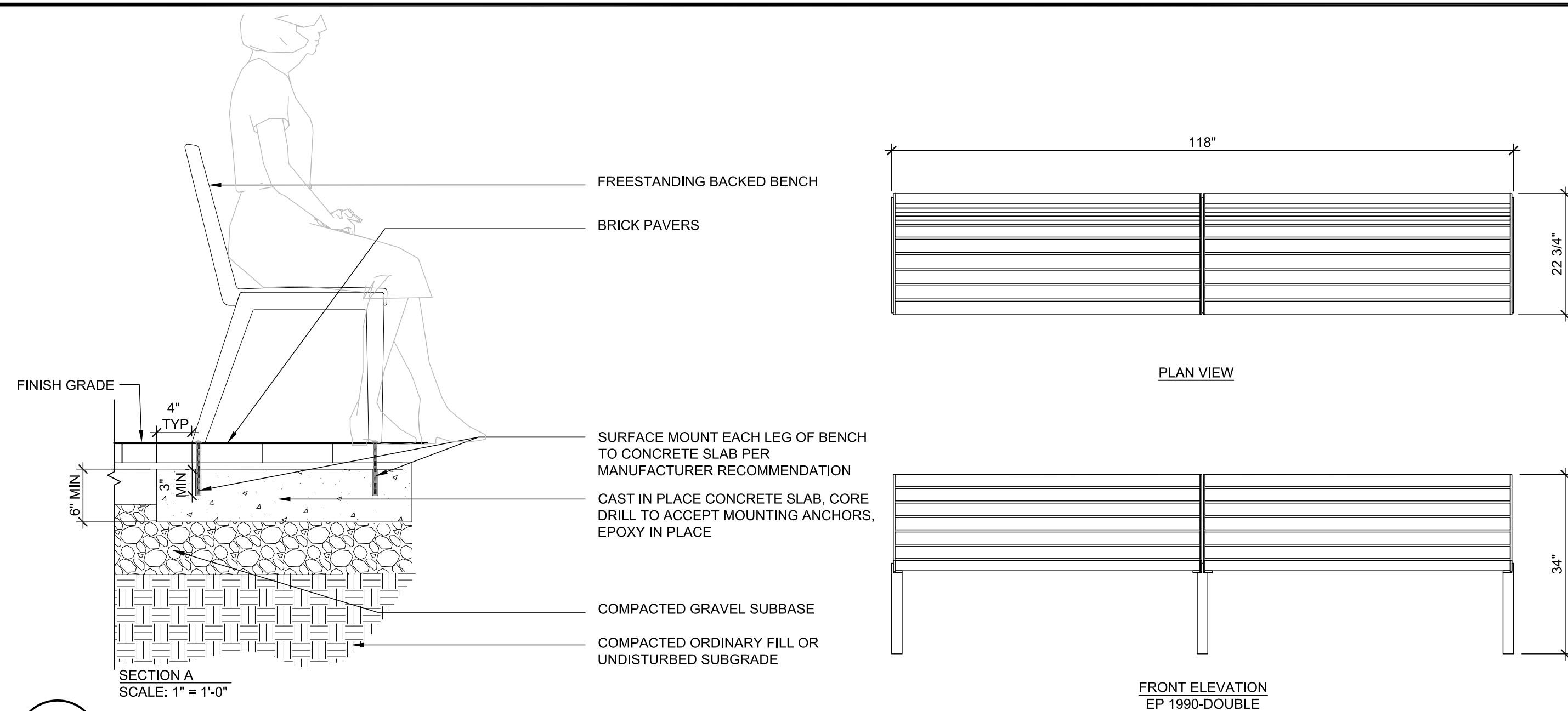


4 SOD / SEEDED LAWN
Scale: NTS

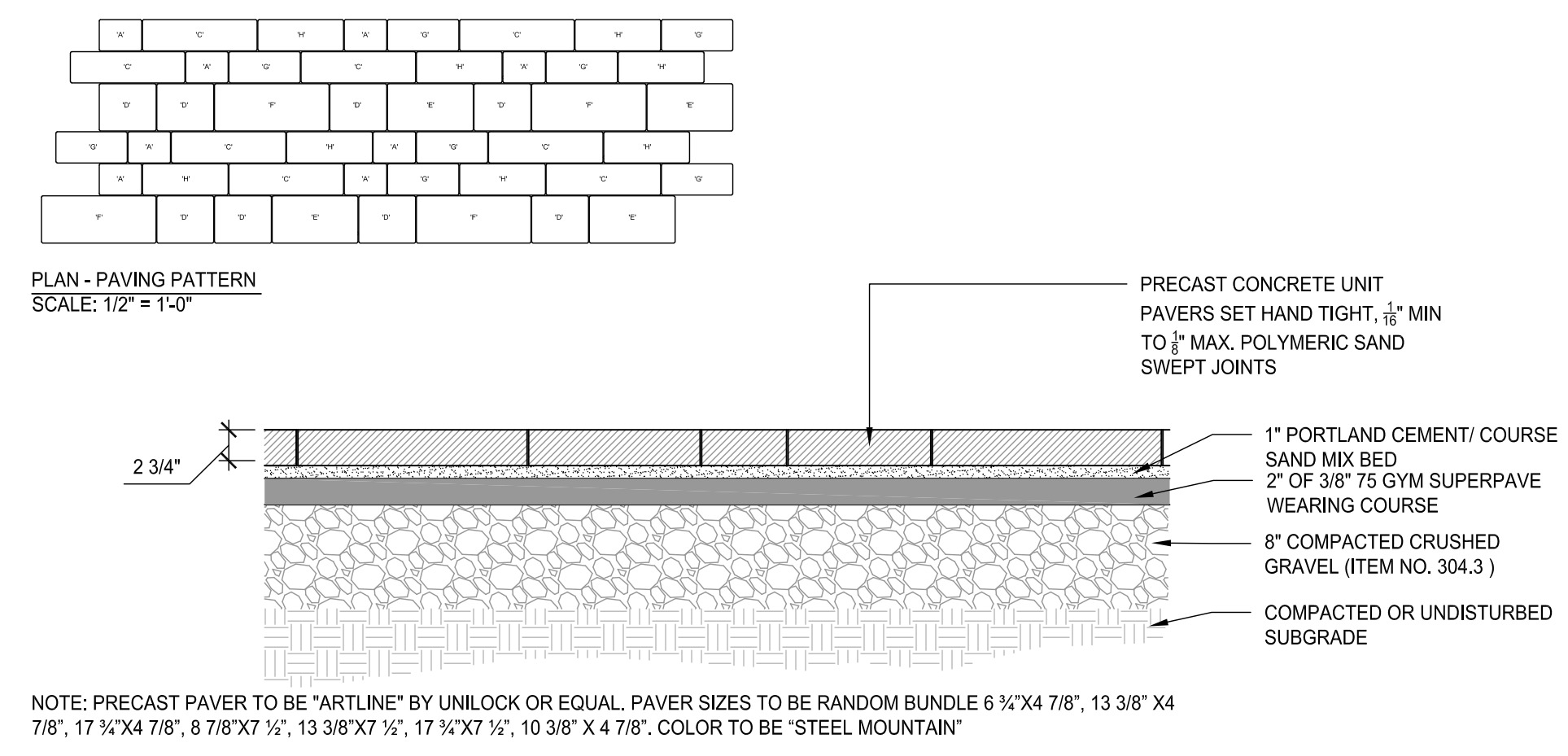


2 PLANTING BED - SHRUB & PERENNIAL AREA
SCALE: 3/8"=1'-0"

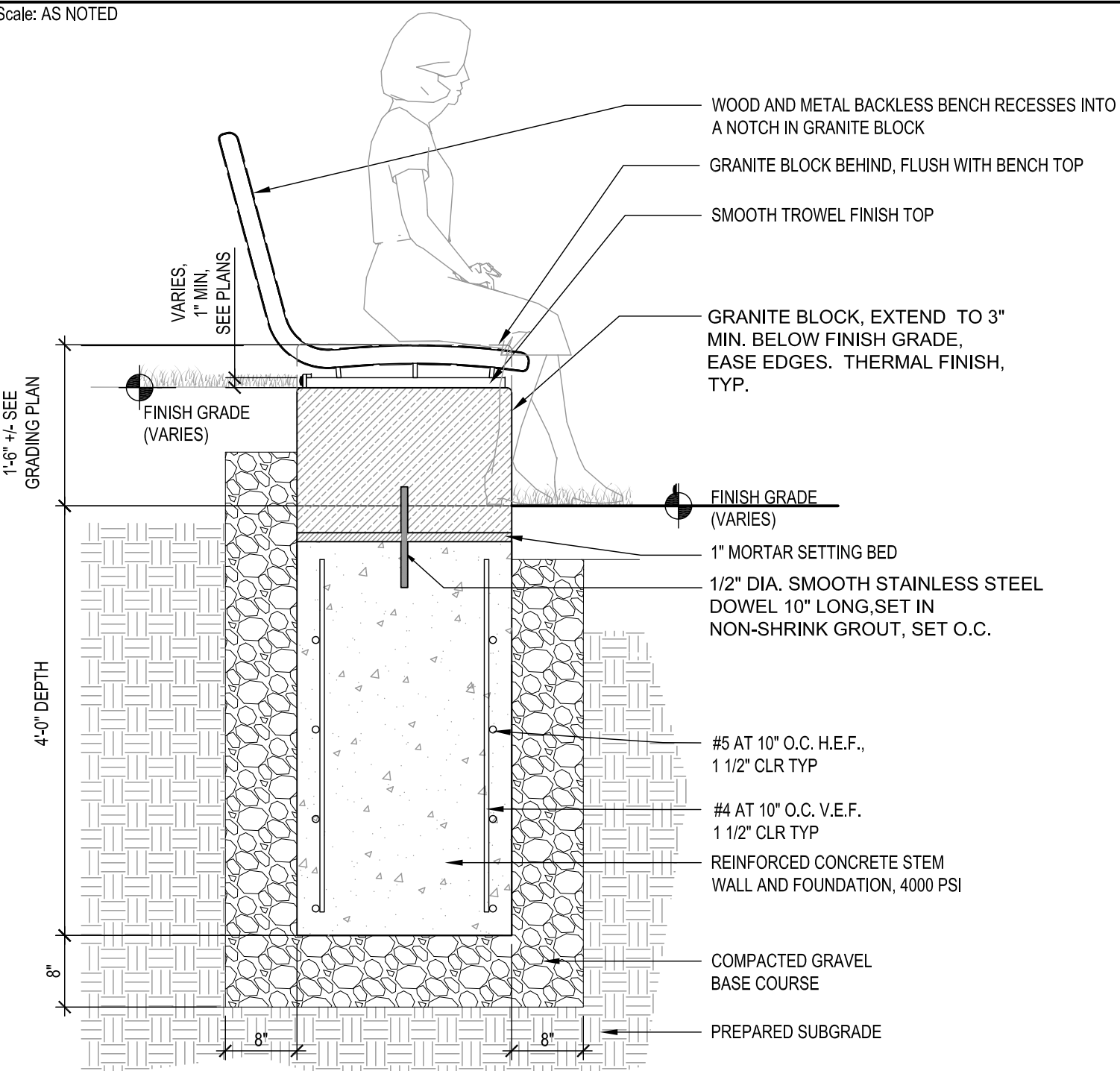
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Plot Date: Tuesday, May 07, 2019 Plotted By: Richard Houghton
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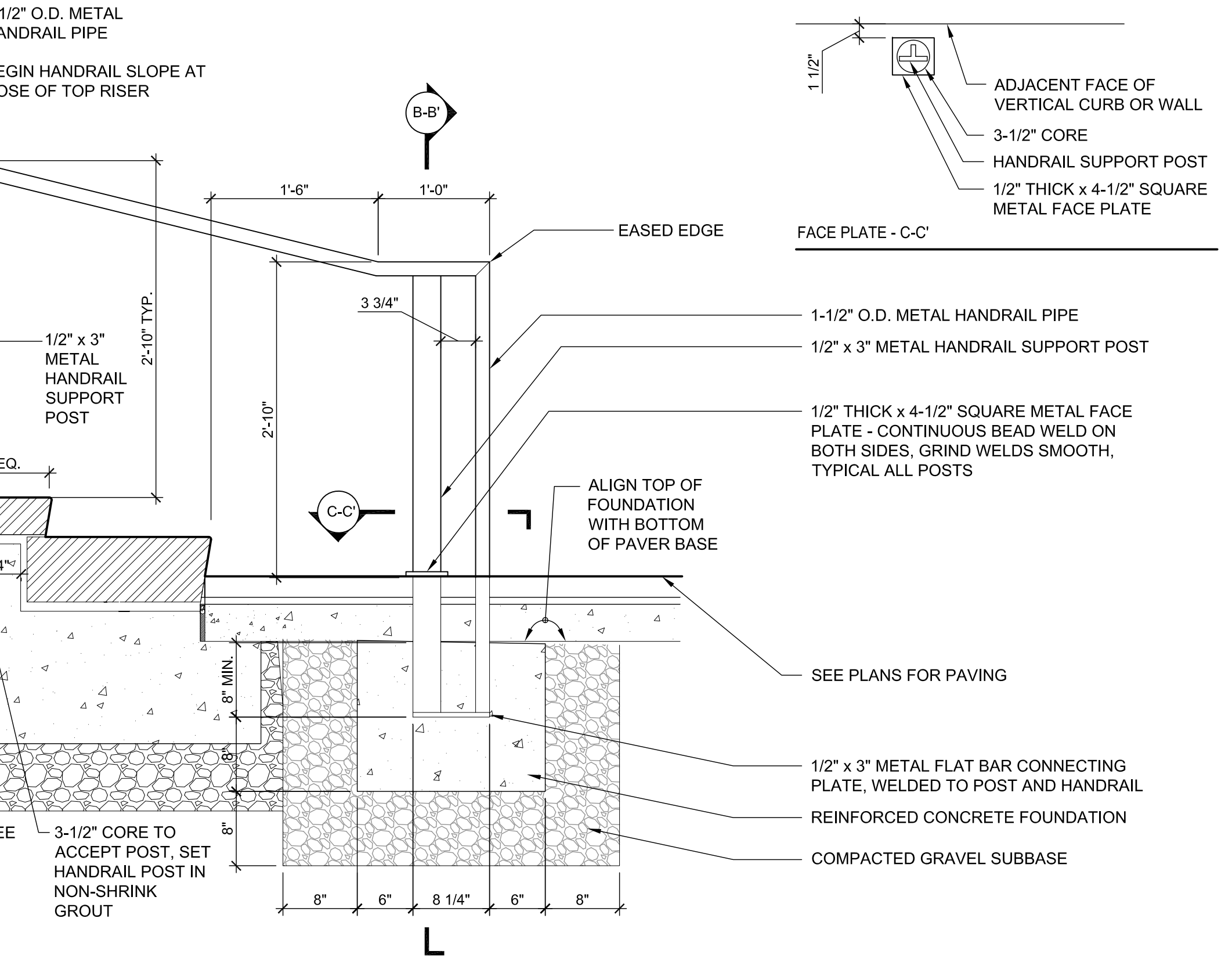
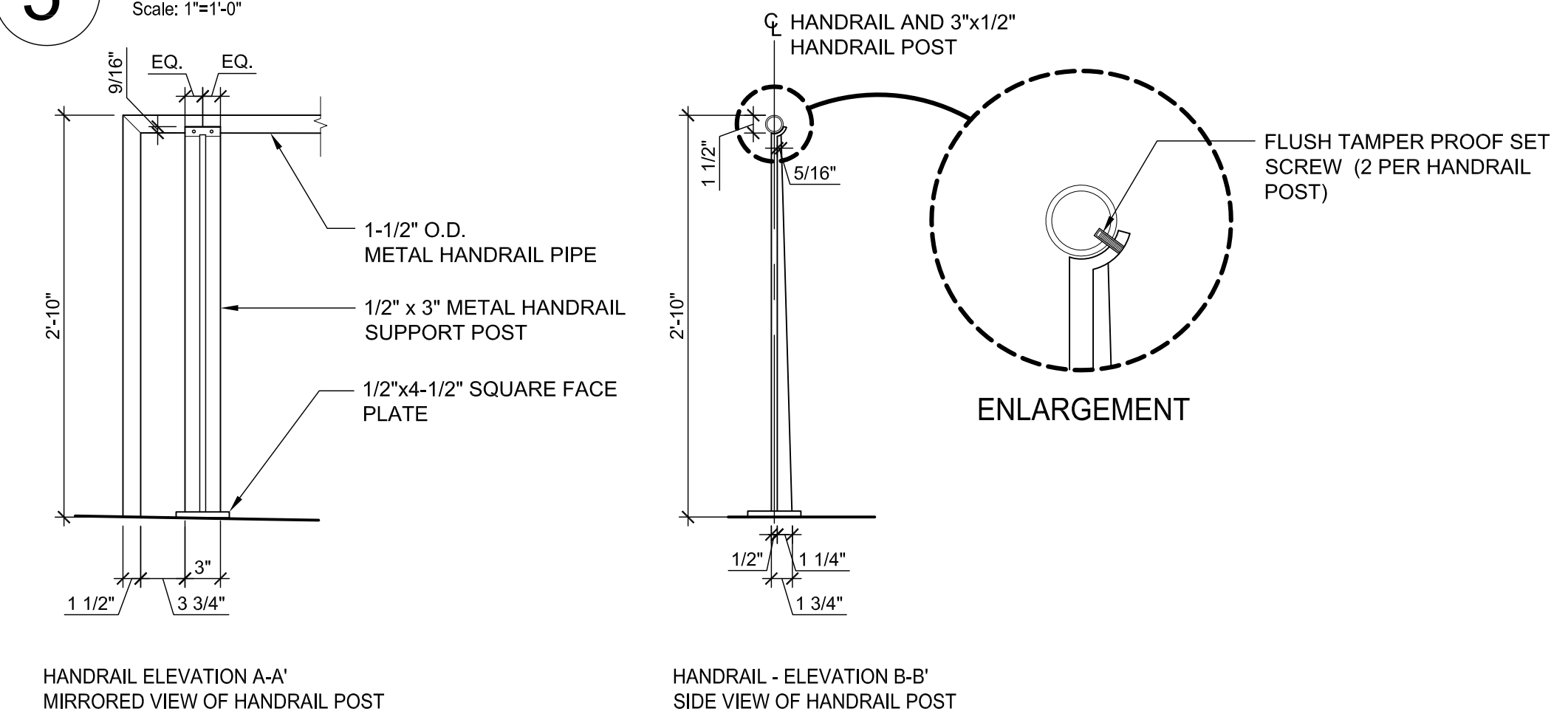
1 LONG FREESTANDING BENCH - SURFACE MOUNT CONDITION
Scale: AS NOTED



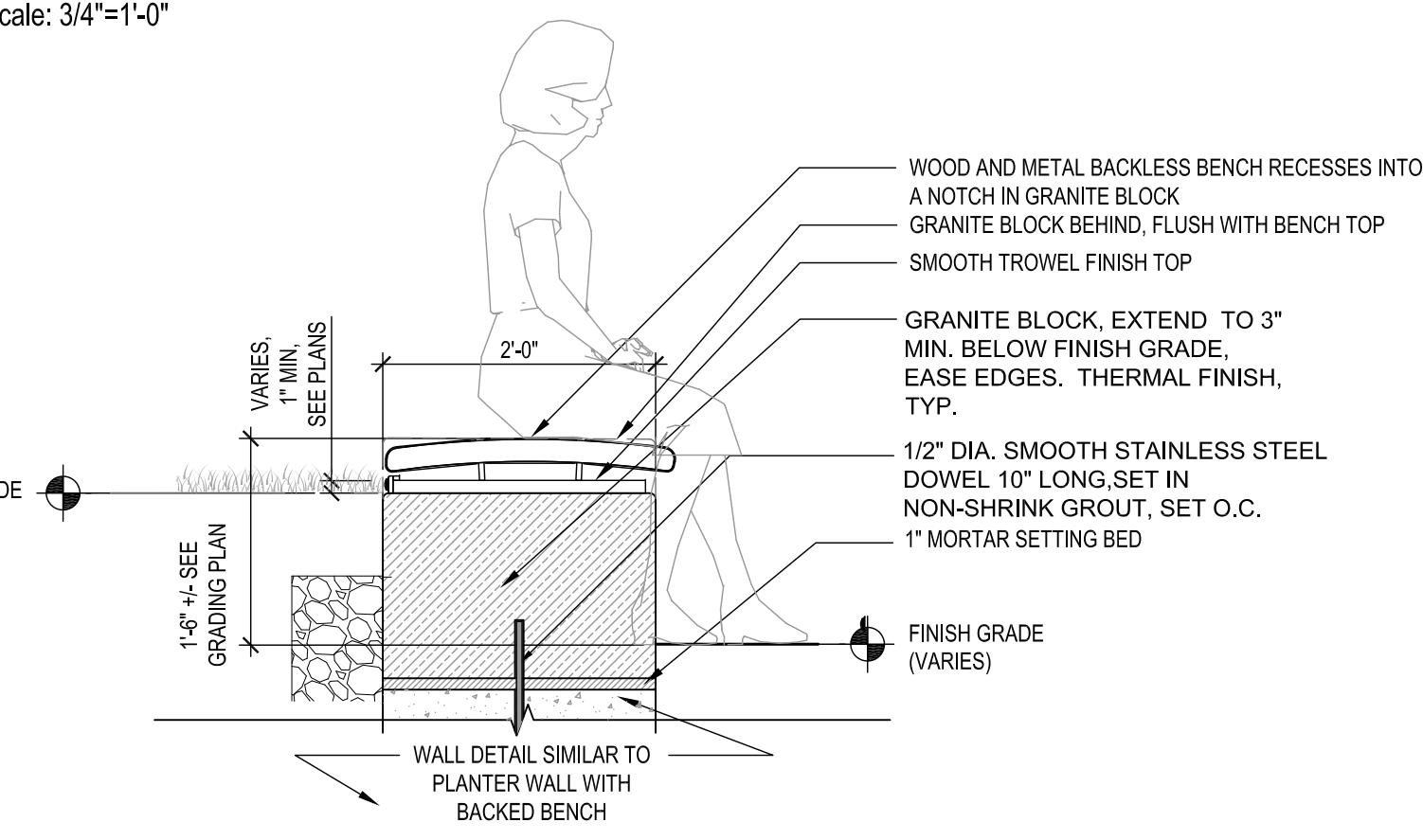
5 UNIT PAVERS ON GRAVEL BASE
Scale: 1/2"=1'-0"



2 LANDSCAPE PLANTER WALL WITH BACKED BENCH
Scale: 3/4"=1'-0"



4 METAL HANDRAIL
SCALE: 1" = 1'-0"



3 LANDSCAPE PLANTER WALL WITH BACKLESS BENCH
Scale: 3/4"=1'-0"

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

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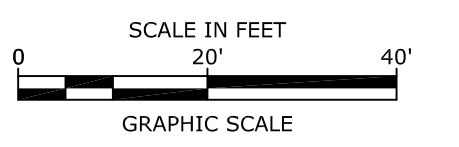
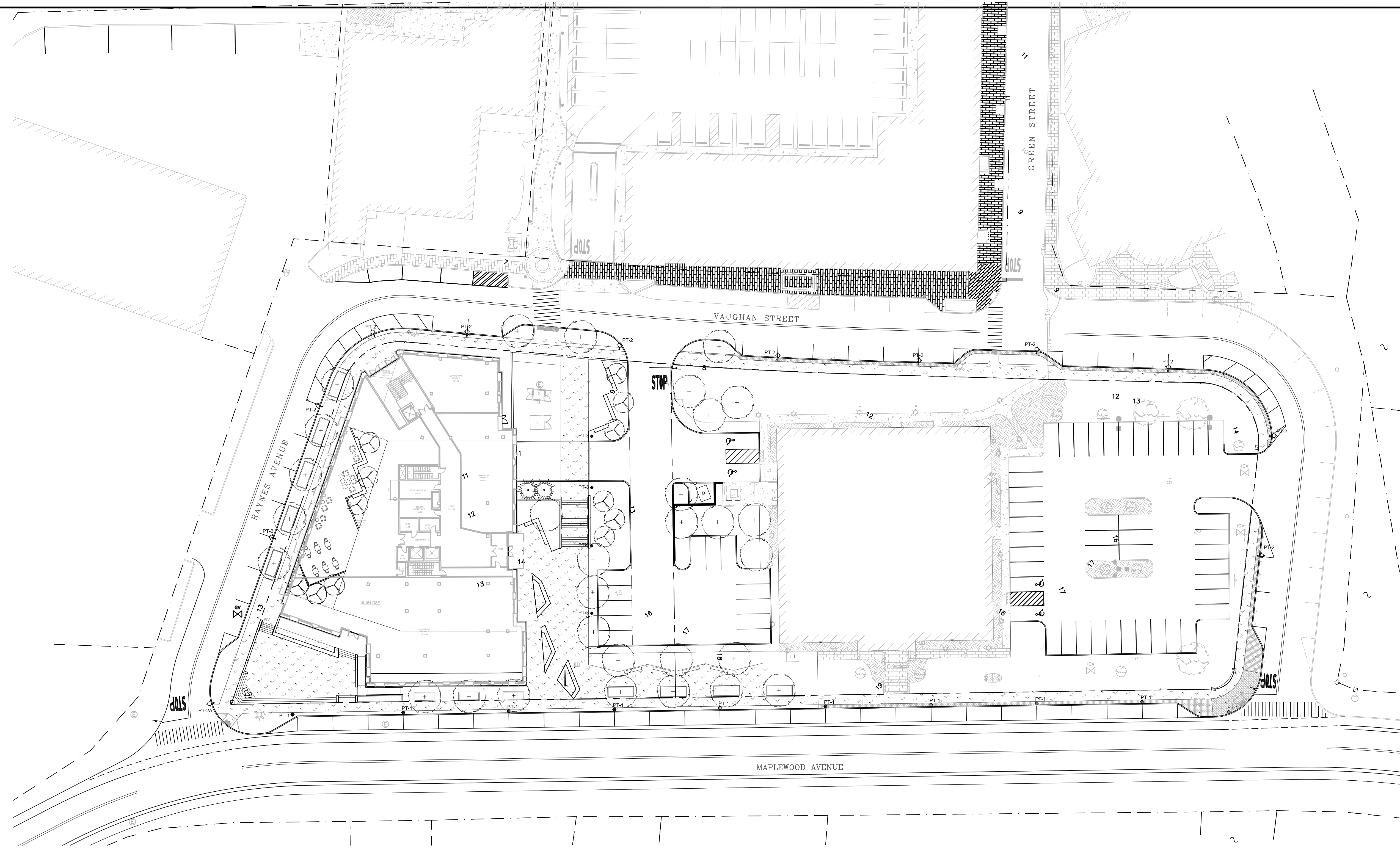
PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: L502 Details.dwg
DRAWN BY:
CHECKED:
APPROVED:

LANDSCAPE DETAILS

SCALE: AS SHOWN

L-502

Last Save Date: May 7, 2019 12:19 PM By: RICHARD
Plot Date: Tuesday, May 07, 2019 Plotted By: Richard Houghton
P&E File Location: \\C:\1111 Highwood Ave., Portsmouth, NH, 2019100 CAD\Sheets\L502 Details.dwg Layout Tab: L-502



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Maplewood Plaza_Top	Illuminance	Fc	0.24	0.8	0.1	2.40	8.00
Middle Path_Top	Illuminance	Fc	2.93	10.5	0.1	29.30	105.00
Plaza Raynes Ave_Top	Illuminance	Fc	0.13	0.3	0.0	N.A.	N.A.
Sidewalk - Raynes Avenue_Top	Illuminance	Fc	0.14	0.6	0.0	N.A.	N.A.
Sidewalk - Vaughan Street 2_Top	Illuminance	Fc	0.39	1.1	0.1	3.90	11.00
Sidewalk - Vaughan Street 3_Top	Illuminance	Fc	0.26	1.0	0.1	2.60	10.00
Sidewalk - Vaughan Street_Top	Illuminance	Fc	0.45	1.1	0.1	4.50	11.00
Sidewalk Maplewood Ave_Top	Illuminance	Fc	0.23	0.5	0.1	2.30	5.00

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PROJECT NO: K-0076-019
DATE: 05/07/2019
FILE: 20190507 111 Maplewood Lighting.dwg
DRAWN BY:
CHECKED:
APPROVED:

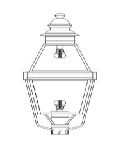
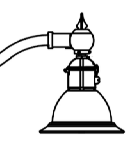
SITE LIGHTING PHOTOMETRICS

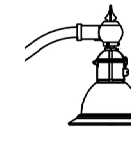
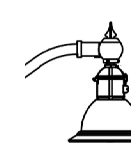
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LS-101

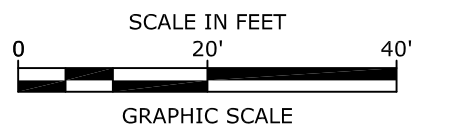
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111 MAPLEWOOD - PORTSMOUTH NH
Created: 03/14/2019 | Reissued: 05/07/2019

Code/Tag	Image	Product / Manufacturer	Attributes	Notes
PT-1		New Stamp Lighting "RS-TUR" Description: Historic style fixture on 10'-2" pole	Fixture Specification : #RS-TUR-177 Pole Specification : #PSHNC-16-10-17-2.88/3.50-CB Lamping : Sylvania #78911 Wattage (W) : 28W Output (lm) : 2200lm CCT (K) : 2700K CRI : 80 Voltage (V) : 120V Finish : Satin Black Material (Pole) : Ductile Iron Material (Fixture) : Commercial Grade Copper and Steel Height (ft) : 14'-2" Location : Maplewood Ave Qty : 10	1. EC to verify voltage, prior to ordering.
PT-2		King Luminaire "K729 Aurora Jr" Description: 16' LED Post Top	Fixture Specification : #K729-P2FL-II-60(SSL)-7042-120-277-KPL10-3K Arm Specification : #(MOD) KA72-T-1-3' Pole Specification : #KBH16-G-S11-SBP C/W 140-35/55&DR Lamping : LED (Included) Wattage (W) : 60W Output (lm) : 6000lm CCT (K) : 3000K CRI : 80 Voltage (V) : 120-277V Distribution : Type II Label/IP : IP66 Finish : Textured Black Material (Pole) : Concrete Material (Arm) : Aluminum Material (Fixture) : Aluminum Height (ft) : 18'-0" Arm Length (ft) : 41" Location : Raynes Ave, Vaughan St Qty : 11	1. EC to verify voltage (prior to ordering).

Code/Tag	Image	Product / Manufacturer	Attributes	Notes
PT-2A		King Luminaire "K729 Aurora Jr" Description: 24' LED Post Top	Fixture Specification : #K729-P2FL-II-60(SSL)-7042-120-277-KPL10-3K Arm Specification : #(MOD) KA72-T-1-3' Pole Specification : #KBH24-G-S11-SBP C/W 140-35/55&DR Lamping : LED (Included) Wattage (W) : 60W Output (lm) : 6000lm CCT (K) : 3000K CRI : 80 Voltage (V) : 120-277V Distribution : Type II Label/IP : IP66 Finish : Textured Black Material (Pole) : Concrete Material (Arm) : Aluminum Material (Fixture) : Aluminum Height (ft) : 24'-0" Arm Length (ft) : 41" Location : Raynes Ave & Maplewood Ave Corner Qty : 1	1. EC to verify voltage (prior to ordering). 2. EC to verify pole height required by Portsmouth, prior to ordering.
PT-3		King Luminaire "K729 Aurora Jr" Description: 14' LED Post Top	Fixture Specification : #K729-P2FL-II-40(SSL)-7030-120-277-KPL10-3K Arm Specification : #(MOD) KA72-T-1-3' Pole Specification : #KBH14-G-S11-SBP C/W 140-35/55&DR Lamping : LED (Included) Wattage (W) : 40W Output (lm) : 4675lm CCT (K) : 3000K CRI : 80 Voltage (V) : 120-277V Distribution : Type II Label/IP : IP66 Finish : Textured Black Material (Pole) : Concrete Material (Arm) : Aluminum Material (Fixture) : Aluminum Height (ft) : 14'-0" Location : Community Path Qty : 4	1. EC to verify voltage (prior to ordering).

- Lighting Schedule Notes:**
- Lighting submittals are required for all lighting fixtures, prior to ordering. Any lighting ordered without prior review and approval by Lumen Studio, Inc. is the sole responsibility of the contractor.
 - Any substitutions not approved by Lumen Studio, Inc., prior to ordering, are the sole responsibility of the contractor.
 - All additional costs associated with the integration, and use of substitute products are the sole responsibility of the contractor and lighting distributor. These include, but are not limited to:
 - Revision of details and construction drawings by Architect and/or Lumen Studio, Inc.
 - Labor costs associated with the modifications required, in the field, for previously coordinated lighting equipment.
 - Cost of running additional photometric and/or energy studies by Lumen Studio, Inc.
 - Delay of project, due to unexpected lead-time issues associated with substitute lighting equipment or because submitted lighting equipment, as determined by the Lumen Studio, Inc., is "Not Equal".
 - The management of lead-times, for all lighting equipment, is the sole responsibility of the contractor, and not acceptable as a reason for substitution requests.
 - Quantities, lengths, and installation details for all lighting products, are to be verified, by contractor, prior ordering.
 - Contractor responsible for coordinating all lighting installation details, with site conditions, and informing Lumen Studio, Inc., of any conflicts prior to proceeding with installation.
 - All fixtures shall be ordered with all necessary power supplies, drivers, power feeds, and components, as required, for installation.
 - For all continuous run fixtures, including track, manufacturer shall submit a layout drawing for run lengths specified, per Contract Documents, during shop drawing review for Lumen Studio, Inc. approval, prior to fabrication.
 - Contractor shall verify voltage and coordinate, prior to ordering any lighting equipment.



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

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A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	05/07/2019
FILE:	20190507_111_Maplewood_Lighting.dwg
DRAWN BY:	
CHECKED:	
APPROVED:	

LIGHTING FIXTURE SCHEDULE

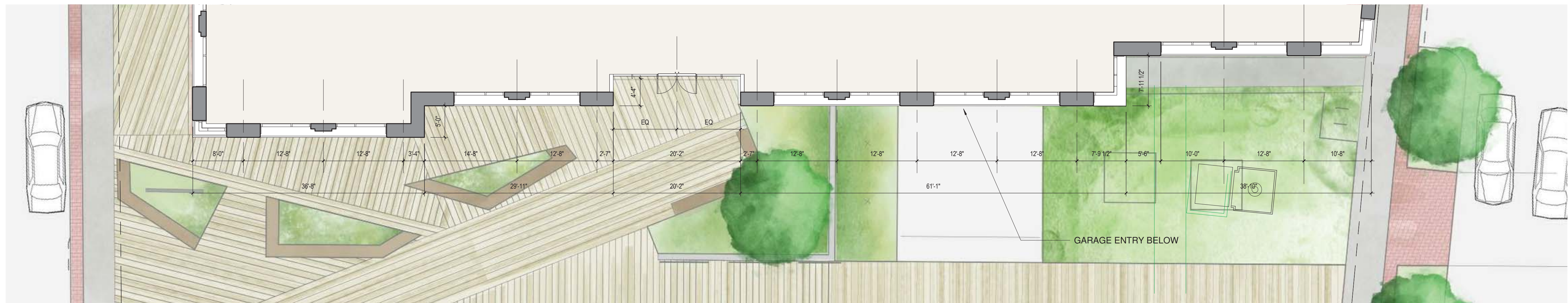
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LS-102

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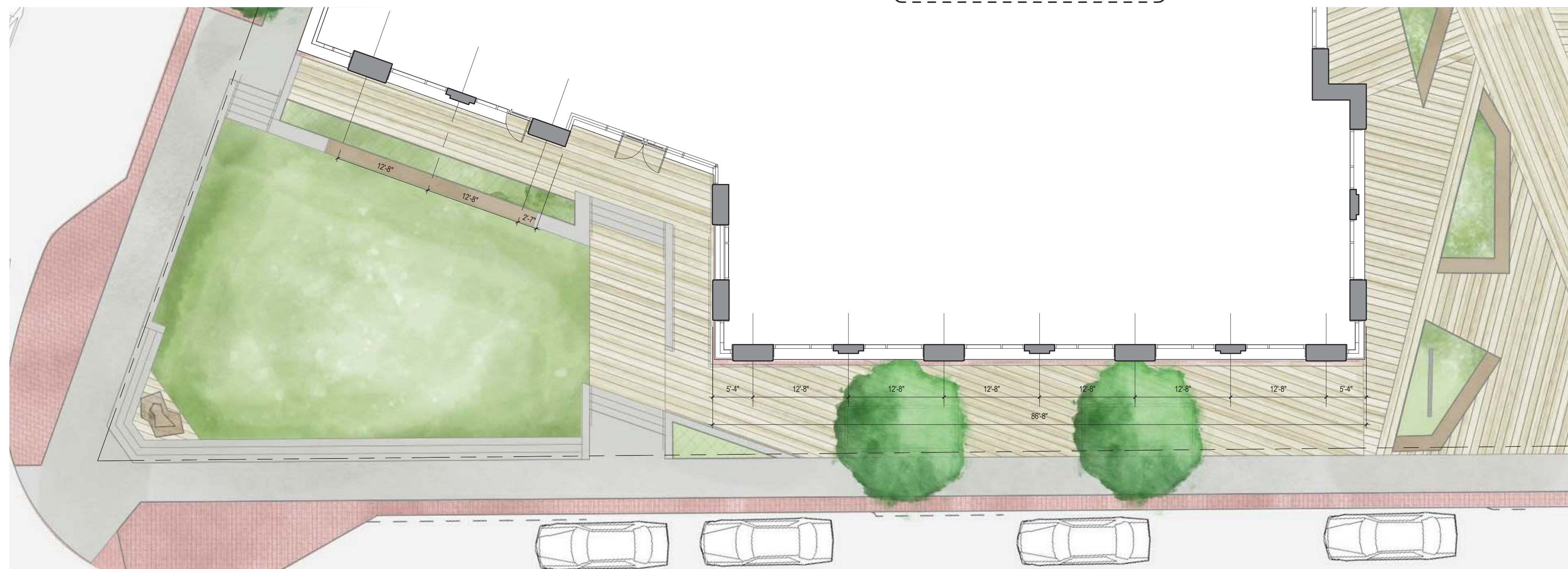
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1/8" = 1'-0"



2 Enlarged Ground Floor Plan - Entry Passage
1/8" = 1'-0"



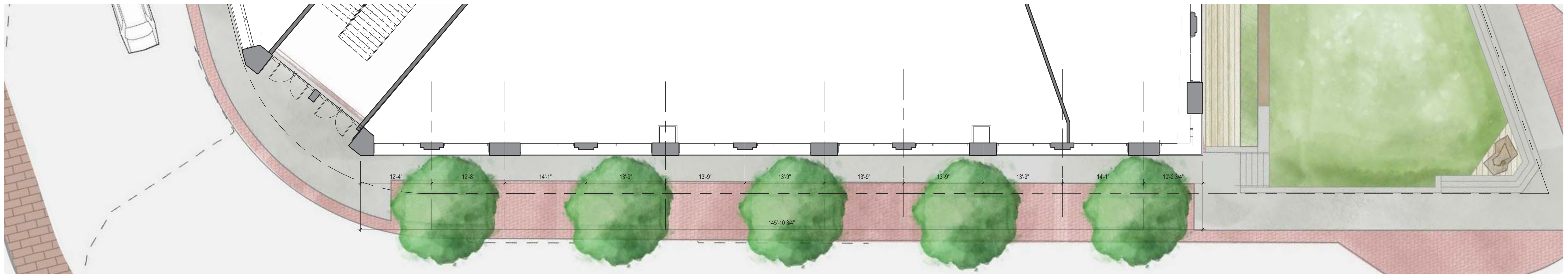
2 Building Elevation - Maplewood Avenue
1/8" = 1'-0"



BUILDING ELEVATION - MAPLEWOOD AVE
111 MAPLEWOOD AVE PORTSMOUTH, NH
04.12.19



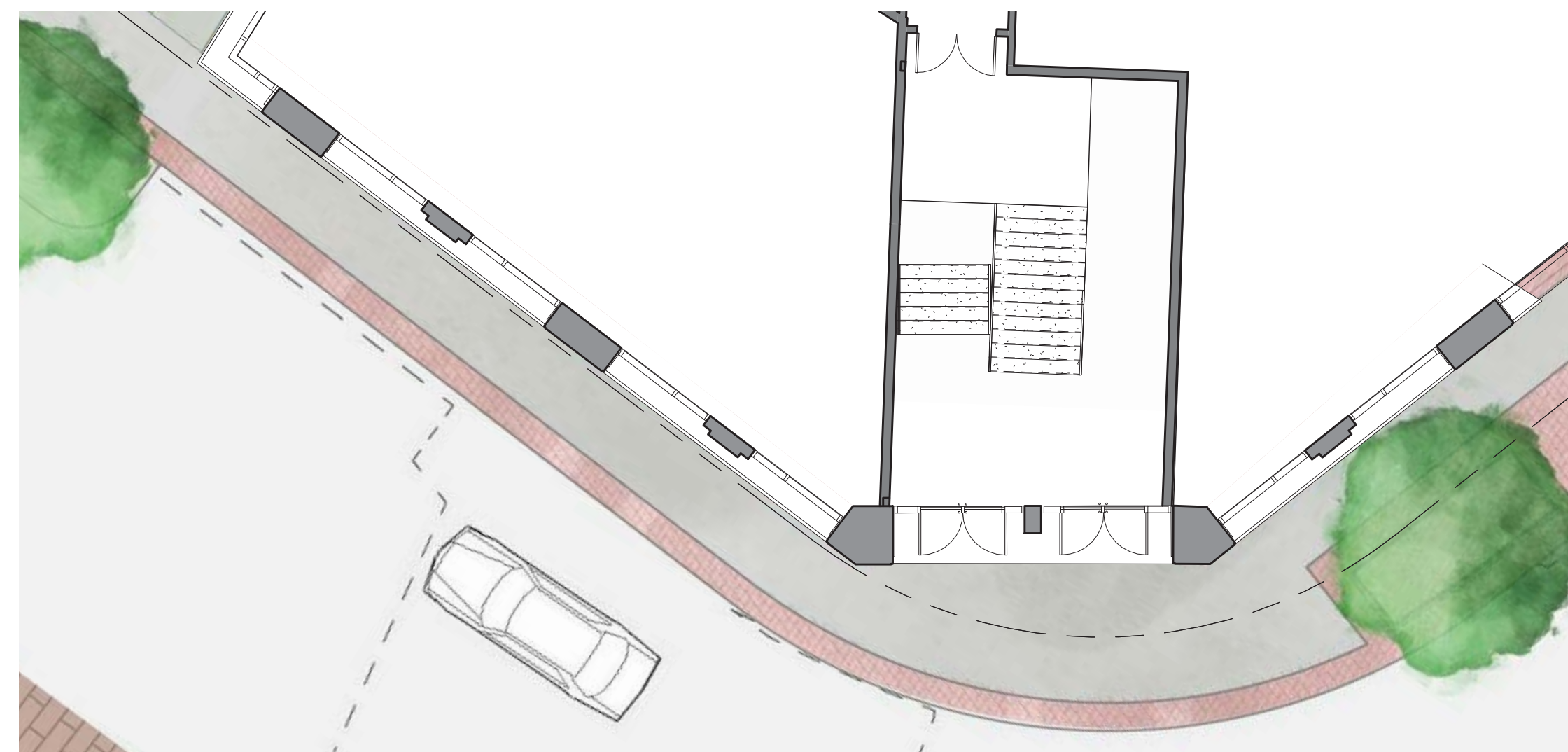
2 Building Elevation - Raynes Avenue
1/8" = 1'-0"



1 Enlarged Ground Floor Plan - Raynes Avenue
1/8" = 1'-0"



2 Building Elevation - Vaughan Street
1/8" = 1'-0"



1 Enlarged Ground Floor Plan - Vaughan Street
1/8" = 1'-0"

BUILDING ELEVATION - VAUGHAN ST
111 MAPLEWOOD AVE PORTSMOUTH, NH
04.12.19



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. 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 Owner/Applicant: _____ Date Submitted: _____

Phone Number: _____ E-mail: _____

Site Address: _____ Map: _____ Lot: _____

Zoning District: _____ Lot area: _____ sq. ft.

Application Requirements			
<input checked="" type="checkbox"/>	Required Items for Submittal	Item Location (e.g. Page or Plan Sheet/Note #)	Waiver Requested
<input type="checkbox"/>	Fully executed and signed Application form. (2.5.2.3)		N/A
<input type="checkbox"/>	All application documents, plans, supporting documentation and other materials provided in digital Portable Document Format (PDF) on compact disc, DVD or flash drive. (2.5.2.8)		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 type="checkbox"/>	Statement that lists and describes "green" building components and systems. (2.5.3.1A)		
<input type="checkbox"/>	Gross floor area and dimensions of all buildings and statement of uses and floor area for each floor. (2.5.3.1B)		N/A
<input type="checkbox"/>	Tax map and lot number, and current zoning of all parcels under Site Plan Review. (2.5.3.1C)		N/A
<input type="checkbox"/>	Owner's name, address, telephone number, and signature. Name, address, and telephone number of applicant if different from owner. (2.5.3.1D)		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 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. (2.5.3.1E)		N/A
<input type="checkbox"/>	Names, addresses and telephone numbers of all professionals involved in the site plan design. (2.5.3.1F)		N/A
<input type="checkbox"/>	List of reference plans. (2.5.3.1G)		N/A
<input type="checkbox"/>	List of names and contact information of all public or private utilities servicing the site. (2.5.3.1H)		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 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. Submittals shall be a minimum of 11 inches by 17 inches as specified by Planning Dept. staff. (2.5.4.1A)	Required on all plan sheets	N/A
<input 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 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)	Required on all plan sheets	N/A
<input type="checkbox"/>	Plans shall be drawn to scale. (2.5.4.1D)	Required on all plan sheets	N/A
<input type="checkbox"/>	Plans shall be prepared and stamped by a NH licensed civil engineer. (2.5.4.1D)	Required on all plan sheets	N/A
<input type="checkbox"/>	Wetlands shall be delineated by a NH certified wetlands scientist. (2.5.4.1E)		N/A
<input type="checkbox"/>	Title (name of development project), north point, scale, legend. (2.5.4.2A)	Required on all plan sheets	N/A
<input type="checkbox"/>	Date plans first submitted, date and explanation of revisions. (2.5.4.2B)	Required on all plan sheets	N/A
<input 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

Site Plan Specifications

<input checked="" type="checkbox"/>	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Waiver Requested
<input type="checkbox"/>	Source and date of data displayed on the plan. (2.5.4.2D)	Required on all plan sheets	N/A
<input 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)	Required on all plan sheets	N/A
<input type="checkbox"/>	Plan sheets submitted for recording shall include the following notes: <ul style="list-style-type: none"> 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)		N/A
<input type="checkbox"/>	Plan sheets showing landscaping and screening shall also include the following additional notes: <ul style="list-style-type: none"> a. "The property owner and all future property owners shall be responsible for the maintenance, repair and replacement of all required screening and landscape materials." b. "All required plant materials shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse and debris. All required fences and walls shall be maintained in good repair." c. "The property owner shall be responsible to remove and replace dead or diseased plant materials immediately with the same type, size and quantity of plant materials as originally installed, unless alternative plantings are requested, justified and approved by the Planning Board or Planning Director." (2.13.4)		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
	1. Existing Conditions: (2.5.4.3A)		
<input type="checkbox"/>	a. Surveyed plan of site showing existing natural and built features;		
<input type="checkbox"/>	b. Zoning boundaries;		
<input type="checkbox"/>	c. Dimensional Regulations;		
<input type="checkbox"/>	d. Wetland delineation, wetland function and value assessment;		
<input type="checkbox"/>	e. SFHA, 100-year flood elevation line and BFE data.		
	2. Buildings and Structures: (2.5.4.3B)		
<input type="checkbox"/>	a. Plan view: Use, size, dimensions, footings, overhangs, 1st fl. elevation;		
<input type="checkbox"/>	b. Elevations: Height, massing, placement, materials, lighting, façade treatments;		
<input type="checkbox"/>	c. Total Floor Area;		
<input type="checkbox"/>	d. Number of Usable Floors;		
<input type="checkbox"/>	e. Gross floor area by floor and use.		
	3. Access and Circulation: (2.5.4.3C)		
<input type="checkbox"/>	a. Location/width of access ways within site;		
<input type="checkbox"/>	b. Location of curbing, right of ways, edge of pavement and sidewalks;		
<input type="checkbox"/>	c. Location, type, size and design of traffic signing (pavement markings);		
<input type="checkbox"/>	d. Names/layout of existing abutting streets;		
<input type="checkbox"/>	e. Driveway curb cuts for abutting prop. and public roads;		
<input type="checkbox"/>	f. If subdivision; Names of all roads, right of way lines and easements noted;		
<input type="checkbox"/>	g. AASHTO truck turning templates, description of minimum vehicle allowed being a WB-50 (unless otherwise approved by TAC).		
	4. Parking and Loading: (2.5.4.3D)		
<input type="checkbox"/>	a. Location of off street parking/loading areas, landscaped areas/buffers;		
<input type="checkbox"/>	b. Parking Calculations (# required and the # provided).		
	5. Water Infrastructure: (2.5.4.3E)		
<input type="checkbox"/>	a. Size, type and location of water mains, shut-offs, hydrants & Engineering data;		
<input type="checkbox"/>	b. Location of wells and monitoring wells (include protective radii).		
	6. Sewer Infrastructure: (2.5.4.3F)		
<input type="checkbox"/>	a. Size, type and location of sanitary sewage facilities & Engineering data.		
	7. Utilities: (2.5.4.3G)		
<input type="checkbox"/>	a. The size, type and location of all above & below ground utilities;		
<input type="checkbox"/>	b. Size type and location of generator pads, transformers and other fixtures.		

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 type="checkbox"/>	8. Solid Waste Facilities: (2.5.4.3H)		
<input type="checkbox"/>	a. The size, type and location of solid waste facilities.		
<input type="checkbox"/>	9. Storm water Management: (2.5.4.3I)		
<input type="checkbox"/>	a. The location, elevation and layout of all storm-water drainage.		
<input type="checkbox"/>	10. Outdoor Lighting: (2.5.4.3J)		
<input type="checkbox"/>	a. Type and placement of all lighting (exterior of building, parking lot and any other areas of the site) and; b. photometric plan.		
<input type="checkbox"/>	11. Indicate where dark sky friendly lighting measures have been implemented. (10.1)		
<input type="checkbox"/>	12. Landscaping: (2.5.4.3K)		
<input type="checkbox"/>	a. Identify all undisturbed area, existing vegetation and that which is to be retained;		
<input type="checkbox"/>	b. Location of any irrigation system and water source.		
<input type="checkbox"/>	13. Contours and Elevation: (2.5.4.3L)		
<input type="checkbox"/>	a. Existing/Proposed contours (2 foot minimum) and finished grade elevations.		
<input type="checkbox"/>	14. Open Space: (2.5.4.3M)		
<input type="checkbox"/>	a. Type, extent and location of all existing/proposed open space.		
<input type="checkbox"/>	15. All easements, deed restrictions and non-public rights of ways. (2.5.4.3N)		
<input type="checkbox"/>	16. Location of snow storage areas and/or off-site snow removal. (2.5.4.3O)		
<input type="checkbox"/>	17. Character/Civic District (All following information shall be included): (2.5.4.3Q)		
<input type="checkbox"/>	a. Applicable Building Height (10.5A21.20 & 10.5A43.30);		
<input type="checkbox"/>	b. Applicable Special Requirements (10.5A21.30);		
<input type="checkbox"/>	c. Proposed building form/type (10.5A43);		
<input type="checkbox"/>	d. Proposed community space (10.5A46).		

Other Required Information			
<input checked="" type="checkbox"/>	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Waiver Requested
<input type="checkbox"/>	Traffic Impact Study or Trip Generation Report, as required. <i>(Four (4) hardcopies of the full study/report and Six (6) summaries to be submitted with the Site Plan Application) (3.2.1-2)</i>		
<input type="checkbox"/>	Indicate where Low Impact Development Design practices have been incorporated. (7.1)		
<input 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)		
<input type="checkbox"/>	Indicate where measures to minimize impervious surfaces have been implemented. (7.4.3)		
<input type="checkbox"/>	Calculation of the maximum effective impervious surface as a percentage of the site. (7.4.3.2)		
<input type="checkbox"/>	Stormwater Management and Erosion Control Plan. <i>(Four (4) hardcopies of the full plan/report and Six (6) summaries to be submitted with the Site Plan Application) (7.4.4.1)</i>		

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 type="checkbox"/>	All local approvals, permits, easements and licenses required, including but not limited to: <ul style="list-style-type: none"> a. Waivers; b. Driveway permits; c. Special exceptions; d. Variances granted; e. Easements; f. Licenses. (2.5.3.2A)		
<input 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"> a. Calculations relating to stormwater runoff; b. Information on composition and quantity of water demand and wastewater generated; c. Information on air, water or land pollutants to be discharged, including standards, quantity, treatment and/or controls; d. Estimates of traffic generation and counts pre- and post-construction; e. Estimates of noise generation; f. A Stormwater Management and Erosion Control Plan; g. Endangered species and archaeological / historical studies; h. Wetland and water body (coastal and inland) delineations; i. Environmental impact studies. (2.5.3.2B)		

K-0076-019
May 7, 2019

Mr. Dexter Legg, Chair
City of Portsmouth Planning Board
1 Junkins Avenue
Portsmouth, New Hampshire 03801

**Re: Site Review & Subdivision Permit Applications
Proposed Office Building - 111 Maplewood Avenue**

Dear Chairman Legg:

On behalf of RJF-Maplewood, LLC, owner, and RW Norfolk Holdings, LLC, applicant, we are pleased to submit the following information to support Site Review and Subdivision Permit Applications related to a proposed office building project at 111 Maplewood Avenue:

- One (1) full size & eleven (11) half size copies of the Site Plan set last revised May 7, 2019
- Twelve (12) copies of the TAC Stipulation Response Report dated May 7, 2019
- Twelve (12) copies of the Waiver Request Letter dated April 16, 2019
- Twelve (12) copies of the Conditional Use Permit Letter dated April 16, 2019
- Twelve (12) copies of the Site Review Checklist dated March 18, 2019;
- Twelve (12) copies of the Subdivision Application Checklist dated March 18, 2019;
- Twelve (12) copies the Community Space Exhibit last revised May 7, 2019;
- Twelve (12) copies of the Drainage Analysis Memorandum last revised April 16, 2019;
- Twelve (12) Traffic Evaluation Memorandum dated March 18, 2019;
- Twelve (12) copies of the Responses to TAC Traffic Comment Memorandum dated April 16, 2019
- Twelve (12) copies of the Eversource Will Serve Letter dated March 11, 2019;
- Twelve (12) copies of the Unutil Will Serve Letter dated March 13, 2019;
- Twelve (12) copies of the Green Building Statement prepared by CBT Architects dated March 18, 2019;
- Twelve (12) copies of the Lighting Cut Sheets;
- One (1) CD containing digital copies of the above listed materials

The proposed project is located at 111 Maplewood Avenue which is identified as Map 124 Lot 8 on the City of Portsmouth Tax Maps. The existing 2.33-acre parcel is bound by Maplewood Avenue to south, Vaughan Street to the east and north and Raynes Avenue to the west.

The proposed project will subdivide the existing 2.33-acre parcel into two (2) proposed properties. The proposed parcel to the west will be 1-acre and will consist of the proposed office building. The proposed parcel to the east will be 1.3-acres and will consist of the existing 111 Maplewood Avenue office building.

The proposed office building project will include the construction of a 4-story, 74,000 SF building that consists of parking and commercial space on the basement level, commercial space on the ground level, office space on the 2nd through 4th stories and a roof deck on the 4th story. The proposed office building project will provide 36 total parking spaces with 31 spaces in the basement and 5 surface lot spaces on the ground floor. The project will consist of associated site improvements such as paving, pedestrian/bicycle enhancements including complete streets improvements along the perimeter of the site, stormwater management, utilities, lighting, landscaping and community space. The proposed office building project is providing 11,762 SF of community spaces (27.7% of the total lot area) which exceeds the



20% of total lot area required to receive the incentive bonus for one additional story (10 ft) above the maximum height requirement. The community space calculation is depicted in the enclosed Community Space Exhibit. A request for Conditional Use Permit is also enclosed in order bank the additional community space for potential future development.

The proposed parcel to the east that includes the existing 1-story, 111 Maplewood office building will provide 55 parking spaces. The project proposes to close the Maplewood curb cut in the east parking lot to make the parcel more nearly conforming such that it will now only have one curb cut to access the parking lot. The existing office building will retain 10 spaces to the west of the building to meet ADA parking requirements for the existing basement level tenants and to provided 55 total spaces per tenant agreements that the applicant is inheriting as part of the land purchase. The parking spaces to the west of the existing 1-story office building will be accessed via easement on the proposed parcel to the east.

On April 30, 2019, the Technical Advisory Committee (TAC) voted to recommend Site Plan Review and Subdivision approval with stipulations. Enclosed is a TAC Stipulation Status Report which provides a comment response to each of the stipulations recommended by TAC.

We respectfully request to be places on the Planning Board meeting agenda for May 16, 2019. 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: RW Norfolk Holdings, LLC
CBT Architects
Halvorson Design Partnership
DTC Lawyers
Pro Con, Inc.

City of Portsmouth TAC, April 30, 2019:			
	<u>TAC Stipulation</u>	<u>Applicant Response</u>	<u>Sheet</u>
1	Applicant shall work with DPW to finalize the location and design of the lighting conduit layout. Lighting locations shall be reviewed for consistency throughout the Plan set.	Applicant has been coordinating lighting for the neighborhood with DPW and agrees to continue to do so in order to finalize the conduit and light locations.	C-104.1
2	A detail shall be added for the north end light foundation system.	North End light foundation detail has been added to the detail sheets.	C-507
3	The plans shall be updated to show that Drain Man Hole (DMH) 1098 shall be replaced and the backflow device shall be accessible from inside of that structure.	The plans have been revised to show the existing CB 1098 being replaced with a new manhole and the note calling out the backflow preventer has been revised to state that the device shall be accessible from inside the manhole.	C-104.1
4	A note shall be added to the Site Plan and the Landscaping Plan that all trees planted are to be installed under the supervision of City of Portsmouth DPW using City standard installation methods.	Note #24 has been added to the Site Plan all trees planted are to be installed under the supervision of City of Portsmouth DPW using City standard installation methods. Tree Planting Note #1 has also been included on the Landscape Plan.	C-102 & L-101
5	The applicant shall participate in a meeting with the Planning and DPW Departments prior to coordinate the following TAC recommendations:		
5a	Applicant shall overlay and/or provide final pavement and striping for Vaughan and Raynes as part of this project per DPW specifications.	Applicant has is meeting with City staff on May 7, 2019 to coordinate these stipulations.	N/A
5b	Applicant shall provide fair share contributions for sewer improvements, Russell St intersection improvements, and the Maplewood Avenue Complete Street improvement project (in particular the Deer and Maplewood intersection)		
5c	Plans shall be reviewed and updated for consistency with the Maplewood Avenue Complete Streets Project Plans		
6	Sheet C-102.3 shall be revised to show a minimum 16' width wherever there is a two- way driveway aisle for the underground parking.	The underground parking area has been revised to be a one way loop. There is a minimum drive minimum drive aisle width of 22ft along parking spaces. There is a minimum drive aisle width of 14.3ft where there is no parking just after you enter the garage.	C-102.3
7	Plans shall include details on the screening of the existing and proposed transformer and dumpster areas.	The transformer for the existing building is not being relocated and is already screened by a fence. The proposed transformer is screened by landscaping as shown on the Landscape Plan. The relocated dumpster for the existing building will be screened by a fence. A detail is for the fence is shown on the Site Plan Details. The trash area for the proposed building is located inside the building as shown on the Basement Level Floor Plan.	C-102.1, C-102.3, C-507, L-101 & L-501
8	Per requirements of Section 10.5A46.10 (footnote 4) of the City's Zoning Ordinance, the sidewalk on Raynes Avenue, Vaughan Street, and Maplewood Avenue shall be a minimum of 10-feet wide plus an additional two feet for each additional story of building height above three stories.	The location of the building has been revised to allow for a minimum of 12ft wide sidewalks between the façade of the building and all three streets.	C-102.1
9	The Incentives to Development Standards dimensional requirements shall be added to the table on Sheet C-102.	The Incentives to Development Standards dimensional requirements have been added to the table on the Overall Site Plan.	C-102
10	Water lines shall be sleeved from outside the foundation wall to the water room.	The water room has been relocated to be directly inside of the foundation wall which eliminates the need to sleeve the waterlines.	C-104.1
11	Basement level egress locations shall be revised per the comments of the Fire Department.	The basement level egress has been revised to address the comments of the Fire Department as follows: The basement parking area has been revised to be a one way loop removing the dead end; the second exit from the basement level commercial space ne longer exits into a service area; and the conflicting doors have been revised to be one exit.	C-102.3
12	Actual locations of utility lines to the site to be approved by the City of Portsmouth DPW.	Note #32 has been added to the utility plans stating that the final locations of all utility lines shall be approved by the City of Portsmouth DPW prior to construction.	C-104.1 & C-104.2

13	The Landscape Plan shall be updated as follows:		
13a	The tree species (all 3) should be indicated on the plans (consistent with the Maplewood Ave Complete Streets Project, see 5c above).	A tree plant list has been added to the Landscape Plan as well as a note stating that tree species selections may be modified based on an upcoming meeting with the City of Portsmouth to align with recently completed Maplewood Avenue Complete Streets package.	L-101
13b	The material for the landscape planter and seat walls shall be granite	The Landscape Plan and Details have been revised to include granite planters and seat walls.	L-101 & L-502
13c	A detail showing the color and material specifications for the sidewalk and pedestrian alley pavers shall be provided.	A detail showing the color and material specifications for the sidewalk and pedestrian alley pavers has been added to the landscape details.	L-101 & L-502
13d	The concrete unit pavers edging the proposed driveway to the underground parking shall be shown on the plan.	The concrete unit pavers edging the proposed driveway to the underground parking have replaced with flush granite curb.	L-101
Stipulations of Planning Board approval to be completed prior to issuance of a building permit:			
14	The applicant shall provide updated plans to the City indicating sewer lateral locations prior to the City's planned sewer upgrades in spring 2019.	Updated sewer plans previously prepared as part of the AC Hotel project were sent to the DPW on May 1, 2019	N/A
15	Actual locations of utility lines to the site shall be approved by the City of Portsmouth DPW prior to construction.	Agreed. Note #32 has been added to the utility plans stating that the final locations of all utility lines shall be approved by the City of Portsmouth DPW prior to construction.	C-104.1 & C-104.2
16	Final water service size and location shall be coordinated with the Building Drawings and DPW prior to construction.	Agreed. Callout for proposed water service location and size has been revised to include the City of Portsmouth DPW.	C-104.1 & C-104.2
17	The applicant shall enter into a Prospective Development Incentive Agreement (PDIA) with the Planning Department per the requirements of Section 10.5A46.23(3).	Agreed. The applicant has acknowledged this requirement in the Conditional Use Permit request letter.	CUP Letter
18	The applicant shall prepare a Construction Management and Mitigation Plan (CMMP) for review and approval by the City's Legal and Planning Departments.	Agreed. Note #25 has been added to the Site Plan to indicate this requirement.	C-102.1 & C-102.2
19	A temporary support of excavation (SOE) plan shall be prepared by the applicant's contractor to confirm any temporary encumbrances of the City's right-of-way.	Agreed. Note #26 has been added to the Site Plan to indicate this requirement.	C-102.1 & C-102.2
20	The proposed loading zone shall be reviewed by the Parking & Traffic Safety Committee for recommendation to City Council.	Agreed. Note #20 has been added to the Site Plan to indicate this requirement.	C-102.1 & C-102.2

K-0076-019
April 16, 2019

Mr. Dexter Legg, Chair
City of Portsmouth Planning Board
1 Junkins Avenue
Portsmouth, New Hampshire 03801

**Re: Waiver Request for Dumpster Location
Proposed 4-story Office Building – 111 Maplewood Avenue**

Dear Chairman Legg:

On behalf of RW Norfolk Holdings, LLC (applicant), this letter is provided to request a waiver from Section 9.3(6) of the Site Plan Review Regulations which indicates a dumpster shall be 20-feet from a lot line. The dumpster for the existing 1-story office building to remain will be relocated and is less than 20-feet from a proposed lot line associated with the project's Subdivision application.

The project will subdivide the existing 2.33-acre parcel into two (2) proposed properties. The proposed parcel to the west will consist of the 4-story proposed office building with ground floor commercial space. The proposed parcel to the east will consist of the existing 1-story office building to remain. The applicant intends to retain ownership of both parcels once the property is subdivided.

The dumpster for the existing 1-story building will be relocated as part of the project to provide better access for trash removal. While the dumpster will meet the 10-foot setback requirement of the Zoning Ordinance, it will not meet the 20-foot setback requirement of the Site Plan Regulations due to the location of the internal lot line that is proposed to create two (2) lots. The dumpster will be accessed via a driveway easement located on the proposed west parcel. The new dumpster location on the proposed east parcel will be adjacent to this driveway. Trash removal vehicles will have direct access to the dumpster when they enter the site from this driveway and then will be able to turn around within the driveway to exit the site without conflict to off-street parking.

It should be noted the dumpster meets the 20-foot setback requirement for the exterior lot lines along the street. The dumpster simply doesn't meet the 20-foot setback for the proposed interior lot line which will be creating two (2) lots that will both be owned by the applicant.

If you have any questions, please feel free to contact me by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,

TIGHE & BOND, INC.

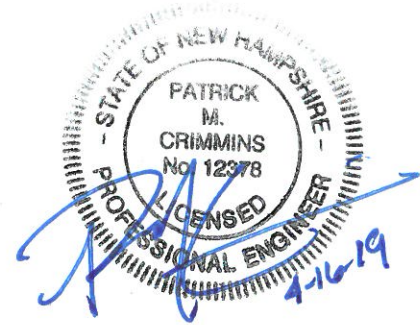


Patrick M. Crimmins, PE
Senior Project Manager



Drainage Analysis

To: City of Portsmouth Technical Advisory Committee (TAC)
FROM: Neil A. Hansen, PE
Patrick M. Crimmins, PE
COPY: RW Norfolk Holdings LLC
DATE: March 18, 2019
Revised: April 16, 2019



1.0 Project Description

The proposed project is located at 111 Maplewood Avenue in Portsmouth, New Hampshire. The existing parcels includes a two (2) story office building with a footprint of approximately 14,500 SF with associated surface parking. The site is bound to the north by Raynes Avenue, to the south and east by Vaughan Street, and to the west by Maplewood Avenue. The topography of the site has a high point at the center of the site with approximately half of the site sloping northeast towards Vaughan Street and the remaining half sloping southeast towards Vaughan Street. The western property line slopes towards Maplewood Avenue approximately half sloping to the north and half to the south.

Runoff generated by the site flows to two discharge points and are identified as Point of Analysis 1 (PA1) and Point of Analysis 2 (PA2). PA1 is located in the municipal drainage system at the corner of Raynes Avenue and Vaughan Street and ultimately flows to North Mill Pond. The majority of the site flows to PA1 via an on-site closed drainage system. The remainder of the site flows to PA2 which outlets into the municipal drainage system at the corner of Vaughan Street and Maplewood Avenue.

The proposed project consists of constructing 4-story mixed use building with basement level parking, 1st floor office and commercial space, upper story office space and associated site improvements. These site improvements include a stormwater management system that consists of a two (2) underground detention systems and a Contech Jellyfish Filter stormwater filtration system.

The proposed project is located in the Shoreland Protection Buffer and will disturb over 50,000 SF of the site. Thus, the project will require a New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) Permit.

2.0 Drainage Analysis

2.1 Calculation Methods

The parcels on-site watersheds were analyzed under this section. The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour duration storm as per NHDES AoT Regulations (Env-Wq 1500). The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model. 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 NHDES AoT Regulation Env-Wq 1503.08(l).

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.

2.2 Pre-Development Calculations

In order to analyze the pre-development condition, the site has been divided into six (6) watershed areas modeled at two (2) points of analysis. These points of analysis and watersheds are depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

Each of the points of analysis and their contributing watershed areas are described below:

Point of Analysis One (PA1)

Pre-Development Watershed 1.0 (PRE 1.1) and Pre-Development Watershed 1.1 (PRE 1.1) are comprised primarily of the paved parking and surrounding grass area to the north of the existing office building. Runoff from this watershed area travels via overland flow to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

Pre-Development Watershed 1.2 (PRE 1.2) is comprised of the roof of the existing office building. The building's roof drains connect to the municipal drainage system in Vaughan Street (PA1).

Pre-Development Watershed 1.3 (PRE 1.3) and Pre-Development Watershed 1.4 (PRE 1.4) are comprised primarily of the paved parking and surrounding grass area to the south of the existing office building. Runoff from this watershed area travels via overland flow and the existing on-site closed drainage system to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

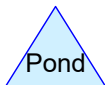
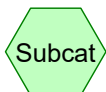
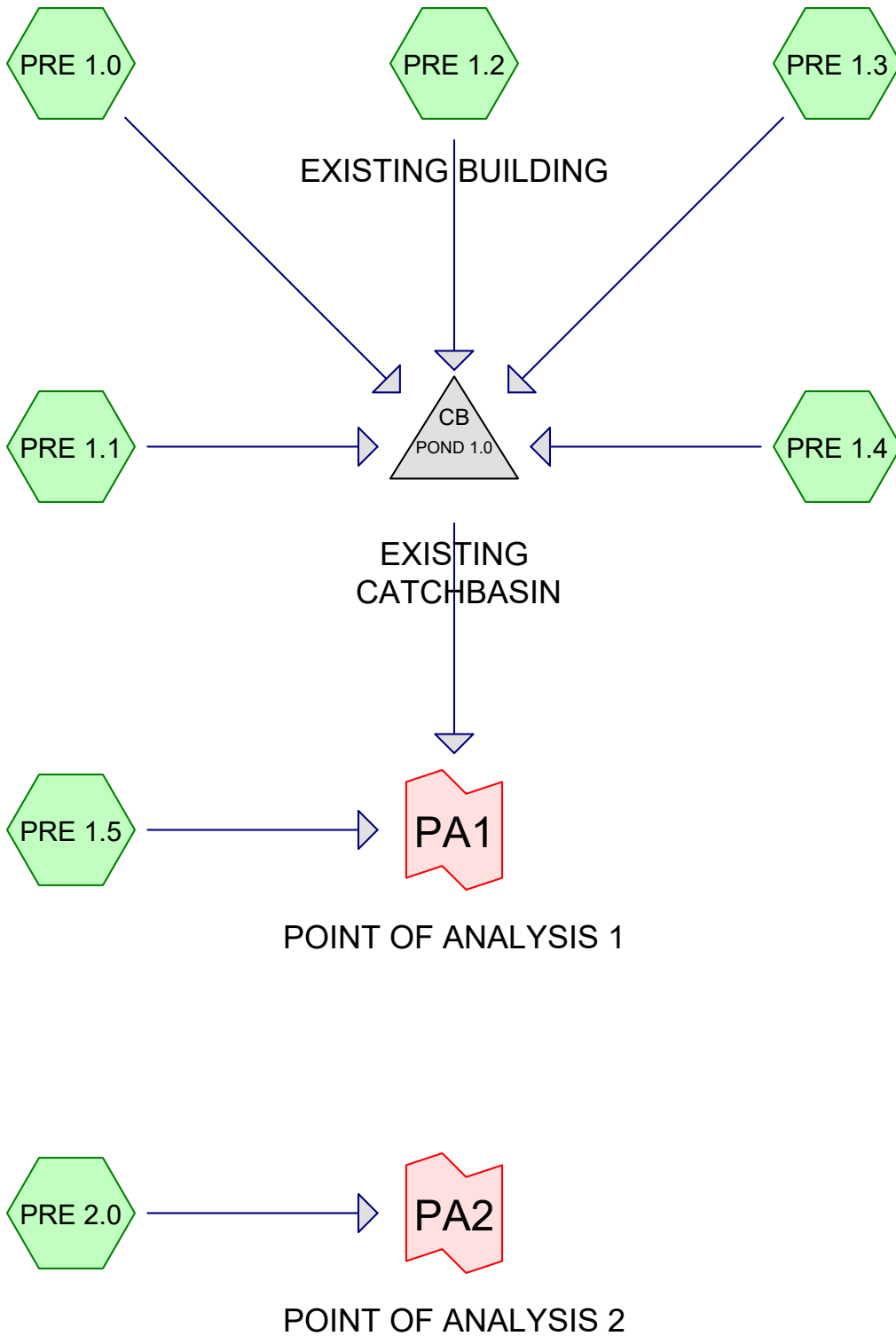
Pre-Development Watershed 1.5 (PRE 1.5) is comprised primarily of grass area with some paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system in Maplewood Avenue. This drainage system connects to the Vaughan Street municipal drainage system (PA1).

Point of Analysis Two (PA2)

Pre-Development Watershed 2.0 (PRE 2.0) is comprised primarily of grass area with some paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system at the corner of Maplewood Avenue and Vaughan Street (PA2).

2.2.1 Pre-Development Calculations

2.2.2 Pre-Development Watershed Plan



Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.119	39	>75% Grass cover, Good, HSG A (PRE 1.0, PRE 1.1, PRE 1.3, PRE 1.4, PRE 1.5, PRE 2.0)
1.181	98	Paved parking, HSG A (PRE 1.0, PRE 1.1, PRE 1.3, PRE 1.4, PRE 1.5, PRE 2.0)
0.344	98	Roofs, HSG A (PRE 1.2)
2.644	73	TOTAL AREA

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.644	HSG A	PRE 1.0, PRE 1.1, PRE 1.2, PRE 1.3, PRE 1.4, PRE 1.5, PRE 2.0
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.644		TOTAL AREA

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>0.41"
Flow Length=514' Tc=10.7 min CN=55 Runoff=0.17 cfs 0.028 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>3.01"
Flow Length=238' Tc=5.0 min CN=94 Runoff=1.38 cfs 0.103 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>3.44"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=1.24 cfs 0.099 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>0.65"
Flow Length=467' Tc=5.0 min CN=61 Runoff=0.16 cfs 0.015 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>2.81"
Flow Length=572' Tc=5.0 min CN=92 Runoff=1.16 cfs 0.085 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>0.53"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.09 cfs 0.010 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>0.70"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.13 cfs 0.011 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=4.86' Inflow=3.95 cfs 0.330 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=3.95 cfs 0.330 af

Link PA1: POINT OF ANALYSIS 1 Inflow=4.03 cfs 0.340 af
Primary=4.03 cfs 0.340 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.13 cfs 0.011 af
Primary=0.13 cfs 0.011 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.351 af Average Runoff Depth = 1.59"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>1.28"
Flow Length=514' Tc=10.7 min CN=55 Runoff=0.91 cfs 0.089 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>4.88"
Flow Length=238' Tc=5.0 min CN=94 Runoff=2.18 cfs 0.167 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>5.34"
Flow Length=368' Slope=0.0050 '/ Tc=5.0 min CN=98 Runoff=1.89 cfs 0.153 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>1.73"
Flow Length=467' Tc=5.0 min CN=61 Runoff=0.53 cfs 0.040 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>4.65"
Flow Length=572' Tc=5.0 min CN=92 Runoff=1.88 cfs 0.141 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>1.50"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.36 cfs 0.028 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>1.81"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.38 cfs 0.029 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=5.21' Inflow=7.03 cfs 0.590 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/ Outflow=7.03 cfs 0.590 af

Link PA1: POINT OF ANALYSIS 1 Inflow=7.38 cfs 0.618 af
Primary=7.38 cfs 0.618 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.38 cfs 0.029 af
Primary=0.38 cfs 0.029 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.646 af Average Runoff Depth = 2.93"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

Summary for Subcatchment PRE 1.0:

Runoff = 0.91 cfs @ 12.17 hrs, Volume= 0.089 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
26,602	39	>75% Grass cover, Good, HSG A
9,904	98	Paved parking, HSG A
36,506	55	Weighted Average
26,602		72.87% Pervious Area
9,904		27.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	100	0.0300	0.21		Sheet Flow, Grass: Short n= 0.150 P2= 3.68"
2.0	304	0.0300	2.60		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
0.8	80	0.0060	1.57		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	30	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
10.7	514	Total			

Summary for Subcatchment PRE 1.1:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.18 cfs @ 12.07 hrs, Volume= 0.167 af, Depth> 4.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,332	39	>75% Grass cover, Good, HSG A
16,548	98	Paved parking, HSG A
17,880	94	Weighted Average
1,332		7.45% Pervious Area
16,548		92.55% Impervious Area

K-0076-019 PRE

Type III 24-hr 10 Year Storm Rainfall=5.58"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0500	2.13		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.3	83	0.0500	4.54		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.3	55	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.4	238	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.2: EXISTING BUILDING

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.153 af, Depth> 5.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
14,979	98	Roofs, HSG A
14,979		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	35	0.0050	2.84	1.55	Pipe Channel, 10.0" Round Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.013 Cast iron, coated
0.3	58	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	30	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.6	185	0.0050	5.52	17.33	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	5.52	17.33	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.4	368	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.3:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.53 cfs @ 12.09 hrs, Volume= 0.040 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
7,633	39	>75% Grass cover, Good, HSG A
4,433	98	Paved parking, HSG A
12,066	61	Weighted Average
7,633		63.26% Pervious Area
4,433		36.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0254	1.62		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	38	0.0254	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	17	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
2.4	467	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.4:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.88 cfs @ 12.07 hrs, Volume= 0.141 af, Depth> 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,611	39	>75% Grass cover, Good, HSG A
14,204	98	Paved parking, HSG A
15,815	92	Weighted Average
1,611		10.19% Pervious Area
14,204		89.81% Impervious Area

K-0076-019 PRE

Type III 24-hr 10 Year Storm Rainfall=5.58"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0237	1.58		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	35	0.0254	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	20	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
3.0	572	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.5:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.028 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
6,499	39	>75% Grass cover, Good, HSG A
3,134	98	Paved parking, HSG A
9,633	58	Weighted Average
6,499		67.47% Pervious Area
3,134		32.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0159	1.12		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
1.0	148	0.0159	2.56		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.4	84	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.8	196	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
2.8	468	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 2.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.38 cfs @ 12.09 hrs, Volume= 0.029 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
5,062	39	>75% Grass cover, Good, HSG A
3,225	98	Paved parking, HSG A
8,287	62	Weighted Average
5,062		61.08% Pervious Area
3,225		38.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	10	0.0360	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.68"
0.3	45	0.0360	2.85		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
0.7	132	0.0227	3.06		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.1	187	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond POND 1.0: EXISTING CATCHBASIN

Inflow Area = 2.232 ac, 61.77% Impervious, Inflow Depth > 3.17" for 10 Year Storm event
 Inflow = 7.03 cfs @ 12.08 hrs, Volume= 0.590 af
 Outflow = 7.03 cfs @ 12.08 hrs, Volume= 0.590 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.03 cfs @ 12.08 hrs, Volume= 0.590 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 5.21' @ 12.08 hrs
 Flood Elev= 7.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.95'	24.0" Round Culvert L= 145.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 3.95' / 1.60' S= 0.0162 ' / ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=6.83 cfs @ 12.08 hrs HW=5.19' TW=0.00' (Dynamic Tailwater)
 ←1=Culvert (Inlet Controls 6.83 cfs @ 3.34 fps)

Summary for Link PA1: POINT OF ANALYSIS 1

Inflow Area = 2.454 ac, 59.13% Impervious, Inflow Depth > 3.02" for 10 Year Storm event
Inflow = 7.38 cfs @ 12.08 hrs, Volume= 0.618 af
Primary = 7.38 cfs @ 12.08 hrs, Volume= 0.618 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link PA2: POINT OF ANALYSIS 2

Inflow Area = 0.190 ac, 38.92% Impervious, Inflow Depth > 1.81" for 10 Year Storm event
Inflow = 0.38 cfs @ 12.09 hrs, Volume= 0.029 af
Primary = 0.38 cfs @ 12.09 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>2.17"
Flow Length=514' Tc=10.7 min CN=55 Runoff=1.69 cfs 0.152 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>6.36"
Flow Length=238' Tc=5.0 min CN=94 Runoff=2.81 cfs 0.218 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>6.84"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=2.40 cfs 0.196 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>2.76"
Flow Length=467' Tc=5.0 min CN=61 Runoff=0.88 cfs 0.064 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>6.13"
Flow Length=572' Tc=5.0 min CN=92 Runoff=2.44 cfs 0.185 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>2.46"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.62 cfs 0.045 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>2.86"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.63 cfs 0.045 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=5.49' Inflow=9.68 cfs 0.814 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=9.68 cfs 0.814 af

Link PA1: POINT OF ANALYSIS 1 Inflow=10.30 cfs 0.860 af
Primary=10.30 cfs 0.860 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.63 cfs 0.045 af
Primary=0.63 cfs 0.045 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.905 af Average Runoff Depth = 4.11"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>3.11"
Flow Length=514' Tc=10.7 min CN=55 Runoff=2.51 cfs 0.217 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>7.76"
Flow Length=238' Tc=5.0 min CN=94 Runoff=3.38 cfs 0.265 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>8.24"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=2.88 cfs 0.236 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>3.81"
Flow Length=467' Tc=5.0 min CN=61 Runoff=1.23 cfs 0.088 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>7.52"
Flow Length=572' Tc=5.0 min CN=92 Runoff=2.95 cfs 0.227 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>3.46"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.89 cfs 0.064 af

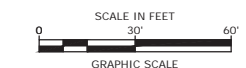
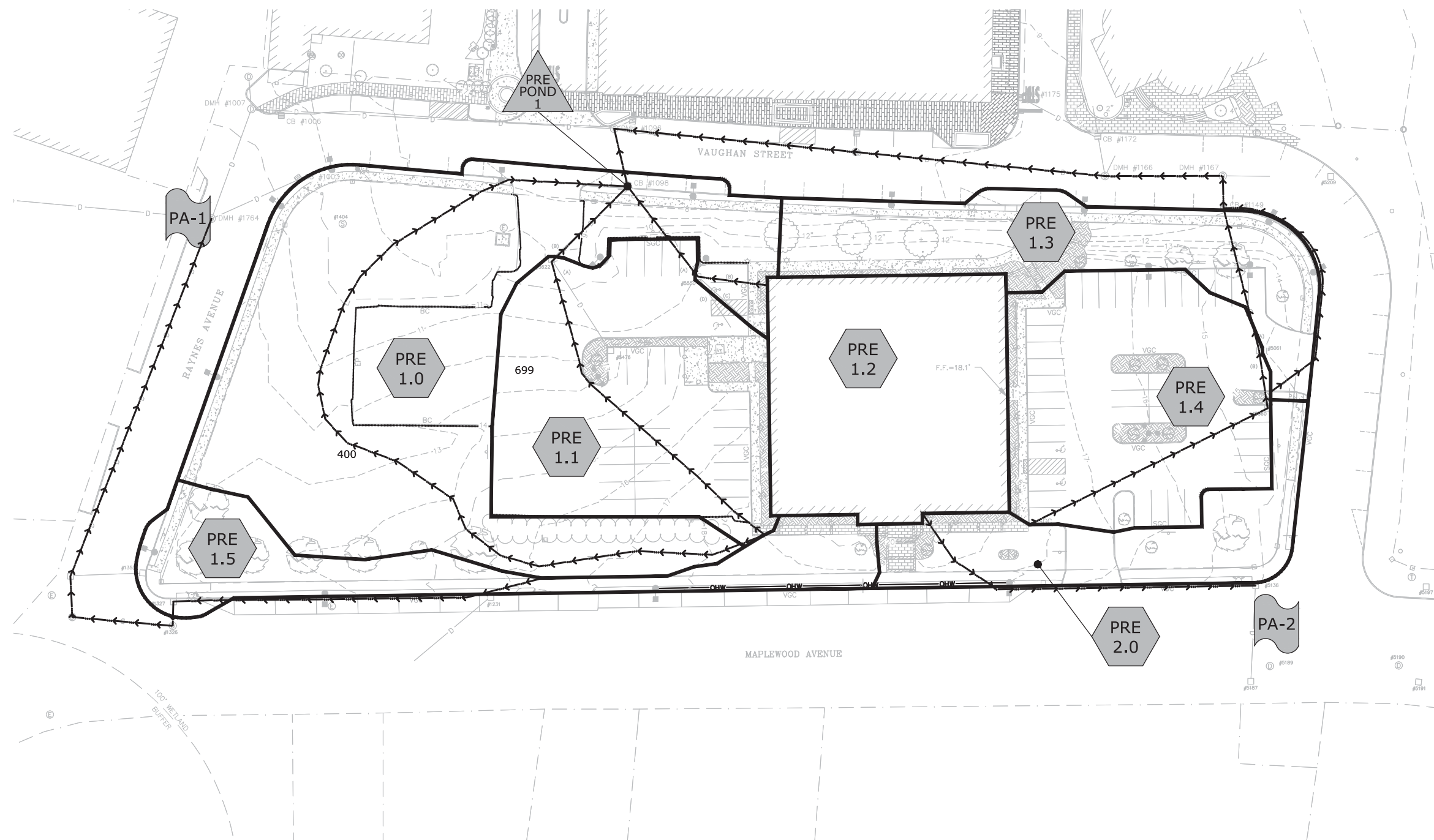
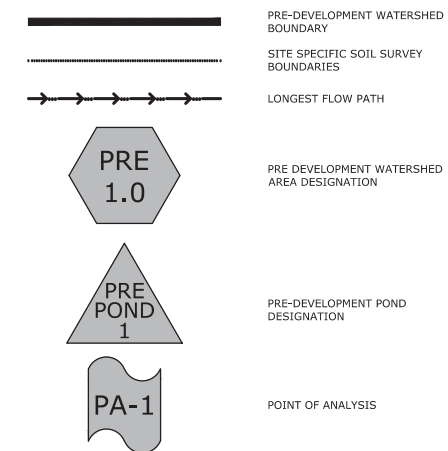
Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>3.93"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.87 cfs 0.062 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=5.78' Inflow=12.27 cfs 1.034 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=12.27 cfs 1.034 af

Link PA1: POINT OF ANALYSIS 1 Inflow=13.15 cfs 1.098 af
Primary=13.15 cfs 1.098 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.87 cfs 0.062 af
Primary=0.87 cfs 0.062 af

Total Runoff Area = 2.644 ac Runoff Volume = 1.160 af Average Runoff Depth = 5.26"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
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

PRE DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE	HSG
400	UDORTHENTS GLACIAL	A
699	URBAN LAND	A

Last Save Date: April 16, 2019 12:26 PM By: NAHANSEN
 Plot Date: Tuesday, April 16, 2019 Plotted By: Neil A. Hansen
 File Location: J:\K-0076-019\Maplewood Drawings - Figures\AutoCAD\YearK-0076-019_C-SITE.dwg Layout Tab: C-801

2.3 Post-Development Calculations

The proposed drainage condition has been evaluated by dividing the site into ten (10) watershed areas which discharge to the same two (2) points of analysis as in the pre-development condition as depicted on "Post-Development Watershed Plan", C-802.

Each of the points of analysis and their contributing watershed areas are described below:

Point of Analysis One (PA1)

Post-Development Watershed 1.0 (POST 1.0) is comprised primarily of the paved parking and surrounding grass area to the east of the site, between the proposed and existing office buildings. Runoff from this watershed area travels via overland flow and the on-site closed drainage system to a Contech Jellyfish Filter stormwater filtration system. This system has been sized to treat the 1 Year Storm volume that is discharged from the detention system and bypass the larger storm flows. This is a larger volume than the Water Quality Volume which is required to be treated per NHDES AoT regulations. The Jellyfish Filter discharges to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

Post-Development Watershed 1.1 (POST 1.1) and Post-Development Watershed 1.8 (POST 1.8) are comprised primarily of the paved parking area between the proposed and existing office building and the roof runoff from the proposed office building. Runoff from these watershed areas travels via a closed drainage system to an underground detention system. The detention system discharges into a Jellyfish Filter stormwater filtration system. This system has been sized to treat the 1 Year Storm volume that is discharged from the detention system and bypass the larger storm flows. This is a larger volume than the Water Quality Volume which is required to be treated per NHDES AoT regulations. The Jellyfish Filter discharges to the municipal drainage system in Vaughan Street (PA1).

Post-Development Watershed 1.2 (POST 1.2) is comprised of the roof of the existing office building. The building's roof drains connect to an underground detention system. The underground detention system discharges to the municipal drainage system in Vaughan Street (PA1).

Post-Development Watershed 1.3 (POST 1.3) and Post-Development Watershed 1.4 (POST 1.4) are comprised primarily of the paved parking and surrounding grass area to the south of the existing office building. Runoff from this watershed area travels via overland flow and the existing on-site closed drainage system to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

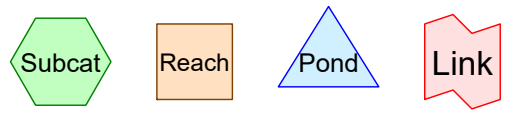
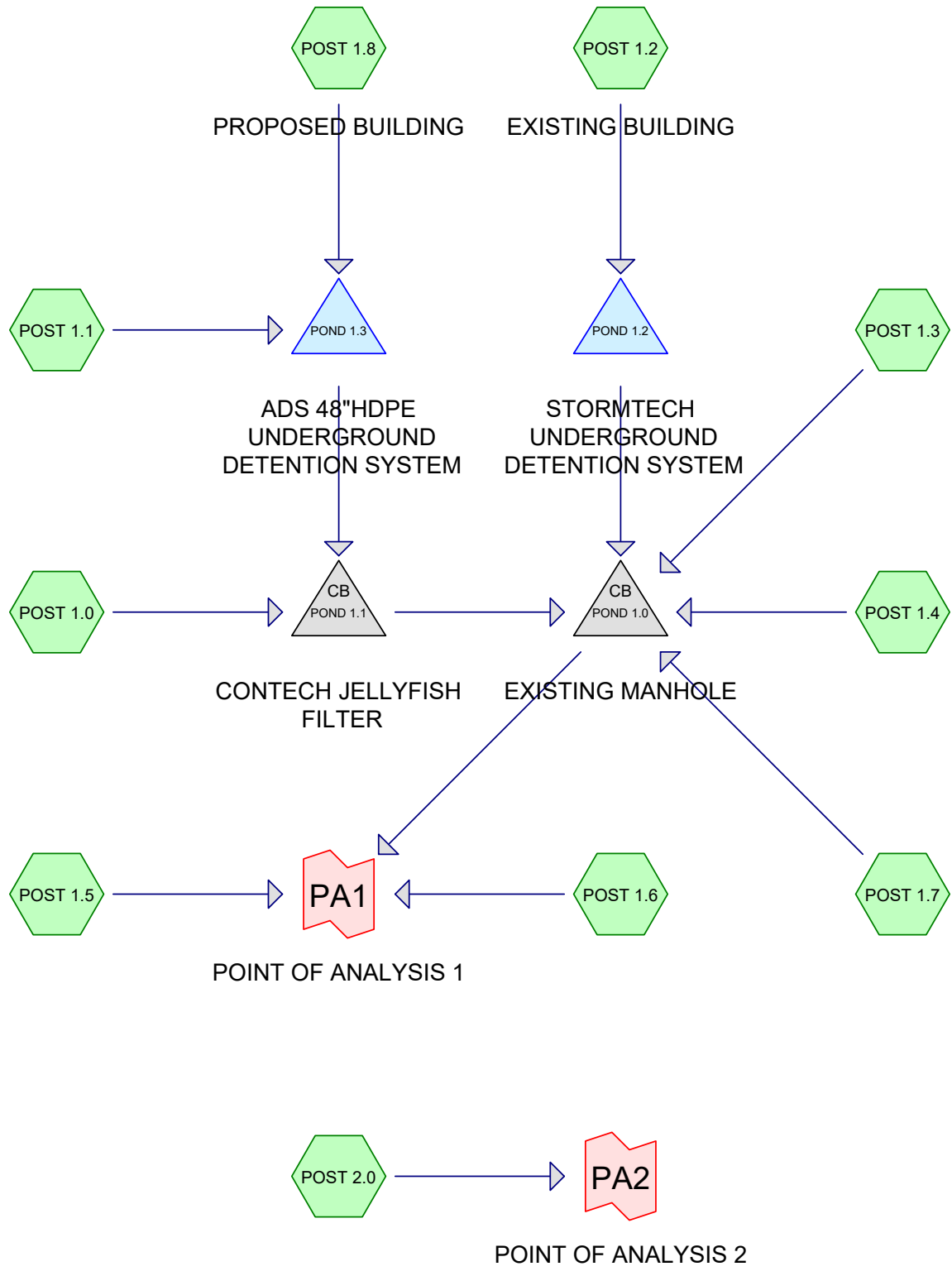
Post-Development Watershed 1.5 (POST 1.5) is comprised primarily of paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system in Maplewood Avenue. This drainage system connects to the Vaughan Street municipal drainage system (PA1).

Post-Development Watershed 1.6 (POST 1.6) and Post-Development Watershed 1.7 (POST 1.7) are comprised primarily of paved sidewalk area along Raynes Avenue and Vaughan Street. Runoff from these watershed areas travels via overland flow to the municipal drainage system in Vaughan Street (PA1).

Point of Analysis Two (PA2)

Post-Development Watershed 2.0 (POST 2.0) is comprised primarily of grass area with some paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system at the corner of Maplewood Avenue and Vaughan Street (PA2).

2.3.1 Post-Development Calculations**2.3.2 Post-Development Watershed Plan**



Routing Diagram for K-0076-019 POST
 Prepared by Tighe & Bond, Printed 4/16/2019
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.605	39	>75% Grass cover, Good, HSG A (POST 1.0, POST 1.1, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7, POST 2.0)
1.235	98	Paved parking, HSG A (POST 1.0, POST 1.1, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7, POST 2.0)
0.804	98	Roofs, HSG A (POST 1.2, POST 1.8)
2.644	84	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.644	HSG A	POST 1.0, POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7, POST 1.8, POST 2.0
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.644		TOTAL AREA

K-0076-019 POST

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

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1.0:	Runoff Area=7,961 sf 81.99% Impervious Runoff Depth>2.34" Flow Length=112' Tc=5.0 min CN=87 Runoff=0.50 cfs 0.036 af
Subcatchment POST 1.1:	Runoff Area=15,025 sf 75.37% Impervious Runoff Depth>2.01" Flow Length=172' Tc=5.0 min CN=83 Runoff=0.81 cfs 0.058 af
Subcatchment POST 1.2: EXISTING	Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>3.44" Tc=5.0 min CN=98 Runoff=1.24 cfs 0.099 af
Subcatchment POST 1.3:	Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>0.80" Flow Length=470' Tc=5.0 min CN=64 Runoff=0.22 cfs 0.018 af
Subcatchment POST 1.4:	Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>2.71" Flow Length=572' Tc=5.0 min CN=91 Runoff=1.16 cfs 0.084 af
Subcatchment POST 1.5:	Runoff Area=10,104 sf 69.36% Impervious Runoff Depth>1.78" Flow Length=182' Tc=5.0 min CN=80 Runoff=0.48 cfs 0.034 af
Subcatchment POST 1.6:	Runoff Area=3,425 sf 74.01% Impervious Runoff Depth>2.01" Flow Length=572' Tc=5.0 min CN=83 Runoff=0.19 cfs 0.013 af
Subcatchment POST 1.7:	Runoff Area=7,468 sf 53.09% Impervious Runoff Depth>1.12" Flow Length=188' Slope=0.0159 '/ Tc=5.0 min CN=70 Runoff=0.21 cfs 0.016 af
Subcatchment POST 1.8: PROPOSED	Runoff Area=20,033 sf 100.00% Impervious Runoff Depth>3.44" Tc=5.0 min CN=98 Runoff=1.66 cfs 0.132 af
Subcatchment POST 2.0:	Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>0.70" Flow Length=187' Tc=5.0 min CN=62 Runoff=0.12 cfs 0.011 af
Pond POND 1.0: EXISTING MANHOLE	Peak Elev=4.74' Inflow=3.06 cfs 0.440 af 24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/ Outflow=3.06 cfs 0.440 af
Pond POND 1.1: CONTECH JELLYFISH FILTER	Peak Elev=5.11' Inflow=0.76 cfs 0.226 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0100 '/ Outflow=0.76 cfs 0.226 af
Pond POND 1.2: STORMTECH	Peak Elev=5.82' Storage=0.014 af Inflow=1.24 cfs 0.099 af Outflow=0.91 cfs 0.096 af
Pond POND 1.3: ADS 48"HDPE	Peak Elev=8.67' Storage=0.068 af Inflow=2.47 cfs 0.190 af Outflow=0.35 cfs 0.190 af
Link PA1: POINT OF ANALYSIS 1	Inflow=3.73 cfs 0.487 af Primary=3.73 cfs 0.487 af
Link PA2: POINT OF ANALYSIS 2	Inflow=0.12 cfs 0.011 af Primary=0.12 cfs 0.011 af

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

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Total Runoff Area = 2.644 ac Runoff Volume = 0.501 af Average Runoff Depth = 2.27"
22.89% Pervious = 0.605 ac 77.11% Impervious = 2.039 ac

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1.0:	Runoff Area=7,961 sf 81.99% Impervious Runoff Depth>4.11" Flow Length=112' Tc=5.0 min CN=87 Runoff=0.87 cfs 0.063 af
Subcatchment POST 1.1:	Runoff Area=15,025 sf 75.37% Impervious Runoff Depth>3.70" Flow Length=172' Tc=5.0 min CN=83 Runoff=1.49 cfs 0.106 af
Subcatchment POST 1.2: EXISTING	Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>5.34" Tc=5.0 min CN=98 Runoff=1.89 cfs 0.153 af
Subcatchment POST 1.3:	Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>1.97" Flow Length=470' Tc=5.0 min CN=64 Runoff=0.62 cfs 0.045 af
Subcatchment POST 1.4:	Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>4.54" Flow Length=572' Tc=5.0 min CN=91 Runoff=1.90 cfs 0.141 af
Subcatchment POST 1.5:	Runoff Area=10,104 sf 69.36% Impervious Runoff Depth>3.40" Flow Length=182' Tc=5.0 min CN=80 Runoff=0.92 cfs 0.066 af
Subcatchment POST 1.6:	Runoff Area=3,425 sf 74.01% Impervious Runoff Depth>3.70" Flow Length=572' Tc=5.0 min CN=83 Runoff=0.34 cfs 0.024 af
Subcatchment POST 1.7:	Runoff Area=7,468 sf 53.09% Impervious Runoff Depth>2.47" Flow Length=188' Slope=0.0159 '/ Tc=5.0 min CN=70 Runoff=0.49 cfs 0.035 af
Subcatchment POST 1.8: PROPOSED	Runoff Area=20,033 sf 100.00% Impervious Runoff Depth>5.34" Tc=5.0 min CN=98 Runoff=2.53 cfs 0.205 af
Subcatchment POST 2.0:	Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>1.81" Flow Length=187' Tc=5.0 min CN=62 Runoff=0.37 cfs 0.027 af
Pond POND 1.0: EXISTING MANHOLE	Peak Elev=5.06' Inflow=5.69 cfs 0.745 af 24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/ Outflow=5.69 cfs 0.745 af
Pond POND 1.1: CONTECH JELLYFISH FILTER	Peak Elev=5.36' Inflow=1.43 cfs 0.374 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0100 '/ Outflow=1.43 cfs 0.374 af
Pond POND 1.2: STORMTECH	Peak Elev=6.41' Storage=0.018 af Inflow=1.89 cfs 0.153 af Outflow=1.43 cfs 0.150 af
Pond POND 1.3: ADS 48"HDPE	Peak Elev=9.33' Storage=0.106 af Inflow=4.02 cfs 0.311 af Outflow=0.99 cfs 0.311 af
Link PA1: POINT OF ANALYSIS 1	Inflow=6.93 cfs 0.835 af Primary=6.93 cfs 0.835 af
Link PA2: POINT OF ANALYSIS 2	Inflow=0.37 cfs 0.027 af Primary=0.37 cfs 0.027 af

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Total Runoff Area = 2.644 ac Runoff Volume = 0.866 af Average Runoff Depth = 3.93"
22.89% Pervious = 0.605 ac 77.11% Impervious = 2.039 ac

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Summary for Subcatchment POST 1.0:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.87 cfs @ 12.07 hrs, Volume= 0.063 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,434	39	>75% Grass cover, Good, HSG A
6,527	98	Paved parking, HSG A
7,961	87	Weighted Average
1,434		18.01% Pervious Area
6,527		81.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	80	0.0400	1.86		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	32	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	112	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.1:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 1.49 cfs @ 12.07 hrs, Volume= 0.106 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
3,700	39	>75% Grass cover, Good, HSG A
11,325	98	Paved parking, HSG A
15,025	83	Weighted Average
3,700		24.63% Pervious Area
11,325		75.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0500	1.85		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.1	48	0.0800	5.74		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.4	74	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	172	Total, Increased to minimum Tc = 5.0 min			

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Summary for Subcatchment POST 1.2: EXISTING BUILDING

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.153 af, Depth> 5.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
14,979	98	Roofs, HSG A
14,979		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment POST 1.3:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.045 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
6,993	39	>75% Grass cover, Good, HSG A
5,073	98	Paved parking, HSG A
12,066	64	Weighted Average
6,993		57.96% Pervious Area
5,073		42.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0254	1.62		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	38	0.0254	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	20	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
2.4	470	Total, Increased to minimum Tc = 5.0 min			

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Summary for Subcatchment POST 1.4:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 1.90 cfs @ 12.07 hrs, Volume= 0.141 af, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,871	39	>75% Grass cover, Good, HSG A
14,347	98	Paved parking, HSG A
16,218	91	Weighted Average
1,871		11.54% Pervious Area
14,347		88.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0237	1.58		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	35	0.0254	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	20	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
3.0	572	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.5:[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.92 cfs @ 12.08 hrs, Volume= 0.066 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
3,096	39	>75% Grass cover, Good, HSG A
7,008	98	Paved parking, HSG A
10,104	80	Weighted Average
3,096		30.64% Pervious Area
7,008		69.36% Impervious Area

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	52	0.0500	1.87		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	52	0.0800	5.74		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.4	78	0.0050	3.21	2.52	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.1	182	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.6:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.34 cfs @ 12.07 hrs, Volume= 0.024 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
890	39	>75% Grass cover, Good, HSG A
2,535	98	Paved parking, HSG A
3,425	83	Weighted Average
890		25.99% Pervious Area
2,535		74.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0237	1.58		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
0.2	35	0.0254	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	20	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
3.0	572	Total, Increased to minimum Tc = 5.0 min			

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Summary for Subcatchment POST 1.7:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.49 cfs @ 12.08 hrs, Volume= 0.035 af, Depth> 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
3,503	39	>75% Grass cover, Good, HSG A
3,965	98	Paved parking, HSG A
7,468	70	Weighted Average
3,503		46.91% Pervious Area
3,965		53.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0159	1.12		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.68"
1.0	148	0.0159	2.56		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.6	188	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.8: PROPOSED BUILDING

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.53 cfs @ 12.07 hrs, Volume= 0.205 af, Depth> 5.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
20,033	98	Roofs, HSG A
20,033		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment POST 2.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Area (sf)	CN	Description
4,871	39	>75% Grass cover, Good, HSG A
3,013	98	Paved parking, HSG A
7,884	62	Weighted Average
4,871		61.78% Pervious Area
3,013		38.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	10	0.0360	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.68"
0.3	45	0.0360	2.85		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
0.7	132	0.0227	3.06		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.1	187	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond POND 1.0: EXISTING MANHOLE

Inflow Area = 2.152 ac, 81.33% Impervious, Inflow Depth > 4.16" for 10 Year Storm event
 Inflow = 5.69 cfs @ 12.10 hrs, Volume= 0.745 af
 Outflow = 5.69 cfs @ 12.10 hrs, Volume= 0.745 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.69 cfs @ 12.10 hrs, Volume= 0.745 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 5.06' @ 12.10 hrs
 Flood Elev= 7.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.95'	24.0" Round Culvert L= 145.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 3.95' / 1.60' S= 0.0162 1' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=5.64 cfs @ 12.10 hrs HW=5.06' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Inlet Controls 5.64 cfs @ 3.16 fps)

Summary for Pond POND 1.1: CONTECH JELLYFISH FILTER

Inflow Area = 0.988 ac, 88.07% Impervious, Inflow Depth > 4.54" for 10 Year Storm event
 Inflow = 1.43 cfs @ 12.12 hrs, Volume= 0.374 af
 Outflow = 1.43 cfs @ 12.12 hrs, Volume= 0.374 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.43 cfs @ 12.12 hrs, Volume= 0.374 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 5.36' @ 12.14 hrs
 Flood Elev= 8.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	4.60'	12.0" Round Culvert L= 15.0' CPP, mitered to conform to fill, Ke= 0.700

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Type III 24-hr 10 Year Storm Rainfall=5.58"

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Inlet / Outlet Invert= 4.60' / 4.45' S= 0.0100 '/ n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.41 cfs @ 12.12 hrs HW=5.35' TW=5.03' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 1.41 cfs @ 3.12 fps)

Summary for Pond POND 1.2: STORMTECH UNDERGROUND DETENTION SYSTEM

Inflow Area = 0.344 ac, 100.00% Impervious, Inflow Depth > 5.34" for 10 Year Storm event
 Inflow = 1.89 cfs @ 12.07 hrs, Volume= 0.153 af
 Outflow = 1.43 cfs @ 12.14 hrs, Volume= 0.150 af, Atten= 24%, Lag= 4.3 min
 Primary = 1.43 cfs @ 12.14 hrs, Volume= 0.150 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 6.41' @ 12.14 hrs Surf.Area= 0.012 ac Storage= 0.018 af
 Flood Elev= 7.50' Surf.Area= 0.012 ac Storage= 0.024 af

Plug-Flow detention time= 31.8 min calculated for 0.150 af (98% of inflow)
 Center-of-Mass det. time= 19.2 min (764.2 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	4.00'	0.011 af	20.50'W x 24.98'L x 3.50'H Field A 0.041 af Overall - 0.013 af Embedded = 0.028 af x 40.0% Voids
#2A	4.50'	0.013 af	ADS StormTech SC-740 +Cap x 12 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Rows of 3 Chambers
		0.024 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	4.50'	12.0" Round Culvert L= 35.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 4.50' / 4.30' S= 0.0057 '/ n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	4.50'	5.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	5.60'	8.0" W x 3.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	7.25'	4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.44 cfs @ 12.14 hrs HW=6.40' TW=4.99' (Dynamic Tailwater)

↑1=Culvert (Passes 1.44 cfs of 3.95 cfs potential flow)

↑2=Orifice/Grate (Orifice Controls 0.78 cfs @ 5.71 fps)

↑3=Orifice/Grate (Orifice Controls 0.66 cfs @ 3.95 fps)

↑4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond POND 1.3: ADS 48"HDPE UNDERGROUND DETENTION SYSTEM

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=32)

Inflow Area = 0.805 ac, 89.45% Impervious, Inflow Depth > 4.64" for 10 Year Storm event
 Inflow = 4.02 cfs @ 12.07 hrs, Volume= 0.311 af
 Outflow = 0.99 cfs @ 12.45 hrs, Volume= 0.311 af, Atten= 75%, Lag= 22.6 min
 Primary = 0.99 cfs @ 12.45 hrs, Volume= 0.311 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 9.33' @ 12.45 hrs Surf.Area= 0.076 ac Storage= 0.106 af
 Flood Elev= 10.30' Surf.Area= 0.076 ac Storage= 0.156 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 76.2 min (842.7 - 766.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	6.30'	0.000 af	36.50'W x 91.00'L x 5.50'H Field A 0.419 af Overall - 0.215 af Embedded = 0.205 af x 0.0% Voids
#2A	6.80'	0.179 af	ADS N-12 48" x 28 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 7 Rows of 4 Chambers 34.50' Header x 12.40 sf x 2 = 855.6 cf Inside
		0.179 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	6.80'	12.0" Round Culvert L= 74.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 6.80' / 5.70' S= 0.0149 1' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	6.80'	3.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	8.60'	8.0" W x 3.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	9.80'	4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.99 cfs @ 12.45 hrs HW=9.33' TW=5.27' (Dynamic Tailwater)

- 1=Culvert (Passes 0.99 cfs of 4.76 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.37 cfs @ 7.47 fps)
- 3=Orifice/Grate (Orifice Controls 0.62 cfs @ 3.74 fps)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link PA1: POINT OF ANALYSIS 1

Inflow Area = 2.463 ac, 79.97% Impervious, Inflow Depth > 4.07" for 10 Year Storm event
 Inflow = 6.93 cfs @ 12.09 hrs, Volume= 0.835 af
 Primary = 6.93 cfs @ 12.09 hrs, Volume= 0.835 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link PA2: POINT OF ANALYSIS 2

Inflow Area = 0.181 ac, 38.22% Impervious, Inflow Depth > 1.81" for 10 Year Storm event
Inflow = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af
Primary = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

K-0076-019 POST

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

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1.0:	Runoff Area=7,961 sf 81.99% Impervious Runoff Depth>5.55" Flow Length=112' Tc=5.0 min CN=87 Runoff=1.15 cfs 0.085 af
Subcatchment POST 1.1:	Runoff Area=15,025 sf 75.37% Impervious Runoff Depth>5.10" Flow Length=172' Tc=5.0 min CN=83 Runoff=2.03 cfs 0.147 af
Subcatchment POST 1.2: EXISTING	Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>6.84" Tc=5.0 min CN=98 Runoff=2.40 cfs 0.196 af
Subcatchment POST 1.3:	Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>3.06" Flow Length=470' Tc=5.0 min CN=64 Runoff=0.99 cfs 0.071 af
Subcatchment POST 1.4:	Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>6.01" Flow Length=572' Tc=5.0 min CN=91 Runoff=2.47 cfs 0.187 af
Subcatchment POST 1.5:	Runoff Area=10,104 sf 69.36% Impervious Runoff Depth>4.77" Flow Length=182' Tc=5.0 min CN=80 Runoff=1.29 cfs 0.092 af
Subcatchment POST 1.6:	Runoff Area=3,425 sf 74.01% Impervious Runoff Depth>5.10" Flow Length=572' Tc=5.0 min CN=83 Runoff=0.46 cfs 0.033 af
Subcatchment POST 1.7:	Runoff Area=7,468 sf 53.09% Impervious Runoff Depth>3.68" Flow Length=188' Slope=0.0159 '/' Tc=5.0 min CN=70 Runoff=0.74 cfs 0.053 af
Subcatchment POST 1.8: PROPOSED	Runoff Area=20,033 sf 100.00% Impervious Runoff Depth>6.84" Tc=5.0 min CN=98 Runoff=3.22 cfs 0.262 af
Subcatchment POST 2.0:	Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>2.86" Flow Length=187' Tc=5.0 min CN=62 Runoff=0.60 cfs 0.043 af
Pond POND 1.0: EXISTING MANHOLE	Peak Elev=5.30' Inflow=7.89 cfs 0.996 af 24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=7.89 cfs 0.996 af
Pond POND 1.1: CONTECH JELLYFISH FILTER	Peak Elev=5.66' Inflow=2.10 cfs 0.493 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0100 '/' Outflow=2.10 cfs 0.493 af
Pond POND 1.2: STORMTECH	Peak Elev=7.08' Storage=0.022 af Inflow=2.40 cfs 0.196 af Outflow=1.81 cfs 0.193 af
Pond POND 1.3: ADS 48"HDPE	Peak Elev=9.91' Storage=0.137 af Inflow=5.25 cfs 0.409 af Outflow=1.69 cfs 0.409 af
Link PA1: POINT OF ANALYSIS 1	Inflow=9.61 cfs 1.121 af Primary=9.61 cfs 1.121 af
Link PA2: POINT OF ANALYSIS 2	Inflow=0.60 cfs 0.043 af Primary=0.60 cfs 0.043 af

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

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Total Runoff Area = 2.644 ac Runoff Volume = 1.168 af Average Runoff Depth = 5.30"
22.89% Pervious = 0.605 ac 77.11% Impervious = 2.039 ac

K-0076-019 POST

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

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1.0:	Runoff Area=7,961 sf 81.99% Impervious Runoff Depth>6.91" Flow Length=112' Tc=5.0 min CN=87 Runoff=1.42 cfs 0.105 af
Subcatchment POST 1.1:	Runoff Area=15,025 sf 75.37% Impervious Runoff Depth>6.43" Flow Length=172' Tc=5.0 min CN=83 Runoff=2.54 cfs 0.185 af
Subcatchment POST 1.2: EXISTING	Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>8.24" Tc=5.0 min CN=98 Runoff=2.88 cfs 0.236 af
Subcatchment POST 1.3:	Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>4.16" Flow Length=470' Tc=5.0 min CN=64 Runoff=1.35 cfs 0.096 af
Subcatchment POST 1.4:	Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>7.39" Flow Length=572' Tc=5.0 min CN=91 Runoff=3.00 cfs 0.229 af
Subcatchment POST 1.5:	Runoff Area=10,104 sf 69.36% Impervious Runoff Depth>6.07" Flow Length=182' Tc=5.0 min CN=80 Runoff=1.63 cfs 0.117 af
Subcatchment POST 1.6:	Runoff Area=3,425 sf 74.01% Impervious Runoff Depth>6.43" Flow Length=572' Tc=5.0 min CN=83 Runoff=0.58 cfs 0.042 af
Subcatchment POST 1.7:	Runoff Area=7,468 sf 53.09% Impervious Runoff Depth>4.88" Flow Length=188' Slope=0.0159 '/' Tc=5.0 min CN=70 Runoff=0.98 cfs 0.070 af
Subcatchment POST 1.8: PROPOSED	Runoff Area=20,033 sf 100.00% Impervious Runoff Depth>8.24" Tc=5.0 min CN=98 Runoff=3.85 cfs 0.316 af
Subcatchment POST 2.0:	Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>3.93" Flow Length=187' Tc=5.0 min CN=62 Runoff=0.83 cfs 0.059 af
Pond POND 1.0: EXISTING MANHOLE	Peak Elev=5.57' Inflow=10.41 cfs 1.234 af 24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=10.41 cfs 1.234 af
Pond POND 1.1: CONTECH JELLYFISH FILTER	Peak Elev=7.20' Inflow=4.28 cfs 0.606 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0100 '/' Outflow=4.28 cfs 0.606 af
Pond POND 1.2: STORMTECH	Peak Elev=7.45' Storage=0.024 af Inflow=2.88 cfs 0.236 af Outflow=2.58 cfs 0.233 af
Pond POND 1.3: ADS 48"HDPE	Peak Elev=10.13' Storage=0.148 af Inflow=6.39 cfs 0.501 af Outflow=3.55 cfs 0.501 af
Link PA1: POINT OF ANALYSIS 1	Inflow=12.46 cfs 1.393 af Primary=12.46 cfs 1.393 af
Link PA2: POINT OF ANALYSIS 2	Inflow=0.83 cfs 0.059 af Primary=0.83 cfs 0.059 af

K-0076-019 POST

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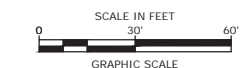
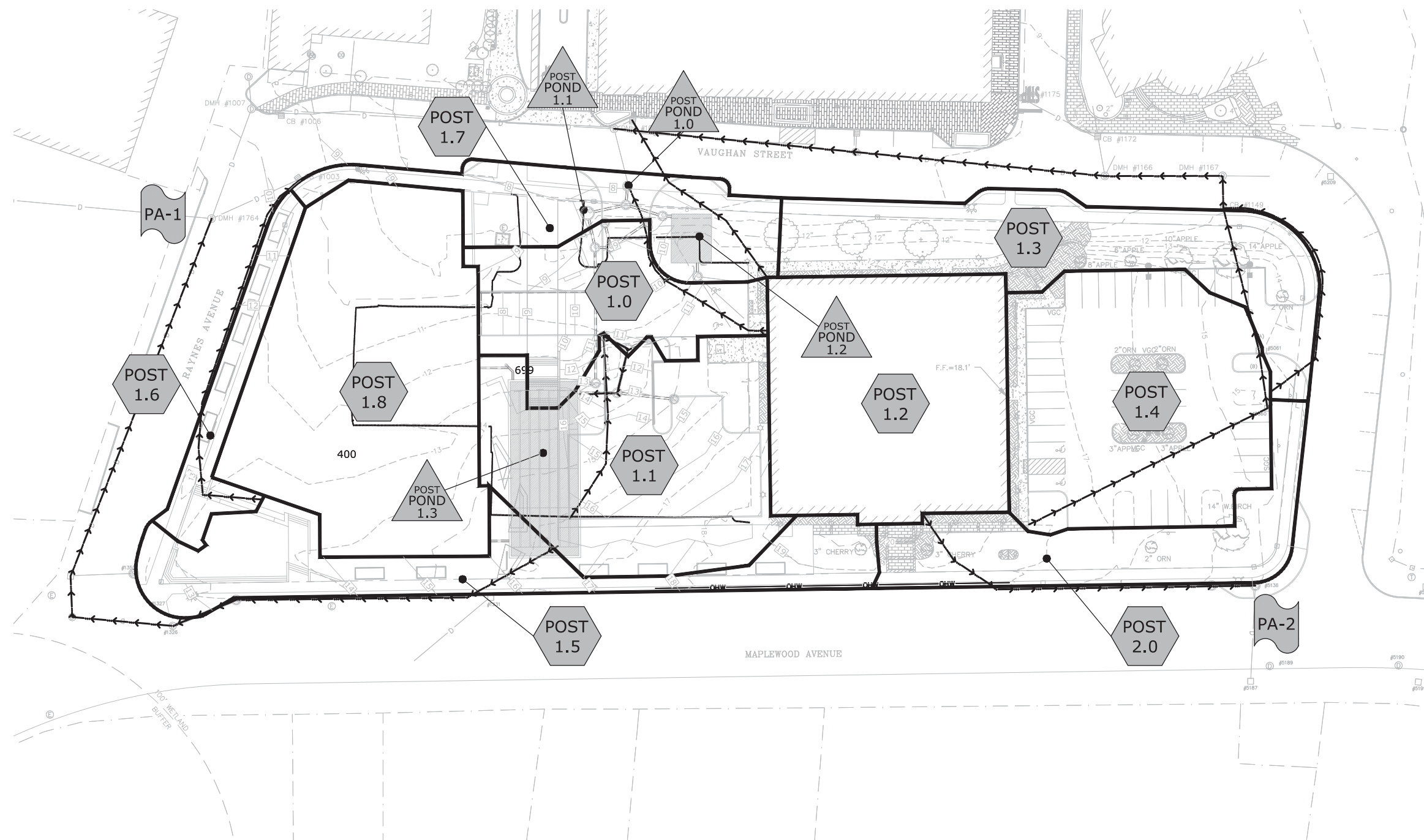
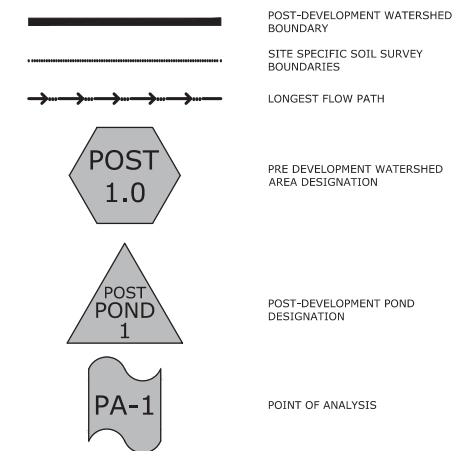
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Type III 24-hr 50 Year Storm Rainfall=8.48"

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Total Runoff Area = 2.644 ac Runoff Volume = 1.456 af Average Runoff Depth = 6.61"
22.89% Pervious = 0.605 ac 77.11% Impervious = 2.039 ac



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
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

POST DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE	HSG
400	UDORTHERENTS GLACIAL	A
699	URBAN LAND	A

Last Save Date: April 16, 2019 12:26 PM By: NAHANSEN
 Plot Date: Tuesday, April 16, 2019 Plotted By: Neil A. Hansen
 File Location: J:\MK\0076-019\Map\wshed\Drawings - Figures\AutoCAD\YearK-0076-019_C-SITE.dwg Layout Tab: C-802

2.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates for the 2-year, 10-year, 25-year and 50-year storm events at each point of analysis. The pre-development 1-year storm event is also included for channel protection requirements.

Point of Analysis	Pre/ Post 2-Year Storm (cfs)	Pre/ Post 10-Year Storm (cfs)	Pre/ Post 25-Year Storm (cfs)	Pre/ Post 50-Year Storm (cfs)
PA1	4.03/ 3.73	7.38/ 6.93	10.30/ 9.61	13.15/ 12.46
PA2	0.13/ 0.12	0.38/ 0.37	0.63/ 0.60	0.87/ 0.83

2.5 Stormwater Treatment

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).

Runoff generated from impervious area will be treated by a Runoff generated by Contech Jellyfish Filter stormwater filtration system. The surface parking area will receive pre-treatment from deep sump catch basins prior to discharging to the stormwater detention system. The roof runoff does not require pretreatment and will be discharged directly into the detention system. The detention system discharges to the Jellyfish Filter stormwater filtration system.

The Jellyfish Filter stormwater filtration system was sized to treat the 1 Year Storm flow which exceeds the Water Quality Volume requirements for the NHDES AoT Regulations as shown in the attached Jellyfish Filter Design Summary prepared by Contech Engineered Solutions, LLC.

3.0 Conclusion

The proposed project will result in a reduction in post-development peak runoff rates from the pre-development condition. The impervious area resulting from the proposed project will be treated by the proposed stormwater filtration system. The project will require an NHDES AoT Permit. A complete copy of the AoT Permit Application will be provided to the City of Portsmouth when it is submitted to NHDES.

111 Maplewood Avenue: Contech Filter

Portsmouth, NH

Information Provided:

- Total Contributing Drainage Area = 1 acre
- Impervious cover = 0.87 acres
- Design Storm = 1.00" Rainfall
- $T_c = 6$ minutes
- Unit Peak Discharge, $q_u = 700$ cfs/mi²/in
- Presiding agency = Alteration of Terrain Bureau - NHDES (AoT-NHDES)

Jellyfish Information and Cartridge Data:

The Jellyfish[®] Filter is an engineered Stormwater quality treatment technology featuring pre-treatment and membrane filtration in a compact stand-alone treatment system that removes a high level and wide variety of Stormwater pollutants. Exceptional pollutant removal is achieved at high treatment flow rates with minimal head loss and low maintenance costs. Each lightweight Jellyfish Filter cartridge contains an extraordinarily large amount of membrane surface area, resulting in superior flow capacity and pollutant removal capacity. The Jellyfish Filter is NJCAT verified in accordance to the TARP Tier II Protocol and New Jersey Tier II Stormwater Test Requirements – Amendments to Tarp Tier II Protocol, with a demonstrated 89% TSS removal efficiency.

- Jellyfish cartridge length = 54 inches (nominal)
- Jellyfish cartridge flowrate (Hi Flo) = 80 gpm
- Jellyfish cartridge flowrate (Drain Down) = 40 gpm
- Jellyfish cartridge headloss = Minimum 18" above outlet

Design Summary:

The Jellyfish for this site was design as a flow-based system, and was sized based on calculating the peak water quality flow rate associated with the design storm. The design storm rainfall depth of 1.00 inch was selected based on NHDES-AoT regulations as of December 2008. Using the NHDES BMP Worksheet, a water quality flow rate of 0.911 cfs was calculated. See the WQF results from the sheet below:

Water Quality Volume (WQV)		
1.00	ac	A = Area draining to the practice
0.87	ac	A_i = Impervious area draining to the practice
0.87	decimal	I = percent impervious area draining to the practice, in decimal form
0.83	unitless	R_v = Runoff coefficient = $0.05 + (0.9 \times I)$
0.83	ac-in	$WQV = 1'' \times R_v \times A$
3,024	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".
0.83	inches	Q = water quality depth. $Q = WQV/A$
98	unitless	CN = unit peak discharge curve number. $CN = 1000 / (10 + 5P + 10Q - 10 * [Q^2 + 1.25 * Q * P]^{0.5})$
0.2	inches	S = potential maximum retention. $S = (1000/CN) - 10$
0.032	inches	I_a = initial abstraction. $I_a = 0.2S$
6.0	minutes	T_c = Time of Concentration
700.0	cfs/mi ² /in	q_u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III
0.911	cfs	$WQF = q_u \times WQV$. Conversion: to convert "cfs/mi ² /in * ac-in" to "cfs" multiply by 1mi ² /640ac

Fig. 1 –NHDES BMP Worksheet for WQF

Jellyfish Filter Design Summary

The Jellyfish for this site was sized to provide **5 Hi Flo and 1 Drain Down cartridge** in order to meet the water quality flowrate provided (calculations seen below). In order to house this number of cartridges, Contech Engineered Solutions (Contech) recommends a JF6-5-1, which is a 72" Precast Manhole Jellyfish Filter.

$$N_{\text{cartridges}} = \frac{Q_{\text{Treat}} \times 449 \text{ gpm} / \text{cfs}}{Q_{\text{specific}} \text{ (cartridges)}}$$
$$0.62 \text{ cfs} \times 449 \text{ gpm} / \text{cfs} \leq (x)80 \text{ gpm} / \text{ft}^2 + (y)40 \text{ gpm} / \text{ft}^2$$

$$N_{\text{cartridges}} = [x = 5; y = 1]$$

Hyd. Load

Hydraulic Loading Requires: (5) Hi Flo, (1) Drain Down Cartridges

Maintenance:

Contech offers a network of Preferred Service Providers that have the capability to perform all necessary inspections, compliance reporting and cleaning services. Contech recommends inspecting the system annually and maintaining the system at the recommendation of the annual inspection. Full maintenance is typically required every 24-36 months. Please contact Contech's Maintenance Department for all questions regarding maintenance at (503) 258-3157 or visit our website at www.ContechES.com.

Thank you for the opportunity to present this information to you and your client.

Sincerely,

Pat Valentine P.E.
Stormwater Design Engineer
Contech Engineered Solutions, LLC.

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 (NHDOT) 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

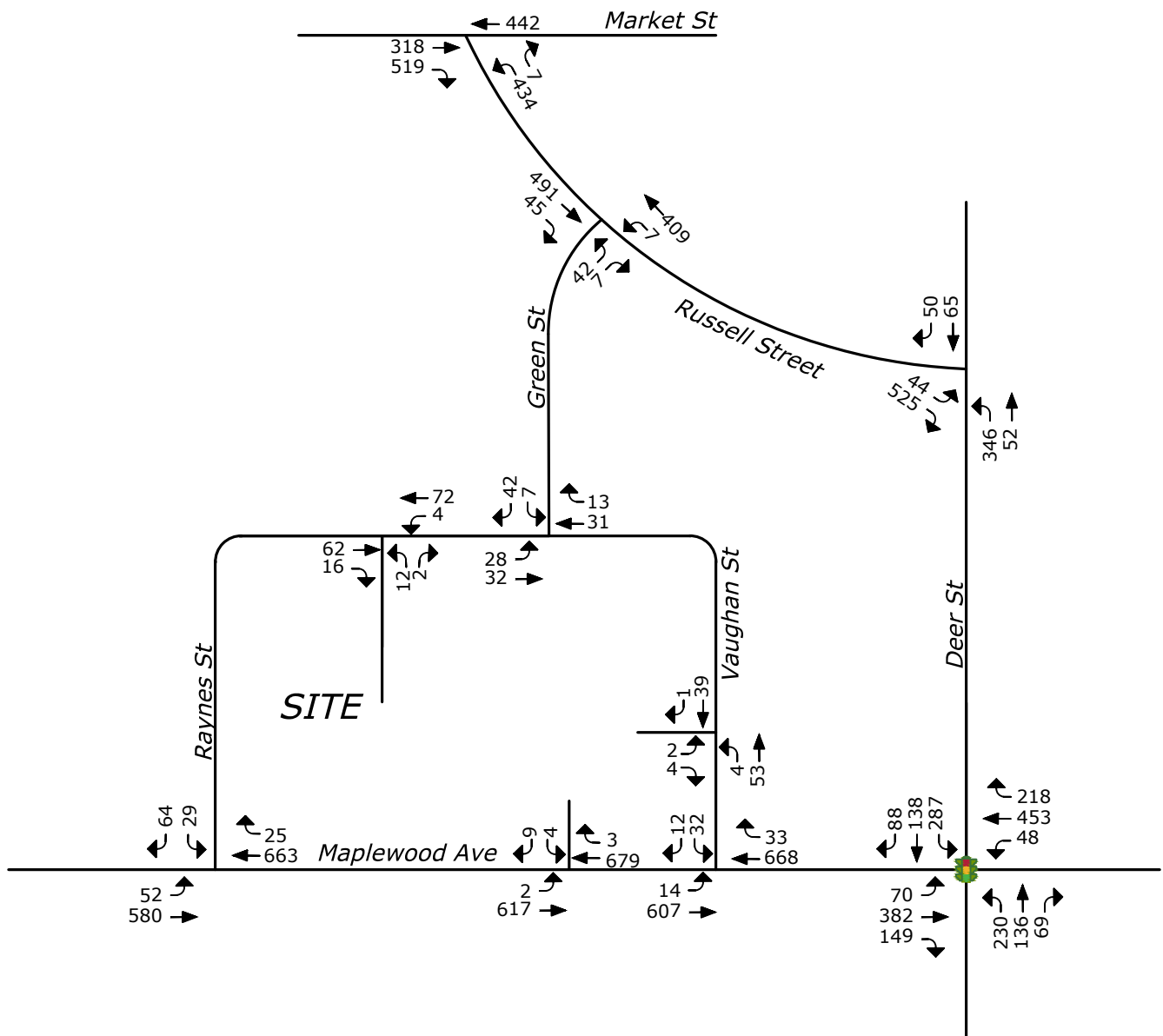
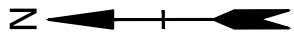
Study Area

DATE: 03/18/2019

SCALE: 1" = 200'

FIGURE 1

Tighe & Bond
www.tighebond.com

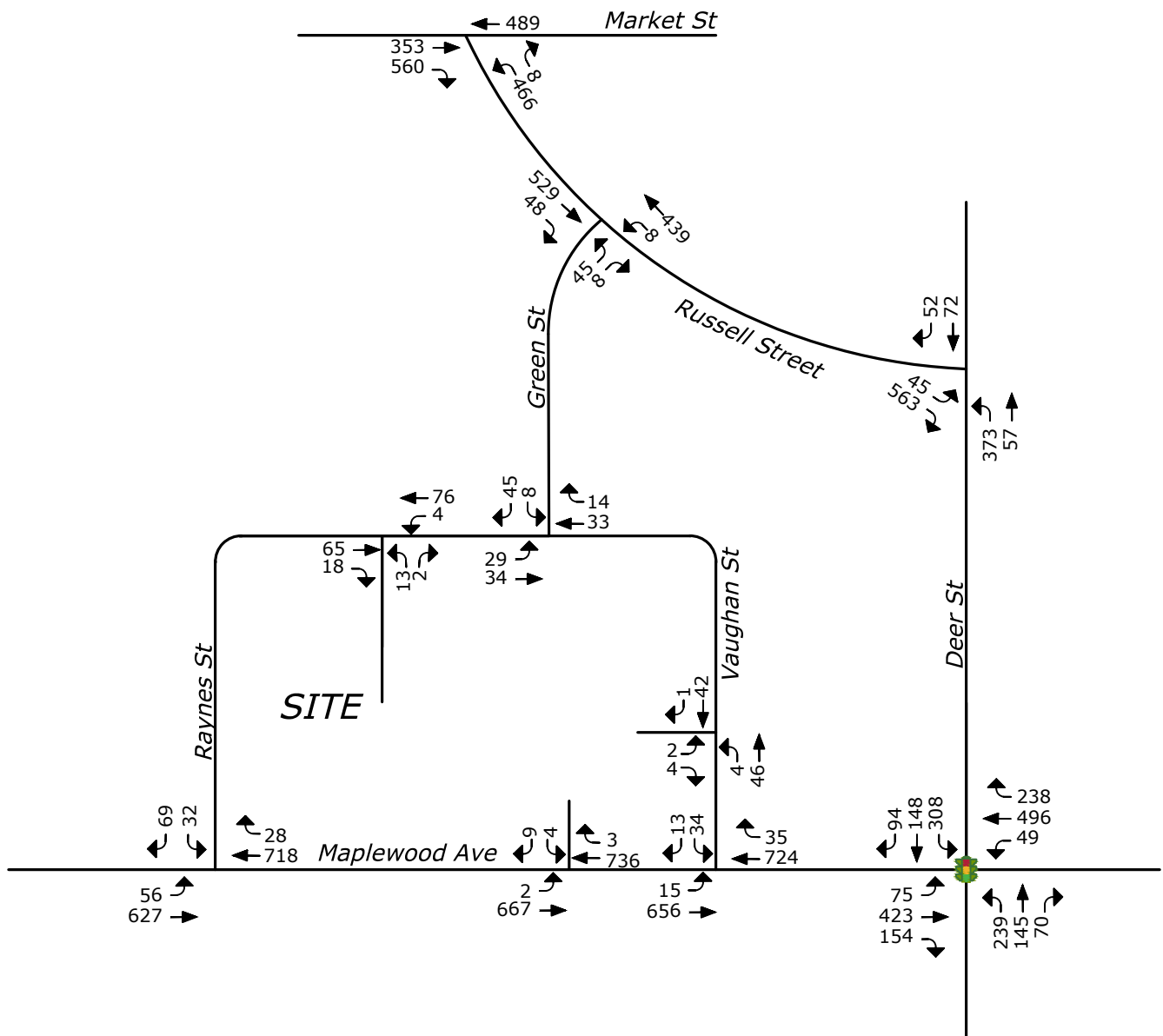
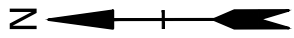


LEGEND



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	

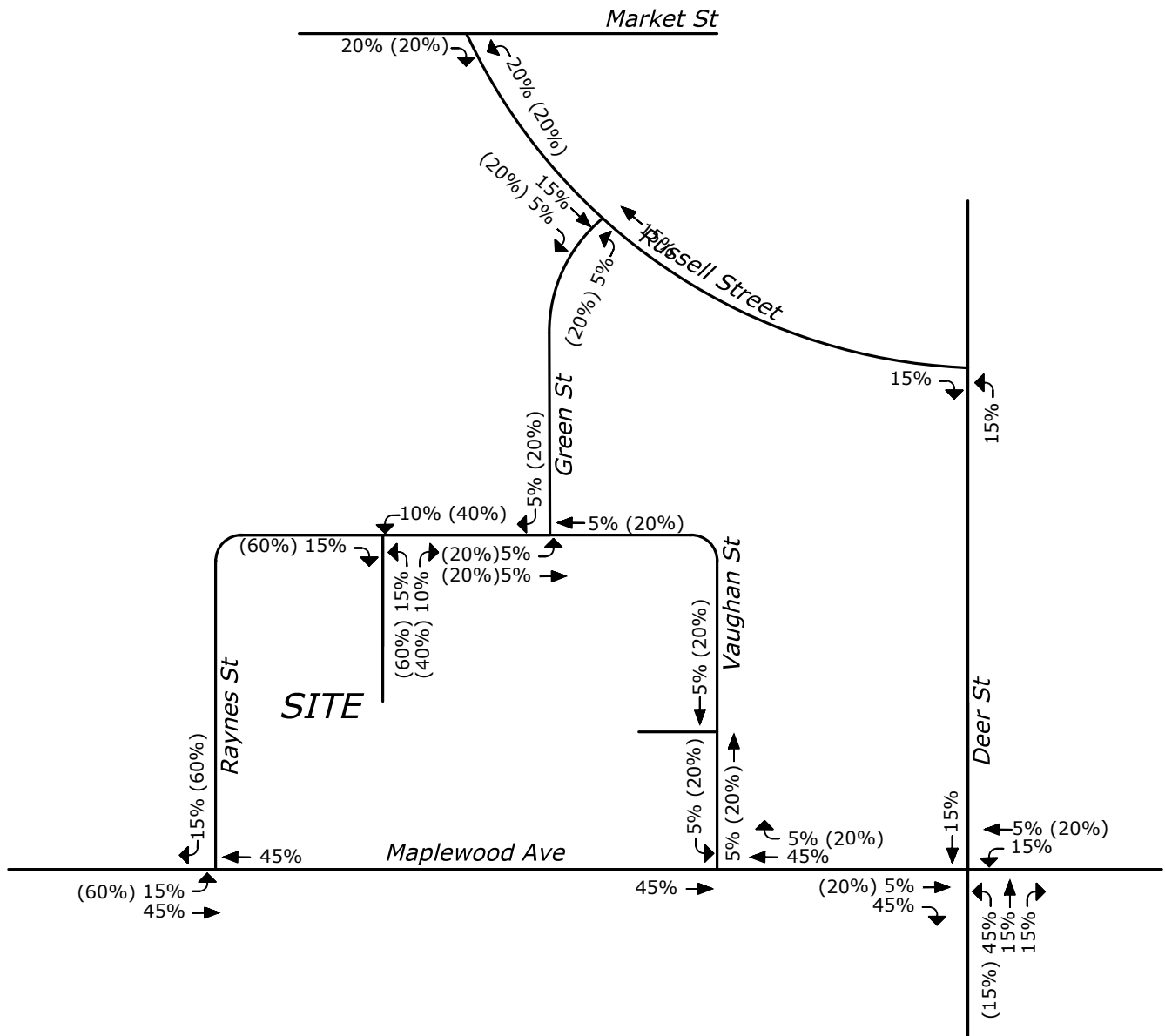
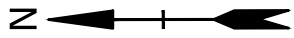


LEGEND



TRAFFIC SIGNAL

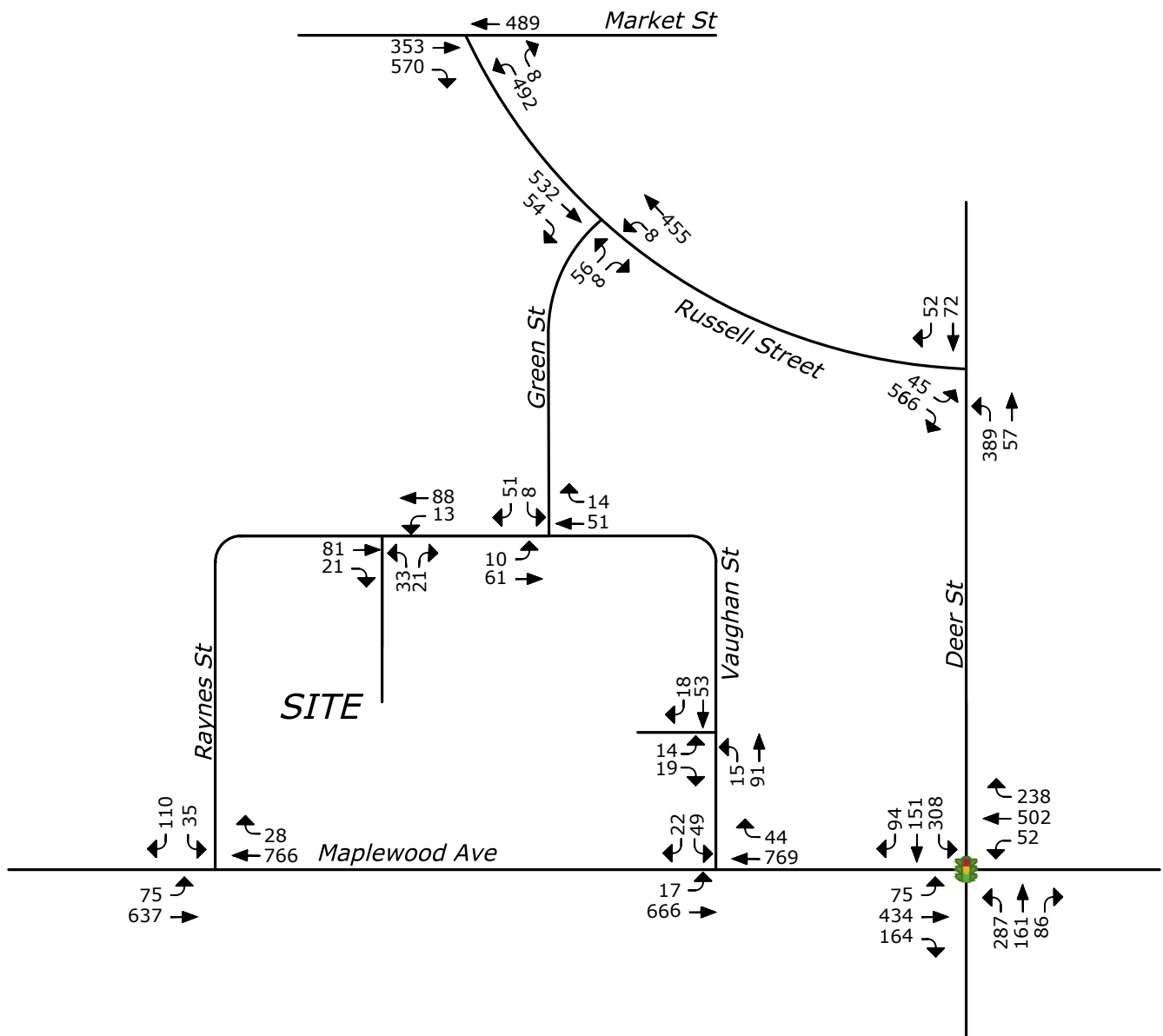
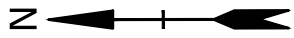
Proposed Office Building 111 Maplewood Avenue, Portsmouth NH	
2030 No Build Peak Hour Traffic Volumes	
DATE: 03/18/2019	 www.tighebond.com
SCALE: No Scale	
FIGURE 3	



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>	



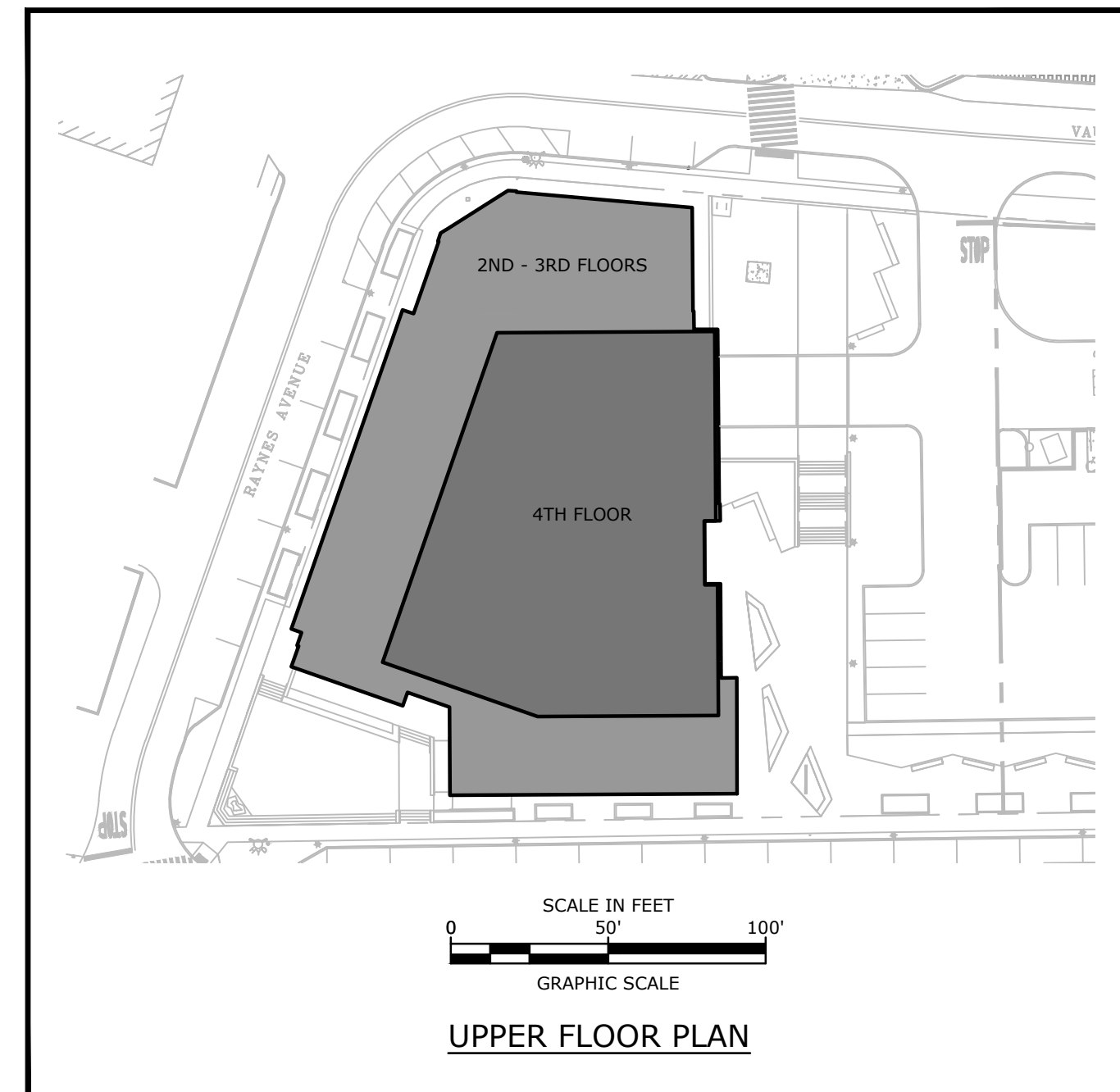
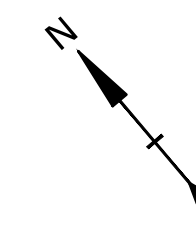
LEGEND



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 (CDS)
DOWNTOWN OVERLAY DISTRICT
NORTH END INCENTIVE OVERLAY DISTRICT
HISTORIC DISTRICT

PROPOSED USE: OFFICE

PROPOSED LOT SIZE: ±0.98 ACRES (±42,778 SF)

PARKING REQUIREMENTS

PARKING SPACES REQUIRED:			
OFFICE	±59,000 SF	0 SPACES	
COMMERCIAL	±5,000 SF	0 SPACES	
DOWNTOWN OVERLAY DISTRICT		-4 SPACES	
TOTAL MINIMUM PARKING SPACES REQUIRED =		0 SPACES	
TOTAL PARKING SPACES PROVIDED:			36 SPACES
TOTAL PARKING SPACES PROVIDED =			36 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
----------------------------------	----------	----------

PROPOSED GROSS FLOOR AREAS				
FLOOR	OFFICE (SF)	COMMERCIAL (SF)	SERVICE/COMMON (SF)	TOTAL (SF)
BASEMENT	0	1,400	1,900	3,300
FIRST	0	13,300	6,600	19,900
SECOND	19,000	0	1,000	20,000
THIRD	19,000	0	1,000	20,000
FOURTH	9,500	0	1,000	10,500
TOTAL	47,500	14,700	11,500	73,700*

* EXCLUDES 15,540 SF OF BASEMENT LEVEL PARKING AREA

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
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% ±47.0%
MAXIMUM BUILDING FOOTPRINT:	*30,000 SF 20,117 SF
MINIMUM LOT AREA:	NR
MINIMUM LOT AREA PER DWELLING UNIT:	NR
MINIMUM OPEN SPACE:	5% 37.8%
MAXIMUM GROUND FLOOR GFA PER USE:	15,000 SF 13,300 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
MINIMUM GROUND STORY HEIGHT:	12 FT
MINIMUM SECOND STORY HEIGHT:	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:

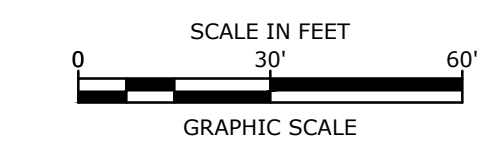
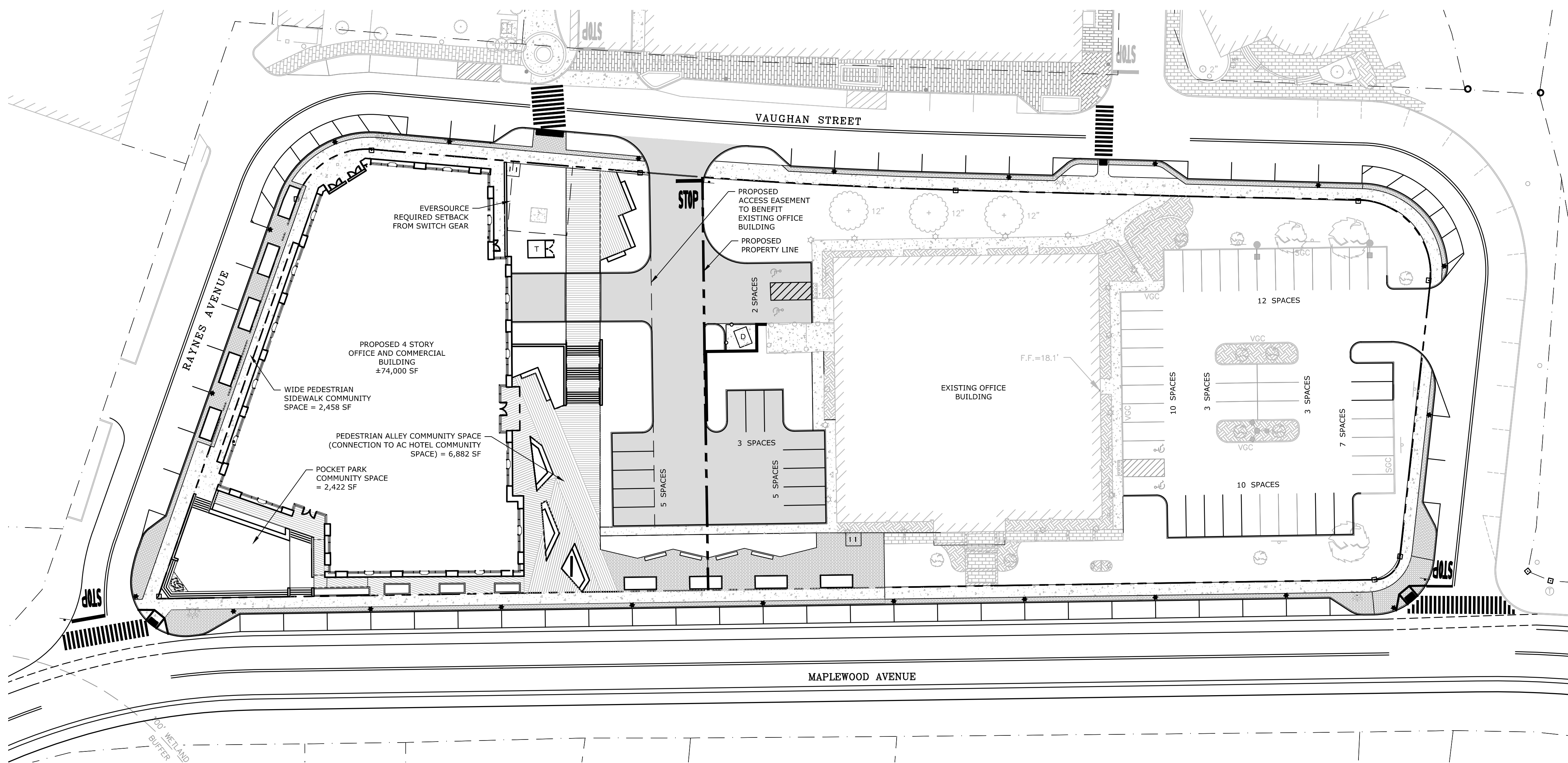
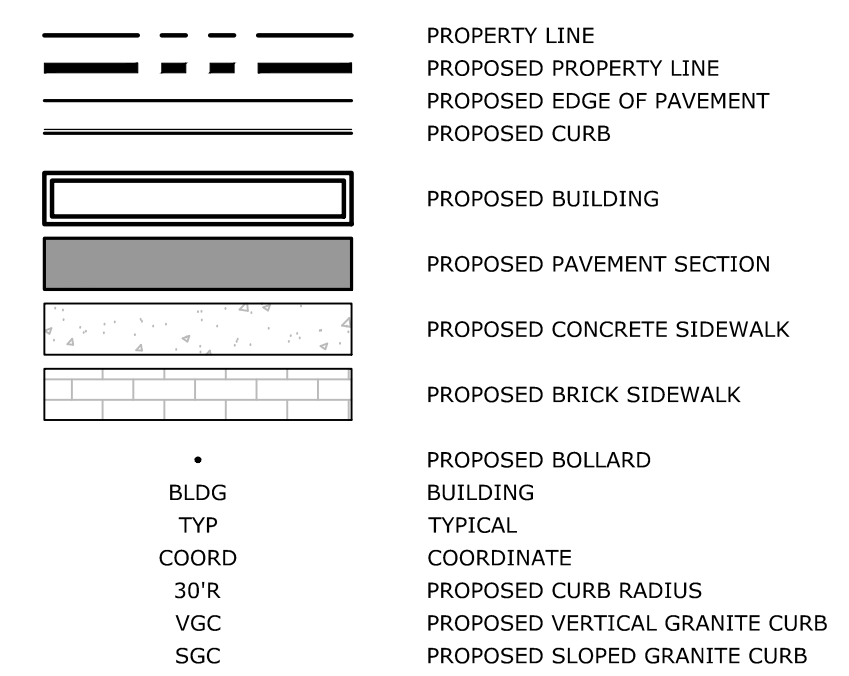
REQUIRED	PROVIDED
8,556 SF	11,762 SF
20%	27.5%

INCENTIVES TO DEVELOPMENT STANDARDS:

MAXIMUM BUILDING FOOTPRINT PLUS 1-STORY, MAX 10 FT	30,000 SF **60 FT	20,117 SF 55 FT
MINIMUM SIDEWALK WIDTH	**12 FT	12 FT

***ZONING ORDINANCE 10.5A46.10, FOOTNOTE 4 REQUIRES THE SIDEWALK WIDTH TO BE 10 FT PLUS AN EXTRA 2 FT FOR EACH STORY OF BUILDING HEIGHT ABOVE 3 STORIES.

LEGEND



Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	5/7/2019	Planning Board Submission
C	4/16/2019	Revised TAC Submission
B	3/18/2019	NHDES Submissions
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

Last Save Date: May 7, 2019 1:17 PM By: MAHANSEN
 Plot Date: Wednesday, May 08, 2019 Plotted By: Neil A. Hansen
 P&E File Location: J:\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\VerK-0076-019_C-SITE.dwg Layout Tab: 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)**



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:



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					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:



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	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	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	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	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	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	1	0	1	0	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	0	1	0	1	0	0	0	0	0	0	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	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	
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	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	
Entering Leg	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	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	1	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	2	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	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	7	7	0	0	0	0	0	100	100	0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	27.3	36.4	63.6	63.6	0	0	0	0	0	9.09	9.09	0	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	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	1.000		
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	0.625	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	5	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:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

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**



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
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	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
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 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	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
Total	0	0	0	1	0	1	0	0	0	4	9	13	0	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	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	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	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	4	4	0	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	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	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	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	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	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	0.000	0.875
Entering Leg	0	0	0	1	0	1	0	0	0	4	9	13	0	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:

	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:



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	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						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						828
Total					795					52					809						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@pdilic.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	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	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	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
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	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	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
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	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	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	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		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	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	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	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	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
Total Volume	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	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		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	0.000	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	0	1	0	0	0	0	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:



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	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	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
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	
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	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	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
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	0.500	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	0.750
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					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	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:

	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	
5:00 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	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	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	3	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	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		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	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	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	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	3	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	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	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:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

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:



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					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					1					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:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

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					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	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	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
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	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	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
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	1	1	0	0	2	0	0	0	0	0	0	4	2	0	6	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	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	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
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	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	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:



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	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	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	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	1	1	1	0	0	0	0	1	0	1	0	1	0	0	0	1	0	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	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
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
 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
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	1	1	0	0	0	1	0	1	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
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	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	1	2	3	0	0	0	1	0	1	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		
Total %	0	0	0	25	50	75	0	0	0	25	0	25	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
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	1	1	0	0	0	1	0	1	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
Total Volume	0	0	0	0	1	1	0	0	0	1	0	1	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		
PHF	0.000	0.000	0.000	0.000	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	0	0	0	1	0	1	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**



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:

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**



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:

5:00 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	
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@pdilic.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**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.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**



**PRECISION
 DATA
 INDUSTRIES, LLC**

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Class:

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
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@pdilic.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																			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																			14	32
Total																			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:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

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**



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:

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
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**



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	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

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	
4:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	1	1	0	0	0	2	3	5	0	0	0	1	0	1	1	
Total	0	0	0	0	2	2	0	0	0	4	6	10	0	0	0	1	0	1	1	
5:00 PM	0	0	0	0	1	1	0	0	0	2	6	8	0	0	0	1	1	2	2	
5:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	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	0	0	0	
5:45 PM	0	0	0	0	1	1	0	0	0	1	1	2	0	0	0	0	0	0	0	
Total	0	0	0	0	2	2	0	0	0	4	10	14	0	0	0	1	1	2	2	
Grand Total	0	0	0	0	4	4	0	0	0	8	16	24	0	0	0	2	1	3	3	
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	
4:30 PM	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	1	1	0	0	0	2	3	5	0	0	0	1	0	1	1	
5:00 PM	0	0	0	0	1	1	0	0	0	2	6	8	0	0	0	1	1	2	2	
Total Volume	0	0	0	0	3	3	0	0	0	5	12	17	0	0	0	2	1	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	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)

Class:

	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**



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:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

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@pdilic.com

Class:

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				0	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@pdillc.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	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**



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.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
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
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
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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:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

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**



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)**

	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@pdillc.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
 Class:



46 Morton Street, Framingham, MA 01702
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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	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			
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	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	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			
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	1
Total	1							0							0							1	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):

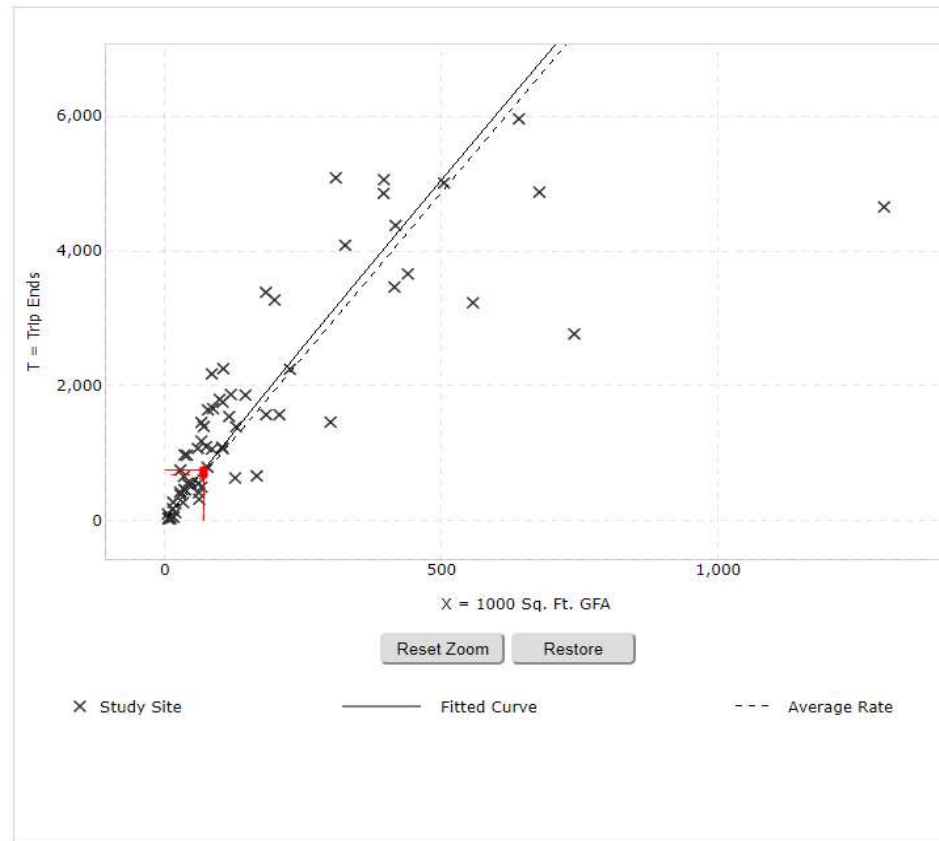
TIME PERIOD:

SETTING/LOCATION:

TRIP TYPE:

ENTER IV VALUE TO CALCULATE TRIPS:

Data Plot and Equation



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
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

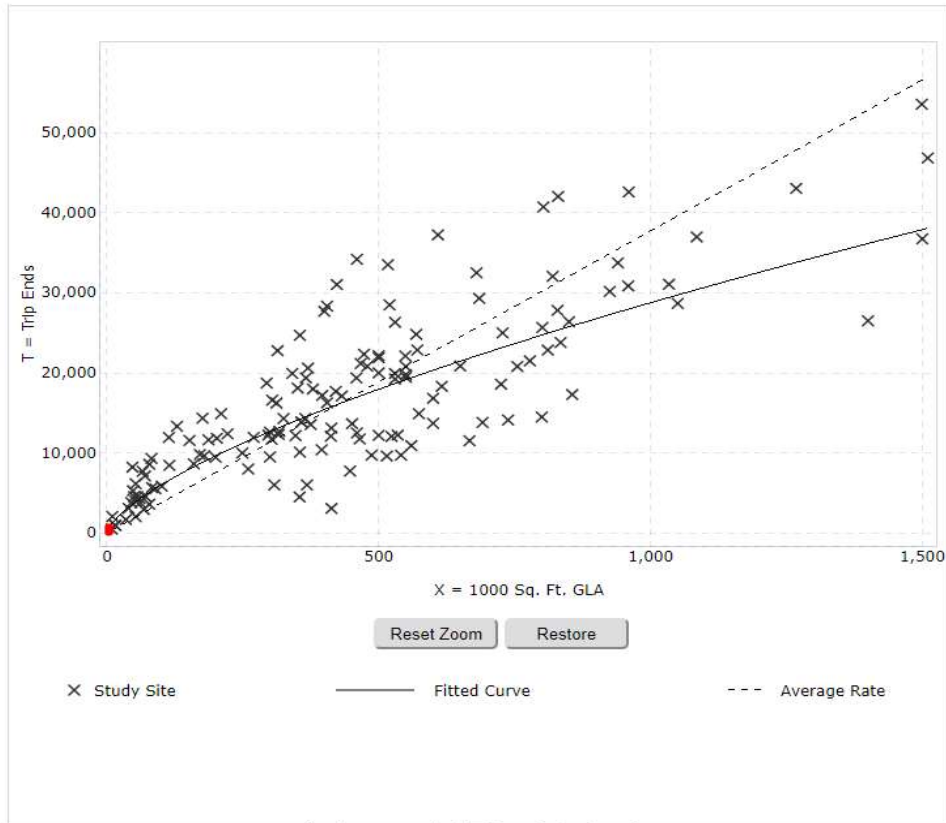
TIME PERIOD:
 Weekday

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 4 Calculate

Data Plot and Equation



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

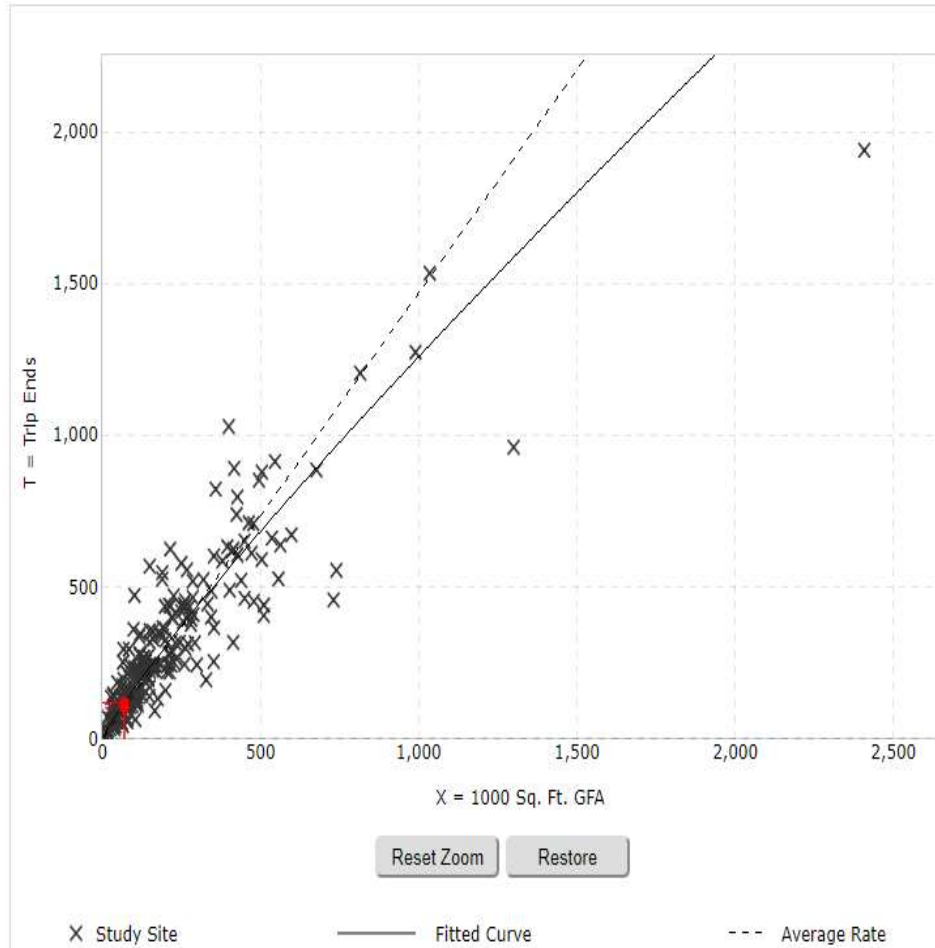
TIME PERIOD:
 Weekday, AM Peak Hour of Generator

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

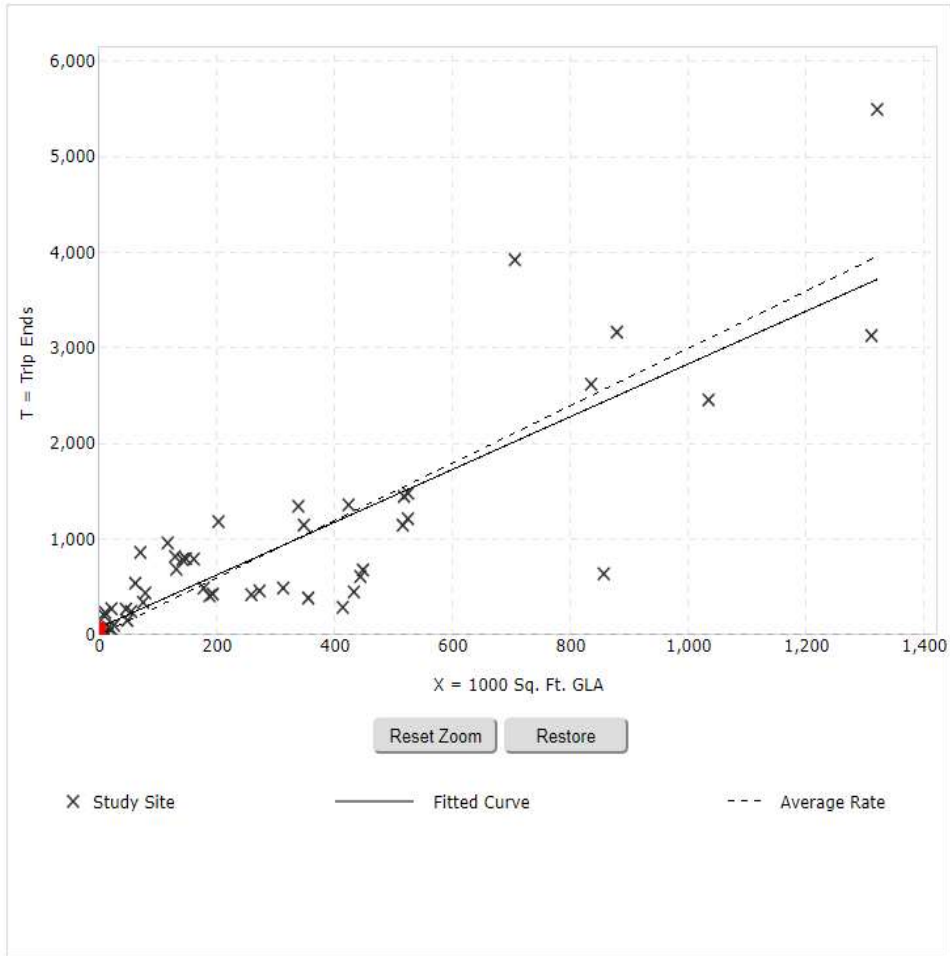
TIME PERIOD:
 Weekday, AM Peak Hour of Generator

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 4 Calculate

Data Plot and Equation



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 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:	$T = 2.76(X) + 77.28$
R ² :	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

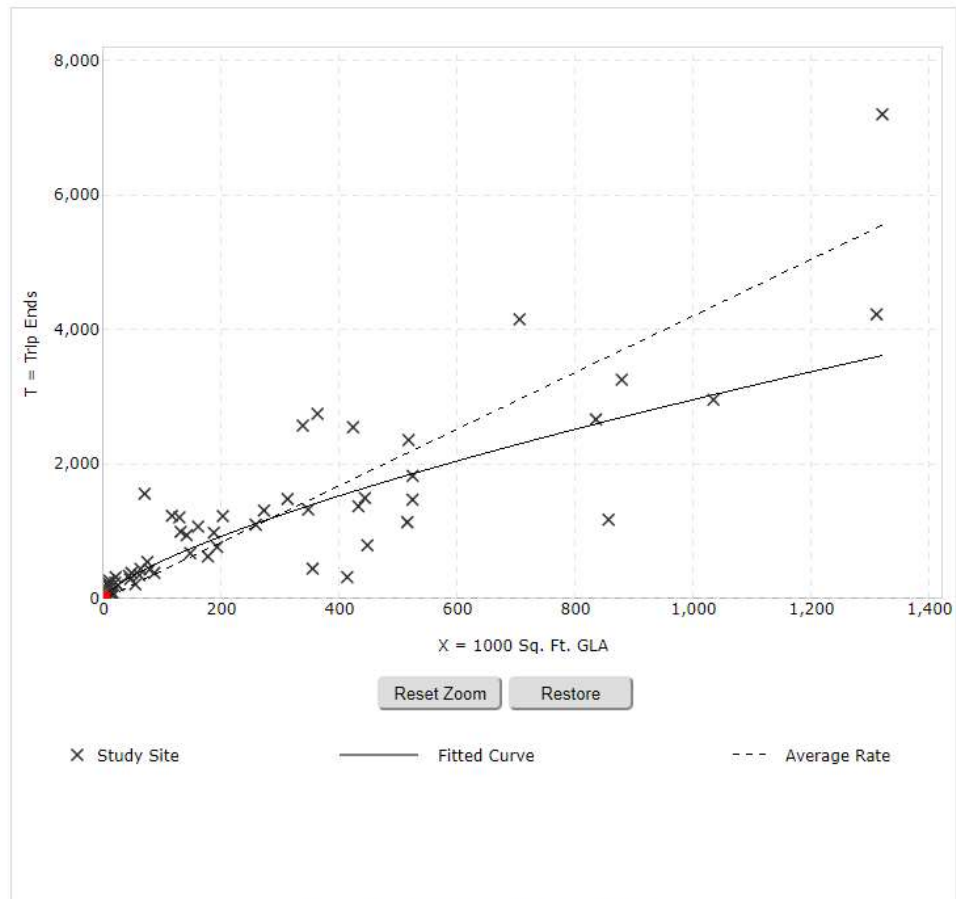
TIME PERIOD:
 Weekday, PM Peak Hour of Generator

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
 4 Calculate

Data Plot and Equation



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 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

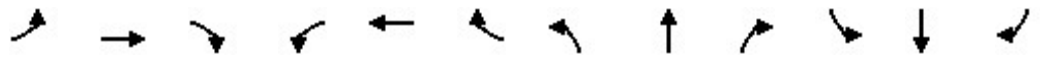
Direction	Entering %	Exiting %
Maplewood Ave to/from Northwest	60%	60%
Market St to/from Northwest	20%	20%
Congress St to/from Northeast	10%	10%
Islington St to/from Southwest	5%	5%
<u>Middle St to/from South</u>	<u>5%</u>	<u>5%</u>
Total	100%	100%

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

Lanes, Volumes, Timings
3: Maplewood Ave & Deer St

K0076-19 111 Maplewood Ave, Portsmouth HH
2020 No Build

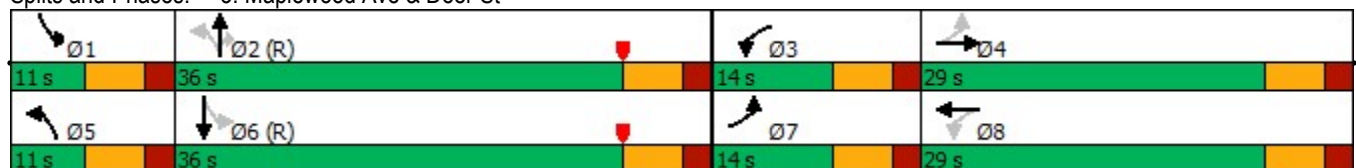


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	136	69	287	138	88	48	453	218	70	382	149
Future Volume (vph)	230	136	69	287	138	88	48	453	218	70	382	149
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	348	311	0	378	298	0	55	521	251	85	648	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	1.32	0.78		1.39	0.72		0.28	0.73	0.32	0.30	0.93	
Control Delay	194.9	44.1		221.2	39.1		17.2	33.5	4.2	16.1	49.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	194.9	44.1		221.2	39.1		17.2	33.5	4.2	16.1	49.7	
Queue Length 50th (ft)	~181	153		~212	139		16	270	0	24	~394	
Queue Length 95th (ft)	#165	153		#258	171		37	#429	45	48	#537	
Internal Link Dist (ft)		283			373			505			151	
Turn Bay Length (ft)												
Base Capacity (vph)	263	487		272	503		193	709	796	284	698	
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	1.32	0.64		1.39	0.59		0.28	0.73	0.32	0.30	0.93	























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: 100
 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 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		↶	↷		↶	↷
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
Stage 1	-	-	-	-	59
Stage 2	-	-	-	-	90
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	-	-	-	843
Stage 1	-	-	-	-	964
Stage 2	-	-	-	-	934
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1545	-	-	-	840
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	R	T	R	L	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	-	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						
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	Major2	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

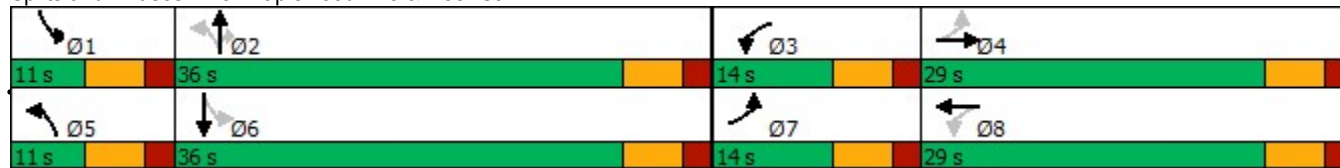
~ Volume exceeds capacity, queue is theoretically infinite.

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	TT		TT			TT
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

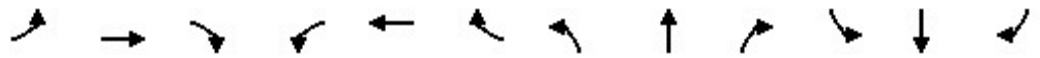
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	293	68	0	0	76
Stage 1	68	-	-	-	-
Stage 2	225	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	698	995	-	-	1523
Stage 1	955	-	-	-	-
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

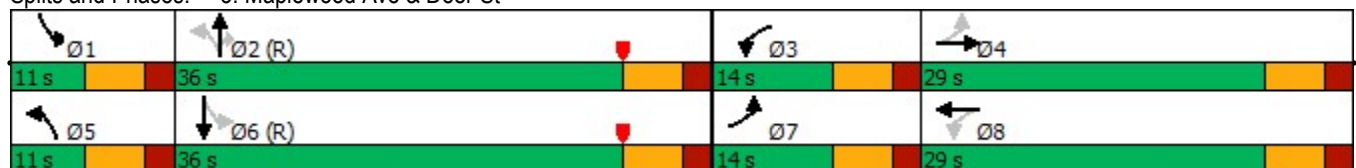


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	145	70	308	148	94	49	496	238	75	423	154
Future Volume (vph)	239	145	70	308	148	94	49	496	238	75	423	154
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared 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		↔	↔		↔	
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
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						
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

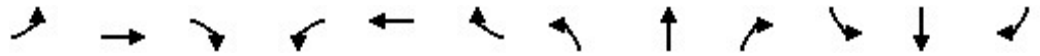
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	202	50	0	0	58
Stage 1	50	-	-	-	-
Stage 2	152	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	787	1018	-	-	1546
Stage 1	972	-	-	-	-
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

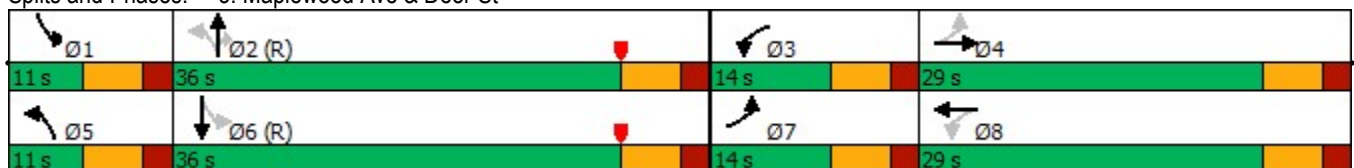


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	161	86	308	151	94	52	502	238	75	434	164
Future Volume (vph)	287	161	86	308	151	94	52	502	238	75	434	164
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared 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	W		T			T
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						
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

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 16, 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

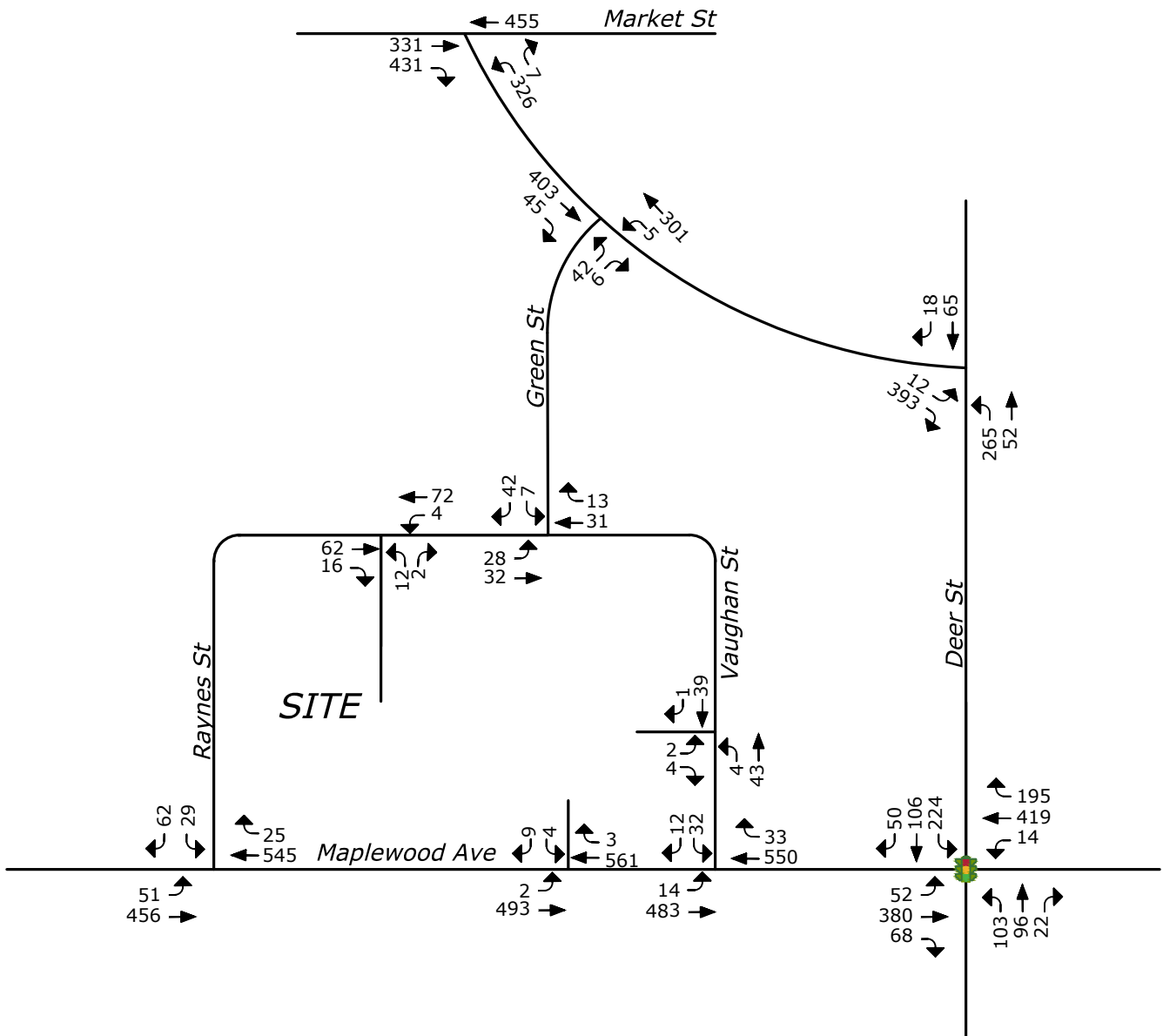
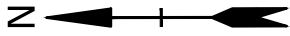
Study Area

DATE: 03/18/2019

SCALE: 1" = 200'

FIGURE 1

Tighe & Bond
www.tighebond.com

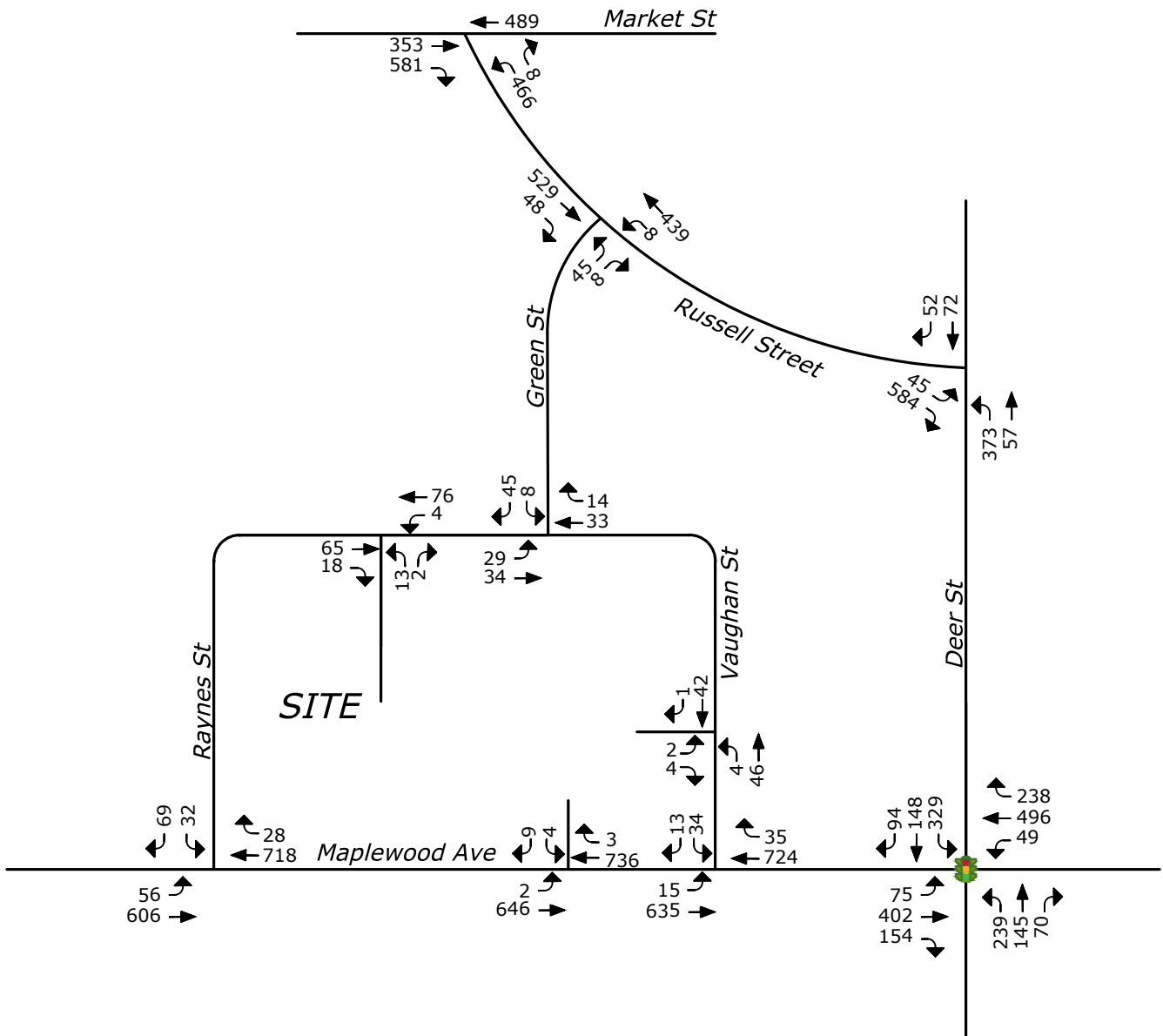
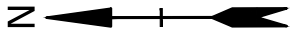


LEGEND



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	

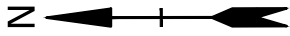


LEGEND



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	

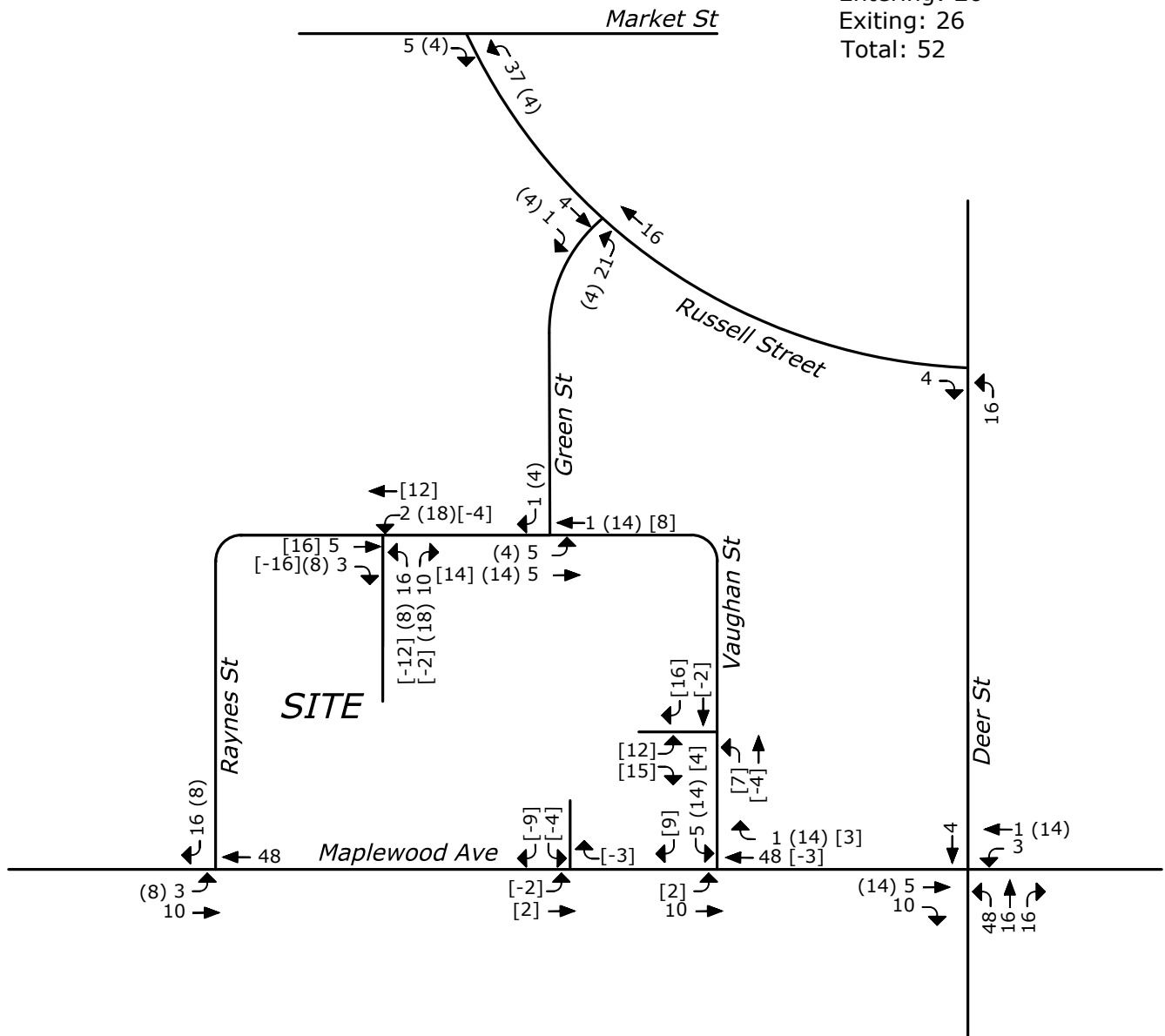


Office Generated Trips

Entering: 23
 Exiting: 106
 Total: 129

Retail Generated Trips

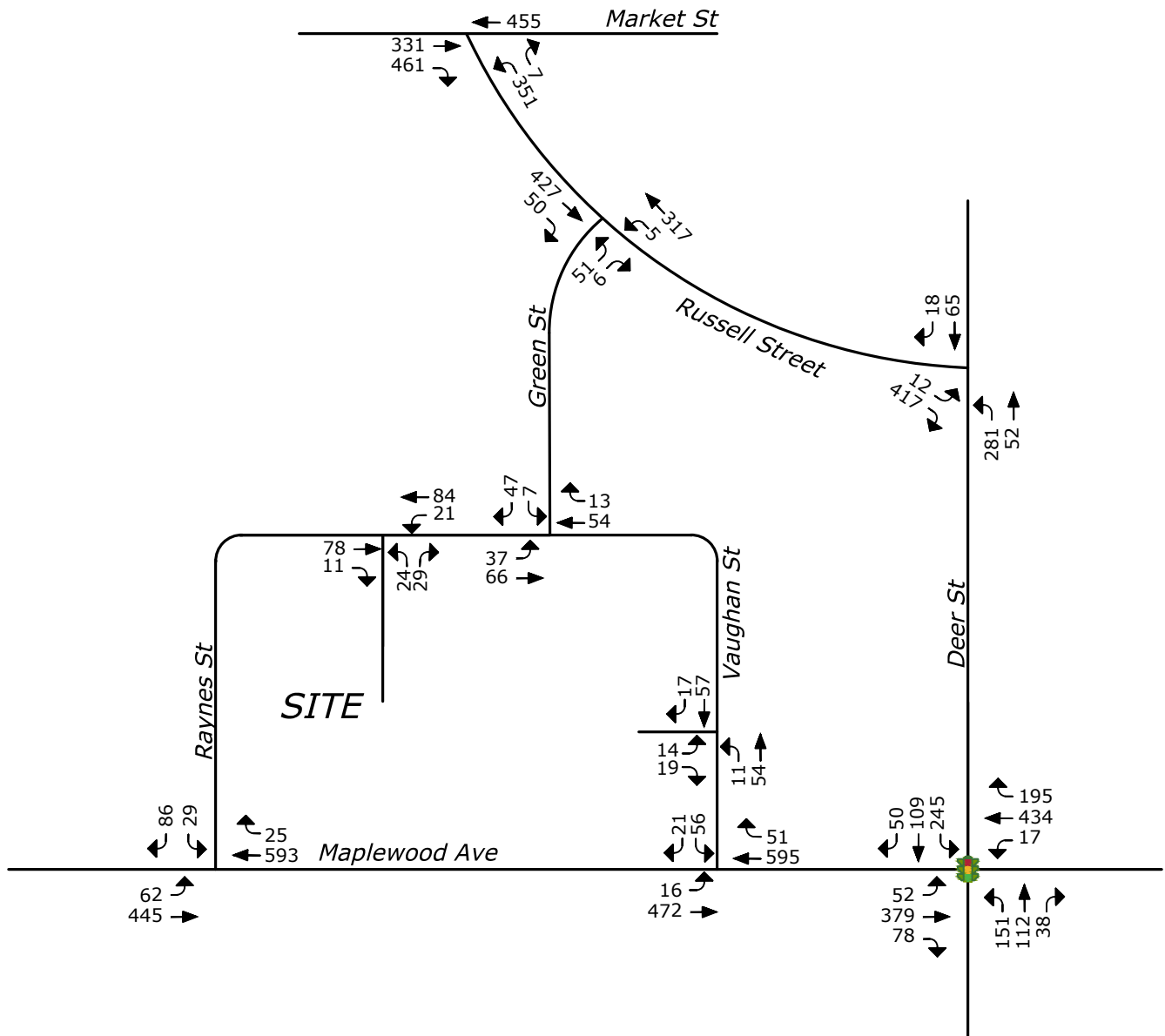
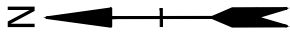
Entering: 26
 Exiting: 26
 Total: 52



LEGEND

- XX Office Trips
- (XX) Retail Trips
- [XX] Driveway Redistribution

<p>Proposed Office Building 111 Maplewood Avenue, Portsmouth NH</p>	
<p>Site Generated Trips</p>	
<p>DATE: 03/18/2019</p>	<p>www.tighebond.com</p>
<p>SCALE: No Scale</p>	
<p>FIGURE 5</p>	

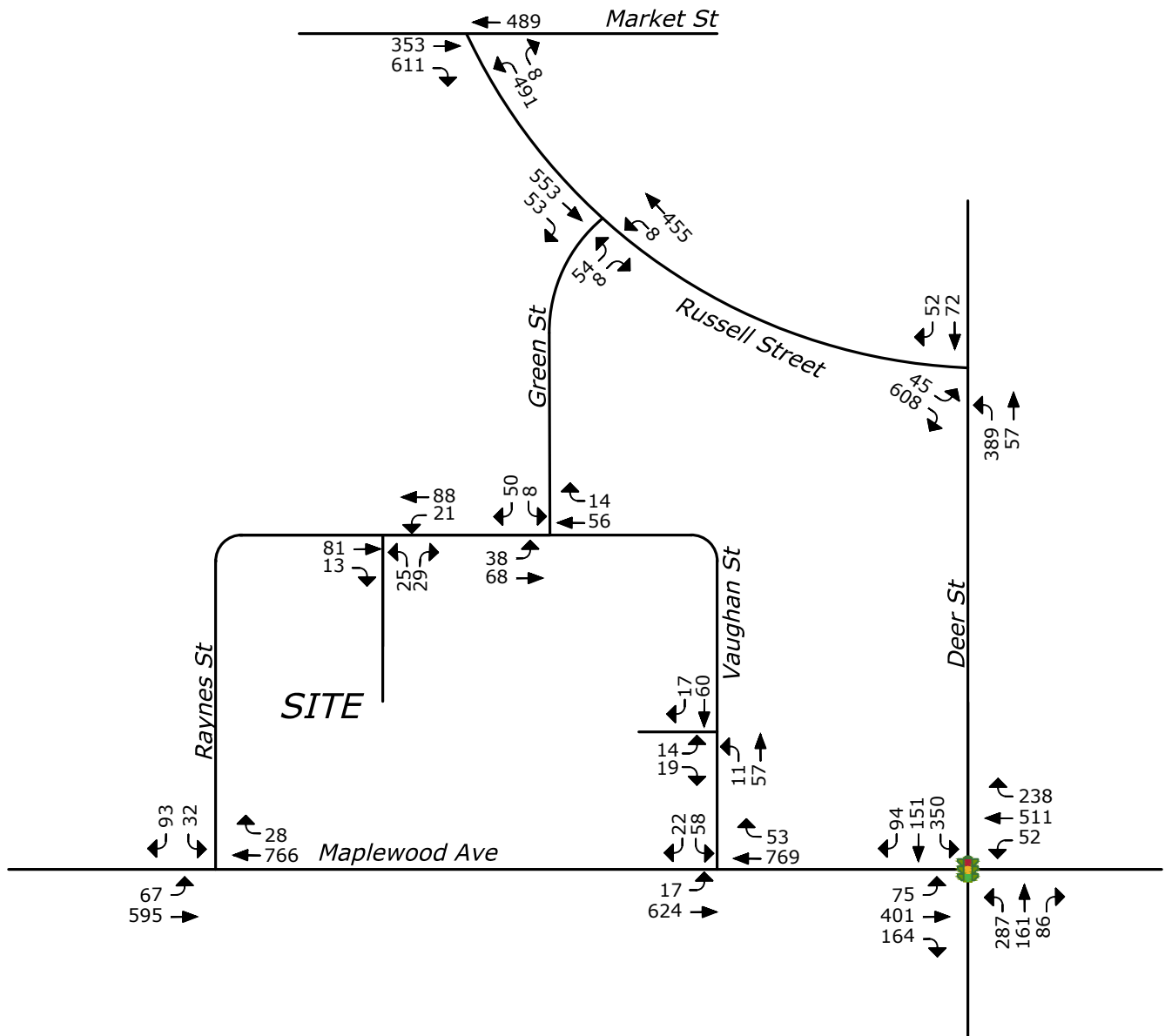
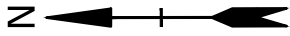


LEGEND



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

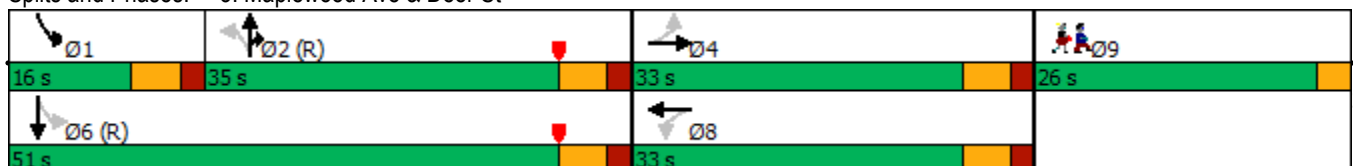


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (vph)	103	96	22	224	106	50	14	419	195	52	380	68
Future Volume (vph)	103	96	22	224	106	50	14	419	195	52	380	68
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
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			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	E
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	77.0%	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		↶	↷		↶	↷
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	0
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	R	T	R	L	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

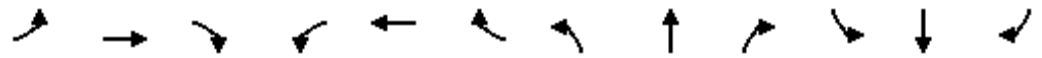
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	190	46	0	0	54
Stage 1	46	-	-	-	-
Stage 2	144	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	799	1023	-	-	1551
Stage 1	976	-	-	-	-
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

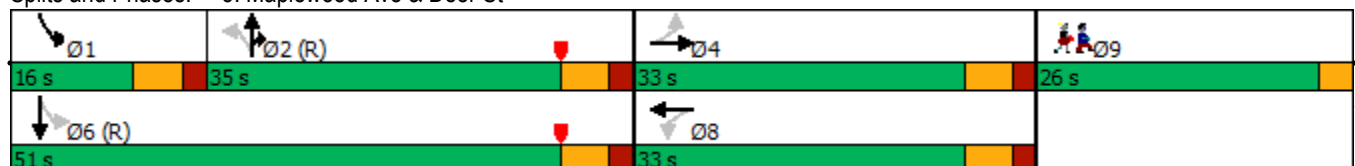


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	151	112	38	245	109	50	17	434	195	52	379	78
Future Volume (vph)	151	112	38	245	109	50	17	434	195	52	379	78
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
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

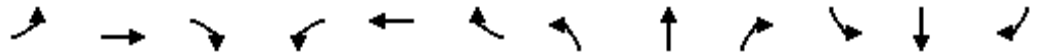
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume 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%	ICU Level of Service
Analysis Period (min)	15	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		
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	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	Y		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	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

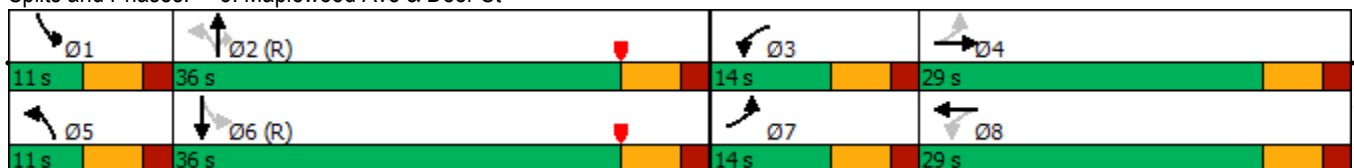


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	161	86	350	151	94	52	511	238	75	401	164
Future Volume (vph)	287	161	86	350	151	94	52	511	238	75	401	164
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared 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						
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
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

March 11, 2019

Neil A. Hansen, PE
Tighe & Bond, Inc.
177 Corporate Drive
Portsmouth, NH 03801

Dear Mr. Hansen:

I am responding to your request to confirm the availability of electric service for the proposed 111 Maplewood Avenue project being constructed for/by RW Norfolk Holdings, LLC.

The proposed project consists of a 4-story building with $\pm 75,000$ s/f of office space and parking below grade. The proposed development will be constructed on the corner of Maplewood Avenue, Raynes Avenue and Vaughan Street.

The developer will be responsible for the installation of all underground facilities and infrastructure required to service the new building. The service will be as shown on attached marked up Utilities Plan Sheet C-104. The proposed building service will be fed from a new transformer installed adjacent to existing manhole and switch gear as depicted on utility plan Sheet C-104. The developer will work with Eversource to obtain all necessary easements adjustments and licenses for the proposed underground facilities listed above.

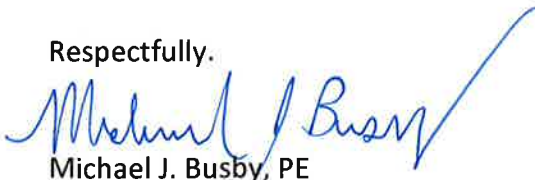
This letter serves as confirmation that Eversource has sufficient capacity in the area to provide service to this proposed development. The cost of extending service to the aforementioned location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled "Utilities Plan" dated 03/18/2019, shows the proposed transformer location and proposed underground conduit to service your proposed project.

Eversource approves the locations shown; assuming the final installed locations meet all clearances, physical protection, and access requirements as outlined in Eversource's "Information & Requirements For Electric Supply" (<https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2>).

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-436-7708 Ext. 555-5678

Respectfully,



Michael J. Busby, PE
NH Eastern Regional Engineering and Design Manager, Eversource

cc: (via e-mail)
Michael Lee, Eastern Region Operations Manager, Eversource
Mary Jo Hanson, Field Supervisor, Electric Design, Eversource



3/13/19

RW Norfolk Holdings, LLC
Portsmouth, NH 03801

RE: Natural gas service to 111 Maplewood Ave, Portsmouth, NH

Unitil's natural gas division has reviewed the requested site for natural gas service. The site being located at 111 Maplewood Ave, Portsmouth, NH.

Unitil hereby confirms natural gas is available from Raynes Avenue to supply the proposed office building.

Please contact me with any questions at 603-294-5144.

Sincerely,

A handwritten signature in dark ink, appearing to read "David Beaulieu", with a long horizontal flourish extending to the right.

David Beaulieu
Business Development Executive
Unitil
325 West Road
Portsmouth, NH 03801

March 18, 2019

Portsmouth Planning Board

GREEN BUILDING STATEMENT

111 Maplewood Avenue -Proposed Commercial/Office Building

The Shell & Core of this commercial/office building at 111 Maplewood is 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 2009 International Energy Code with amendments. This building will be built to current best practices and will exceed the 2009 IECC requirements when appropriate.

- Site: This site is a redevelopment on a previously developed semi-urban site. Parking is accommodated underneath the structure, reducing hardscape footprint. This site provides good access to local businesses and residences – by foot or bicycle. Landscaped open community space provided on its perimeter.
- Exterior Wall System: continuous insulation outside the framing system and continuous air barrier provide high thermal performance. Exterior skin of is a combination of masonry, terra-cotta rain screen, and metal panel wall systems that provide an air space in front of the insulation to allow for moisture management. Terracotta has an extremely long durability.
- Window Systems: windows have a thermally broken aluminum framing with insulated, high-performance glazing to provide enhanced thermal performance and solar control. Exterior sun control devices are used at strategic areas of western solar exposure. Large windows provide an abundance of daylight access to its occupants.
- Roofing System: high albedo membrane system over continuous rigid insulation that exceeds the base energy code requirements.
- HVAC System: high-efficiency, variable volume rooftop units with economizers and variable speed drives are designed. High efficiency condensing boilers with variable frequency pumps for providing heat to hydronic variable air volume boxes at spaces. Digital controls with occupancy sensors and nighttime setbacks provided. Toilet room exhaust runs through heat recovery units to preheat incoming air.
- Plumbing System: fixtures are low flow. High efficiency gas fired condensing boiler for domestic hot water designed.
- Lighting System: LED cutoff fixtures for energy efficiency and to minimize light pollution at exterior designed. Interior lighting is LED provided throughout - using less than 1 watt / sf and perimeter daylight sensors. Occupancy sensors utilized as required by code.
- Landscaping: local species designed that are drought tolerant and noninvasive incorporated into plantings list. Water saving irrigation system provided.

architecture
interior design
urban design

Sincerely



Haril A. Pandya, FAIA LEED AP
Principal
CBT Architects

cbt

110 canal street
boston, ma 02114
617 262 4354
cbtarchitects.com

TYPE: SITE HEAD
RS-TUR-177

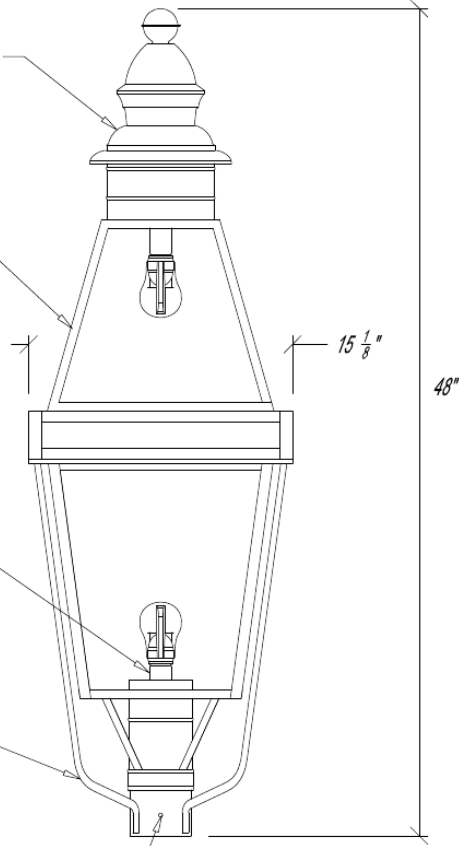
CROWN VENT ASSEMBLY WITH REMOVABLE TOP,
FABRICATED FROM 20 OZ. COMMERCIAL GRADE
COPPER. MEDIUM BASE PORCELAIN SOCKET
MOUNTED TO ACCOMMODATE SYLVANIA #78911,
14 WATT LED LAMP

COPPER CAGE, 24 OZ. COMMERCIAL GRADE
COPPER THROUGHOUT CAGE

MEDIUM BASE PORCELAIN SOCKET FOR
LED LAMP (LAMPS BY OTHER),
NO CHIMNEY FOR PORTSMOUTH SPEC.

LANTERN CRADLE FABRICATED FROM
 $\frac{1}{2}$ " OD ROUND STEEL HOT ROLLED ROD,
 $\frac{1}{4}$ " THICK x 1" WIDE HOT ROLLED BAR STEEL
AND $3\frac{1}{2}$ " OD x $\frac{13}{64}$ " x $4\frac{1}{4}$ " LONG
SLIPFITTER SLEEVE.

$\frac{1}{4}$ " - 20 x $\frac{1}{2}$ " LONG HEX HEAD SET SCREW,
THREE (3), 120 DEG. APART, STAINLESS STEEL



A - FINISH OPTIONS - SATIN BLACK

B - LOWER, UPPER, AND SIGN SECTION PANELS
0.125" CLEAR GLASS

C - ALL JOINTS FULL SOLDERED WITH
50% TIN, 50% LEAD ALLOY



NEWSTAMP LIGHTING CO.

227 BAY ROAD

N. EASTON, MA 02356

Project: 111 Maplewood - Portsmouth NH

Project #: 19109.0

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

Lumen Studio, Inc.

Created : 03/14/2019

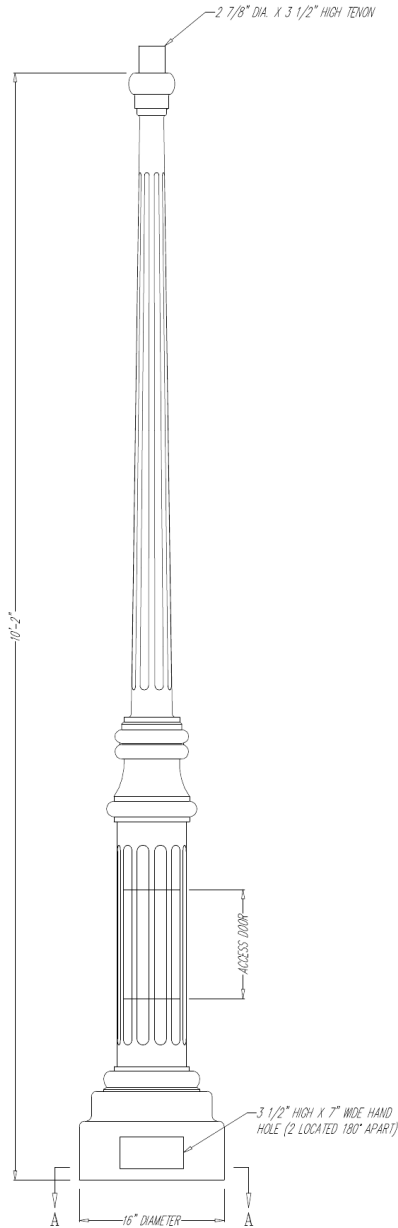
Code/Tag:

PT-1

175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

TYPE: SITE POLE

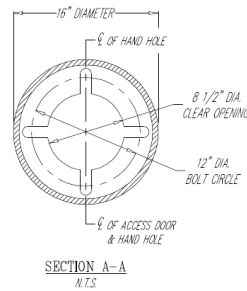
This drawing is property of Spring City Elect. Mfg. and is issued to the recipient with the understanding that it shall not be copied, duplicated, passed on to unauthorized parties, nor used for any purpose other than that for which it is specifically furnished except with Spring City's written permission.



LAMP POST SPECIFICATIONS

STYLE: HANCOCK (INTERNAL ANCHOR BOLTS)
 HEIGHT: 10'-2"
 BASE: 16" DIAMETER
 MATERIAL: PLEASE SEE QUANTITY
 FINISH: PRIME PAINT THEN FINISH PAINT, SHERWIN WILLIAMS
 AEROLON CLASSIC - BLACK
 ACCESS DOOR: LOCATED IN BASE SECURED WITH TAMPER PROOF
 HEX SOCKET SECURITY MACHINE SCREWS
 GROUND STUD PROVISIONS: DRILL AND TAP INSIDE WALL OF BASE OPPOSITE ACCESS DOOR
 1/4"-20 TO ACCOMMODATE GROUND STUD (STUD BY OTHERS)
 ANCHOR BOLTS: (4) 3/4" DIA. X 2 1/2" LONG + 3" HIGH (FULLY GALVANIZED WITH 1
 GALVANIZED NUT AND 1 OVERSIZED GALVANIZED WASHER PER BOLT)
 BOLT PROJECTION: 3" REQUIRED
 TENON: 2 7/8" DIA. X 3 1/2" HIGH
 CATALOG NO.: _PSHNC-16-10.17-2.88(3.50)-09

Quantity: Verify correct quantity
 needed for project. See Sheet
 C-102



REVISION	REVISOR	DATE
1	Y.V.	05-11-2017
2	Y.V.	03-06-2017
3	Y.V.	11-10-2016
4	B.K.R.	10-24-2016
5	B.K.R.	10-13-2015



Spring City Electrical Mfg. Co.
 HALL AND MAIN STREETS - P.O. BOX 19 - SPRING CITY, PA. 19475
 PHONE (610) 948-4000 - FAX (610) 948-5577 - WWW.SPRINGCITY.COM

DESCRIPTION	THE HANCOCK 10'-2" (INTERNAL ANCHOR BOLT TYPE) LAMP POST		
CUSTOMER	ROCKINGHAM ELECTRIC - NEWINGTON, NH		
JOB	PORTSMOUTH, NH		
SCALE	DRAWN BY:	DATE	DRAWING NO.
N.T.S.	W.M.K.	08-14-01	LP-25071

~~PROJECT HISTORY~~
~~QUANTITY - 4 REQUIRED~~
~~MATERIAL: DUCTILE IRON~~
~~PER S.O. # 016642~~
~~QUANTITY - 6 REQUIRED~~
~~MATERIAL: DUCTILE IRON~~
~~PER S.O. # 017131~~

REV.	ALTERATION	DATE	BY

LUMINAIRE SPECIFICATIONS

CATALOGUE NO.: K729-P2FL-II-60(SSL)
-7042-120:277-KPL10

QUANTITY:
GLOBE MAT'L: FLAT ARRAY, CLEAR FLAT LENS
IES CLASSIFIC.: TYPE II
WATTAGE: 60W
LIGHT SOURCE: LIGHT EMITTING DIODE
LINE VOLTAGE: 120:277V
PAINT: TEXTURED BLACK (INCLUDING HARDWARE)
OPTIONS: KPL-10 LEVELING DEVICE

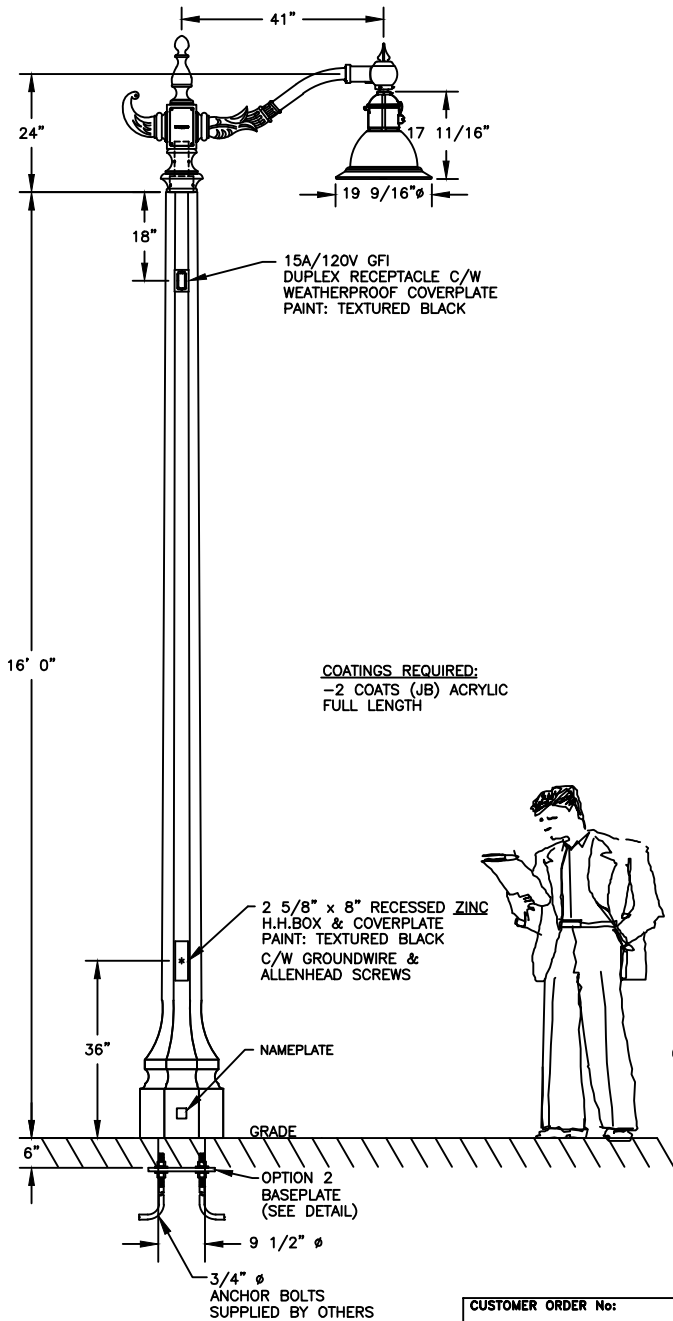
ARM SPECIFICATIONS

CATALOGUE NO.: (MOD) KA72-T-1-3'
QUANTITY:
MATERIAL: ALUMINUM
PAINT: TEXTURED BLACK (INCLUDING HARDWARE)

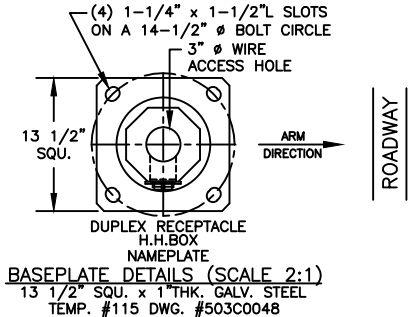
POLE SPECIFICATIONS

CATALOGUE NO.: KBH16-G-S11-SBP
C/W 140-35/55 & DR

QUANTITY:
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





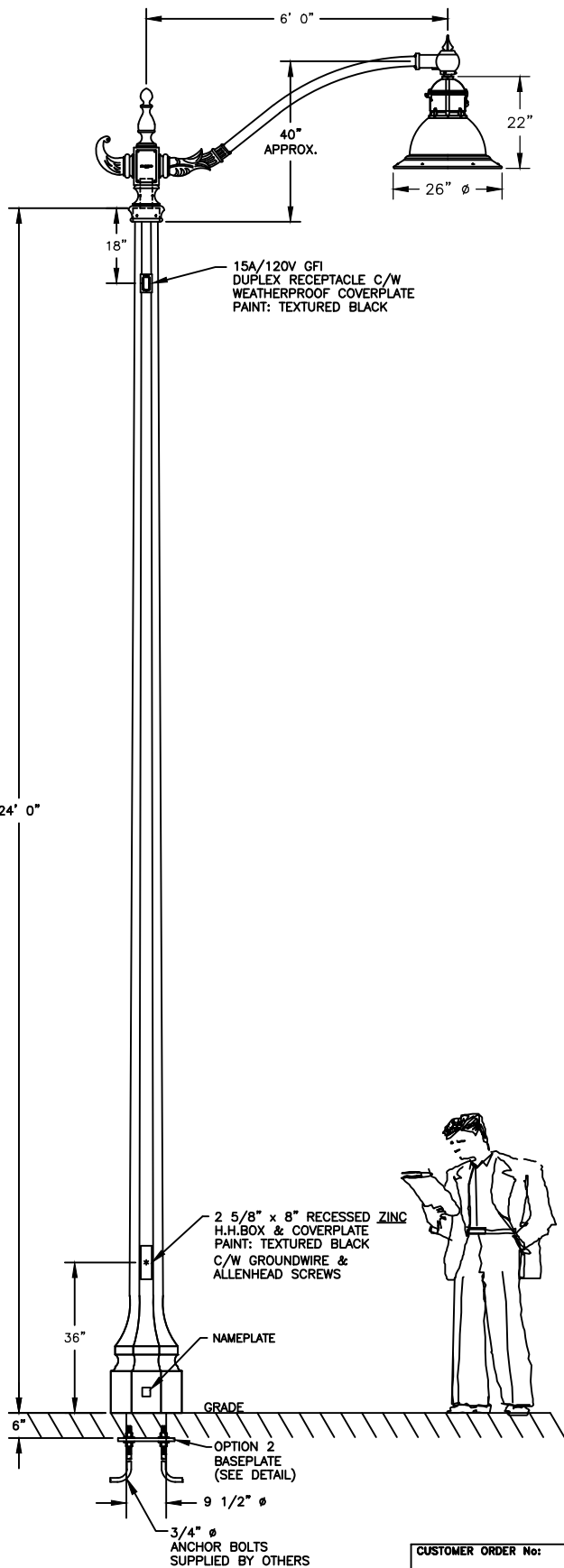
COATINGS REQUIRED:
-2 COATS (JB) ACRYLIC
FULL LENGTH



CUSTOMER APPROVAL & DATE: _____

CUSTOMER ORDER No:	-
STRESSCRETE ORDER No:	-
KMFG. ORDER No:	-
KING U.S. ORDER No:	-

 		Manufacturing Locations: Burlington, Ontario 1-800-268-7809 Northport, Alabama 1-800-435-6563 Atchison, Kansas 1-800-837-1024 Jefferson, Ohio 1-800-268-7809	
King Luminaire • StressCrete • Est. 1953 STRESSCRETE GROUP		PROJECT/CUSTOMER: PORTSMOUTH, NH	
DRAWN BY: A. ALVELA	AT: SC1	CHECKED BY: (blank)	DATE: 10/22/15
DRAWING TYPE: CONCEPT DWG.		DRAWING NUMBER: 206A8479-4	



REV.	ALTERATION	DATE	BY

ROADWAY LUMINAIRE SPECIFICATIONS

CATALOGUE NO.:	K829-P2FL-II-150(SSL) -80126-120:277 S/F KPL20
QUANTITY:	
GLOBE MAT'L:	FLAT ARRAY, CLEAR FLAT LENS
IES CLASSIFIC.:	TYPE II
WATTAGE:	150W (80126 SERIES)
LIGHT SOURCE:	LIGHT EMITTING DIODE
LINE VOLTAGE:	120:277V
PAINT:	TEXTURED BLACK (INCLUDING HARDWARE)
OPTIONS:	S/F KPL-20 LEVELING DEVICE

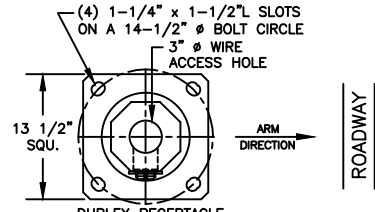
ROADWAY ARM SPECIFICATIONS

CATALOGUE NO.:	KA72-T-1-6'
QUANTITY:	
MATERIAL:	ALUMINUM
PAINT:	TEXTURED BLACK (INCLUDING HARDWARE)

POLE SPECIFICATIONS

CATALOGUE NO.:	KBH24-G-S11-SBP C/W 140-30/70 & DR
QUANTITY:	
SECTION:	OCTAGONAL
COLOUR:	ECLIPSE
FINISH:	POLISHED
POLE TOP:	5 7/16" FL/FL
POLE BUTT:	9 1/2" ϕ
POLE LENGTH:	24' 6"
APPROX WEIGHT:	1,375 lbs.
MIN. RACEWAY:	1 1/8" ϕ



COATINGS REQUIRED:
-2 COATS ACRYLIC
FULL LENGTH



BASEPLATE DETAILS (SCALE 2:1)
13 1/2" SQU. x 1" THK. GALV. STEEL
TEMP. #115 DWG. #503C0048

CUSTOMER APPROVAL & DATE: _____

CUSTOMER ORDER No:	-
STRESSCRETE ORDER No:	-
KMFG. ORDER No:	-
KING U.S. ORDER No:	-

  <p>King Luminaire • StressCrete • Est. 1953</p> <p>STRESSCRETE GROUP</p>	<p>Manufacturing Locations:</p> <p>Burlington, Ontario 1-800-268-7809</p> <p>Northport, Alabama 1-800-435-6563</p> <p>Atchison, Kansas 1-800-837-1024</p> <p>Jefferson, Ohio 1-800-268-7809</p>			
	<p>PROJECT/CUSTOMER:</p> <p>PORTSMOUTH, NH</p>			
<p>DRAWN BY:</p> <p>A. ALVELA</p>	<p>AT:</p> <p>SC1</p>	<p>CHECKED BY:</p> <p> </p>	<p>DATE:</p> <p>10/22/15</p>	<p>REVISION:</p> <p> </p>
<p>DRAWING TYPE:</p> <p>CONCEPT DWG.</p>		<p>DRAWING NUMBER:</p> <p>206A8479-2</p>		