PARKING and TRAFFIC SAFETY COMMITTEE

PORTSMOUTH, NEW HAMPSHIRE

CITY HALL CONFERENCE ROOM A

CITY HALL, MUNICIPAL COMPLEX, 1 JUNKINS AVENUE

Members of the public also have the option to join the meeting over Zoom. (See below for more details) *

8:30 AM October 5th, 2023

AGENDA

- I. CALL TO ORDER
- II. ATTENDANCE
- III. FINANCIAL REPORT
- IV. PUBLIC COMMENT (15 MINUTES)

This is the time for all comments on any of the agenda items or non-agenda items.

V. PRESENTATIONS

Downtown Parking FlashVote survey results, by Monte Bohanan

VI. NEW BUSINESS

(No public comment during Committee discussion without Committee approval.)

- A. 293 Austin Street, request for temporary handicap parking space, by resident. Sample Motion: Move to approve temporary handicap parking space at 293 Austin Street while parking is prohibited on Union Street during construction project.
- **B.** Chapter 7, Section 7-A.402, Bus Stops Designated, recommendation to update ordinance to reflect current conditions, by DPW. **Sample Motion: Move to approve proposed changes to Chapter 7 as presented.**

VII. OLD BUSINESS

- A. High Street, report back and recommendation on proposal to remove parking spaces and loading zone between Congress Street and Ladd Street. Sample Motion: Move to temporarily install two 15-minute parking spaces and two standard inventory Zone A spaces in the bus bay on Congress Street between High Street and Market Street, during construction of the 1 Congress Street project.
- **B.** State Street 2-Way traffic study, report back on status. **Sample Motion: Move to accept report and forward it to City Council.**
- C. Dennett Street traffic calming update. Sample Motion: Move to place on file.

VIII. INFORMATIONAL

- **A.** Aldrich Road speed humps installation
- B. Bartlett Street railroad bridge grant award
- C. Monthly Accident Report
- **D.** Hillside Drive pedestrian safety measures update
- **E.** Outdoor dining barrier removal
- F. Removal of Woodbury Avenue speed cushions and Bartlett Street roundabout

IX. MISCELLANEOUS

X. ADJOURNMENT

*Members of the public also have the option to join the meeting over Zoom, a unique meeting ID and password will be provided once you register. To register, click on the link below or copy and paste this into your web browser:

https://us06web.zoom.us/webinar/register/WN Y9eHiRWqTdK8p7xgoil5OA

After registering, you will receive a confirmation email containing information about joining the webinar.

Parking Related Revenues

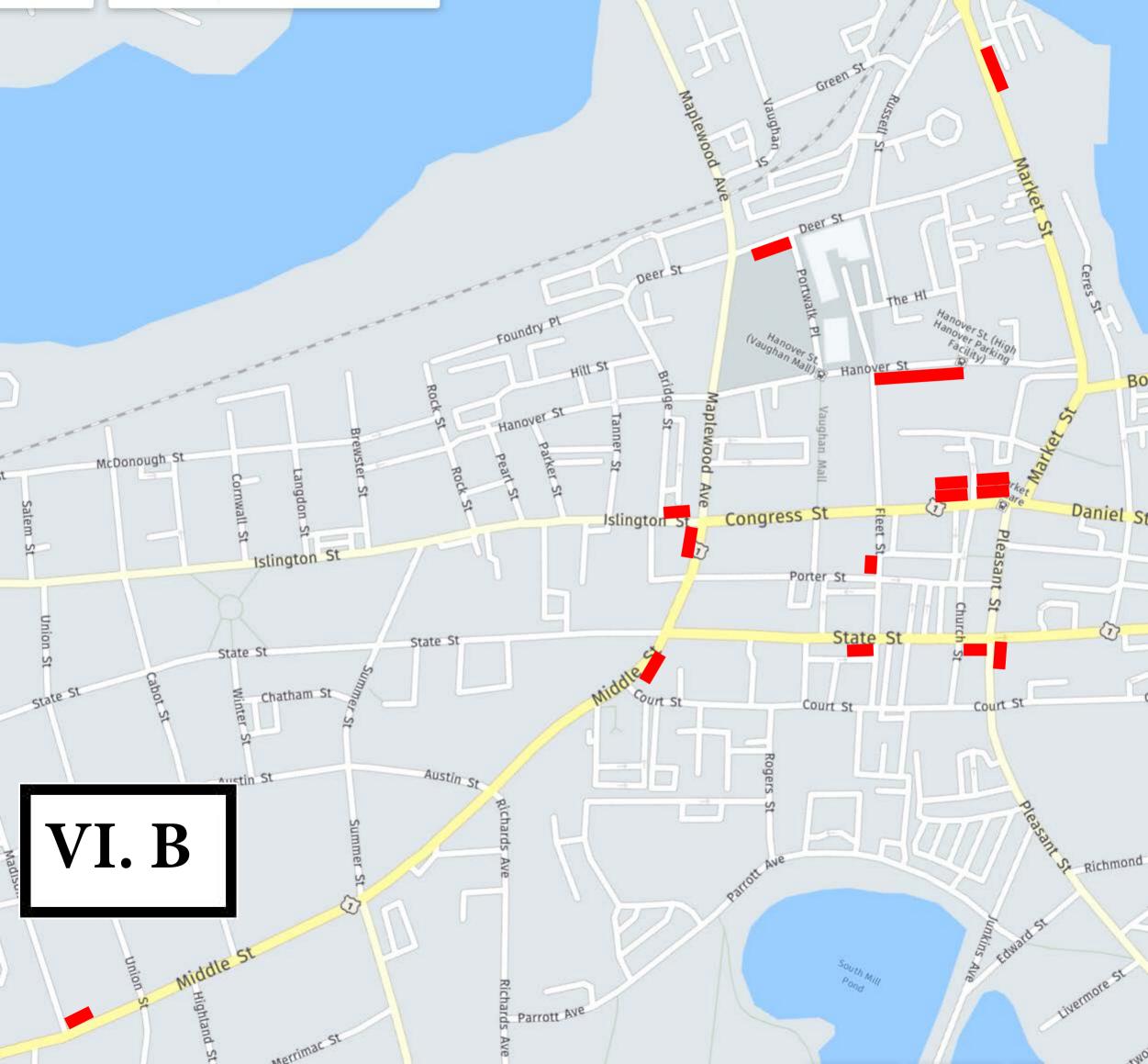
Unaudited

Percentage of Fiscal Year Complete Preliminary
16.67% Totals Thru
August 31, 2023

	Total Budge		% of Budget
FY 24			
Parking Meter Fees	835,486.43	4,310,000.00	19%
Meter Space Rental	37,770.00	150,000.00	25%
Meter In Vehicle	0.00	0.00	0%
EV Charging Stations	3,429.33	15,000.00	23%
Parking-Area Service Agreements	0.00	35,000.00	
High Hanover Transient	490,494.72	2,350,000.00	21%
High HanoverPasses	167,955.17	1,150,000.00	15%
Foundry Place Transient	93,400.25	400,000.00	23%
Foundry Place Passes	81,815.16	450,000.00	18%
Parking Sign Permit	0.00	0.00	
HH Pass Reinstatement	60.00	750.00	8%
Foundry Pass Reinstatement	480.00	750.00	64%
Parking Violations	231,685.00	900,000.00	26%
Immobilization Administration Fee	2,700.00	6,000.00	45%
Summons Admin Fee	0.00	0.00	0%
Total FY 23	1,945,276.06	9,767,500.00	20%

BUDGETED
7,267,500 74% Transfer to Parking Fund
2,500,000 26% Funds Remaining in Gen Fund





ORDINANCE

THE CITY OF PORTSMOUTH ORDAINS

That Chapter 7, Article IVA – BUS STOPS AND TAXICAB STANDS, Section 7-A.402, BUS STOPS DESIGNATED, of the Ordinances of the City of Portsmouth, be amended as follows (deletions from existing language stricken; additions to existing language bolded; remaining language unchanged from existing.)

Section 7-A.402: BUS STOPS DESIGNATED

For the purpose of this Ordinance, the following sections of the streets in the business section of the City are hereby designated as Bus Stops:

A. Congress Street:

- two parallel strips 10 feet wide adjacent to the sidewalk on the northerly side of said street from the point of intersection of said street and the westerly side of High Street and extending westerly along Congress Street a distance of 70 feet.
- 2. a strip 10 feet wide adjacent to the sidewalk on the northerly side of said street, beginning at the intersection of Bridge Street and running along said sidewalk, easterly a distance of 36 feet.
- B. Deer Street: south side, from a point 15 feet easterly of a hydrant located near the intersection of Deer Street and Maplewood Avenue to a point 95 feet easterly of said hydrant.
- C. Fleet Street: a strip 10 feet wide adjacent to the sidewalk on the westerly side of said street beginning at a point of intersection of Porter Street and running northerly along said street a distance of 30 feet.
- DA. Hanover Street: southerly side of Hanover Street from Fleet Street to a point 285 feet east of Fleet Street.
- E. Market Street: easterly side from Isle of Shoals Steamship Company Entrance a distance of 90 fee southerly.
- F. Market Square: two parallel strips 10 feet wide adjacent to the sidewalk on the northerly side of said square from the point of intersection of said square and the easterly side of High Street and extending easterly along Market Square a distance of 70 feet.
- G. Middle Street:

- Leastrip 10 feet side adjacent to the sidewalk on the westerly side of said street from the point of intersection of said street and Islington Street and running southerly along Middle Street a distance of 40 feet.
- 2. a strip 10 feet wide adjacent to the sidewalk on the east side of the street extending forty feet in a southerly direction from a point 80 feet south of the intersection of State Street to be reserved as a bus stop from 8:00 a.m. to 1:00 p.m. Sundays only.
- 3. a strip 10 feet adjacent to the sidewalk on the westerly side of said street from the point of intersection of Madison Street and running northerly along Middle Street a distance of 40 feet.
- H. Pleasant Street: a strip 10 feet wide adjacent to the sidewalk on the easterly side of said street beginning at the intersection of State Street and running southerly along Pleasant Street a distance of 30 feet.

I. State Street:

APPROVED:

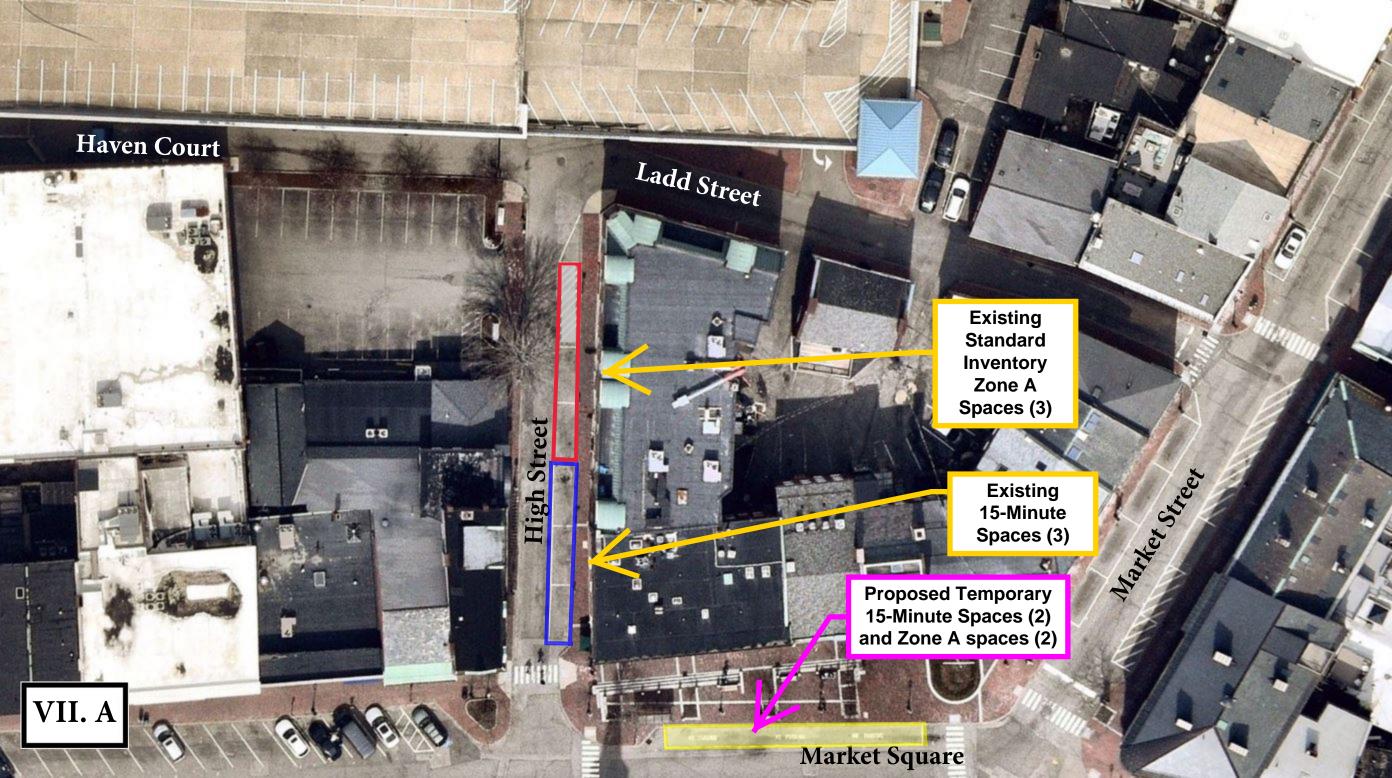
- l. a strip 10 feet wide adjacent to the sidewalk on the southerly side of said street beginning at the southwesterly intersection of said street and Pleasant Street and running westerly along said State Street a distance of 30 feet.
- 2. a strip 10 feet wide adjacent to the sidewalk on the southerly side of said street beginning at the southwesterly intersection of said street and Fleet Street and running westerly along said State Street a distance of 30 feet.

The City Clerk shall properly alphabetize and/or re-number the ordinances as necessary in accordance with this amendment.

All ordinances or parts of ordinances inconsistent herewith are hereby deleted.

This ordinance shall take effect upon its passage.

Deaglan McEachern, Mayor	_
ADOPTED BY COUNCIL:	
Kelli L. Barnaby, City Clerk	





28 August 2023

Andrew Bagley, City Council Representative City of Portsmouth Traffic and Safety Committee 680 Peverly Hill Road Portsmouth, NH 03801

RE: Request for Consideration, High Street Parking Changes, Proposed Off Site Development Improvements, High Street, Ladd Street, and Haven Court

Dear Councilor Bagley and Traffic and Safety Committee Members:

On behalf of Mark McNabb and One Market Square, LLC (the Developer) we are pleased to submit the attached plan set for <u>Committee Review</u> for the above-mentioned project and request that we be placed on the agenda for your <u>September 7, 2023</u>, Meeting.

The *overall project* includes the re-use of the existing Commercial Buildings at 1 and 3 Congress Street, some existing building demolition, and proposed new construction of a 3 Story Structure with Attic Hip Top Mansard Roof to the rear of the existing buildings with the associated and required site improvements. The area behind the existing building is currently a surface parking lot. The surface parking will be lowered to below street level and provide parking for the new construction. Site plans for the on-site construction received Planning Board approval on February 16, 2023.

The project contemplates, but is not required to construct, some additional off-site improvements. Those improvements were presented to the Portsmouth City Council on August 7, 2023, at which time the Council required that the Traffic and Safety Committee review the proposal. The plan is to re-work High Street in a manner similar to Chestnut Street. This will allow the widening of the currently narrow non-code sidewalks, as well as a widening of the vehicular travel lane to provide a width that accommodates the city's fire response apparatus. As a result of these improvements, there will be 5 parking spaces and a loading zone that are impacted. The plans show that the loading zone can be relocated to Ladd Street, but there is no space to re-create the parking spaces. The Traffic and Safety Committee's input is hereby requested.

The Developer believes that the re-design will provide improved connectivity through the heart of the downtown and is a win for all. The significant off-site improvements contemplated herein would be funded by the Developer, at their sole cost, and include extensive improvements in High Street, Ladd Street and connecting Haven Court to Fleet Street. The Developer will also pay the entire cost of design, thereby not requiring the City of Portsmouth to pay any costs for these improvements. Included in this package are plans to show the general location of the proposal, with a more specific layout for High Street. The plans will be modified as comments are obtained.



The following plans are included in our submission:

- Cover Sheet This shows the Development Team, Legend, Site Location, and Site Zoning.
- Existing Conditions Plan C1 This plan shows the existing site conditions in detail.
- Pedestrian Connections This plan shows the overall site connectivity and the potential to create a friendly pedestrian corridor from the McIntyre Building to Fleet Street.
- Site Plan C3 This plan shows the adjacent, approved building placement. The 1 Congress project was approved by the Planning Board on February 16, 2023.
- Landscape Plan High Street This plan show the proposed concept of eliminating the curbs and providing conforming sidewalk widths and fire safety access.

We look forward to the Traffic and Safety Committee review of this submission and look forward to an in-person presentation. We look forward to attending the September 7th meeting to discuss the project. If the Traffic and Safety Committee would like to do a site walk, we would be happy to accommodate.

Sincerely,

John R. Chagnon, PE

CC: Design Team

IMPROVEMENT PLANS

PROJECT PROPONENT:

ONE MARKET SQUARE LLC 3 PLEASANT STREET SUITE #400 PORTSMOUTH, NH 03801 TEL. (603) 427-0725

LAND SURVEYOR & CIVIL **ENGINEER:**

AMBIT ENGINEERING, INC. 200 GRIFFIN ROAD, UNIT 3 PORTSMOUTH, N.H. D3801 Tel. (603) 430-9282 Fax (603) 436-2315

ARCHITECT:

ARCOVE LLC 3 CONGRESS STREET PORTSMOUTH, NH 03801

TEL. (603) 731-5187

LANDSCAPE ARCHITECT: TERRA FIRMA LANDSCAPE

ARCHITECTURE 163A COURT STREET PORTSMOUTH, NH 03801 TEL. (603) 430-8388

GEOTECHNICAL:

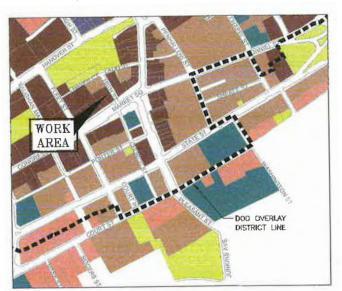
GEOTECHNICAL SERVICES INC. 18 COTE AVENUE, UNIT 11 GOFFSTOWN, N.H. 03045 Tel. (603) 624-2722

LAND USE ATTORNEY:

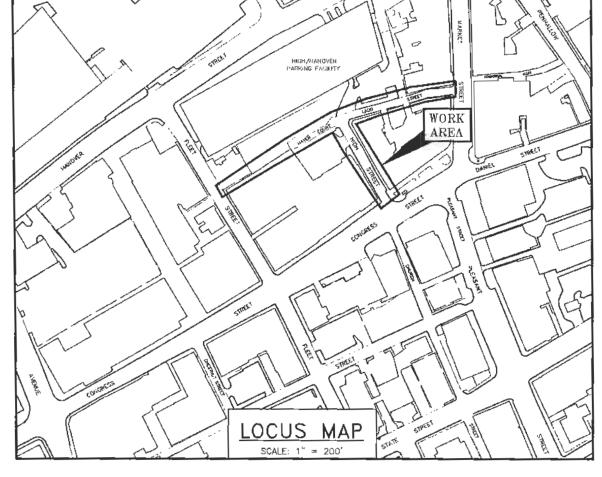
BRUTON & BERUBE, PLLC

601 CENTRAL AVENUE DOVER, N.H. 03820 Tel. (603) 749-4529

HIGH STREET, LADD STREET & HAVEN COURT PORTSMOUTH, NEW HAMPSHIRE TRAFFIC & SAFETY COMMITTEE APPROVAL PLAN SET









EXISTING PROPOSED PROPERTY LINE ____ SETBACK SEWER PIPE SEWER LATERAL GAS LINE STORM DRAIN WATER LINE WATER SERVICE UNDERGROUND ELECTRIC OVERHEAD ELECTRIC/WIRES FOUNDATION DRAIN EDGE OF PAVEMENT (EP) CONTOUR SPOT ELFVATION UTILITY POLE -}}-WALL MOUNTED EXTERIOR LIGHTS *‰* **1** TRANSFORMER ON CONCRETE PAD ELECTRIC HANDHOLD SHUT OFFS (WATER/GAS) GATE VALVE HYDRANT CATCH BASIN (8) SEWER MANHOLE **(** DRAIN MANHOLE <u>(6)</u> TELEPHONE MANHOLE 14 PARKING SPACE COUNT PARKING METER **(%)** LSA LANDSCAPED AREA ren TO BE DETERMINED CAST IRON PIPE COP COPPER PIPE DUCTILE IRON PIPE POLYVINYL CHLORIDE PIPE RCP REINFORCED CONCRETE PIPE ASRESTOS CEMENT PIPE VITRIFIED CLAY PIPE EDGE OF PAVEMENT ELEVATION FINISHED FLOOR SLOPE FT/F1 TEMPORARY BENCH MARK DYPICAL.

LEGEND:



INDEX OF SHEETS

EXISTING CONDITIONS PEDESTRIAN CONNECTIONS LANDSCAPE PLAN-HIGH STREET

UTILITY CONTACTS

ELECTRIC: EVERSOURCE 700 LAFAYETTE ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 436-7708, Ext. 555.5678 ATTN: MICHAEL BUSBY, P.E. (MANAGER)

SEWER & WATER: PORTSMOUTH DEPARTMENT OF PUBLIC WORKS 680 PEVERLY HILL ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 427-1530 ATTN: JIM TOW

NATURAL, GAS:

325 WEST ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 294-5144 ATTN: DAVE BEAULIEU

CABLE: COMCAST

COMMUNICATIONS: FAIRPOINT COMMUNICATIONS JOE CONSIDINE 1575 GREENLAND ROAD GREENLAND, N.H. 03840 Tel. (603) 427-5525

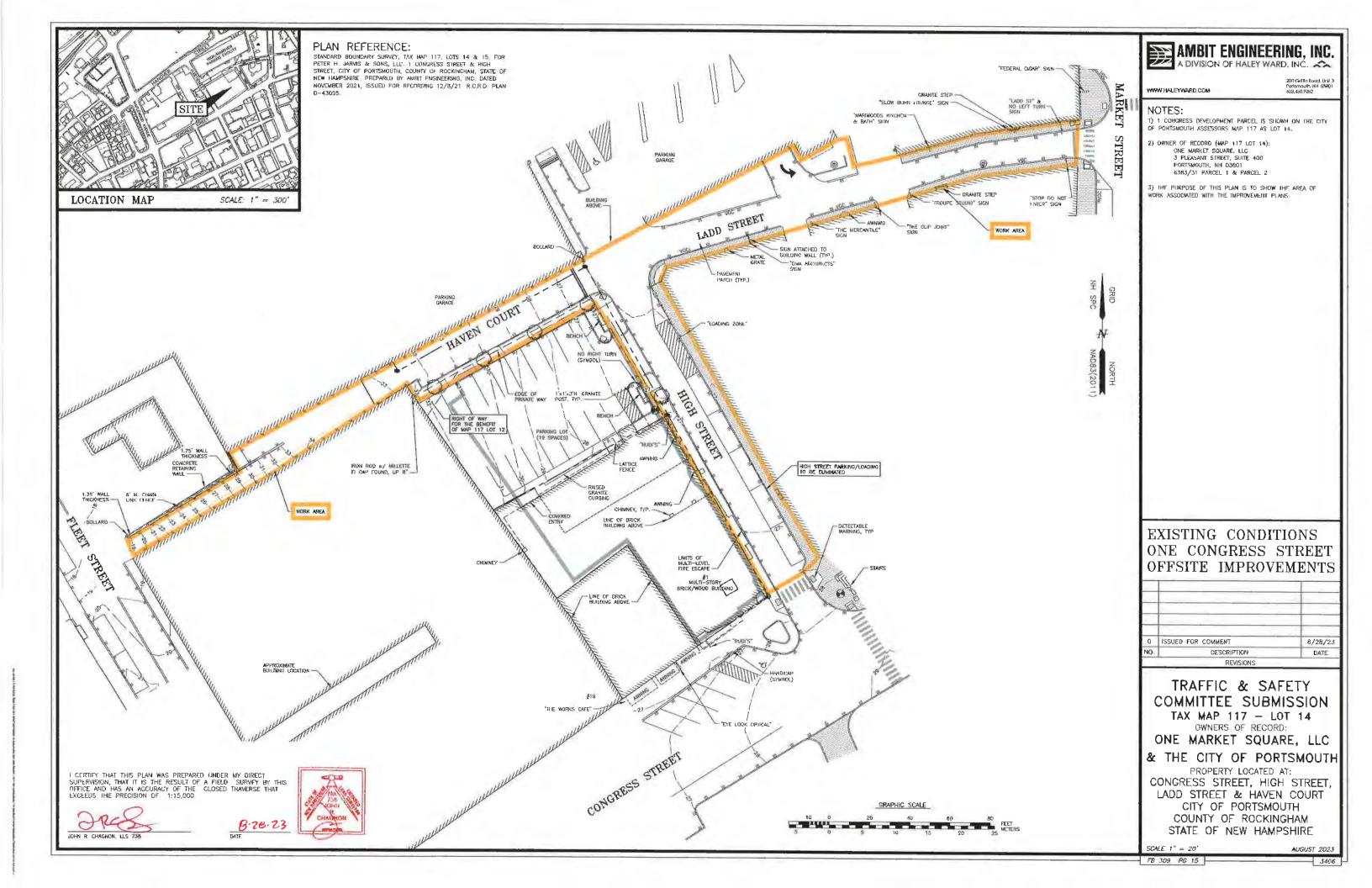
155 COMMERCE WAY PORTSMOUTH, N.H. 03801 Tel. (603) 679-5695 (X1037) ATTN: MIKE COLLINS

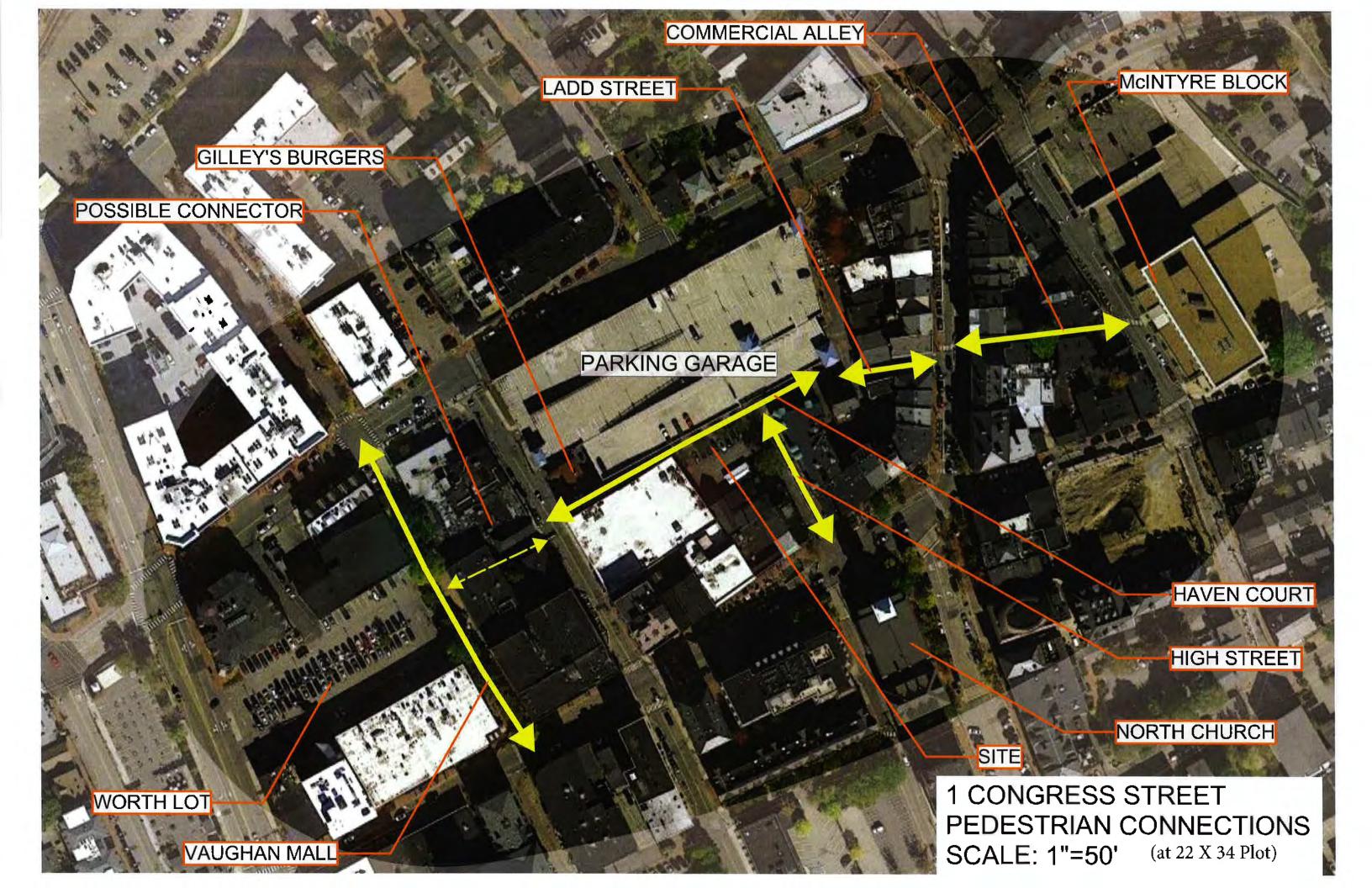
TRAFFIC & SAFETY COMMITTEE APPROVAL PLAN SET IMPROVEMENT PLANS HIGH STREET, LADD STREET & HAVEN COURT PORTSMOUTH, N.H.

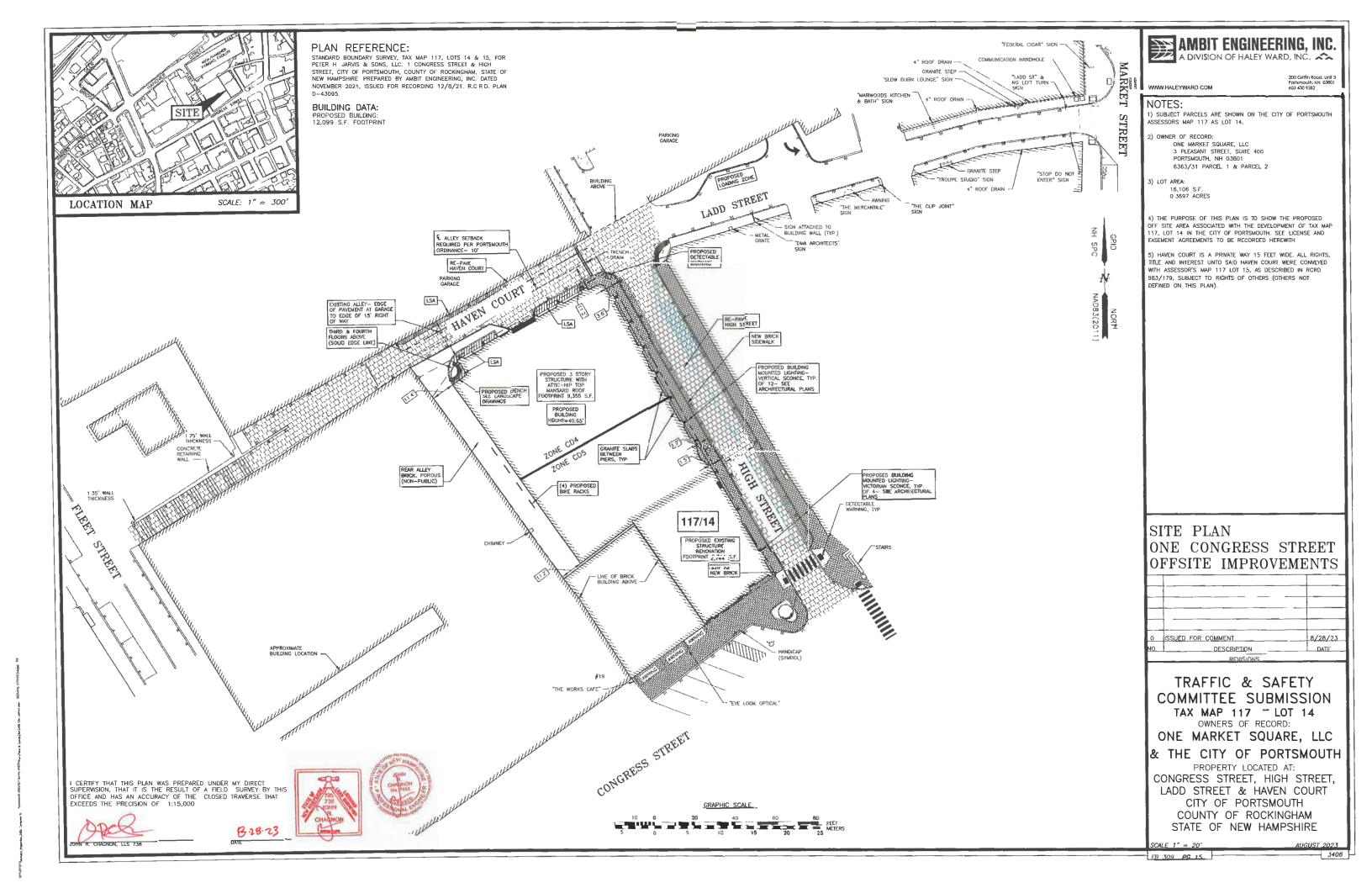


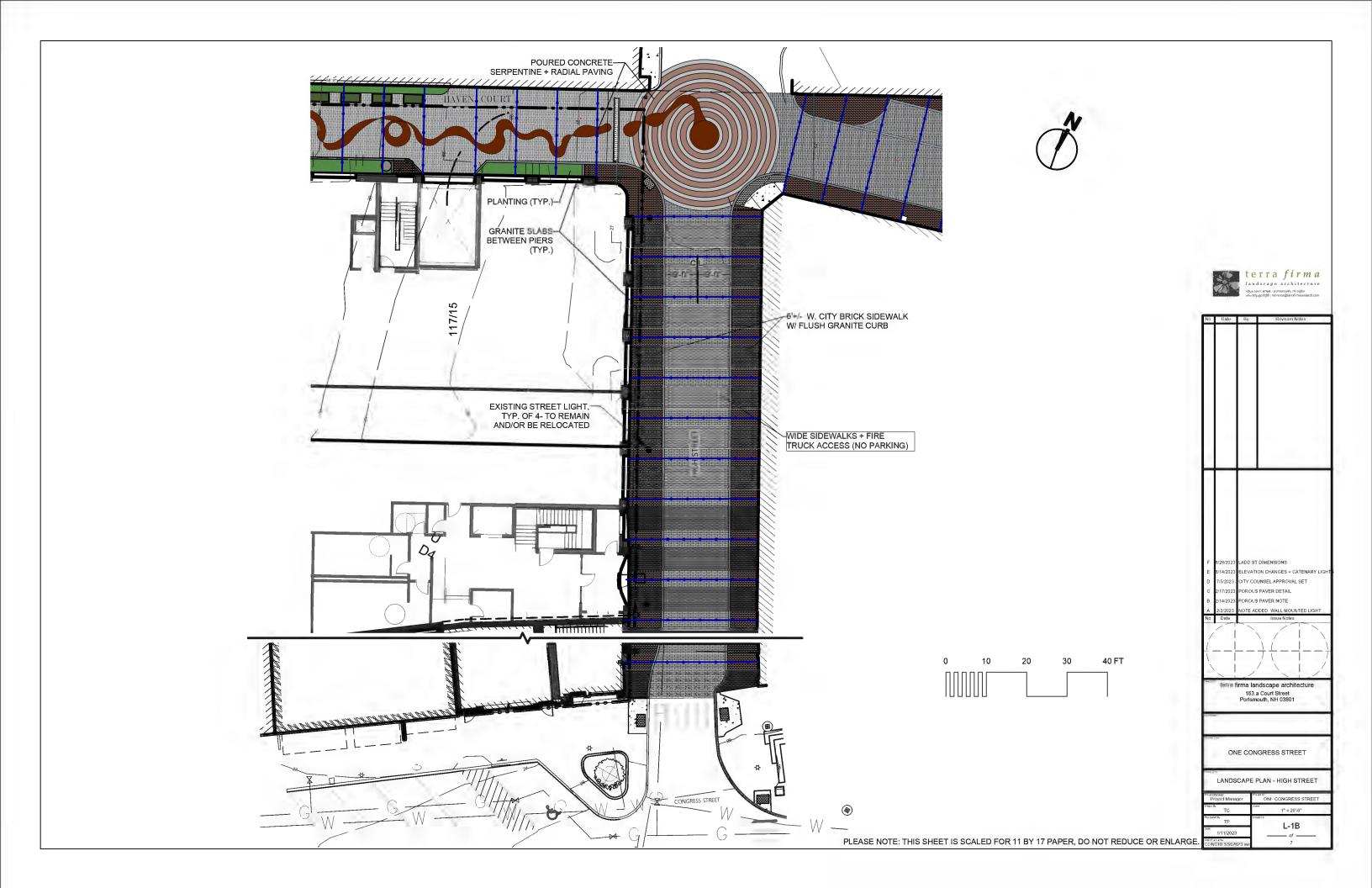
WWW HALEYWARD COM

PLAN SET SUBMITTAL DATE: 28 AUGUST 2023









GUIDING PARKING PRINCIPLES FOR CENTRAL BUSINESS DISTRICTS

(Approved by the Portsmouth City Council on March 19, 2012)

Overall Principles:

A balanced mix of retail/restaurant, office, and residential uses is key to downtown vitality.

A downtown parking supply that is convenient, viable and central to downtown destinations is key to the short-term and long-term health of the City's retail, restaurant and office economy.

- 1. Insuring an adequate supply of parking for retail/restaurant and office users in the downtown is primarily a City responsibility.
- 2. Parking for new downtown residential development is primarily a private responsibility with residents wanting convenient parking right where they live.
- 3. We need to plan for future reuse, redevelopment and full occupancy of buildings in the Central Business Districts. If it is too difficult, expensive or unpleasant to find parking, retail/restaurant/cultural destination customers may prefer to visit elsewhere and offices may prefer to locate elsewhere.
- 4. The City should strive to play a lead role in developing and managing parking facilities:
 - Parking management and supply decisions are interconnected and a comprehensive, unified approach to decision-making is needed.
 - The value of private parking facilities should be recognized as a resource. These
 resources are not part of the public parking supply under the City's long-term control
 and opportunities to manage private lots are limited.
- 5. Address peak parking demand needs in order to avoid perfect Friday/Saturday night storm when residents/customers can't find parking:
 - Manage parking at the garage (for example, flat rate pricing for special events).
 - Increase the supply of convenient parking.
- 6. Parking should support economic development including businesses (office, retail, restaurant) and visitors/customers.
- 7. The parking garage should be priced and managed so that it has high occupancy more frequently (improve utilization of what we've got).
- 8. The primary reason for parking revenues is to be able to provide an adequate supply of safe, convenient parking. Pricing structures should be simple and easy for customers to understand.
- 9. Parking management strategies should recognize that there is a difference between the needs of long-term parkers who may be more likely to use the garage or use parking immediately adjacent to downtown, and short-term parkers running a quick errand.
- Price and manage more desirable on street parking spaces to favor users who are highly motivated to use them. Give customers and residents the option to stay and pay.

- 11. Information on parking options should be easily accessible to parking users, including through technology options.
- 12. Parking planning should take a comprehensive, sustainable and big picture approach by taking a broad range of costs and benefits into account when making decisions.
- 13. All parking resources should place value on aesthetics, security, accessibility and user information.
- 14. Consider ways to incentivize use of "remote parking".
- 15. Surface parking lots should be located at the periphery of the downtown and should not be allowed to create a "dead zone" barrier to comfortable pedestrian movement.
- 16. Parking management programs should take into consideration hospitality industry workers.
- 17. Incentives for residents should be provided at the parking garage, but shouldn't compromise best practices.
- 18. Parking resources should be provided to support downtown activity (streets are for people as well as cars) and should therefore be designed and located in such a manner that recognizes the following:
 - Parking resources should enhance not detract from downtown vitality, walkability and the pedestrian experience;
 - Parking resources should accommodate pedestrians (bump-outs, plazas), bicycles (bike parking) and transit (space to pull over);
 - Parking structures should be incorporated into the commercial streetscape; and
 - The needs of an aging population should be taken into account when it comes to parking.
- 19. Parking strategies should be revenue neutral.
- 20. Parking management plans should recognize the short-term parking needs of retail and hospitality industry for loading zones.
- 21. Encourage public transit and other transportation modes, but recognize strong customer/ resident preference for personal vehicle use as well as very limited regional public transit infrastructure.

15m Usage Profile: High Street @ Starbucks

26% total users overstaying

63

26%

62

4	% of Enf. I			
Avg. Total Hours UNUSED/Day	4:30	41%		
Avg. PROPER Total Hours (<= 15m)	5:38	51%		
Avg. Total Abused (>:15)	0:50	8%		
Avg. Total Hours Occupied/Day	6:29	59%		

Avg. Total Abused (>:15) 0:44 7% Avg. Total Hours Occupied/Day 6:46 62%

4:13

6:02

Avg. % of >:15 Minute Parkers

Avg. Total Hours UNUSED/Day

Avg. PROPER Total Hours (<= 15m)

25% 25% total users overstaying

% of Enf. Hrs

38%

55%

61

Avg. % of >:15 Minute Parkers

% of Enf. Hrs Avg. Total Hours UNUSED/Day 31% 3:27 Avg. PROPER Total Hours (<= 15m) 6:03 55% Avg. Total Abused (>:15) 1:29 14% Avg. Total Hours Occupied/Day 7:32 69% Avg. % of >:15 Minute Parkers 30% 30% total users overstaying

AVERAGE 15M SPACES HIGH STREET @ STARBUCKS

% of Enf. Hrs Avg. Total Hours UNUSED/Day 4:03 37% Avg. PROPER Total Hours (<= 15m) 5:54 54% Avg. Total Abused (>:15) 1:01 9% Avg. Total Hours Occupied/Day 6:56 63%

Avg. % of >:15 Minute Parkers 27% total users overstaying 27%







VII. A







Date: August 23, 2023

To: Eric Eby & Tyler Reece, City of Portsmouth

From: Erica Wygonik, PhD, PE; Austin Feula, PE, PTOE

Subject: State Street Two-Way Study – Results

Summary of Findings

Using the downtown Portsmouth microsimulation model, WCG has examined the traffic impacts of converting State Street through the core of the Portsmouth downtown from one-way travel to two-way flow.

The Portsmouth Traffic Microsimulation model has been developed to support a comprehensive assessment of the transportation implications associated with potential future development, parking changes, or roadway configurations or orientations. The model region covers the downtown core of Portsmouth, including, but not limited to, Maplewood Avenue, Market Street, and the Congress/Daniel and State Street one-way loop. It includes detailed information on roadway classification, speeds, geometrics, intersection controls, signal timings, parking, pedestrians, and traffic volumes to best reflect how vehicles would react to various changes.

The following summarizes key findings based on the analysis presented in this memorandum:

- The model is developed to reflect the peak month midweek 5:00 to 6:00 PM period as it corresponds with the highest combined vehicle and pedestrian volumes. The scenario was evaluated during this time period.
- Count volumes were adjusted to represent 2032 conditions considering proposed development projects throughout the downtown, background growth, and travel behavior changes due to COVID. Given the combined impact of these factors, an adjustment of 1% to the 2021 model volumes was applied to reflect likely 2032 conditions.
- For this scenario, State Street and Dutton Avenue were converted to two-way flow between Middle Street and Scott Avenue. The small segment of road allowing for u-turns from Dutton Avenue to Scott Avenue was removed as part of the evaluation.
- Results were compared between the existing one-way and the proposed two-way configuration during a weekday PM peak hour with and without a typical Memorial Bridge drawbridge lift.
- The two-way scenario operates with acceptable congestion during the PM peak hour.
- Minor changes in delay are projected during baseline conditions if State Street is converted to two-way flow. If State Street is converted to two-way flow, more substantial changes are projected following a Memorial Bridge drawbridge lift, with congestion shifting from Market Square to the Middle Street corridor.



- With the conversion to two-way traffic flow, 1 to 2 on-street parking spaces would be eliminated for a right-turn pocket on State Street approaching Middle Street westbound, and westbound trucks would be prohibited from turning right due to an inadequate turning radius on that corner.
- Accounting for construction costs, engineering costs, construction oversight, and contingency, the approximate total cost of improvements to support the conversion is roughly \$1.5 million.
- The extent of the area under consideration to shift to two-way traffic is within the urban compact, and thus is under the authority of the city. However, a project on this road (C2492, 1953) has been completed using federal monies, and State Street in this area is a numbered highway (US-1). As such, while decisions regarding the roadway design are largely held with the City, NHDOT has a role in protecting the investment of federal funds and will likely require a review of the design to ensure any proposed changes do not limit the function or use of the road.

It is important to note the model does not evaluate impacts on non-vehicular modes (bicyclists and pedestrians), emergency vehicles, and loading zones. Currently, truck loading has been observed fully or partially blocking the travel lane due to trucks exceeding the width of loading areas, not fully pulling into loading areas, or using the travel lane instead of loading areas. This behavior is not modeled but would need to be adequately planned for. Additional loading zones and possibly wider loading zones may be required, which would have impacts on the number of lost parking spaces or the sidewalk width. Shifting the curb to accommodate wider loading zones would have significant cost implications.

Model Background

The Portsmouth Traffic Microsimulation model has been developed to support a comprehensive assessment of the transportation implications associated with potential future development, parking changes, or roadway configurations or orientations.

The model region covers the downtown core of Portsmouth, including, but not limited to, Maplewood Avenue, Market Street, and the Congress/Daniel and State Street one-way loop (Figure 1). The microsimulation model is calibrated to weekday PM peak design hour conditions (5:00 to 6:00 PM) for the peak month and is developed in the TransModeler software program.



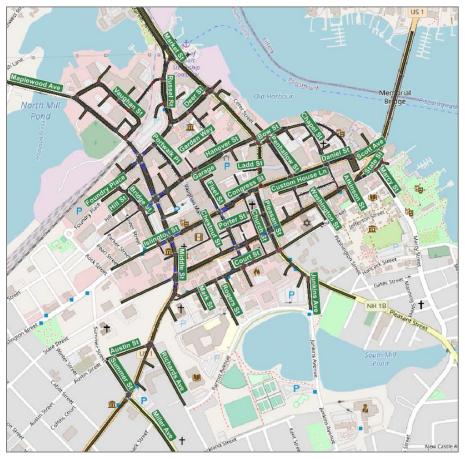


Figure 1: Downtown Portsmouth Traffic Microsimulation Model Extent

The model includes detailed information on roadway classification, speeds, geometrics, intersection controls, signal timings, parking, pedestrians, and traffic volumes. The model was initially calibrated to 58 intersection turning movement counts. These counts were collected by Resource Systems Group, the City's consultant on the original project, in June of 2017 and include counts provided by the City of Portsmouth. For more information on the calibration and specifics of this model, please see the Portsmouth Model Calibration Report. The model was recalibrated in 2020 using count data from nine indicator intersections to reflect background growth as well as travel behavior shifts due to the Foundry Place Garage opening and the Sarah Long Bridge re-opening.

Adjustment to 2032 Conditions

For the current analysis, WCG reviewed available count data to determine recommended future growth rates and COVID adjustments to adjust the Downtown Portsmouth Traffic Model to reflect 2032 conditions. The analysis indicated traffic volumes were approximately 9% lower in 2022 than they were pre-COVID during the PM peak hour. In addition, volumes decreased approximately 0.5% per year between 2015 and 2019. However, a robust set of proposed development projects throughout the downtown are anticipated. Given the combined impact of



these factors, an adjustment of 1% was applied to the 2021 model volumes to reflect likely 2032 conditions.

Two-Way State Street Scenario

For this scenario, State Street and Dutton Avenue were converted to two-way flow between Middle Street and Scott Avenue. The small segment of road allowing for u-turns from Dutton Avenue to Scott Avenue was removed for the evaluation as it would no longer be necessary for circulation as vehicles can use State Street to Daniel Street, under the Memorial Bridge, to reverse direction or they can turn onto State Street southbound from the side streets. The roadway changes are shown below in Figure 2. The green dash illustrates the extent of the two-way flow and the red line indicates the u-turn road segment that would be removed.

In this two-way scenario, impacts to on-street parking and roadway cross-sections were minimized. Turn lanes were included only where absolutely necessary, and where they were necessary, their length was minimized to save as many on-street parking spaces as possible. Figure 3 presents the changes that would be required to support the two-way conversion. In the legend in Figure 3, "New Signal Heads" connotes the additional signal infrastructure necessary to support new movements at an intersection. This additional infrastructure may include new signal heads, new mast arms, additional detectors, or additional controller equipment. Similarly, "Intersection Reconstruction" reflects a comprehensive overhaul, which may include curbs, pavement, drainage modifications, changed lane alignments, signal heads, mast arms, detectors, new or additional controller equipment, or striping.

Constructing new signal heads would cost roughly \$150,000 per intersection, and a complete intersection reconstruction is estimated to cost roughly \$600,000. When accounting for engineering costs, construction oversight, and contingency, the approximate total cost of these improvements is roughly \$1.5 million.



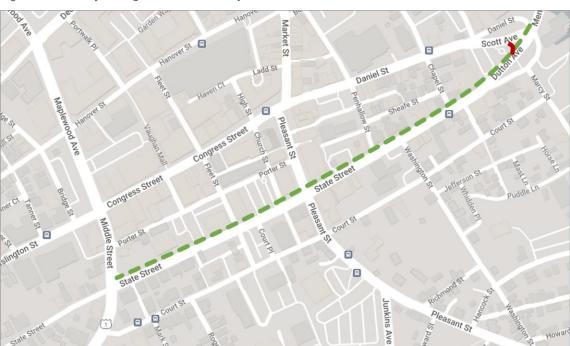


Figure 2: Roadway Changes for the Two-Way State Street Scenario

Figure 3: Changes Required to Support Two-Way Conversion of State Street



While the infrastructure changes are modest, trucks pose two challenges. First, delivery vehicles have been observed fully or partially blocking a travel lane when loading/loading. If the



road is converted to two-way traffic, additional parking spaces may need to be removed to accommodate additional loading areas, and those spaces may need to be widened slightly to ensure loading vehicles do not extend into the travel lanes. Loading vehicles sometimes block travel lanes because they do not use loading zones and simply stop in the street; more active patrolling might be required to change that behavior.

The second limitation for trucks of converting State Street to two-way travel is the angle between State Street and Middle Street is too sharp to allow for the necessary turning radius for large westbound vehicles to make a right turn. This challenge can be addressed through signage, including posting Truck Route signs upstream to direct them away from the intersection if they are traveling north, and a Trucks No Right Turns sign at the intersection. Posting the Trucks No Right Turn sign may require an ordinance change.

Authority to Modify Roadway Geometry

The extent of the area under consideration to shift to two-way traffic is within the urban compact, and thus is under the authority of the city. However, a project on this road (C2492, 1953) has been completed using federal monies², and State Street in this area is a numbered highway (US-1). As such, while decisions regarding the roadway design are largely held with the City, NHDOT has a role in protecting the investment of federal funds. A review by NHDOT will likely be required to ensure any proposed changes do not limit the function or use of the road. Review would be coordinated by the Bureau of Planning & Community Assistance upon a request from the City. As this effort would also review signage changes for US-1, the City should consider their preferences for the future routing of US-1.

Capacity Analysis

Level of service (LOS) is a qualitative measure describing the operating conditions as perceived by motorists driving in a traffic stream. LOS is calculated using the procedures outlined in the Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis³ (HCM6). In addition to traffic volumes, key inputs include the number of lanes at each intersection, traffic control type (signalized or unsignalized), and the traffic signal timing plans, if applicable.

¹ NH RSA 231:2 Class IV Compact Section Highways. – All class IV highways shall be wholly constructed, reconstructed and maintained by the city or town in which they are located, and no state funds shall be expended thereon except as may be authorized by RSA 235.

² NH RSA 231:1 Class IV, V and VI. – All class IV highways not financed in whole or in part with federal aid highway funds, and class V and VI highways shall be laid out by the mayor and aldermen of the city, the selectmen of the town or the commissioners of a village district formed for the purpose of RSA 52:1, I(m) in which such highways are located, or by the superior court as hereinafter provided. In the case of a village district formed for the purpose of RSA 52:1, I(m), references in this title to "town" and "selectmen" shall be deemed to be references to "village district" and "village district commissioners", respectively.

³ The HCM6 does not provide methodologies for calculating intersection delays at certain intersection types including signalized intersections with exclusive pedestrian phases and signalized intersections with non NEMA-standard phasing. Because of these limitations, HCM 2000 and HCM 2010 methodologies are employed where necessary and as noted.



The HCM6 defines six qualitative grades to describe the level of service at an intersection. Level-of-service is based on the average control delay per vehicle. Table 1 shows the various LOS grades and descriptions for signalized and unsignalized intersections.

Table 1: Level-of-Service Criteria for Unsignalized and Signalized Intersections

LOS	CHARACTERISTICS	UNSIGNALIZED CONTROL DELAY (SEC)	SIGNALIZED CONTROL DELAY (SEC)
Α	Little or no delay	≤ 10.0	≤ 10.0
В	Short delays	10.1-15.0	10.1-20.0
С	Average delays	15.1-25.0	20.1-35.0
D	Long delays	25.1-35.0	35.1-55.0
E	Very long delays	35.1-50.0	55.1-80.0
F	Extreme delays	> 50.0	> 80.0

The delay thresholds for LOS at signalized and unsignalized intersections differ because of the driver's expectations of the operating efficiency for the respective traffic control conditions.

In a downtown environment like Portsmouth, longer delays and worse level of service are generally acceptable. Congestion and lower vehicle speeds can improve the environment for pedestrians and bicyclists.

Level-of-Service Results

The delay and queuing reports within TransModeler (v5.0) were used to assess traffic congestion at the six key intersections which would be directly affected by the two-way conversion. Figure 4 and Figure 5 present level-of-service results for the current baseline one-way conditions and the two-way scenario, respectively. The level of service is expected to improve at the Market Square intersection due to the conversion and otherwise change minimally at the other 5 study intersections.

A full delay and queuing summary by approach is provided in the appendix.



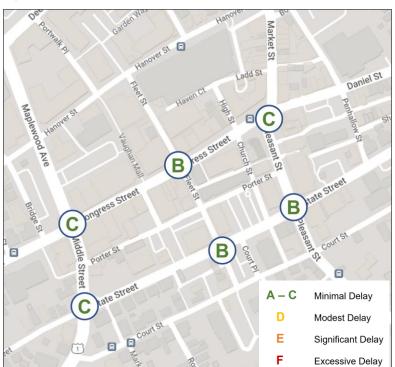


Figure 4: Baseline One-Way State Street – 2032 PM Peak Hour Level-of-Service

Figure 5: Baseline Two-Way State Street Scenario – 2032 PM Peak Hour Level-of-Service





Drawbridge Scenario Results

In addition to the base network, a scenario was modeled where the Memorial Bridge is temporarily closed due to a drawbridge lift. This occurrence results in significant queuing along State Street, followed by a large surge of traffic along Daniel Street into Market Square when the drawbridge re-opens. Converting State Street to two-way traffic would only be viable if doing so still provides enough space to serve anticipated queues and allows traffic to clear efficiently following closures.

The congestion level is higher following a bridge closure than in the baseline condition, with the Market Square intersection operating at LOS D in the one-way State Street condition when a drawbridge lift occurs. If State Street is converted to two-way traffic, operations at Market Square improve and that intersection is projected to operate at LOS B. However, congestion shifts west to the Middle Street corridor – the intersection of Congress Street/Maplewood Avenue/Islington Street/Middle Street intersection drops to LOS D from LOS C, and the State Street & Middle Street intersection drops to LOS E from LOS C. The level of service at the three other study intersections is not changed. Level-of-service results are presented below in Figure 6 and Figure 7.

The length of the queues is another important metric during a drawbridge closure as well as during the recovery period when a surge of traffic enters Portsmouth from the Memorial Bridge. As shown in Figure 8, initial queues from the drawbridge closure are slightly longer in the two-way scenario than with the existing one-way configuration. While vehicles only have one lane to queue in during a bridge lift, vehicles no longer need to use State Street to reverse direction onto Daniel Street to travel westbound. In addition, allowing for westbound traffic on State Street allows for some vehicles to avoid the eastern end of the city when it is congested. For these reasons, the queues are longer if State Street is converted to two-way travel, but they are not twice as long. Figure 9 illustrates the secondary queues resulting from the surge of traffic entering Portsmouth once the Memorial Bridge reopens and shows how congestion shifts to the west.



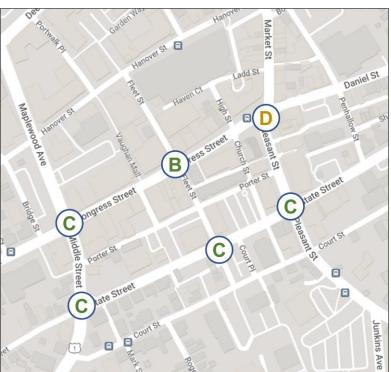


Figure 6: Drawbridge One-Way State Street – 2032 PM Peak Hour Level-of-Service

Figure 7: Drawbridge Two-Way State Street Scenario – 2032 PM Peak Hour Level-of-Service

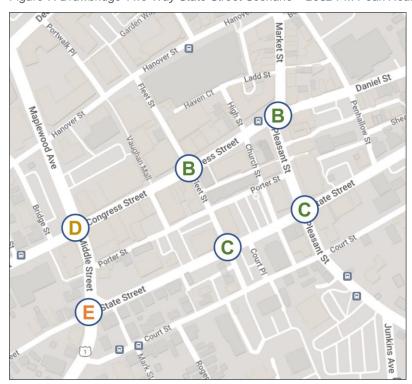




Figure 8: Drawbridge Scenario – Average Maximum Queue Lengths

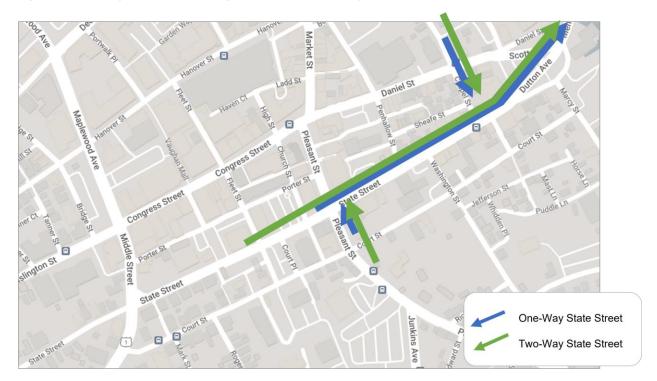
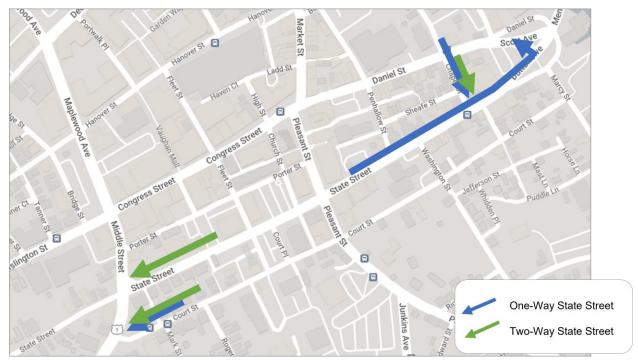


Figure 9: Drawbridge Scenario Secondary Queues - Average Maximum Queue Lengths





Conclusions

Using the downtown Portsmouth microsimulation model, WCG has examined the traffic impacts of converting State Street through the core of the Portsmouth downtown from one-way travel to two-way flow.

The Portsmouth Traffic Microsimulation model has been developed to support a comprehensive assessment of the transportation implications associated with potential future development, parking changes, or roadway configurations or orientations. The model region covers the downtown core of Portsmouth, including, but not limited to, Maplewood Avenue, Market Street, and the Congress/Daniel and State Street one-way loop. It includes detailed information on roadway classification, speeds, geometrics, intersection controls, signal timings, parking, pedestrians, and traffic volumes to best reflect how vehicles would react to various changes.

The following summarizes key findings based on the analysis presented in this memorandum:

- The model is developed to reflect the peak month midweek 5:00 to 6:00 PM period as it corresponds with the highest combined vehicle and pedestrian volumes. The scenario was evaluated during this time period.
- Count volumes were adjusted to represent 2032 conditions considering proposed development projects throughout the downtown, background growth, and travel behavior changes due to COVID. Given the combined impact of these factors, an adjustment of 1% to the 2021 model volumes was applied to reflect likely 2032 conditions.
- For this scenario, State Street and Dutton Avenue were converted to two-way flow between Middle Street and Scott Avenue. The small segment of road allowing for u-turns from Dutton Avenue to Scott Avenue was removed as part of the evaluation.
- Results were compared between the existing one-way and the proposed two-way configuration during a weekday PM peak hour with and without a typical Memorial Bridge drawbridge lift.
- The two-way scenario operates with acceptable congestion during the PM peak hour.
- Minor changes in delay are projected during baseline conditions if State Street is converted to two-way flow. If State Street is converted to two-way flow, more substantial changes are projected following a Memorial Bridge drawbridge lift, with congestion shifting from Market Square to the Middle Street corridor.
- With the conversion to two-way traffic flow, 1 to 2 on-street parking spaces would be
 eliminated for a right-turn pocket on State Street approaching Middle Street westbound,
 and westbound trucks would be prohibited from turning right due to an inadequate
 turning radius on that corner.
- Accounting for construction costs, engineering costs, construction oversight, and contingency, the approximate total cost of improvements to support the conversion is roughly \$1.5 million.



• The extent of the area under consideration to shift to two-way traffic is within the urban compact, and thus is under the authority of the city. However, a project on this road (C2492, 1953) has been completed using federal monies, and State Street in this area is a numbered highway (US-1). As such, while decisions regarding the roadway design are largely held with the City, NHDOT has a role in protecting the investment of federal funds and will likely require a review of the design to ensure any proposed changes do not limit the function or use of the road.

It is important to note the model does not evaluate impacts on non-vehicular modes (bicyclists and pedestrians), emergency vehicles, and loading zones. Currently, truck loading has been observed fully or partially blocking the travel lane due to trucks exceeding the width of loading areas, not fully pulling into loading areas, or using the travel lane instead of loading areas. This behavior is not modeled but would need to be adequately planned for. Additional loading zones and possibly wider loading zones may be required, which would have impacts on the number of lost parking spaces or the sidewalk width. Shifting the curb to accommodate wider loading zones would have significant cost implications.



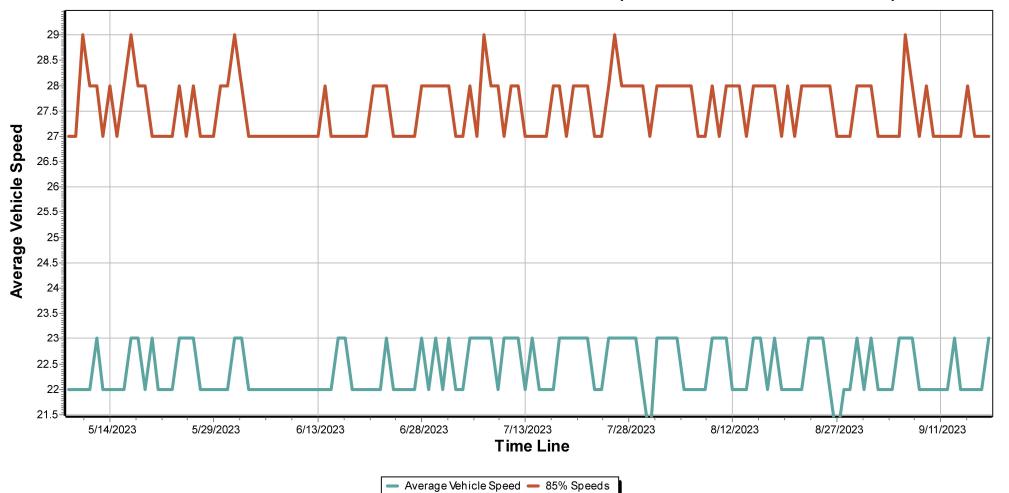
Appendix

	PM Peak Hour - No Drawbridge					
	2032 Baseline			2032 Two-Way		
Intersections	LOS	Delay	Queue	LOS	Delay	Queue
Maplewood Ave/Middle St & Congress St/Islington St						
Overall	C	23	-	С	22	-
EB, along Islington St	D	42	110	D	41	100
WB, along Congress St	D	40	180	D	38	150
NB, along Middle St	Α	5	50	Α	6	70
SB, along Maplewood Ave	В	11	150	Α	8	120
Middle St & State St						
Overall	С	25	-	С	27	-
EB, along State St	D	36	90	Е	56	110
WB, along State St				Ε	74	130
NB, along Middle St	С	26	150	В	20	140
SB, along Middle St	С	23	210	С	21	220
Congress St & Fleet St						
Overall	В	12	-	В	13	-
WB, along Congress St	В	11	100	В	11	100
NB, along Fleet St	С	23	60	С	23	50
SB, along Fleet St	Α	<1	0	В	16	90
State St & Fleet St						
Overall	В	18	-	В	19	-
EB, along State St	В	18	130	Α	8	120
WB, along State St				В	17	50
NB, along Fleet St	В	13	40	С	27	50
SB, along Fleet St	В	19	80	Е	70	150
Congress St/Daniel St & Pleasant St/Market Sq						
Overall	С	17	-	В	13	-
WB, along Daniel St	С	17	130	В	15	110
NB, along Pleasant St	В	15	70	В	13	70
SB, along Market Sq	С	16	110	В	12	90
State St & Pleasant St						
Overall	В	18	-	В	16	-
EB, along State St	В	19	140	Α	9	80
WB, along State St				В	17	40
NB, along Pleasant St	В	18	130	С	29	160

	PM Peak Hour - Drawbridge						
		2032 Baseline			2032 Two-Way		
Intersections	LOS	Delay	Queue	LOS	Delay	Queue	
Maplewood Ave/Middle St & Congress St/Islington St							
Overall	C	23	-	D	36	-	
EB, along Islington St	D	39	110	F	>100	250	
WB, along Congress St	D	41	180	D	50	190	
NB, along Middle St	Α	6	60	В	12	120	
SB, along Maplewood Ave	Α	10	150	В	16	230	
Middle St & State St							
Overall	C	22	-	Ε	59	-	
EB, along State St	D	36	90	F	85	150	
WB, along State St				F	>100	420	
NB, along Middle St	C	23	140	D	50	210	
SB, along Middle St	С	20	200	D	47	280	
Congress St & Fleet St							
Overall	В	13	-	В	13	-	
WB, along Congress St	В	11	100	Α	10	80	
NB, along Fleet St	C	22	70	С	22	60	
SB, along Fleet St	В	12	60	В	20	70	
State St & Fleet St							
Overall	С	21	-	С	30	-	
EB, along State St	С	21	150	С	33	410	
WB, along State St				В	18	100	
NB, along Fleet St	В	12	40	С	33	60	
SB, along Fleet St	С	24	120	F	91	130	
Congress St/Daniel St & Pleasant St/Market Sq							
Overall	D	28	-	В	12	-	
WB, along Daniel St	D	32	200	В	14	90	
NB, along Pleasant St	C	17	70	В	10	60	
SB, along Market Sq	С	24	170	В	11	100	
State St & Pleasant St	_			_			
Overall	C	29	-	С	32	-	
EB, along State St	С	30	210	D	35	230	
WB, along State St	•	2.0	450	D	43	160	
NB, along Pleasant St	С	29	150	С	32	160	



Custom Chart for Dennett inbound at Hunters Hill (from 5/8/2023 to 9/19/2023)



Generated on September 21, 2023 at 02:04 PM

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CITY OF PORTSMOUTH NH



September 26, 2023

City of Portsmouth NH Receives \$460,000 Federal Consolidated Rail Infrastructure & Safety Improvements Grant for Bartlett Street Underpass Engineering Study

Portsmouth, New Hampshire – In a phone call to Mayor Deaglan McEachern on September 25, 2023, US Transportation Secretary Pete Buttigieg extended his congratulations to the City of Portsmouth on being selected for the Fiscal Year 2022 Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant program. The City applied for a \$460,000 grant to cover the cost of the engineering studies necessary to reconfigure the Bartlett Street underpass and railroad bridge.

The project also includes Preliminary Engineering Studies with cost estimates for surface and safety improvements at three public grade crossings (Barberry Lane, Maplewood Avenue and Green Street) on the CSX Portsmouth Branch as well as the public crossing at Market Street on the CSX Newington Industrial Track. The Maplewood Avenue and Market Street crossings are already included in the New Hampshire 2023-2032 10-Year Transportation Improvement Plan.

"The Department of Transportation just announced \$1.4 billion in railroad improvements covering just 70 projects – and Portsmouth is one of them. This rail project supports the economic vitality of Portsmouth and of the State of New Hampshire by ensuring that efficient and reliable rail transportation can move products in and out of the Port of Portsmouth, the Portsmouth Naval Shipyard and other rail-served businesses in the City," said Mayor McEachern in making the announcement. "Railroads have been so central to our economy for the past two hundred years that there is a train depicted on the City seal. Thank you to the Department of Public Works and our Legal Department working with our grant consultant to make a convincing argument in the grant application to the Federal Transportation Department. Thanks to this grant the City will be able to improve both the rail line and the safety of Bartlett Street for the neighborhood."

This project will perform Preliminary Engineering, and the development of specifications and cost estimates for the replacement of the 135-year-old girder bridge over Bartlett Street. Part of the CSX Portsmouth Branch network in Portsmouth, the existing bridge has exceeded its service life and is no longer capable of carrying industry standard freight cars of 286,000 (286k) pound gross weight. In addition, the bridge is built over a sharp curve in Bartlett Street and has substandard highway vertical and horizontal clearances which constitute a safety hazard. The engineering studies will determine the scope of a project to construct a new 286k-capable undergrade bridge over a relocated and straightened Bartlett Street.



The project is intended to improve highway safety by providing industry standard vertical and horizontal clearances and clear sightlines. The new configuration will also improve railroad safety by eliminating bridge strikes by over-height highway vehicles. The grant covers some of the initial costs of the four project components:

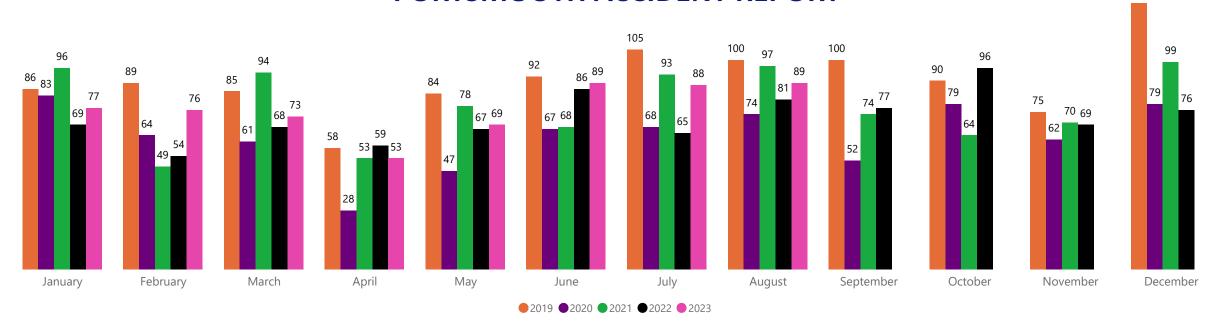
- Relocate and replace the Bartlett Street bridge to achieve 286k capability and improve the highway vertical clearances to a minimum of 14 feet;
- Relocate Bartlett Street and its utilities to a new alignment under the new Bartlett Street bridge;
- Rehabilitate four public grade crossings with surface improvements and installation of new or upgraded active warning devices; and
- Rehabilitate the 1.33 miles of Portsmouth Branch and Newington Industrial track from just west of the Barberry Road grade crossing to just east of the Market Street Grade Crossings.

The City will now work with the Federal Railroad Administration (FRA) Office of Railroad Development, in the words of the notification, "To deliver your project that will help us modernize our nation's freight and passenger rail infrastructure."

The CSX Portsmouth Branch rail line serves Portsmouth Naval Shipyard and the New Hampshire State Port Authority's Market Street Marine Terminal as well as commercial customers. The Portsmouth Branch and the Newington Industrial Track are designated as "Defense Connector Lines" as part of the Strategic Rail Corridor Network (STRACNET) civil rail lines which are most important to national defense because they provide rail service to military installations.

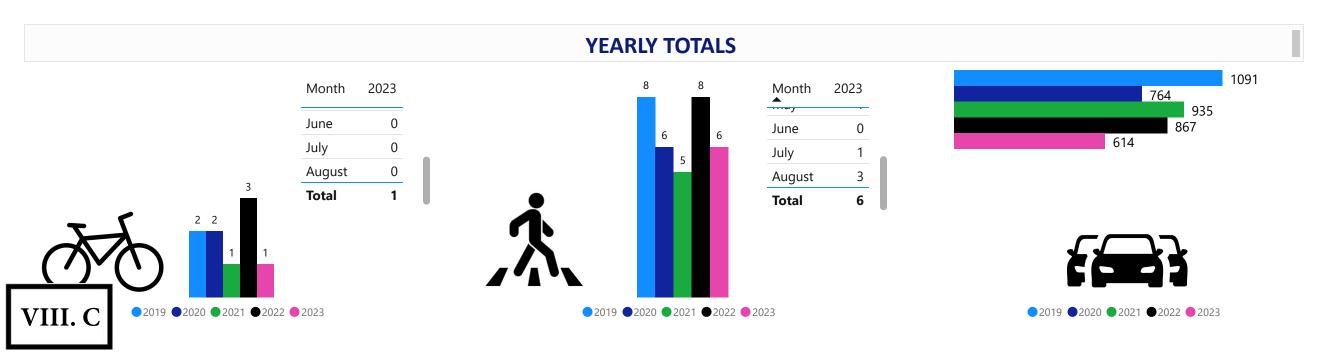
PORTSMOUTH ACCIDENT REPORT

127



August 2023- 50 reportable crashes, damage > \$1,000





City of Portsmouth

Department of Public Works



MEMORANDUM

TO: Karen Conard, City Manager

Peter Rice, Director, Department of Public Works

FROM: Eric Eby, City Engineer-Parking, Transportation and Planning

DATE: September 22nd, 2023

SUBJECT: Hillside Drive Neighborhood Pedestrian Concerns

To address the concerns of the residents of Hillside Drive regarding pedestrian safety for their neighborhood, the DPW will be taking the following short-term measures:

- Relocate the existing Rectangular Rapid Flashing Beacons (RRFBs) from the crosswalk at the corner of Bridge Street and Deer Street, to the crosswalk on Lafayette Road at Greenleaf Avenue. This will allow pedestrians to push a button to activate the flashing lights when crossing Lafayette, to increase driver awareness of the crossing. Sight lines at the crosswalk are sufficient for vehicle speeds of over 40 MPH, so sight lines are sufficient. This should help drivers to realize that there are pedestrians attempting to cross Lafayette. The RRFBs at Deer and Bridge need to be removed for the construction projects starting soon, so this is a good place to relocate them.
- Request the removal of the large silver maple tree on Greenleaf Avenue at the northern intersection of Hillside Drive, at the next Trees and Greenery Committee meeting on October 11. This tree limits sight lines for pedestrians and motorists attempting to cross Greenleaf Avenue or turn out of Hillside Drive onto Greenleaf Avenue. As the tree is still in good health, this is being requested as a safety item, and the neighborhood residents should attend the Trees and Greenery meeting to voice their support for this tree removal.
- Install a speed feedback sign on Greenleaf Avenue facing traffic traveling from Lafayette Road to the Route 1 Bypass. Speeds on Greenleaf Avenue in this direction are 29 MPH, well over the posted speed limit of 20 MPH, and will likely increase when the white flex posts at the intersection of Greenleaf Avenue and Lafayette Road are removed for the winter. With the tree removed, sight lines at Hillside Drive will be adequate for speeds of up to 24 MPH, still limited by trees and vegetation on private property inside the horizontal curve on Greenleaf Avenue.
- Install pedestrian warning sign on Greenleaf Avenue between Lafayette Road and the upper Hillside Drive intersection, facing traffic coming from Lafayette Road.



CHILDREN PLAYING signs are no longer an approved traffic control device and are not recommended.

A crosswalk across Greenleaf Avenue at Hillside Drive is not recommended, as this could give a false sense of security and make it less safe for pedestrians. Pedestrians tend not to be as careful when using a crosswalk, thinking that traffic will always stop for them. Especially when there are fewer than 20 pedestrians an hour, drivers tend not to notice pedestrians, even when in a crosswalk. With the limited sight lines at this location, it is best for pedestrians to stop, look both directions, and listen for traffic before crossing, rather than relying on pavement markings.

City staff will also continue to pursue long-term measures to improve pedestrian safety and access to the neighborhood, including the reconstruction of the Greenleaf Avenue and Lafayette Road intersection, possible traffic flow changes and pedestrian sidewalks or easements.



Taking the mystery out of accessibility

September 26, 2023

City Manager's office Parking Traffic and Safety Committee City of Portsmouth

Dear City Manager Conard, Chairman Bagley and PTS Committee Members:

This year the City approved a pilot program expanding the accessible parking at Prescott Park, hoping to make the park and the seasonal events at Prescott Park Arts Festival more inclusive for people of all abilities. It was a great success, both Access Navigators and PPAF heard from many people who were pleased to have convenient accommodation for their accessible parking needs. From Courtney Perkins, PPAF Executive Director, "I spoke to a woman last week who said she stopped coming to the Festival years ago because it was so difficult for her to find parking and walk to the park. She expressly wanted to let me know that the lot has let her come back to the community again."

We did a lot of visits during park events, observing parking lot usage. Arts Festival staff did the same. Near the end of the season we compared notes, thinking it would be helpful for planning for summer of 2024 parking accommodations. Here are our observations and opinions:

- Baseline, year round: The lot has 16 van accessible spaces, three are reserved full time for vehicles with HC plates or
 placards. The lot has a two hour maximum.
- PPAF 2023 season: The program had rotating signage:
 Monday through Friday, accessible parking entire lot, 5pm-11pm.

 Saturday and Sunday, accessible parking entire lot, 10am-11pm.
- Early in the summer the lot was sparsely used. As the season progressed, on Monday and Tuesday evenings the lot had six to eight vehicles. Wednesday through Sunday PPAF show evenings there were 12-16 vehicles in the 16-space lot. By mid-August, the lot was filled to capacity nearly every show evening.
- On Saturdays and Sundays the signage was changed to 10am-11pm to accommodate matinee performances. The lot
 was sparsely filled during those matinee hours, with the exception of the Camp Encore weekends, but would fill to
 near capacity after 5pm.
- From Arts Festival staff: There are three weekends of Camp Encore matinee programs. Those three weekends are filled with families including many grandparents. The parking lot was full for those matinees. We feel that with a strong line of communication between park staff and city staff, those would be the only weekends that benefit from accessible matinee parking.
- We learned that switching the signage on Saturday mornings and Monday mornings was cumbersome for city staff. Limiting matinee parking to the three consecutive Camp Encore weekends would reduce city staff signage logistics.
- Nearly every evening we would see a ticket on a non-HC plate or placard vehicle. It's an expensive ticket, not a Portsmouth feel-good moment. For the 2024 season, better signage, including signage at the lot entry, might help alleviate these unpleasant surprises.
- There were frequently vehicles in the lot with Veteran plates, but no HC plate or placard. They were unticketed. Not every Veteran is a disabled veteran. This isn't legal parking for Veterans use.
- PPAF shows are longer than two hours. The signage states two-hour limit, though parking enforcement does not enforce time limits for HC parking in this pilot program. Patrons were confused about their legality after two hours. Suggestions welcome on this conundrum.

Happy to collaborate on any thoughts city staff and PTS may have to continue to create a good experience for people with disabilities.

Best Regards,

Anne Weidman Todd Hanson, FAIA Access Navigators