Agenda Item #12

Meeting of June 19, 2017

South Portland City Council
Position Paper of the City Manager

Subject:

ORDER #218-16/17 – Approving the submission of grant applications to PACTS for traffic, bicycle and pedestrian projects. Passage requires majority vote.

Position:

Applications for grant funds were submitted to the Portland Area Comprehensive Transportation System (PACTS) in preparation of the 2018 Capital Improvement Program, which included funding for the following five projects:

- **Intersection of Broadway& Elm Street**: Provide traffic signal and geometric improvements to an outdated intersection that is currently rated as a High Crash Location (HCL).

- **Highland Avenue Rehabilitation:** Reconstruct/rehabilitate this section of Highland Avenue by reclaiming the existing pavement and placing a new bituminous wearing surface, installing new concrete curbing and drainage, rebuilding the existing bituminous sidewalks, and replacing the outdated traffic signal equipment and mounting hardware at the intersection of Ocean Street with Highland Avenue.

- **Maine Mall Area access to MTA Connector Reconfiguration:** Reconfigure the current access from the Maine Mall and John Roberts Road Business Park to the MTA Connector (Route 703) to address two HCL's – Philbrook Avenue at Ramp E and Maine Mall Road at Chili's

- **Tri-Community Pedestrian-Bicyclist Safety and Access**: Improve safety for pedestrian, bicyclists, and transit users along a number of high volume local roadways which are identified as Priority Corridors and pass through Centers of Opportunity. The South Portland components include:
    - Casco Bay Bridge Approach – Multi-Use Path
    - Waterman Drive (in Mill Creek) – Sidewalks, Bike Lanes, Traffic Signal Improvements, and Landscaping
    - Route 77 (Broadway to Cape Town Line) – Sidewalk Repairs and Bus Facility Improvements
    - Cottage Road – Curb Extensions at Pillsbury and Improved Pedestrian Crossing at Goudy

- Preble Street – Improved Sidewalks for SMCC, Improved Crosswalks for Small School, Improve Sight Distance for Angell, and Extend Sidewalks from Angell to Cape Town Line

The cost and funding of these projects is as follows:

	Total Estimated Cost	PACTS Funding (75%)	Local Share (25%)	South Portland Local Share	PACTS Staff Ranking	Chance for Funding
Intersection of Broadway & Elm	$ 409,400	$ 307,050	$ 102,350	$102,350	#7 of 7 Construction applications. First four recommended for funding.	Unlikely
Highland Avenue Rehabilitation	$ 1,058,900	$ 794,175	$ 264,725	$264,725	#5 of 6 PDR applications. First two recommended for funding.	Unlikely
Maine Mall Area Access to MTA Connector Reconfiguration	$ 3,711,050	$ 2,783,288	$ 927,763	$927,763	#6 of 6 PDR applications. First two recommended for funding.	Unlikely
Tri-Community Pedestrian-Bicyclist Safety and Access	$ 2,298,790	$ 1,724,093	$ 574,698	$297,693	#3 of 7 Construction applications. First four recommended for funding.	Possible
Total	**$ 7,478,140**	**$ 5,608,605**	**$ 1,869,535**	**$1,592,531**		
Note: "PDR" means Preliminary Design Review. Current PACTS policy is that after a PDR is completed, PACTS is committed to funding construction, but the year in which this would occur is not set.						

The estimated cost of the local share of these projects, at a maximum, is $1,592,531. The estimated local share of the one application that appears to have a chance of being funded is $297,693.

This order is brought forward as a formal action of the City Council's approval of these projects and application submitted.

Requested Action:

Council passage of ORDER #218-16/17.

City Manager

CITY OF SOUTH PORTLAND

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Mayor

SCOTT T. MORELLI
City Manager

EMILY F. SCULLY
City Clerk

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District Four
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District Five
BRAD FOX

At Large
MAXINE R. BEECHER

At Large
SUSAN J. HENDERSON

IN CITY COUNCIL
ORDER #218-16/17

ORDERED, that the City Council hereby authorizes the submission of grant applications to PACTS for traffic, bicycle and pedestrian projects.

Fiscal Note: $1,592,531 – Maximum Estimated Local Share

Date: June 19, 2017

P.O. Box 9422 • South Portland, ME 04116-9422
Telephone (207) 767-3201 • Fax (207) 767-7620

Application Form for PACTS 2020 and 2021 Complex Projects

September 30, 2016

PACTS staff and members of the Planning, Transit and Technical Committees will use the information provided to score and rank the applications. Please reference our Application Instructions and our 2017-2018 TIP Policies and Procedures document for more information, or contact PACTS staff with any questions.

Applications must be received by PACTS by 4:00 p.m. on February 3, 2017. Three (3) hard copies as well as an electronic Word submittal are required. Email (or cd) to ceppich@gpcog.org and pniehoff@gpcog.org. Attach supplementary information as needed.

Submittal Requirements

1. Proposals to change the capacity of an intersection must include the results of capacity analyses of current and proposed conditions. Proposals for a new traffic signal (or removal of an existing one) must be accompanied by a MaineDOT-approved warrant analysis. MaineDOT support documents must be submitted with the application.

2. Proposals to change an intersection or roadway cross-section must be supported by a feasibility study that includes an analysis of feasible alternatives, recommendation of the most viable alternative, a cost estimate, and at least one public forum.

3. Similarly, proposals for the construction of new sidewalks/paths/trails intended to be used solely by bicycles and/or pedestrians must be supported by an analysis that assesses viable alternative routes, potential demand, and level of municipal, business and resident support and that recommends the most feasible alternative.

4. Proposals for road and/or intersection reconstruction must be submitted by a registered professional engineer.

General Information

1. **Municipality**: South Portland

2. **Primary contact**: Charles Haeuser, Planning Director

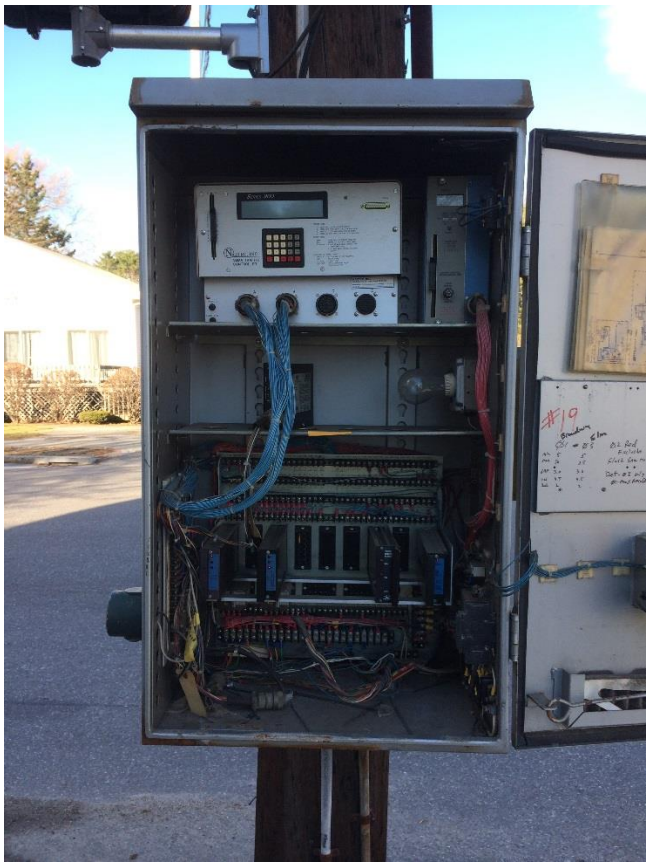
3. **Contact phone number:** 207.767.7649

4. **Project name**: Intersection of Broadway and Elm Streets

5. **Project location**: Broadway at Elm Street

a. **Brief project scope description**: Provide traffic signal and geometric improvements to an outdated intersection that is currently rated as a High Crash Location (HCL).

Broadway looking east at the intersection of Elm Street



Existing TS-1 Traffic Signal Cabinet

6. **Purpose-and-need statement that describes the conditions that warrant the proposed project and an explanation of the intended benefits of that project.** The existing intersection of Broadway and Elm Street is currently classified as a HCL with 21 crashes between 2013-2015 and a CRF of 1.01. Elm Street is the primary access to Turner Island a port facility on the Fore River with off-loading facilities for oil tankers, rail service, and a general marine related wharf. Commercial trucking in and out of Turner Island has to negotiate the intersection of Elm Street with Broadway with its tight, substandard geometrics on a routine basis. In addition, the traffic signal equipment is 30+ years old and not positioned well for optimum driver visibility. The City's Water Resources Department and area utilities will be performing work on Elm Street and Broadway in the next year or so, and it would make sense to include an intersection upgrade at this location in conjunction with this other work.

7. **Has a preliminary design report (PDR) been completed?** No If yes, then please attach it.

8. **Is this an application for PDR funding as a precursor to future PACTS construction funding?** Yes If no, then describe why you think this project does not need a PDR phase:

9. **Federal functional classification**: Elm Street – Local
   Broadway – Minor Arterial

10. **MaineDOT Corridor Priority**: (http://www.maine.gov/mdot/about/assets/search/)

    Elm Street – Priority 6
    Broadway – Priority 3

11. **Are there any right-of-way impacts?** Possibly If yes, please identify them. The curb radii are very tight on the Turner Island side of Broadway which makes it difficult to navigate for large tractor trailer trucks. We suspect that this because the ROW is restricted, but have not done any research on this yet.

12. **Has this project been reviewed for potential environmental impacts?** No If yes, please identify them.

13. **Will the project meet clear zone requirements?** Yes

14. **Will the project require design exceptions?** No If yes, please identify them.

15. **Will the project require historical and/or environmental review?** Yes

16. **Transit provider(s) support for municipal applications that involve transit-supportive elements:** Broadway is part of South Portland Buses 24A Routes so they are supportive of making this intersection safer for all to use.

17. **Cost Estimate**

Provide as much detail as possible and attach the worksheets used to develop your estimates.

Contact information for the cost estimate preparer: Stephen S. Sawyer, Jr., PE, Sebago Technics, Inc. - the City's Consulting Traffic Engineer

Preliminary engineering:	$ 59,400
Right of way:	$ 25,000
Construction:	$295,000
Construction engineering:	$ 30,000
Total estimated cost:	$409,400

PACTS Preservation Spending Target estimate: 0%
PACTS Modernization Spending Target estimate: 100% or $409,400
PACTS Expansion Spending Target estimate: 0%
Total estimated cost: $409,400

Scoring Formula Criteria

1. Subregion's and Transit Committee's top priority projects (maximum 10 points)

Please communicate with your PACTS subregion colleagues in order to decide on priority project investments in your subregion. Each of the four PACTS subregions shall allocate up to 10 points to PACTS applications from the municipalities in the subregion. The 10 points may go to a single proposal or be spread among multiple projects.

The Transit Committee shall do the same for applications submitted by, or in partnership with, any of the PACTS Transit Agencies.

Please list below the points allocated for this application and for all other applications submitted from your PACTS Subregion.

Submittal N/A

2. *Destination 2040* Priority Corridor or Center (maximum 10 points)

The *Destination 2040* Plan identifies Priority Corridors and 56 Priority Centers which are existing important regional transportation corridors or emerging centers that have or could have infrastructure such as water and sewers to support additional development. They generally allow a mix of uses and proximate living near jobs and services, as well as recreation opportunities. The map of these corridors and centers is at the end of the PACTS application instructions memo. The mapped circles are not intended to define strict limits of the center. Applicants make the case that the proposed projects are in or related to a center

and then PACTS staff makes a determination whether or not the proposed project qualifies for these points.

Submittal The proposed project is part of the Centers of Opportunity centered on Mill Creek.

3. Improves region's traffic signal system (maximum 5 points)

Maintaining and operating the region's 100+ signalized intersections at peak performance and coordination has been a strategy of PACTS for over a decade. Signals which have sensors that can detect not only cars but also buses, bicycles and pedestrians can provide for optimal efficiency thereby reducing the need for costly roadway widening or lane expansion. Proposals will be scored on the projected improved performance, including safety and balancing of all modes which utilize the intersection. Scoring will be weighted on the amount of traffic volumes specific to the intersection as well as its regional significance i.e. how many municipalities are affected and transit agencies using the intersection and benefiting from the proposed improvements.

Submittal As mentioned previously, the traffic signal equipment is woefully outdated (a TS-1 platform), is not ADA compliant, nor are the signal heads in an optimum position for maximum driver visibility (they are all post-top mounted - not on mast arms), and the intersection detection is only on the side streets, which means the intersection does not operate fully actuated but semi-actuated. In addition, the City has recently installed TSP in many of its signal controllers on bus routes, and this will be done at Broadway and Elm, which is on a fixed bus route (24A).

Traffic counts have been taken during the AM and PM peak hours (January 3, 2017 – See Attached) and current capacity results are as follows:

Movement	***AM Existing***	***PM Existing***
	Delay (sec.)/LOS	***Delay (sec.)/LOS***
Broadway EB LT	41.8/D	31.9/C
Broadway EB TH	17.8/B	15.0/B
Broadway EB RT	21.2/C	13.2/B
Broadway WB LT	19.4/B	19.2/B
Broadway WB TH	11.2/B	11.5/B
Broadway WB RT	10.4/A	10.6/B

Elm NB LT	24.0/C	NA
Elm NB TH	NA	31.9/C
Elm NB RT	7.5/A	9.1/A
Elm SB LT	26.7/C	26.8/C
Elm SB RT	15.0/B	16.0/B
Overall	16.1/B	17.7/B

With the proposed fully actuated signal these results can be improved as follows:

Movement	***AM Proposed Delay (sec.)/LOS***	***PM Proposed Delay (sec.)/LOS***
Broadway EB LT	28.0/D	19.4/B
Broadway EB TH	10.4/B	9.1/A
Broadway EB RT	8.9/A	12.1/B
Broadway WB LT	16.8/B	9.6/A
Broadway WB TH	8.8/A	6.6/A
Broadway WB RT	8.4/A	4.7/A
Elm NB LT	12.5/B	NA
Elm NB TH	NA	16.9/B
Elm NB RT	7.5/A	6.9/A
Elm SB LT	13.5/B	15.0/B
Elm SB RT	8.5/A	23.8/C
Overall	12.3/B	11.5/B

4. Leverages other non-MPO funds from the MaineDOT, Private/developers, Public Private Partnerships (PPP), Tax Increment Financing (TIFs), etc. (maximum 3 points)

   Destination 2040 identified a growing gap between the infrastructure needs of the growing PACTS region, and flat or declining funding available. Proposals that include funds from non-government sources, and innovative funding mechanisms can receive points. Greater percentages of non-governmental funds will receive more points.

   Submittal Downtown TIF funds will be used for the local match.

5. Multi-member applications (maximum 3 points)

   Transportation transcends municipal boundaries so PACTS encourages regional coordination of transportation investment decisions. Project proposals that include planning and match funding by two or more municipalities and/or transit agencies will receive the maximum points.

   - 1 point – Application which includes a supporting resolution adopted by a neighboring city or town council.
   - 2 points – Application which includes supporting resolutions adopted by two or more neighboring city or town councils.
   - 3 points – Application for which multiple municipalities would provide equal or proportional shares in payment of the local match for a project located wholly within one municipality.

   Submittal N/A

6. Enhance existing freight industry (maximum 10 points)

   The efficient movement of goods is critical to the local and regional economy. Providing better access to specialized sites that handle freight, and/or projects that propose to shift large/heavy freight shipments away from congested areas and neighborhoods are eligible for points. Projects that increase heavy haul freight through existing residential neighborhoods are discouraged. Proposed projects that demonstrate a reduction in the frequency and/or weight of trucked freight and that move more freight onto rail and/or ships will receive the most points.

   Submittal The existing geometry of this intersection is comprising large truck movements into and out of the Turner Island port facility. Improvements, whatever they may ultimately be, will enhance existing freight movements to and from this marine facility.

7. Economic Development Benefits of the project (maximum 8 points)

Transportation links businesses and markets at all scales. Projects that support the economic vitality of the region, and provide better links between labor and employment are desired in the PACTS region. Projects that demonstrate the infrastructure investments proposed will enable desired economic development projects in appropriate and desired locations, such as Priority Centers are eligible for points. Project proposals that demonstrate increased accommodations for all modes in job concentrated areas, for access to child care in those areas as well as education and workforce training sites are also eligible for points in this category.

Submittal Improved access from Broadway to Elm Street will create a positive impact for the viability of the Turner Island port facility.

8. Reconstruct or Rehabilitate an Arterial or Collector Road (maximum 10 points)

Arterials connect the region to the rest of the state and country and carry the majority of the region's traffic. PACTS has a successful pavement preservation program for Collector Roads, but has not had a means to fully fund the reconstruction of Collectors or Arterials. Proposed projects for roads that are no longer eligible for pavement preservation and require some level of rebuilding are eligible for these points (up to 10 points for arterials, and 7 points for collectors).

Submittal N/A

9. Reduces the numbers or severity of crashes (maximum 12 points)

The safety of the traveling public is a priority in the multi-modal environment of the PACTS region. Making streets and roads safer and more compatible for all users is an important aspect of transforming our transportation system. Proposals that demonstrate the project will mitigate High Crash Locations and/or make travel conditions safer for vulnerable users, (i.e. bicyclists, pedestrians, transit riders/passengers, and underserved persons, etc.) are eligible for points.

Submittal The proposed project is aimed at addressing a current HCL on Broadway, a primary east-west arterial within the City. In addition, in 2011 a bicyclist was struck at this intersection by a turning vehicle. Improved geometrics and updated traffic signal equipment will have direct effects on the intersection's safety performance.

10. Transit supportive project elements (maximum 10 points)

The success of our growing region depends on more convenient and inviting access to transit that provides high quality transit trips as a viable choice for everyday travel. The integration of transit amenities such as pedestrian and bicycle accessible transit stops and shelters, street modifications which improve transit service, technology upgrades such as Transit Signal Priority or Real-Time Passenger Information systems, as well as other transit capital projects

which maintain, improve or expand existing transit service are eligible for points in the category.

Submittal South Portland Bus has equipped its entire fleet with TSP equipment and a number of intersections with TSP software. Because the proposed intersection is located on Bus Route 24A, we plan to outfit this intersection with TSP capabilities as part of the project.

11. Improves Pedestrian Network (maximum 5 points)

Multimodal streets and corridors that foster calmed traffic and provide a relaxed, accessible and outdoor-oriented experience encouraging pedestrian activity are critical to livability in the PACTS region. Proposals that demonstrate the removal of barriers, closing of gaps, and other treatments improving pedestrian movement are desired. Proposals that demonstrate treatments which will improve the pedestrian network, such as traffic slowing, diversion of cut-through traffic, the construction of sidewalks of adequate width, providing shade trees, and encourage active transportation and street life, etc. are eligible for points.

Submittal N/A

12. Improves Bicycle Network (maximum 5 points)

The ongoing and continued emphasis on a safe, comfortable, PACTS region-wide bicycle network that provides an active transportation choice for people and enables active transportation lifestyle is an important transportation strategy. Projects that will expand on-road bikeways, bicycle or shared-use lanes or paths, trail connections, and other treatments that provide a network for safer and more comfortable travel by bicycle are eligible for points.

Submittal N/A

13. Reduces congestion and/or improves multimodal level of service (maximum 10 points)

The economic and population growth of the PACTS region, like other successful regions, is potentially constrained and limited by congestion. The PACTS Congestion Management Process plan focuses on mode shift and traffic signal coordination as the primary strategies for reducing motor vehicle congestion. Proposals that demonstrate the project will provide reductions in motor vehicle congestion AND improve multimodal level of service without negatively impacting the safety of non-motorized travel mode will receive the maximum points.

Submittal The Broadway/Elm intersection is not in the PACTS CMP network. Broadway is, however, the City's major east-west corridor and as such is vital to the movement of people and goods from one end of the City to the other. Given that the Broadway/Elm intersection is isolated in its location, traffic signal coordination is not germane to this discussion, but the implementation of TSP is and will have a positive effect on bus travel within the corridor.

Upgrading the detection at the intersection to make it operate fully actuated and modifying the signal programming can make improvements in traffic operations by reducing motorist delay. See the results presented in the answer to question 3 above.

14. Encourages or enables compact development such as Transit Oriented Development, street connectivity, etc. (maximum 5 points)

    Acknowledging limited financial resources, the Destination 2040 Plan encourages transportation and land-use decisions to direct growth toward existing infrastructure (sewer, water, transportation, safety services) in centers and connecting corridors. *Destination 2040* identified Priority Centers that are either currently serviced by transit, or that could be in the future. Existing and emerging mixed-use centers are more sustainable, and more cost sensitive for municipalities delivering services and maintaining infrastructure assets than low-density developments which are more dependent on trips by automobile. Proposals that demonstrate the project will enable or provide for a framework for transit oriented development are eligible for these points

    Submittal N/A

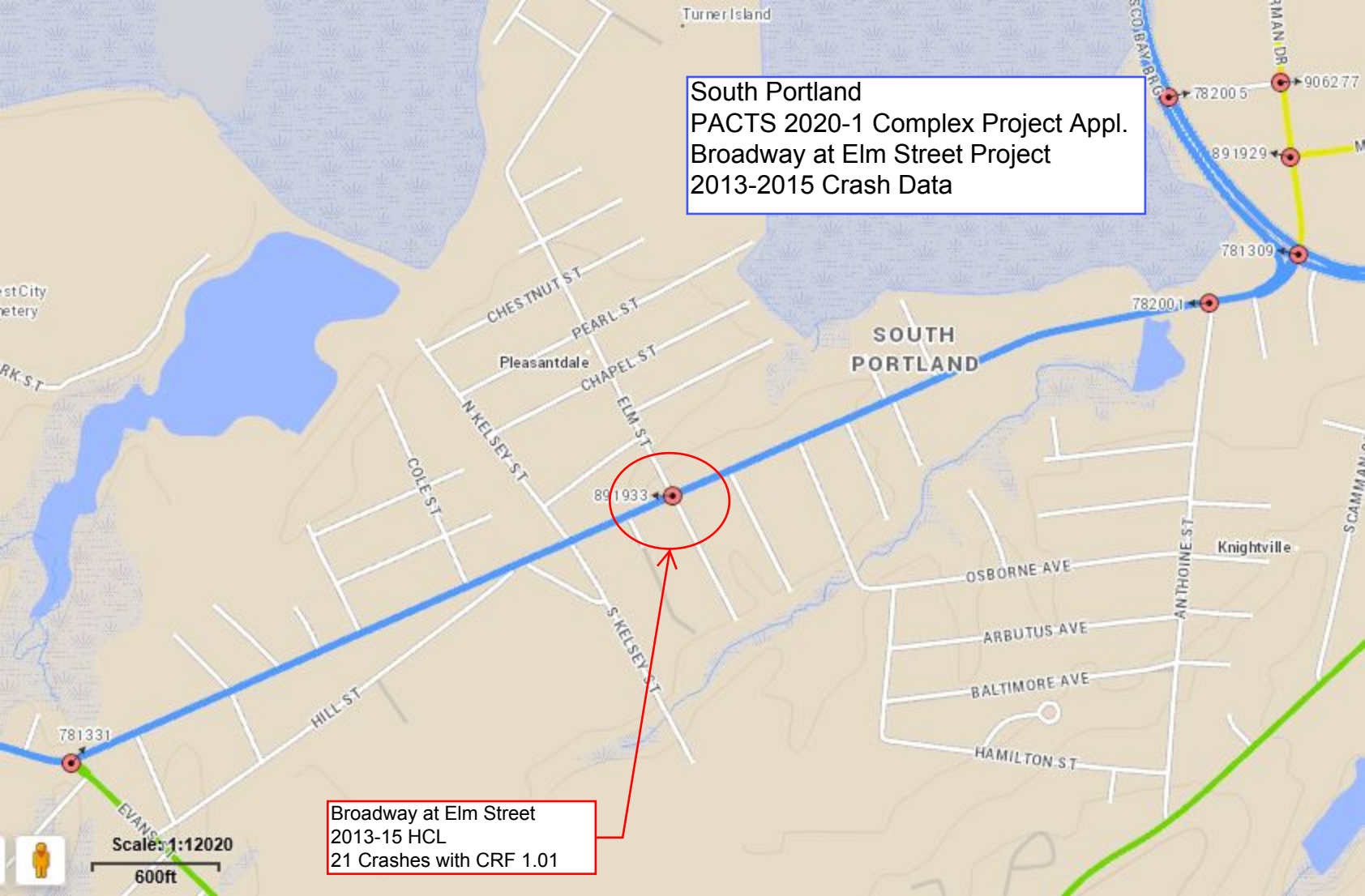
15. Links jobs and housing by trips other than by automobile (maximum 5 points)

    The combined costs of balancing housing and transportation related to commuting to jobs, schools and shopping comprises the majority of most household budgets. By removing barriers to transportation options other than just automobiles, and providing transportation choices and enabling walkable, transit-connected neighborhoods, these costs can be reduced. Proposals that demonstrate that the project would facilitate more non-automobile trips between employment centers and residential areas through capital improvements are eligible for these points.

    Submittal N/A

16. Increases Resilience to Climate-related events and/or provides "Green" infrastructure to reduce storm water (maximum 5 points)

    Extreme weather events and a changing climate are certain to add to the transportation infrastructure needs in the near future. Many roadways and bridges will require modernization that will allow infrastructure to withstand climate related impacts such as sea level rise, storm surge, and other storm related events – resilient infrastructure that can survive these events. Proposals that demonstrate the improvements will reduce impacts from climate related events, such as flooding, erosion, storm surge, sea level rise etc. are eligible for points. Proposals that demonstrate that the proposed infrastructure facilities will function in such conditions, or may reduce run-off or treat it organically, and/or reduce the need for engineered storm water facilities are also eligible for points.
    Submittal N/A


South Portland
PACTS 2020-1 Complex Project Appl.
Broadway at Elm Street Project
2013-2015 Crash Data
Broadway at Elm Street
2013-15 HCL
21 Crashes with CRF 1.01
Turner Island
SCOTBAY BRG
RMAN DR
782005
906277
891929
781309
782001
SOUTH PORTLAND
CHESTNUT ST
PEARL ST
Pleasantdale
CHAPEL ST
N KELSEY ST
ELM ST
COLE ST
891933
S KELSEY ST
HILL ST
781331
EVANS ST
OSBORNE AVE
ARBUTUS AVE
BALTIMORE AVE
HAMILTON ST
ANTHOINE ST
Knightville
SCAMMAN
Scale: 1:12020
600ft

3: Elm St & Broadway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	4.7	2.0	0.7	0.5	0.4	0.6	0.1	0.1	0.3	0.2	1.2
Total Del/Veh (s)	41.8	17.8	21.2	19.4	11.2	10.4	24.0	7.5	26.7	15.0	16.1

Total Network Performance

Denied Del/Veh (s)	1.2
Total Del/Veh (s)	18.1

Intersection: 3: Elm St & Broadway

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	70	562	438	48	147
Average Queue (ft)	26	179	117	10	64
95th Queue (ft)	66	494	280	36	114
Link Distance (ft)		792	1096	618	620
Upstream Blk Time (%)		2			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)	1				
Storage Blk Time (%)	13	16			
Queuing Penalty (veh)	71	6			

Network Summary

Network wide Queuing Penalty: 77

3: Elm St & Broadway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	1.7	0.6	0.9	0.5	0.6	0.6	0.1	0.1	0.2	0.2	0.2	0.6
Total Del/Veh (s)	31.9	15.0	13.2	19.2	11.5	10.6	31.9	9.1	26.8	32.5	16.0	14.6

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	17.7

Intersection: 3: Elm St & Broadway

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	68	635	496	49	152
Average Queue (ft)	25	163	141	13	59
95th Queue (ft)	54	436	324	39	112
Link Distance (ft)		1983	1096	618	620
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	3				
Storage Blk Time (%)	17	15			
Queuing Penalty (veh)	97	9			

Network Summary

Network wide Queuing Penalty: 105

3: Elm St & Broadway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Del/Veh (s)	3.2	0.6	0.7	0.5	0.5	0.6	0.1	0.1	0.2	0.2	0.6
Total Del/Veh (s)	28.0	10.4	8.9	16.8	8.8	8.4	12.5	7.5	13.5	8.5	10.3

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	12.3

Intersection: 3: Elm St & Broadway

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	70	497	275	39	109
Average Queue (ft)	27	121	94	9	55
95th Queue (ft)	67	332	206	32	94
Link Distance (ft)		792	1096	618	620
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)	1				
Storage Blk Time (%)	12	13			
Queuing Penalty (veh)	67	5			

Network Summary

Network wide Queuing Penalty: 73

3: Elm St & Broadway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	1.4	0.5	0.8	0.4	0.5	0.6		0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	19.4	9.1	12.1	9.6	6.6	4.7		16.9	6.9	15.0	23.8	9.0

3: Elm St & Broadway Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	8.6

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	11.5

Intersection: 3: Elm St & Broadway

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	68	430	218	44	99
Average Queue (ft)	26	105	90	13	49
95th Queue (ft)	56	254	179	39	84
Link Distance (ft)		1998	1121	613	616
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	3				
Storage Blk Time (%)	13	11			
Queuing Penalty (veh)	72	6			

Network Summary

Network wide Queuing Penalty: 78

SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106
250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB PACTS 2020-1 App Broadway/Elm
SHEET NO. ____ OF ____
CALCULATED BY SSS DATE 12/28/16
CHECKED BY ____ DATE ____
SCALE ____

PDR Scope

1. Field Survey	$7,500
2. ROW Research	$2,000
3. Traffic Data Collection and Analysis	$3,000
4. Alternative Designs assume 2	$6,500
5. Public Meeting	$1,500
6. Team Meetings w/ PACTS and MDOT	$3,000
7. Draft PDR document	$3,500
8. Final PDR document	$2,500
9. Cost Estimating	$2200
	$31,700
MDOT charges (10%)	3,200
Contingency (15%)	4,500
	$39,400

DELUXE FOR BUSINESS 1-800-888-6327

SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106
250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB PACTS 2020-1 App Broadway Elm
SHEET NO. ____ OF ____
CALCULATED BY SSS DATE 2/1/17
CHECKED BY ____ DATE ____
SCALE ____

Preliminary Construction Cost Estimate

1. New traffic signal w/ mast arms, full detection, and ADA accommodations = $175,000
2. Roadway radius widening = $ 50,000
3. Drainage = $ 5,000
4. Curbing = $ 5,000
5. (4) ADA Ramps w/ Trunc. Domes = $10,000

$245,000

Contingency 20% 50,000

$295,000

(in 2017 $)

ROW Cost

If the corner radius can be improved by acquiring ROW that is friendly, then maybe

$25,000

Construction	$295,000
ROW	$ 25,000 (maybe)
PE:	
PDR	$ 39,400
Remainder	$ 20,000
CE:	$ 30,000
	$409,400

DELUXE FOR BUSINESS 1-800-888-6327

Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 1

Groups Printed- Cars - Trucks

	Elm St From North			Broadway From East			Elm St From South			Broadway From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	11	0	10	0	66	4	4	0	2	8	53	1	159
07:15 AM	5	0	13	2	94	4	4	0	2	9	72	2	207
07:30 AM	10	0	16	0	82	3	0	0	1	2	73	0	187
07:45 AM	16	0	15	3	112	13	1	0	1	7	117	2	287
Total	42	0	54	5	354	24	9	0	6	26	315	5	840
08:00 AM	9	0	11	0	82	5	3	0	1	13	97	0	221
08:15 AM	9	0	18	1	85	5	3	0	3	6	95	1	226
08:30 AM	8	0	15	2	91	6	1	0	0	3	94	1	221
08:45 AM	12	0	8	3	95	6	1	0	0	4	83	0	212
Total	38	0	52	6	353	22	8	0	4	26	369	2	880
Grand Total	80	0	106	11	707	46	17	0	10	52	684	7	1720
Apprch %	43	0	57	1.4	92.5	6	63	0	37	7	92.1	0.9	
Total %	4.7	0	6.2	0.6	41.1	2.7	1	0	0.6	3	39.8	0.4	
Cars	79	0	84	11	682	45	17	0	10	29	657	7	1621
% Cars	98.8	0	79.2	100	96.5	97.8	100	0	100	55.8	96.1	100	94.2
Trucks	1	0	22	0	25	1	0	0	0	23	27	0	99
% Trucks	1.2	0	20.8	0	3.5	2.2	0	0	0	44.2	3.9	0	5.8

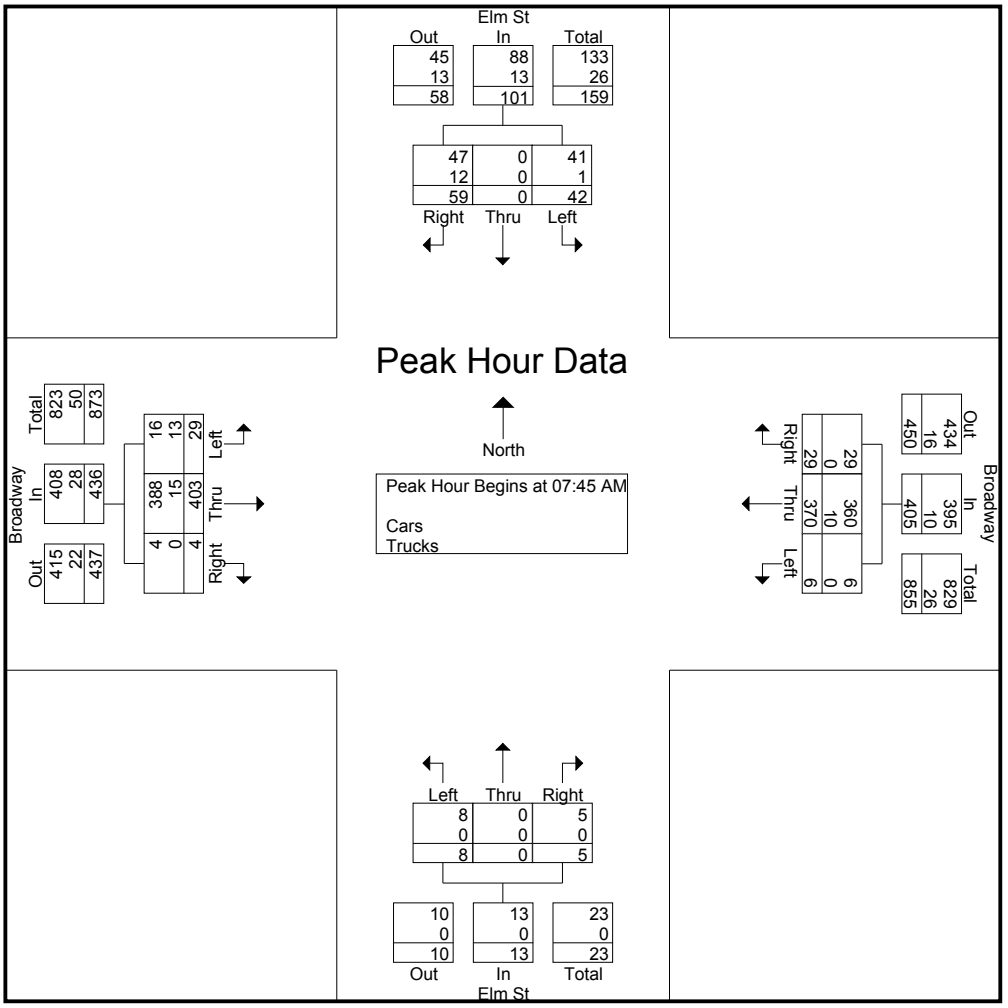
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 2

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**16**	0	15	**31**	**3**	**112**	**13**	**128**	1	0	1	2	7	**117**	**2**	**126**	**287**
08:00 AM	9	0	11	20	0	82	5	87	**3**	0	1	4	**13**	97	0	110	221
08:15 AM	9	0	**18**	27	1	85	5	91	3	0	**3**	**6**	6	95	1	102	226
08:30 AM	8	0	15	23	2	91	6	99	1	0	0	1	3	94	1	98	221
Total Volume	42	0	59	101	6	370	29	405	8	0	5	13	29	403	4	436	955
% App. Total	41.6	0	58.4		1.5	91.4	7.2		61.5	0	38.5		6.7	92.4	0.9		
PHF	.656	.000	.819	.815	.500	.826	.558	.791	.667	.000	.417	.542	.558	.861	.500	.865	.832
Cars	41	0	47	88	6	360	29	395	8	0	5	13	16	388	4	408	904
% Cars	97.6	0	79.7	87.1	100	97.3	100	97.5	100	0	100	100	55.2	96.3	100	93.6	94.7
Trucks	1	0	12	13	0	10	0	10	0	0	0	0	13	15	0	28	51
% Trucks	2.4	0	20.3	12.9	0	2.7	0	2.5	0	0	0	0	44.8	3.7	0	6.4	5.3



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

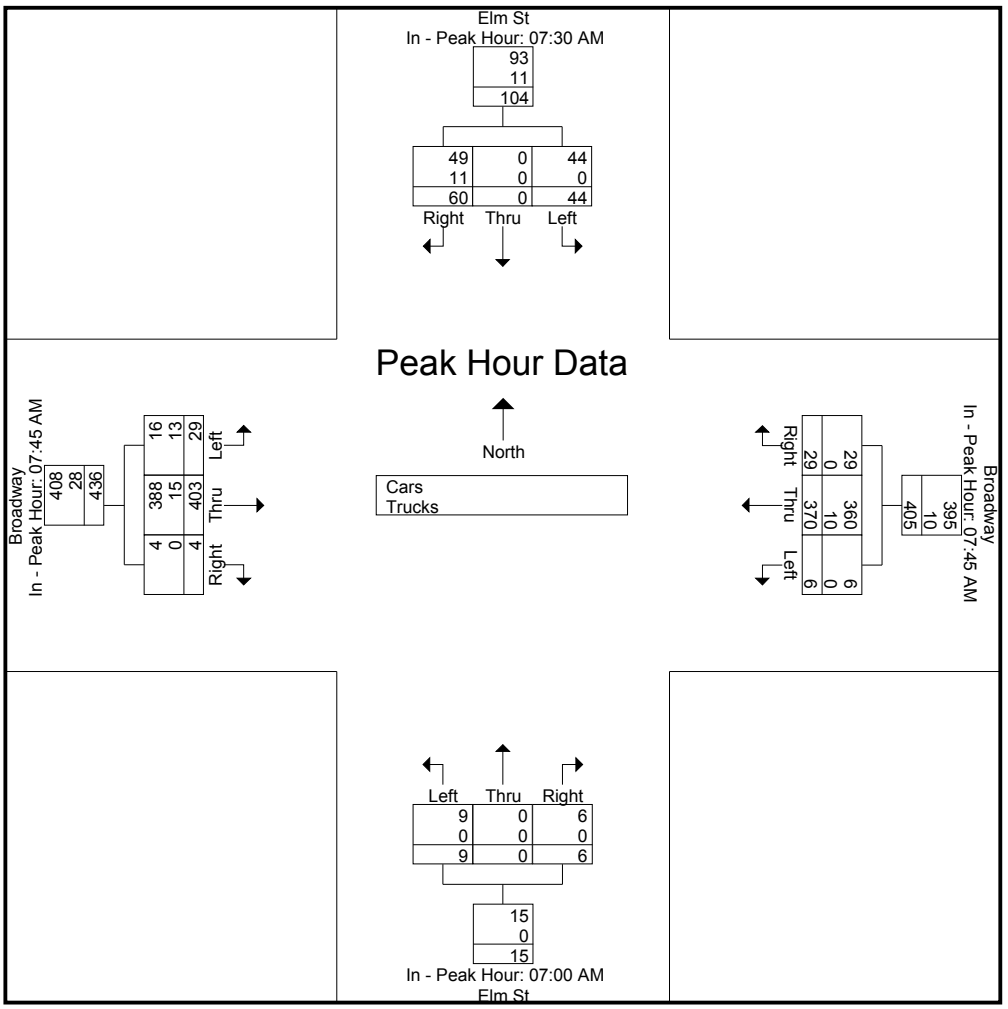
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 3

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:00 AM				07:45 AM			
+0 mins.	10	0	16	26	**3**	**112**	**13**	**128**	**4**	0	**2**	**6**	7	**117**	**2**	**126**
+15 mins.	**16**	0	15	**31**	0	82	5	87	4	0	2	6	**13**	97	0	110
+30 mins.	9	0	11	20	1	85	5	91	0	0	1	1	6	95	1	102
+45 mins.	9	0	**18**	27	2	91	6	99	1	0	1	2	3	94	1	98
Total Volume	44	0	60	104	6	370	29	405	9	0	6	15	29	403	4	436
% App. Total	42.3	0	57.7		1.5	91.4	7.2		60	0	40		6.7	92.4	0.9	
PHF	.688	.000	.833	.839	.500	.826	.558	.791	.563	.000	.750	.625	.558	.861	.500	.865
Cars	44	0	49	93	6	360	29	395	9	0	6	15	16	388	4	408
% Cars	100	0	81.7	89.4	100	97.3	100	97.5	100	0	100	100	55.2	96.3	100	93.6
Trucks	0	0	11	11	0	10	0	10	0	0	0	0	13	15	0	28
% Trucks	0	0	18.3	10.6	0	2.7	0	2.5	0	0	0	0	44.8	3.7	0	6.4



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 4

Groups Printed- Cars

	Elm St From North			Broadway From East			Elm St From South			Broadway From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	11	0	8	0	63	4	4	0	2	5	49	1	147
07:15 AM	5	0	9	2	89	3	4	0	2	5	70	2	191
07:30 AM	10	0	14	0	80	3	0	0	1	1	71	0	180
07:45 AM	16	0	13	3	111	13	1	0	1	5	111	2	276
Total	42	0	44	5	343	23	9	0	6	16	301	5	794
08:00 AM	9	0	8	0	77	5	3	0	1	7	93	0	203
08:15 AM	9	0	14	1	82	5	3	0	3	2	93	1	213
08:30 AM	7	0	12	2	90	6	1	0	0	2	91	1	212
08:45 AM	12	0	6	3	90	6	1	0	0	2	79	0	199
Total	37	0	40	6	339	22	8	0	4	13	356	2	827
Grand Total	79	0	84	11	682	45	17	0	10	29	657	7	1621
Apprch %	48.5	0	51.5	1.5	92.4	6.1	63	0	37	4.2	94.8	1	
Total %	4.9	0	5.2	0.7	42.1	2.8	1	0	0.6	1.8	40.5	0.4	

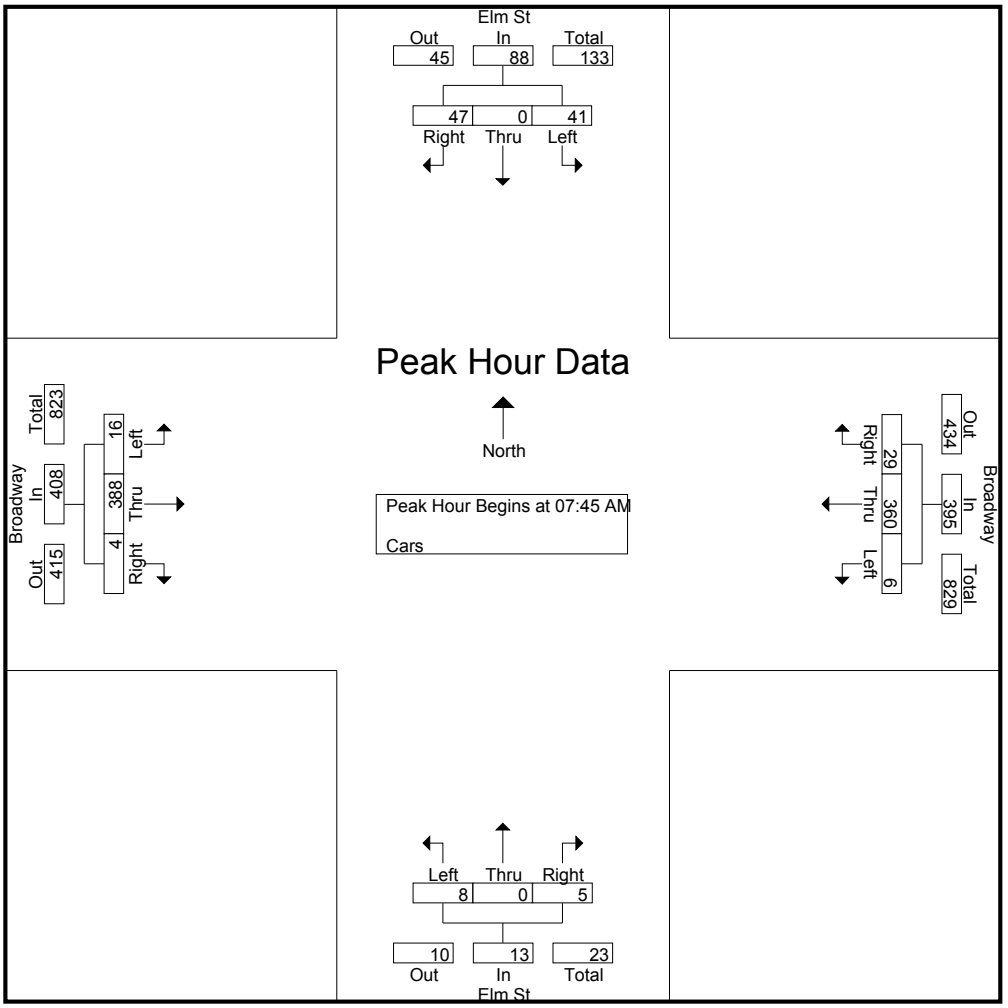
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 5

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**16**	0	13	**29**	**3**	**111**	**13**	**127**	1	0	1	2	5	**111**	**2**	**118**	**276**
08:00 AM	9	0	8	17	0	77	5	82	**3**	0	1	4	**7**	93	0	100	203
08:15 AM	9	0	**14**	23	1	82	5	88	3	0	**3**	**6**	2	93	1	96	213
08:30 AM	7	0	12	19	2	90	6	98	1	0	0	1	2	91	1	94	212
Total Volume	41	0	47	88	6	360	29	395	8	0	5	13	16	388	4	408	904
% App. Total	46.6	0	53.4		1.5	91.1	7.3		61.5	0	38.5		3.9	95.1	1		
PHF	.641	.000	.839	.759	.500	.811	.558	.778	.667	.000	.417	.542	.571	.874	.500	.864	.819



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

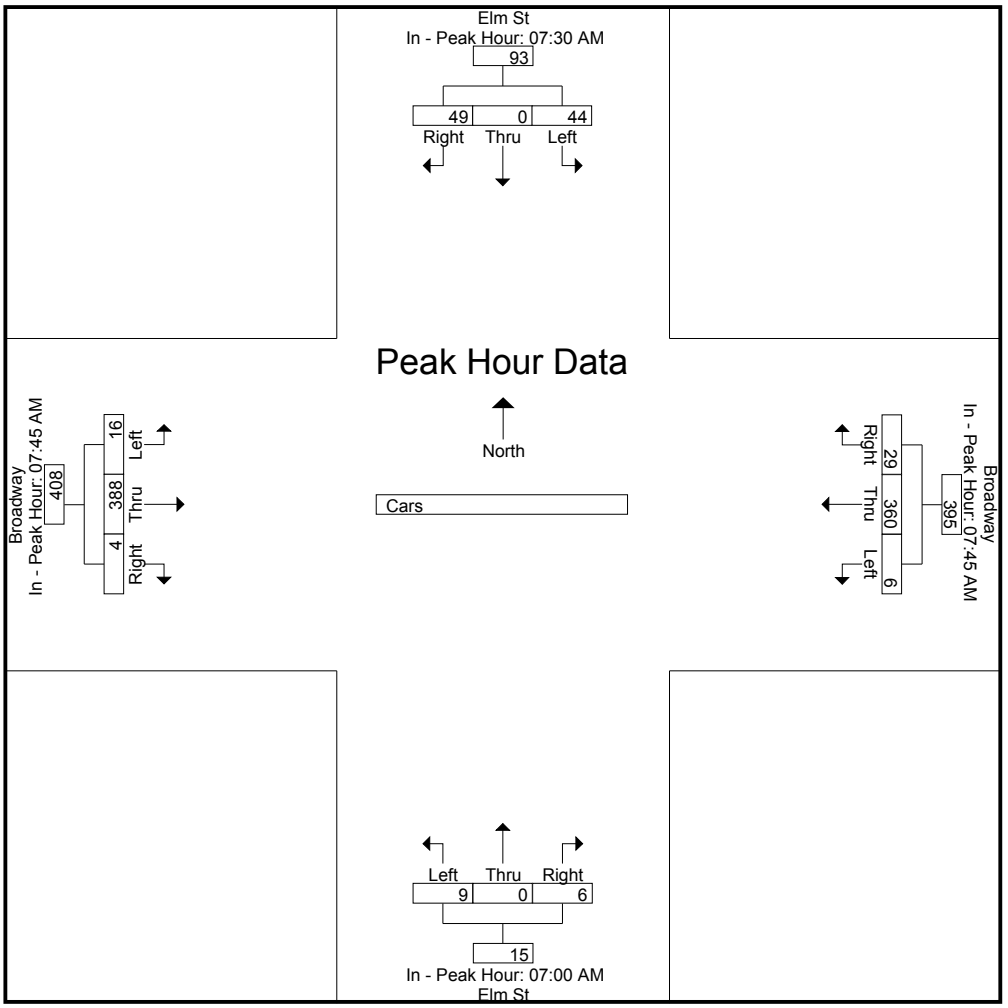
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 6

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:00 AM				07:45 AM			
+0 mins.	10	0	**14**	24	**3**	**111**	**13**	**127**	**4**	0	**2**	**6**	5	**111**	**2**	**118**
+15 mins.	**16**	0	13	**29**	0	77	5	82	4	0	2	6	**7**	93	0	100
+30 mins.	9	0	8	17	1	82	5	88	0	0	1	1	2	93	1	96
+45 mins.	9	0	14	23	2	90	6	98	1	0	1	2	2	91	1	94
Total Volume	44	0	49	93	6	360	29	395	9	0	6	15	16	388	4	408
% App. Total	47.3	0	52.7		1.5	91.1	7.3		60	0	40		3.9	95.1	1	
PHF	.688	.000	.875	.802	.500	.811	.558	.778	.563	.000	.750	.625	.571	.874	.500	.864



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 7

Groups Printed- Trucks

	Elm St From North			Broadway From East			Elm St From South			Broadway From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	2	0	3	0	0	0	0	3	4	0	12
07:15 AM	0	0	4	0	5	1	0	0	0	4	2	0	16
07:30 AM	0	0	2	0	2	0	0	0	0	1	2	0	7
07:45 AM	0	0	2	0	1	0	0	0	0	2	6	0	11
Total	0	0	10	0	11	1	0	0	0	10	14	0	46
08:00 AM	0	0	3	0	5	0	0	0	0	6	4	0	18
08:15 AM	0	0	4	0	3	0	0	0	0	4	2	0	13
08:30 AM	1	0	3	0	1	0	0	0	0	1	3	0	9
08:45 AM	0	0	2	0	5	0	0	0	0	2	4	0	13
Total	1	0	12	0	14	0	0	0	0	13	13	0	53
Grand Total	1	0	22	0	25	1	0	0	0	23	27	0	99
Apprch %	4.3	0	95.7	0	96.2	3.8	0	0	0	46	54	0	
Total %	1	0	22.2	0	25.3	1	0	0	0	23.2	27.3	0	

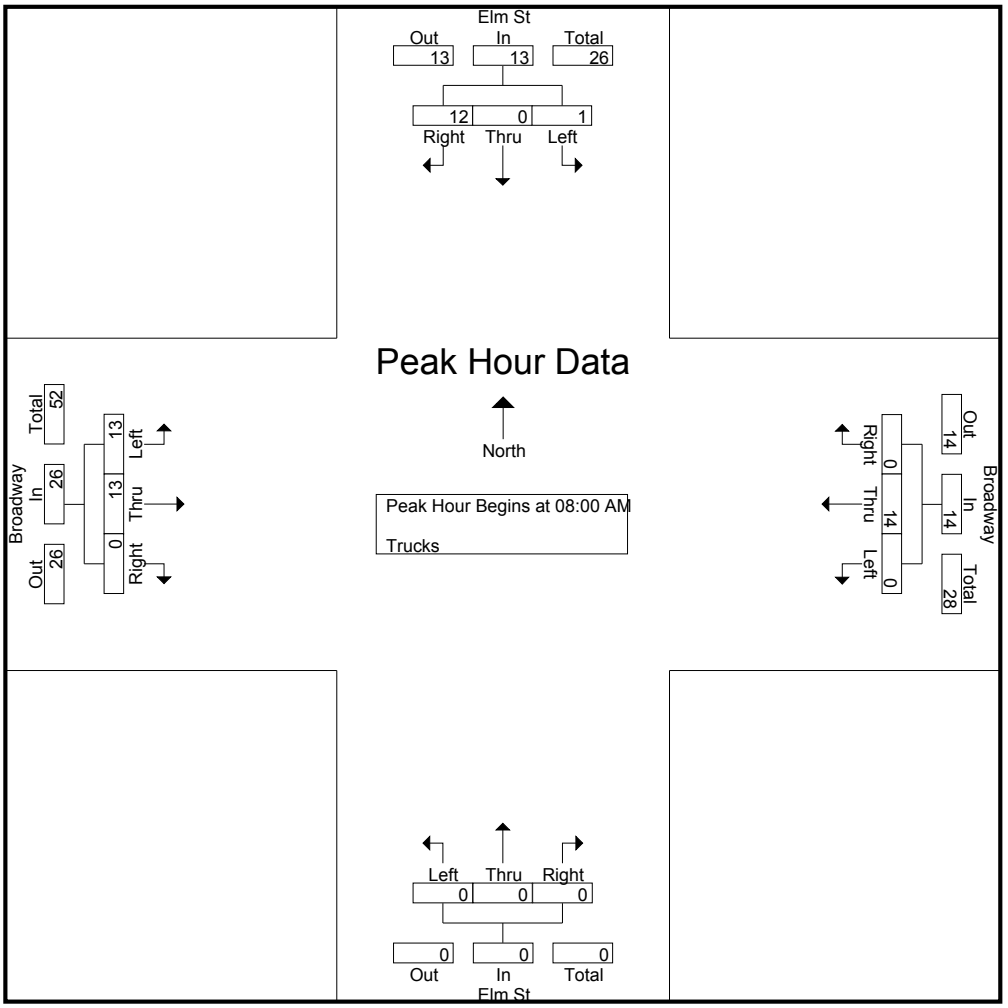
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 8

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	3	3	0	**5**	0	**5**	0	0	0	0	**6**	**4**	0	**10**	**18**
08:15 AM	0	0	**4**	**4**	0	3	0	3	0	0	0	0	4	2	0	6	13
08:30 AM	**1**	0	3	4	0	1	0	1	0	0	0	0	1	3	0	4	9
08:45 AM	0	0	2	2	0	5	0	5	0	0	0	0	2	4	0	6	13
Total Volume	1	0	12	13	0	14	0	14	0	0	0	0	13	13	0	26	53
% App. Total	7.7	0	92.3		0	100	0		0	0	0		50	50	0		
PHF	.250	.000	.750	.813	.000	.700	.000	.700	.000	.000	.000	.000	.542	.813	.000	.650	.736



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

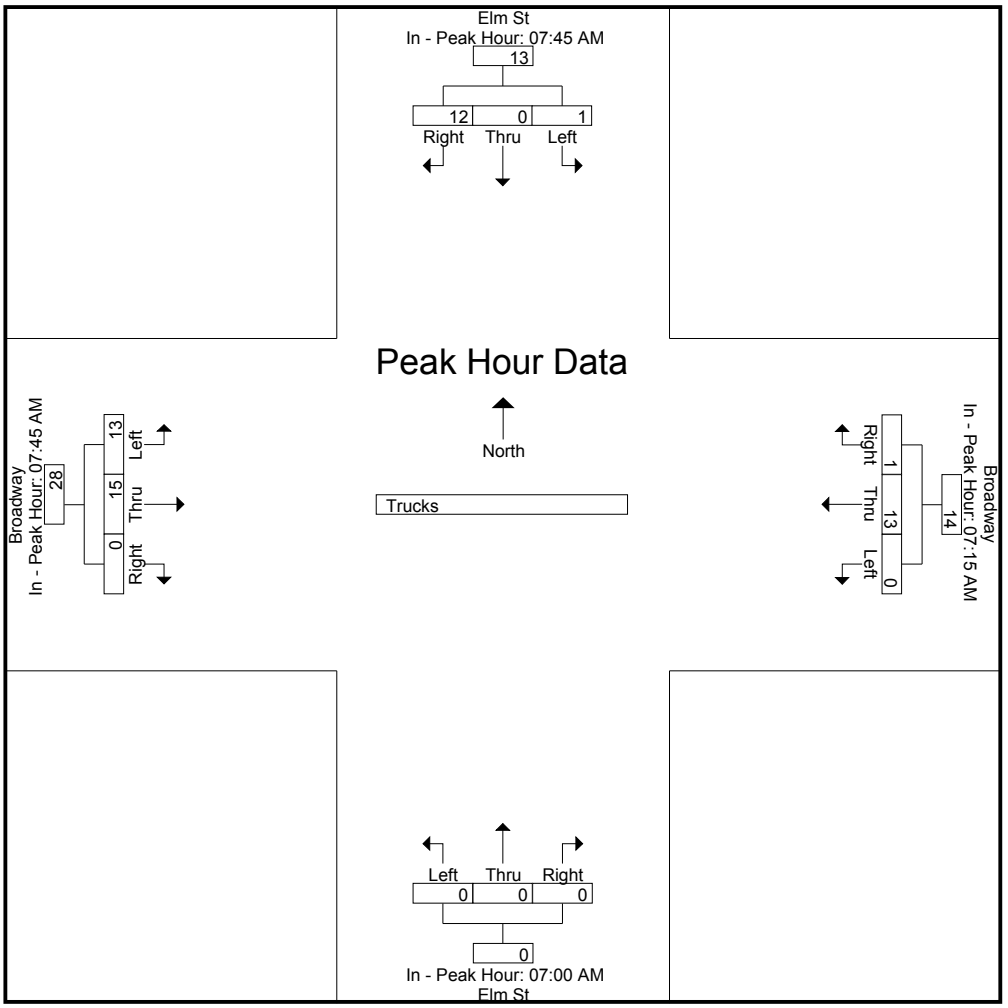
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 9

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:00 AM				07:45 AM			
+0 mins.	0	0	2	2	0	**5**	**1**	**6**	0	0	0	0	2	**6**	0	8
+15 mins.	0	0	3	3	0	2	0	2	0	0	0	0	**6**	4	0	**10**
+30 mins.	0	0	**4**	**4**	0	1	0	1	0	0	0	0	4	2	0	6
+45 mins.	**1**	0	3	4	0	5	0	5	0	0	0	0	1	3	0	4
Total Volume	1	0	12	13	0	13	1	14	0	0	0	0	13	15	0	28
% App. Total	7.7	0	92.3		0	92.9	7.1		0	0	0		46.4	53.6	0	
PHF	.250	.000	.750	.813	.000	.650	.250	.583	.000	.000	.000	.000	.542	.625	.000	.700



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 10

Groups Printed- Bikes Peds

	Elm St From North				Broadway From East				Elm St From South				Broadway From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2	1	3
07:15 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	3	1	4
07:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Total	0	0	0	8	0	0	1	1	0	0	0	0	0	1	0	0	9	2	11
08:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3	1	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	1	0	0	2	0	1	0	1	0	0	0	0	0	2	0	0	3	4	7
Grand Total	1	0	0	10	0	1	1	2	0	0	0	0	0	3	0	0	12	6	18
Apprch %	100	0	0		0	50	50		0	0	0		0	100	0				
Total %	16.7	0	0		0	16.7	16.7		0	0	0		0	50	0		66.7	33.3	

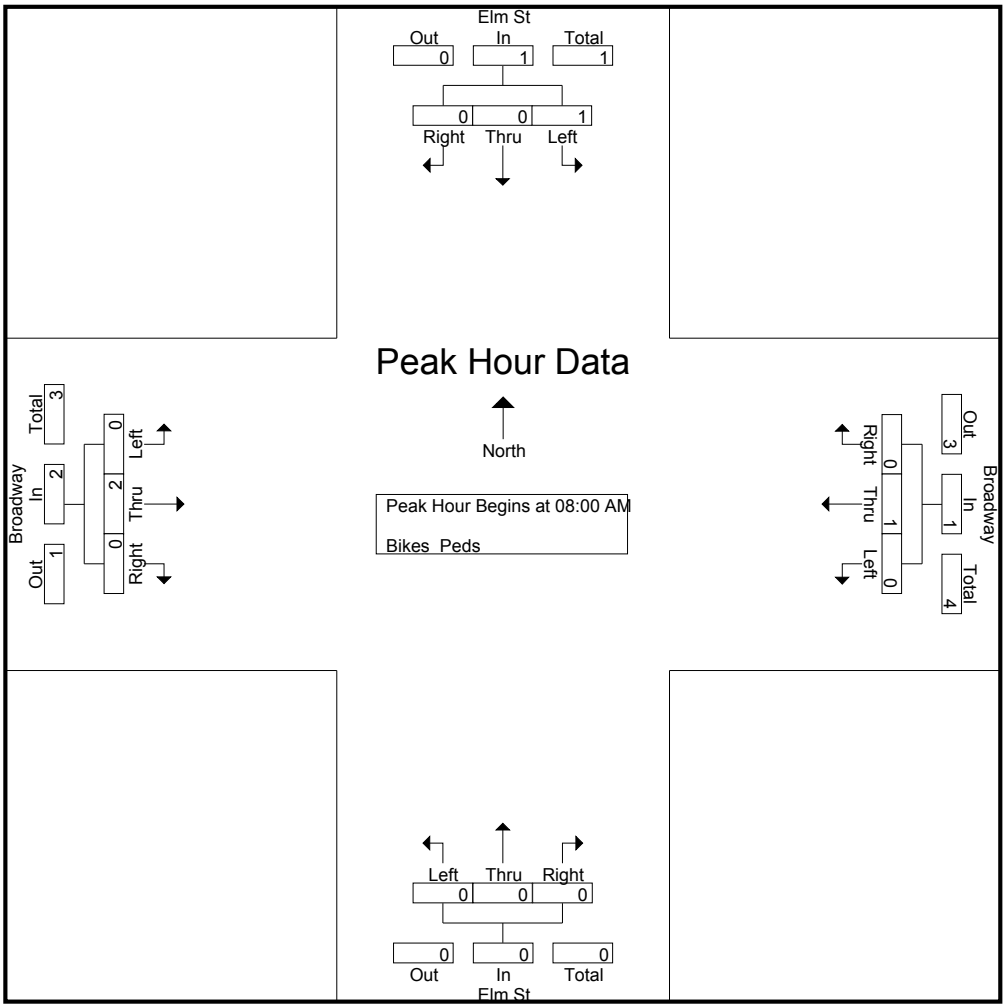
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 11

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
08:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	1	0	1	0	0	0	0	0	2	0	2	4
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	1.00



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Light Rain

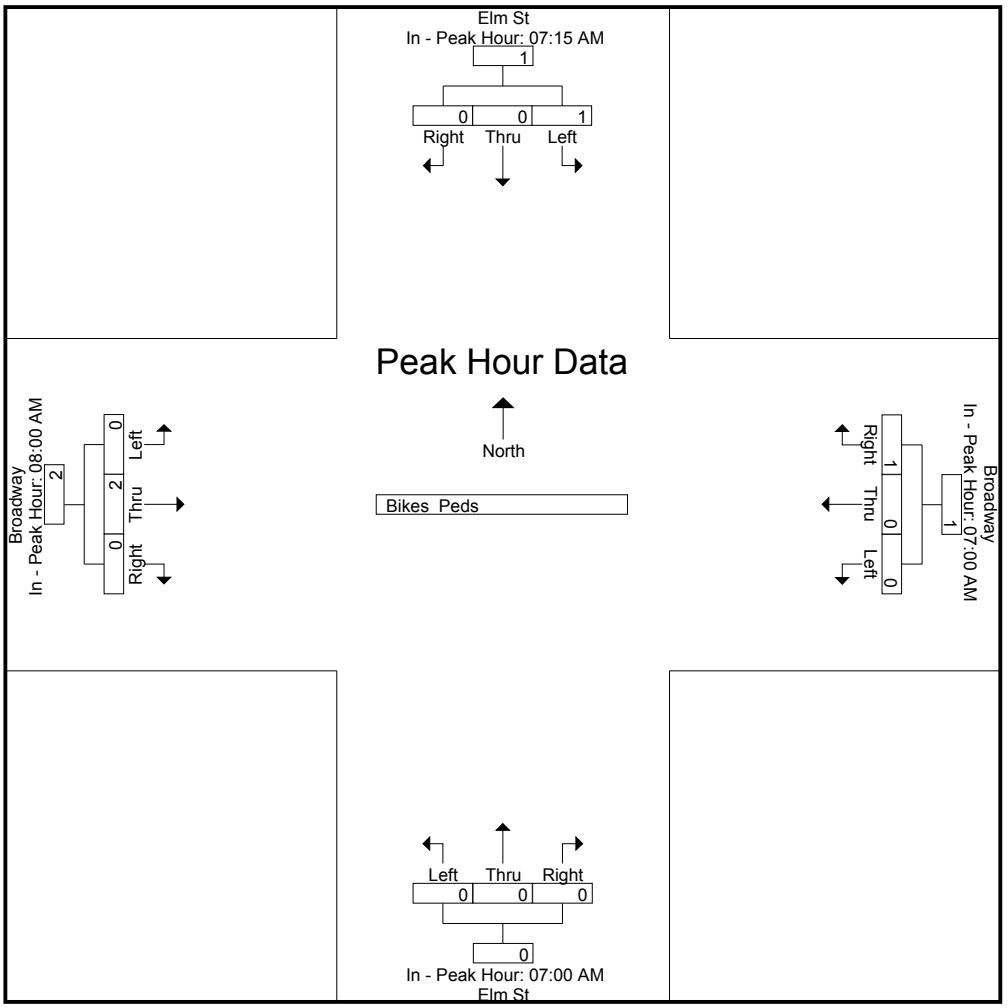
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 12

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+45 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	1	0	0	1	0	0	1	1	0	0	0	0	0	2	0	2
% App. Total	100	0	0		0	0	100		0	0	0		0	100	0	
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.000	.500	.000	.500



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 1

Groups Printed- Cars - Trucks

	Elm St From North			Broadway From East			Elm St From South			Broadway From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	10	0	7	2	119	1	1	0	1	12	110	1	264
04:15 PM	16	0	10	3	121	17	0	0	5	9	116	1	298
04:30 PM	13	1	11	4	117	10	0	1	1	6	106	3	273
04:45 PM	12	0	6	2	110	13	0	0	4	16	118	0	281
Total	51	1	34	11	467	41	1	1	11	43	450	5	1116
05:00 PM	4	0	5	1	94	12	1	0	1	7	129	4	258
05:15 PM	6	0	12	1	117	17	1	0	0	5	106	3	268
05:30 PM	6	0	12	1	99	14	0	0	1	5	103	2	243
05:45 PM	10	0	8	1	94	13	3	0	1	11	99	2	242
Total	26	0	37	4	404	56	5	0	3	28	437	11	1011
Grand Total	77	1	71	15	871	97	6	1	14	71	887	16	2127
Apprch %	51.7	0.7	47.7	1.5	88.6	9.9	28.6	4.8	66.7	7.3	91.1	1.6	
Total %	3.6	0	3.3	0.7	40.9	4.6	0.3	0	0.7	3.3	41.7	0.8	
Cars	77	1	54	15	862	96	6	1	14	61	880	16	2083
% Cars	100	100	76.1	100	99	99	100	100	100	85.9	99.2	100	97.9
Trucks	0	0	17	0	9	1	0	0	0	10	7	0	44
% Trucks	0	0	23.9	0	1	1	0	0	0	14.1	0.8	0	2.1

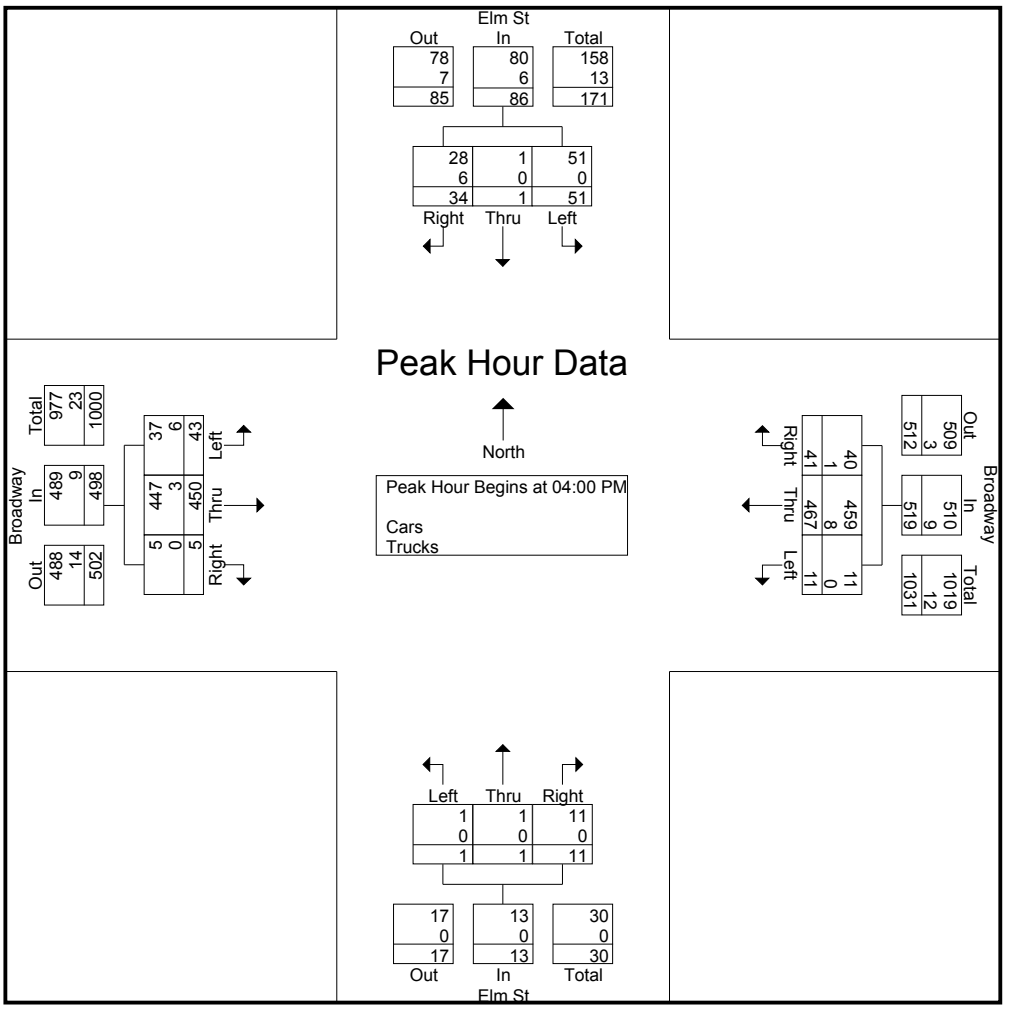
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 2

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	10	0	7	17	2	119	1	122	**1**	0	1	2	12	110	1	123	264
04:15 PM	**16**	0	10	**26**	3	**121**	**17**	**141**	0	0	**5**	**5**	9	116	1	126	**298**
04:30 PM	13	**1**	**11**	25	**4**	117	10	131	0	**1**	1	2	6	106	**3**	115	273
04:45 PM	12	0	6	18	2	110	13	125	0	0	4	4	**16**	**118**	0	**134**	281
Total Volume	51	1	34	86	11	467	41	519	1	1	11	13	43	450	5	498	1116
% App. Total	59.3	1.2	39.5		2.1	90	7.9		7.7	7.7	84.6		8.6	90.4	1		
PHF	.797	.250	.773	.827	.688	.965	.603	.920	.250	.250	.550	.650	.672	.953	.417	.929	.936
Cars	51	1	28	80	11	459	40	510	1	1	11	13	37	447	5	489	1092
% Cars	100	100	82.4	93.0	100	98.3	97.6	98.3	100	100	100	100	86.0	99.3	100	98.2	97.8
Trucks	0	0	6	6	0	8	1	9	0	0	0	0	6	3	0	9	24
% Trucks	0	0	17.6	7.0	0	1.7	2.4	1.7	0	0	0	0	14.0	0.7	0	1.8	2.2



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

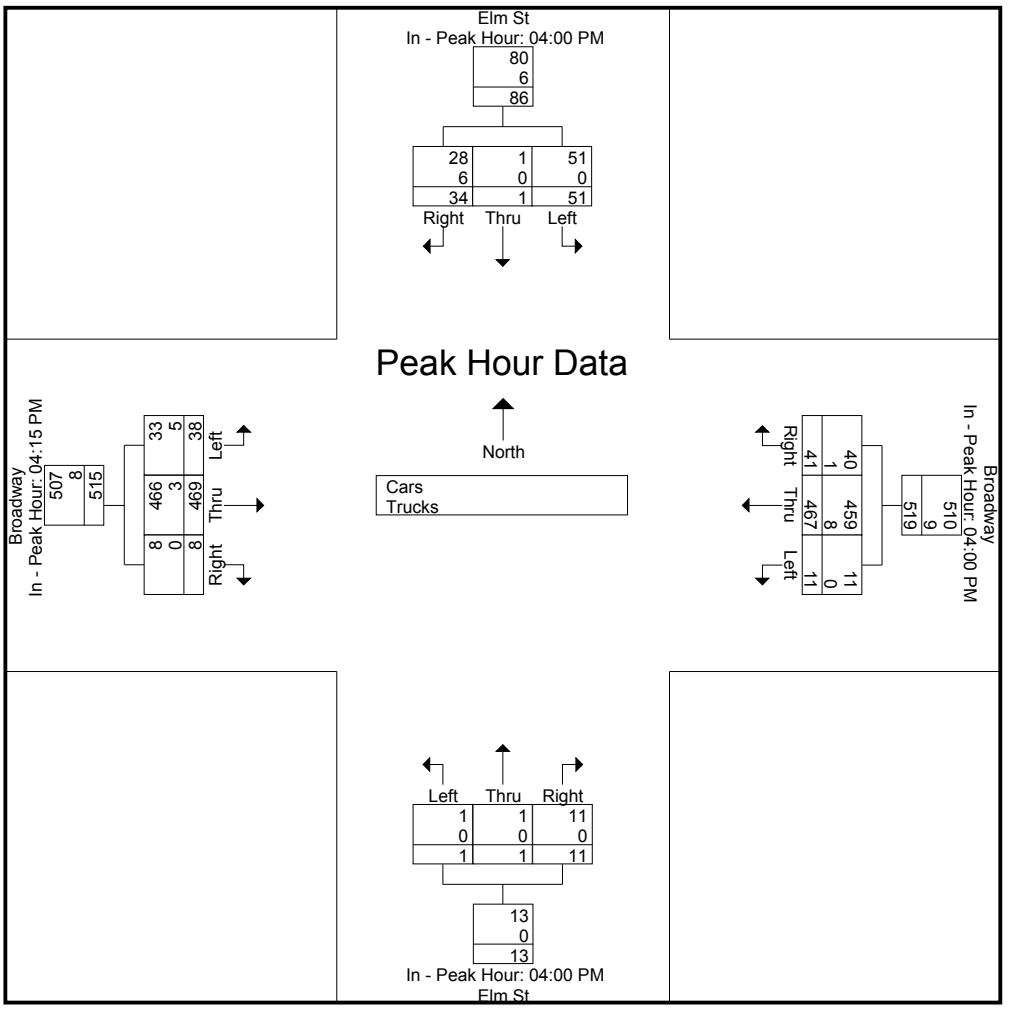
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 3

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:15 PM			
+0 mins.	10	0	7	17	2	119	1	122	**1**	0	1	2	9	116	1	126
+15 mins.	**16**	0	10	**26**	3	**121**	**17**	**141**	0	0	**5**	**5**	6	106	3	115
+30 mins.	13	**1**	**11**	25	**4**	117	10	131	0	**1**	1	2	**16**	118	0	134
+45 mins.	12	0	6	18	2	110	13	125	0	0	4	4	7	**129**	**4**	**140**
Total Volume	51	1	34	86	11	467	41	519	1	1	11	13	38	469	8	515
% App. Total	59.3	1.2	39.5		2.1	90	7.9		7.7	7.7	84.6		7.4	91.1	1.6	
PHF	.797	.250	.773	.827	.688	.965	.603	.920	.250	.250	.550	.650	.594	.909	.500	.920
Cars	51	1	28	80	11	459	40	510	1	1	11	13	33	466	8	507
% Cars	100	100	82.4	93	100	98.3	97.6	98.3	100	100	100	100	86.8	99.4	100	98.4
Trucks	0	0	6	6	0	8	1	9	0	0	0	0	5	3	0	8
% Trucks	0	0	17.6	7	0	1.7	2.4	1.7	0	0	0	0	13.2	0.6	0	1.6



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 4

Groups Printed- Cars

	Elm St From North			Broadway From East			Elm St From South			Broadway From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	10	0	5	2	117	1	1	0	1	11	110	1	259
04:15 PM	16	0	10	3	117	17	0	0	5	8	114	1	291
04:30 PM	13	1	9	4	115	9	0	1	1	5	106	3	267
04:45 PM	12	0	4	2	110	13	0	0	4	13	117	0	275
Total	51	1	28	11	459	40	1	1	11	37	447	5	1092
05:00 PM	4	0	4	1	94	12	1	0	1	7	129	4	257
05:15 PM	6	0	9	1	116	17	1	0	0	3	103	3	259
05:30 PM	6	0	6	1	99	14	0	0	1	4	103	2	236
05:45 PM	10	0	7	1	94	13	3	0	1	10	98	2	239
Total	26	0	26	4	403	56	5	0	3	24	433	11	991
Grand Total	77	1	54	15	862	96	6	1	14	61	880	16	2083
Apprch %	58.3	0.8	40.9	1.5	88.6	9.9	28.6	4.8	66.7	6.4	92	1.7	
Total %	3.7	0	2.6	0.7	41.4	4.6	0.3	0	0.7	2.9	42.2	0.8	

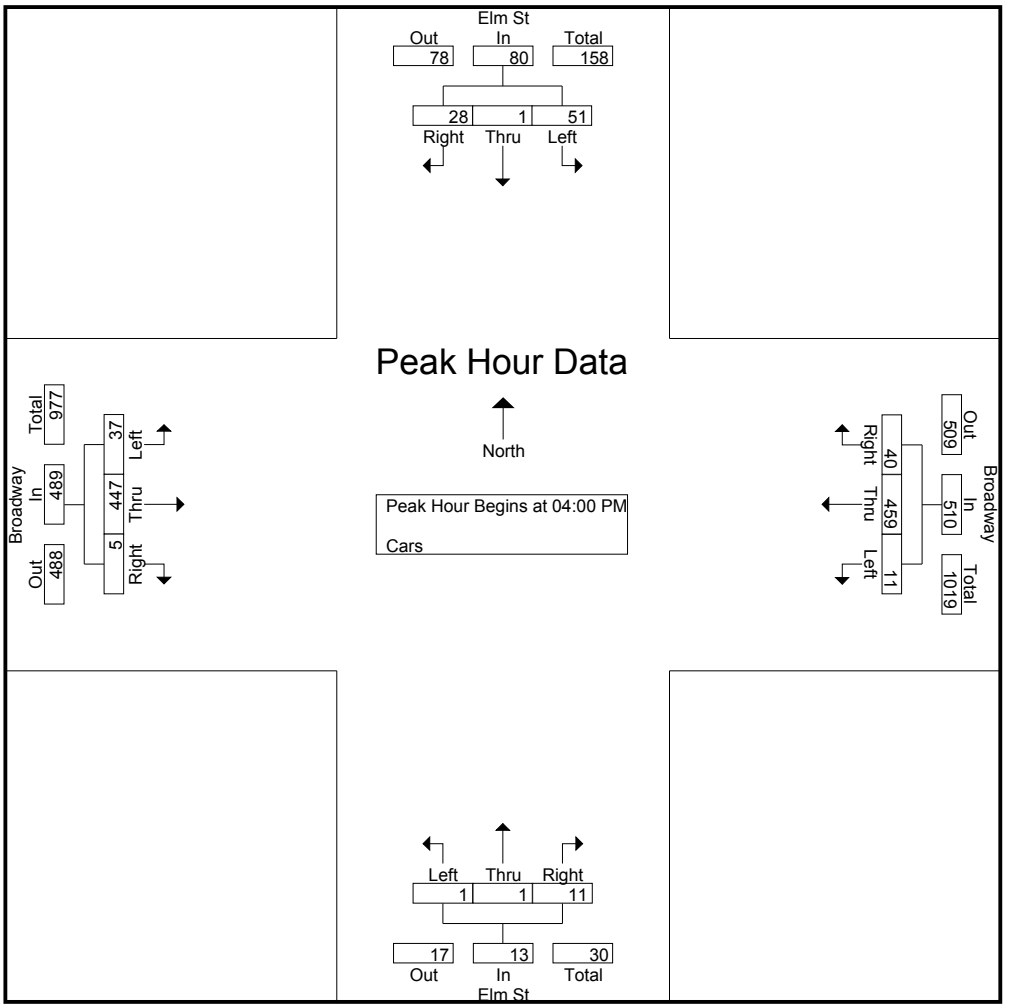
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 5

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	10	0	5	15	2	**117**	1	120	**1**	0	1	2	11	110	1	122	259
04:15 PM	**16**	0	**10**	**26**	3	117	**17**	**137**	0	0	**5**	**5**	8	114	1	123	**291**
04:30 PM	13	**1**	9	23	**4**	115	9	128	0	**1**	1	2	5	106	**3**	114	267
04:45 PM	12	0	4	16	2	110	13	125	0	0	4	4	**13**	**117**	0	**130**	275
Total Volume	51	1	28	80	11	459	40	510	1	1	11	13	37	447	5	489	1092
% App. Total	63.8	1.2	35		2.2	90	7.8		7.7	7.7	84.6		7.6	91.4	1		
PHF	.797	.250	.700	.769	.688	.981	.588	.931	.250	.250	.550	.650	.712	.955	.417	.940	.938



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

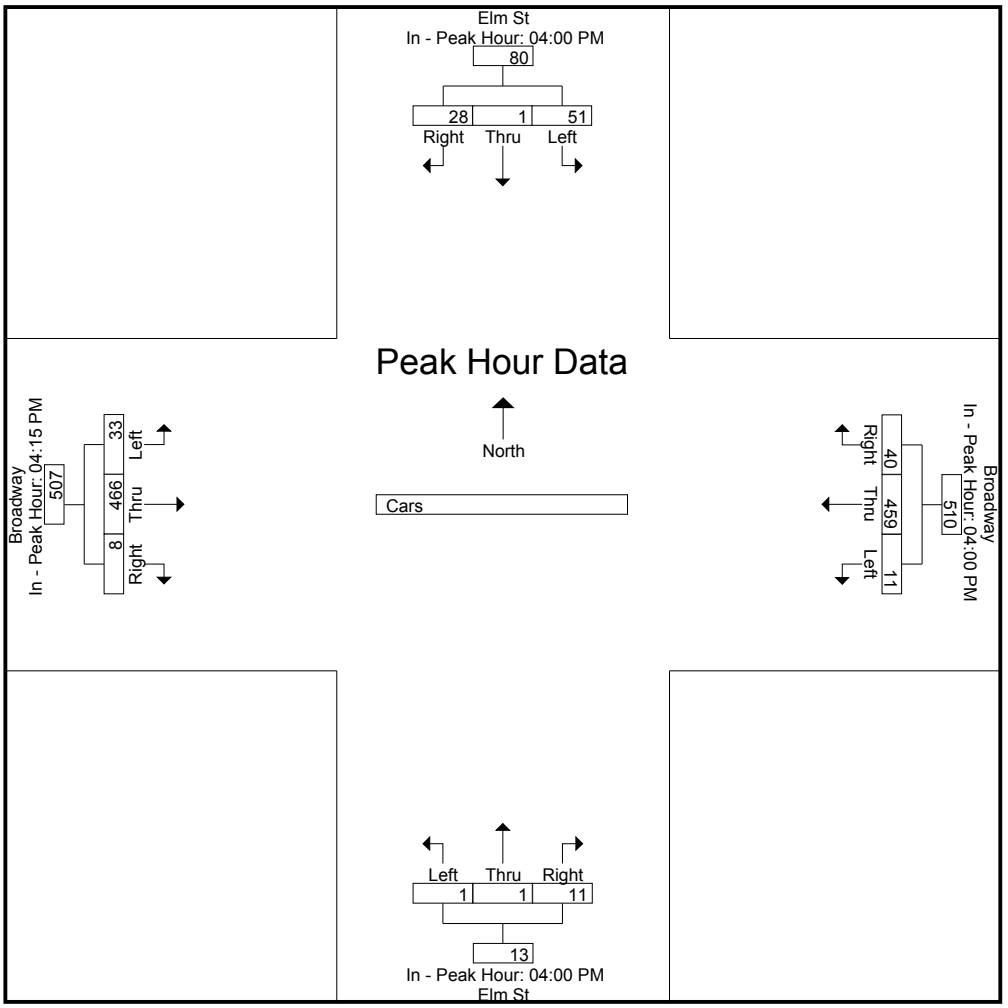
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 6

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:15 PM			
+0 mins.	10	0	5	15	2	**117**	1	120	**1**	0	1	2	8	114	1	123
+15 mins.	**16**	0	**10**	**26**	3	117	**17**	**137**	0	0	**5**	**5**	5	106	3	114
+30 mins.	13	**1**	9	23	**4**	115	9	128	0	**1**	1	2	**13**	117	0	130
+45 mins.	12	0	4	16	2	110	13	125	0	0	4	4	7	**129**	**4**	**140**
Total Volume	51	1	28	80	11	459	40	510	1	1	11	13	33	466	8	507
% App. Total	63.8	1.2	35		2.2	90	7.8		7.7	7.7	84.6		6.5	91.9	1.6	
PHF	.797	.250	.700	.769	.688	.981	.588	.931	.250	.250	.550	.650	.635	.903	.500	.905



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 7

Groups Printed- Trucks

	Elm St From North			Broadway From East			Elm St From South			Broadway From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	0	2	0	2	0	0	0	0	1	0	0	5
04:15 PM	0	0	0	0	4	0	0	0	0	1	2	0	7
04:30 PM	0	0	2	0	2	1	0	0	0	1	0	0	6
04:45 PM	0	0	2	0	0	0	0	0	0	3	1	0	6
Total	0	0	6	0	8	1	0	0	0	6	3	0	24
05:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	3	0	1	0	0	0	0	2	3	0	9
05:30 PM	0	0	6	0	0	0	0	0	0	1	0	0	7
05:45 PM	0	0	1	0	0	0	0	0	0	1	1	0	3
Total	0	0	11	0	1	0	0	0	0	4	4	0	20
Grand Total	0	0	17	0	9	1	0	0	0	10	7	0	44
Apprch %	0	0	100	0	90	10	0	0	0	58.8	41.2	0	
Total %	0	0	38.6	0	20.5	2.3	0	0	0	22.7	15.9	0	

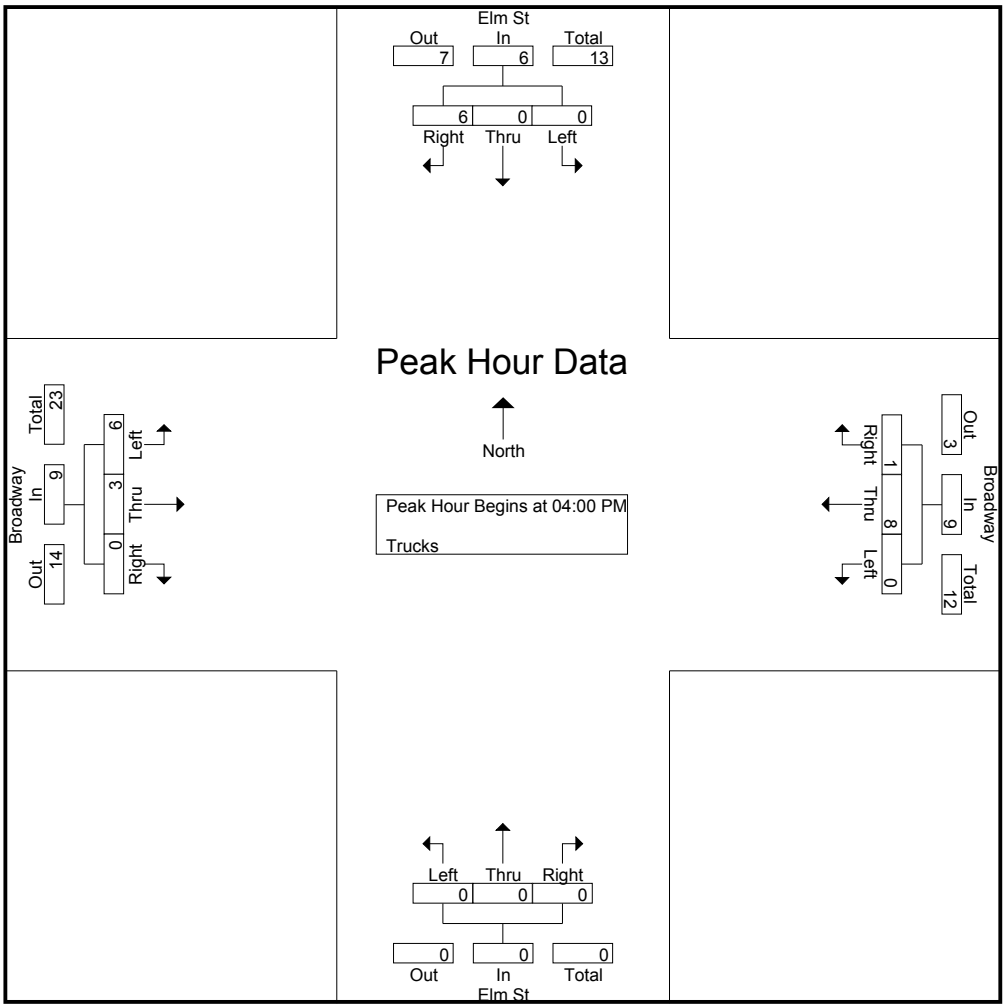
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 8

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	**2**	**2**	0	2	0	2	0	0	0	0	1	0	0	1	5
04:15 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	1	**2**	0	3	**7**
04:30 PM	0	0	2	2	0	2	**1**	3	0	0	0	0	1	0	0	1	6
04:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	**3**	1	0	**4**	6
Total Volume	0	0	6	6	0	8	1	9	0	0	0	0	6	3	0	9	24
% App. Total	0	0	100		0	88.9	11.1		0	0	0		66.7	33.3	0		
PHF	.000	.000	.750	.750	.000	.500	.250	.563	.000	.000	.000	.000	.500	.375	.000	.563	.857



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

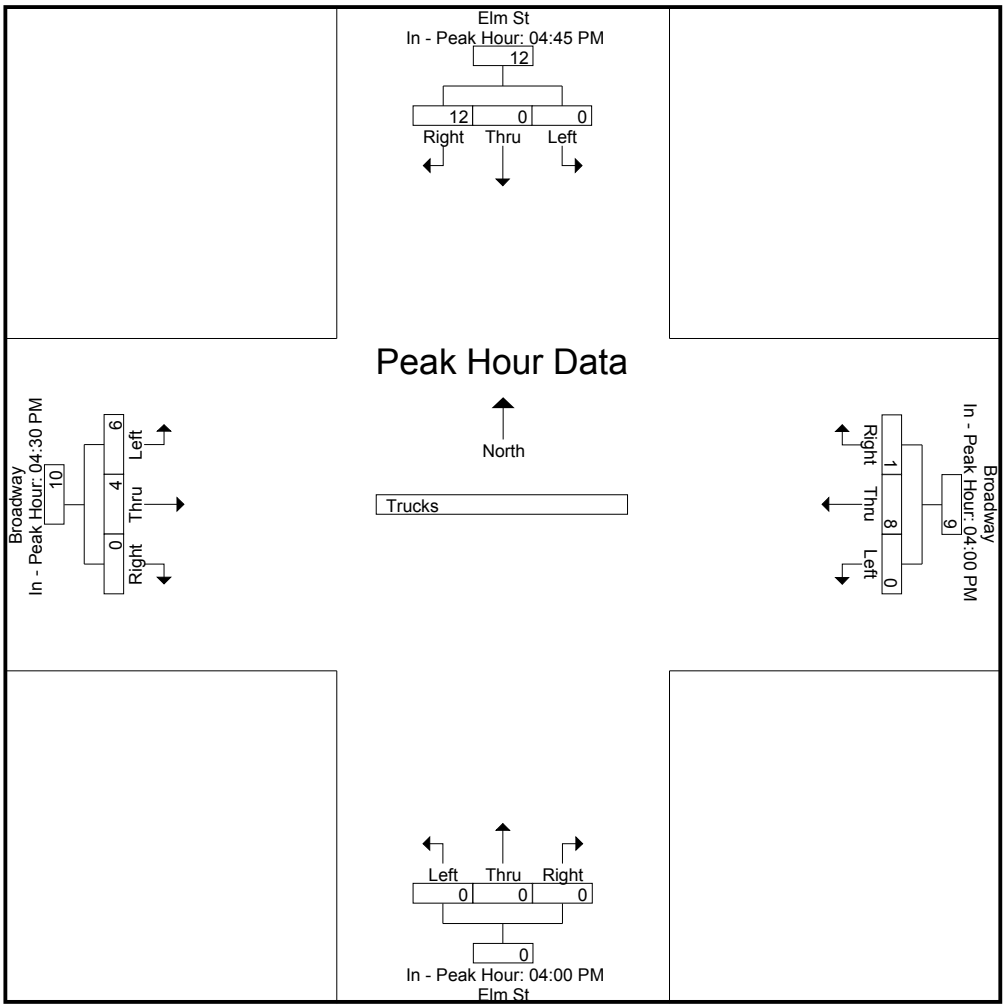
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 9

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	0	0	2	2	0	2	0	2	0	0	0	0	1	0	0	1
+15 mins.	0	0	1	1	0	**4**	0	**4**	0	0	0	0	**3**	1	0	4
+30 mins.	0	0	3	3	0	2	**1**	3	0	0	0	0	0	0	0	0
+45 mins.	0	0	**6**	**6**	0	0	0	0	0	0	0	0	2	**3**	0	**5**
Total Volume	0	0	12	12	0	8	1	9	0	0	0	0	6	4	0	10
% App. Total	0	0	100		0	88.9	11.1		0	0	0		60	40	0	
PHF	.000	.000	.500	.500	.000	.500	.250	.563	.000	.000	.000	.000	.500	.333	.000	.500



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 10

Groups Printed- Bikes Peds

	Elm St From North				Broadway From East				Elm St From South				Broadway From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
04:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
Total	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	4	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
05:45 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	2	1	3
Total	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	3	1	4
Grand Total	0	0	0	4	0	0	0	1	0	0	0	2	0	1	0	0	7	1	8
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0				
Total %	0	0	0		0	0	0		0	0	0		0	100	0		87.5	12.5	

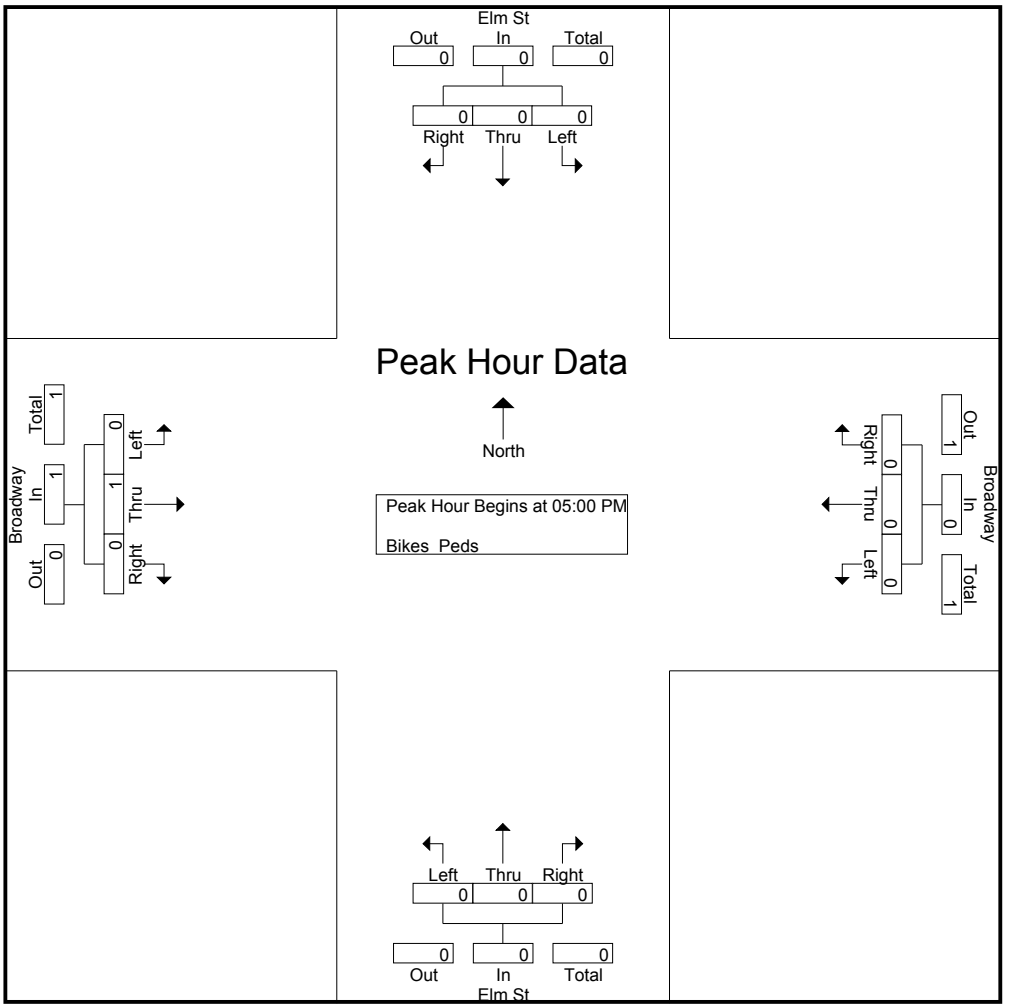
Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 11

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250



Accurate Counts

978-664-2565

N/S Street : Elm Street
E/W Street : Broadway
City/State : South Portland, ME
Weather : Cloudy

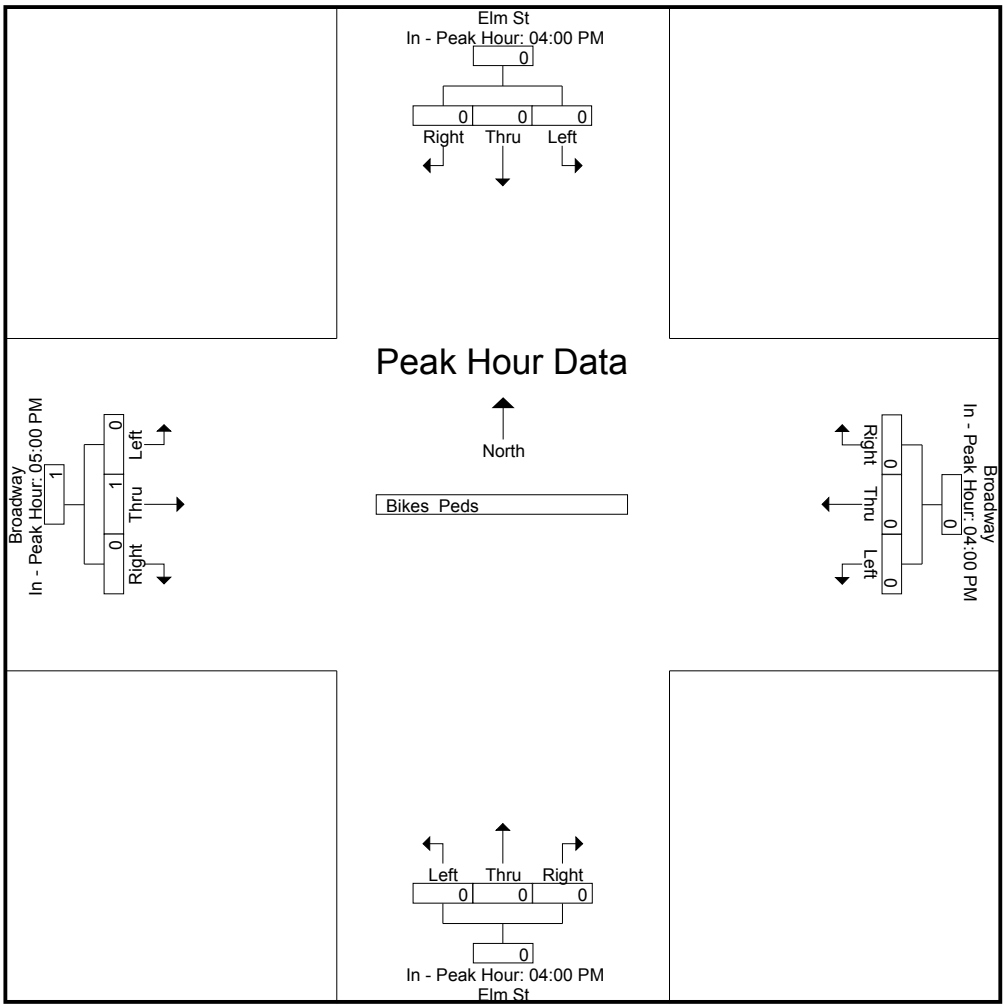
File Name : 16450001
Site Code : 16450001
Start Date : 1/3/2017
Page No : 12

	Elm St From North				Broadway From East				Elm St From South				Broadway From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total

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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250



Application Form for PACTS 2020 and 2021 Complex Projects

September 30, 2016

PACTS staff and members of the Planning, Transit and Technical Committees will use the information provided to score and rank the applications. Please reference our Application Instructions and our 2017-2018 TIP Policies and Procedures document for more information, or contact PACTS staff with any questions.

Applications must be received by PACTS by 4:00 p.m. on February 3, 2017. Three (3) hard copies as well as an electronic Word submittal are required. Email (or cd) to ceppich@gpcog.org and pniehoff@gpcog.org. Attach supplementary information as needed.

Submittal Requirements

1. Proposals to change the capacity of an intersection must include the results of capacity analyses of current and proposed conditions. Proposals for a new traffic signal (or removal of an existing one) must be accompanied by a MaineDOT-approved warrant analysis. MaineDOT support documents must be submitted with the application.

2. Proposals to change an intersection or roadway cross-section must be supported by a feasibility study that includes an analysis of feasible alternatives, recommendation of the most viable alternative, a cost estimate, and at least one public forum.

3. Similarly, proposals for the construction of new sidewalks/paths/trails intended to be used solely by bicycles and/or pedestrians must be supported by an analysis that assesses viable alternative routes, potential demand, and level of municipal, business and resident support and that recommends the most feasible alternative.

4. Proposals for road and/or intersection reconstruction must be submitted by a registered professional engineer.

General Information

1. **Municipality**: South Portland

2. **Primary contact**: Doug Howard, Public Works Director

3. **Contact phone number:** 207.767.7611

4. **Project name**: Highland Avenue Rehabilitation – Ocean Street to Cottage Road

5. **Project location**: Highland Avenue from Ocean Street to Cottage Road

6. **Brief project scope description**: Reconstruct/rehabilitate this section of Highland Avenue by reclaiming the existing pavement and placing a new bituminous wearing surface, installing new concrete curbing and drainage, rebuilding the existing bituminous sidewalks, and replacing the outdated traffic signal equipment and mounting hardware at the intersection of Ocean Street with Highland Avenue.

7. **Purpose-and-need statement that describes the conditions that warrant the proposed project and an explanation of the intended benefits of that project.** This link in the City's urban collector network provides an important parallel route to Broadway for residents in the eastern end of the City, as well as access to the Frank Brown Elementary School and community Library. The lack of proper drainage has caused the pavement condition of this roadway to deteriorate to the point of repair. MaineDOT's Condition Rating for this stretch of road is "D" for much of its length.

   The traffic signal at Highland and Ocean Street is woefully outdated. The signal heads are

undersized and non-compliant with the MUTCD, the pedestrian signal equipment is non-ADA compliant, the controller cabinet is 30+ years old and based on a TS-1 platform, which is legacy technology. Given that Ocean Street is a major urban collector connecting South Portland to Cape Elizabeth having this signal able to communicate with others in the RTMS is a key goal for maintaining efficient traffic operations across the City. PACTS and MaineDOT are funding a communication upgrade for this intersection as part of WIN 18665.00, but a full equipment upgrade would allow this to happen more efficiently and provide much more flexibility in programming the signal's operations.

8. **Has a preliminary design report (PDR) been completed?** No If yes, then please attach it.

9. **Is this an application for PDR funding as a precursor to future PACTS construction funding?** Yes If no, then describe why you think this project does not need a PDR phase:

10. **Federal functional classification**: Highland Avenue – Major Urban Collector
Ocean Street – Major Urban Collector

11. **MaineDOT Corridor Priority**: (http://www.maine.gov/mdot/about/assets/search/)

Highland Avenue – Priority 5
Ocean Street - Priority 4

12. **Are there any right-of-way impacts?** No – not that we are aware of. If yes, please identify them.

13. **Has this project been reviewed for potential environmental impacts?** No. If yes, please identify them.

14. **Will the project meet clear zone requirements?** Yes

15. **Will the project require design exceptions?** No If yes, please identify them.

16. **Will the project require historical and/or environmental review?** Yes

17. **Transit provider(s) support for municipal applications that involve transit-supportive elements:** Ocean Street is on South Portland's Bus Route 21 and is supportive of this project because one element of the traffic signal upgrade will be the installation of TSP, which will benefit bus scheduling and reliability.

18. **Cost Estimate**

Provide as much detail as possible and attach the worksheets used to develop your estimates.

Contact information for the cost estimate preparer: Stephen S. Sawyer, Jr., PE, Sebago Technics, Inc. – the City's Consulting Traffic Engineer

Preliminary engineering:	$ 125,000
Right of way:	$ 0
Construction:	$ 848,900
Construction engineering:	$ 85,000
Total estimated cost:	$1,058,900

PACTS Preservation Spending Target estimate:	35% or $370,600
PACTS Modernization Spending Target estimate:	65% or $688,300
PACTS Expansion Spending Target estimate:	0%
Total estimated cost: $1,058,900	

Scoring Formula Criteria

1. Subregion's and Transit Committee's top priority projects (maximum 10 points)

   Please communicate with your PACTS subregion colleagues in order to decide on priority project investments in your subregion. Each of the four PACTS subregions shall allocate up to 10 points to PACTS applications from the municipalities in the subregion. The 10 points may go to a single proposal or be spread among multiple projects.

   The Transit Committee shall do the same for applications submitted by, or in partnership with, any of the PACTS Transit Agencies.

   Please list below the points allocated for this application and for all other applications submitted from your PACTS Subregion.

   Submittal N/A

2. *Destination 2040* Priority Corridor or Center (maximum 10 points)

   The *Destination 2040* Plan identifies Priority Corridors and 56 Priority Centers which are existing important regional transportation corridors or emerging centers that have or could have infrastructure such as water and sewers to support additional development. They generally allow a mix of uses and proximate living near jobs and services, as well as recreation opportunities. The map of these corridors and centers is at the end of the PACTS application instructions memo. The mapped circles are not intended to define strict limits of the center. Applicants make the case that the proposed projects are in or related to a center and then PACTS staff makes a determination whether or not the proposed project qualifies for these points.

   Submittal The location of the proposed project is within an identified "Centers of Opportunity" in the Destination 2040 PACTS Plan, and also impacts a "Priority Corridor".

3. Improves region's traffic signal system (maximum 5 points)

   Maintaining and operating the region's 100+ signalized intersections at peak performance and coordination has been a strategy of PACTS for over a decade. Signals which have sensors that can detect not only cars but also buses, bicycles and pedestrians can provide for optimal efficiency thereby reducing the need for costly roadway widening or lane expansion. Proposals will be scored on the projected improved performance, including safety and balancing of all modes which utilize the intersection. Scoring will be weighted on the amount of traffic volumes specific to the intersection as well as its regional significance i.e. how many municipalities are affected and transit agencies using the intersection and benefiting from the proposed improvements.

   Submittal Ocean Street is a main arterial in the City that connects with Cape Elizabeth. It is Route 77 and a PACTS' Priority Corridor. Finely tuned traffic signal coordination at its intersections (Highland at Ocean) is key to optimizing traffic flow within this major commuter corridor. The proposed project will upgrade the existing legacy traffic signal equipment, bring the intersection into compliance with ADA, and implement TSP for the improved performance of the South Portland Buses on Route 21. Traffic counts were taken at this location and our preliminary analyses are attached.

4. Leverages other non-MPO funds from the MaineDOT, Private/developers, Public Private Partnerships (PPP), Tax Increment Financing (TIFs), etc. (maximum 3 points)

   Destination 2040 identified a growing gap between the infrastructure needs of the growing PACTS region, and flat or declining funding available. Proposals that include funds from non-government sources, and innovative funding mechanisms can receive points. Greater percentages of non-governmental funds will receive more points.

   Submittal Tax increment financing funds will be used for local match.

5. Multi-member applications (maximum 3 points)

   Transportation transcends municipal boundaries so PACTS encourages regional coordination of transportation investment decisions. Project proposals that include planning and match funding by two or more municipalities and/or transit agencies will receive the maximum points.

   - 1 point – Application which includes a supporting resolution adopted by a neighboring city or town council.
   - 2 points – Application which includes supporting resolutions adopted by two or more neighboring city or town councils.
   - 3 points – Application for which multiple municipalities would provide equal or proportional shares in payment of the local match for a project located wholly within one municipality.

Submittal N/A

6. Enhance existing freight industry (maximum 10 points)

The efficient movement of goods is critical to the local and regional economy. Providing better access to specialized sites that handle freight, and/or projects that propose to shift large/heavy freight shipments away from congested areas and neighborhoods are eligible for points. Projects that increase heavy haul freight through existing residential neighborhoods are discouraged. Proposed projects that demonstrate a reduction in the frequency and/or weight of trucked freight and that move more freight onto rail and/or ships will receive the most points.

Submittal N/A.

7. Economic Development Benefits of the project (maximum 8 points)

Transportation links businesses and markets at all scales. Projects that support the economic vitality of the region, and provide better links between labor and employment are desired in the PACTS region. Projects that demonstrate the infrastructure investments proposed will enable desired economic development projects in appropriate and desired locations, such as Priority Centers are eligible for points. Project proposals that demonstrate increased accommodations for all modes in job concentrated areas, for access to child care in those areas as well as education and workforce training sites are also eligible for points in this category.

Submittal This project is within the Mill Creek economic transportation-shed and will improve movements to and from this downtown center.

8. Reconstruct or Rehabilitate an Arterial or Collector Road (maximum 10 points)

Arterials connect the region to the rest of the state and country and carry the majority of the region's traffic. PACTS has a successful pavement preservation program for Collector Roads, but has not had a means to fully fund the reconstruction of Collectors or Arterials. Proposed projects for roads that are no longer eligible for pavement preservation and require some level of rebuilding are eligible for these points (up to 10 points for arterials, and 7 points for collectors).

Submittal Highland Avenue represents a vital link in the City's cross-town travel. It serves as a parallel route to Broadway and carries considerable traffic between Cottage Road and Ocean Street – 6,900 AADT. Highland Avenue also is home to one of the City's elementary schools, as well as, the public library. The current PCR value is 2.34 and the Customer Condition Service Level is D.

9. Reduces the numbers or severity of crashes (maximum 12 points)

The safety of the traveling public is a priority in the multi-modal environment of the PACTS region. Making streets and roads safer and more compatible for all users is an important aspect of transforming our transportation system. Proposals that demonstrate the project will mitigate High Crash Locations and/or make travel conditions safer for vulnerable users, (i.e. bicyclists, pedestrians, transit riders/passengers, and underserved persons, etc.) are eligible for points.

Submittal In 2015 a handicapped individual riding a motorized scooted struck a vehicle at the intersection of Ocean and Highland while trying to cross the street against the signal. Thankfully no one was injured, but ADA compliant pedestrian signal equipment might have prevented this incident.

10. Transit supportive project elements (maximum 10 points)

The success of our growing region depends on more convenient and inviting access to transit that provides high quality transit trips as a viable choice for everyday travel. The integration of transit amenities such as pedestrian and bicycle accessible transit stops and shelters, street modifications which improve transit service, technology upgrades such as Transit Signal Priority or Real-Time Passenger Information systems, as well as other transit capital projects which maintain, improve or expand existing transit service are eligible for points in the category.

Submittal The proposed project includes the incorporation of TSP into the new traffic signal equipment capabilities for improved bus operations on Route 21.

11. Improves Pedestrian Network (maximum 5 points)

Multimodal streets and corridors that foster calmed traffic and provide a relaxed, accessible and outdoor-oriented experience encouraging pedestrian activity are critical to livability in the PACTS region. Proposals that demonstrate the removal of barriers, closing of gaps, and other treatments improving pedestrian movement are desired. Proposals that demonstrate treatments which will improve the pedestrian network, such as traffic slowing, diversion of cut-through traffic, the construction of sidewalks of adequate width, providing shade trees, and encourage active transportation and street life, etc. are eligible for points.

Submittal The existing street has a sidewalk throughout its length but the current condition of this facility could be improved with reconstruction. In addition, we would propose to add RRFB's at the two crosswalks in front of the elementary school for increased driver awareness of pedestrian activity at both the school and public library.

12. Improves Bicycle Network (maximum 5 points)

The ongoing and continued emphasis on a safe, comfortable, PACTS region-wide bicycle network that provides an active transportation choice for people and enables active transportation lifestyle is an important transportation strategy. Projects that will expand on-

road bikeways, bicycle or shared-use lanes or paths, trail connections, and other treatments that provide a network for safer and more comfortable travel by bicycle are eligible for points.

Submittal The current PACTS Bicycle and Pedestrian Plan designates paved shoulders on this section of Highland Avenue as a future improvement. The proposed project would aim to attain this goal as part of the redesign effort.

13. Reduces congestion and/or improves multimodal level of service (maximum 10 points)

The economic and population growth of the PACTS region, like other successful regions, is potentially constrained and limited by congestion. The PACTS Congestion Management Process plan focuses on mode shift and traffic signal coordination as the primary strategies for reducing motor vehicle congestion. Proposals that demonstrate the project will provide reductions in motor vehicle congestion AND improve multimodal level of service without negatively impacting the safety of non-motorized travel mode will receive the maximum points.

Submittal The new traffic signal equipment at Ocean and Highland with the added feature of TSP would improve traffic operations along Ocean Street (Route 77) over what exists presently. See attached LOS analyses. Also, PACTS has funded another project (WIN 18665.00) to add this intersection into the RTMS for better overall monitoring and management.

14. Encourages or enables compact development such as Transit Oriented Development, street connectivity, etc. (maximum 5 points)

Acknowledging limited financial resources, the Destination 2040 Plan encourages transportation and land-use decisions to direct growth toward existing infrastructure (sewer, water, transportation, safety services) in centers and connecting corridors. *Destination 2040* identified Priority Centers that are either currently serviced by transit, or that could be in the future. Existing and emerging mixed-use centers are more sustainable, and more cost sensitive for municipalities delivering services and maintaining infrastructure assets than low-density developments which are more dependent on trips by automobile. Proposals that demonstrate the project will enable or provide for a framework for transit oriented development are eligible for these points

Submittal The proposed project is located within an "Opportunity Center" and the Ocean Street intersection is on a "Priority Corridor" served by South Portland Bus' Route 21.

15. Links jobs and housing by trips other than by automobile (maximum 5 points)

The combined costs of balancing housing and transportation related to commuting to jobs, schools and shopping comprises the majority of most household budgets. By removing barriers to transportation options other than just automobiles, and providing transportation

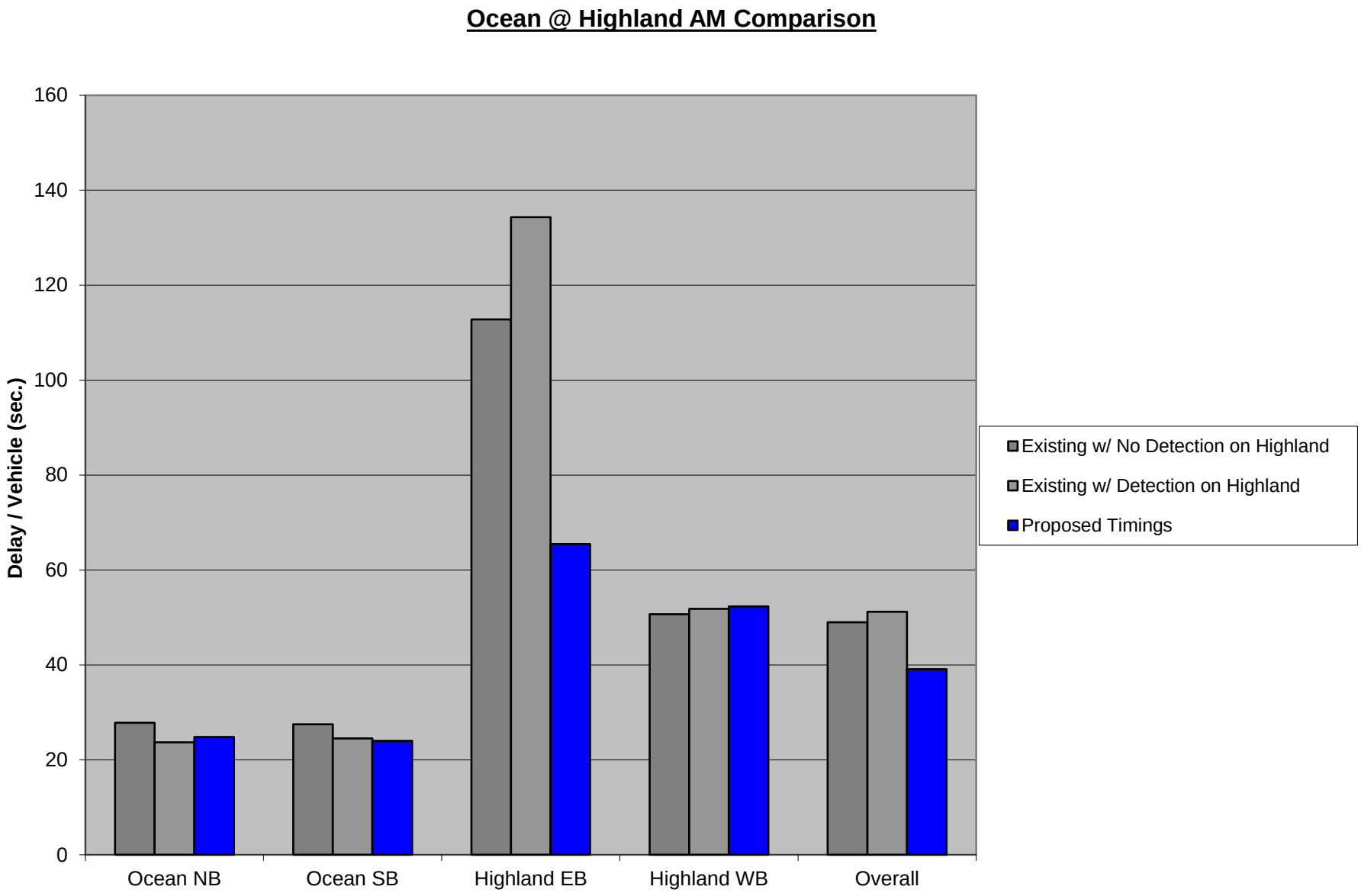
choices and enabling walkable, transit-connected neighborhoods, these costs can be reduced. Proposals that demonstrate that the project would facilitate more non-automobile trips between employment centers and residential areas through capital improvements are eligible for these points.

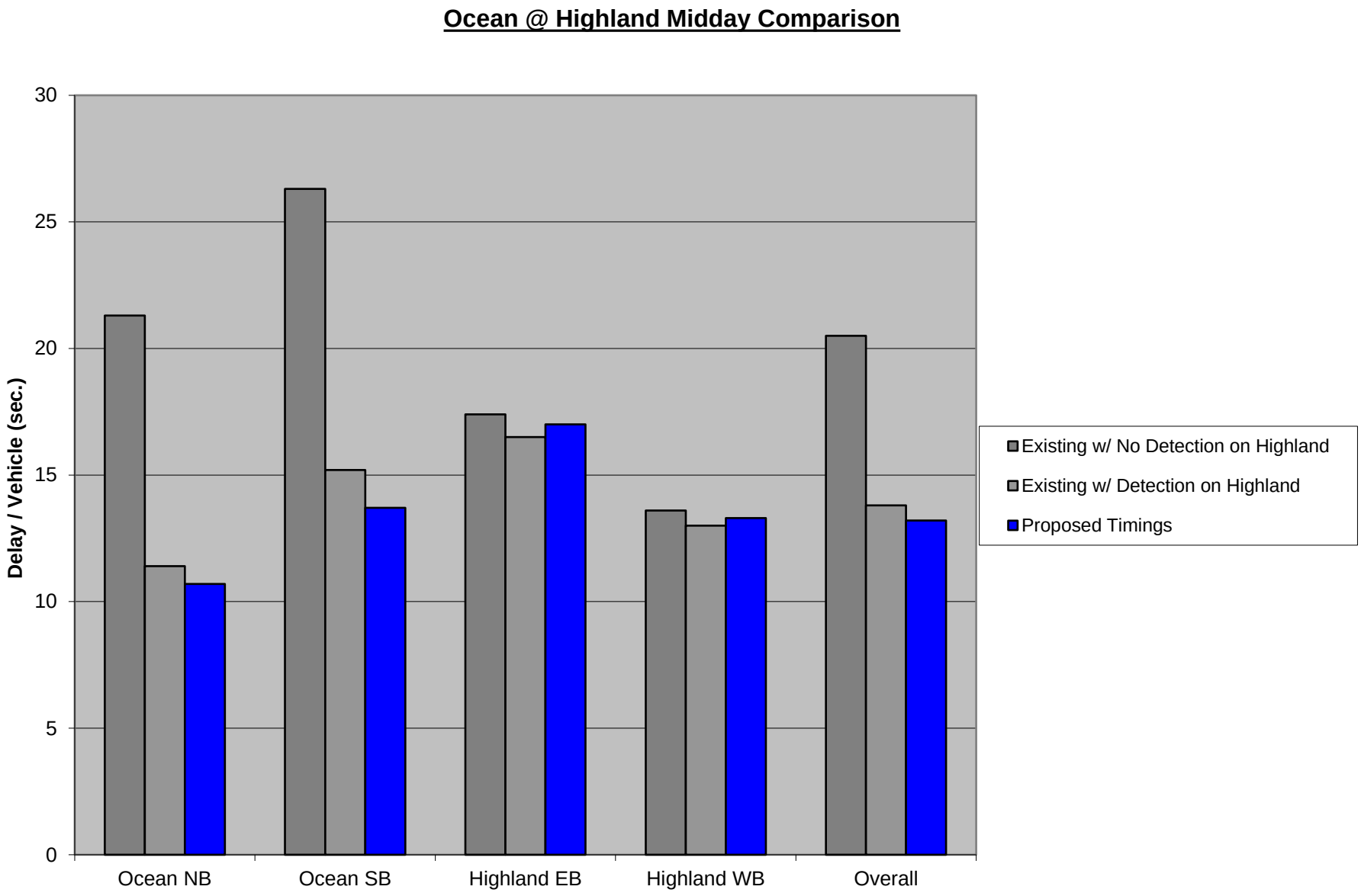
Submittal The addition of paved shoulders for bikes and upgraded pedestrian facilities along this stretch of urban street will encourage more neighborhood residents to change their travel habits to walking and biking. Given the close proximity to the Knightville/Millcreek shopping district and local school and library alternative choices to travel (walking and biking) are more than realistic.

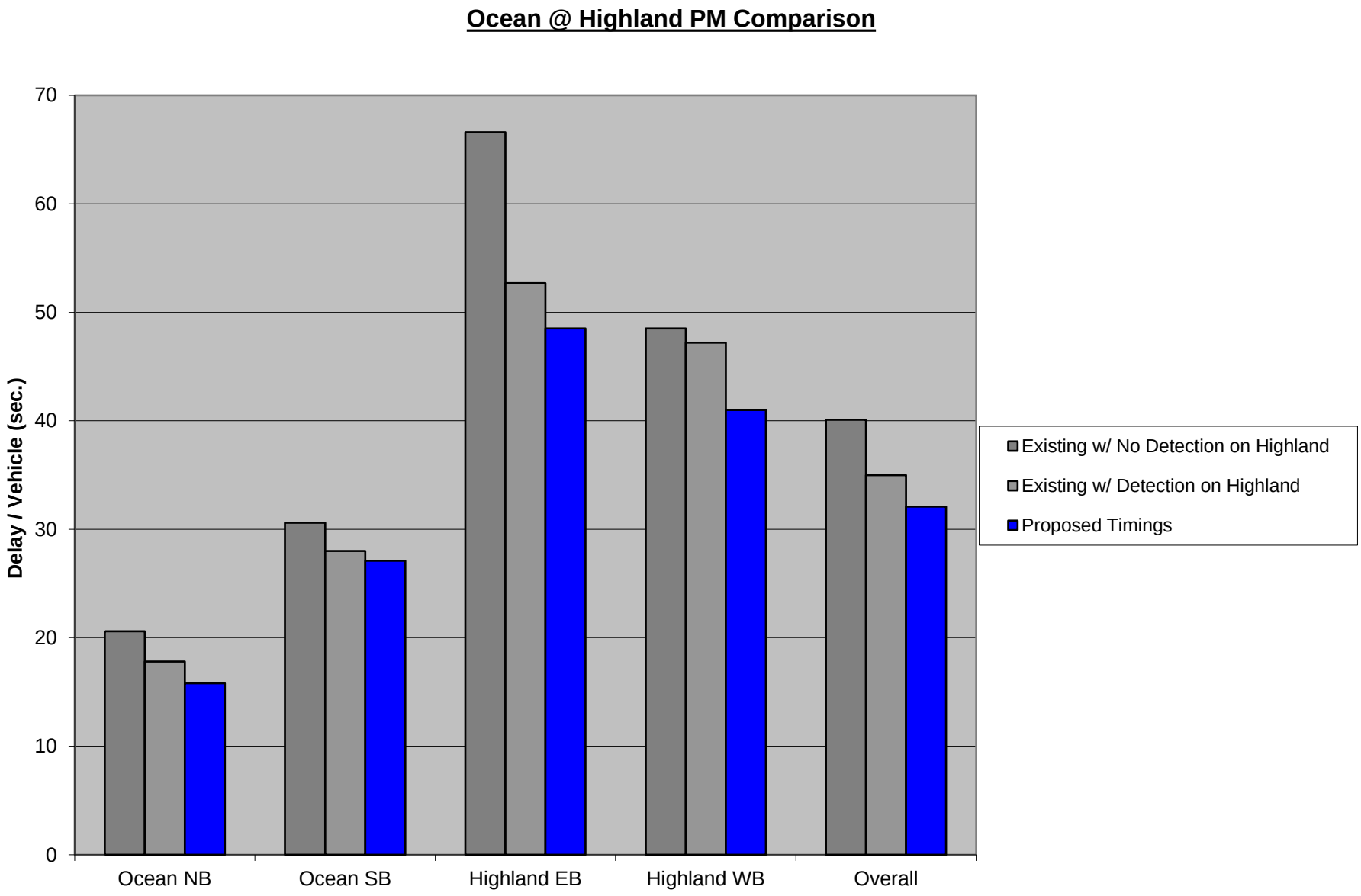
16. Increases Resilience to Climate-related events and/or provides "Green" infrastructure to reduce storm water (maximum 5 points)

Extreme weather events and a changing climate are certain to add to the transportation infrastructure needs in the near future. Many roadways and bridges will require modernization that will allow infrastructure to withstand climate related impacts such as sea level rise, storm surge, and other storm related events – resilient infrastructure that can survive these events. Proposals that demonstrate the improvements will reduce impacts from climate related events, such as flooding, erosion, storm surge, sea level rise etc. are eligible for points. Proposals that demonstrate that the proposed infrastructure facilities will function in such conditions, or may reduce run-off or treat it organically, and/or reduce the need for engineered storm water facilities are also eligible for points.

Submittal N/A


Ocean @ Highland AM Comparison
Delay / Vehicle (sec.)
160
140
120
100
80
60
40
20
0
Ocean NB
Ocean SB
Highland EB
Highland WB
Overall
Existing w/ No Detection on Highland
Existing w/ Detection on Highland
Proposed Timings


Ocean @ Highland Midday Comparison
Delay / Vehicle (sec.)
30
25
20
15
10
5
0
Ocean NB
Ocean SB
Highland EB
Highland WB
Overall
Existing w/ No Detection on Highland
Existing w/ Detection on Highland
Proposed Timings


Ocean @ Highland PM Comparison
Delay / Vehicle (sec.)
70
60
50
40
30
20
10
0
Ocean NB
Ocean SB
Highland EB
Highland WB
Overall
Existing w/ No Detection on Highland
Existing w/ Detection on Highland
Proposed Timings

SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106
250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB PACTS App 2020-1 Highland Ave.
SHEET NO. ____ OF ____
CALCULATED BY SSS DATE 2/1/17
CHECKED BY ____ DATE ____
SCALE ____

Preliminary Cost Estimate

Total length = 1900'
Drainage discharges in 2 streams
880' + 2 CB's
Rdwy width = 30'
5' bit s/w w/ conc curb
need signal system at Ocean

Road Reclaim w/ cement	1900' x 30' x 1/9 x $9	= $57,000
4" HMA overlay @ $120/Ton	1900' x 30' x 1/9 x $120 x 440/2000	= $167,200
2 RRFB's	2 x $12,000	= $24,000
Conc. curb	1900' x 2 x $15/FT	= $57,000
5' s/w @ $85/sy	1900' x 5' x 1/9 x $85	= $89,750
	500' x 5' x 1/9 x 85	= $23,750
2 CB's at $4,000		= $8,000
Drain Pipe	880' x $65/FT	= $57,200
Traffic signal (Ocean) w/ mast arms		= $175,000
Traffic Control		= 35,000
Mobilization		= 75,000
Misc. & Contingencies		= 80,000
Total Construct.		848,900
ROW		0
PE: PDR		85,000
Remaining		40,000
CE		85,000
		1,058,900

DELUXE FOR BUSINESS 1-800-888-6327

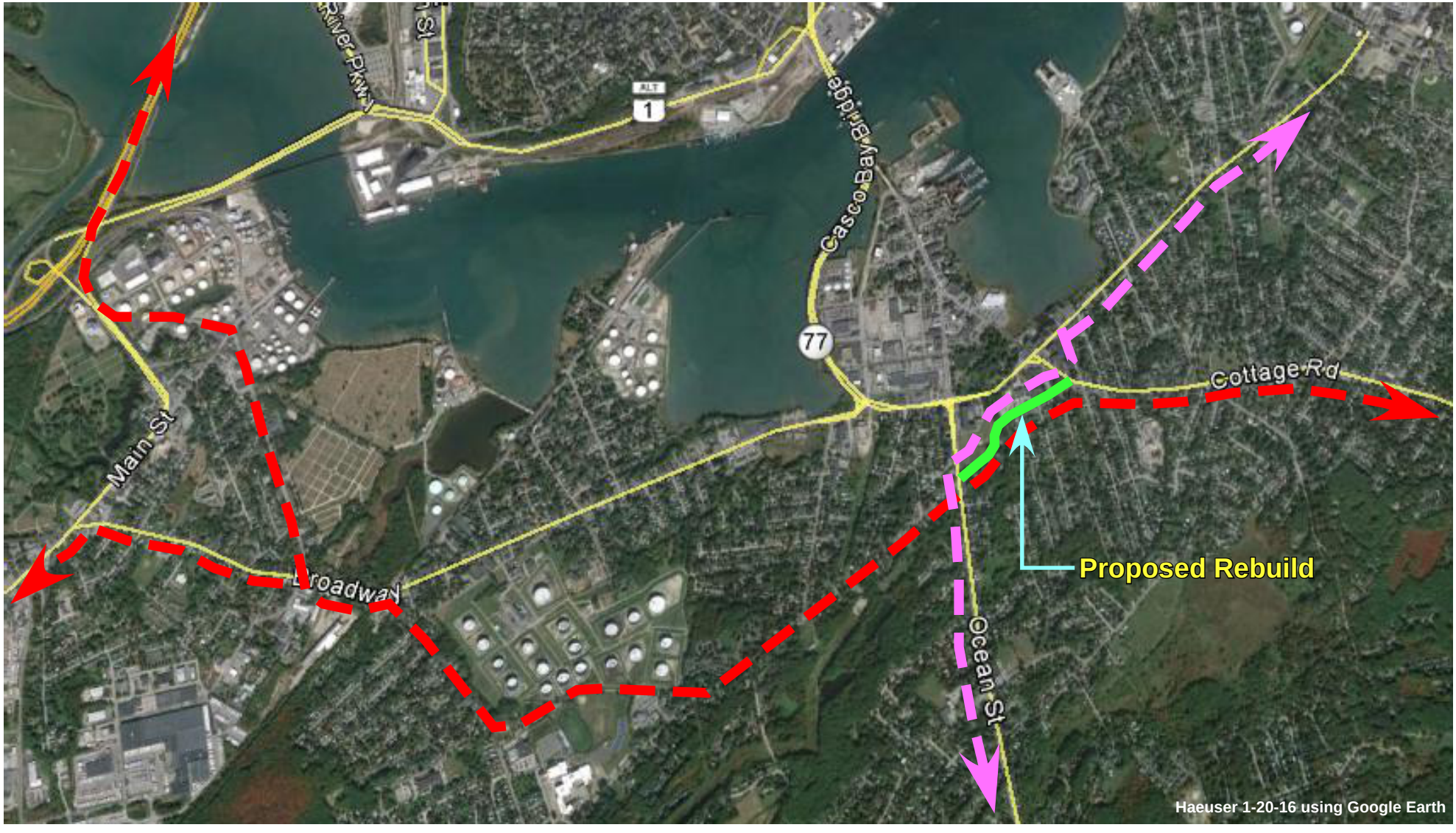
SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106
250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB PACTS App 2020-1 Highland Ave
SHEET NO. ____ OF ____
CALCULATED BY SSS DATE 12/28/16
CHECKED BY ____ DATE ____
SCALE ____

PDR Scope

1. Field Survey	$17,000
2. ROW Research	$2,500
3. Utility identification	$1,500
4. Traffic Data Collection and analysis	$1,500
4.A. Geotechnical	$5,000
5. Alternative Designs assume 2 variations	$27,000
6. Public Meeting	$1500
7. Team Meetings with PACTS and MDOT	$3,500
8. Draft PDR document	$3,500
9. Final PDR document	$2,500
10. Cost Estimating	$2,500
	$68,000
MDOT Charges (10%)	7,000
Contingency (15%)	10,000
	$85,000

DELUXE FOR BUSINESS 1-800-888-6327



Regional Routes Served by Highland Avenue between Ocean and Cottage

Application Form for PACTS 2020 and 2021 Complex Projects

September 30, 2016

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Submittal Requirements

1. Proposals to change the capacity of an intersection must include the results of capacity analyses of current and proposed conditions. Proposals for a new traffic signal (or removal of an existing one) must be accompanied by a MaineDOT-approved warrant analysis. MaineDOT support documents must be submitted with the application.

2. Proposals to change an intersection or roadway cross-section must be supported by a feasibility study that includes an analysis of feasible alternatives, recommendation of the most viable alternative, a cost estimate, and at least one public forum.

3. Similarly, proposals for the construction of new sidewalks/paths/trails intended to be used solely by bicycles and/or pedestrians must be supported by an analysis that assesses viable alternative routes, potential demand, and level of municipal, business and resident support and that recommends the most feasible alternative.

4. Proposals for road and/or intersection reconstruction must be submitted by a registered professional engineer.

General Information

1. **Municipality**: South Portland

2. **Primary contact**: Charles Haeuser, Planning Director

3. **Contact phone number:** 207.767.7649

4. **Project name**: Maine Mall Area access to MTA Connector Reconfiguration

5. **Project location**: Maine Mall Road/Philbrook Avenue/Ramp E off MTA Connector (Route 703)

Route 703 Ramp E at Philbrook Avenue

Maine Mall Road at Chili's

6. **Brief project scope description**: Reconfigure the current access from the Maine Mall and John Roberts Road Business Park to the MTA Connector (Route 703) to address two HCL's - Philbrook Ave. at Ramp E and Maine Mall Road at Chili's. See attached concept sketches.

7. **Purpose-and-need statement that describes the conditions that warrant the proposed project and an explanation of the intended benefits of that project.** Currently, patrons/employees of the Maine Mall and employees of businesses along John Roberts Road wishing to get onto the Maine Turnpike from Philbrook Road proceed to Maine Mall Road, turn left using the two left turn lanes, and then immediately turn left again using two left turning lanes to access Ramp A0420, which leads to the Maine Turnpike Toll Booths. Introducing this traffic demand onto Maine Mall Road in this congested area is unnecessary and adds to driver confusion on which is the proper lane to be in, which is resulting in a high number of crashes in this general location. If access from the Mall were provided directly from the parking lots or Philbrook Road (similar to the entering movements off the MTA Connector) then traffic volumes and vehicle conflicts caused by driver confusion would be reduced on Maine Mall Road.

8. **Has a preliminary design report (PDR) been completed?** No If yes, then please attach it.

9. **Is this an application for PDR funding as a precursor to future PACTS construction funding?** Yes If no, then describe why you think this project does not need a PDR phase:

10. **Federal functional classification**: Maine Mall Road – Minor Arterial
Philbrook Avenue – Local
Ramp E – Principal Arterial

11. **MaineDOT Corridor Priority**: (http://www.maine.gov/mdot/about/assets/search/)

Maine Mall Road – Priority 3
Philbrook Avenue – Priority 6
Ramp E – Priority 1

12. **Are there any right-of-way impacts?** Yes, potentially. The conceptual design will likely impact property owned by both the Mall and Hampton Inn. If yes, please identify them.

13. **Has this project been reviewed for potential environmental impacts?** Not thoroughly and is located within the Long Creek Watershed District. The LCWMD is currently conducting improvement studies for the South Branch of Long Creek, which passes within this project area. If yes, please identify them.

14. **Will the project meet clear zone requirements?** Yes

15. **Will the project require design exceptions?** No If yes, please identify them.

16. **Will the project require historical and/or environmental review?** Yes

17. **Transit provider(s) support for municipal applications that involve transit-supportive elements:** Philbrook Road is on South Portland's Bus Routes 24A and 24B and is supportive of this roadway network reconfiguration because it will improve safety along their travel route.

18. **Cost Estimate**

Provide as much detail as possible and attach the worksheets used to develop your estimates.

Contact information for the cost estimate preparer: Stephen S. Sawyer, Jr., PE, Sebago Technics, Inc. – the City's Consulting Traffic Engineer

Preliminary engineering:	$ 193,300
Right of way:	$ 250,000
Construction:	$1,967,750
Construction engineering:	$ 300,000
Total estimated cost:	$3,711,050

PACTS Preservation Spending Target estimate:	0%
PACTS Modernization Spending Target estimate:	100% or $3,711,050
PACTS Expansion Spending Target estimate:	0%
Total estimated cost: $3,711,050	

Scoring Formula Criteria

1. Subregion's and Transit Committee's top priority projects (maximum 10 points)

Please communicate with your PACTS subregion colleagues in order to decide on priority project investments in your subregion. Each of the four PACTS subregions shall allocate up to 10 points to PACTS applications from the municipalities in the subregion. The 10 points may go to a single proposal or be spread among multiple projects.

The Transit Committee shall do the same for applications submitted by, or in partnership with, any of the PACTS Transit Agencies.

Please list below the points allocated for this application and for all other applications submitted from your PACTS Subregion.

Submittal N/A

2. *Destination 2040* Priority Corridor or Center (maximum 10 points)

The *Destination 2040* Plan identifies Priority Corridors and 56 Priority Centers which are existing important regional transportation corridors or emerging centers that have or could have infrastructure such as water and sewers to support additional development. They generally allow a mix of uses and proximate living near jobs and services, as well as recreation opportunities. The map of these corridors and centers is at the end of the PACTS application instructions memo. The mapped circles are not intended to define strict limits of the center. Applicants make the case that the proposed projects are in or related to a center

and then PACTS staff makes a determination whether or not the proposed project qualifies for these points.

Submittal The location of the proposed project is within an identified "Centers of Opportunity" in the Destination 2040 PACTS Plan, but not on a "Priority Corridor".

3. Improves region's traffic signal system (maximum 5 points)

Maintaining and operating the region's 100+ signalized intersections at peak performance and coordination has been a strategy of PACTS for over a decade. Signals which have sensors that can detect not only cars but also buses, bicycles and pedestrians can provide for optimal efficiency thereby reducing the need for costly roadway widening or lane expansion. Proposals will be scored on the projected improved performance, including safety and balancing of all modes which utilize the intersection. Scoring will be weighted on the amount of traffic volumes specific to the intersection as well as its regional significance i.e. how many municipalities are affected and transit agencies using the intersection and benefiting from the proposed improvements.

Submittal Maine Mall Road is a main arterial that is part of the PACTS RTMS. Finely tuned traffic signal coordination is key to optimizing traffic flow within this major commuter and retail shopping corridor. The proposed project will reduce traffic by 15% on the minor approach at the Philbrook intersection and reduce the demand for left turning traffic off Maine Mall Road by 15% at Chili's. Both of these reductions will potentially allow for additional signal time to be allocated to the major through movements on Maine Mall Road, which will reduce congestion, fuel usage, and harmful air emissions.

4. Leverages other non-MPO funds from the MaineDOT, Private/developers, Public Private Partnerships (PPP), Tax Increment Financing (TIFs), etc. (maximum 3 points)

Destination 2040 identified a growing gap between the infrastructure needs of the growing PACTS region, and flat or declining funding available. Proposals that include funds from non-government sources, and innovative funding mechanisms can receive points. Greater percentages of non-governmental funds will receive more points.

Submittal TIF funds will be used for the local match.

5. Multi-member applications (maximum 3 points)

Transportation transcends municipal boundaries so PACTS encourages regional coordination of transportation investment decisions. Project proposals that include planning and match funding by two or more municipalities and/or transit agencies will receive the maximum points.

- 1 point – Application which includes a supporting resolution adopted by a neighboring city or town council.

- 2 points – Application which includes supporting resolutions adopted by two or more neighboring city or town councils.

- 3 points – Application for which multiple municipalities would provide equal or proportional shares in payment of the local match for a project located wholly within one municipality.

Submittal N/A

6. Enhance existing freight industry (maximum 10 points)

The efficient movement of goods is critical to the local and regional economy. Providing better access to specialized sites that handle freight, and/or projects that propose to shift large/heavy freight shipments away from congested areas and neighborhoods are eligible for points. Projects that increase heavy haul freight through existing residential neighborhoods are discouraged. Proposed projects that demonstrate a reduction in the frequency and/or weight of trucked freight and that move more freight onto rail and/or ships will receive the most points.

Submittal Providing direct access from the Mall and area businesses to the Maine Turnpike Connector and avoiding the need to enter Maine Mall Road is not only a timelier route, but also a safer alternative. Large trucks making turning maneuvers on and off Maine Mall Road has a negative effect on traffic operations in general within this corridor.

7. Economic Development Benefits of the project (maximum 8 points)

Transportation links businesses and markets at all scales. Projects that support the economic vitality of the region, and provide better links between labor and employment are desired in the PACTS region. Projects that demonstrate the infrastructure investments proposed will enable desired economic development projects in appropriate and desired locations, such as Priority Centers are eligible for points. Project proposals that demonstrate increased accommodations for all modes in job concentrated areas, for access to child care in those areas as well as education and workforce training sites are also eligible for points in this category.

Submittal The proposed project will provide improved access for this major activity center in the City – be they shoppers, employees, shippers or businesses. Having both a safer and more direct route to their destination is a significant enhancement to the area.

8. Reconstruct or Rehabilitate an Arterial or Collector Road (maximum 10 points)

Arterials connect the region to the rest of the state and country and carry the majority of the region's traffic. PACTS has a successful pavement preservation program for Collector Roads, but has not had a means to fully fund the reconstruction of Collectors or Arterials. Proposed projects for roads that are no longer eligible for pavement preservation and require

some level of rebuilding are eligible for these points (up to 10 points for arterials, and 7 points for collectors).

Submittal N/A

9. Reduces the numbers or severity of crashes (maximum 12 points)

The safety of the traveling public is a priority in the multi-modal environment of the PACTS region. Making streets and roads safer and more compatible for all users is an important aspect of transforming our transportation system. Proposals that demonstrate the project will mitigate High Crash Locations and/or make travel conditions safer for vulnerable users, (i.e. bicyclists, pedestrians, transit riders/passengers, and underserved persons, etc.) are eligible for points.

Submittal This project is intended to reduce traffic volumes and conflicting vehicular movements at the Maine Mall Road/Philbrook Avenue and the Maine Mall Road/Chili's intersections – two HCL's. See attached graphic.

10. Transit supportive project elements (maximum 10 points)

The success of our growing region depends on more convenient and inviting access to transit that provides high quality transit trips as a viable choice for everyday travel. The integration of transit amenities such as pedestrian and bicycle accessible transit stops and shelters, street modifications which improve transit service, technology upgrades such as Transit Signal Priority or Real-Time Passenger Information systems, as well as other transit capital projects which maintain, improve or expand existing transit service are eligible for points in the category.

Submittal N/A

11. Improves Pedestrian Network (maximum 5 points)

Multimodal streets and corridors that foster calmed traffic and provide a relaxed, accessible and outdoor-oriented experience encouraging pedestrian activity are critical to livability in the PACTS region. Proposals that demonstrate the removal of barriers, closing of gaps, and other treatments improving pedestrian movement are desired. Proposals that demonstrate treatments which will improve the pedestrian network, such as traffic slowing, diversion of cut-through traffic, the construction of sidewalks of adequate width, providing shade trees, and encourage active transportation and street life, etc. are eligible for points.

Submittal N/A

12. Improves Bicycle Network (maximum 5 points)

The ongoing and continued emphasis on a safe, comfortable, PACTS region-wide bicycle network that provides an active transportation choice for people and enables active

transportation lifestyle is an important transportation strategy. Projects that will expand on-road bikeways, bicycle or shared-use lanes or paths, trail connections, and other treatments that provide a network for safer and more comfortable travel by bicycle are eligible for points.

Submittal N/A

13. Reduces congestion and/or improves multimodal level of service (maximum 10 points)

The economic and population growth of the PACTS region, like other successful regions, is potentially constrained and limited by congestion. The PACTS Congestion Management Process plan focuses on mode shift and traffic signal coordination as the primary strategies for reducing motor vehicle congestion. Proposals that demonstrate the project will provide reductions in motor vehicle congestion AND improve multimodal level of service without negatively impacting the safety of non-motorized travel mode will receive the maximum points.

Submittal This project is aimed at reducing travel demand on Maine Mall Road, which in turn will decrease congestion and increase existing levels of service in this section of the corridor.

14. Encourages or enables compact development such as Transit Oriented Development, street connectivity, etc. (maximum 5 points)

Acknowledging limited financial resources, the Destination 2040 Plan encourages transportation and land-use decisions to direct growth toward existing infrastructure (sewer, water, transportation, safety services) in centers and connecting corridors. *Destination 2040* identified Priority Centers that are either currently serviced by transit, or that could be in the future. Existing and emerging mixed-use centers are more sustainable, and more cost sensitive for municipalities delivering services and maintaining infrastructure assets than low-density developments which are more dependent on trips by automobile. Proposals that demonstrate the project will enable or provide for a framework for transit oriented development are eligible for these points

Submittal The overall Maine Mall region of the City is a major activity center within the community that is currently served by South Portland Bus. Improving access to and from this area for out of town visitors and employees by making Maine Mall Road less congested and safer will enhance the current transit service by improving schedule reliability.

15. Links jobs and housing by trips other than by automobile (maximum 5 points)

The combined costs of balancing housing and transportation related to commuting to jobs, schools and shopping comprises the majority of most household budgets. By removing barriers to transportation options other than just automobiles, and providing transportation choices and enabling walkable, transit-connected neighborhoods, these costs can be reduced.

Proposals that demonstrate that the project would facilitate more non-automobile trips between employment centers and residential areas through capital improvements are eligible for these points.

Submittal N/A

16. Increases Resilience to Climate-related events and/or provides "Green" infrastructure to reduce storm water (maximum 5 points)

Extreme weather events and a changing climate are certain to add to the transportation infrastructure needs in the near future. Many roadways and bridges will require modernization that will allow infrastructure to withstand climate related impacts such as sea level rise, storm surge, and other storm related events – resilient infrastructure that can survive these events. Proposals that demonstrate the improvements will reduce impacts from climate related events, such as flooding, erosion, storm surge, sea level rise etc. are eligible for points. Proposals that demonstrate that the proposed infrastructure facilities will function in such conditions, or may reduce run-off or treat it organically, and/or reduce the need for engineered storm water facilities are also eligible for points.

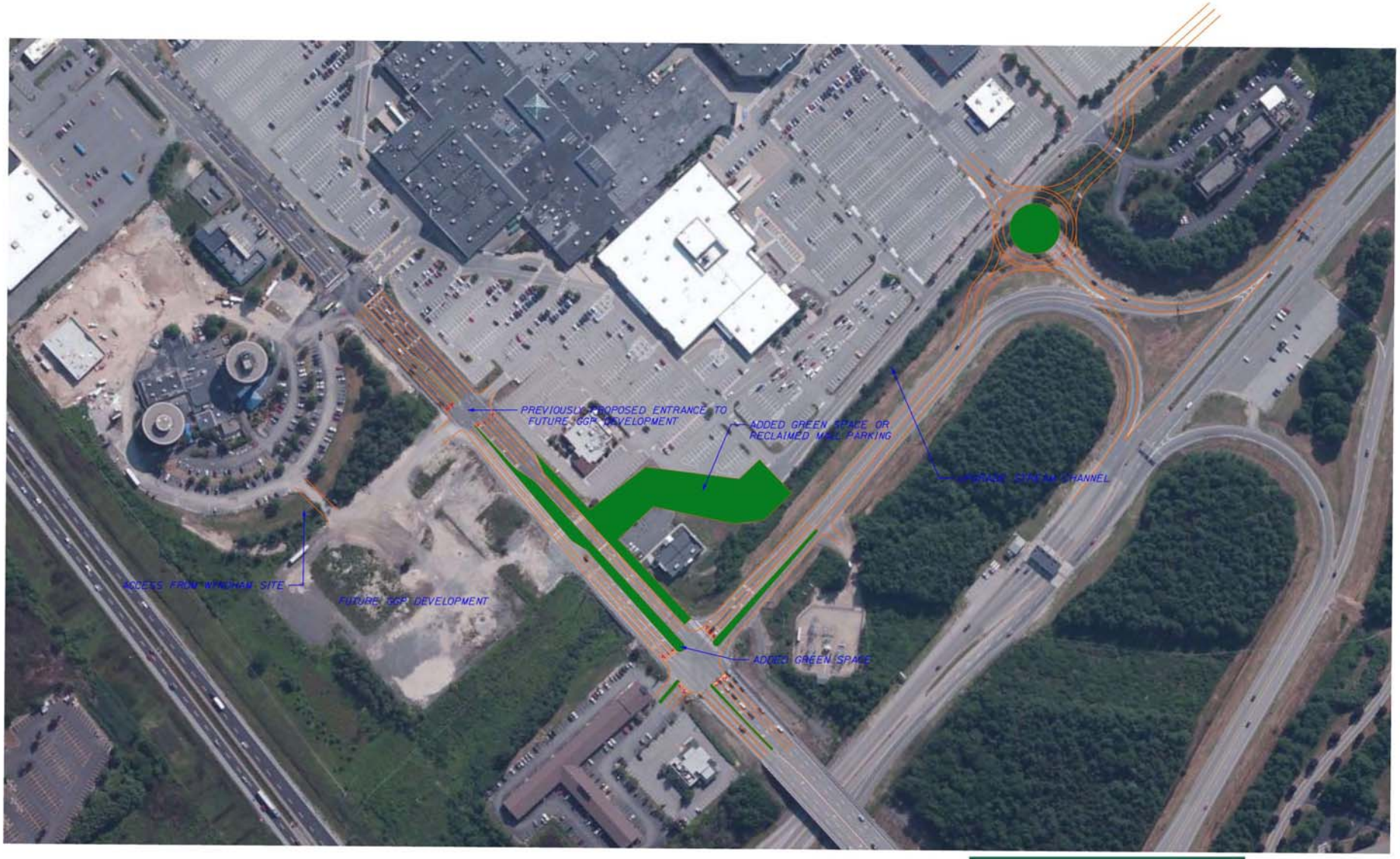
Submittal N/A

MAINE MALL AND MAINE MALL ROAD
INTERSECTION SAFETY IMPROVEMENTS

CONCEPT 1

NOVEMBER 1, 2011

Sebago Technics
Engineering Expertise You Can Build On



MAINE MALL AND MAINE MALL ROAD
INTERSECTION SAFETY IMPROVEMENTS

CONCEPT 2

NOVEMEBER 1, 2011

Sebago Technics
Engineering Expertise You Can Build On

SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106
250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB: PACTS App - Philbrook/Rang E
SHEET NO. 1 OF 1
CALCULATED BY: SSS DATE: 12/28/16
CHECKED BY: DATE:
SCALE:

PDR Scope

1. Field Survey	$22,000
2. Wetland Mapping	$ 2,000
3. Geotechnical Investigations	$ 7,500
4. Traffic Data Collection and Analysis	$ 7,500
3 intersections { MMR/Chilis, MMR/Philbrook, Rang E/Philbrook }	
5. Alternative Designs assume 3	$12,000
6. Public Meeting	$1,500
7. Team Meetings w/ PACTS & MDOT	$ 8,000
8. Draft PDR document	$ 5,000
9. Final PDR document	$ 4,000
10. ROW Research	$ 3,500
11. Cost Estimating (3 alts.)	$ 3,600
	$76,600
MDOT Charges (10%)	$ 6,700
Contingency	$ 10,000
	$93,300

DELUXE FOR BUSINESS 1-800-888-6377

SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106
250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB Pacts App 2020-21 MMR/Ramp E
SHEET NO. 1 OF 2
CALCULATED BY SSS DATE 2/1/17
CHECKED BY DATE
SCALE

Preliminary Cost Estimate

based on Concept 2
11/1/11

MMR - Median

Pav't removal (3B median)
800' x 12' x 1' x 1/27 = 355 cy x $25 = $8,900

Reset curb
800' x $25 = $20,000

Loam 1.5' x 25' x 800' x 1/27 = 1,111 cy x $60 = 66,500

Landscaping $50,000

Drainage 3 CB's at $4,000 $12,000
3 x 20' x $65 $3,900

MMR - Mallside

Pav't removal
500' x 16' x 1' x 1/27 = 300 cy x $25 = $7,500

Reset curb
500 x $25 = $12,500

Loam 1.5 x 20' x 500' x 1/27 = 555 cy x $60 = $33,500

Landscaping = $50,000

Drainage 3 CBs at $4,000 = $12,000
3 x 10' x $65 = = $1,950

End of Philbrook Ave.

Remove pav't
450' x 60' x 1' x 1/27 = 1,000 cy x $25 = $25,000

Fill 450' x 60' x 1.5' x 1/27 = 1500 cy x $15 = $22,500

Loam 450' x 60' x .33 x 1/27 = 330 cy @ $65 = $21,500

Landscaping = $50,000

DELUXE FOR BUSINESS 1-800-888-6327
Ref. No. G 1000277

SEBAGO TECHNICS
(207) 200-2100
www.sebagotechnics.com

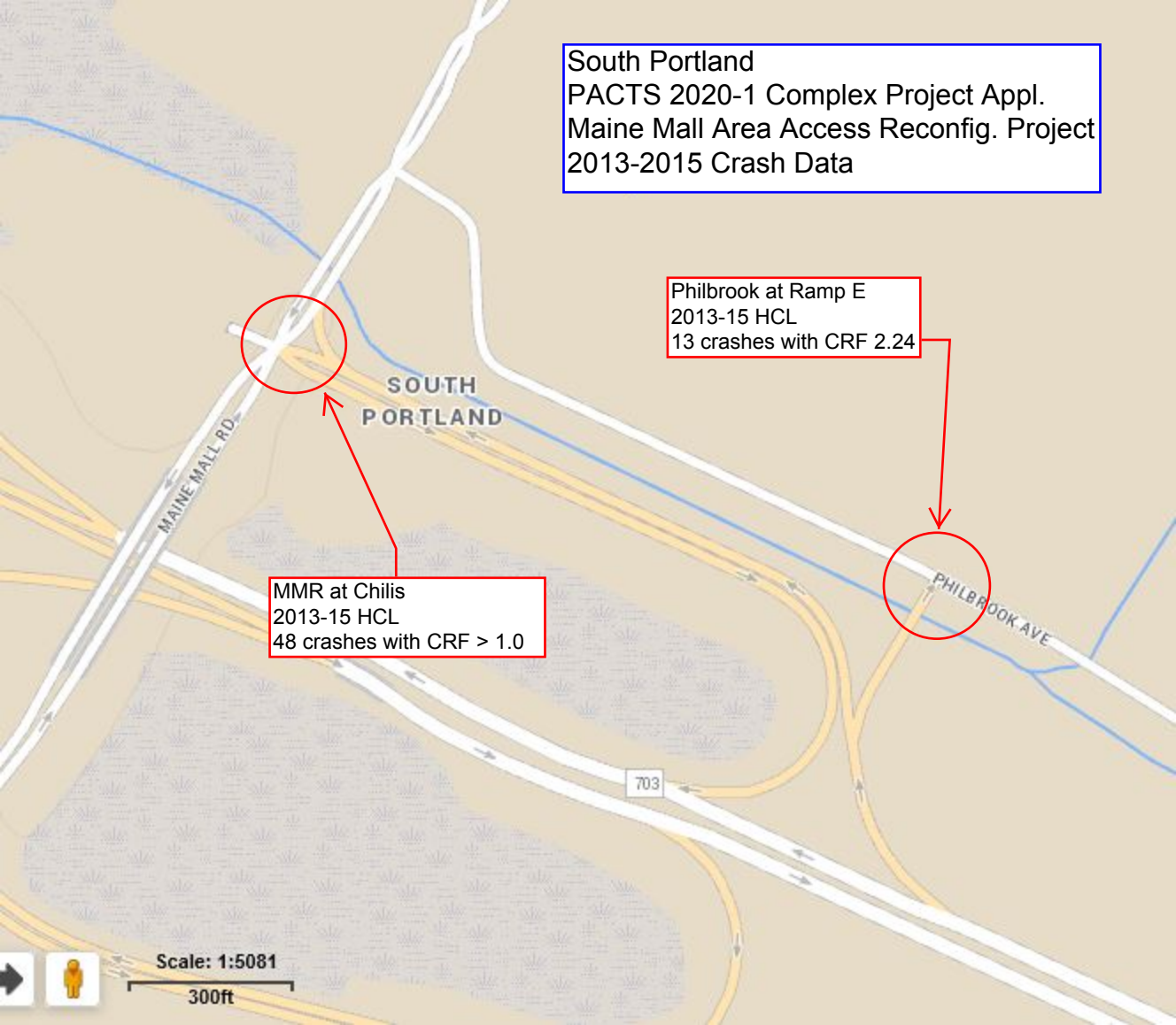
75 John Roberts Rd., Ste. 1A
So. Portland, ME 04106

250 Goddard Rd., Ste. B
Lewiston, ME 04240

JOB Pacts App. 2020-1 MMR Ramp E
SHEET NO. 2 OF 2
CALCULATED BY SSS DATE 2/1/17
CHECKED BY DATE
SCALE

Roundabout	$1,250,000
Realigned Approach Rdwys.	
800' x $300/Ft =	$240,000
	1,887,750
Traffic Signal Mods	30,000
Traffic Control	50,000
Mobilization	200,000
Misc. and Contingencies	300,000
Box Culvert for Stream under roundabout	500,000
Total Constr. Cost	$2,967,750
Row	250,000
PE: PDR	93,300
Remainder	100,000
CE	300,000
	$3,711,050

DELUXE FOR BUSINESS 1-800-888-6727


South Portland
PACTS 2020-1 Complex Project Appl.
Maine Mall Area Access Reconfig. Project
2013-2015 Crash Data
Philbrook at Ramp E
2013-15 HCL
13 crashes with CRF 2.24
MMR at Chilis
2013-15 HCL
48 crashes with CRF > 1.0
SOUTH
PORTLAND
MAINE MALL RD
PHILBROOK AVE
703
Scale: 1:5081
300ft

High Crash Locations

Locations with CRF's >=1 and 8 or more crashes for 1/1/2013 to 12/31/2015

NODES FOR THE TOWN OF South Portland (05220), IN THE COUNTY OF Cumberland (05)

Node	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Number of Injuries K	A	B	C	Annual MEV	Crash Rate	Critical Rate	CRF	Ranking State/County
14203	Int of BROADWAY RAMP WESTBROOK ST SOKOKIS ST	2	10	0	0	2	2	6	40.0	0	0	2	2	6.515	0.51	0.30	1.73	172 / 59
14443	Int of BROADWAY NORTH KELSEY ST SOUTH KELSEY ST	2	8	0	1	1	5	1	87.5	0	1	1	6	5.796	0.46	0.34	1.34	200 / 77
14585	Int of ME TPK APP ON RAMP C0420	2	14	0	0	0	2	12	14.3	0	0	0	2	3.965	1.18	0.36	3.29	77 / 24
14667	Int of BROADWAY ELM ST	9	21	0	0	0	5	16	23.8	0	0	0	7	6.104	1.15	1.14	1.01	233 / 98
P14949	Int of BROADWAY COTTAGE RD	9	38	0	0	2	11	24	35.1	0	0	2	14	12.143	1.04	1.01	1.04	230 / 96
14979	Int of FODEN RD GORHAM RD PHILBROOK AV	9	33	0	1	0	9	23	30.3	0	1	0	11	8.965	1.23	1.06	1.16	218 / 87
15531	Int of ENTRANCE CHILIS DAYS INN Z RD MAINE MALL RD RAMP A0420 RAMP C0420	9	34	0	0	1	11	22	35.3	0	0	1	16	9.079	1.25	1.06	1.18	216 / 85
15532	Int of GORHAM RD MAINE MALL RD RUNNING HILL RD	9	39	0	0	4	11	24	38.5	0	0	5	14	11.666	1.11	1.01	1.10	224 / 92
P15538	Int of JETPORT PLAZA RD MAINE MALL RD WESTERN AV WESTERN AV WB	9	35	0	0	0	14	21	40.0	0	0	0	17	10.727	1.09	1.03	1.06	228 / 95
P15541	Int of BROADWAY WESTBROOK ST	9	43	0	1	5	7	30	30.2	0	1	7	16	9.954	1.44	1.04	1.39	195 / 72
16738	Int of MAIN ST SKILLINGS ST	2	15	0	0	1	2	12	20.0	0	0	2	3	5.007	1	0.36	2.81	104 / 34
16739	Int of BROADWAY MAIN ST	9	34	0	0	0	5	29	14.7	0	0	0	6	9.708	1.17	1.04	1.12	222 / 90
16743	Int of BILLY VACHON DR ROUTE 1	2	15	0	0	1	4	10	33.3	0	0	1	4	4.922	1.02	0.34	3.01	90 / 31
18350	Int of PHILBROOK AV, RAMP E	2	13	0	0	0	4	9	30.8	0	0	0	4	6.016	0.72	0.32	2.24	138 / 45
P19250	Int of RAMP OFF WESTBROOK ST WESTBROOK ST	9	42	0	1	1	2	38	9.5	0	1	1	7	12.855	1.09	1.00	1.09	225 / 93

Application Form for PACTS 2020 and 2021 Complex Projects

September 30, 2016

PACTS staff and members of the Planning, Transit and Technical Committees will use the information provided to score and rank the applications. Please reference our Application Instructions and our 2017-2018 TIP Policies and Procedures document for more information, or contact PACTS staff with any questions.

Applications must be received by PACTS by 4:00 p.m. on February 3, 2017. Three (3) hard copies as well as an electronic Word submittal are required. Email (or cd) to ceppich@gpcog.org and pniehoff@gpcog.org. Attach supplementary information as needed.

Submittal Requirements

1. Proposals to change the capacity of an intersection must include the results of capacity analyses of current and proposed conditions. Proposals for a new traffic signal (or removal of an existing one) must be accompanied by a MaineDOT-approved warrant analysis. MaineDOT support documents must be submitted with the application.

2. Proposals to change an intersection or roadway cross-section must be supported by a feasibility study that includes an analysis of feasible alternatives, recommendation of the most viable alternative, a cost estimate, and at least one public forum.

3. Similarly, proposals for the construction of new sidewalks/paths/trails intended to be used solely by bicycles and/or pedestrians must be supported by an analysis that assesses viable alternative routes, potential demand, and level of municipal, business and resident support and that recommends the most feasible alternative.

4. Proposals for road and/or intersection reconstruction must be submitted by a registered professional engineer.

General Information

1. **Municipality**: South Portland, Cape Elizabeth, and Portland

2. **Primary contact**: Charles Haeuser, Director of Planning, South Portland

3. **Contact phone number:** 207.767.4749

4. **Project name**: Priority Corridor and Centers Pedestrian-Bicyclist Safety and Access Project South Portland, Cape Elizabeth, and Portland

5. **Project location**:

South Portland: Casco Bay Bridge Approach
Waterman Drive (in Mill Creek)
Route 77 (Broadway to Cape Town Line)
Cottage Road
Preble Street

Cape Elizabeth: Town Center

Portland: York Street (State Street to High Street)

6. **Brief project scope description**:

The Central SubRegion is unique in its concentration of commercial areas and population. This project aims to improve safety for pedestrian, bicyclists, and transit users along a number of high volume local roadways which are identified as Priority Corridors and pass through Centers of Opportunity. More specifically this combination of projects include:

South Portland: Casco Bay Bridge Approach – Multi-Use Path
Waterman Drive (in Mill Creek) – Sidewalks, Bike Lanes, Traffic Signal Improvements, and Landscaping
Route 77 (Broadway to Cape Town Line) – Sidewalk Repairs and Bus Facility Improvements
Cottage Road – Curb Extensions at Pillsbury and Improved Pedestrian Crossing at Goudy
Preble Street – Improved Sidewalks for SMCC, Improved Crosswalks for Small School, Improve Sight Distance for Angell, and Extend Sidewalks from Angell to Cape Town Line

Cape Elizabeth: Town Center Sidewalks

Portland: York Street Sidewalks, Pedestrian Signals/Accessibility and Bicycle Lanes and Pavement Preservation of York Street

7. **Purpose-and-need statement that describes the conditions that warrant the proposed project and an explanation of the intended benefits of that project.**

Purpose: The Purpose of these collective projects is to increase pedestrian and bicyclist safety and accessibility along and to Priority Corridors and within and between Centers of Opportunity.

Need: The Needs for the project include:

- Rehabilitate existing sidewalks in poor condition and add sidewalks where there is known demand in activity centers (all)

- Address deficient ADA accessibility along sidewalks and at transit stops including pedestrian signals (all)
- Address poor pavement condition (York Street, Portland)
- Address bicyclist safety by adding bicycle lanes (Portland and South Portland)
- Improve bicyclist and pedestrian access to the Casco Bay Bridge (South Portland)
- Upgrade crosswalks to increase pedestrian safety (South Portland and Portland)
- Add transit shelters (South Portland)

8. **Has a preliminary design report (PDR) been completed?** No If yes, then please attach it. In conversations with MaineDOT, we understand that a program as presented (i.e. with no ROW impacts and mainly pedestrian improvement upgrades) can be advanced in a single step that includes PDR development, design, and construction funding. PDR level design has been completed for the Cape Elizabeth sidewalks and Portland and South Portland projects are straight-forward pedestrian-bicyclists preservation/modernization projects and expansion projects. A short section of new sidewalk in Portland is also proposed.

9. **Is this an application for PDR funding as a precursor to future PACTS construction funding?** **No** If no, then describe why you think this project does not need a PDR phase: See answer to question 8 above.

10. **Federal functional classification**:

South Portland:	Casco Bay Bridge Approach – Minor Arterial Waterman Drive – Major Urban Collector Route 77 – Major Urban Collector Cottage Road – Major Urban Collector Preble Street – Local Street
Cape Elizabeth:	Ocean House Road (Route 77) – Major Urban Collector
Portland:	Route 77, York Street – Minor Arterial

11. **MaineDOT Corridor Priority**: (http://www.maine.gov/mdot/about/assets/search/)

South Portland:	Casco Bay Bridge Approach – Priority 3 Waterman Drive – Priority 5 Route 77 – Priority 4 Cottage Road – Priority 5 Preble Street – Local Street
Cape Elizabeth:	Ocean House Rd (Route 77) – Priority 5
Portland:	York Street (Route 77) – Priority 3

12. **Are there any right-of-way impacts?** No right of way acquisition is anticipated, and if some are identified these improvements will be removed from the scope of the Project. Temporary construction easements will likely be needed where the back of sidewalks are directly abutting property lines.

13. **Has this project been reviewed for potential environmental impacts?** No. If yes, please identify them.

14. **Will the project meet clear zone requirements?** Yes

15. **Will the project require design exceptions?** No If yes, please identify them.

16. **Will the project require historical and/or environmental review?** Yes as do all projects.

17. **Transit provider(s) support for municipal applications that involve transit-supportive elements:**

    South Portland: South Portland Bus has fixed routes that travel along the roadways outlined in South Portland's and Portland's project scope and thus is supportive of the project.

    Cape Elizabeth: Cape has no transit service. These improvements will make the Cape Elizabeth town center more transit-ready.

    Portland: METRO is supportive of this project for the same reasons as South Portland Bus. A SPBS stop will be improved on York Street at State Street right at the Casco Bay Bridge approach.

18. **Cost Estimate**

    Provide as much detail as possible and attach the worksheets used to develop your estimates.

    Contact information for the cost estimate preparer: Stephen S. Sawyer, Jr., PE, Sebago Technics, Inc.

    Three Community Summary:

Preliminary engineering:	$ 194,700
Right of way:	$ 0
Construction:	$1,620,732
Construction engineering:	$ 150,633
Total estimated cost:	$1,966,065

PACTS Preservation Spending Target estimate:	30% or $ 589,820
PACTS Modernization Spending Target estimate:	55% or $1,081,335

PACTS Expansion Spending Target estimate: 15% or $294,910
Total estimated cost: $1,966,065

South Portland:

Preliminary engineering:	$ 84,000
Right of way:	$ 0
Construction	$699,050
Construction engineering:	$ 75,000
Total estimated cost:	$858,050

Cape Elizabeth:

Preliminary engineering:	$ 38,700
Right of way:	$ 0
Construction:	$322,550
Construction engineering:	$ 48,400
Total estimated cost:	$409,650

Portland:

Preliminary engineering:	$ 72,000
Right of way:	$ 0
Construction:	$599,132
Construction engineering:	$ 27,233
Total estimated cost:	$698,365

Scoring Formula Criteria

1. Subregion's and Transit Committee's top priority projects (maximum 10 points)

   Please communicate with your PACTS subregion colleagues in order to decide on priority project investments in your subregion. Each of the four PACTS subregions shall allocate up to 10 points to PACTS applications from the municipalities in the subregion. The 10 points may go to a single proposal or be spread among multiple projects.

   The Transit Committee shall do the same for applications submitted by, or in partnership with, any of the PACTS Transit Agencies.

   Please list below the points allocated for this application and for all other applications submitted from your PACTS Subregion.

   Submittal From the Central SubRegion, 8 points are assigned to this project.

2. *Destination 2040* Priority Corridor or Center (maximum 10 points)

The *Destination 2040* Plan identifies Priority Corridors and 56 Priority Centers which are existing important regional transportation corridors or emerging centers that have or could have infrastructure such as water and sewers to support additional development. They generally allow a mix of uses and proximate living near jobs and services, as well as recreation opportunities. The map of these corridors and centers is at the end of the PACTS application instructions memo. The mapped circles are not intended to define strict limits of the center. Applicants make the case that the proposed projects are in or related to a center and then PACTS staff makes a determination whether or not the proposed project qualifies for these points.

Submittal The location of the proposed projects are within multiple identified Centers of Opportunity in the Destination 2040 PACTS Plan, and on Priority Corridors.

3. Improves region's traffic signal system (maximum 5 points)

Maintaining and operating the region's 100+ signalized intersections at peak performance and coordination has been a strategy of PACTS for over a decade. Signals which have sensors that can detect not only cars but also buses, bicycles and pedestrians can provide for optimal efficiency thereby reducing the need for costly roadway widening or lane expansion. Proposals will be scored on the projected improved performance, including safety and balancing of all modes which utilize the intersection. Scoring will be weighted on the amount of traffic volumes specific to the intersection as well as its regional significance i.e. how many municipalities are affected and transit agencies using the intersection and benefiting from the proposed improvements.

Submittal The project includes replacement of the pedestrian signal equipment at the State Street-York Street intersection, a primary access route to the Casco Bay Bridge. Improved pedestrian signal phasing, to include Lead Pedestrian Intervals (where appropriate) will be explored during the design phase.

3. Leverages other non-MPO funds from the MaineDOT, Private/developers, Public Private Partnerships (PPP), Tax Increment Financing (TIFs), etc. (maximum 3 points)

Destination 2040 identified a growing gap between the infrastructure needs of the growing PACTS region, and flat or declining funding available. Proposals that include funds from non-government sources, and innovative funding mechanisms can receive points. Greater percentages of non-governmental funds will receive more points.

Submittal Yes, matching funds for the Cape Elizabeth Town Center sidewalks portion of the project will be from the Town Center TIF. South Portland has a Mill Creek TIF which be used for matching funds. In Portland, this is one part of a multi-phase project to address safety and accessibility issues for all modes from a MaineDOT-led Road Safety Audit conducted in 2016. Other phases are using CDBG and CIP funds to accomplish much larger pedestrian safety and accessibility outcomes.

4. Multi-member applications (maximum 3 points)

Transportation transcends municipal boundaries so PACTS encourages regional coordination of transportation investment decisions. Project proposals that include planning and match funding by two or more municipalities and/or transit agencies will receive the maximum points.

- 1 point – Application which includes a supporting resolution adopted by a neighboring city or town council.
- 2 points – Application which includes supporting resolutions adopted by two or more neighboring city or town councils.
- 3 points – Application for which multiple municipalities would provide equal or proportional shares in payment of the local match for a project located wholly within one municipality.

Submittal This is a multi-municipal project where improvements will be made in all 3 communities, mostly along the Route 77 corridor. Each community will be providing local match for the grant.

5. Enhance existing freight industry (maximum 10 points)

The efficient movement of goods is critical to the local and regional economy. Providing better access to specialized sites that handle freight, and/or projects that propose to shift large/heavy freight shipments away from congested areas and neighborhoods are eligible for points. Projects that increase heavy haul freight through existing residential neighborhoods are discouraged. Proposed projects that demonstrate a reduction in the frequency and/or weight of trucked freight and that move more freight onto rail and/or ships will receive the most points.

Submittal This project will provide safer pedestrian facilities in areas where freight is currently moving, and thereby enhance the movement of freight along the Route 77 corridor.

6. Economic Development Benefits of the project (maximum 8 points)

Transportation links businesses and markets at all scales. Projects that support the economic vitality of the region, and provide better links between labor and employment are desired in the PACTS region. Projects that demonstrate the infrastructure investments proposed will enable desired economic development projects in appropriate and desired locations, such as Priority Centers are eligible for points. Project proposals that demonstrate increased accommodations for all modes in job concentrated areas, for access to child care in those areas as well as education and workforce training sites are also eligible for points in this category.

Submittal The project will enhance commercial areas/Centers of Opportunity by providing safe access for pedestrians and bicyclists between local residential neighborhoods and

commercial districts. Enhanced access will increase the number of patrons who do not arrive by vehicle to the businesses in the commercial districts. Centers of Opportunity with proposed enhancements include the Cape Elizabeth Town Center, Mill Creek in South Portland and York Street leading to the Downtown Center of Opportunity in Portland. Both Mill Creek and the Cape Town Center have been the focus of public planning efforts. Enclosed as part of this application is the 2013 Town Center Plan; the Mill Creek Master Plan may be viewed at:

http://www.southportland.org/files/9414/3232/9607/13.755_Mill_Creek_Master_Plan_-_FINAL_-_05-22-2015.compressed.pdf

7. Reconstruct or Rehabilitate an Arterial or Collector Road (maximum 10 points)

   Arterials connect the region to the rest of the state and country and carry the majority of the region's traffic. PACTS has a successful pavement preservation program for Collector Roads, but has not had a means to fully fund the reconstruction of Collectors or Arterials. Proposed projects for roads that are no longer eligible for pavement preservation and require some level of rebuilding are eligible for these points (up to 10 points for arterials, and 7 points for collectors).

   Submittal The project includes pavement preservation of the 2 block section of York Street in Portland from State Street to High Street.

8. Reduces the numbers or severity of crashes (maximum 12 points)

   The safety of the traveling public is a priority in the multi-modal environment of the PACTS region. Making streets and roads safer and more compatible for all users is an important aspect of transforming our transportation system. Proposals that demonstrate the project will mitigate High Crash Locations and/or make travel conditions safer for vulnerable users, (i.e. bicyclists, pedestrians, transit riders/passengers, and underserved persons, etc.) are eligible for points.

   Submittal See attached graphic for the proposed three community project locations.

9. Transit supportive project elements (maximum 10 points)

   The success of our growing region depends on more convenient and inviting access to transit that provides high quality transit trips as a viable choice for everyday travel. The integration of transit amenities such as pedestrian and bicycle accessible transit stops and shelters, street modifications which improve transit service, technology upgrades such as Transit Signal Priority or Real-Time Passenger Information systems, as well as other transit capital projects which maintain, improve or expand existing transit service are eligible for points in the category.

   Submittal Route 77 is a primary transit route in South Portland and Portland. The project will increase safety and accessibility to and at transit stops along the corridor.

10. Improves Pedestrian Network (maximum 5 points)

    Multimodal streets and corridors that foster calmed traffic and provide a relaxed, accessible and outdoor-oriented experience encouraging pedestrian activity are critical to livability in the PACTS region. Proposals that demonstrate the removal of barriers, closing of gaps, and other treatments improving pedestrian movement are desired. Proposals that demonstrate treatments which will improve the pedestrian network, such as traffic slowing, diversion of

cut-through traffic, the construction of sidewalks of adequate width, providing shade trees, and encourage active transportation and street life, etc. are eligible for points.

Submittal This project will substantially improve pedestrian facilities by filling gaps in the pedestrian network and extending pedestrian facilities where pedestrians are currently walking in the road.

The Cape Elizabeth Town Center Plan reviewed pedestrian access alternatives first in 1993, and then again in 2013. Both plans included a goal to build sidewalks along the roadway within the Town Center. Municipal will has been demonstrated by adoption of zoning regulations that require new sidewalk construction as part of site plan review. This project will fill some of the remaining sidewalk gaps. Municipal support is also demonstrated by the first TIF adopted in the Town of Cape Elizabeth, located in the Town Center and dedicated solely to sidewalk and stormwater improvements. There is high demand for sidewalk expansions, as demonstrated in community surveys, and due to the concentration of destination attractors in the Town Center.

In Portland, numerous needed pedestrian and bicycle safety and accessibility outcomes were identified in a 2016 Road Safety Audit led by the MaineDOT in coordination with City of Portland staff. This project addresses them for the 2 blocks of York Street between State Street and High Street with rehabilitation of sidewalks, replacement of aged pedestrian signals and adding a missing sidewalk link on High Street from Commercial Street to York Street. Lead pedestrian interval signal phasing will be used where appropriate.

11. Improves Bicycle Network (maximum 5 points)

The ongoing and continued emphasis on a safe, comfortable, PACTS region-wide bicycle network that provides an active transportation choice for people and enables active transportation lifestyle is an important transportation strategy. Projects that will expand on-road bikeways, bicycle or shared-use lanes or paths, trail connections, and other treatments that provide a network for safer and more comfortable travel by bicycle are eligible for points.

Submittal The project will formalize bike lanes adjacent to proposed sidewalks, reducing pedestrian/bicycle conflicts. In Portland, several bicycle crashes have occurred on York Street; adding bicycle lanes and adding signs and green paint within the conflict zones will reduce these conflicts. Bicycle access will also be significantly improved in South Portland by modernizing the existing sidewalk to a shared use pathway between Broadway and the Casco Bay Bridge.

12. Reduces congestion and/or improves multimodal level of service (maximum 10 points)

The economic and population growth of the PACTS region, like other successful regions, is potentially constrained and limited by congestion. The PACTS Congestion Management Process plan focuses on mode shift and traffic signal coordination as the primary strategies for reducing motor vehicle congestion. Proposals that demonstrate the project will provide

reductions in motor vehicle congestion AND improve multimodal level of service without negatively impacting the safety of non-motorized travel mode will receive the maximum points.

Submittal
In Portland, adding bicycle lanes on York Street will improve the MMLOS. In Cape Elizabeth, pedestrian LOS will be improved by filling in gaps in the sidewalk network. In South Portland both pedestrian and MM LOS will be improved by expanding the multi-use path on the approach to the Casco Bay Bridge, rebuilding sidewalks and adding bike lanes on Waterman Drive, improving crosswalks on Cottage Road, and filling in the gaps in the sidewalks on Preble Street. Making these roadways safer and more comfortable for bicycling, walking and access to transit will induce more demand for these modes, reducing the need to drive to and between these Centers of Opportunity.

13. Encourages or enables compact development such as Transit Oriented Development, street connectivity, etc. (maximum 5 points)

Acknowledging limited financial resources, the Destination 2040 Plan encourages transportation and land-use decisions to direct growth toward existing infrastructure (sewer, water, transportation, safety services) in centers and connecting corridors. *Destination 2040* identified Priority Centers that are either currently serviced by transit, or that could be in the future. Existing and emerging mixed-use centers are more sustainable, and more cost sensitive for municipalities delivering services and maintaining infrastructure assets than low-density developments which are more dependent on trips by automobile. Proposals that demonstrate the project will enable or provide for a framework for transit oriented development are eligible for these points

Submittal The Cape Elizabeth Town Center Plan sets out a vision for a vibrant, mixed use center which functions as a municipal, commercial and cultural center for the community. Current zoning supports this vision and if any transit were restored to Cape Elizabeth, it would include the town center.

In Portland and South Portland, improving bicycle and pedestrian accessibility to the downtown will attract more much needed housing and jobs within the noted Centers of Opportunity

14. Links jobs and housing by trips other than by automobile (maximum 5 points)

The combined costs of balancing housing and transportation related to commuting to jobs, schools and shopping comprises the majority of most household budgets. By removing barriers to transportation options other than just automobiles, and providing transportation choices and enabling walkable, transit-connected neighborhoods, these costs can be reduced. Proposals that demonstrate that the project would facilitate more non-automobile trips between employment centers and residential areas through capital improvements are eligible for these points.

Submittal The Cape Elizabeth Town Center is also the town employment center. There are also at least 300 households compactly nestled within 1/4 mile of the town center, and those residents have demonstrated a willingness to walk when safe sidewalks are provided.

The South Portland projects all provide improved means of accessing jobs and housing by upgrading transportation infrastructure that does not relate to motorized single occupant vehicles.

In Portland commuting to work or school by bicycling, walking or taking transit will be enhanced by improving the safety and comfort of sidewalks and adding enhanced bikeways.

15. Increases Resilience to Climate-related events and/or provides "Green" infrastructure to reduce storm water (maximum 5 points)

Extreme weather events and a changing climate are certain to add to the transportation infrastructure needs in the near future. Many roadways and bridges will require modernization that will allow infrastructure to withstand climate related impacts such as sea level rise, storm surge, and other storm related events – resilient infrastructure that can survive these events. Proposals that demonstrate the improvements will reduce impacts from climate related events, such as flooding, erosion, storm surge, sea level rise etc. are eligible for points. Proposals that demonstrate that the proposed infrastructure facilities will function in such conditions, or may reduce run-off or treat it organically, and/or reduce the need for engineered storm water facilities are also eligible for points.

Submittal Following adoption of the 2013 Town Center Plan, Cape Elizabeth completed a Town Center Stormwater Plan which was intended to incorporate low-impact development features into the stormwater infrastructure. In accordance with that plan, the segment 7 sidewalk would include three bio-retention swales.

OCEAN STREET
SIDEWALK REPAIR AND UPGRADES
1010' OF SIDEWALK REPAIRS
2 BUS SHELTERS
HIGHLAND AVE
BRENTON ST
MT VERNON ST
MAYBERRY ST
REMOVE EXISTING SIDEWALK AND CONSTRUCT NEW SIDEWALK (TYPICAL)
ADJUST RAMP GRADES TO ADA STANDARDS, INSTALL DETECTIABLE WARNING FIELDS, AND PAINT CROSSWALK (TYPICAL)
BELLAIRE RD
PARROTT ST
SAWYER ST
BUS SHELTER (TYPICAL)
DERBY RD
STANLEY ST
WILD ROSE AVE
SIMMONS RD
LARCHWOOD RD

PREBLE STREET
SIDEWALK REPAIR AND UPGRADES
65' OF NEW SIDEWALK
2 RRFB
HEDGE TRIMMING
RECTANGULAR RAPID FLASHING BEACON (TYPICAL)
PILLSBURY STREET
TRIM HEDGE TO IMPROVE SIGHT DISTANCE
WILLARD STREET
PREBLE STREET
ELSMERE AVENUE
CONTRUCT NEW SIDEWALK
ANGELL AVENUE
DEAKE STREET
ADJUST RAMP GRADES TO ADA STANDARDS, INSTALL DETECTIABLE WARNING FIELDS, AND PAINT CROSSWALK (TYPICAL)