

# **APPENDIX A:**

## **PUBLIC SURVEY SUMMARY**

## Bayfront Parkway Corridor Study MetroQuest Survey Results

## INTRODUCTION

A public survey for the Bayfront Parkway Corridor Study was launched on December 19, 2014 and asked participants to identify their priority areas for transportation improvements along the Bayfront Parkway Corridor. The survey was developed using MetroQuest, an online community engagement platform, and was available until February 27, 2015. Nearly 500 participants responded to the survey and left over 1900 comments.

The purpose of the survey was to gather participants' thoughts and opinions on:

- What type of transportation improvements are most needed along the corridor,
- Why those improvements are a priority, and
- Where those improvements should be implemented.

The survey consisted of five screens; the first screen was an introduction to the survey, the second screen asked for participants to rant their top priorities, the third screen asked for priority statements to be rank, the fourth screen had participants drop pins on a map and leave comments about improvements, and the fifth screen ask how the Bayfront Parkway should function overall.

A sample of the survey can be found at: https://bayfrontparkwaystudy-draft.metroquest.com/



## MetroQuest - Screen 2 Priority Ranking

Priority		Overall Ranking
Traffic Flow/Congestion	Improve traffic flow during peak and non-peak hours on the Bayfront Parkway and adjacent alternative routes.	1
Pedestrian and Bicycle Access	Expand trails and paths to the make Central Bayfront area more accessible.	2
Safety	Improve safety for pedestrians, cyclists, and vehicles when operating on the Bayfront Parkway and alternative routes.	3
Speed	Adjust speeds on the Bayfront Parkway and alternative routes.	4
Vehicle Access	Improve traffic signals and access to the Bayfront.	5
Parking and Facilities	Consider parking locations and add bike racks to the Central Bayfront area to help encourage the use of alternative modes of travel.	6
Transit	Enhance and expand existing travel routes and stops for buses and trollies.	7
Alternative Route Improvements	Improve alternative route conditions and reduce travel times.	8

Detail Topic	Detail Statement	Average Ranking*
	TRAFFIC FLOW/CONGESTION	
PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during peak travel times is adequate. (7 a.m. to 9 a.m. and 4p.m. to 6 p.m.)	Disagree (2.03)
NON-PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during non-peak travel times is adequate.	Agree (3.73)
EVENT TRAVEL	Traffic flow on the Bayfront Parkway during events is adequate.	Disagree (1.93)
ALTERNATE ROUTE TRAVEL	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	Netrual (2.59)
ALTERNATE ROUTE TRAFFIC SIGNALS	Coordination of traffic signals along 12th Street is adequate.	Disagree (2.33)
FREQUENT COMMENTS	<ul> <li>Add left turning lanes and left arrow to traffic lights</li> <li>Increase the Parkway to four lanes</li> <li>Improve traffic signals</li> <li>Events cause considerable traffic on the Bayfront Parkway</li> </ul>	

	ALTERNATIVE ROUTE IMPROVEMENTS	
AVOID OTHER ROUTES	I use the Bayfront Parkway to avoid other travel routes.	Agree _(3.51)
AVOID BAYFRONT PEAK TRAVEL TIME FOR ALT ROUTES NON-PEAK TRAVEL TIME FOR ALT ROUTES	I use other travel routes to avoid the Bayfront Parkway. It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours. It is quicker to travel the Bayfront Parkway than to use other travel routes during non-peak travel times.	Disagree (1.48) Netrual (2.50) Agree (3.94)
REMOVE BAYFRONT TRAFFIC	Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.	Agree (3.74)
FREQUENT COMMENTS	<ul> <li>Other east-west routes need to be developed</li> <li>Enhance 12st, 6th, 26th and 38th Streets</li> </ul>	

Detail Topic	Detail Statement	Average Ranking*
	PEDESTRIAN AND BICYCLE ACCESS	
WESTSIDE ACCESS	Bicycle and Pedestrian connections from the Westside neighborhoods to the Bayfront are adequate.	Netrual (2.68)
EASTSIDE ACCESS	Bicycle and Pedestrian connections from the Eastside neighborhoods to the Bayfront are adequate.	Disagree (2.18)
DOWNTOWN ACCESS - PED AND BIKE	Bicycle and Pedestrian connections from the downtown to the central Bayfront area are adequate.	Disagree (2.31)
NORTHSIDE	Connections are adequate along the Northside of the Bayfront.	Netrual (2.70)
FREQUENT COMMENTS	<ul> <li>More crossings, Sidewalks and paths needed</li> <li>Pedestrian bridges/tunnels</li> <li>Better signage</li> <li>Add bike lanes</li> <li>Improved winter maintenance on multi-use paths</li> <li>E. Front Street needs a paved path</li> <li>Crossings at State Street, Cranberry Street, East 6th Street are dangerous</li> <li>Improved eastside connections</li> </ul>	

	SAFETY	
WALKING/BIKING IN AREA	I feel safe walking/biking along existing ped/bike facilities in the Bayfront area.	Netrual (2.97)
WALKING/BIKING ACROSS	I feel safe walking/biking across the Bayfront Parkway.	Disagree (2.00)
DRIVING BAYFRONT	I feel safe driving along the Bayfront Parkway.	Agree (3.66)
TURNING ON/OFF	I feel safe turning onto/off of the Bayfront Parkway to/from existing access points.	Netrual (2.98)
FREQUENT COMMENTS	<ul><li>Intersections are unsafe for pedestrians and bicyclists</li><li>Better/increased signage</li></ul>	

Detail Topic	Detail Statement	Average Ranking*
	SPEED	
LOWER BAYFRONT SPEED	The Speed needs to be lowered on the Bayfront Parkway to calm traffic.	Disagree (1.97)
INCREASE BAYFRONT SPEED	The speed should be increased on the Bayfront Parkway.	Netrual (2.99)
ALTERNATE ROUTE SPEED	The speed on alternative routes should be increased to encourage use.	Netrual (2.97)
NO CONCERN	Speed is not an issue on the Bayfront Parkway.	Disagree (2.39)
SAFETY CONCERN	Speed is a safety concern on the Bayfront Parkway.	Netrual (2.91)
FREQUENT COMMENTS	<ul> <li>Speed limits along the Bayfront need to be better enforced</li> <li>The current speed is appropriate</li> </ul>	

	VEHICLE ACCESS	
ROADWAY CONNECTIONS	Additional roadway connections (or service roads) within the central Bayfront area are needed.	Netrual (2.86)
ACCESS POINTS	The number of access points along the Bayfront Parkway is adequate.	Netrual (3.19)
TRAFFIC SIGNALS	Improvements to existing traffic signals are needed to improve access.	Agree (3.52)
DOWNTOWN ACCESS - VEHICLE	Access to Downtown Erie from the Bayfront is adequate.	Netrual (3.13)
EASE OF ACCESS	It is easy to access the Bayfront Parkway from connecting roadways.	Netrual (2.83)
FREQUENT COMMENTS	<ul> <li>Add an access road to the north of the Parkway</li> <li>Improvements to the intersection at Cranberry Street</li> <li>Left turning lanes</li> </ul>	

\* All rankings rounded to the nearest whole number.

Detail Topic	Detail Statement	Average Ranking*
	PARKING AND FACILITIES	
CENTRAL BAYFRONT AREA	There are currently plenty of parking spaces in the central Bayfront area.	Disagree (2.41)
MORE GARAGES	Additional parking garages should be built to accommodate development in the central Bayfront area.	Netrual (3.02)
BICYCLE STORAGE	There are plenty of bicycle storage options.	Disagree (2.25)
PARKING NEAR TRANSIT	There are plenty of parking spots available near major transit links.	Netrual (2.85)
MOVING PEOPLE	More emphasis should be placed on alternative means to move people within the central Bayfront area.	Agree (3.71)
FREQUENT COMMENTS	<ul> <li>No additional parking garages on the Bayfront</li> <li>Bike share</li> </ul>	

TRANSIT			
CURRENT ROUTES	The current bus routes meet all of my transit needs.	Netrual (2.64)	
ADD CENTRAL ROUTES	Additional routes are needed to connect the Central Bayfront area and Downtown.	Netrual (3.11)	
ADD WESTSIDE ROUTES	Additional routes are needed to connect the Central Bayfront area and Westside neighborhoods.	Netrual (3.45)	
ADD EASTSIDE ROUTES	Additional routes are needed to connect the Central Bayfront area and Eastside neighborhoods.	Netrual (3.42)	
PARK-AND-RIDE	Additional park-and-ride facilities should be considered.	Netrual (3.12)	
FREQUENT COMMENTS	<ul> <li>Expand bus routes and times</li> <li>Need to encourage more people to use public transit</li> </ul>		



## MetroQuest - Screen 4 - Map Comments

#### Ped/Bike - 423 pins

- Crosswalk Safety 138
- Connection 70
- Buffer from Cars 48
- Improve Signage 18
- Improve Lighting 14
- No Descriptor 135

## Comments Themes:

- Add Pedestrian Bridge or Tunnel at State St.
- Poor Lighting/Dark Areas
- More Signs to Alert Drivers
- More Time to Cross Large Intersections
- Slow Traffic Down
- Connect, Pave, and Repair Facilities
- Crosswalks Improvements State St., Waterworks, Liberty St., Cranberry St., Port Erie Rd., Lincoln
- Consider Other City's Designs

## Roadway - 293 pins

- Lane 66
- Traffic Signal 57
- Intersection Design 50
- Connection 17
- Reversible Lane 12
- No Descriptor 91

## Comment Themes:

- Additional Lanes
- Ice Buildup Along Eastbound Lanes
- Improve Pavement Markings
- Turning Lanes Needed/Extended in Some Areas Other Areas Should Limit Left Turns
- Consider Roundabouts
- Intersection Improvements Cranberry, State, Holland
- Coordinate and Add Turning Signals



## Aesthetics – 247 Pins

- Look and Feel 90
- Gateway Treatment 46
- Streetscaping 26
- Improve Lighting 3
- Improve Signage 2
- No Descriptor 80

## Comment Themes:

- Dislike Signs on the Bluff Consider Natural Vegetation
- Change Overall Aesthetics One Design Theme
- Gateway Treatment on Both Ends
- Improve East Side Appearance
- Improve or Remove Walls
- Repair or Remove Dilapidated Buildings
- Maintain View of the Bay

Parking/Facilities - 85 pins

- Bike Storage 7
- Inadequate Parking 36
- Permit Parking 1
- Remove Parking 6
- Restrict Parking 4
- No Descriptor 31

## Comment Themes:

- No More Parking Garages Along the Bayfront
- Not Enough Parking During Events
- Additional Park-and-Rides to Accommodate Events
- Additional Parking on the East Side



## Transit – 37 pins

- Bus/Trolley Route 12
- Bus Lane 4
- Park-and-Ride 4
- Improve Signage 1
- No Descriptor 16

## Comment Themes:

- More Bus/Trolley Routes Consider Seasonal Opportunities and Existing Parking Areas
- Express Routes To Mall, 26th St. to Downtown
- New Park-and-Ride Underutilized (Except During Events)

## Other - 87 pins

Comment Themes:

- Additional Hotels Will Add Congestion
- Consider Utilizing Unused Downtown Retail Space
- Take Advantage of the View/Maintain the View
- Avoid Additional Development and Create Greenspace

To view the map with all of the pins and comments, please visit: www.bayfrontparkwaystudy.com/surveycomments.html.

MetroQuest - Screen 5 - Final Question

## In general, how would you like the Bayfront Parkway to function?

High traffic volume and speed serving primarily cross-town traffic with limited vehicle, and bike/ped access

- 21.5% of residents chose this option (checked 77 times)
- Additional lanes
- Increase speed
- Focus on traffic flow first
- Improved traffic signals
- Turn the Parkway into a Highway
- Pedestrian Bridges Keep pedestrians and bicycle away from the road
- Limit access
- Add a local access road to help limit stops along the parkway

Moderate traffic volume and speed serving primarily Bayfont amenities and the City of Erie with moderate vehicle, and bike/ped access

- 57% of Residents chose this option (checked 203 times)
- Pedestrian bridges
- Reversible lane
- Make the area a 'big city attraction'
- Improve Traffic Flow and signal timing
- Replace signals with Roundabouts
- Aesthetics buffer
- Improved Trolley system
- Express Bus Routes
- Repurpose RR tunnels to be used by ped/bike
- Increase alternate modes of transit
- Increase access from the Eastside
- Add turning lanes
- Extend Park and Ride Hours and encourage more use

Lower traffic volume and speed serving primarily as a downtown street with maximum vehicle, and bike/ped access

- 18% of residents chose this option (checked 65 times)
- Pedestrian bridges
- Light rail/street cars
- Better police speed
- Pedestrian centric
- Tunnel the highway
- Remove parking in the Bayfront and use for commercial development instead
- Better connection to Presque Isle
- Improve and add green space
- Roundabouts
- Ferry service/water service

## Other

- 3.6% of Residents chose this option (checked 13 times)
- Make main focus bike and ped traffic and more bike/ped access closer to the water
- Enhance connections to local neighborhoods

Economic Development suggestions

- Stop building hotels
- Waterfront shopping
- Public market (Ex: Seattle or 78th Street Studios in Cleveland)
- No more parking garages



# **APPENDIX B:**

# PROJECT ADVISORY COMMITTEE (PAC) MEMBER LIST

First	Last	Organization	Job Title
LeAnn	Parmenter	City of Erie	Traffic Engineer
John	Buchna	Erie Downtown	Chief Executive Officer
Erika	Ramalho	Gannon University	Director of Community and Government Relations
Jeremy	Bloeser	Bayfront Eastside Taskforce (BEST)	Director
V. James	Fiorenzo	UPMC Hamot	President
Ray	Moluski	UPMC Hamot	Vice President of General Services
Jeff	Brinling	Erie Insurance	Senior Vice President
Barbara	Chaffee	Erie Regional Chamber & Growth Partnership	President/CEO
Brett	Wiler	Erie Regional Chamber & Growth Partnership	Business Service Outreach
Chris	Groner	City of Erie	Economic Development Specialist
Mike	Tann	Erie Metropolitan Transit Authority	Director of Operations
Justin	Smith	Bike Erie	President
Brenda	Sandberg	Erie-Western PA Port Authority	Executive Director
Doug	Pomorski	Erie-Western PA Port Authority	Director of Operations/ Harbormaster
Paul	Vojtek	Erie Water Works	Chief Executive Officer
Ron	Costantini	Erie Water Works	Manager of Administration
Jon	Tushak	City of Erie	City Engineer
Jason	Sayers	City of Erie	Assistant City Engineer
Raymond	Massing	Erie Parking Authority	Executive Director
Kathy	Wryosdick	Erie County	Planning Department, Director
		Erie County	Transportation Planner
Pet	Duckin	Erie Police	
Pat Tony	Durkin Pol	City of Erie	Fire Chief
Joe	Walko	City of Erie	Assistant Chief
Kale	Asp	Erie County	911 Coordinator
John	Grappy	Erie County	Director of E-911 & Public Safety
Brian	Mesaros	Erie County	Asst. Emergency Management Coordinator
		ErieEvents (Erie County Convention Center	Executive Director
John 'Casey'	Wells	Authority)	(Owner/Remediator)
Jeff	Kidder	Kidder Wachter Architecture and Design	Architect/Partner
Jacqueline	Spry	Kidder Wachter Architecture and Design	urban planner/project manager
Nicholas	Scott	Scott Enterprises	President

First	Last	Organization	Job Title
Brian	Weber	Weber Architecture	Owner/Architect
Tom	Kennedy	Renaissance Centre/Cobblestone Inn	CEO
	Interinedy		
Melani	Scott	Professional Development Associates, Inc.	Director of Operations
Bill	Petit	PennDOT	District Executive
Brian	Yedinak	PennDOT	Assistant District Executive Design
Tom	McClelland	PennDOT	Design Services Engineer
Lyndsie	DeVito	PennDOT	Project Manager
Mark	Nicholson	PennDOT	Project Manager
Brian	Smith	PennDOT	Traffic Engineer
Jim	Carroll	PennDOT	Community Relations Coordinator
Michele	Morningstar	PennDOT	Permit Manager
			Ocurta Maintanana Manana
Bob	Miller	PennDOT	County Maintenance Manger
Darrell	Chapman	PennDOT	Assistant County Manager
John	Petulla	McCormick Taylor	Project Manager
Jennifer	Threats	McCormick Taylor	Facilitator
Dana	Sklack	McCormick Taylor	Public Involvment Coordinator



# **APPENDIX C:**

# **PAC MEETING SUMMARIES**

## Bayfront Parkway Corridor Study Project Advisory Committee Meeting #1

Date: December 17, 2014

Time: 10:00 AM to 12:00 PM

Location: Erie Intermodal Transportation Center Conference Room, Erie, PA

Attendees: Name

Jeremy Bloeser Jeff Brinling John Buchna Barbara Chaffee Darrell Chapman Tom Kennedy Raymond Massing Tom McClelland, P.E., PTOE John Morgan Michele Morningstar, P.E. Mark Nicholson, P.E. LeAnn Parmenter, P.E. Bill Petit, P.E. John Petulla, P.E. Tony Pol Erika Ramalho Brenda Sandberg Jason Sayers, P.E. Dana Sklack Brian Smith, P.E. Justin Smith Jennifer Threats Joe Walko Casey Wells Jake Welsh Brian Yedinak, P.E.

Representing **Bayfront Eastside Taskforce** Erie Insurance Erie Downtown Partnership Erie Regional Chamber & Growth Partnership PennDOT District 1-0 Renaissance Centre/Cobblestone Inn Erie Parking Authority PennDOT District 1-0 Erie County Transportation Planner PennDOT District 1-0 PennDOT District 1-0, Interim Project Manager City of Erie Traffic Engineer PennDOT District 1-0, District Executive McCormick Taylor City of Erie Fire Dept. Gannon University Erie-Western PA Port Authority City of Erie McCormick Taylor PennDOT District 1-0 **Bike Erie** McCormick Taylor City of Erie Police Erie County Convention Center Authority Erie County Planning Director PennDOT District 1-0

## Meeting Summary:

I. Introduction

Jennifer Threats, meeting facilitator, welcomed everyone and thanked them for their attendance and commitment to the Bayfront Parkway Project Advisory Committee (PAC). She noted that more details about the meeting agenda and function of the PAC would be provided as the meeting proceeds. She then introduced Bill Petit, District Executive, PennDOT Engineering District 1-0 and asked him to provide opening remarks.

Mr. Petit noted the first portion of the Bayfront Parkway was completed 25 years ago, and since then, no major improvements or changes have occurred on the Parkway. Over the years, substantial changes have occurred along the Bayfront, and more changes are coming. He indicated that some planned development will occur as early as this year. He explained that PennDOT has a responsibility to monitor and support existing and future economic development initiatives and is conducting this study to consider the changes the development will have on existing travel preferences, traffic flow and safety, and identify how the transportation system could be improved to accommodate the growth and enhance the viability of the area. The timing of the study is important because any future transportation projects identified through this process will take approximately three years to go from conception to completion. Mr. Petit concluded by emphasizing the importance of the Bayfront area to the City of Erie and thanking attendees for their attention to this important study.

Ms. Threats explained that she was part of the McCormick Taylor consultant team that would be performing the study and introduced John Petulla, P.E., as the consultant Project Manager. She then asked each of the PAC members to introduce themselves and share their preferences related to the overall function of the Bayfront Parkway by answering the following question:

In general, how would you like the Bayfront Parkway to function?

- A. High traffic volume and speed serving primarily cross-town traffic with limited vehicle, and bike/ped access.
- B. Moderate traffic volume and speed serving primarily Bayfont amenities and the City of Erie with moderate vehicle, and bike/ped access similar to a city street.
- C. Lower traffic volume and speed serving primarily as a downtown street with maximum vehicle, and bike/ped access.

Ms. Threats noted that this question was included as part of the study's online survey to be shared with the public soon. She explained that the question originated from the Stakeholder Interviews held in



October because comments seemed to reflect a variety of different opinions regarding the function of the Bayfront Parkway.

The results of the PAC introduction activity indicated the following preferences:

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A = 2
Combination of A and B = 1
B = 11
Combination of B and C = 6
C= 2
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Ms. Threats said the results showed more commonality than anticipated and that they are encouraging because they show the group's desire to combine the options and ability to look for ways to balance a variety of interests.

Following the introduction, Tom Kennedy, Renaissance Centre/Cobblestone Inn asked if the study would provide the opportunity to consider a 'creative' change to the road to adjust how it functions rather than picking the most expensive option. He used the example from another area where they used bridges with low vertical clearance in the design of the road to discourage truck traffic from using the road. Mr. Petit responded by saying the District is open to any ideas for how to improve the Bayfront Parkway corridor as they relate to the overall needs of the corridor and the PAC will play an instrumental role in identifying projects and potential funding solutions.

Next, Ms. Threats reviewed the remaining points on the meeting agenda (Appendix A) before moving onto the PAC Overview.

II. Project Advisory Committee Overview

Ms. Threats described the PAC as an important partner that will provide input on the development of the Bayfront Parkway Corridor. The committee members are intended to represent a variety of interests and concerns that were identified during the stakeholder interview process, including the following:

- Neighborhood and City Access
- Economic Development
- Alternate Transportation Modes
- Public Facilities
- Transportation Planning and Programming
- Emergency Services
- Bayfront Development

Ms. Threats briefly reviewed the PAC Role and Responsibilities form given to them in their folders (Appendix B). She also pointed out that up to 5 PAC Meetings are anticipated over the next 6 to 9 months of the study. PAC members were encouraged to attend all meetings if possible or send a representative in their place. Ms. Threats asked the PAC to review the form in more detail, and sign and return the form as acknowledgement of the PAC Role and Responsibilities.

Ms. Threats explained that when differences arise, the PAC would work together to build consensus. To do so, the PAC will listen carefully to everyone's interests with an open-mind, understand that interests are not the same as positions or demands, and recognize that a good-faith effort will be made to satisfy the interests of all stakeholders. She explained that consensus doesn't always mean everyone agrees, but rather participants can live with the final proposal and be willing to move forward with the group.

## III. Scope of Study

John Petulla provided an overview of the study area and referenced the study area map (Appendix C). He noted the Bayfront Parkway begins at Interstate 79 on the west side of Erie, PA and connects to the Bayfront Connector and Interstate 90 on the east side of the city. The study area starts generally at W. 12th St. and follows the Bayfront Parkway to E.12th St. The majority of the Parkway is three lanes in width. The corridor can be traveled by motor vehicle, bike, on foot or using public transit. There are approximately twenty intersections, with fourteen that feature traffic signals, within the study corridor. A series of trails and railroad tracks run along the length of the Bayfront Parkway. Some of the trails are interconnected with each other while others only serve a small section of the Parkway. Additionally, there are currently 6 proposed developments along the corridor. The impact of the proposed development would likely add traffic and potentially alter travel patterns within the Bayfront in the coming years.

Jake Welsh asked if consideration had been given to how changes to the Bayfront Parkway would affect adjacent roads in the vicinity of the Bayfront Parkway such as 12<sup>th</sup> Street. Mr. Petulla responded by saying that traffic counts were not conducted along adjacent routes; however, recent data gathered on other roadways such as 12<sup>th</sup> Street can be utilized to better understand how alternate routes are performing.

Tom Kennedy asked if any computer renderings would be used to show how the area could function with increased traffic or changes in the traffic flow. Mr. Petulla said that traffic synchro models will be utilized to show how existing and future traffic capacity, or delays, and a tool that can be used to identify potential congestion. The existing traffic model is currently in development for the existing traffic and future traffic non-build (without improvements) and the findings will be presented at our next PAC

Meeting. Other graphic renderings may be considered in the future as possible improvements are identified.

Mr. Petulla next provided an overview of the Study Work Plan (Appendix D). The work plan outlines both the technical and public involvement aspects of the study that will be performed during the four phases of the study, which include: understanding the corridor, identifying a vision, developing solutions, and delivering a plan. These four study phases are planned to occur from August 2014 to August 2015. The first phase (understanding the corridor) has been completed and included defining the study area, conducting traffic counts and performing an Origin-Destination study (O&D), and conducting stakeholder interviews. As part of phase 2 (identifying a vision), the study team is analyzing the existing conditions and projecting future conditions. Additionally, the study team is preparing to launch the online public survey and website, and will continue to work with the PAC.

Mr. Petulla indicated the study's deliverables would include the identification of conceptual improvements identified by early spring 2015, the prioritization of improvement projects and identification of funding scenarios by spring/summer 2015, and the completion of the study report by late summer 2015.

## IV. Understanding the Corridor

Mr. Petulla acknowledged the following studies that have been conducted over the years related to the Bayfront Parkway.

- Waterfront Comprehensive Plan Erie Pennsylvania, City of Erie May 1986
- Toward an Economic Development Strategy for Erie (Bosworth Report) Economic Development Corporation of Erie County (EDCEC) – October 2001
- Erie Downtown Master Plan Erie Redevelopment Authority and the City of Erie 2005
- Erie Waterfront Master Plan Summary Report Erie-Western Pennsylvania Port Authority March 2009
- Completing the Bayfront Bayfront Place Concept Plan Report Erie County Convention Center Authority – April 2012
- Unlocking the Bayfront's Full Potential Destination Erie: A Regional Vision 2013
- Destination Erie: A Regional Vision Vision Report October 2013
- Erie Parking and Transit Study June 2008

These studies are being reviewed and will be considered in the development of the study needs.

Barbara Chaffee, Erie Regional Chamber and Growth Partnership, requested that these studies be made available to the PAC members for review and familiarize themselves with the past studies. Ms.

Threats responded by noting that the studies will be added to the project website and, once available, PAC members will be notified.

Mr. Petulla then provided an overview of the current traffic counts, safety analysis, and multi-modal use that were initiated in August 2014. Factors being considered when looking at the results from this initial analysis include existing conditions, speed, access point management, the system network (considering 12<sup>th</sup> Street), emergency vehicle access, and existing transit services.

## **Traffic Counts**

Traffic counts were conducted at 18 locations during weekday AM and PM peak travel hours. Counts were conducted over a three hour period and noted vehicle types, pedestrians, and bicycles using the project area. The Average Daily Traffic (ADT) traveling the Bayfront Parkway is approximately 16,000 vehicles with seven percent (7%) being trucks. Average observed speeds obtained from our origin and destination study (O&D) were noted as being higher than the posted speed limit:

Eastern Parkway

- Port Access Rd. to 12th Street 46 MPH
- 12th Street to Port Access Rd. 29 MPH

Western Parkway

- Cranberry St. to Sassafras St. 42 MPH
- Sassafras St. to Cranberry St. 43 MPH

The traffic counts are being utilized to examine how the intersections are performing. The performance, or Level-of-Service (LOS), is rated on an A-F scale based on the capacity of the intersection and the number of vehicles traveling through the area – "A" being free-flowing traffic and "F" traffic operating in near gridlock (see Appendix H for a full definition on slide 14). A map showing the existing condition LOS for the evaluated intersections was provided in the PAC member folders and reviewed (Appendix E). Two intersections along the Bayfront Parkway received an LOS F rating during both morning and evening peak travel times. They were the intersections at West 8<sup>th</sup> Street and Bayfront and the intersection at East 12<sup>th</sup> Street and Bayfront. All other intersections evaluated received an LOS C or higher during the morning peak travel time and a D or higher for the evening peak travel time.

The O&D study was conducted to determine where commuter traffic is coming from (origin) and where they are going (destination) within the study area. This information will also help to identify the amount of through traffic vs. local traffic. The O&D study utilized 8 blue tooth readers which connect with anonymous mobile blue tooth compatible devices traveling through the study area to capture travel movements of those vehicles. The blue tooth readers were active for one week. The results of the O&D study are currently being summarized.

LeAnn Parameter, P.E., City of Erie Traffic Engineer, asked what methodology was used for the LOS Map. Mr. Petulla said the methodology from the Highway Capacity Manual (HCM) was used to develop the LOS at each signalized intersection.

#### Safety Study

A safety study was also conducted along the corridor. The study analyzed crashes reported from 2009 to 2013 within the study area to determine the frequency and likely causes of crashes along the Bayfront Parkway. In summary, there were 246 recorded crashes with 80% being located at intersections while the others were located between intersections (mid-block), and 4% involved a fatality or major injury. To compare the crash rates to state wide averages for similar roadway types, the study team divided the corridor into four areas: Lincoln Ave. to Cranberry St., Cranberry St. to the boat launch area, the boat launch area to Port Access Rd., and Port Access Rd. to 12<sup>th</sup> St. All crash rates were below statewide averages accept the area between Port Access Rd. and 12<sup>th</sup> St.

## **Bicycle and Pedestrian Connections**

Mr. Petulla reviewed the existing bicycle and pedestrian paths noted within the Study Area. Connections across the Bayfront Parkway currently exist at Greengarden Blvd., 8<sup>th</sup> St., West 6<sup>th</sup> St., Erie Waterworks, Sassafras St., State St., Holland St., East 6<sup>th</sup> St., East 8<sup>th</sup> St., East 10<sup>th</sup> St., and East 12<sup>th</sup> St. However, it has been noted in past studies and by stakeholders during their interviews that better and more efficient connections are needed and the safety of existing connections should be improved.

Jake Welsh, Erie County Planning Director asked that the connection at Cranberry St. be added to the map. Mr. Petulla agreed and encouraged the PAC to review the mapping and make the study team aware of any additional connections that may not be shown or are improperly shown.

## Parking

Mr. Petulla reviewed the data gathered regarding parking in the area. Currently, the supply of parking available near the Bayfront corridor is greater than the need. Erie Parking Authority owns 13 garages and/or lots in the six block radius of the Bayfront Parkway and there are four additional private garages and lots also in the area. According to the 2008 parking study, there are 4500 available parking spaces in the existing parking structures. In addition to this, 5 additional lots or garages are planned.

## **Transit**

Mr. Petulla noted that the Bayfront Parkway Corridor Study will consider the existing transit service in the area and how transit may be best utilized and/or enhanced as the area grows and develops. Public transit to the central Bayfront area currently includes bus routes, two park and ride shuttles and three trolley loops within the project area.

## Economic Development

Mr. Petulla noted that a number of developments are planned along the Bayfront Parkway. Within approximately five years, 6 new developments are planned to be constructed. A map of these sites was created and provided to the PAC (Appendix F). The project team asked any attendees representing these developments to add their own updates to their projects as they were covered. In addition, it was also requested that any non-public information be shared with the team to help better plan for their developments. The known planned developments are:

- <u>Bayfront Place</u> has begun its first phase by beginning construction on a new hotel and parking garage located beside the convention center. The hotel will include 192 rooms and the parking garage will accommodate 281 vehicles. The Erie County Convention Center Authority is heading the project at the former GAF site and hopes to turn the area into a mix use site by also potentially adding housing, offices and retail stores. They plan to release their master plan for the area in the spring of 2015.
- <u>Harbor Place</u> will be located at the northeast corner of State Street and the Bayfront Parkway, and is being developed by Scott Enterprises. In June 2014 a height variance was approved for the development and it is also planned to be a mixed use site.
- <u>The Bayfront Cobblestone Hotel and Suites</u> is being developed by Tom Kennedy who told the group that the storm water management plan is currently being finalized and they expect to open in the summer of 2015. The 54-room hotel will be located across from Liberty Park, south of the Bayfront Parkway.
- <u>The East Bayfront Port Expansion</u> is being organized by the Port Authority of Erie and Develop Erie. It is located near the eastern side of the Bayfront and would be an import/export facility. It is currently in its conceptual stage. Brenda Sandberg, Port Authority Director noted that the outline of the development would need to be revised to accurately reflect the area involved with the port expansion.
- <u>McAllister Place</u> is also owned by the Port Authority and they are currently looking for a developer to redevelop the Eastern part of Dobbins Landing. As previously proposed the

development would include condominiums/apartments, office space, retail shops and a 200space parking facility in a five-story building. Ms. Sandberg again provided an adjustment to the area shown on the map of the proposed development.

 <u>A GetGo</u> is planned for the Northwest corner of West 12<sup>th</sup> Street and Greengarden Road. The permit for 5,750-square-foot store, gas station and car wash is currently under review and the Transportation Investment Study (TIS) has been approved.

While discussing the planned economic development for the Bayfront area, Tony Pol, City of Erie Fire Chief, mentioned that emergency vehicles often use the Bayfront Parkway out of necessity to avoid busier and more congested spots of the city when possible. By adding additional pedestrian and bicycle crossing to the Parkway it will make it more difficult for emergency services. They have begun avoiding State Street because recent improvements made it harder for them to navigate the street quickly. Mr. Petulla noted that emergency service access will be a consideration as improvement alternatives are evaluated.

## Public Outreach

Ms. Threats gave an overview of the public outreach efforts that have been done to better understand the corridor and described upcoming activities. Stakeholder interviews were held in early October with representatives of 23 different organizations. The feedback received during the interviews was utilized to help develop the PAC, the online public survey, and website. The availability of the survey and website will be announced to the public in the days following the PAC Meeting. In addition, two Public Meetings will be held during the study process. Public input will be vital to the relevance of the study and the ability to implement future projects.

The group then took a ten minute break.

## V. Improvement Priorities

After the break, Ms. Threats began the second half of the session by reviewing the eight common themes or topics that were consistently identified during the stakeholder interviews. They were:

- Traffic Flow/Congestion
- Speed
- Safety
- Pedestrian and Bicycle Access
- Vehicle Access
- Alternative Route Improvements

- Parking and Facilities
- Transit

These themes were also used to create the priority areas for the public survey. In the survey, hosted by MetroQuest, respondents are asked to choose their top five priorities from the list of eight. They then answer detail questions related to the selected priorities. Ms. Threats reviewed screens 2 and 3 of the survey and explained the PAC would be conducting a similar activity with their identified group.

To simplify the activity for the meeting, each group was asked to pick their top three priorities (rather than 5) and to answer the accompanying priority detail questions for each. The PAC was divided into five pre-assigned groups. Once the allotted time ended, a representative from each group summarized their discussions on each of the three priorities they selected and the associated priority detail rankings.

Four groups selected 'Traffic Flow/Congestion', 'Safety', and 'Alternative Route', two groups selected 'Pedestrian and Bicycle Access' and one group selected 'Vehicle Access' as their priorities. Below is a summary of the average results of the priority detail rankings. The complete priority detail rankings and comments from the groups can be found in Appendix G.

The four groups that selected Traffic Flow/Congestion as a priority responded as follows (on average):

- 50% Disagree, 25% Strongly Disagreed, 25% Agreed Peak travel time on the Bayfront is adequate
- 75% Agreed, 25% Strongly Agreed Non-peak travel time on the Bayfront is adequate
- 50% Strongly Disagreed, 50% Disagreed Peak travel time during events on the Bayfront is adequate
- 50% Disagreed, 50% Neutral Peak travel time on alternate routes is adequate
- 50% Neutral, 25% Strongly Disagreed, 25% Disagreed Coordination of traffic signals along 12<sup>th</sup> St. is adequate.

The four groups that selected Safety as a priority responded as follows (on average):

- 75% Agreed, 25% Strongly Disagreed Walking/Biking along existing ped/bike facilities in the Bayfront area feels safe
- 75% Disagreed, 25% Strongly Disagreed Walking/Biking across the Bayfront Parkway feels safe
- 50% Agreed, 50% Strongly Agreed Driving along the Bayfront Parkway feels safe
- 50% Strongly Disagreed, 25% Neutral, 25% Agreed Turning onto/off of the Bayfront Parkway from existing access points feels safe

The four groups that selected Alternative Route as a priority responded as follows (on average):

- 50% Agreed, 25% Strongly Agreed, 25% Disagreed They use the Bayfront Parkway to avoid other travel routes.
- 50% Neutral, 25% Disagreed, 25% Agreed They use other travel routes to avoid the Bayfront Parkway.
- 50% Disagreed, 25% Neutral, 25% Agreed It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours.
- 50% Strongly Agreed, 50% Agreed It is quicker to travel the Bayfront Parkway than to use other travel routes during non-peak travel times.
- 75% Strongly Agreed, 25% Neutral Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.

The two groups that selected Pedestrian and Bicycle Access as a priority responded as follows (on average):

- 50% Disagreed, 50% Neutral Bicycle and Pedestrian connections from the Westside neighborhoods to the Bayfront are adequate.
- 50% Strongly Disagreed, 50% Disagreed Bicycle and Pedestrian connections from the Eastside neighborhoods to the Bayfront are adequate.
- 50% Strongly Disagreed, 50% Neutral Bicycle and Pedestrian connections from the downtown to the central Bayfront area are adequate.
- 50% Disagreed, 50% Agreed Connections are adequate along the Northside of the Bayfront.

The one group that selected Vehicle Access as a priority responded as follows (on average):

- Disagreed Additional roadway connections (or service roads) within the central Bayfront area are needed.
- Disagreed The number of access points along the Bayfront Parkway is adequate.
- Strongly Agreed Improvements to existing traffic signals are needed to improve access.
- Agreed Access to Downtown Erie from the Bayfront is adequate.
- Agreed It is easy to access the Bayfront Parkway from connecting roadways.

Below are a few additional comments the PAC offered regarding the prioritization activity:

- The PAC members agreed that many of them did not select speed as a priority because they thought it was closely related to safety.
- Ms. Parmenter informed the group that they are currently looking at ways to improve signals in the City while working within the current configuration.

- To further evaluate the results of the activity, Justin Smith, Bike Erie, asked who from the PAC lived in the Downtown area. Three people raised their hands. Five said they live to the west of the city and five said they live to the east of the city. Others also noted that they work within the City.
- Mr. Smith also pointed out a bike route that runs along 6th Street into the Downtown area.

#### VI. Next Steps

Mr. Petulla wrapped up the meeting by covering what the next steps will be in the study process. This includes the launch of the MetroQuest Survey and the website and he again encourage the PAC to help spread the word about the survey. Future PAC meetings will also be held and focus on reviewing the draft Purpose and Need for the study, analyzing existing and future conditions, and identifying improvement areas and strategies. Mr. Petulla thanked the PAC for their participation and noted that a PAC directory was provided in their folders that includes contact information for the study team (Appendix I).

With no further questions or discussions, the meeting was adjourned at approximately 12:10 p.m. We believe this report accurately describes what transpired at this meeting. If anyone has a different understanding of what occurred, please contact Dana Sklack at (412) 922-6880 within two weeks of receipt. If no comments are received, this report will be considered final.

Prepared by: McCormick Taylor, Inc.

Jennifer Threats Dana Sklack

## Appendix List

- A. Project Advisory Committee Meeting #1 Agenda
- B. Role and Responsibilities
- C. Study Area Map
- D. Bayfront Parkway Corridor Study Work Plan\*
- E. Level of Service Map
- F. Economic Development Map\*
- G. Priority Detail Responses
- H. Project Advisory Committee Meeting #1 PowerPoint Slides
- I. Bayfront Parkway Corridor Study Project Advisory Committee Directory

\*Updated to reflect changes suggested by the Project Advisory Committee and the Bayfront Parkway Corridor Study Project Team.

APPENDIX A:

## Project Advisory Committee Meeting #1 Agenda



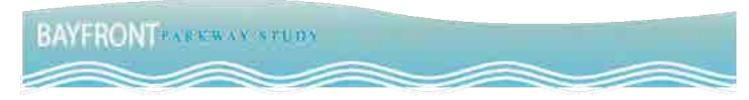
PROJECT ADVISORY COMMITTEE MEETING #1 – December 17, 2014 10:00 a.m. to 12:00 p.m. Intermodal Transportation Center Conference Room

## **AGENDA**

1.	Introductions – Jennifer Threats, McCormick Taylor / Bill Petit, P.E., PennDOT District Executive	10:00 a.m.
2.	Project Advisory Committee Overview – Jennifer Threats, McCormick Taylor	10:15 a.m.
3.	Scope of Study – JLP	10:25 a.m.
4.	Understanding the Corridor – JLP	10:35 a.m.
-	BREAK (10 Minutes)	
5.	Improvement Priorities – JBT	11:15 a.m.
6.	What's Next – JLP	11:55 a.m.

APPENDIX B:

Role and Responsibilities



## PROJECT ADVISORY COMMITTEE ROLE AND RESPONSIBILITIES

December 17, 2014

The Project Advisory Committee (PAC) is an important partner to the study team and will provide input on the development of the Bayfront Parkway Corridor. The following outlines the major roles and responsibilities of PAC members:

#### Inform

- Share details with PennDOT and the consultant team related to local interests and concerns that are representative of your larger stakeholder group throughout the development of the study.
- Share contacts that may contribute additional data, information, and ideas.
- Share project information with your larger stakeholder group as updates are available.

#### Advise

- Review project data and information as presented and provide feedback.
- Discuss issues and ideas openly at PAC meetings, respecting perspectives of other committee members.
- Participate in the consensus-building process.

#### Assist

- Encourage and solicit community perspectives and participation.
- Encourage public participation of study activities and events.
- Review meeting summaries for accuracy and provide feedback.
- Foster concepts or ideas that emerge during the study.

#### Participate

- Attend meetings regularly (up to 5) or send an alternate who can represent you in your absence.
- Do your homework be prepared for the meeting discussion and bring any necessary materials to assist with the meeting topic.
- Help keep the study process on track and on schedule.

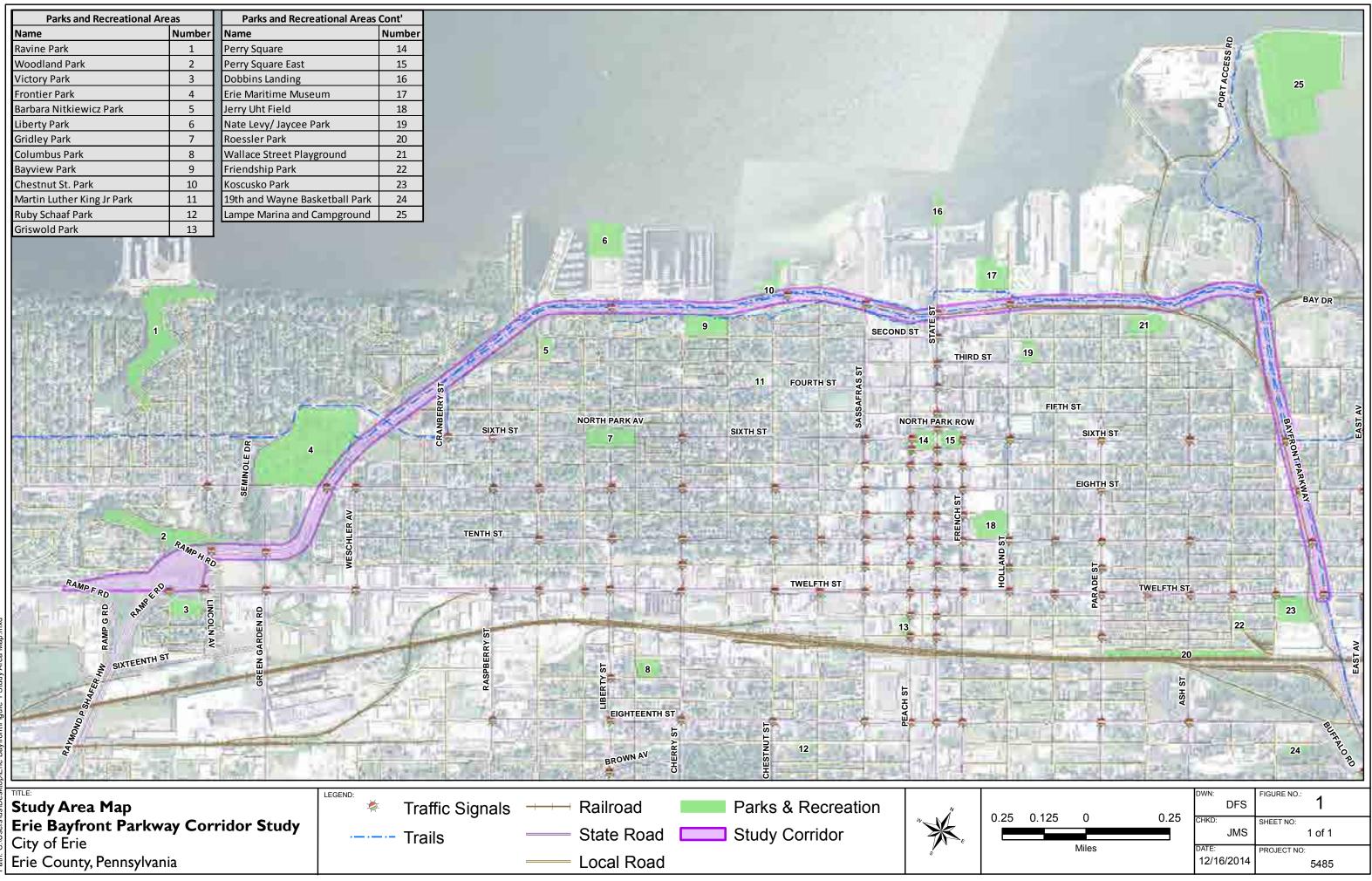
I hereby acknowledge my interest in serving on the Project Advisory Committee and fulfilling the above stated Role and Responsibilities.

(Signature)

(Date)

APPENDIX C:

Study Area Map



## APPENDIX D:

## Bayfront Parkway Corridor Study Work Plan

## BAYFRONTPARKWAY STUDY

# **UNDERSTANDING THE** CORRIDOR

## Launch the Project

Define Study Area

- Kick off Meeting with the District
- Traffic Data Collection and O&D Study

### **Establish the Baseline**

- Collect Existing Data and Document
  - Traffic
- Bike/Ped - Transit
- Crash Data - Planning - Land Use
- Environmental
- Select Project Advisory Committee (PAC) Members

August

September

October

## **Conduct Stakeholder** Interviews

### **Press Release #1**

Traffic Studies

		ING A VISI			ELOPING S			IVERING	APLAN
<ul> <li>Study Area /</li> <li>Field verify das sensitive features problem areas of</li> <li>Existing Traffic</li> <li>Draft Purpose</li> </ul>	ta and identify s, identify r red flags & Need & Need <b>Future</b> • Deve • Identify Planting • Cond	e Conditions A elop Traffic Synchro Ar elop Potential Improve tify Anticipated Transit is clude and summarize lize Purpose & Need	halysis ment Concepts and Bike/Ped	Developmer	Alternatives teptual Alternatives Alternatives Refine Conceptua Prepare Cost Esti Identify Potential I Determine Approa	I Alternatives mates Funding Sources	Draft Implet         Funding Sci         • Develop Fund		oort Report
November	December	January	February	March	April	May	June	July	August
	<ul> <li>PAC Meeting</li> <li>Identify improve</li> <li>Press Releas</li> <li>Public Survey a Launch</li> </ul>	ement priorities Se #2	PA	bsite Update : C Meeting #2 Confirm Purpose & N potential improvemer	Website Upd Conduct Put	ceptual alternatives ate #2 blic Meeting #1 PAC Meet	• Price imp ing #4 efined Alternatives	Meeting #5 Dritize alternatives and Dementation scenario Conduct Publ PAC Meet • Review an Comments Website U Press Rel	ic Meeting #2 ing #6 d Address s on the Draft Report Jpdate #4

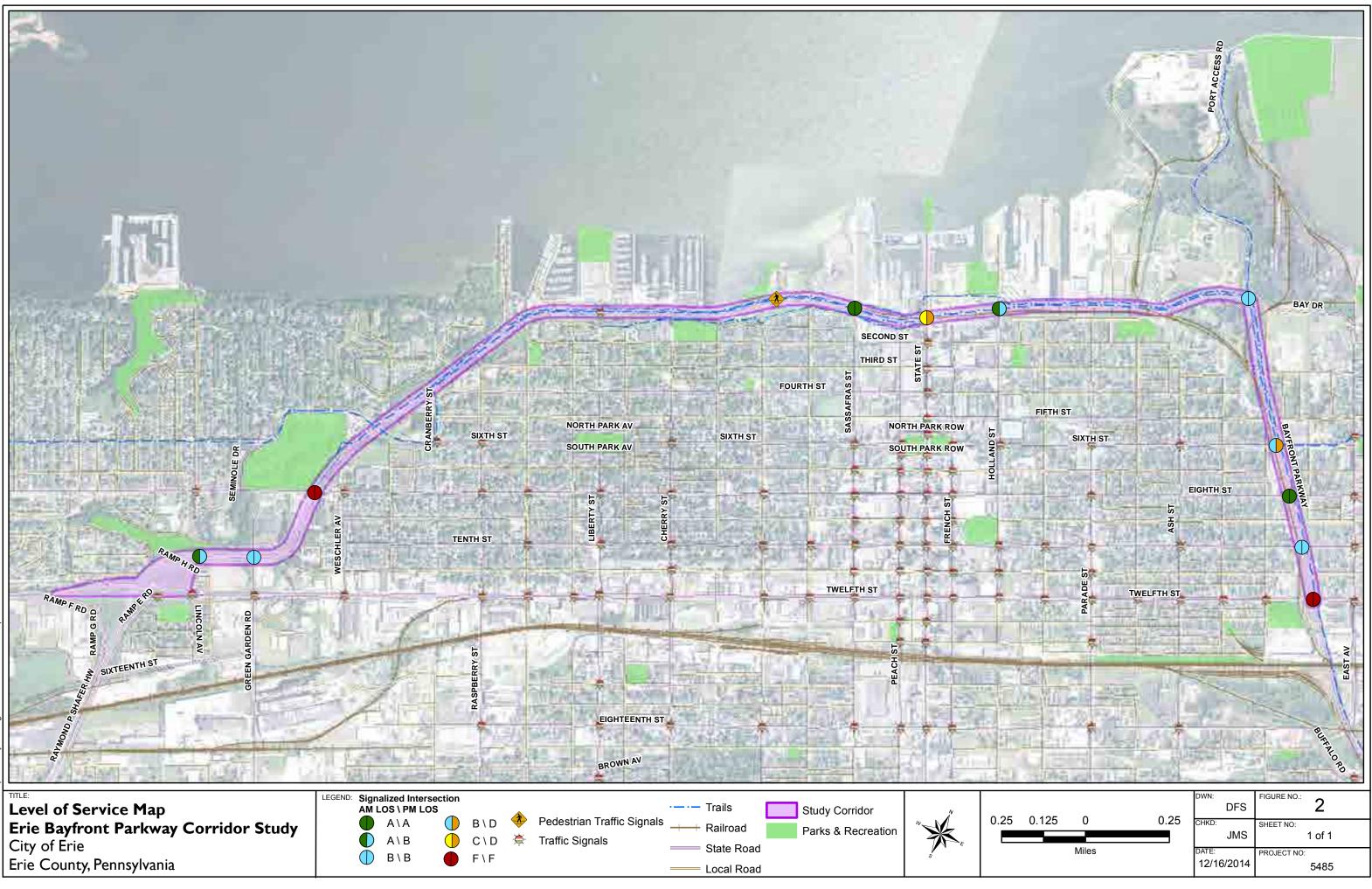
# **PUBLIC INVOLVEMENT**



As of 1/27/15

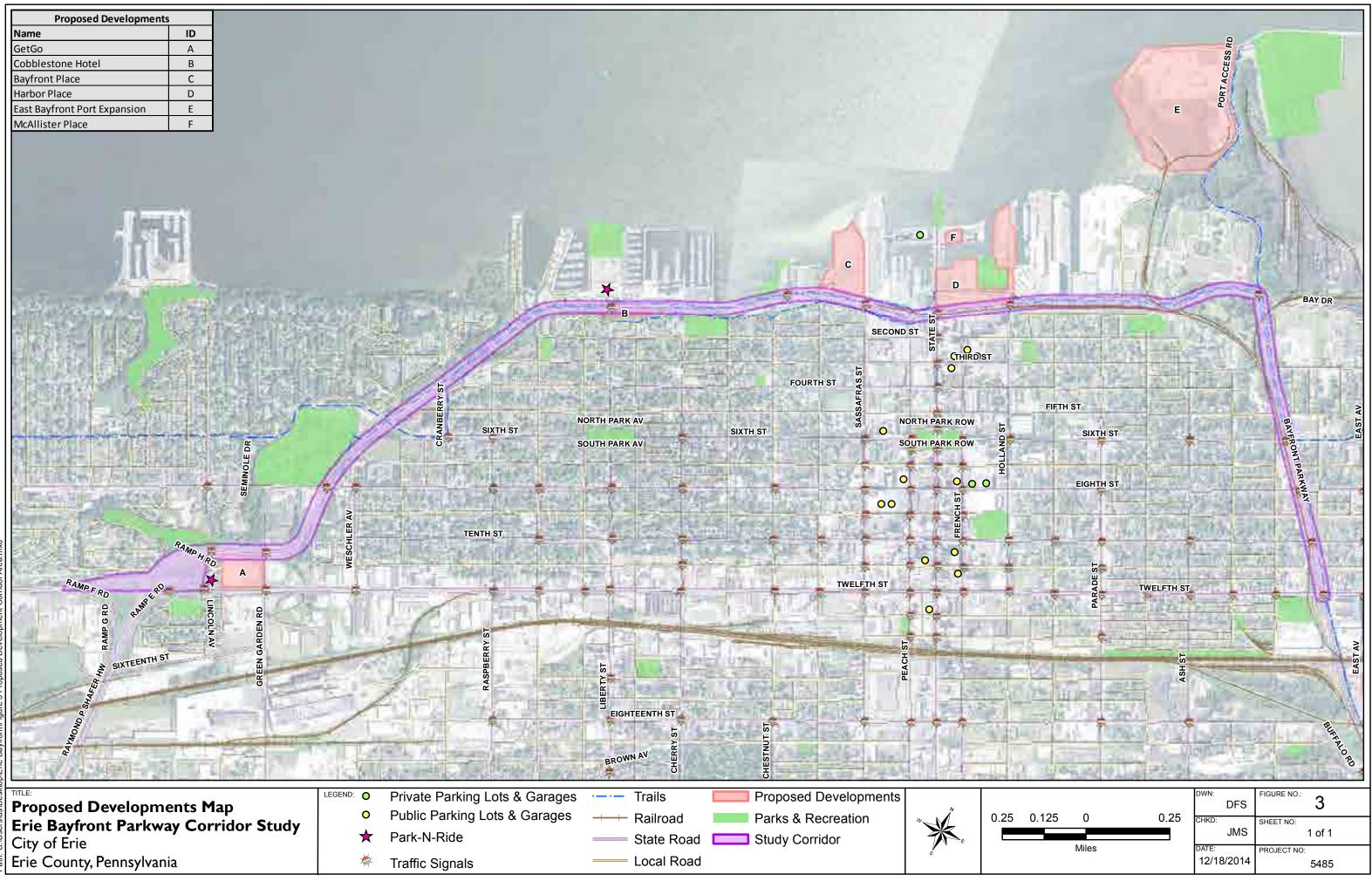
#### APPENDIX E:

Level of Service Map



#### APPENDIX F:

Economic Development Map



APPENDIX G:

Priority Detail Responses

Detail No.	Detail Topic	Detail Statement	Ranking*	Comments/Notes
	<b>p 1 -</b> City of Erie (Traffic De	pt.), LeAnn Parmenter, P.E., Traffic Engineer, Erie Chamber	& Growth Partner	rship, Barbara Chaffee; Erie Insurance, Jeff
	; PennDOT Permit Manager, N : Flow/ Congestion	lichele Morningstar, P.E.		
1	PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during peak travel times is adequate. (7 a.m. to 9 a.m. and 4p.m. to 6 p.m.)	2.33	
2	NON-PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during non- peak travel times is adequate.	4	
3	EVENT TRAVEL	Traffic flow on the Bayfront Parkway during events is adequate.	<b>3</b> 1	requires emergency service staff to help with traffic
4	ALTERNATE ROUTE TRAVEL	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	2.5	
5	ALTERNATE ROUTE TRAFFIC SIGNALS	Coordination of traffic signals along 12th Street is adequate.	2.5	It's not Leann's fault. (member of group)
Safety				
1	WALKING/BIKING IN AREA	I feel safe walking/biking along existing ped/bike facilities in the Bayfront area.	3.75	
2	WALKING/BIKING ACROSS	I feel safe walking/biking across the Bayfront Parkway.	1.75	
3	DRIVING BAYFRONT	I feel safe driving along the Bayfront Parkway.	5	
4	TURNING ON/OFF	I feel safe turning onto/off of the Bayfront Parkway to/from existing access points.	2	updates to State St. and Bayfront signals are needed (In progress) Left turn lanes needed Crossing is unsafe on foot
Altern	ative Route Improvem	ents		
1	AVOID OTHER ROUTES	I use the Bayfront Parkway to avoid other travel routes.	4	signals
2	AVOID BAYFRONT	I use other travel routes to avoid the Bayfront Parkway.	3	peak hours, Winter, Events
3	PEAK TRAVEL TIME FOR ALT ROUTES	It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours.	2	
4	NON-PEAK TRAVEL TIME FOR ALT ROUTES	It is quicker to travel the Bayfront Parkway than to use other travel routes during non-peak travel times.	4	

Detail				
No.	Detail Topic	Detail Statement	Ranking*	Comments/Notes
5	REMOVE BAYFRONT TRAFFIC	Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.	3	Good choice of alt. routes to maximize return Would move congestion to other routes Could create safety issues on other routes
Grou	<b>p 2</b> - Erie Downtown Partner	rship, John Buchna; Bike Erie, Justin Smith; Erie County Pl	anning (Transpo	rtation), John Morgan; PennDOT Assistant District
	• /e Design, Brian Yedinak, P.E.			~ ~ ~ ·
Safety	-			
1	WALKING/BIKING IN AREA	I feel safe walking/biking along existing ped/bike facilities in the Bayfront area.	1	Intersections
2	WALKING/BIKING ACROSS	I feel safe walking/biking across the Bayfront Parkway.	1	
3	DRIVING BAYFRONT	I feel safe driving along the Bayfront Parkway.	5	
4	TURNING ON/OFF	I feel safe turning onto/off of the Bayfront Parkway to/from existing access points.	4	
Pedes	trian and Bicycle Acce	ess		
1	WESTSIDE ACCESS	Bicycle and Pedestrian connections from the Westside neighborhoods to the Bayfront are adequate.	2	
2	EASTSIDE ACCESS	Bicycle and Pedestrian connections from the Eastside neighborhoods to the Bayfront are adequate.	1	depending on neighborhoods near parkway
3	DOWNTOWN ACCESS PED AND BIKE	Bicycle and Pedestrian connections from the - downtown to the central Bayfront area are adequate.	1	
4	NORTHSIDE	Connections are adequate along the Northside of the Bayfront.	4	
Altern	ative Route Improvem	ents		
1	AVOID OTHER ROUTES	I use the Bayfront Parkway to avoid other travel routes.	4	
2	AVOID BAYFRONT	I use other travel routes to avoid the Bayfront Parkway.	2	only when trying to leave town - quickest to leave
3	PEAK TRAVEL TIME FOR ALT ROUTES	It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours.	4	
4	NON-PEAK TRAVEL TIME FOR ALT ROUTES	It is quicker to travel the Bayfront Parkway than to use other travel routes during non-peak travel times.	5	fewer stops
5	REMOVE BAYFRONT TRAFFIC	Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.	5	

Detail

Detail				
No.	Detail Topic	Detail Statement	Ranking*	Comments/Notes
Grou	<b>0 3</b> - Gannon University, Erik	a Ramalho; Erie-Western PA Port Authority, Brenda Sandb	berg; City of Erie (F	W), Jason Sayers, P.E.; PennDOT Traffic
Enginee	r, Brian Smith, P.E.; PennDOT	Erie County Maintenance Manager, Darrell Chapman		
Traffic	Flow/ Congestion			
	<b>J</b>	Traffic flow on the Bayfront Parkway during peak		
1	PEAK TRAVEL TIME	travel times is adequate. (7 a.m. to 9 a.m. and 4p.m. to 6 p.m.)	4	westside is worse than east, 2 lanes on westside; 4 on eastside
2	NON-PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during non- peak travel times is adequate.	5	
3	EVENT TRAVEL	Traffic flow on the Bayfront Parkway during events is adequate.	<sup>3</sup> 2	depends on event
4	ALTERNATE ROUTE TRAVEL	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	3	West seems more congested
5	ALTERNATE ROUTE TRAFFIC SIGNALS	Coordination of traffic signals along 12th Street is adequate.	2.5	Should additional timing changes be made
Vehicu	ılar Access			
1	ROADWAY CONNECTIONS	Additional roadway connections (or service roads) within the central Bayfront area are needed.	1.5	
2	ACCESS POINTS	The number of access points along the Bayfront Parkway is adequate.	2	
3	TRAFFIC SIGNALS	Improvements to existing traffic signals are needed to improve access.	5	
4	DOWNTOWN ACCESS - VEHICLE	- Access to Downtown Erie from the Bayfront is adequate.	4	
5	EASE OF ACCESS	It is easy to access the Bayfront Parkway from connecting roadways.	4	when no congested
				need to review rail/trucking access
Pedes	trian and Bicycle Acce	SS		
		Bicycle and Pedestrian connections from the Westside neighborhoods to the Bayfront are	3	
1	WESTSIDE ACCESS	adequate.		
0		Bicycle and Pedestrian connections from the Eastside neighborhoods to the Bayfront are	2	
2	EASTSIDE ACCESS	adequate.		
3	DOWNTOWN ACCESS - PED AND BIKE	Bicycle and Pedestrian connections from the - downtown to the central Bayfront area are adequate.	3	
4	NORTHSIDE	Connections are adequate along the Northside of the Bayfront.	2	

**Group 4** - Bayfront East Side Taskforce, Jeremy Bloeser; Erie Fire Department, Tony Pol; Erie County Convention Center Authority, John "Casey" Wells; PennDOT Design Services Engineer, Tom McClelland, P.E., PTOE

**Traffic Flow/ Congestion** 

Detail				
No.	Detail Topic	Detail Statement	Ranking*	Comments/Notes
		Traffic flow on the Bayfront Parkway during peak		
	PEAK TRAVEL TIME	travel times is adequate. (7 a.m. to 9 a.m. and	2	
1		4p.m. to 6 p.m.)		
	NON-PEAK TRAVEL	Traffic flow on the Bayfront Parkway during non-	4	
2	TIME	peak travel times is adequate.	•	
				8 Great tuesdays
	EVENT TRAVEL	Traffic flow on the Bayfront Parkway during events	1	fireworks
2		is adequate.		snow/rian/ice compounds problem
3				Convention Center Events
1	ALTERNATE ROUTE	Traffic flow on Alternate Routes (such as 12th	2	
4	TRAVEL ALTERNATE ROUTE	Street) during peak travel times is adequate.		٨٠
5	TRAFFIC SIGNALS	Coordination of traffic signals along 12th Street is	1	Awful
		adequate.		Too many red lights
Safety	WALKING/BIKING IN	I feel safe walking/biking along existing ped/bike		
1	AREA	facilities in the Bayfront area.	4	
1	WALKING/BIKING	I feel safe walking/biking across the Bayfront		
2	ACROSS	Parkway.	2	especially during events
3	DRIVING BAYFRONT	I feel safe driving along the Bayfront Parkway.	4	
	DRIVING DATERONT	I feel safe turning onto/off of the Bayfront Parkway.		Off BP is adequate
4	TURNING ON/OFF	to/from existing access points.	2	onto is problematic
	ative Route Improveme			
Allem	alive Roule improveme	I use the Bayfront Parkway to avoid other travel		
1	AVOID OTHER ROUTES		5	
	AVOID UTHER ROUTES	I use other travel routes to avoid the Bayfront		
2	AVOID BAYFRONT	Parkway.	3	Time of day
	PEAK TRAVEL TIME	It is quicker to travel the Bayfront Parkway than to		
3	FOR ALT ROUTES	use other travel routes during peak travel hours.	3	
	NON-PEAK TRAVEL	It is quicker to travel the Bayfront Parkway than to		
	TIME FOR ALT	use other travel routes during non-peak travel	5	
4	ROUTES	times.	5	
	REMOVE BAYFRONT	Alternate travel routes should be improved to		
5	TRAFFIC	remove traffic from the Bayfront Parkway.	5	
0		entere aano nom no Bajnoner annagr		

Group 5 - Erie Parking Authority, Raymond Massing; Tom Kennedy, Renaissance Centre/Cobblestone Inn; Erie Planning Director, Jake Welsh; PennDOT Interim Project Manager, Mark Nicholson, P.E.

**Traffic Flow/ Congestion** Traffic flow on the Bayfront Parkway during peak Hard to access at peak times PEAK TRAVEL TIME travel times is adequate. (7 a.m. to 9 a.m. and 1 Westside is more difficult/congestion 1 4p.m. to 6 p.m.) Traffic flow on the Bayfront Parkway during non-NON-PEAK TRAVEL 4 2 TIME peak travel times is adequate. Traffic flow on the Bayfront Parkway during events Tuesdays is wprse event 2 EVENT TRAVEL 3 is adequate. **Convention Center - decent** 

Detail				
No.	Detail Topic	Detail Statement	Ranking*	Comments/Notes
4	ALTERNATE ROUTE TRAVEL	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	2	Too many lights on 12th Street to provide adequate at peak
5	ALTERNATE ROUTE TRAFFIC SIGNALS	Coordination of traffic signals along 12th Street is adequate.	1	
Safety	,			
1	WALKING/BIKING IN AREA	I feel safe walking/biking along existing ped/bike facilities in the Bayfront area.	4	
2	WALKING/BIKING ACROSS	I feel safe walking/biking across the Bayfront Parkway.	2	
3	DRIVING BAYFRONT	I feel safe driving along the Bayfront Parkway.	4	Eastbound 8th by country fair- feels unsafe due to excesive speeds
4	TURNING ON/OFF	I feel safe turning onto/off of the Bayfront Parkway to/from existing access points.	3	Cranberry St turing left - mand turns use center lane to turn as merge
Altern	ative Route Improvem	ents		
1	AVOID OTHER ROUTES	I use the Bayfront Parkway to avoid other travel S routes.	2	
2	AVOID BAYFRONT	I use other travel routes to avoid the Bayfront Parkway.	4	
3	PEAK TRAVEL TIME FOR ALT ROUTES	It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours.	2	getting access discourages use of parkway
4	NON-PEAK TRAVEL TIME FOR ALT ROUTES	It is quicker to travel the Bayfront Parkway than to use other travel routes during non-peak travel times.	4	
5	REMOVE BAYFRONT TRAFFIC	Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.	5	

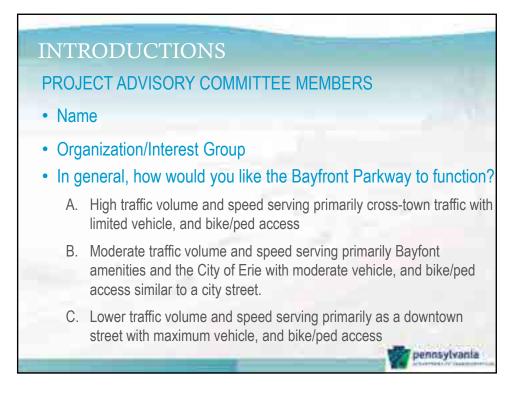
\* 1-5, 1 = Strongly Disagree, 5= Strongly Agree

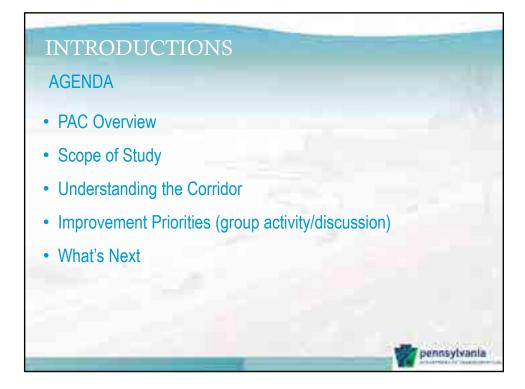
#### APPENDIX H:

#### Project Advisory Committee Meeting #1 PowerPoint Slides



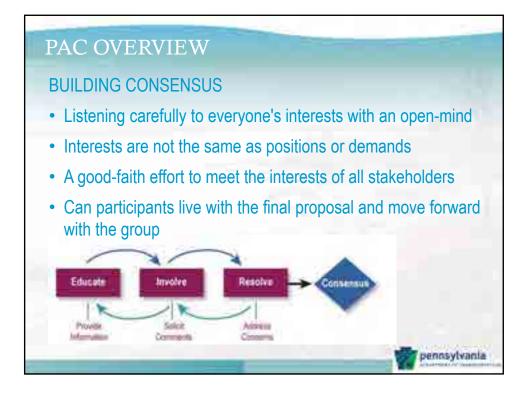


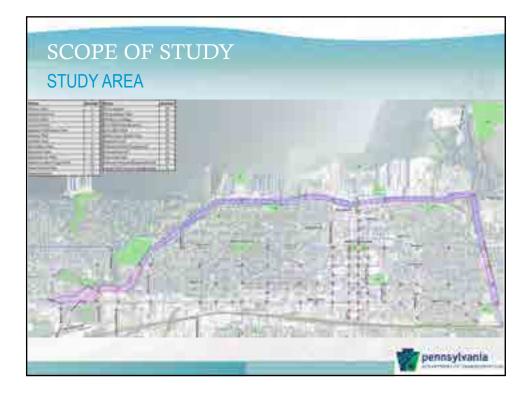




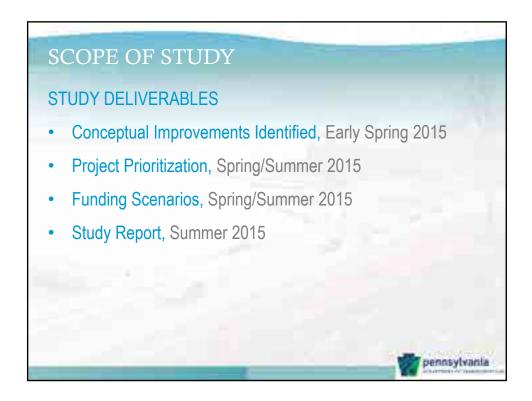


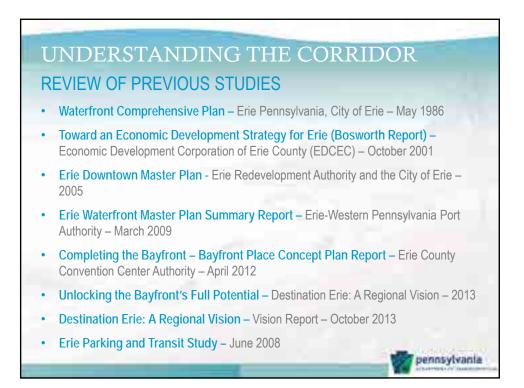


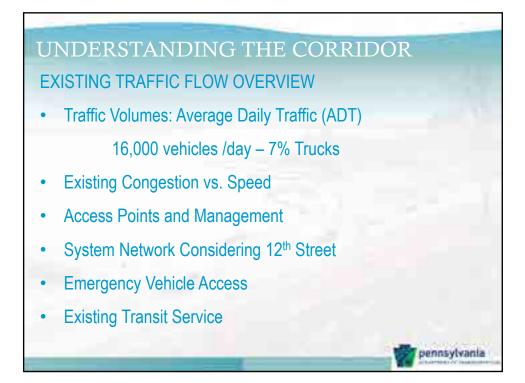


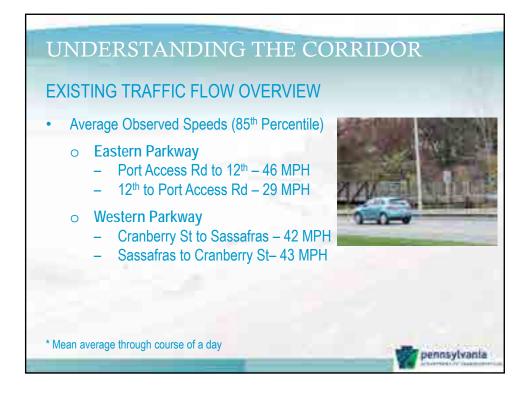


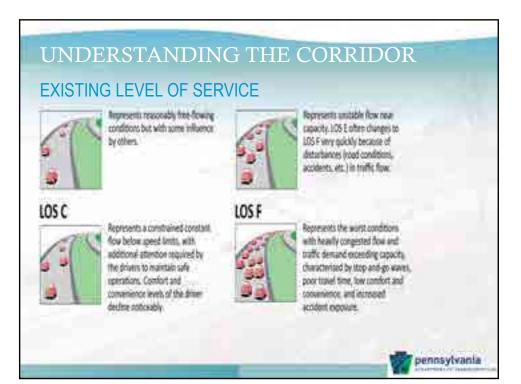
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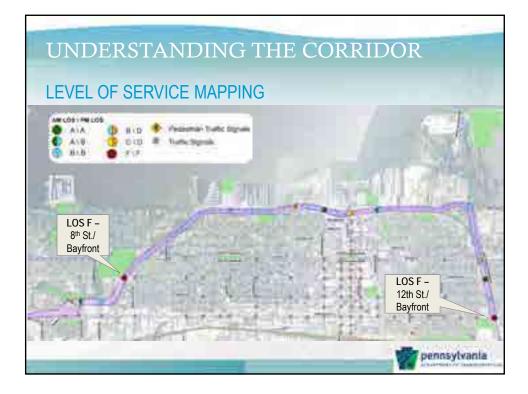


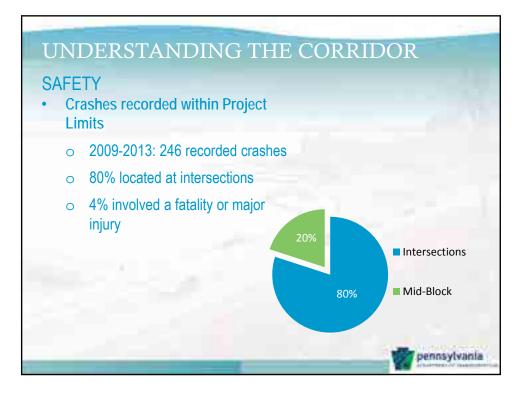


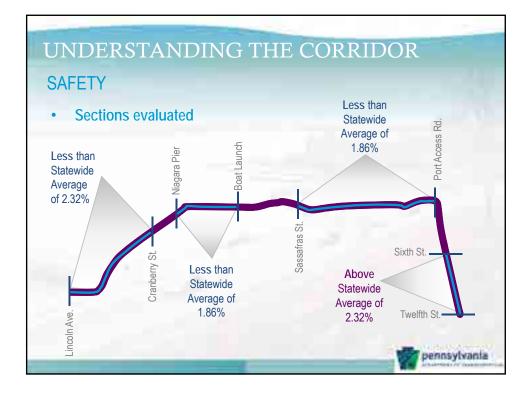










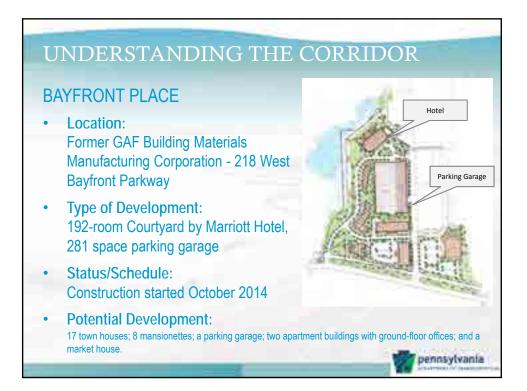




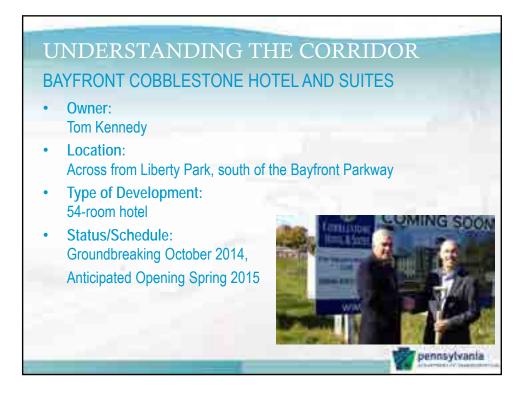


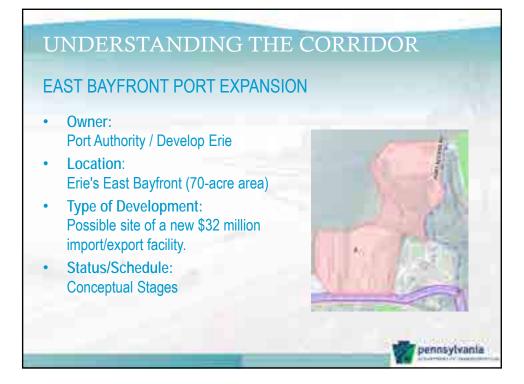






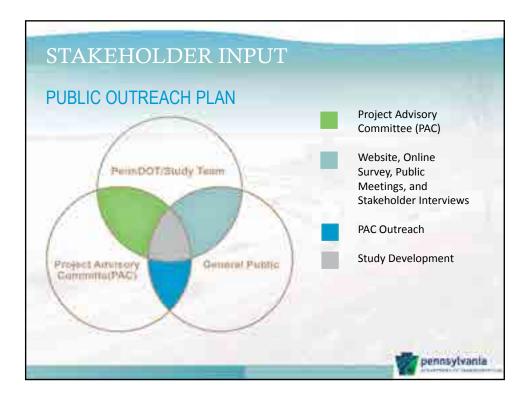












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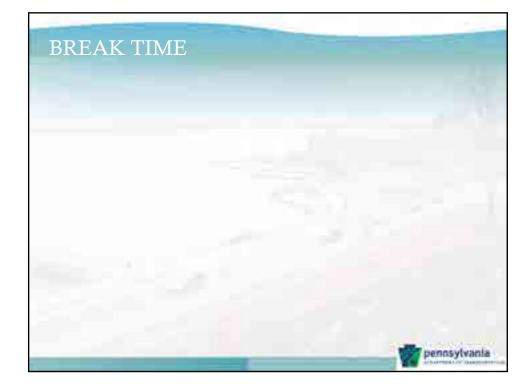
#### **INTERVIEWS**

- City of Erie
- Erie County
- Emergency Services
- Local BusinessesUPMC Hamot
- OPINIC Hamot
- S.O.N.S. of Lake Erie
  Erie Regional Chamber
- Erie Regional Chamber and Growth Partnership
- Erie Metropolitan Transit Authority
- Gannon University
- Erie County Public Library
- Erie-Western PA Port Authority
- Destination Erie
- Erie Downtown

- Chamber and Growth Partnership
- Scott Enterprises
- Erie County Convention Center Authority
- Renaissance Centre/Cobblestone
   Inn
- Bayfront Eastside Taskforce (BEST)

pennsylvania

- Develop Erie
- All Aboard Erie
- Erie Water Works
- Erie Insurance
- Erie Parking Authority









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Priority	Detail No.	Detail Topic	Detail Statement	(1 -	5, 1 S	anki trongly ongly A	Disag	ree,
raffic Flow	/ Congest	ion						
	1	PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during peak travel times is adequate. (7 a.m. to 9 a.m. and 4p.m. to 6 p.m.)	1	2	3	4	5
	2	NON-PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during non-peak travel times is adequate.	1	2	3	4	5
	3	EVENT TRAVEL	Traffic flow on the Bayfront Parkway during events is adequate.	1	2	3	4	5
	4	ALTERNATE ROUTE TRAVEL	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	1	2	3	4	5
-	5	ALTERNATE ROUTE	Coordination of traffic signals along 12th Street is adequate.	1	2	3	4	5







#### APPENDIX I:

### Bayfront Parkway Corridor Study Project Advisory Committee Directory

#### Project Advisory Committee Directory

Mr. Kale Asp 911 Coordinator - Erie County 2880 Flower Road Erie, PA 16509 (814) 923-2679 kasp@eriecounty.gov.org

Mr. Jeremy Bloeser Bayfront Eastside Taskforce (BEST) Director 420 Parade Street Erie, PA 16507 (814) 456-7062 ibloeser@besterie.org

Mr. Jeff Brinling Erie Insurance Senior Vice President 100 Erie Insurance Place Erie, PA 16530 814-870-2558 jeff.Brinling@ErieInsurance.com

Mr. John Buchna Erie Downtown Chief Executive Officer 40 East Fifth Street Erie, PA 16507 (814) 455-3743 John.Buchna@eriedowntown.com

Mr. Jim Carroll PennDOT Community Relations Coordinator 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7095 jamecarrol@pa.gov Ms. Barbara Chaffee Erie Regional Chamber & Growth Partnership President/CEO 208 E. Bayfront Parkway Suite 100 Erie, PA 16507 814-454-7191 x134 bchaffee@erie.pa.com

Mr. Darrell Chapman PennDOT Assistant County Manager 9031 Peach Street Waterford, PA 16441 (814) 871-4411 dachapman@pa.gov

Ms. Lyndsie DeVito PennDOT Project Manager 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7174 Idevito@pa.gov

Lt. Pat Durkin Erie Police 626 State Street Erie, PA 16501 (814) 870-1107 pdurkin@erie.pa.us

Mr. V. James Fiorenzo UPMC Hamot President 201 State Street Erie, PA 16550 (814) 877-6000 fiorenzoj2@upmc.edu Mr. Chris Groner City of Erie Economic Development Specialist 626 State Street Erie, PA 16501 (814) 870-1272 cgroner@erie.pa.us

Mr. Tom Kennedy Renaissance Centre/Cobblestone Inn CEO 1001 State St. Suite 307 Erie, PA 16501 (814) 622-1121 tomk4428@gmail.com

Mr. Raymond Massing Erie Parking Authority Executive Director 25 E 10th Street Erie, PA 16501 (814) 456-7588 ext. 3 raymassing@eriepark.org

Mr. Tom McClelland ,P.E., PTOE PennDOT Design Services Engineer 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7081 THMCCLELLA@pa.gov

Mr. John Morgan Erie County Transportation Planner 140 West Sixth Street Erie, PA 16501 (814) 451-6012 jmorgan@eriecountygov.org Ms. Michele Morningstar ,P.E. PennDOT Permit Manager 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7156 mmorningst@pa.gov

Mr. Mark Nicholson, P.E. PennDOT Project Manager 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7057 manicholso@pa.gov

Ms. LeAnn Parmenter, P.E. City of Erie Traffic Engineer 626 State Street Room 508 Erie, PA 16501 (814) 870-1379 Iparmenter@erie.pa.us

Mr. Bill Petit, P.E. PennDOT District Executive 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7015 wpetit@pa.gov Mr. John Petulla McCormick Taylor Project Manager 7 Parkway Center Suite 700 Pittsburgh, PA 15220 (412) 922-6880 JLPetulla@mccormicktaylor.com

Chief Tony Pol City of Erie Fire Chief 626 State Street Room 509 Erie, PA 16501 (814) 870-1400 apol@erie.pa.us

Ms. Erica Ramalho Gannon University Director of Community and Government Relations 109 University Square Erie, PA 16541 (814) 871-5584 RAMALHO001@gannon.edu

Ms. Brenda Sandberg Erie-Western PA Port Authority Executive Director 1 Holland Street Erie, PA 16507 (814) 455-7557 bsandberg@porterie.org

Mr. Nicholas Scott Scott Enterprises President Hilton Garden Inn 2225 Downs Drive 6th Floor Executive Suites Erie, PA 16509 (814) 868-9500 Ms. Dana Sklack McCormick Taylor Public Involvement Coordinator 7 Parkway Center Suite 700 Pittsburgh, PA 15220 (412) 922-6880 DESklack@mccormicktaylor.com

Mr. Justin Smith Bike Erie President (814) 745-7788 justin@bikeerie.org

Mr. Brian Smith, P.E. PennDOT Traffic Engineer 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7178 BRIANSMIT@pa.gov

Mr. Mike Tann Erie Metropolitan Transit Authority Director of Operations 127 E 14th Street Erie, PA 16503 (814) 452-3515 mtann@ride-the-e.com

Ms. Jennifer Threats McCormick Taylor Facilitator 7 Parkway Center Suite 700 Pittsburgh, PA 15220 (412) 922-6880 JBThreats@mccormicktaylor.com Mr. Jon Tushak, P.E. City of Erie City Engineer 626 State Street Room 400 Erie, PA 16501 (814) 870-1370 jtushak@erie.pa.us

Mr. Paul Vojtek Erie Water Works Chief Executive Officer 240 W 12th Street Erie, PA 16501 (814) 870-8000, ext. 303 pvojtek@eriewaterworks.org

Mr. John 'Casey' Wells Erie County Convention Center Authority Owner/Remediator 809 French Street Erie, PA 16501 (814) 480-6012 casey@erieevents.com Mr. Jake Welsh Erie County Planning Department, Director 140 West Sixth Street Room 111 Erie, PA 16501 (814) 451-7003 jwelsh@eriecountygov.org

Mr. Brian Yedinak, P.E. PennDOT Assistant District Executive Design 255 Elm Street P.O. Box 398 Oil City, PA 16301 (814) 678-7130 byedinak@pa.gov

Ms. Betsy Zang McCormick Taylor Environmental Specialist 7 Parkway Center Suite 700 Pittsburgh, PA 15220 (412) 922-6880 BAZang@mccormicktaylor.com

### Bayfront Parkway Corridor Study Project Advisory Committee Meeting #2

Date: March 10, 2015

Time: 2:00 PM to 4:00 PM

Location: Erie Intermodal Transportation Center Conference Room, Erie, PA

Attendees: Name

Jeff Brinling John Buchna Darrell Chapman John Grappy Chris Groner Tom Kennedy Raymond Massing Tom McClelland, P.E., PTOE Brian Mesaros Ray Moluski John Morgan Mark Nicholson, P.E. LeAnn Parmenter, P.E. Bill Petit, P.E. John Petulla, P.E. Tony Pol Doug Pomorski Erika Ramalho John Sada, P.E., PTOE Jason Sayers, P.E. Dana Sklack Brian Smith, P.E. Justin Smith Jacqueline Spry Mike Tann Jennifer Threats Jon Tushak, P.E.

Representing Erie Insurance Erie Downtown Partnership PennDOT District 1-0 Erie County City of Erie Renaissance Centre/Cobblestone Inn Erie Parking Authority PennDOT District 1-0 Erie County **UPMC Hamot** Erie County Transportation Planner PennDOT District 1-0, Interim Project Manager City of Erie Traffic Engineer PennDOT District 1-0, District Executive McCormick Taylor City of Erie Fire Department Erie-Western PA Port Authority Gannon University McCormick Taylor City of Erie McCormick Taylor PennDOT District 1-0 **Bike Erie** Kidder Wachter Architecture and Design Erie Metropolitan Transit Authority McCormick Taylor City of Erie

Paul Vojtek Joe Walko Casey Wells Jake Welsh Brett Wiler Brian Yedinak, P.E. Erie Water Works City of Erie Fire Department Police Erie Events Erie County Planning Director Erie Regional Chamber & Growth Partnership PennDOT District 1-0

### Meeting Summary:

I. Welcome

Jennifer Threats, meeting facilitator, welcomed everyone to the second of a series of Project Advisory Committee (PAC) Meetings. She then introduced Bill Petit, District Executive for PennDOT Engineering District 1-0. Mr. Petit gave a brief review of what was discussed during the first PAC meeting in December before talking about possible future parking concerns in the area.

Currently, each new development being planned for the Bayfront area has a parking structure as part of their master plans. Mr. Petit encouraged the group to start thinking creatively about parking, especially in the central Bayfront area. He noted that the central Bayfront area is prime real estate for the community, visitors and economic development opportunity. As such, he suggested that rather than having multiple parking garages, it may be more beneficial to have one central parking location for the area. This would then encourage locals and visitors to move around the area differently. Access roads, people movers and additional forms of public transit could also be offered to help move people around the area. Mr. Petit explained that whether it is parking or some other type of improvement, we should consider all possibilities.

Next, Ms. Threats reviewed the meeting agenda (Appendix A) that included discussing follow-up items from the previous meetings, going over the results from the MetroQuest Survey, reviewing the project's purpose and needs, and discussing possible improvements that could be applied to the Bayfront Parkway and surrounding area.

II. Follow-up Items

Ms. Threats began her review of the follow-up items from the previous meeting by reminding the PAC members to sign the Role and Responsibilities (Appendix B) form they received in their folders during the first meeting (additional copies were also provided to the members during the meeting's break).

She then asked for any final comments about the first meeting summary. The summary was provided to the group by email approximately two weeks before the meeting. There were no further edits requested.

The website updates that had been completed leading up to the meeting where then reviewed. The meeting summary from the first PAC meeting was added to the PAC page, a summary of common themes from the stakeholder interviews was added and a new page, 'Past Studies', was added to the website. The new page was a suggestion made by the PAC during the first meeting. It includes links to previous studies conducted in the Bayfront and City of Erie area.

John Petulla, P.E., Project Manager, discussed the mapping updates completed since the first meeting. A new mapping base was introduced and will be used throughout the rest of the study. In all, four maps where shown to the group including the study area map (Appendix D), the existing level of service (Appendix E), the proposed developments (Appendix F), and the future level of service (appendix G). A version of the first three maps had previously been shown to the group during the first PAC meeting in December and the suggested changes had been incorporated into them prior to this meeting.

Mr. Petulla also discussed updates that have been made to the traffic Level-of-Service (LOS). The LOS previously presented was based on traffic timings from the traffic signal permit plans measured by McCormick Taylor when in the field in August 2014. The revised LOS Map (Appendix G) incorporates the traffic signal timings that were measured by McCormick Taylor in the field in August 2014. The revised LOS Map (Appendix G) incorporates the traffic signal timings that were measured by McCormick Taylor in the field in August 2014. These changes improved the LOS reported for the intersection of Bayfront and East 8<sup>th</sup> Street and at the intersection of Bayfront and West 12<sup>th</sup> Street.

#### III. Study Update

Mr. Petulla next covered where the study is in relation to the work plan (Appendix H) that had been presented to the group during the first PAC meeting. It had been updated since then to reflect a few minor changes to the timeline of the study.

Mr. Petulla and John Sada, PE, PTOE, presented a traffic model to illustrate the impact full build-out of currently planned development would have on traffic along the Bayfront Parkway if no improvements were made. The Synchro/SIMTRAFFIC simulation was developed for the year 2034 condition with traffic volume increases due to background traffic growth of 0.15% per year as well as increase traffic due to the build out of the developments.

Ray Moluski, Vice President of General Services at UPMC Hamot, asked what times where used for the peak travel time along the Bayfront. He also added that most UPMC Hamot employees do not work only eight hours a shift and often do not travel during traditional peak hours. Shifts at Hamot are often long,

possibly over twelve hours each, and there can be off peak congestion caused by many of the employees coming and going at the same time from the hospital. Mr. Petulla responding by saying that in the morning, the hours from 7:00 a.m. to 9:00 a.m. were looked at, and in the evenings, from 4:00 p.m. to 6:00 p.m. where looked at.

Mr. Moluski also asked if a timeline and funding had been determined for the project. According to Mr. Petit, funding has not been secure but they hope for most of the road work to be funded through the Federal Highway Administration's (FHWA) Transportation Improvement Program (TIP). A prospective timeline for the improvements will be decided once the study is complete, improvements have been identified and funding has been secured. It was also noted that when receiving funding from TIP, it normally takes three to five years from planning to ground breaking for a project. Mr. Petulla noted that there is a hope to take care of simple improvements quickly first such as the addition of new signage in the area. Mr. Petit also suggested a public/private funding approach for projects that cannot receive TIP funding.

John Morgan, the Transportation Planner for Erie County, asked if a regional model was developed or used when looking at the traffic data in the Synchro simulation. Mr. Petulla said no, the simulation only includes data from the field data collection at the study intersections.

Tom Kennedy, CEO Of the Renaissance Center and Cobblestone Inn, asked if different aspects of Synchro could be changed to see how different improvements or changes to the Bayfront would affect traffic. Mr. Petulla said that this is possible.

Next, Ms. Threats presented the MetroQuest Survey results. During this portion of the meeting, she compared the public's results to the results from polling the PAC members during the first meeting. These comparisons can be seen in the meeting's PowerPoint presentation (Appendix C).

The survey was launched on December 19, 2014 and ran until February 27, 2015. During that time, nearly 500 people responded to the survey and left a few thousand comments about improvements along the Bayfront Parkway corridor. The survey asked participants to identify their top five priority areas from a list of eight that included, Traffic Flow/Congestion, Pedestrian and Bicycle Access, Safety, Speed, Vehicle Access, Parking and Facilities, Transit, and Alternative Route Improvements. Next, they answered questions in relation to their selected priorities before placing pins on a map of the Bayfront Parkway Corridor to show where they would like to see improvements. A map was developed to show all of the pins and comments left by participants in that portion of the survey. It can be found at <a href="https://www.bayfrontparkwaystudy.com/surveycomments.html">www.bayfrontparkwaystudy.com/surveycomments.html</a> (for a full summary of the survey, see Appendix I).

Mr. Morgan asked if the exact location of the survey takers was recorded. According to Ms. Threats, only the IP address of participants was recorded. Mr. Morgan then noted that the County-wide MetroQuest Survey conducted previously in 2013 only had approximately 300 responses.

Erika Ramalho, Director of Community and Government Relations for Gannon University, asked if there were any questions on the survey about veering off of 8<sup>th</sup> Street. Ms. Threats responded that there were not any specific questions regarding 8<sup>th</sup> Street.

### IV. Project Purpose and Need

A draft of the Purpose and Needs (Appendix J) for the study was developed and sent to the PAC members the Friday (March 6, 2015) before the meeting for their review. Mr. Petulla noted that the Purpose and Needs document will remain in draft form until after the first public meeting. During this meeting, the PAC members were given a handout entitled 'Approach to Identifying Improvements' (Appendix K) which summarized the purpose and needs memo and introduced a list of improvement considerations.

According to the Purpose and Needs document, "the purpose of the study is to complete an extensive analysis of the corridor (S.R. 4034), utilizing traffic data and involving stakeholders, to identify future projects that will improve safety, improve congestion, increase compliance with applicable current design standards, improve mobility throughout the corridor, and support existing and future economic development initiatives."

Five study needs where identified and included:

- Safety concerns exist in the study area.
- There are congestion concerns in the study area.
- There are operational concerns in the study area.
- Alternative modes are lacking parallel to the Bayfront (east/west).
- Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

The list of improvement considerations was also reviewed. The list was developed based on stakeholder input and noted improvement concept development should consider the following:

- Consistent with Local Planning Guidance (Destination Erie: A Regional Vision, City of Erie Comprehensive Plan: Background Analysis Principles; Erie Waterfront Master Plan)
- Maximize Land Use (Consolidate Parking, Brownfield Utilization, etc.)
- Enhances Aesthetics
- Supports Livability (Work & Play)
- Accommodates Emergency Service/Incident Management Access

- Accommodates Event Access and Mobility
- Enhances Travel Communication/Intelligence
- Minimizes Environmental Impacts (Property Impacts, Natural Resources, Cultural Resources)
- Ability to Maintain Improvement
- Total Project Costs/Available Funding

Once these two lists were reviewed, the PAC members were asked for their thoughts.

Mr. Petit noted that in the Waterfront Master Plan an additional connection to the city grid from the Bayfront Parkway was identified as needed – possibly Cherry Street. Paul Vojtek, Erie Water Works' Chief Executive, suggested that the need for the additional connection was from mostly pedestrians and bicyclists. Justin Smith, President of Bike Erie, suggested that the employees from UPMC Hamot may also need the additional connection. Lastly, Tony Pol, Fire Chief for the City of Erie, said that there is a lack of access for emergency vehicles between the city grid and the Bayfront Parkway. He would like to see this improved.

When discussing the growth factors for the future traffic conditions, Jeff Brinling, Senior Vice President at Erie Insurance, asked if the study was on target if no major improvements will be started for three to five years from now. Mr. Petit responded that all projects have a twenty year growth period built into the project so that any improvements made stay relevant for two decades after it is completed.

To follow up, Mr. Brinling questioned whether the survey results especially the comments, would still be relevant once the improvements have been completed. Jennifer noted the survey was intended to evaluate public interest related to existing conditions and future growth.

Mr. Morgan suggested inviting someone from the zoning office to participate in the PAC. He thought it would be helpful when discussing potential improvements to help confirm if an improvement option being proposed would be consistent with existing zoning regulations.

The group agreed that a need specifically stating the necessity for additional pedestrian and bicycle access and improvements should be added to the needs list. It was also suggested that better emergency service access should be added.

For the last part of the purpose and needs conversation, the PAC members were asked to respond to two statements. The survey equipment Meridia was used to collect their answers. A Likert scale was used with 1 meaning strongly agree and 5 meaning strongly disagree. The full scale was:

• Strongly Agree = 1

- Agree = 2
- Neutral = 3
- Disagree = 4
- Strongly Disagree = 5

The first statement said 'The Study Needs Statements Accurately Reflect the Problems within the Study Area.' Of the twenty-four PAC members who responded, 88% or 21 members agreed with the statement, one member (4%) was neutral, and two members (8%) strongly agreed.

The second statement was about the Improvement Considerations. It read 'As Presented, the list of Improvement Considerations is Comprehensive and Addresses Other Important Aspects of the Study.' Twenty-six PAC members responded to this statement with 73% (19 members) saying they agreed with the statement, 19% (5 members) where neutral, and 8% (2 members) strongly agreed.

### V. Types of Improvement

After a brief break, the group reconvened to discuss possible improvement options. Mr. Petulla started by giving the PAC members a brief overview of the approach that will be utilized to identify the improvement concepts. During this meeting, the focus was on looking at different types of improvements that could be implemented in the corridor through the use of an Image Survey. During the third PAC meeting Improvement Scenarios will be presented to the group and then to the public during a public meeting. The Preferred and/or modified scenarios will then be reviewed during the fourth PAC meeting.

To gauge the group's opinion on the different improvement options, the Meridia survey equipment was once again used. Within the survey (Appendix M), an image would be shown to the group and then on the following slide they were asked to use the same rating scale previously used with one for strongly agree to five for strongly disagree.

All of the improvement images mirrored some of the priority areas previously identified during the Stakeholder interviews and used during the public survey process. The priority areas that were the primary focus for the survey included:

- Pedestrian and Bicycle Improvements
- Traffic Flow/Congestion
- Safety Improvements
- Parking and Facilities
- Transit
- Aesthetics

Throughout the survey process, the PAC members were asked to briefly share their thoughts on the various improvement options.

Pedestrian bridges that can be used for both pedestrians and bicycle traffic where well-liked by the group. Additionally, due to safety concerns, the PAC members expressed a higher approval of bike and pedestrian paths that where not directly on the roadway and instead had some form of buffer between the vehicle traffic and the foot and bike traffic. When discussing storage, it was suggested that parking garages should be used for covered bicycle storage and some of the existing bike racks are under used because people think they are pieces of art.

When looking at options for traffic flow and congestion, half of the group (54%) agreed or strongly agreed with introducing roundabouts into the corridor. Some concern about bicycle safety was expressed but according to Mr. Petit, roundabouts can be safer than traditional intersections. It was suggested that a roundabout on 8<sup>th</sup> Street would be a helpful addition to the parkway.

When shown a picture of four lane highway treatment, 68% of the group disagreed or strongly disagreed with the change in relation to the Bayfront Parkway. It was expressed that the four lanes would serve as even more of a barrier between the Bayfront Parkway and Downtown Erie.

Transit improvement options where liked but the group but many agreed that there would need to be a shift by the public in how they view public transit in the area. Currently, a large majority of commuters drive into the City of Erie for work each day sighting low parking fees, plenty of available parking, and buses taking the same amount of time as cars to travel the Bayfront.

For all of the results from the meeting summary, see Appendix N.

#### VI. Next Steps

The last section of the meeting was a review of the next steps for the summary. The next set of website updates will be posted prior to the next meeting planned for April 14, 2015. A Public Meeting will be held approximately a month after the next PAC meeting.

With no further questions or discussions, the meeting was adjourned at approximately 4:20 p.m. We believe this report accurately describes what transpired at this meeting. If anyone has a different understanding of what occurred, please contact Dana Sklack at (412) 922-6880 within two weeks of receipt. If no comments are received, this report will be considered final.



Prepared by: McCormick Taylor, Inc.

Jennifer Threats Dana Sklack

### Appendix List

- A. Project Advisory Committee Meeting #2 Agenda
- B. Role and Responsibilities
- C. Project Advisory Committee Meeting #2 PowerPoint Slides
- D. Figure 1: Project Area Map
- E. Figure 2: Existing Level of Service
- F. Figure 3: Proposed Development
- G. Figure 4:Future Level of Service
- H. Bayfront Parkway Corridor Study Work Plan
- I. MetroQuest Survey Results Summary
- J. Purpose and Need
- K. Approach to Identifying Improvements
- L. PowerPoint Survey Question Results
- M. Improvement Image Survey
- N. Improvement Image Survey Results

\*Appendix items are available for reference on the following site:

<u>ftp://Bayfront:parkway@ftp.mccormicktaylor.com</u> Username: bayfront Password: parkway APPENDIX A:

### Project Advisory Committee Meeting #2 Agenda



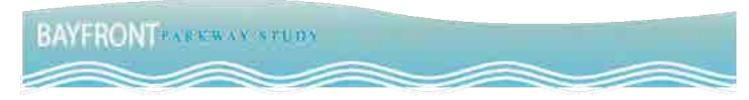
PROJECT ADVISORY COMMITTEE MEETING #2 – March 10, 2015 2:00 p.m. to 4:00 p.m. Erie Intermodal Transportation Center Conference Room

### **AGENDA**

1.	Welcome – Jennifer Threats, McCormick Taylor / Bill Petit, P.E., PennDOT District Executive	2:00 p.m. – 2:05 p.m.
2.	Follow-up Items – John Petulla, P.E., and Jennifer Threats, McCormick Taylor	2:05 p.m 2:15 p.m.
3.	Study Update – John Petulla, P.E., and Jennifer Threats, McCormick Taylor	2:15 p.m 2:50 p.m.
4.	Project Purpose & Needs – John Petulla, P.E.	2:50 p.m 3:05 p.m.
-	BREAK (10 Minutes)	
5.	Types of Improvements - John Petulla, P.E.	3:15 p.m 3:55 p.m.
6.	Next Steps – John Petulla, P.E.	3:55 p.m. – 4:00 p.m.

APPENDIX B:

Role and Responsibilities



### PROJECT ADVISORY COMMITTEE ROLE AND RESPONSIBILITIES

December 17, 2014

The Project Advisory Committee (PAC) is an important partner to the study team and will provide input on the development of the Bayfront Parkway Corridor. The following outlines the major roles and responsibilities of PAC members:

#### Inform

- Share details with PennDOT and the consultant team related to local interests and concerns that are representative of your larger stakeholder group throughout the development of the study.
- Share contacts that may contribute additional data, information, and ideas.
- Share project information with your larger stakeholder group as updates are available.

#### Advise

- Review project data and information as presented and provide feedback.
- Discuss issues and ideas openly at PAC meetings, respecting perspectives of other committee members.
- Participate in the consensus-building process.

#### Assist

- Encourage and solicit community perspectives and participation.
- Encourage public participation of study activities and events.
- Review meeting summaries for accuracy and provide feedback.
- Foster concepts or ideas that emerge during the study.

#### Participate

- Attend meetings regularly (up to 5) or send an alternate who can represent you in your absence.
- Do your homework be prepared for the meeting discussion and bring any necessary materials to assist with the meeting topic.
- Help keep the study process on track and on schedule.

I hereby acknowledge my interest in serving on the Project Advisory Committee and fulfilling the above stated Role and Responsibilities.

(Signature)

(Date)

### APPENDIX C:

### Project Advisory Committee Meeting #1 PowerPoint Slides

## BAYFRONTPARK WAY STUDY



## Welcome to the Bayfront Parkway Study

### PROJECT ADVISORY COMMITTEE MEETING

March 10, 2015



## WELCOME

## **MEETING AGENDA**

- Follow-up Items
- Study Update
- Project Purpose & Need
- Types of Improvements
- Next Steps



# FOLLOW-UP ITEMS PREVIOUS MEETING

- PAC Meeting Summary #1
- PAC Role and Responsibilities
- Website Updates
  - Past Studies
  - Stakeholder Committee
- Map Updates



## FOLLOW-UP ITEMS MAP UPDATES – PROJECT AREA



# FOLLOW-UP ITEMS

## MAP UPDATES – ECONOMIC DEVELOPMENT





# FOLLOW-UP ITEMS EXISTING LEVEL OF SERVICE



## STUDY UPDATE

### WORK PLAN

#### UNDERSTANDING THE **IDENTIFYING A VISION** CORRIDOR Launch the Project Study Area Analysis · Deficie Shridy Free · Field swilly data and identify nerradine loatures, checkly . Nick of Meeting with the Disirici

- . Traffic Data Collection and C&D Study
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  - · Onlied Eatthing Data and Docommitt
    - Traffic: Skniffed
    - Crasti Oata Darad
    - -Lint Lin Plannici
    - Environmental
  - · Select Project Advisory Clemina (PAC) Monders

Conduct Sheloshokder

Interviewa

- problem areas or mil Taga
- Existing Traffic-Arotyniii
- Draft Purscele & Need
  - Devolop Tlaffic System Analysia
    - · Develop Friterial Impresentatif Concepta

Future Conditions Analysis

- · identify Anticipated Tomat and Bike/Ped Plain
- · Constrolle and commutate the Survey Results
- · Fitalize Purpose & Need

### DEVELOPING SOLUTIONS

#### Conceptual Atternatives

- Desigioperatif
- Develue Correctual Alternatives

#### Alternatives Rollmanard

- · Refore Occomptual Alwardives
- Produce David Estimation
- Josofily Prosential Funding Sources
- Determiner Approach to Prioritization

### **DELIVERING A PLAN**

- Draft Implementation 3 Funding Semilarity
- · Develop Funding Scenarios

#### Finance Brudy Report

- · Chall Elluty Report
- · Finalize Study Report
- Outstains Report

· Process alternatives and Associate

eventuation management

PAC Meeting #5

### PAC Maeting #1

· Identify improvement priorities

#### Prote Related #2

+ Public Sarvey and Viebole

#### Press Rolesse #1

Table Shatesi

Launch

### PAC Mineting #1

- To remew conceptual adamatives
- Website Update #2

#### Conduct Poblic Meeting #1

- PAC Meeting #A · Person Retired Alternatives
- Webstro Update #3
- Pront Radmassi 83 Final-Pripot.

Constant Public Meeting #2

Webnith Update #4

Communis shafe Draft Report

PAC Meeting #6 · Payment and Address

### PUBLIC INVOLVEMENT

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· Confirm Purpose & Iswell and elevity

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PAG Meeting #2

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STUDY UPDATE TRAFFIC MODEL Model Development

- Model Software Utilized Synchro-SimTraffic
- Travel Time Runs During AM and PM Peak Hours
  - Actual Travel Times Used to Calibrate Traffic Model
- Traffic Volumes Represent AM and PM Peak Hour Traffic
- Future Volumes Represent Development and Background Traffic Growth



# STUDY UPDATE TRAFFIC MODEL

Synchro Model Demonstration



# FOLLOW-UP ITEMS MAP UPDATES – FUTURE LEVEL OF SERVICE MAP





- Launched December 19, 2014
- Closed February 27, 2015
- Nearly 500 Respondents
- Survey Include 5 Screen:
  - Priorities, Priority Details, Improvement Map and Opportunities



Top 5 Priorities Identified

Priorities	Overall Survey Ranking	Overall PAC Ranking
Traffic Flow/Congestion	X	x
Pedestrian and Bicycle Access	X	X
Safety	Х	X
Speed	X	
Vehicle Access	X	X
Parking and Facilities		
Transit		
Alternative Route Improvements		X



## Traffic Flow/Congestion

Detail Topic	Traffic Flow/Congestion Statement	Survey Average Ranking*	PAC Average Ranking
Peak Travel Time	Traffic flow on the Bayfront Parkway during peak travel times is adequate. (7 a.m. to 9 a.m. and 4p.m. to 6 p.m.)	Disagree	Disagree
Non-Peak Travel Time	Traffic flow on the Bayfront Parkway during non-peak travel times is adequate.	Agree	Agree
Event Travel	Traffic flow on the Bayfront Parkway during events is adequate.	Disagree	Disagree
Alternate Route Travel	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	Neutral	Neutral
Alternate Route Traffic Signals	Coordination of traffic signals along 12th Street is adequate.	Disagree	Disagree



## Pedestrian and Bicycle Access

Detail Topic	Pedestrian and Bicycle Statement	Survey Average Ranking*	PAC Average Ranking
Westside Access	Bicycle and Pedestrian connections from the Westside neighborhoods to the Bayfront are adequate.	Neutral	Neutral
Eastside Access	Bicycle and Pedestrian connections from the Eastside neighborhoods to the Bayfront are adequate.	Disagree	Disagree
Downtown Access – Ped and Bike	Bicycle and Pedestrian connections from the downtown to the central Bayfront area are adequate.	Disagree	Disagree
Northside	Connections are adequate along the Northside of the Bayfront.	Neutral	Neutral



## Safety

Detail Topic	Safety Statement	Survey Average Ranking*	PAC Average Ranking
Walking/Biking in Area	I feel safe walking/biking along existing ped/bike facilities in the Bayfront area.	Neutral	Neutral
Walking/Biking Across	I feel safe walking/biking across the Bayfront Parkway.	Disagree	Disagree
Driving Bayfront	I feel safe driving along the Bayfront Parkway.	Agree	Strongly Agree
Turning On/Off	I feel safe turning onto/off of the Bayfront Parkway to/from existing access points.	Neutral	Neutral



## Speed

Detail Topic	Speed Statement	Survey Average Ranking*	PAC Average Ranking
Lower Bayfront Speed	The Speed needs to be lowered on the Bayfront Parkway to calm traffic.	Disagree	
Increase Bayfront Speed	The speed should be increased on the Bayfront Parkway.	Neutral	
Alternate Route Speed	The speed on alternative routes should be increased to encourage use.	Neutral	
No Concern	Speed is not an issue on the Bayfront Parkway.	Disagree	
Safety Concern	Speed is a safety concern on the Bayfront Parkway.	Disagree	



# STUDY UPDATE PUBLIC SURVEY RESPONSES • Vehicle Access

#### Survey Average PAC Average **Detail Topic** Vehicle Access Statement Ranking\* Ranking Additional roadway connections (or service Roadway roads) within the central Bayfront area are Neutral Disagree **Connections** needed. The number of access points along the **Access Points** Neutral Neutral Bayfront Parkway is adequate. Improvements to existing traffic signals are **Traffic Signals** Agree Strongly Agree needed to improve access. Downtown Access to Downtown Erie from the Bayfront Neutral Agree **Access-Vehicle** is adequate. It is easy to access the Bayfront Parkway **Ease of Access** Neutral Agree from connecting roadways.



# STUDY UPDATE PUBLIC SURVEY RESPONSES • Parking and Facilities

Detail Topic	Parking and Facilities Statement	Survey Average Ranking*	PAC Average Ranking
Central Bayfront Area	There are currently plenty of parking spaces in the central Bayfront area.	Disagree	
More Garages	Additional parking garages should be built to accommodate development in the central Bayfront area.	Neutral	
Bicycle Storage	There are plenty of bicycle storage options.	Disagree	
Parking Near Transit	There are plenty of parking spots available near major transit links.	Neutral	
Moving People	More emphasis should be placed on alternative means to move people within the central Bayfront area.	Agree	



# STUDY UPDATE PUBLIC SURVEY RESPONSES • Transit

Detail Topic	Transit Statement	Survey Average Ranking*	PAC Average Ranking
Current Routes	The current bus routes meet all of my transit needs.	Neutral	
Add Central Routes	Additional routes are needed to connect the Central Bayfront area and Downtown.	Neutral	
Add Westside Routes	Additional routes are needed to connect the Central Bayfront area and Westside neighborhoods.	Neutral	
Add Eastside Routes	Additional routes are needed to connect the Central Bayfront area and Eastside neighborhoods.	Neutral	
Park-and-Ride	Additional park-and-ride facilities should be considered.	Neutral	



## Alternate Route Improvements

Detail Topic	Alternate Route Improvements Statement	Survey Average Ranking*	PAC Average Ranking
Avoid Other Routes	I use the Bayfront Parkway to avoid other travel routes.	Neutral	Agree
Avoid Bayfront	I use other travel routes to avoid the Bayfront Parkway.	Neutral	Neutral
Peak Travel Time for Alt. Routes	It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours.	Neutral	Neutral
Non-Peak Travel Time for Alt. Routes	It is quicker to travel the Bayfront Parkway than to use other travel routes during non- peak travel times.	Neutral	Strongly Agree
Remove Bayfront Traffic	Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.	Neutral	Strongly Agree



Improvement Type Map (<u>www.bayfrontparkwaystudy.com/surveycomments.html</u>)

- Ped/Bike 423 pins
- Roadway 293 pins
- Aesthetics 247 pins
- Parking/Facilities 85 pins
- Transit 37 pins
- Other 87 pins





STUDY UPDATE PUBLIC SURVEY RESPONSES Ped/Bike - 423 Pins

- Crosswalk Safety 138
- Connection 70
- Buffer from Cars 48
- Improve Signage 18
- Improve Lighting 14
- No Descriptor 135



# STUDY UPDATE PUBLIC SURVEY RESPONSES Ped/Bike Comment Themes:

- Add Pedestrian Bridge or Tunnel Under
- Improve Damaged Facilities
- Poor Lighting/Dark Areas
- More Signs to Alert Drivers
- More Time to Cross Large Intersections
- Slow Traffic Down
- Connect and Pave Facilities
- Crosswalks Improvements State St., Waterworks, Liberty St., Cranberry St., Port Erie Rd., Lincoln
- Consider Other City's Designs



STUDY UPDATE PUBLIC SURVEY RESPONSES Roadway – 293 Pins

- Lane 66
- Traffic Signal 57
- Intersection Design 50
- Connection 17
- Reversible Lane 12
- No Descriptor 91



# **STUDY UPDATE** PUBLIC SURVEY RESPONSES **Roadway Comment Themes:**

- Additional Lanes
- Extend Areas of Two Lanes Longer
- Ice Buildup Along Eastbound Lanes
- Improve Pavement Markings
- Turning Lanes Needed/Extended in Some Areas Other Areas Should Limit Left Turns
- Consider Roundabouts
- Intersection Improvements Cranberry, State, Holland
- Coordinate and Add Turning Signals



STUDY UPDATE PUBLIC SURVEY RESPONSES Aesthetics -247

- Look and Feel 90
- Gateway Treatment 46
- Streetscaping 26
- Improve Lighting 3
- Improve Signage 2
- No Descriptor 80



# STUDY UPDATE PUBLIC SURVEY RESPONSES

**Aesthetics Comment Themes:** 

- Dislike Signs on the Bluff Consider Natural Vegetation
- Change Overall Aesthetics One Design Theme
- Gateway Treatment on Both Ends
- Improve East Side Appearance
- Improve or Remove Walls
- Repair or Remove Dilapidated Buildings
- Maintain View of the Bay



STUDY UPDATE PUBLIC SURVEY RESPONSES Parking & Facilities - 85

- Inadequate Parking 36
- Bike Storage 7
- Remove Parking 6
- Restrict Parking 4
- Permit Parking 1
- No Descriptor 31



## STUDY UPDATE PUBLIC SURVEY RESPONSES Parking & Facilities Comment Themes:

- No More Parking Garages Along the Bayfront
- Not Enough Parking During Events
- Additional Park-and-Rides to Accommodate Events
- Additional Parking on the East Side



STUDY UPDATE PUBLIC SURVEY RESPONSES Transit - 37

- Bus/Trolley Route 12
- Bus Lane 4
- Park-and-Ride 4
- Improve Signage 1
- No Descriptor 16



## STUDY UPDATE PUBLIC SURVEY RESPONSES Transit Comment Themes:

- More Bus/Trolley Routes Consider Seasonal Opportunities and Existing Parking Areas
- Express Routes To Mall, 26<sup>th</sup> St. to Downtown
- New Park-and-Ride Underutilized (Except During Events)



## STUDY UPDATE PUBLIC SURVEY RESPONSES

Other - 87 Pins

### **Other Comment Themes:**

- Additional Hotels Will Add Congestion
- Consider Utilizing Unused Downtown Retail Space
- Take Advantage of the View/Maintain the View
- Avoid Additional Development and Create Greenspace



## STUDY UPDATE

PUBLIC SURVEY RESPONSES In general, how would you like the Bayfront Parkway to function?

- A. 77 High traffic volume and speed serving primarily cross-town traffic with limited vehicle, and bike/ped access.
- B. 203 Moderate traffic volume and speed serving primarily
   Bayfont amenities and the City of Erie with moderate vehicle, and bike/ped access similar to a city street.
- C. **65** Lower traffic volume and speed serving primarily as a downtown street with maximum vehicle, and bike/ped access.
- D. 13 Other



# STUDY PURPOSE AND NEED STUDY PURPOSE

The purpose of the study is to complete an extensive analysis of the corridor (S.R. 4034), utilizing traffic data and involving stakeholders, to identify future projects that will improve safety, improve congestion, increase compliance with applicable current design standards, improve mobility throughout the corridor, and support existing and future economic development initiatives.



# STUDY PURPOSE AND NEED STUDY NEEDS

- Safety concerns exist in the study area.
- There are congestion concerns in the study area.
- There are operational concerns in the study area.
- Alternative modes are lacking parallel to the Bayfront (east/west).
- Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.



# TYPES OF IMPROVEMENTS APPROACH TO IDENTIFYING IMPROVEMENTS Evaluating Improvements

- Study Purpose & Need
- Other Improvement
   Considerations



### TYPES OF IMPROVEMENTS APPROACH TO IDENTIFYING IMPROVEMENTS Improvement Considerations • Accommode

Consistent with Local
 Planning Guidance

(Destination Erie: A Regional Vision, City of Erie Comprehensive Plan: Background Analysis Principles; Erie Waterfront Master Plan)

- Maximize Land Use (Consolidate Parking, Brownfield Utilization, etc.)
- Enhances Aesthetics
- Supports Livability (Work & Play)
- Accommodates Emergency Service/Incident Management Access

 Accommodates Event Access and Mobility

- Enhances Travel Communication/Intelligence
- Minimizes Environmental Impacts

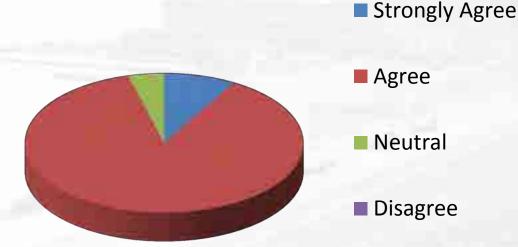
(Property Impacts, Natural Resources, Cultural Resources)

- Ability to Maintain
   Improvement
- Total Project Costs/ Available Funding



# The Study Needs Statements Accurately Reflect the Problems within the Study Area.

- 1. Strongly Agree
- 2. Agree
- 3. Neutral
- 4. Disagree
- 5. Strongly Disagree



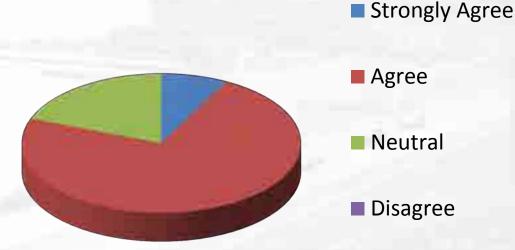
Strongly Disagree





Improvement Considerations: As Presented, the list of Improvement Considerations is Comprehensive and Addresses Other Important Aspects of the Study.

- 1. Strongly Agree
- 2. Agree
- 3. Neutral
- 4. Disagree
- 5. Strongly Disagree



Strongly Disagree



# BREAK



### TYPES OF IMPROVEMENTS

APPROACH TO IDENTIFYING IMPROVEMENTS

- Types of Improvements PAC #2
- Improvement Scenarios PAC #3, Public Meeting
- Preferred/Modified Scenario PAC #4



Improvement Image Survey: This image provides a vision of an Improvement Type that I would like to see along the Bayfront Parkway.

- 1. Strongly Agree
- 2. Agree
- 3. Neutral
- 4. Disagree
- 5. Strongly Disagree

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree





### APPROACH TO IDENTIFYING IMPROVEMENTS

### **IMPROVEMENT IMAGE SURVEY**

**Comments/Discussion** 



## NEXT STEPS

- Website Updates
  - Survey Results
  - Stakeholder Page
- Next PAC Meeting April 14, 2015 at 10:30 a.m.
- Public Meeting



# **QUESTIONS/COMMENTS**



APPENDIX D:

Project Location Map



#### Figure 1Project Location Map

City of Erie | Erie County, Pennsylvania

Miles

1 inch = 1,210 feet

Traffic SignalsRailroad

Legend



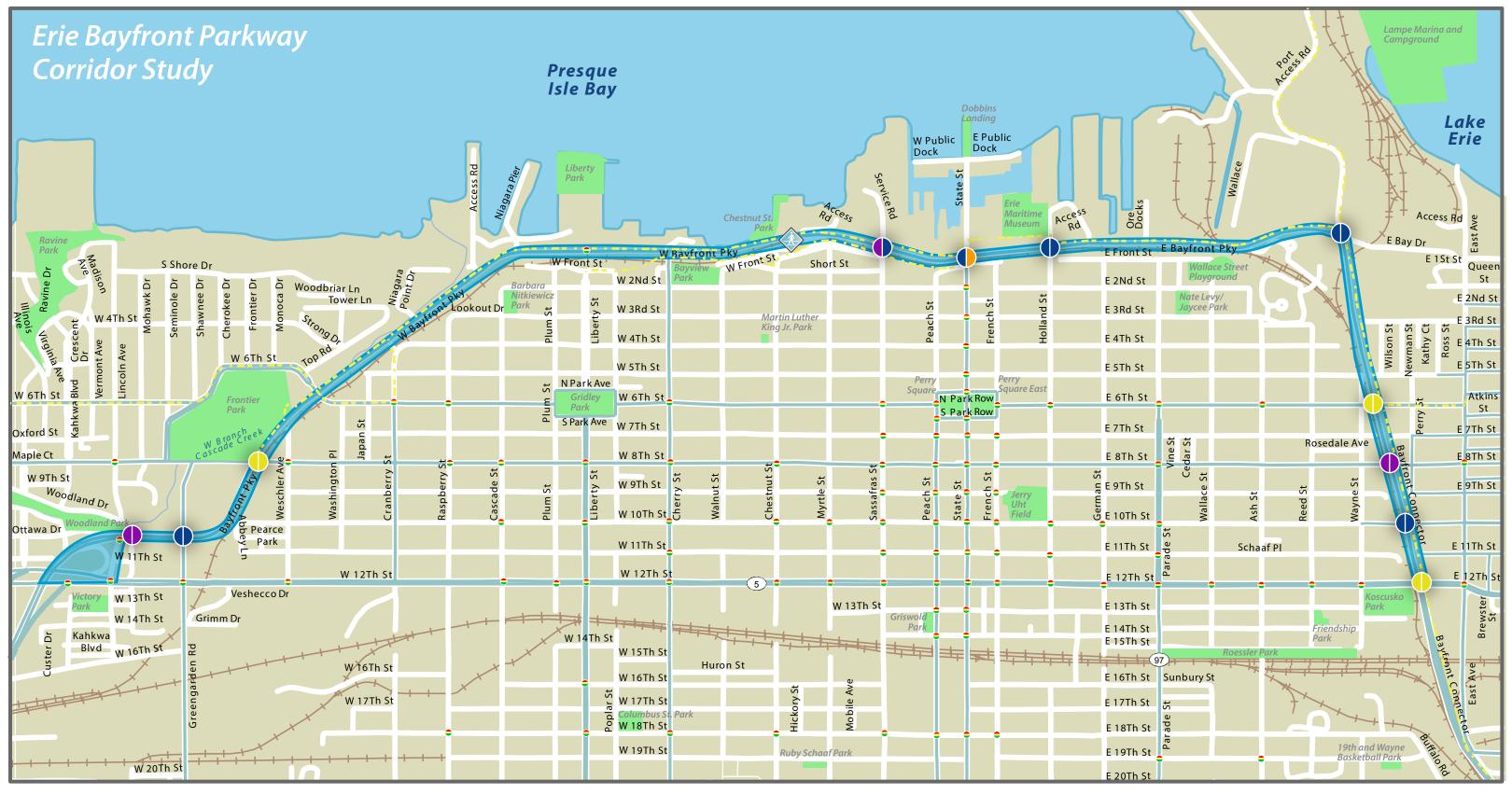
Trails Study Corridor



Parks & Recreation State Road Local Road

#### APPENDIX E:

Existing Level of Service Map



#### Figure 2 | Existing Level of Service

City of Erie | Erie County, Pennsylvania September 30th, 2014 | Source: ESRI 0.5  $\mathcal{I}_N$ 

Miles

Legend Signalized Intersection AM LOS\PM LOS ▲\A A\B ● B\B

1 inch = 1,210 feet



**Traffic Signals** Railroad Trails

Pedestrian Traffic Signals

Study Corridor

Parks & Recreation

State Road

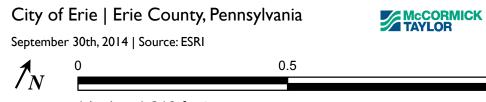
Local Road

#### APPENDIX F:

Proposed Development Map

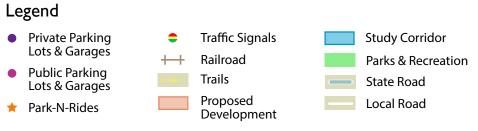


#### Figure 3 | Proposed Development



Miles

1 inch = 1,210 feet



#### APPENDIX G:

Future Levels of Service Map



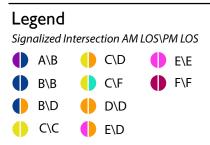
#### Figure 4 | Future Level of Service

City of Erie | Erie County, Pennsylvania September 30th, 2014 | Source: ESRI 0.5  $\mathcal{I}_N$ 

Miles

1 inch = 1,210 feet

#### 2034 No Build with Future Development Traffic





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**Traffic Signals** Railroad Trails Pedestrian

Traffic Signals

Study Corridor

Parks & Recreation

- State Road
- Local Road

APPENDIX H:

Bayfront Parkway Corridor Study Work Plan

# BAYFRONTPARKWAY STUDY

# UNDERSTANDING THE CORRIDOR

# Launch the Project

Define Study Area

- Kick off Meeting with the District
- Traffic Data Collection and O&D Study

# **Establish the Baseline**

- Collect Existing Data and Document
  - Traffic
- Bike/Ped - Transit
- Crash DataTransitPlanningLand Use
- Environmental
- Select Project Advisory
   Committee (PAC) Members

August

September

October

# Conduct Stakeholder Interviews

# **Press Release #1**

Traffic Studies

# **IDENTIFYING A VISION**

Study Area Analysis				Conceptual Alternatives Development			
<ul> <li>Field verify data sensitive feature problem areas of</li> <li>Existing Traffic</li> <li>Draft Purpose</li> </ul>	es, identify or red flags c Analysis	uture Conditions A	e Conditions Analysis		eptual Alternatives	ofinomont	
		<ul> <li>Develop Traffic Synchro Analysis</li> <li>Develop Potential Improvement Concepts</li> <li>Identify Anticipated Transit and Bike/Ped Plans</li> <li>Conclude and summarize the Survey Results</li> <li>Finalize Purpose &amp; Need</li> </ul>			<ul> <li>Refine Conceptua</li> <li>Prepare Cost Esti</li> <li>Identify Potential F</li> </ul>	hceptual Alternatives ost Estimates tential Funding Sources Approach to Prioritization	
November	Decemb	oer January	February	March	April	May	
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# PUBLIC INVOLVEMENT

# DEVELOPING SOLUTIONS





As of 3/16/15

#### APPENDIX I:

#### Bayfront Parkway Corridor Study MetroQuest Results Summary

#### Bayfront Parkway Corridor Study MetroQuest Survey Results

#### INTRODUCTION

A public survey for the Bayfront Parkway Corridor Study was launched on December 19, 2014 and asked participants to identify their priority areas for transportation improvements along the Bayfront Parkway Corridor. The survey was developed using MetroQuest, an online community engagement platform, and was available until February 27, 2015. Nearly 500 participants responded to the survey and left over 1900 comments.

The purpose of the survey was to gather participants' thoughts and opinions on:

- What type of transportation improvements are most needed along the corridor,
- Why those improvements are a priority, and
- Where those improvements should be implemented.

The survey consisted of five screens; the first screen was an introduction to the survey, the second screen asked for participants to rant their top priorities, the third screen asked for priority statements to be rank, the fourth screen had participants drop pins on a map and leave comments about improvements, and the fifth screen ask how the Bayfront Parkway should function overall.

A sample of the survey can be found at: https://bayfrontparkwaystudy-draft.metroquest.com/



## MetroQuest - Screen 2 Priority Ranking

Priority		Overall Ranking
Traffic Flow/Congestion	Improve traffic flow during peak and non-peak hours on the Bayfront Parkway and adjacent alternative routes.	1
Pedestrian and Bicycle Access	Expand trails and paths to the make Central Bayfront area more accessible.	2
Safety	Improve safety for pedestrians, cyclists, and vehicles when operating on the Bayfront Parkway and alternative routes.	3
Speed	Adjust speeds on the Bayfront Parkway and alternative routes.	4
Vehicle Access	nicle Access Improve traffic signals and access to the Bayfront.	
Parking and Facilities	Consider parking locations and add bike racks to the Central Bayfront area to help encourage the use of alternative modes of travel.	6
Transit	Enhance and expand existing travel routes and stops for buses and trollies.	7
Alternative Route Improvements	Improve alternative route conditions and reduce travel times.	

Detail Topic	Detail Statement	Average Ranking*
	TRAFFIC FLOW/CONGESTION	
PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during peak travel times is adequate. (7 a.m. to 9 a.m. and 4p.m. to 6 p.m.)	Disagree (2.03)
NON-PEAK TRAVEL TIME	Traffic flow on the Bayfront Parkway during non-peak travel times is adequate.	Agree (3.73)
EVENT TRAVEL	Traffic flow on the Bayfront Parkway during events is adequate.	Disagree (1.93)
ALTERNATE ROUTE TRAVEL	Traffic flow on Alternate Routes (such as 12th Street) during peak travel times is adequate.	Netrual (2.59)
ALTERNATE ROUTE TRAFFIC SIGNALS	Coordination of traffic signals along 12th Street is adequate.	Disagree (2.33)
FREQUENT COMMENTS	<ul> <li>Add left turning lanes and left arrow to traffic lights</li> <li>Increase the Parkway to four lanes</li> <li>Improve traffic signals</li> <li>Events cause considerable traffic on the Bayfront Parkway</li> </ul>	

	ALTERNATIVE ROUTE IMPROVEMENTS	
AVOID OTHER ROUTES	I use the Bayfront Parkway to avoid other travel routes.	Agree _(3.51)
AVOID BAYFRONT PEAK TRAVEL TIME FOR ALT ROUTES NON-PEAK TRAVEL TIME FOR ALT ROUTES	I use other travel routes to avoid the Bayfront Parkway. It is quicker to travel the Bayfront Parkway than to use other travel routes during peak travel hours. It is quicker to travel the Bayfront Parkway than to use other travel routes during non-peak travel times.	Disagree (1.48) Netrual (2.50) Agree (3.94)
REMOVE BAYFRONT TRAFFIC	Alternate travel routes should be improved to remove traffic from the Bayfront Parkway.	Agree (3.74)
FREQUENT COMMENTS	<ul> <li>Other east-west routes need to be developed</li> <li>Enhance 12st, 6th, 26th and 38th Streets</li> </ul>	

Detail Topic	Detail Statement	Average Ranking*
	PEDESTRIAN AND BICYCLE ACCESS	
WESTSIDE ACCESS	Bicycle and Pedestrian connections from the Westside neighborhoods to the Bayfront are adequate.	Netrual (2.68)
EASTSIDE ACCESS	Bicycle and Pedestrian connections from the Eastside neighborhoods to the Bayfront are adequate.	Disagree (2.18)
DOWNTOWN ACCESS - PED AND BIKE	Bicycle and Pedestrian connections from the downtown to the central Bayfront area are adequate.	Disagree (2.31)
NORTHSIDE	Connections are adequate along the Northside of the Bayfront.	Netrual (2.70)
FREQUENT COMMENTS	<ul> <li>More crossings, Sidewalks and paths needed</li> <li>Pedestrian bridges/tunnels</li> <li>Better signage</li> <li>Add bike lanes</li> <li>Improved winter maintenance on multi-use paths</li> <li>E. Front Street needs a paved path</li> <li>Crossings at State Street, Cranberry Street, East 6th Street are dangerous</li> <li>Improved eastside connections</li> </ul>	

	SAFETY	
WALKING/BIKING IN AREA	I feel safe walking/biking along existing ped/bike facilities in the Bayfront area.	Netrual (2.97)
WALKING/BIKING ACROSS	I feel safe walking/biking across the Bayfront Parkway.	Disagree (2.00)
DRIVING BAYFRONT	I feel safe driving along the Bayfront Parkway.	Agree (3.66)
TURNING ON/OFF	I feel safe turning onto/off of the Bayfront Parkway to/from existing access points.	Netrual (2.98)
FREQUENT COMMENTS	<ul><li>Intersections are unsafe for pedestrians and bicyclists</li><li>Better/increased signage</li></ul>	

Detail Topic	Detail Statement	Average Ranking*
	SPEED	
LOWER BAYFRONT SPEED	The Speed needs to be lowered on the Bayfront Parkway to calm traffic.	Disagree (1.97)
INCREASE BAYFRONT SPEED	The speed should be increased on the Bayfront Parkway.	Netrual (2.99)
ALTERNATE ROUTE SPEED	The speed on alternative routes should be increased to encourage use.	Netrual (2.97)
NO CONCERN	Speed is not an issue on the Bayfront Parkway.	Disagree (2.39)
SAFETY CONCERN	Speed is a safety concern on the Bayfront Parkway.	Netrual (2.91)
FREQUENT COMMENTS	<ul> <li>Speed limits along the Bayfront need to be better enforced</li> <li>The current speed is appropriate</li> </ul>	

	VEHICLE ACCESS	
ROADWAY CONNECTIONS	Additional roadway connections (or service roads) within the central Bayfront area are needed.	Netrual (2.86)
ACCESS POINTS	The number of access points along the Bayfront Parkway is adequate.	
TRAFFIC SIGNALS	Improvements to existing traffic signals are needed to improve access.	Agree (3.52)
DOWNTOWN ACCESS - VEHICLE	Access to Downtown Erie from the Bayfront is adequate.	Netrual (3.13)
EASE OF ACCESS	It is easy to access the Bayfront Parkway from connecting roadways.	Netrual (2.83)
FREQUENT COMMENTS	<ul> <li>Add an access road to the north of the Parkway</li> <li>Improvements to the intersection at Cranberry Street</li> <li>Left turning lanes</li> </ul>	

\* All rankings rounded to the nearest whole number.

Detail Topic	Detail Statement	Average Ranking*
	PARKING AND FACILITIES	
CENTRAL BAYFRONT AREA	There are currently plenty of parking spaces in the central Bayfront area.	Disagree (2.41)
MORE GARAGES	Additional parking garages should be built to accommodate development in the central Bayfront area.	Netrual (3.02)
BICYCLE STORAGE	There are plenty of bicycle storage options.	Disagree (2.25)
PARKING NEAR TRANSIT	There are plenty of parking spots available near major transit links.	Netrual (2.85)
MOVING PEOPLE	More emphasis should be placed on alternative means to move people within the central Bayfront area.	Agree (3.71)
FREQUENT COMMENTS	<ul> <li>No additional parking garages on the Bayfront</li> <li>Bike share</li> </ul>	

	TRANSIT	
CURRENT ROUTES	The current bus routes meet all of my transit needs.	Netrual (2.64)
ADD CENTRAL ROUTES	Additional routes are needed to connect the Central Bayfront area and Downtown.	Netrual (3.11)
ADD WESTSIDE ROUTES	Additional routes are needed to connect the Central Bayfront area and Westside neighborhoods.	Netrual (3.45)
ADD EASTSIDE ROUTES	Additional routes are needed to connect the Central Bayfront area and Eastside neighborhoods.	Netrual (3.42)
PARK-AND-RIDE	Additional park-and-ride facilities should be considered.	Netrual (3.12)
FREQUENT COMMENTS	<ul> <li>Expand bus routes and times</li> <li>Need to encourage more people to use public transit</li> </ul>	



#### MetroQuest - Screen 4 - Map Comments

#### Ped/Bike - 423 pins

- Crosswalk Safety 138
- Connection 70
- Buffer from Cars 48
- Improve Signage 18
- Improve Lighting 14
- No Descriptor 135

#### Comments Themes:

- Add Pedestrian Bridge or Tunnel at State St.
- Poor Lighting/Dark Areas
- More Signs to Alert Drivers
- More Time to Cross Large Intersections
- Slow Traffic Down
- Connect, Pave, and Repair Facilities
- Crosswalks Improvements State St., Waterworks, Liberty St., Cranberry St., Port Erie Rd., Lincoln
- Consider Other City's Designs

#### Roadway - 293 pins

- Lane 66
- Traffic Signal 57
- Intersection Design 50
- Connection 17
- Reversible Lane 12
- No Descriptor 91

#### Comment Themes:

- Additional Lanes
- Ice Buildup Along Eastbound Lanes
- Improve Pavement Markings
- Turning Lanes Needed/Extended in Some Areas Other Areas Should Limit Left Turns
- Consider Roundabouts
- Intersection Improvements Cranberry, State, Holland
- Coordinate and Add Turning Signals



#### Aesthetics – 247 Pins

- Look and Feel 90
- Gateway Treatment 46
- Streetscaping 26
- Improve Lighting 3
- Improve Signage 2
- No Descriptor 80

#### Comment Themes:

- Dislike Signs on the Bluff Consider Natural Vegetation
- Change Overall Aesthetics One Design Theme
- Gateway Treatment on Both Ends
- Improve East Side Appearance
- Improve or Remove Walls
- Repair or Remove Dilapidated Buildings
- Maintain View of the Bay

Parking/Facilities - 85 pins

- Bike Storage 7
- Inadequate Parking 36
- Permit Parking 1
- Remove Parking 6
- Restrict Parking 4
- No Descriptor 31

#### Comment Themes:

- No More Parking Garages Along the Bayfront
- Not Enough Parking During Events
- Additional Park-and-Rides to Accommodate Events
- Additional Parking on the East Side



#### Transit – 37 pins

- Bus/Trolley Route 12
- Bus Lane 4
- Park-and-Ride 4
- Improve Signage 1
- No Descriptor 16

#### Comment Themes:

- More Bus/Trolley Routes Consider Seasonal Opportunities and Existing Parking Areas
- Express Routes To Mall, 26th St. to Downtown
- New Park-and-Ride Underutilized (Except During Events)

#### Other - 87 pins

Comment Themes:

- Additional Hotels Will Add Congestion
- Consider Utilizing Unused Downtown Retail Space
- Take Advantage of the View/Maintain the View
- Avoid Additional Development and Create Greenspace

To view the map with all of the pins and comments, please visit: www.bayfrontparkwaystudy.com/surveycomments.html.

MetroQuest - Screen 5 - Final Question

## In general, how would you like the Bayfront Parkway to function?

High traffic volume and speed serving primarily cross-town traffic with limited vehicle, and bike/ped access

- 21.5% of residents chose this option (checked 77 times)
- Additional lanes
- Increase speed
- Focus on traffic flow first
- Improved traffic signals
- Turn the Parkway into a Highway
- Pedestrian Bridges Keep pedestrians and bicycle away from the road
- Limit access
- Add a local access road to help limit stops along the parkway

Moderate traffic volume and speed serving primarily Bayfont amenities and the City of Erie with moderate vehicle, and bike/ped access

- 57% of Residents chose this option (checked 203 times)
- Pedestrian bridges
- Reversible lane
- Make the area a 'big city attraction'
- Improve Traffic Flow and signal timing
- Replace signals with Roundabouts
- Aesthetics buffer
- Improved Trolley system
- Express Bus Routes
- Repurpose RR tunnels to be used by ped/bike
- Increase alternate modes of transit
- Increase access from the Eastside
- Add turning lanes
- Extend Park and Ride Hours and encourage more use

Lower traffic volume and speed serving primarily as a downtown street with maximum vehicle, and bike/ped access

- 18% of residents chose this option (checked 65 times)
- Pedestrian bridges
- Light rail/street cars
- Better police speed
- Pedestrian centric
- Tunnel the highway
- Remove parking in the Bayfront and use for commercial development instead
- Better connection to Presque Isle
- Improve and add green space
- Roundabouts
- Ferry service/water service

#### Other

- 3.6% of Residents chose this option (checked 13 times)
- Make main focus bike and ped traffic and more bike/ped access closer to the water
- Enhance connections to local neighborhoods

Economic Development suggestions

- Stop building hotels
- Waterfront shopping
- Public market (Ex: Seattle or 78th Street Studios in Cleveland)
- No more parking garages

## APPENDIX J:

## Bayfront Parkway Corridor Study Purpose and Need Memo



## SUMMARY OF PURPOSE AND NEED - DRAFT

February 19, 2015

#### Introduction

This memo describes the methodologies utilized by the Pennsylvania Department of Transportation (PennDOT) District 1-0 to establish the purpose and needs associated with the Bayfront Parkway Study located in Erie, PA. The needs analysis has been prepared in accordance with Title 23 Code of Federal Regulations (CFR) Part 771, as well as PennDOT Publication 319, *Needs Study Handbook*, and Publication 10, Design Manual 1, *Transportation Program Development and Project Delivery Process*.

#### **Study Area Description**

The study is located along the Bayfront Parkway in the City of Erie, Erie County, Pennsylvania. **See Figure 1, Project Location Map.** The Bayfront Parkway (State Route (S.R.) 4034) begins at Interstate 79 on the west side of Erie, PA and connects to the Bayfront Connector and Interstate 90 on the east side of the city. The study area starts generally at W. 12th Street and follows the Bayfront Parkway to E. 12th Street. The corridor varies from 4 lanes to 2 lanes; however, the majority of the study area consists of 2 through lanes with a center left turn lane. There are approximately twenty intersections, with eleven (11) that feature traffic signals, within the study corridor. A series of bicycle trails, hiking trails, and railroad tracks run along the length of the Bayfront Parkway. Some of the trails are interconnected with each other while others only serve a small section of the Parkway. Additionally, there are currently five proposed developments along the corridor that could potentially affect the number of people traveling to and from the Bayfront in the coming years.

#### **Study Purpose**

The purpose of the study is to complete an extensive analysis of the corridor (S.R. 4034), utilizing traffic data and involving stakeholders, to identify future projects that will improve safety, improve congestion, increase compliance with applicable current design standards, improve mobility throughout the corridor, and support existing and future economic development initiatives.

The identified needs of this study are:

#### 1. Safety concerns exist in the study area.

There were 246 crashes within the study corridor over a 5-year period from January 1, 2009 to December 31, 2013. 80% of the crashes were located at an intersection. Crashes occurring at the intersections primarily consisted of angle and rear-end type of crashes. The crash rate between the Niagara Pier and the Boat Launch is approximately three (3) times the state average for similar types of roadways. Four (4) fatalities or major injuries occurred between East 6th Street and East 12th street. Reducing the number of documented crashes and increasing safety at pedestrian crossings was determined to be important to stakeholders.



According to the MetroQuest survey results obtained as part of this study, the majority of those taking the survey did not feel safe walking/biking across the Bayfront Parkway.

#### 2. There are congestion concerns in the study area.

Currently, traffic analyzed in the 2014 based year is experiencing Level of Service (LOS) D during the existing AM peak hour at the intersection of Bayfront and State Street. Future 2034 no-build traffic projections with anticipated development along the Bayfront increase delays to LOS F for the Bayfrontand State Streetintersection and increase travel times throughout the corridor.

LOS is an informal way to understand how well the transportation system functions given current land configurations and traffic volumes. LOS A indicates free flow operations with little interference from other vehicles, and LOS F indicates extremely congested conditions where travel demand exceeds the capacity of the facility (See Photo 1).

#### LOS A

LOS B

LOS C



Represents the best operating conditions and is considered free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.

### LOS D



Represents traffic operations approaching unstable flow with high passing demand and passing capacity near zero, characterized by drivers being severely restricted in maneuverability.

#### LOS E



Represents unstable flow near capacity. LOS E often changes to LOS F very quickly because of

disturbances (road conditions, accidents, etc.) in traffic flow.

#### LOS F



**Represents the worst conditions** with heavily congested flow and traffic demand exceeding capacity, characterized by stop-and-go waves, poor travel time, low comfort and convenience, and increased accident exposure.

Represents a constrained constant flow below speed limits, with additional attention required by the drivers to maintain safe operations. Comfort and convenience levels of the driver decline noticeably.

by others.

Photo 1: Level of Service

The Bayfront Place Concept Plan Report, April 2012, prepared by the Erie County Convention Center Authority states that the Bayfront Parkway is congested during peak hours. This report is available on this study's website www.bayfrontparkwaystudy.com for review. The report identifies a realistic plan for redevelopment of the former GAF Erie property (Bayfront Place) located along Sassafras Street and the Bayfront Parkway. The report says that this congestion may make access and egress to the Bayfront Place site difficult.



MetroQuest survey results that were obtained as part of this study show that, the majority of those taking the survey felt that traffic flow/congestion during peak and non-peak hours on the Bayfront Parkway and adjacent alternative routes could be improved.

#### **Future Projections**

The congestion problems are only anticipated to worsen due to economic development initiatives. Future traffic projections were based upon a background growth rate and the use of development plans and the resulting projected traffic growth from the ITE Trip Generation Manual (9th Edition). The 2034 Build year projections with anticipated development show increased traffic volumes and delays at each intersection within the corridor.

#### 3. There are operational concerns in the study area.

The intersection at Bayfront and W 8th Street heading north merges to one lane with the right lane only able to turn onto W 8th Street. Traffic has been observed stacking on the through lane with vehicles using the right lane to merge ahead of this queue and not making the required right turn. This queue has been contributing to a bottleneck at this intersection and increasing delays heading northbound and for turns onto W 8th Street. Project stakeholder and interviewees revealed a number of concerns about the function of this intersection and the right turn lane not being an effective way to move traffic through this intersection.

Signals at Bayfront, State Street, and Holland Street have left turn lanes along the Bayfront Parkway, though not separate signal phases for the left turn movement. The observations of these signals and input from the stakeholders has indicated this is an issue during the peak hours with traffic not being able to make a left turn with limited gaps in the opposing traffic.

According to MetroQuest survey results obtained as part of this study, the majority of those taking the survey felt that improvements to existing traffic signals are needed to improve access. The respondents also felt that there is a lack of bicycle storage options.

It is likely that future economic development initiatives will worsen the exist traffic operations of the corridor. As traffic volumes associated with the development increase, the ability to efficiently travel through the corridor will be difficult at intersections with current operational concerns. This will result in greater delays throughout the corridor.

Interviewed stakeholders have concerns that future economic development will limit access to convenient and affordable parking within the central Bayfront Parkway corridor, especially near the hospital.

#### 4. Alternative modes are lacking parallel to the Bayfront (east/west).

Stakeholders have indicated that there is a lack of pedestrian/bicycle connection and access points from Holland Street to 6th Street and from State Street to Cranberry Street. They also noted that pedestrian access at State Street needs improved.

# BAYFRONTPARKWAY STUDY

According to the Erie Waterfront Master Plan Summary Report, March 2009, prepared by the Erie-Western Pennsylvania Port Authority, "Many of the well-used public, civic and recreational spaces and facilities along the Bayfront are difficult to reach or are disconnected from other areas." The report also stated that, "East to west connections to either side of State Street are poorly designed and confusing at best." The report describes that the under-developed areas of the Bayfront lack proper pedestrian and even vehicular circulation options. The report is available on this study's website at <u>www.bayfrontparkwaystudy.com</u> for review.

The Bayfront Place Concept Plan Report, April 2012, indicated that, "There are limited vehicular and pedestrian access points between the Site and the Bayfront Parkway that will influence internal site circulation and may prompt signalization modifications along the Bayfront Parkway".

Destination Erie's, Regional Vision, *Unlocking the Bayfront's Full Potential*, developed 10 principles to guide the successful development of Erie's Bayfront. This report lists connecting the Central Bayfront to the East and West Bay and implementing connections within the Central Bayfront as important to the successful development of the Bayfront. They believe that a "Bayfront Loop" is missing, water routes are missing, and there are "gaps" at the Presque Isle hinge, State Street, Bayfront, and at the Channel Gap.

According to MetroQuest survey results obtained as part of this study, the majority of those taking the survey felt that bicycle and pedestrian connections from the Eastside neighborhoods to the Bayfront were not adequate. The majority of those taking the survey also felt that more emphasis should be placed on alternative means to move people within the Central Bayfront area, as related to parking and facilities.

## 5. Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

The Bayfront Parkway currently acts as a barrier for pedestrians and bicyclists between the City of Erie to the south and the Bayfront area along the north. There is a desire from the stakeholders to make the Bayfront area a connected part of downtown for vehicles, pedestrians, and bicycles.

The Erie Waterfront Master Plan Summary Report, March 2009, prepared by the Erie-Western Pennsylvania Port Authority, notes that "Neither pedestrian nor vehicular circulation routes have convenient north-south connections between the city and the Bayfront." The report goes on to say, "Pedestrian safety is also a concern between the city and the surrounding neighborhoods on the bluff and the Bayfront due to the heavy vehicular use of the Bayfront Parkway and the lack of well-designed cross-walks." The Erie Waterfront Master Plan Summary Report is available on this study's website at <u>www.bayfrontparkwaystudy.com</u> for review.

Destination Erie's, Regional Vision, *Unlocking the Bayfront's Full Potential*, lists connecting the Central Bayfront to Downtown as important to the successful development of Erie's Bayfront. They believe that all connections could be improved, especially at State Street.



The MetroQuest survey results that were gathered by this study showed that the majority of those taking the survey felt that bicycle and pedestrian connections from the downtown to the Central Bayfront area were not adequate.

#### References:

Erie County Convention Center Authority, April 2012, Completing the Bayfront, Bayfront Place Concept Plan Report

Domokur Architects, March 2009, Erie Waterfront Master Plan Summary Report, Erie-Western Pennsylvania Port Authority

Destination Erie's, Regional Vision, Unlocking the Bayfront's Full Potential

Bayfront Parkway Corridor Study, September 2014, *Stakeholder Interview Notes*, Pennsylvania Department of Transportation

Bayfront Parkway Corridor Study, January 2015, *MetroQuest Survey Results*, Pennsylvania Department of Transportation

APPENDIX K:

Approach to Identifying Improvements

## **APPROACH TO IDENTIFYING IMPROVEMENTS:**

As the Study progresses, potential improvement alternatives will be evaluated based on the Study Needs and the Improvement Considerations. The development of the needs and the identification of the Improvement Considerations is based on technical information and analysis, and input from stakeholder outreach conducted to date.

#### **Study Needs:**

The Bayfront Parkway Corridor Study Needs Analysis was completed in accordance with the guidelines set forth in the Pennsylvania Department of Transportation Needs Study Handbook for the Transportation Project Development Process (Publication Number 319) dated December 2010. The needs describe a problem in the study area and, to the extent possible, explain the underlying causes of those problems.

- Safety concerns exist in the study area.
- There are congestion concerns in the study area.
- There are operational concerns in the study area.
- Alternative modes are lacking parallel to the Bayfront (east/west).
- Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

#### Improvement Considerations:

Improvement considerations are design elements to consider when developing improvement options to address the project needs. These elements are based upon input provided by the PAC and public, existing data collected, specific site conditions, and cost constraints.

- Consistent with Local Planning Guidance (Destination Erie: A Regional Vision, City of Erie Comprehensive Plan: Background Analysis Principles; Erie Waterfront Master Plan)
- Maximize Land Use (Consolidate Parking, Brownfield Utilization, etc.)
- Enhances Aesthetics
- Supports Livability by Improving Pedestrian and Bicycle Access (Work & Play)
- Accommodates Emergency Service/Incident Management Access
- Accommodates Event Access and Mobility
- Enhances Travel Communication/Intelligence
- Minimizes Environmental Impacts (Property Impacts, Natural Resources, Cultural Resources)
- Ability to Maintain Improvement
- Total Project Costs/Available Funding

## APPENDIX L:

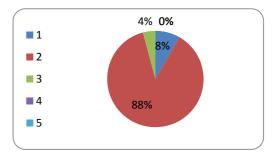
## Bayfront Parkway Corridor Study PowerPoint Question Results

**Result By Question** 

#### Presentation Name: PAC meeting2\_V7.pptx Created on: 3/10/2015 3:19:06 PM

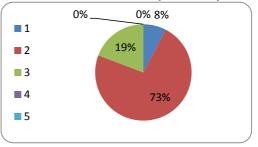
#### 1) The Study Needs Statements Accurately Reflect the Problems within the Study Area.

	Responses		
	(Percent)	(Count)	Answer Options
	8%	2	1) Strongly Agree
	88%	21	2) Agree
	4%	1	3) Neutral
	0%	0	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	24	Comments:



2) Improvement Considerations: As Presented, the list of Improvement Considerations is Comprehensive and Addresses Other Important Aspects of the Study.

	Responses		
	(Percent)	(Count)	Answer Options
	8%	2	1) Strongly Agree
	73%	19	2) Agree
	19%	5	3) Neutral
	0%	0	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	26	Comments:



## APPENDIX M:

## Bayfront Parkway Corridor Study Improvement Image Survey

## **Overhead Bike/Ped Facility**



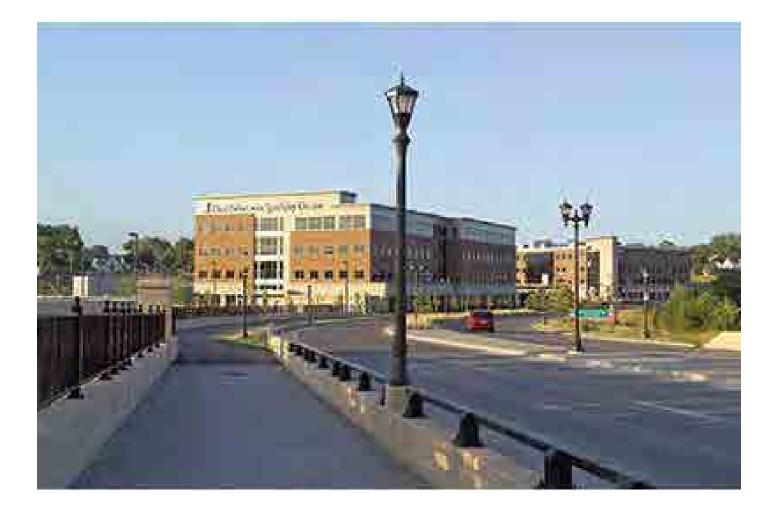
# **Overhead Bike/Ped Facility**



## **Overhead Bike/Ped Facility**



## Pedestrian/Bicycle Buffer



# Pedestrian/Bicycle



# Pedestrian/Bicycle



# Pedestrian/Bicycle



## **Crosswalk Treatment**



## **Crosswalk Treatment**



# Crosswalk Signage



# Crosswalk Signage



# Midblock Crossing



# **Bicycle Storage**



# **Bicycle Storage**



# Bicycle Signage



#### Roundabout



# 2 Lane Parkway



#### 4 Lane Highway



# 4 Lane Parkway



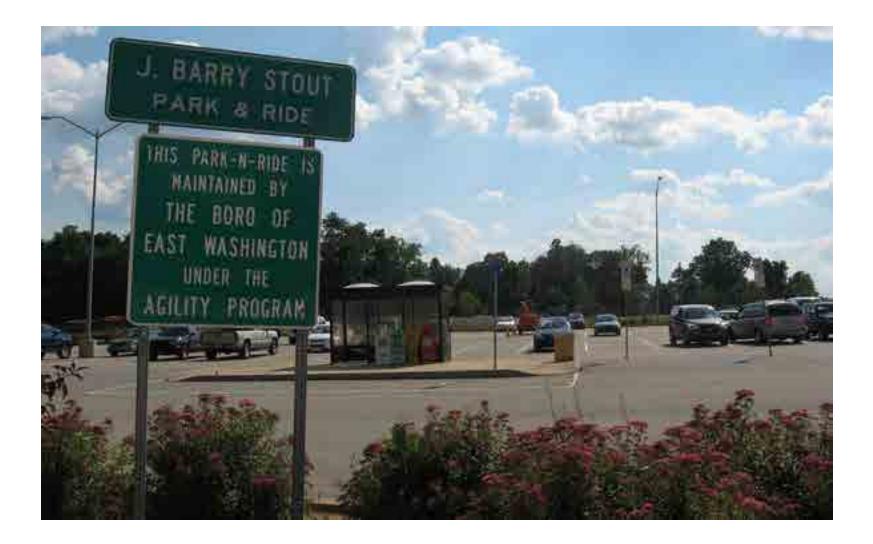
#### **Reversible Lane**



#### Intersection Improvement



#### Park & Ride



#### **Bus Shelters**



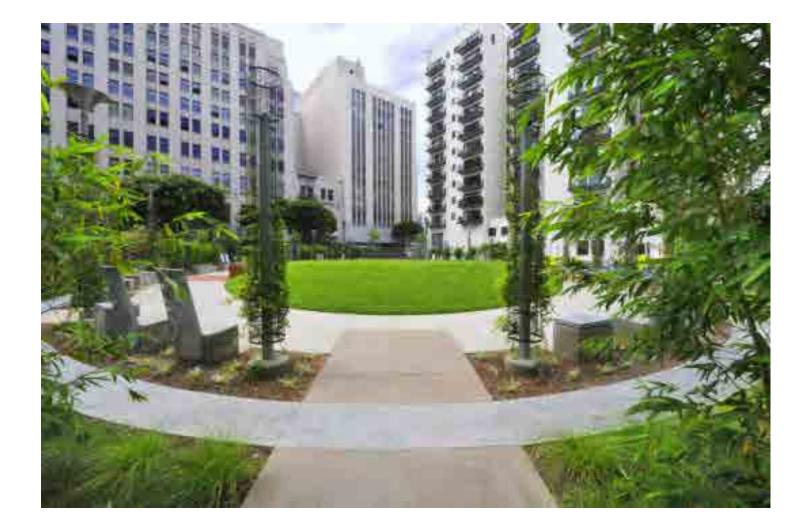
#### Bus Lane



#### **Real-Time Transit Info**



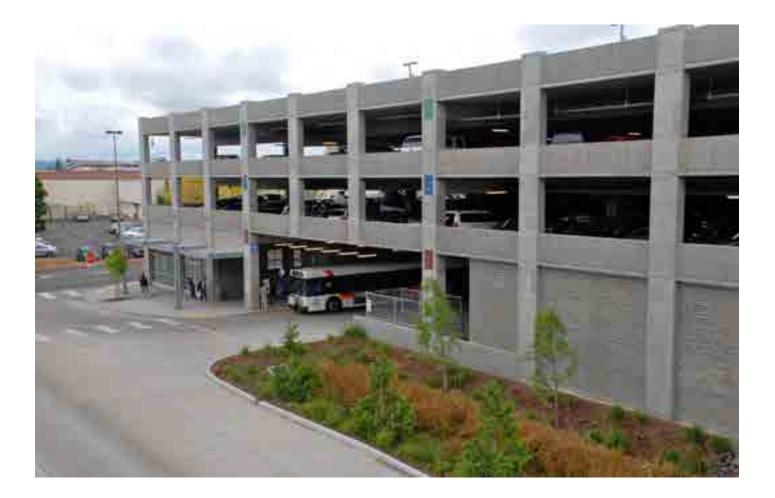
# **Parking Reclamation**



# **On-street Parking**



#### **Additional Parking Facilities**



#### Aesthetics



#### Aesthetics



# **Lighting Aesthetics**



#### Improved Signage



# Gateway Treatment



#### **Bike Share**



# Segways



#### Water Taxi



# People Mover



#### Variable Message Signs



#### **Artistic Wall Treatments**



#### Walkway down the Bluff



#### APPENDIX N:

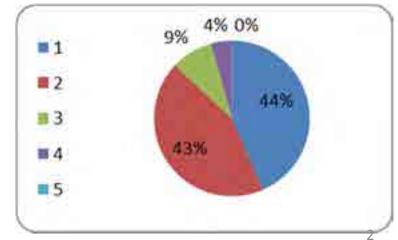
#### Bayfront Parkway Corridor Study Improvement Image Survey Results

# Improvement options where audience response was mostly Agree or Strongly Agree

#### **Overhead Bike/Ped Facility**



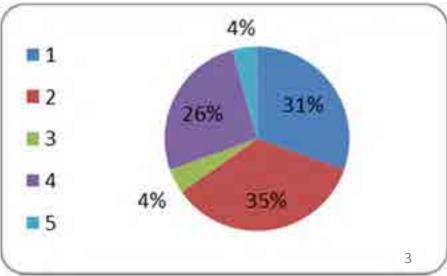
1) This is an Improvement Type that I would like to see. Responses (Percent) (Count) **Answer Options** 43% 1) Strongly Agree 10 43% 2) Agree 10 9% 3) Neutral 2 4% 4) Disagree 1 0% 5) Strongly Disagree 0 Comments: 23 Totals 100%



#### **Overhead Bike/Ped Facility**



2) This is an Improvement Type that I would like to see.						
	Respor	nses				
	(Percent)	(Count)	Answer Options			
	30%	7	1) Strongly Agree			
	35%	8	2) Agree			
	4%	1	3) Neutral			
	26%	6	4) Disagree			
	4%	1	5) Strongly Disagree			
Totals	100%	23	Comments:			



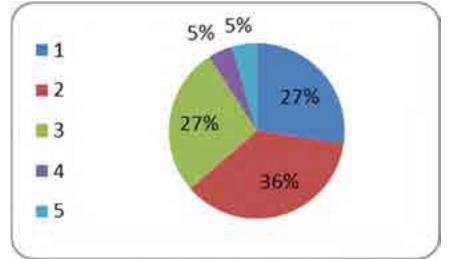
# Pedestrian/Bicycle Buffer

A) This is an Incompany and Trues



4) This is an Improvement Type that I would like to see.				
	Responses			
	(Percent)	(Count)	Answer Options	
	27%	6	1) Strongly Agree	
	36%	8	2) Agree	
	27%	6	3) Neutral	
	5%	1	4) Disagree	
	5%	1	5) Strongly Disagree	
Totals	100%	22	Comments:	

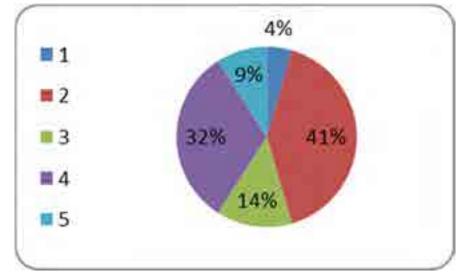
والألبان ويتباعه والالمعال



# Pedestrian/Bicycle



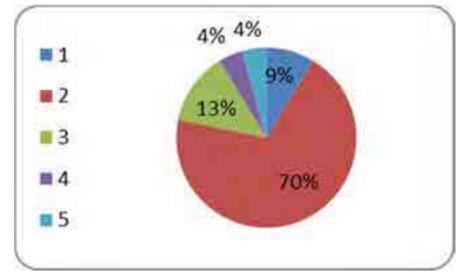
5) This is an Improvement Type that I would like to see.				
	Responses			
	(Percent )	(Count)	Answer Options	
	5%	1	1) Strongly Agree	
	41%	9	2) Agree	
	14%	3	3) Neutral	
	32%	7	4) Disagree	
	9%	2	5) Strongly Disagree	
Totals	100%	22	Comments:	



# **Crosswalk Treatment**



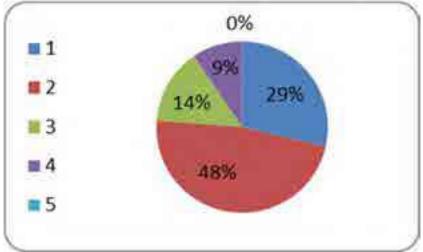
9) This is an Improvement Type that I would like to see.				
	Respo	nses		
	(Percent)	(Count)	Answer Options	
	9%	2	1) Strongly Agree	
	70%	16	2) Agree	
	13%	3	3) Neutral	
	4%	1	4) Disagree	
	4%	1	5) Strongly Disagree	
Totals	100%	23	Comments:	



# Crosswalk Signage



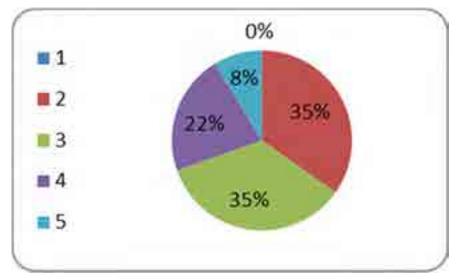
11) This is an Improvement Type that I would like to see.				
	Responses			
	(Percent)	(Count)	Answer Options	
	29%	6	1) Strongly Agree	
	48%	10	2) Agree	
	14%	3	3) Neutral	
	10%	2	4) Disagree	
	0%	0	5) Strongly Disagree	
Totals	100%	21	Comments:	



# Midblock Crossing



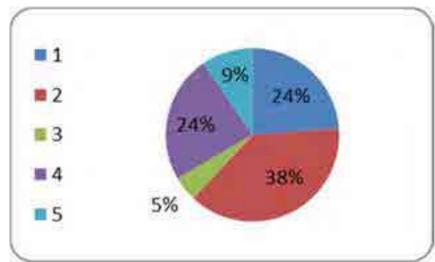
12) This is an Improvement Type that I would like to see.				
	Responses			
	(Percent) (Count)		Answer Options	
	0%	0	1) Strongly Agree	
	35%	8	2) Agree	
	35%	8	3) Neutral	
	22%	5	4) Disagree	
	9%	2	5) Strongly Disagree	
Totals	100%	23	Comments:	



## **Bicycle Storage**



13) This is an Improvement Type that I would like to see.				
	Respo	nses		
	(Percent)	(Count)	Answer Options	
	24%	5	1) Strongly Agree	
	38%	8	2) Agree	
	5%	1	3) Neutral	
	24%	5	4) Disagree	
	10%	2	5) Strongly Disagree	
Totals	100%	21	Comments:	

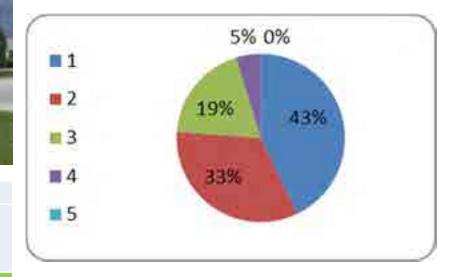


## **Bicycle Signage**



#### 15) This is an Improvement Type that I would like to see.

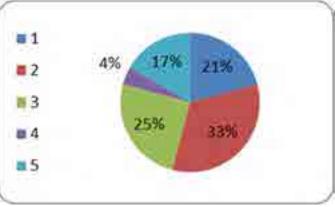
	Responses		
	(Percent)	(Count)	Answer Options
	43%	9	1) Strongly Agree
	33%	7	2) Agree
	19%	4	3) Neutral
	5%	1	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	21	Comments:



#### Roundabout



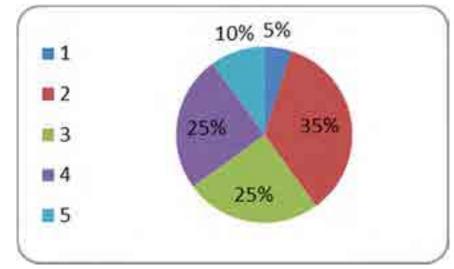
	Respo	onses	
	(Percent)	(Count)	Answer Options
	21%	5	1) Strongly Agree
	33%	8	2) Agree
	25%	6	3) Neutral
	4%	1	4) Disagree
	17%	4	5) Strongly Disagree
Totals	100%	24	Comments:



## Park & Ride



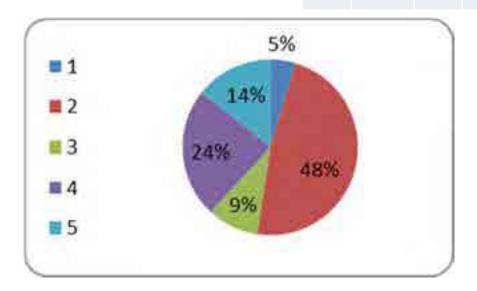
22) Thi	22) This is an Improvement Type that I would like to see.						
	Respor	nses					
	(Percent) (Count)		Answer Options				
	5%	1	1) Strongly Agree				
	35%	7	2) Agree				
	25%	5	3) Neutral				
	25%	5	4) Disagree				
	10%	2	5) Strongly Disagree				
Totals	100%	20	Comments:				



#### **Bus Shelters**



23) This	13) This is an Improvement Type that I would like to see.					
	Respo	nses				
	(Percent)	(Count)	Answer Options			
	5%	1	1) Strongly Agree			
	48%	10	2) Agree			
	10%	2	3) Neutral			
	24%	5	4) Disagree			
	14%	3	5) Strongly Disagree			
Totals	100%	21	Comments:			



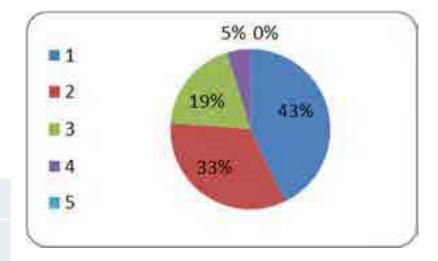
#### **Real-Time Transit Info**



#### 25) This is an Improvement Type that I would like to see.

Responses

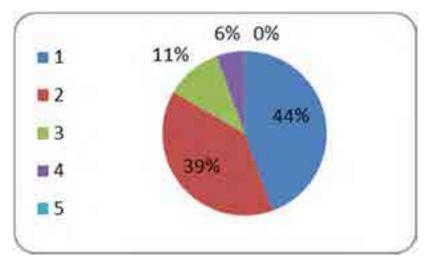
	(Percent)	(Count)	Answer Options
	43%	9	1) Strongly Agree
	33%	7	2) Agree
	19%	4	3) Neutral
	5%	1	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	21	Comments:



#### Aesthetics



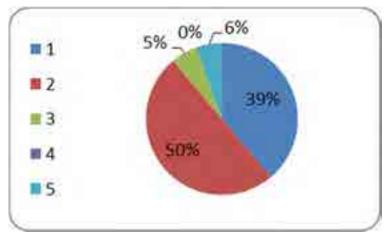
	Responses		
	(Percent)	(Count)	Answer Options
	44%	8	1) Strongly Agree
	39%	7	2) Agree
	11%	2	3) Neutral
	6%	1	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	18	Comments:



## **Lighting Aesthetics**



	Responses		
	(Percent)	(Count)	Answer Options
	39%	7	1) Strongly Agree
	50%	9	2) Agree
	6%	1	3) Neutral
	0%	0	4) Disagree
	6%	1	5) Strongly Disagree
Totals	100%	18	Comments:



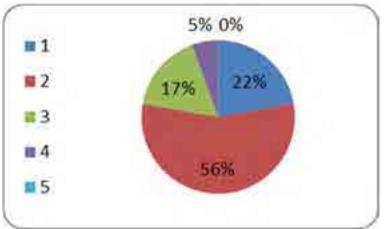
# Improved Signage



32) This is an Improvement Type that I would like to see.

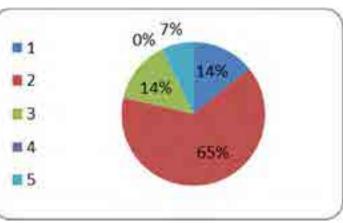
#### Responses

	(Percent)	(Count)	Answer Options
	22%	4	1) Strongly Agree
	56%	10	2) Agree
	17%	3	3) Neutral
	6%	1	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%		Comments:



### Gateway Treatment

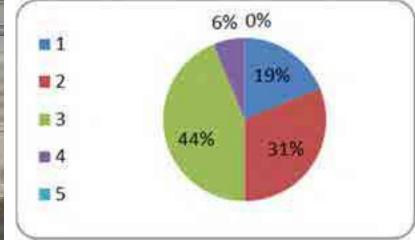




	Responses		
	(Percent)	(Count)	Answer Options
	14%	2	1) Strongly Agree
	64%	9	2) Agree
	14%	2	3) Neutral
	0%	0	4) Disagree
	7%	1	5) Strongly Disagree
Totals	100%	14	Comments:

#### **Bike Share**



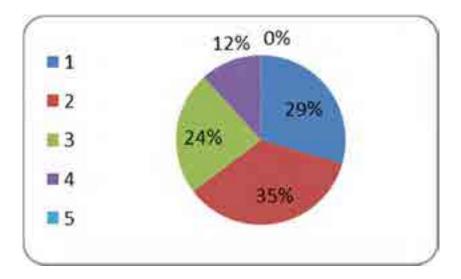


	Responses		
	(Percent)	(Count)	Answer Options
	19%	3	1) Strongly Agree
	31%	5	2) Agree
	44%	7	3) Neutral
	6%	1	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	16	Comments:

## Water Taxi



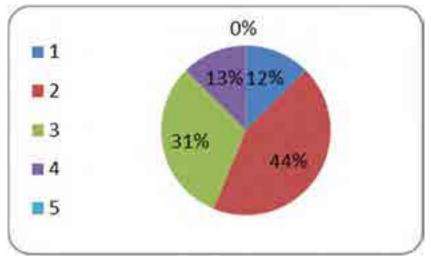
	Respo	nses	
	(Percent)	(Count)	Answer Options
	29%	5	1) Strongly Agree
	35%	6	2) Agree
	24%	4	3) Neutral
	12%	2	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	17	Comments:



# **People Mover**

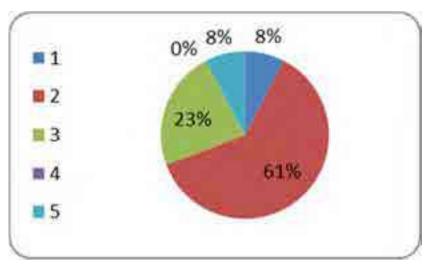


37) This is an Improvement Type that I would like to see. Responses (Percent) (Count) **Answer Options** 13% 1) Strongly Agree 2 44% 7 2) Agree 31% 3) Neutral 5 13% 4) Disagree 2 5) Strongly Disagree 0% 0 Comments: Totals 100% 16



#### Variable Message Signs



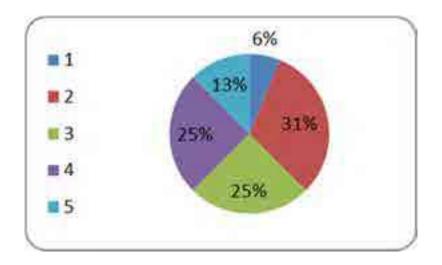


	Respo	nses	
	(Percent)	(Count)	Answer Options
	8%	1	1) Strongly Agree
	62%	8	2) Agree
	23%	3	3) Neutral
	0%	0	4) Disagree
	8%	1	5) Strongly Disagree
Totals	100%	13	Comments:

## Artistic Wall Treatments



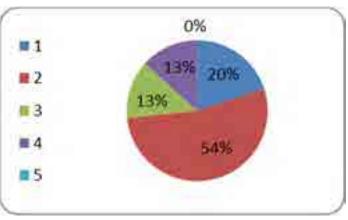
39) This i	39) This is an Improvement Type that I would like to see.				
	Responses				
	(Percent)	(Count)	Answer Options		
	6%	1	1) Strongly Agree		
	31%	5	2) Agree		
	25%	4	3) Neutral		
	25%	4	4) Disagree		
	13%	2	5) Strongly Disagree		
Totals	100%	16	Comments:		



# Walkway down the Bluff



	Responses		
	(Percent)	(Count)	Answer Options
	20%	3	1) Strongly Agree
	53%	8	2) Agree
	13%	2	3) Neutral
	13%	2	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	15	Comments:

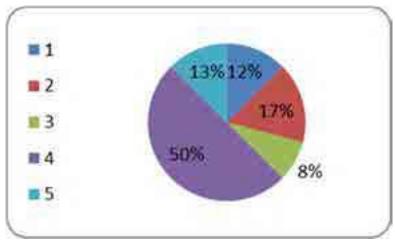


# Improvement options where audience response was mostly **Disagree or Strongly Disagree**

#### **Overhead Bike/Ped Facility**



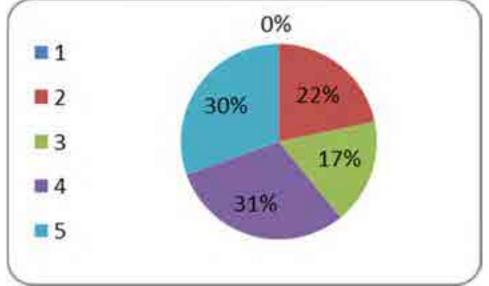
	Respo	onses	
	(Percent		
	)	(Count)	Answer Options
	13%	3	1) Strongly Agree
	17%	4	2) Agree
	8%	2	3) Neutral
	50%	12	4) Disagree
	13%	3	5) Strongly Disagree
Totals	100%	24	Comments:



# Pedestrian/Bicycle



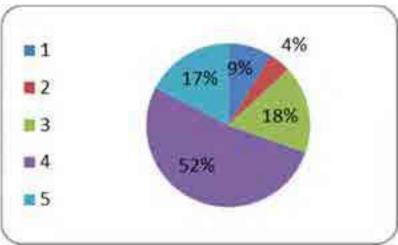
6) This is an Improvement Type that I would like to see.					
	Respo	onses			
	(Percent) (Count)		Answer Options		
	0%	0	1) Strongly Agree		
	22%	5	2) Agree		
	17%	4	3) Neutral		
	30%	7	4) Disagree		
	30%	7	5) Strongly Disagree		
Totals	100%	23	Comments:		



#### Pedestrian/Bicycle



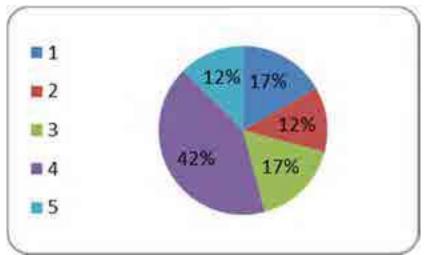
	Respo	onses	
	(Percent)	(Count)	Answer Options
	9%	2	1) Strongly Agree
	4%	1	2) Agree
	17%	4	3) Neutral
	52%	12	4) Disagree
	17%	4	5) Strongly Disagree
Totals	100%	23	Comments:



## **Crosswalk Treatment**



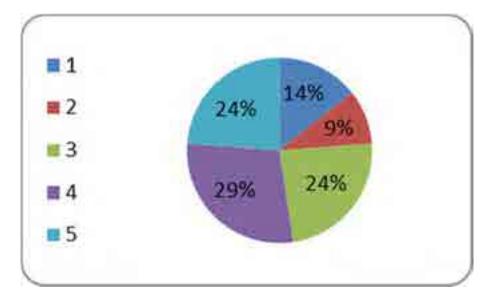
	Respo	nses	
	(Percent)	(Count)	Answer Options
	17%	4	1) Strongly Agree
	13%	3	2) Agree
	17%	4	3) Neutral
	42%	10	4) Disagree
	13%	3	5) Strongly Disagree
Totals	100%	24	Comments:



# Crosswalk Signage



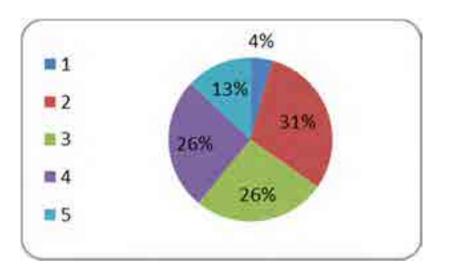
10) This is an Improvement Type that I would like to see.					
	Respo	onses			
	(Percent ) (Count)		Answer Options		
	14%	3	1) Strongly Agree		
	10%	2	2) Agree		
	24%	5	3) Neutral		
	29%	6	4) Disagree		
	24%	5	5) Strongly Disagree		
Totals	100%	21	Comments:		



# **Bicycle Storage**



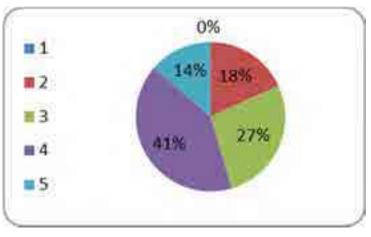
	Responses		
	(Percent)	(Count)	Answer Options
	4%	1	1) Strongly Agree
	30%	7	2) Agree
	26%	6	3) Neutral
	26%	6	4) Disagree
	13%	3	5) Strongly Disagree
Totals	100%	23	Comments:



# 2 Lane Parkway



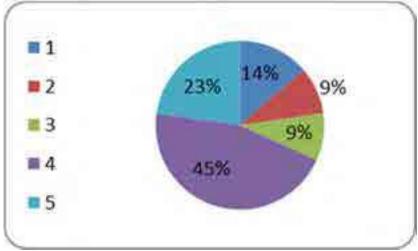
	Responses		
	(Percent)	(Count)	Answer Options
	0%	0	1) Strongly Agree
	18%	4	2) Agree
	27%	6	3) Neutral
	41%	9	4) Disagree
	14%	3	5) Strongly Disagree
Totals	100%	22	Comments:



#### 4 Lane Highway



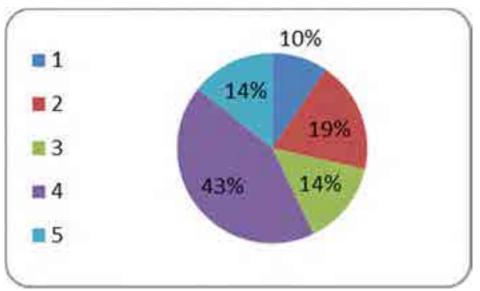
	Respo	onses	
	(Percent)	(Count)	Answer Options
	14%	3	1) Strongly Agree
	9%	2	2) Agree
	9%	2	3) Neutral
	45%	10	4) Disagree
	23%	5	5) Strongly Disagree
Totals	100%	22	Comments:



# **Bus Lane**



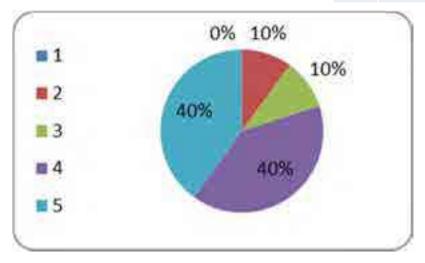
24) This i	24) This is an Improvement Type that I would like to see.				
	Responses				
	(Percent)	(Count)	Answer Options		
	10%	2	1) Strongly Agree		
	19%	4	2) Agree		
	14%	3	3) Neutral		
	43%	9	4) Disagree		
	14%	3	5) Strongly Disagree		
Totals	100%	21	Comments:		



## **On-street Parking**



	Responses		
	(Percent )	(Count )	Answer Options
	0%	0	1) Strongly Agree
	10%	2	2) Agree
	10%	2	3) Neutral
	40%	8	4) Disagree
	40%	8	5) Strongly Disagree
Totals	100%	20	Comments:

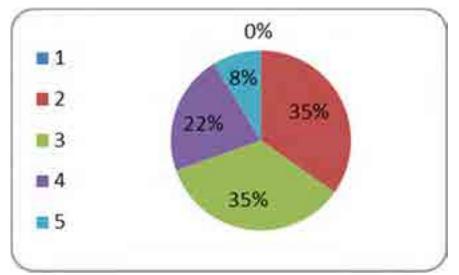


# Improvement options where audience response was mostly **Neutral**

# Midblock Crossing



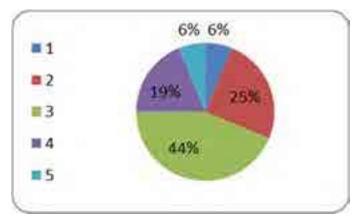
12) This is an Improvement Type that I would like to see.					
	Respo	onses			
	(Percent)	(Count)	Answer Options		
	0%	0	1) Strongly Agree		
	35%	8	2) Agree		
	35%	8	3) Neutral		
	22%	5	4) Disagree		
	9%	2	5) Strongly Disagree		
Totals	100%	23	Comments:		



# 4 Lane Parkway

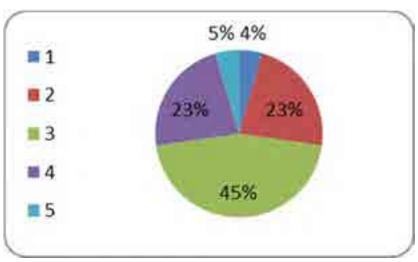


	Respo	nses	
	(Percent)	(Count)	Answer Options
	6%	1	1) Strongly Agree
	25%	4	2) Agree
	44%	7	3) Neutral
	19%	3	4) Disagree
	6%	1	5) Strongly Disagree
Totals	100%	16	Comments:



#### **Reversible Lane**



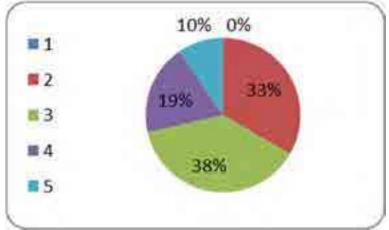


	Responses		
	(Percent )	(Count)	Answer Options
	5%	1	1) Strongly Agree
	23%	5	2) Agree
	45%	10	3) Neutral
	23%	5	4) Disagree
	5%	1	5) Strongly Disagree
Totals	100%	22	Comments:

#### Intersection Improvement

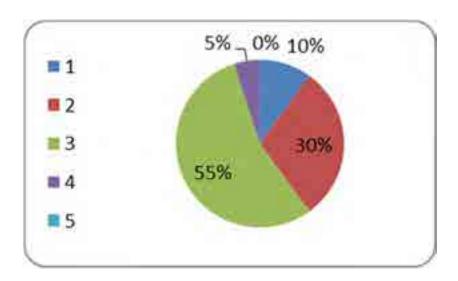


Responses (Percent) (Count) **Answer Options** 0% 0 1) Strongly Agree 33% 2) Agree 7 3) Neutral 38% 8 19% 4) Disagree 4 10% 2 5) Strongly Disagree Comments: Totals 100% 21



# **Parking Reclamation**



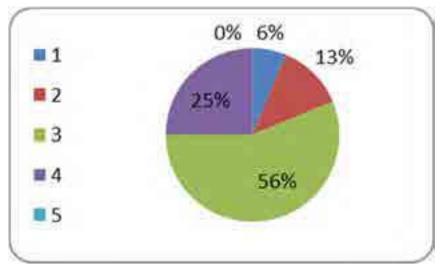


	Responses		
	(Percent)	(Count)	Answer Options
	10%	2	1) Strongly Agree
	30%	6	2) Agree
	55%	11	3) Neutral
	5%	1	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	20	Comments:

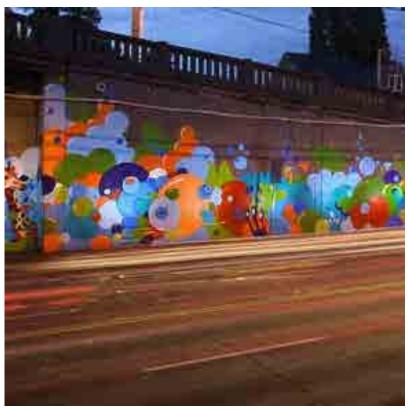
# Segways



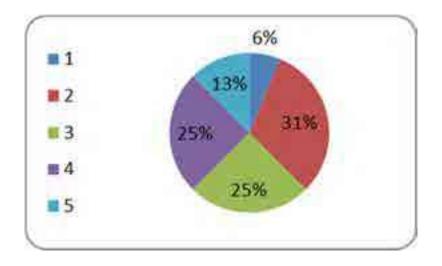
	Responses		
	(Percent)	(Count)	Answer Options
	6%	1	1) Strongly Agree
	13%	2	2) Agree
	56%	9	3) Neutral
	25%	4	4) Disagree
	0%	0	5) Strongly Disagree
Totals	100%	16	Comments:



## Artistic Wall Treatments



39) This is an Improvement Type that I would like to see.				
	Responses			
	(Percent)	(Count)	Answer Options	
	6%	1	1) Strongly Agree	
	31%	5	2) Agree	
	25%	4	3) Neutral	
	25%	4	4) Disagree	
	13%	2	5) Strongly Disagree	
Totals	100%	16	Comments:	



# **Additional Parking Facilities**



30) This is an Improvement Type that I would like to see.					
	Responses				
	(Percen				
	t)	(Count)	Answer Options		
	0%	0	1) Strongly Agree		
	0%	0	2) Agree		
	0%	0	3) Neutral		
	0%	0	4) Disagree		
	0%	0	5) Strongly Disagree		
Totals	0%	0	Comments:		

Results did not calculate for this option.

#### Aesthetics



30) This is an Improvement Type that I would like to see.					
	Responses				
	(Percen				
	t)	(Count)	Answer Options		
	0%	0	1) Strongly Agree		
	0%	0	2) Agree		
	0%	0	3) Neutral		
	0%	0	4) Disagree		
	0%	0	5) Strongly Disagree		
Totals	0%	0	Comments:		

Results did not calculate for this option.



#### Bayfront Parkway Corridor Study Project Advisory Committee Meeting #3

Date: April 14, 2015

Time: 10:30 AM to 12:00 PM

Location: Tom Ridge Environmental Center Large Classroom, Erie, PA

Attendees: N

Name Jeff Brinling John Buchna Jim Caroll Barbara Chaffee Darrell Chapman Ron Costantini Lyndsie DeVito John Grappy Chris Groner Tom McClelland, P.E., PTOE Brian Mesaros John Morgan Mark Nicholson, P.E. LeAnn Parmenter, P.E. Bill Petit. P.E. John Petulla, P.E. Doug Pomorski Jason Sayers, P.E. Melani Scott Dana Sklack Justin Smith Jacqueline Spry Jennifer Threats Jon Tushak, P.E. Joe Walko Brian Weber Jake Welsh Brian Yedinak, P.E.

#### <u>Representing</u>

Erie Insurance Erie Downtown Partnership PennDOT District 1-0 Erie Regional Chamber and Growth Partnership PennDOT District 1-0 Erie Water Works PennDOT District 1-0 Erie County City of Erie PennDOT District 1-0 Erie County Erie County Transportation Planner PennDOT District 1-0, Interim Project Manager City of Erie Traffic Engineer PennDOT District 1-0, District Executive McCormick Taylor Erie-Western PA Port Authority City of Erie Professional Development Associates, Inc. McCormick Taylor Bike Erie Kidder Wachter Architecture and Design McCormick Taylor City of Erie City of Erie Fire Department Police Weber Architecture Erie County Planning Director PennDOT District 1-0

#### Meeting Summary:

I. Welcome

Jennifer Threats, meeting facilitator, welcomed everyone to the third of a series of Project Advisory Committee (PAC) Meetings. She then introduced Bill Petit, District Executive for PennDOT Engineering District 1-0. Mr. Petit gave a brief meeting introduction and then asked for everyone in the room to introduce themselves.

#### II. Follow-up Items

Ms. Threats requested an update on the planned development projects from representatives in attendance associated with current developments on the Bayfront. Below is a summary of the discussion:

- Representatives for the Cobblestone Inn, and McAllister Place indicated they had no updates to report.
- A representative for Bayfront Place, Jacqueline Spry of Kidder Wachter Architecture and Design, said that her firm is working on revising the current plans for the former GAF site. Additionally, construction of the first building in the development site, a hotel, is on-going and a parking garage is planned to support the hotel and other future development on the site.
- Brian Weber of Weber Architecture represented Scott Enterprises and gave a brief summary of the steps taken and planned so far for the Harbor Place development. In 2014, they gathered stakeholder input and worked on the environmental assessment for the land. During the course of 2015, they plan to identify and secure the funding for the first phase of the development with hopes to break ground during the spring of 2016.

Ms. Threats then discussed the following items included in the PAC's handout packet.

- PAC Meeting Summary #2 was distributed as a draft. PAC members were asked to follow-up with any comments or changes before the end of the week. Once changes are incorporated, the final version will be emailed to the PAC.
- The results from the Image Survey conducted during PAC Meeting #2 were provided as a reminder of the concepts the group reviewed and rated as positive, negative or neutral.
- A revised version of the 'Approach to Identifying Improvements' handout (Appendix C) was included. The handout was revised to reflect suggestions made by the PAC during the second



meeting. It was also provided as an aid for PAC members to reference when reviewing the two Improvement Scenarios later in the meeting.

#### III. Improvement Concepts

John Petulla, P.E., Project Manager, began his introduction to the two improvement scenarios by explaining how they were developed. When looking at the corridor to identify improvements, three primary components were identified as the basis to develop improvement options; the project needs and improvement considerations (Appendix C), public and stakeholder input, and existing and future traffic projections (Appendix D and E).

Mr. Petulla noted that there were several overall improvement concepts that both scenarios have in common, including:

- Upgrading signal equipment, signal timing, and lighting throughout the corridor,
- Adding variable message signs at each end of the parkway to inform drivers of drive times to key locations,
- Adding a buffer between the multi-use trail and the roadway whenever they are too close,
- Way finding signs throughout the corridor on the multi-use trail,
- Improved crosswalk design at all intersections to better alert drivers and increase safety,
- Park signs at the entrances to Frontier Park and Liberty Park,
- Bus shelters with real time transit information.

#### Mobility Scenario

The first scenario Mr. Petulla presented was the Mobility Scenario (Appendix G and H). This scenario focused on increasing or preserving the capacity on the Bayfront Parkway and providing improved and more efficient access to pedestrian and bicycle traffic through the corridor.

Key features of this option included:

- Dual lane roundabouts at the State Street and Bayfront Parkway intersection and at the E. 12<sup>th</sup> Street and Bayfront Parkway intersection,
- Divert bicycle traffic between the Lincoln Avenue Park-and-Ride and Frontier to park to a shared lane route that would go along Lincoln Ave to W. 8<sup>th</sup> Street. From there, it would connect to the 6<sup>th</sup> Street bicycle route and continue along W. 8<sup>th</sup> Street to Frontier Park,
- Upgrade Frontier Park sidewalks along W. 8th Street to multiuse paths,
- Restrict left turns from Cranberry Street,
- A two-way frontage road that would run along the north side of the parkway from Liberty Park to State Street,

- Archway Gateway treatments after the Lincoln Avenue and Bayfront intersection and after the E. 12<sup>th</sup> Street and Bayfront Parkway intersection,
- Managed, or reversible, lanes from W. 8th Street to Sassafras Street Ext.,
- Two pedestrian bridges, one from Peach Street to the north side of the Bayfront Parkway to the
  east of the Sassafras Street Ext. and one from the bluff just east of Holland Street to the north
  side of the Bayfront Parkway near the Intermodal Center the pedestrian bridge would connect
  on the south side to a sloped trail leading up the bluff near German Street and connect with the
  existing East Front Street Promenade,
- Create an exclusive right turn from Holland Street to the Bayfront Parkway on the south side of the intersection,
- Widen the Bayfront Parkway to four lanes from Holland Street to Port Access Road,
- Bus pull offs between E. 8<sup>th</sup> and E. 10<sup>th</sup> Street on the east and west side of the Bayfront Parkway The bus pull of area would also include transit shelters and bike storage options.

Brian Yedinak, P.E., Assistant District Executive for Design, PennDOT District 1-0, further explained to the group that the roundabout at E. 12<sup>th</sup> Street was suggested as both a traffic calming element and for better traffic functions.

Barbara Chaffee, Erie Regional Chamber and Growth Partnership, asked if the double roundabout at State Street considered access for Hamot delivery trucks. She explained the loading docks are located right beside the intersection and the angle of the turn from the roundabout may not accommodate truck access. Mr. Petulla said UPMC Hamot access at this location would need to be reviewed further if this improvement was advanced.

John Tushak, P.E. asked how a car on the inside lane of the dual lane roundabout would cross to exit the roundabout and if this would result in a bottle neck. Mr. Petulla explained that the vehicle would have to transition to the outside lane to exist the roundabout and noted that public education would be required before implementation of roundabout.

#### **Connected Scenario**

The second scenario Mr. Petulla explained was the Connected Scenario (Appendix I and J). This scenario focused on making missing connections along the multi-use trail and giving the Bayfront more of a landscaped parkway look by adding planted medians throughout the corridor.

Key features of this option included:

• Reduced travel lane width to 11 feet from Greengarden Road to E. 10th Street,

- A gateway sign in the median between the Lincoln Avenue and Greengarden Road intersections,
- A bike share program that could also be introduced throughout the city,
- Connect the existing Bayfront Bikeway that runs along the Bayfront Parkway from Frontier Park to the Park-and-Ride located at the corner of Lincoln Avenue and the Bayfront Parkway,
- Restricted left turns from Cranberry Street during peak travel hours,
- A pedestrian tunnel under State Street utilizing the existing culvert,
- A central Bayfront people mover to encourage people to park in one central location,
- Improve and pave the path beside Front Street between State Street and Holland Street in the central Bayfront,
- A multi-use trail from German Street at the top of the bluff to the intersection of Holland Street and Bayfront Parkway,
- A single lane roundabout at the Port Access Road and Bayfront Parkway intersection,
- A single lane in each direction from Port Access road to 10th Street,
- A new Park-and-Ride between E. 8th Street and E. 10th Street,

John Buchna asked if the railroad tracks would be removed along the parkway as part of the improvements. Mr. Petulla said that any non-active tracks would likely be removed.

Brian Weber asked if the team had heard any interest from the public or stakeholders related to using the railroad tracks for light rail. Mr. Petulla indicated that very little interest had been expressed to date in light rail, but added that there would be a Public Meeting before the scenarios are finalized that could influence changes to the scenarios and associated improvement concepts.

#### IV. Evaluating the Scenarios

After the two scenarios where explained, the PAC members were asked to evaluate the options in more detail, discuss the pros and cons of both, and identify any additional improvement concepts. To do this, the room was divided into five groups based on the table each member chose at the start of the meeting. Each of the five groups consisted of three to four PAC members and one or two PennDOT employees.

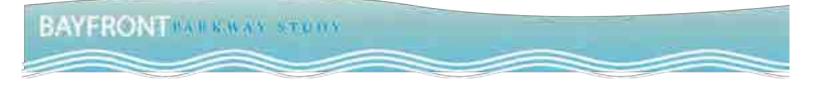
After approximately forty-five minutes of discussion within the groups, a representative from each group was asked to present their groups thoughts on each of the scenarios.

Overall, the Mobility Scenario was preferred by the PAC members. Additionally, the PAC members agreed that enhancing crosswalks by increasing visibility and safety should be a priority. *Group 1* 

	Connected	
Pros	Cons	Suggestions/
		Questions
- Crosswalk treatment	-W 8th St. merge lane extension	-Cost benefit of People Mover
- Roundabout at Port Access Rd.	-Reduction to 2 lanes	
	Mobility	
Pros	Cons	Suggestions/
		Questions
- 4 lanes	-Frontage Rd (if emergency	-Managed lanes – who takes care
- Pedestrian bridges	service vehicles are not allowed)	of them?
- No left from Cranberry St.		-Roundabout education
<ul> <li>Managed lanes for events</li> </ul>		-Consider a roundabout at
- Frontage Rd. (if it allows		Bayfront/Holland St. and
emergency service vehicles)		Bayfront/Port Access Rd.

#### Group 2

	Connected	
Pros	Cons	Suggestions/ Questions
<ul> <li>Crosswalk treatment</li> <li>Roundabouts</li> </ul>	-Safety of tunnel Structure?	<ul> <li>Add frontage road</li> <li>Maximize use of Park and Rides</li> <li>Convert lane to express transit lane</li> <li>Median treatment but keep existing lane configuration near Lincoln Ave. and Greengarden Blvd.</li> </ul>
	Mobility	
Pros	Cons	Suggestions/ Questions
- Roundabouts	<ul> <li>-E 6<sup>th</sup> St. is too wide. Add median treatment. Are all lanes needed?</li> <li>-Access to UPMC with the roundabout at State St.?</li> </ul>	<ul> <li>-Additional roundabouts (Lincoln Ave., Greengarden Blvd., W 8<sup>th</sup> St., E 6<sup>th</sup> St.)</li> <li>-Convert lane to dedicated transit lane</li> <li>-Maximize use of Park and Ride</li> <li>-Better use for parking during events</li> <li>-Bus lane would make transit more</li> </ul>



	appealing -Preferred this option
--	-------------------------------------

### Group 3

	Connected	
Pros	Cons	Suggestions/ Questions
<ul> <li>Roundabout</li> <li>Ped tunnel</li> <li>Eastside Park and Ride</li> <li>Sidewalks</li> </ul>		<ul> <li>Snow removal plan?</li> <li>Expand bike share to downtown</li> <li>What happens when there is an accident in a roundabout?</li> <li>Blvd look at both ends</li> <li>Use W 6<sup>th</sup> St bridge as gateway</li> <li>Continue People Mover to all Park and Rides</li> </ul>
	Mobility	
Pros	Cons	Suggestions/ Questions
<ul><li>Roundabouts</li><li>Archway</li><li>Ped Bridges</li></ul>		-Snow removal plan? -Add People Mover

## Group 4

	Connected			
Pros	Cons	Suggestions/		
		Questions		
- Roundabout at Port Access Rd.	-Median not preferred	- Signage to stop cars from		
- Ped tunnel		blocking multiuse path at intersections		
		- Way finding signs at Port Access		
		Rd., Cranberry St.		
		- Improve multiuse path paving		
Mobility				
Pros	Cons	Suggestions/		
		Questions		
- Roundabout at 12 <sup>th</sup> St.	-State St. roundabout	-Ped bridge at Liberty Park		
- Ped bridges		-Way finding signs at Port Access		
- Reversible lanes		Rd., Cranberry St.		
		-Improve multiuse path paving		

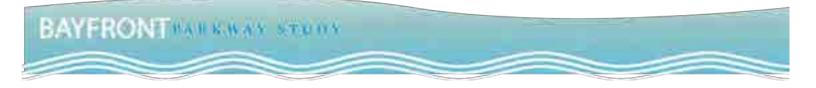
#### Group 51

	Connected	
Pros	Cons	Suggestions/ Questions
- Aesthetics - People Mover	-Median could be a barrier -A step backwards -Less connected -No ped bridge	
	Mobility	-
Pros	Cons	Suggestions/ Questions
<ul> <li>Frontage Rd. can be used as the local road</li> <li>Like the roundabout at State St.</li> <li>Ped Safety?</li> <li>More connected</li> </ul>	<ul> <li>-No accounting for Greengarden Blvd. development?</li> <li>-Right lane back up at 8<sup>th</sup> St. and Bayfront with two lanes going straight</li> <li>-Not enough bus pull overs</li> </ul>	<ul> <li>-Add a channelized/slip right turn lane at 8<sup>th</sup> St./Bayfront</li> <li>-Make the frontage road a dedicated transit lane</li> <li>-Add people mover route to this option</li> <li>-Do managed lanes increase accidents?</li> <li>-Add bike share to this option and increase eastside locations</li> <li>-How do left turns work with managed lanes?</li> <li>-Add a rapid flash beacon crossing in between the intersections of State St/Bayfront and Holland St/Bayfront</li> </ul>

#### V. Next Steps

After each group took turns discussing their preferences with the improvement scenarios, the next steps for the project were discussed. The project team will now review the PAC member feedback to and make some updates to the existing options. These two scenarios will then be presented to the public during a Public Meeting that will be scheduled for late May or early June. It was also requested by a PAC member to make the digital versions of the two scenarios available online. The project team

<sup>&</sup>lt;sup>1</sup> Brian Weber of Weber Architecture represented Scott Enterprises at this meeting. At the end of the meeting, he made additional notes on his group's maps in relation to the Harbor Place development plans. Most of his suggestions and input have been noted above with his group. In addition to that, he also said a pedestrian bridge is planned and will connect their proposed parking garage to UPMC Hamot near French St. He indicated that the pedestrian bridge would be intended to serve potential doctors with offices within the harbor place development who would need direct access to the hospital, as well as, traveling doctors and family members who would be visiting the hospital.



will email the PAC members a link to a FTP site that will host all of the handouts from this meeting and ask the PAC to submit all comments by April 28. Additional feedback received following the meeting can be referenced in Appendix K.

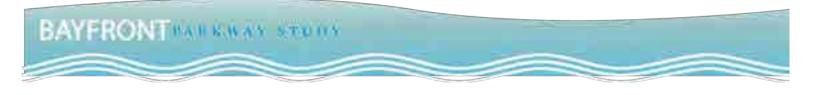
Following the Public Meeting, a third scenario that blends the preferred improvement concepts may be developed for review and discussion by the Project Team and PAC.

Mr. Petulla ended the meeting by thanking everyone for their extra time and dedication to project.

With no further questions or discussions, the meeting was adjourned at approximately 4:20 p.m. We believe this report accurately describes what transpired at this meeting. If anyone has a different understanding of what occurred, please contact Dana Sklack at (412) 922-6880 within two weeks of receipt. If no comments are received, this report will be considered final.

Prepared by: McCormick Taylor, Inc.

Jennifer Threats Dana Sklack



#### Appendix List

- A. Project Advisory Committee Meeting #3 Agenda
- B. Project Advisory Committee Meeting #3 PowerPoint Slides
- C. Approach to Identifying Improvements
- D. Future Intersection Delay Comparison
- E. Future Travel Time Comparison
- F. Improvement Concept Scenarios (Mobility and Connected) text only
- G. Mobility Scenario
- H. Mobility Scenario Section Sheets
- I. Connected Scenario
- J. Connected Scenario Section Sheets
- K. Post Meeting Feedback

\*Appendix items are available for reference on the following site:

<u>ftp://Bayfront:parkway@ftp.mccormicktaylor.com</u> Username: bayfront Password: parkway APPENDIX A:

# Project Advisory Committee Meeting #3 Agenda



#### PROJECT ADVISORY COMMITTEE MEETING #3

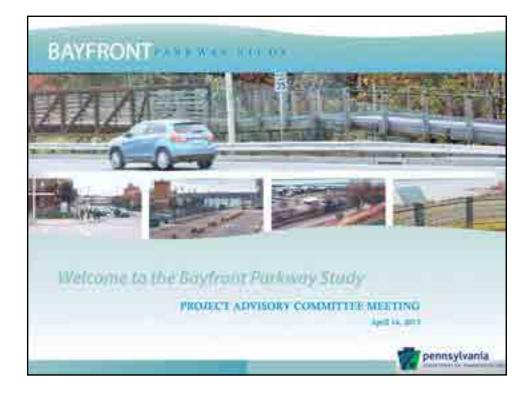
- Date: April 14, 2015
- Time: 10:30 a.m. to 12:00 p.m.
- Location: Tom Ridge Environmental Center

# **AGENDA**

1.	<ul> <li>Welcome and Follow-ups – Bill Petit, P.E., PennDOT District Executive Jennifer Threats, McCormick Taylor</li> <li>a. Welcome – Facilitator</li> <li>b. Opening Remarks – Bill Petit, P.E., PennDOT District Executive</li> <li>c. Follow-up Items – Jennifer Threats</li> <li>PAC Meeting Summary 2</li> <li>Improvement Considerations Revised</li> <li>Development Update</li> </ul>	10:30 a.m. – 10:45 a.m.
2.	Improvement Concepts - John Petulla, P.E. <ul> <li>Scenario #1 Review</li> <li>Scenario #2 Review</li> </ul>	10:45 a.m. – 11:15 a.m.
3.	<ul> <li>Evaluating the Scenarios - Group Activity</li> <li>Divide into Groups of 4-5 to: <ul> <li>Identify pros and cons of each scenario</li> <li>Identify additional concepts</li> </ul> </li> <li>Report Results</li> </ul>	11:15 a.m. – 11:50 p.m.
4.	<ul> <li>Next Steps – John Petulla, P.E.</li> <li>Refine Improvement Concepts/Scenarios</li> <li>Next PAC Meeting – May/June</li> <li>Public Meeting – May/June</li> </ul>	11:50 p.m. – 12:00 p.m.

## APPENDIX B:

# Project Advisory Committee Meeting #3 PowerPoint Slides









Direction	No Build Option: 2034 - Background w/o Development Growth		No Build Option: 2034 - Background and Development Growth	
	AM	PM	AM	PM
Bayfront EB:	11.7 mins	12.5 mins	67.4 mins	15.9 mins
Lincoln Ave to E 12th St	25 mph	23 mph	5 mph	19 mph
Bayfront WB:	11.1 mins	11.7 mins	14.4 mins	20.2 mins
E 12th St to Lincoln Ave	25 mph	24 mph	20 mph	15 mph

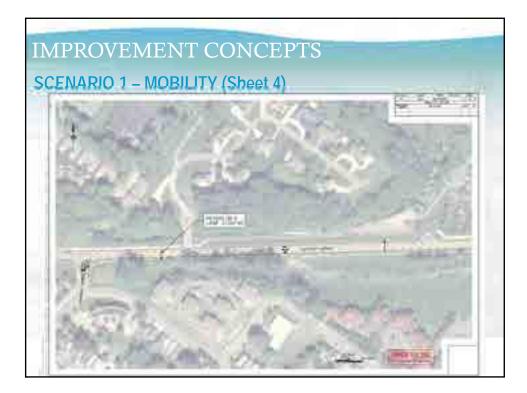








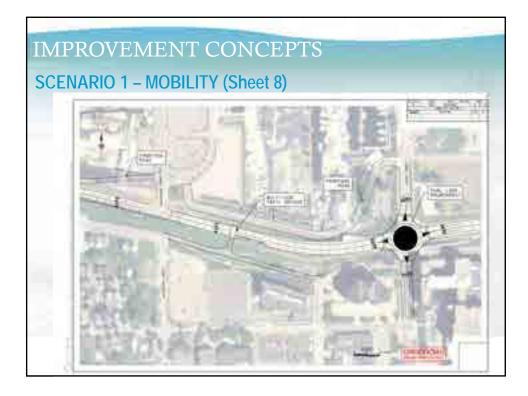


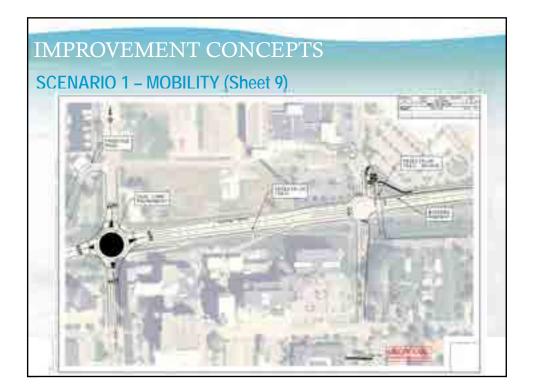




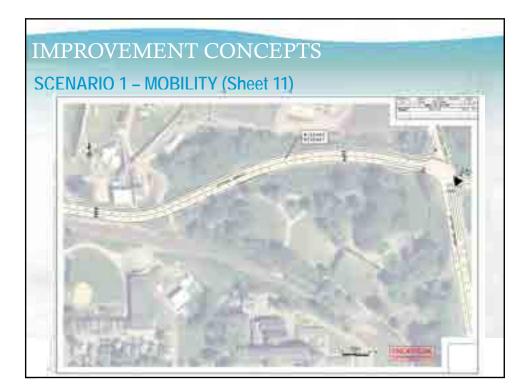






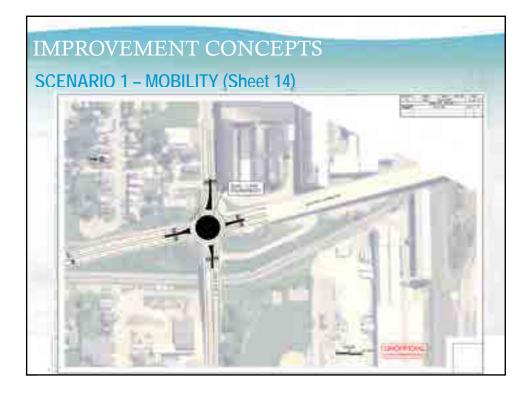




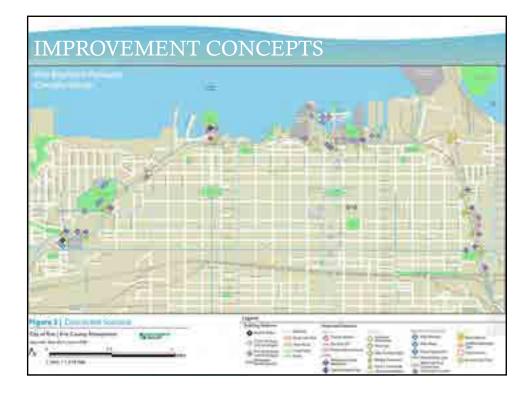




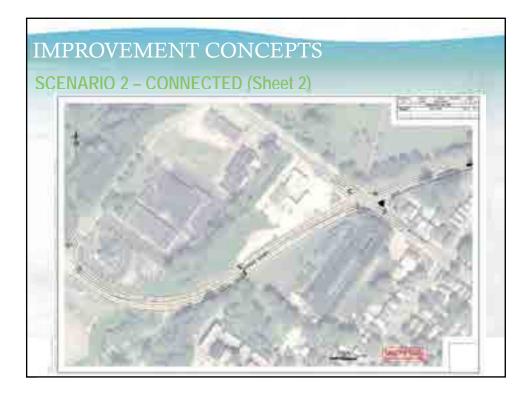


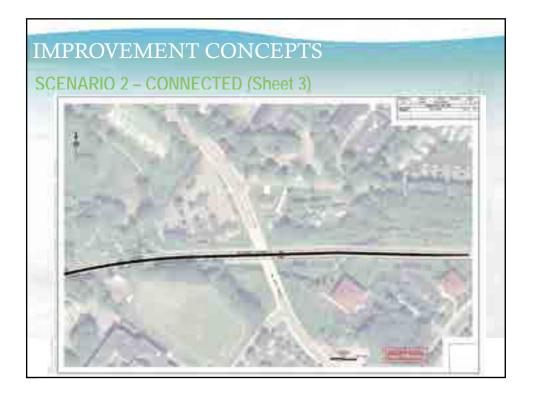


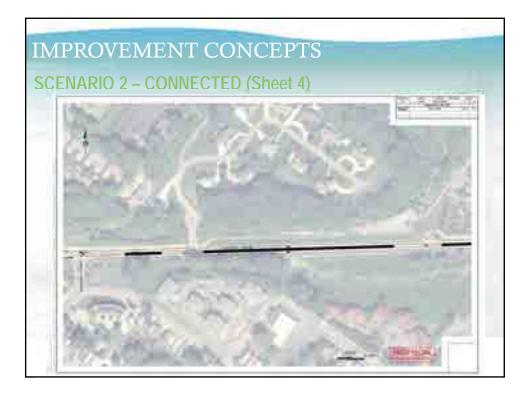




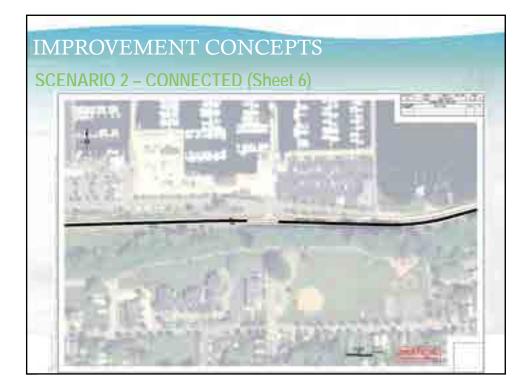


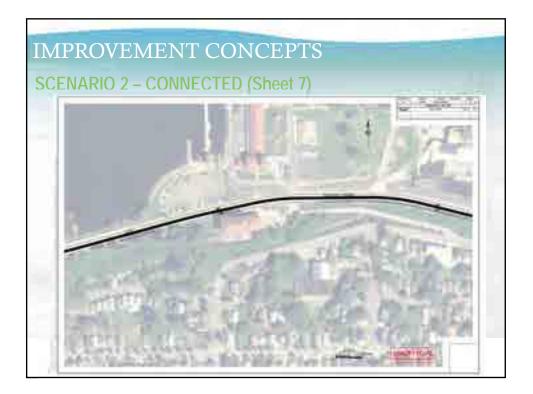


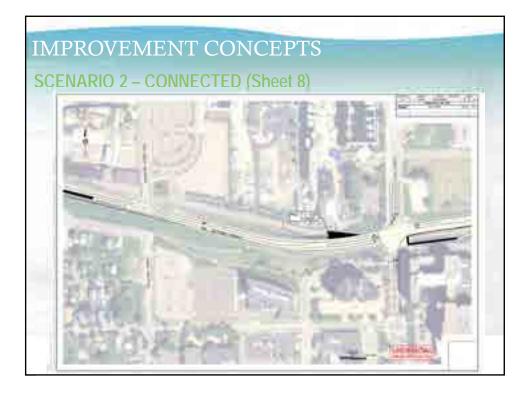




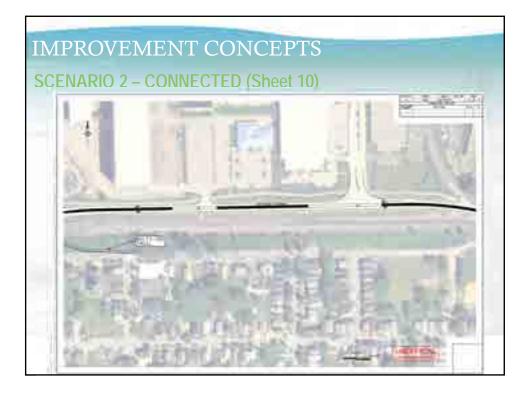


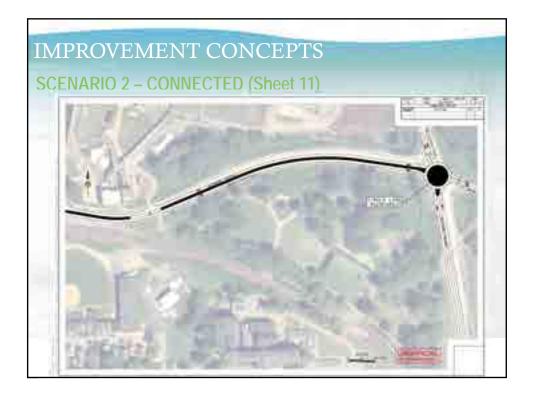






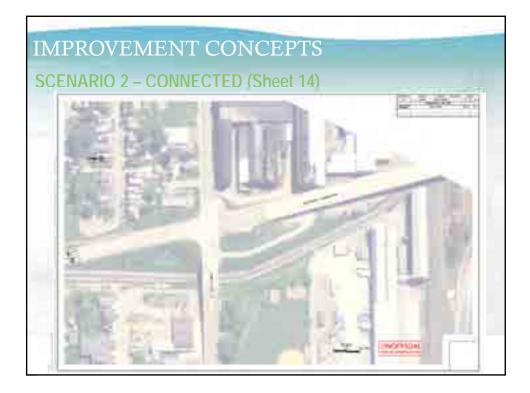


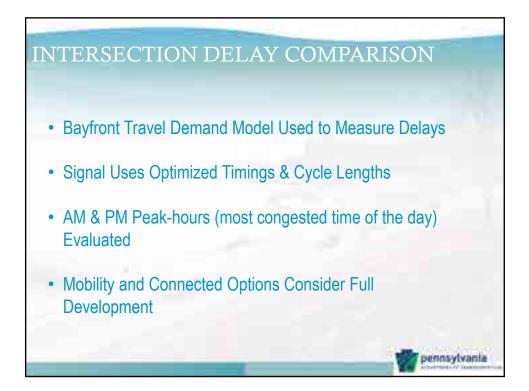












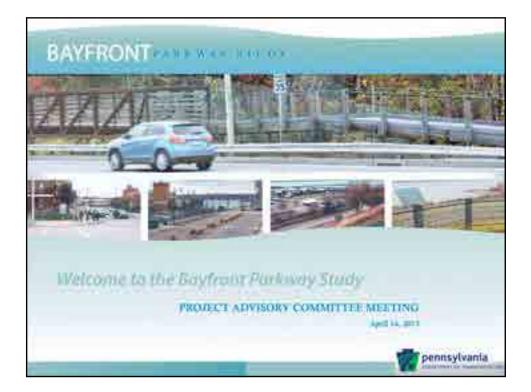
Direction	2034 - Mobility Option		2034 - Connected Option	
	AM	PM	AM	PM
ayfront EB: incoln Ave to E 12th St	11.4 mins 25 mph	15.9 mins 18 mph	18.3 mins 17 mph	14.9 mins 20 mph
ayfront WB: 12th St to Lincoln Ave	12.4 mins 23 mph	12.7 mins 22 mph	35.1 mins 11 mph	20.0 mins 14 mph
No-Build with Bac	kground (only) S	Similar to Delay	Associated with	n Mobility











## APPENDIX C:

Approach to Identifying Improvements

## **APPROACH TO IDENTIFYING IMPROVEMENTS:**

As the Study progresses, potential improvement alternatives will be evaluated based on the Study Needs and the Improvement Considerations. The development of the needs and the identification of the Improvement Considerations is based on technical information and analysis, and input from stakeholder outreach conducted to date.

### **Study Needs:**

The Bayfront Parkway Corridor Study Needs Analysis was completed in accordance with the guidelines set forth in the Pennsylvania Department of Transportation Needs Study Handbook for the Transportation Project Development Process (Publication Number 319) dated December 2010. The needs describe a problem in the study area and, to the extent possible, explain the underlying causes of those problems.

- Safety concerns exist in the study area.
- There are congestion concerns in the study area.
- There are operational concerns in the study area.
- Alternative modes are lacking parallel to the Bayfront (east/west).
- Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

### Improvement Considerations:

Improvement considerations are design elements to consider when developing improvement options to address the project needs. These elements are based upon input provided by the PAC and public, existing data collected, specific site conditions, and cost constraints.

- Consistent with Local Planning Guidance (Destination Erie: A Regional Vision, City of Erie Comprehensive Plan: Background Analysis Principles; Erie Waterfront Master Plan)
- Maximize Land Use (Consolidate Parking, Brownfield Utilization, etc.)
- Enhances Aesthetics
- Supports Livability by Improving Pedestrian and Bicycle Access (Work & Play)
- Accommodates Emergency Service/Incident Management Access
- Accommodates Event Access and Mobility
- Enhances Travel Communication/Intelligence
- Minimizes Environmental Impacts (Property Impacts, Natural Resources, Cultural Resources)
- Ability to Maintain Improvement
- Total Project Costs/Available Funding

APPENDIX D:

Future Intersection Delay Comparison

# Bayfront Parkway Future Corridor - Intersection Delay Comparison

	No Build Option:No Build Option:2034 - Background w/o2034 - Background andDevelopment GrowthDevelopment Growth2034 - Mobility Option *2034 - Mobility Option *		2034 - Conne	2034 - Connected Option *				
Intersection	AM	PM	AM	PM	AM	PM	AM	PM
Lincoln Avenue	6.3 (A)	9.9 (A)	281.3 (F)	10.3 (A)	7.2 (A)	12.4 (B)	6.6 (A)	9.9 (A)
Green Garden Road	11.8 (B)	12.3 (B)	147.4 (F)	14.3 (B)	13.8 (B)	12.5 (B)	13.4 (B)	13.4 (B)
West 8th Street	38.4 (D)	29.4 (C)	194.5 (F)	52.7 (D)	24.7 (C)	41.9 (D)	49.0 (D)	27.1 (C)
Liberty Street Extension	N/A	N/A	56.1 (E)	9.0 (A)	4.6 (A)	20.3 (C)	17.9 (B)	8.0 (A)
Sassafras Extension	7.7 (A)	15.3 (B)	172.6 (F)	121.4 (F)	22.2 (C)	28.3 (C)	56.7 (E)	79.1 (E)
State Street	15.7 (B)	43.0 (D)	225.2 (F)	107.8 (F)	32.3 (C)	52.5 <b>(D)</b>	124.9 (F)	174.0 (F)
Holland Street	13.5 (B)	21.2 (C)	93.1 (F)	213.4 (F)	39.3 (D)	61.4 (E)	129.3 (F)	160.8 (F)
East Bay Drive & Port Access Road	13.5 (B)	8.4 (A)	21.4 (C)	21.8 (C)	13.2 (B)	9.4 (A)	158.7 (F)	28.2 (C)
East 6th Street	45.1 (D)	69.0 (E)	31.9 (C)	58.2 (E)	30.6 (C)	54.2 (D)	77.6 (E)	55.6 (E)
East 8th Street	8.8 (A)	9.0 (A)	8.2 (A)	18.1 (B)	6.0 (A)	7.9 (A)	63.7 (E)	16.9 (B)
East 10th Street	15.9 (B)	32.0 (C)	15.4 (B)	47.7 (D)	12.8 (B)	14.3 (B)	34.0 (C)	38.7 (D)
East 12th Street	38.7 (D)	48.9 (D)	43.4 (D)	63.5 (E)	11.8 (B)	10.8 (B)	163.5 (F)	53.5 (D)

\* - Evaluates Future 2034-year Development Traffic and Background Growth using an annual 0.15% growth rate (source: PennDOT Bureau of Planning and Research for Urban Non-Interstates in Erie County).

Note: Intersection delays reported using SIMTRAFFIC travel demand model and traffic signal Level-of-Service methodology. Delays are reported in seconds per vehicle.

Bold Text indicates intersections where a future Roundabout has been implemented

# APPENDIX E:

Future Travel Time Comparison



#### **Bayfront Parkway Future Corridor - Travel Time Comparison**

Direction	2034 - Back	l Option: ground w/o ent Growth	2034 - Back	l Option: ground and ent Growth	2034 - Mob	ility Option	2034 - Conn	ected Option
	AM	PM	AM	PM	AM	PM	AM	PM
Bayfront EB:	11.7 mins	12.5 mins	67.4 mins	15.9 mins	11.4 mins	15.9 mins	18.3 mins	14.9 mins
Lincoln Ave to E 12th St	25 mph	23 mph	5 mph	19 mph	25 mph	18 mph	17 mph	20 mph
Bayfront WB:	11.1 mins	11.7 mins	14.4 mins	20.2 mins	12.4 mins	12.7 mins	35.1 mins	20.0 mins
E 12th St to Lincoln Ave	25 mph	24 mph	20 mph	15 mph	23 mph	22 mph	11 mph	14 mph

xxx mins - Total Travel Time in Minutes

xx mph - Avg. Vehicle Speed Through Corridor

# APPENDIX F:

# Improvement Concept Scenarios (Mobility and Connected)

	Connected	Mobility	Both
Throughout the corridor	<ul> <li>Reduce travel lane width from Greengarden to 10<sup>th</sup> St to 11 ft. (begin transition from Lincoln to Greengarden and 12<sup>th</sup> St to 10<sup>th</sup> St)</li> <li>Use crosswalk treatment #1</li> </ul>	Use crosswalk treatment #2	<ul> <li>Upgrade signal equipment</li> <li>Re-paint road markings (arrows, stop bars, Crosswalks).</li> <li>Add buffer between Roadway and Bikeway where needed.</li> <li>Upgrade lighting throughout corridor to match lighting used on the Northside of the Bayfront.</li> <li>Replace existing laminar and mass arms with a decorative version to match new lighting and gateway treatment.</li> <li>Upgrade signs to meet current standards.</li> <li>Pedestrian push button up-grade</li> <li>Improve/upgrade signal timing</li> <li>Way finding signs for Pedestrian/bicycle paths and enhance/improve attraction signs along the parkway</li> <li>Real time transit information at bus stops</li> </ul>
1-79	<ul> <li>Variable Message signs leading up to the Bayfront to show length of time to key destinations within the area using with 12 St or Bayfront Parkway (i.e. State Street, Liberty Park, E 6th St)</li> </ul>	<ul> <li>Variable Message signs leading up to the Bayfront to show length of time to key destinations within the area using with 12 St or Bayfront Parkway (i.e. State Street, Liberty Park, E 6th St)</li> </ul>	

Bayfront Concept Scenarios

Duynon concept		M - L 114 -	
Lincoln Ave. Area features: Harding Elementary School and Park- and- Ride	<ul> <li>Connected</li> <li>Gateway treatment on the east side of the intersection with a median offering pedestrian refuge and continuing to Greengarden Blvd.</li> <li>Remove Southbound turning lane</li> <li>Transition to 11 ft. travel lanes</li> <li>Park and Ride Improvements</li> <li>Create multi-use trail on the northern side of the Bayfront to connect to existing trail ending at Frontier Park and to the Park-and-</li> </ul>	<ul> <li>Mobility</li> <li>Arch over gateway treatment</li> <li>Divert pedestrian and bicycle traffic away from Bayfront and up Lincoln to 6<sup>th</sup> Street with a shared lane for bikes and a sidewalk connection to existing sidewalk on Lincoln Ave. to 8<sup>th</sup> St (From there connect the 6<sup>th</sup> St Bike route and to Frontier Park. The park sidewalk will need to be upgraded to a multiuse path)</li> <li>Keep existing lane configuration</li> <li>Bike Storage at park and ride</li> </ul>	Both
Greengarden Blvd. Area features: Get Go	<ul> <li>Ride</li> <li>Add Bike-Share and bike Storage</li> <li>Crosswalk treatment 1</li> <li>Re-start Median to 8<sup>th</sup> Street intersection with refuge area for pedestrian</li> <li>Create a multi-use trail to connect to existing trail on northern side of the Bayfront</li> <li>Remove Southbound/Northbound left turn lanes</li> </ul>	<ul> <li>Keep existing lane configuration</li> <li></li> </ul>	<ul> <li>At 8<sup>th</sup> and Greengarden use a Rectangle Rapid Flash Beacon for Pedestrian and Bicycle crossings</li> </ul>
W. 8 <sup>th</sup> St. Area features: Country Fair, Presque Isle Park	<ul> <li>Extend merging lane after the light</li> <li>Create a median from 8<sup>th</sup> to Cranberry with left turn breaks</li> </ul>	Begin Managed Lane	<ul> <li>Frontier Park</li> <li>Add a Frontier Park Sign and use the back as a way finding sign for Ped/Bike</li> <li>Add/Improve bike racks</li> <li>Add Bike Share</li> </ul>
W. 6 <sup>th</sup> St Bridge	Repaint bridge/change improve fence     (architectural treatment)	•	When was this bridge last re-done or improved?

April 6, 2015

	Connected	Mobility	Both
Cranberry St.	<ul> <li>Crosswalk treatment 1</li> <li>Restrict Left Turn during peak hours from Cranberry</li> <li>Use a Rectangle Rapid Flash Beacon for Pedestrian and Bicycle crossings</li> <li>Create Median from Cranberry to Liberty to Water Works</li> </ul>	<ul> <li>Managed Lane Continues</li> <li>Restrict Left Turns from Cranberry</li> <li>Use a Rectangle Rapid Flash Beacon for Pedestrian and Bicycle crossings</li> </ul>	•
Liberty Park Area features: Liberty Park, Cobblestone Inn	<ul> <li>Bike Share Hub</li> <li>Transit Shelter</li> <li>Bike Storage</li> <li>Create Median from Cranberry to Liberty to Water Works</li> </ul>	Widen/Remove parking along existing frontage road from Liberty Park to the Water Works. Restrict access to passenger vehicles only. Road would continue to State Street to connected to the existing Front St that runs from State St to Holland St.	<ul> <li>Way finding signs at Niagara Pier /Liberty Park</li> <li>Existing planned signal improvements need to be upgraded to a 4-way intersection</li> </ul>
Wall at Bayview Park	Improve/upgrade drainage	Improve/upgrade drainage	•
Water Works	<ul> <li>Re-design pedestrian intersection (see example 9 in image survey)</li> <li>Add a buffer between the road and the multi-use path from the Water Works to Sassafras St. Ext.</li> </ul>	<ul> <li>Build a frontage road leading from the Water Works to Sassafras Ext. and remove driveway connecting to the Bayfront</li> <li>Move trail away from Bayfront and have it run along Frontage Road</li> </ul>	•
Sassafras St. (one-way road leading from the Bayfront up the Bluff to Front St.)		•	•

Bayfront Concep	t Scenarios		April 6, 2015
	Connected	Mobility	Both
Sassafras Ext Area features: Bayfront Place, Convention Center	Reduce Travel Lanes to 11 ft.	<ul> <li>Managed Lane ends (near Peach St? or sooner?)</li> <li>Extend left turn lane (eastbound)</li> </ul>	•
Peach St.	•	<ul> <li>Pedestrian Bridge to connect from the top of the bluff between Sassafras St and Peach St to the Northside of the Bayfront. Northside of the trail would need realigned. (Bridge would be wide enough for a small emergency vehicle)</li> </ul>	•
State St. Area features: Sheraton, Downtown, Hamot Hospital, Harbor Place, McAllister Place	<ul> <li>Pedestrian Tunnel</li> <li>Bike share</li> <li>Extend left turn lanes on Bayfront</li> <li>Improve/realign Bayfront</li> <li>Create a continuous right lane from Bayfront to State (headed downtown) with a yield sign and include a pedestrian island.</li> <li>Add/improve Bike Storage</li> </ul>	<ul> <li>Managed Lane ends</li> <li>Dual lane Roundabout</li> <li>Encourage ped/bike traffic to avoid intersection by taking the ped bridges</li> <li>Add/improve bike storeage</li> </ul>	
Central Bayfront	<ul> <li>Central Bayfront people mover/trolley.</li> <li>Stations located at convention Center, GAF site, Scott Site.</li> <li>Stops at Dobbins/Millennium Tower, Library, McAllister Place</li> <li>Needs a dedicated route with signing and striping</li> <li>Parking Recommendation – consider centralized Parking Garage</li> <li>Median with refuge area for peds</li> </ul>	•	Replace bluff signs with corporate sponsored 'History of the Area' signs along the bikeway/multi-use path

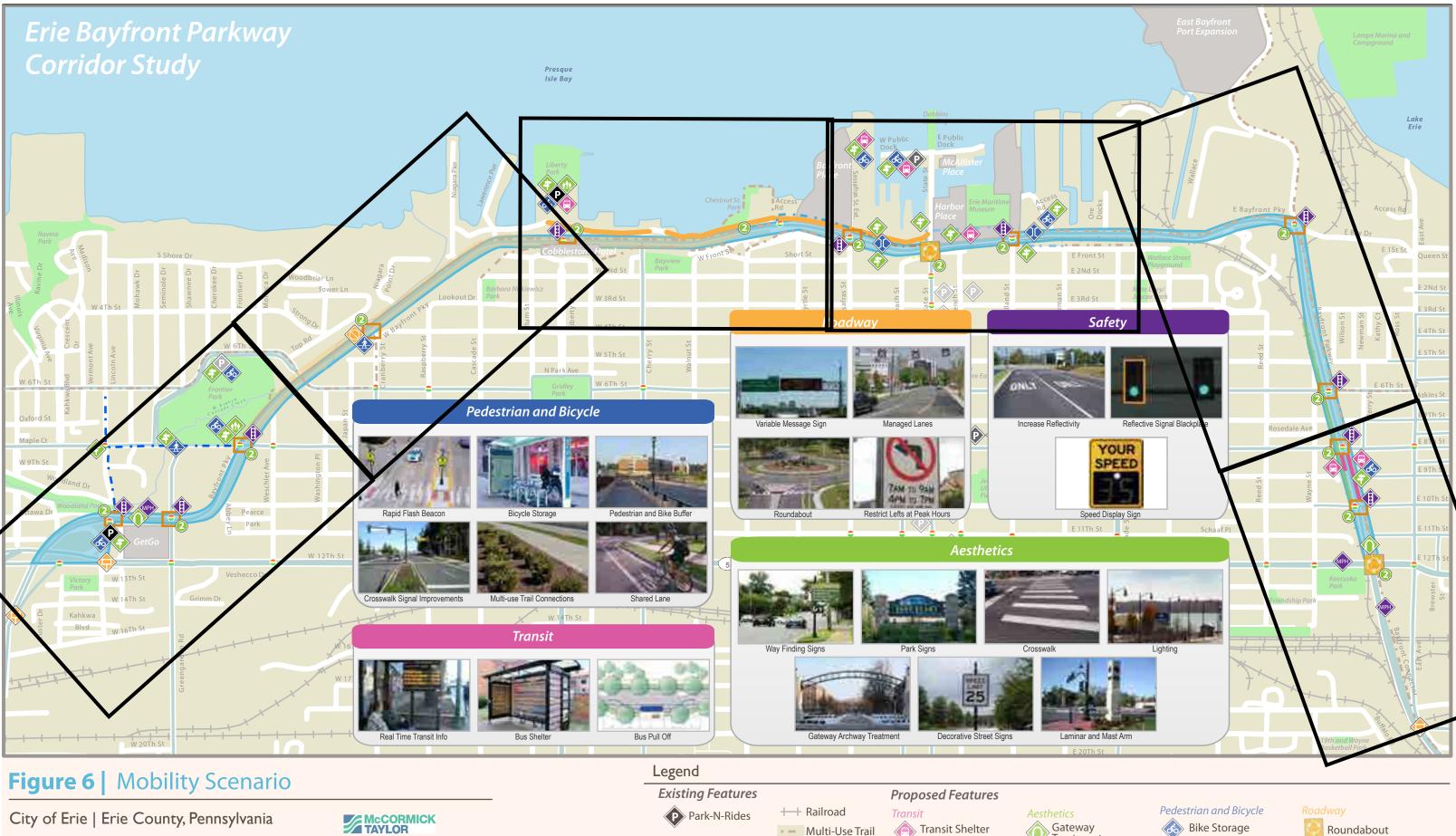
	Connected	Mobility	Both
Holland St Area features: Intermodal Center, Library, Erie Insurance, Arena, Seawolves	<ul> <li>Connect existing sidewalk to the new trail leading from German street and to the new multi-use path leading to the Pedestrian tunnel</li> <li>Remove Railroad equipment</li> <li>Move crosswalk and stop bar closer to the intersection</li> <li>Extend left turning lanes</li> </ul>	<ul> <li>Create an exclusive right from Holland St</li> <li>Turn remaining lanes into an exclusive left and a left through lane</li> <li>Widen Bayfront to four lanes from Holland to Port Access</li> <li>Remove Railroad equipment</li> <li>Improve crossing at Holland/Front St.</li> </ul>	•
German St.	Add trail from German down the bluff to connect with Holland St.	• Pedestrian Bridge to connect from the top of the bluff near the end of E. Front St. to the Northside of the Bayfront. Northside of the trail would need realigned. (Bridge would be wide enough for a small emergency vehicle) Connect Ped Bridge to E. Front St. Promenade.	•
Port Access Road Area features: Port Expansion	<ul> <li>Median with refuge area for peds (Port Access Rd to 10<sup>th</sup> st)</li> <li>Single Lane Roundabout</li> </ul>	Maintain current lane configuration	
E. 6 <sup>th</sup> St. Area features: East High School, Wayne Middle School, Business Plaza, PennDOT owned land, railroad crossing	<ul> <li>Median with refuge area for peds</li> <li>Maintain single through lane in both directions</li> </ul>	Keep existing Lane configuration	Rehab railroad buffer

**Bayfront Concept Scenarios** April 6, 2015 Connected Mobility Both Rehab railroad buffer E. 8<sup>th</sup> St. Median with refuge area for peds Keep existing Lane configuration • • • Add bus pull-off and transit shelter between 8th Maintain single through lane • ٠ Park and Ride between 8th St and 10th St on and 10<sup>th</sup> St on both sides of the road • Area features: the Eastside of the road with shelter Relocate multi-use trail around the bus pull-off • PennDOT owned Bike share at Park and Ride Bike rack along the bus pull-off land. railroad • ٠ Bike Racks at Park and Ride crossing . E. 10<sup>th</sup> St. Median with refuge area for pedestrians Keep existing lane configuration Rehab railroad buffer • • • Transition to single through lane • E. 12<sup>th</sup> St. Keep existing lane configuration Dual Lane Roundabout. Variable Message signs leading up from ٠ ٠ ٠ the Bayfront Connector to show length of Add corresponding Gateway treatment used at Arch over Gateway treatment ٠ ٠ time to key destinations within the area Lincoln intersection. using with 12 St or Bayfront Parkway (i.e. State Street, Liberty Park, E 6th St) • Are there any changes planned for the 12<sup>th</sup> St intersection as mitigation for Viaduct Demo? Consider a 12<sup>th</sup> St. Mobility/Traffic Study to 12<sup>th</sup> Street • complement Bayfront Parkway (from Lincoln improvements. to Bayfront)

APPENDIX G:

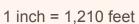
Mobility Scenario – Overall Map

# **Corridor Study**



City of Erie | Erie County, Pennsylvania September 30th, 2014 | Source: ESRI 0.5  $\mathcal{I}_N$ 

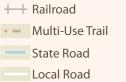




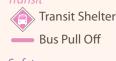


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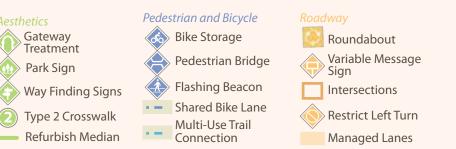


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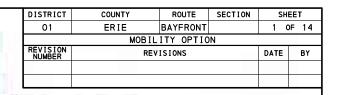
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### APPENDIX H:

Mobility Scenario – Section Sheets







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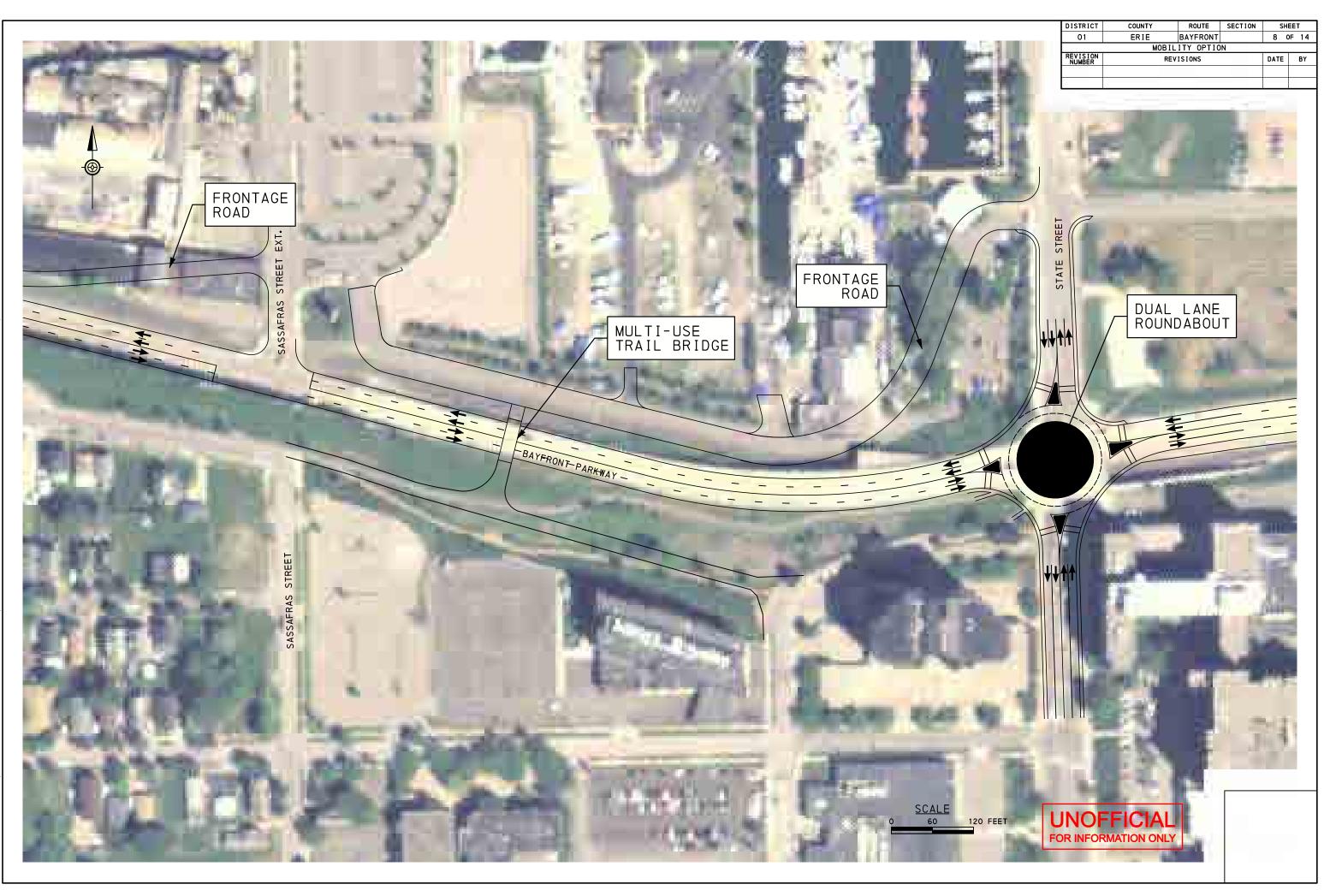
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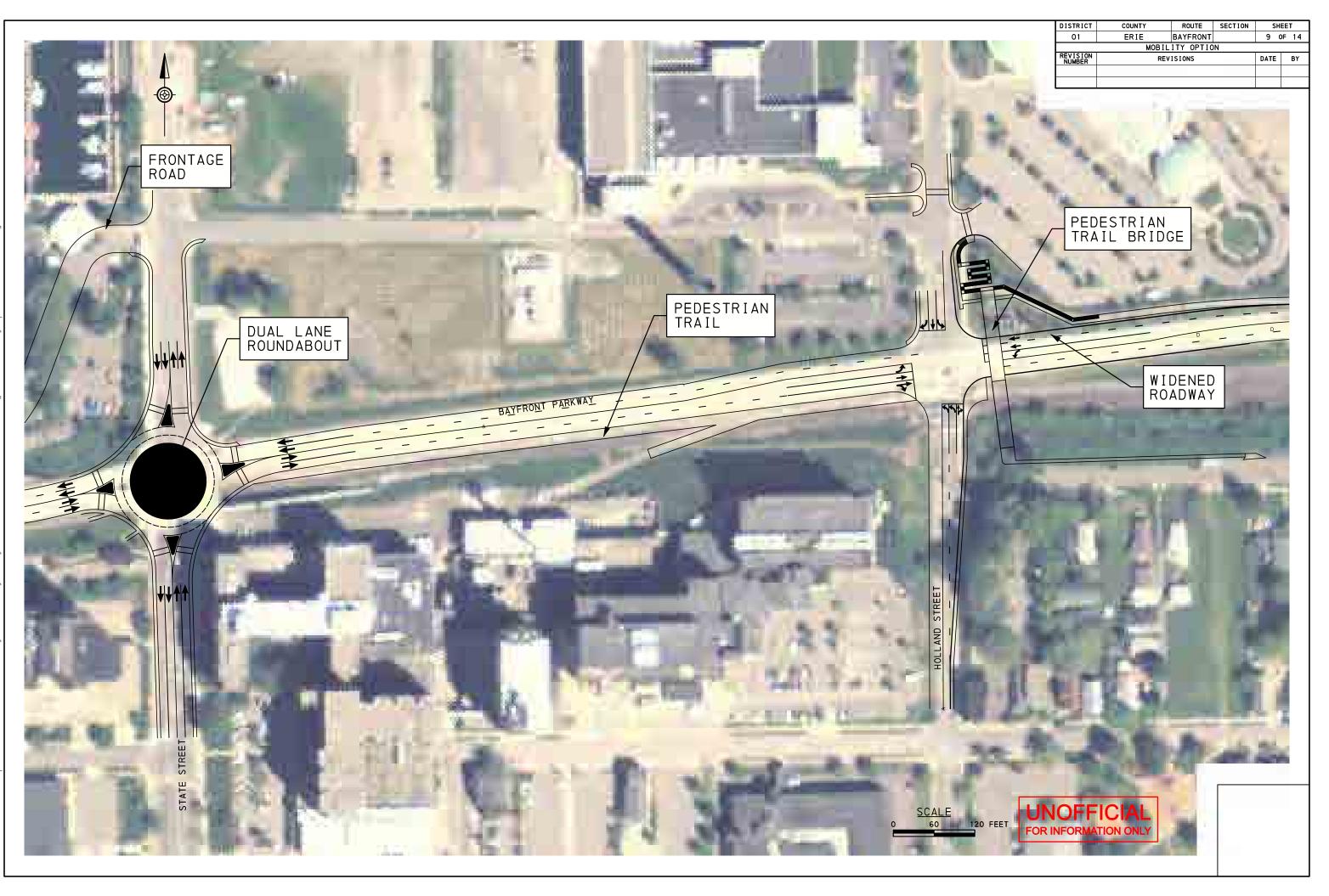
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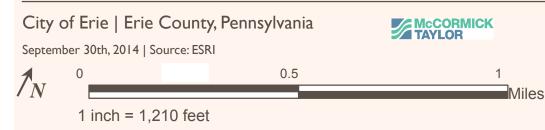


# APPENDIX I:

Connected Scenario – Overall Map



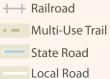
# Figure 5 | Connected Scenario



#### Legend



Development



Parks

# Transit Shelter Bus Pull Off

Transit

- People Mover Route Safety Reflective Signal Backplate

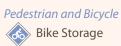
MPH Speed Display Sign

**Proposed Features** 





- Way Finding Signs
- Bridge Aesthetics
- 1 Type 1 Crosswalk Refurbish Median





- Flashing Beacon
- - Shared Bike Lane
- Multi-Use Trail Connection Pedestrian Tunnel

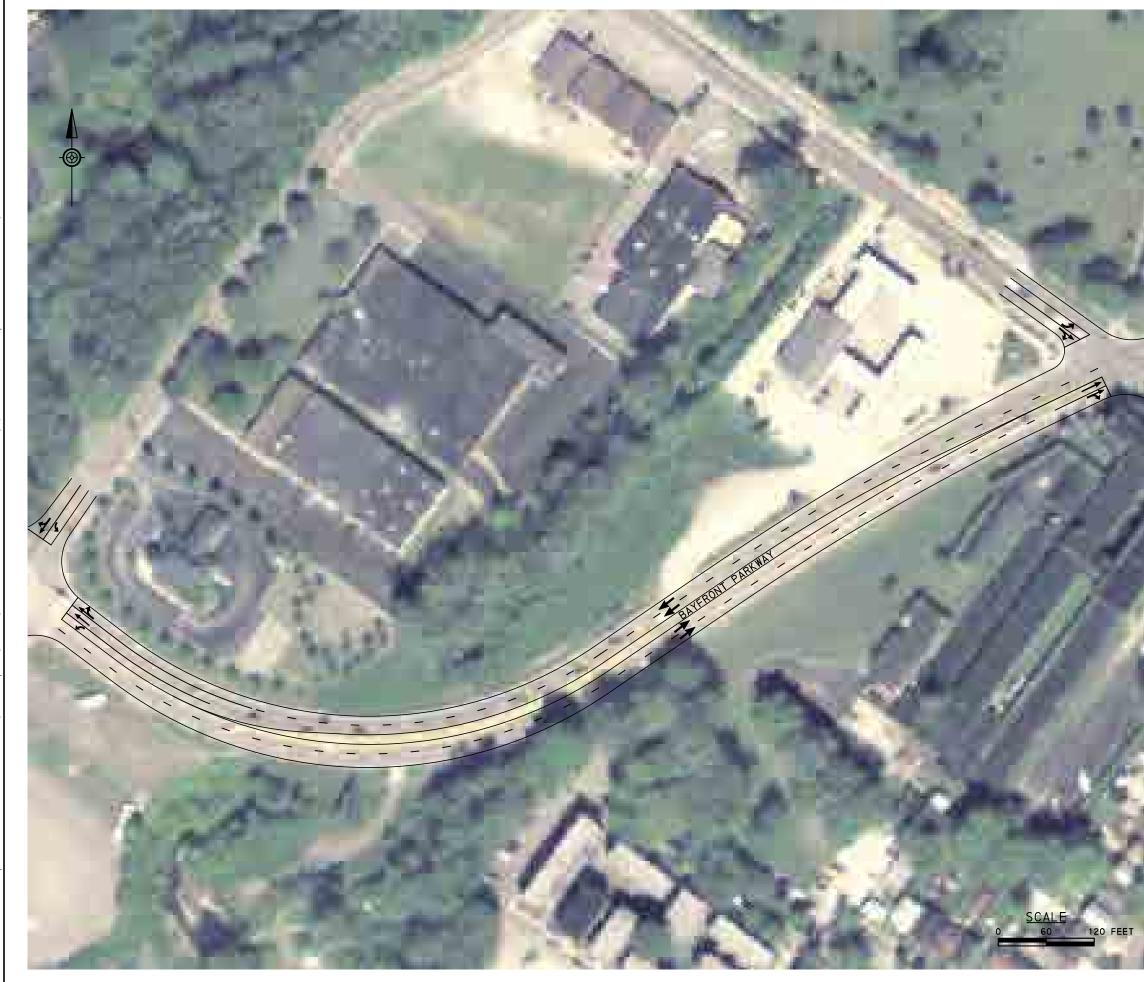


# APPENDIX J:

**Connected Scenario – Section Sheets** 



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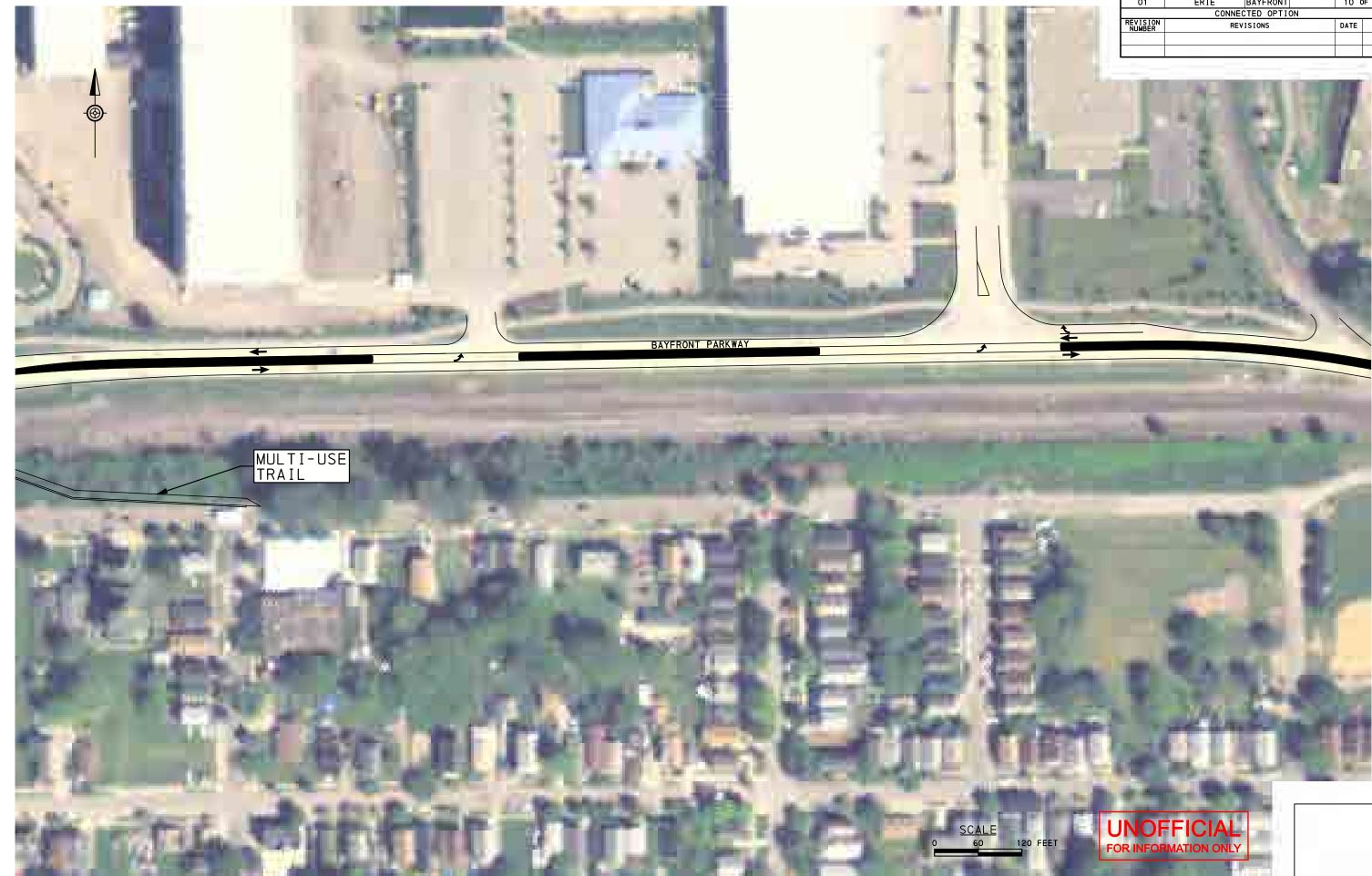
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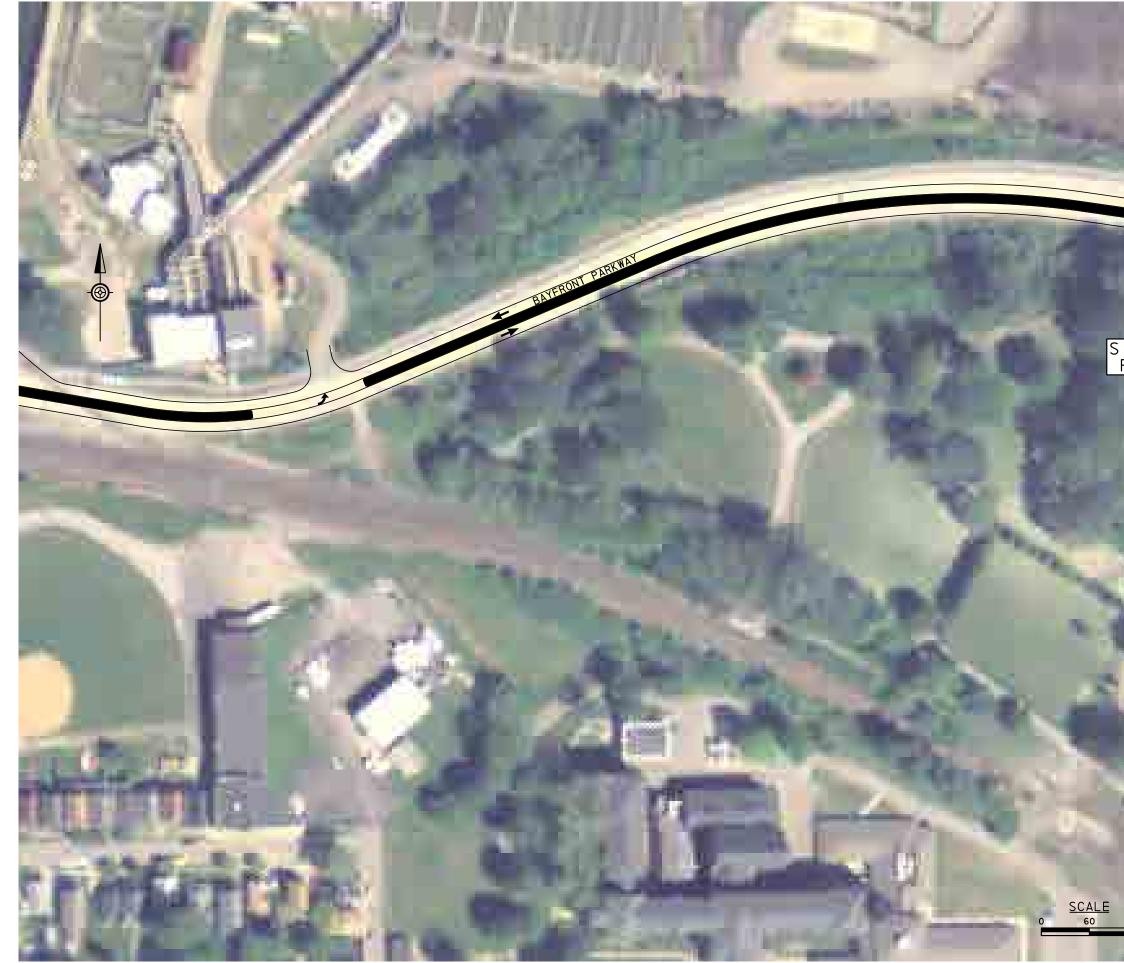
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APPENDIX K:

Post Meeting Feedback

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From:	Ronald Costantini [rcostantini@eriewaterworks.org]	Sent: Wed 4/15/2015 4:59 PM
To:	BayfrontParkwayStudy	
Cc:	Paul Vojtek	
Subject:	Erie Water Works comments/concerns	
Attachments:		

View As Web Page

Overall the Mobility Scenario presented yesterday is much more desirable when compared to the Connected Scenario. However, below are comments regarding the Mobility Scenario and the proposed frontage road and crosswalk that would border the Erie Water Works property.

• Referring to page 7 of 14 – the frontage road jogs north to take advantage of the existing road. This would essentially eliminate our ability to travel around our property and take away delivery access to our filtration plant. It would be more beneficial to the Erie Water Works as well as the project to utilize the former RR right of way immediately to the north of the Bayfront Parkway. A smooth transition could be made to the adjoining property to the west (boat ramp) and maximize the parking for boat trailers as well. I recognize the existing frontage road from the west of the boat ramp property already jogs a bit north, but that's a more easily remedied situation.

• The Erie Water Works receives regular deliveries of chemicals via tractor trailer trucks on the southeast side of the long filtration building that exists on the north side of the Bayfront Parkway. Careful consideration of the location of the frontage road would need to be addressed prior to design so that the tractor trailers have enough room to make their deliveries without interference of the frontage road.

• There is a lighted crosswalk that exists between our buildings on the north and south side of the Bayfront (noted as a Type 2 Crosswalk on the Mobility Scenario). Our employees use this crosswalk on a daily basis. We also hold regular tours of our facilities for the general public as well as special interest groups, with the highlight being the pump house located on the south side of the Bayfront Parkway. In summary, this lighted crosswalk is essential to our daily business and we are grateful the current plan is to keep it operational after the construction. However, it would also be beneficial if, at a minimum, an aesthetically pleasing and safely marked crosswalk were added to the frontage road as a continuation of the existing Bayfront crosswalk.

Thank you for your consideration!

Ronald G. Costantini | Senior Manager, Administration

Erie Water Works | Erie, Pennsylvania Office 814-870-8000 ext. 306 | Mobile 814-323-7385 | Fax 814-452-6227

Email rcostantini@eriewaterworks.org | Web www.eriewater.org

"World-Class Water, First-Class Service"

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John and Jennifer,

Jeff Kidder and I had another chance to review the proposed scenarios for the Bayfront Parkway. We have a few observations on the mobility scenario. From State Street, traveling west on the Parkway, four lanes of traffic merge into three lanes as you approach the Water Authority. We recognize that the roadway is pinched at this section but see this as an area that would become problematic (safety and congestion). The high volumes of traffic coming from both the former GAF site as well as to the east, would not make for an easy transition into three lanes.

Currently, Frontage Road functions as a one-way street. This road is extremely important not only as an access road to the Bayfront Place Development and Convention Center but also as a "local" connector along the bayfront. It seems this road would need to be a two-way street in order to function properly.

As I mentioned, we are in the final phases of our development plan/program and should be able to share those numbers with you by the beginning of May. We would also like to meet with you in the next couple of weeks regarding the internal circulation for the Bayfront Place Development Plan. Are you planning on making a trip back to Erie in the next couple of weeks? If not, we could set up a conference call or Skype.

Thanks,

Jacqueline Spry | Project Planner Kidder Wachter Architecture & Design 201 French St. Erie PA 16507 P <u>814 452 2414</u> http://www.kidderwachter.com BAYFRONTIAN KWAY STUDY

## Bayfront Parkway Corridor Study Project Advisory Committee Meeting #5

Date: September 30, 2015

Time: 10:30 AM to 12:30 PM

Location: Tom Ridge Environmental Center Large Classroom, Erie, PA

Attendees:

Name Jeff Brinling John Buchna Jim Carroll Barbara Chaffee Ron Costantini Chris Groner **Brian Mesaros** Raymond Moluski John Morgan Michele Morningstar, P.E. Mark Nicholson, P.E. LeAnn Parmenter, P.E. Bill Petit, P.E. John Petulla, P.E. Tony Pol Barbara Sandberg Jason Sayers, P.E. Melani Scott Dana Sklack Brian Smith Mike Tann Jennifer Threats Jon Tushak, P.E. Paul Voitek Kathy Wryosdick Brian Yedinak, P.E.

## Representing

Erie Insurance Erie Downtown Partnership PennDOT District 1-0 Erie Regional Chamber and Growth Partnership Erie Water Works City of Erie Erie County **UPMC Hamot** Erie County PennDOT District 1-0 PennDOT District 1-0 City of Erie PennDOT District 1-0 McCormick Taylor City Of Erie Fire Department Erie-Western PA Port Authority City of Erie Professional Development Associates, Inc. McCormick Taylor PennDOT District 1-0 Erie Metropolitan Transit Authority McCormick Taylor City of Erie Erie Water Works Erie County PennDOT District 1-0

## Meeting Summary:

Project Advisory Committee (PAC) members were invited to the meeting via an email blast (appendix C) and asked to review the 'blended' scenario of the improvement concepts (appendix D-F). The maps and matrix (appendix G) of improvements were stored on a FTP site for PAC members to download.

#### I. Welcome

Bill Petit, District Executive for PennDOT Engineering District 1-0 welcomed everyone to the fifth PAC Meeting and explained that the meeting would include the presentation of a "Blended Scenario". He noted that the Blended Scenario was developed based on modest input from the Public Officials/PAC Meeting and Public Meeting held in June. He encouraged the PAC's input on the improvement concepts included in the Blended Scenario and any updates on commercial development and/or planning initiatives.

#### II. Study Update

Jennifer Threats, meeting facilitator from McCormick Taylor, reviewed the information gathered at the Public Meeting and asked for an update on economic development within the area from project developers in attendance.

She noted nineteen members of the PAC and/or Public Officials attended the Public Officials briefing and 20 members of the public attended the public presentation. At the meeting, the Mobility and Connected Scenarios were presented in detail. Attendees were provided a comment form and were asked to identify up to 10 preferred improvement concepts from either scenario. The top concern expressed on the comment forms was safety and 67% of respondents agreed that the proposed improvement concepts satisfy the existing and future needs. When asked which improvement scenario they preferred, 54% preferred the Mobility Scenario and 40% preferred the Connected Scenario. A few of the preferred improvement concepts included: Way Finding Signs for Pedestrians and Bicyclists, Pedestrian Bridge near Peach St., Reversible Lanes from West 8<sup>th</sup> St. to Sassafras St. Ext., the Multi-use Trail Connecting the Promenade at East German St., and the Pedestrian Tunnel.

A full summary of the results from the Public Meeting was provided to the PAC for reference, see appendix H.

The following development/planning updates were provided by PAC attendees:

- Cobblestone Inn according to Melani Scott, who attended in place of Tom Kennedy, the Cobblestone Inn has its building permit for a needed retaining wall. The plans for the hotel are being resubmitted for approval after changes were made to the design.
- McAllister Place Brenda Sandberg, executive Director of Erie-Western PA Port Authority, said there is no news ready to be made public at this time, but they are still working towards a development deal.
- Erie Downtown Partnership According to John Buchna, Chief Executive Officer for Erie Downtown Partnership, the Master Plan for the Erie Downtown will focus on six main goals. An example of this is focusing on how transportation can be improved in the downtown area.

• City of Erie Comprehensive Plan – The City's Comprehensive Plan is being completed by Charles Burki of CZB consultants. A representative from the comprehensive plan was not present.

Mr. Petit stressed the importance of having all of the available information shared with PennDOT and the study team so that the improvement concepts can be tailored to the needs of future developments and changes in the area. Mr. Petit went on to use the Harbor Place development as an example of why communication at this stage is important. Due to their feedback, a second configuration of the access road that is proposed to run along the parkway and provide access to the new developments was added.

Mr. Buchna agreed with Mr. Petit about sharing information and agreed to provide further information regarding their Master Plan as it is available.

Jeff Brinling, Senior Vice President of Erie Insurance, questioned whether the Bayfront Parkway Study and the Erie Downtown Partnership's Master Plan would result in the same conclusion because they seem to be focused on different things – one on transportation and one on economic development. Mr. Petit responded by saying that PennDOT's goal with this project is to support transportation needs in the area proactively so that improvements can be in place as the developments occur.

Ray Moluski, Vice President of General Services for UPMC Hamot, suggested PennDOT and the study team plan to meet with the City's consultant team for the Comprehensive Plan prior to the end of the Bayfront Parkway Sstudy. Mr. Petit agreed a meeting could potentially provide valuable insight.

#### III. Blended Scenario Detail

John Petulla, Project Manager for McCormick Taylor, reviewed the Blended Scenario improvement concepts starting with the West Bayfront area and continued to the Central and East Bayfront area. In doing so, Mr. Petulla referenced the maps and comparison matrix provided to PAC members, see Appendix D-G. He also pointed out that improvements with gray boxes were listed on the improvement matrix as overall improvements and could be applied throughout the corridor and not just in the location noted on the mapping. The matrix provided information on the following for each of the improvement concepts:

- Reduces Congestion and Improves Operations (yes/no),
- Provides multi-modal connection along the Bayfront (yes/no),
- Property and utility impacts (high/medium/ low),
- Engineering/constructability concerns (yes/no),
- Estimated delivery time (short term/mid term/long term),
- Conceptual construction cost range (<10,000/10,000–100,000/100,000–1 million/>1 million), and
- Potential funding source.

PAC members were encouraged to comment and ask questions throughout the presentation. The following comments and clarifications were noted during the discussion:

- Access to UPMC Hamot was noted as a concern with the roundabout improvement concept at State Street and the Bayfront Parkway. As shown, the improvement concept would include alternative access off the Bayfront Parkway. If a roundabout improvement concept is advanced, more detailed studies and design would need to be done to fully assess alternative access options for UPMC and several other potential constructability concerns.
- The improvement concept at West 8<sup>th</sup> Street would maintain the thru travel lane traveling north/east on the Bayfront Parkway and change the right turn only lane to a shared thru and right turn lane. The no left turn restriction during peak hours, traveling south/west, would remain at this intersection. The next opportunity to turn left would remain at the Greengarden Blvd. intersection. Interest in adding a right turn only lane traveling south/west was noted.
- Operation details associated with the Managed Lane improvement concept were of interest. How the system would best work to accommodate emergency services, events, various shifts at UPMC, or other potential uses, such as, bus/trolley use would be determined prior to implementation and could evolve as development or other needs occur.
- A three (3) acre land parcel was identified as being for sale beside the new GetGo near the western side of the corridor.
- A suggestion was made that the Blended Scenario accommodates commuters with higher speeds and capacity and seems disconnected from other plans. The study team developed the Blended Scenario based on public/stakeholder input from the online survey with nearly 500 respondents, stakeholder interviews, PAC Meetings, and the Public Meeting, as well as, technical traffic data and other safety analysis. The study's purpose and need was derived from this information. A Mobility Scenario and a Connected Scenario were initially developed to offer improvement concepts that provided two different approaches to improve the Bayfront Parkway. Finally, the Blended Scenario was created to include the preferred improvements from both the Mobility and Connected options. The improvements included reasonably accommodate growth and development traffic projections; however, they do not achieve a Level of Service (LOS) A throughout the corridor during peak hours most achieve LOS C on average or lower. The study team will further coordinate with the City to learn more about their plans.
- Concern was noted that the Blended Scenario as currently presented seemed to cause more of a divide between the city of Erie and the Bayfront than a connection. Consideration for a more direct connection from the downtown area and neighborhoods to the Central Bayfront area was proposed. One idea was to lower the Bayfront Parkway to go under State Street replacing the current train tunnel/culvert.
- A PAC member noted that it is difficult to visualize the proposed changes to the Bayfront Parkway. The Study team agreed to consider alternative graphics that might help show the improvements.

A new improvement option was presented by the Study Team along the East Bayfront area. Pedestrian refuge areas at each intersection from 6<sup>th</sup> Street to 10<sup>th</sup> Street were developed as a compromise between the current intersection layout and the median/reduced travel lane concept from the Connected Scenario. While the travel lanes will need to be narrowed to allow room for the refuge areas, the number of travel lanes would be maintained.

## Future Travel Times

Once all of the improvement maps and matrixes were reviewed, a future travel time comparison chart for the year 2034 was shown to the PAC to show the different travel times based on improvements. As a base comparison, the travel times for 2034 with no improvements was also shown.

Direction	No Buil	d Option	Blended Option A Dual Lane Roundabout at State Street		Blended Option B Signalized Intersection at State Street	
	AM	PM	AM	PM	AM	PM
Bayfront EB: Lincoln Ave to E 12th St	67.4 min 5 mph	15.9 min 19 mph	10.7 min 27 mph	15.6 min 19 mph	11.7 min 25 mph	16.9 min 19 mph
Bayfront WB: E 12th St to Lincoln Ave	14.4 min 20 mph	20.2 min 15 mph	12.5 min 23 mph	12.6 min 23 mph	14.5 min 20 mph	13.0 min 22 mph

### IV. Improvement Concept Priority Activity

During this portion of the meeting, the 17 PAC members in attendance and the PennDOT project manager, Mark Nicholson, were each given 12 money stickers, three for each improvement station set up in the back of the room. They were then asked to place the stickers on the board beside the improvements that appealed most to them and their organization. They were allowed to place more than one sticker per improvement.

The purpose of this exercise was to demonstrate how the PAC would prioritize future projects included in the Blended Scenario.

The results for each station are as follows:

Conceptual Improvement Options	Improvement Description	Total Votes
<b>Overall Im</b>	provement Concepts	
1.	Variable message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	6
2.	Bike Share Program with hubs located throughout the corridor	3
3.	Bike shelters/storage at locations throughout the corridor	0
4.	Replace existing luminaire and mast arms with ornamental features to match proposed lighting and gateway treatment	2
5.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	7
6.	Decorative park signs with consistent treatments	0
7.	Upgrade pedestrian push buttons, traffic signal equipment and timings, and place reflective signal backplates	11
8.	Add buffer between roadway and bikeway	0
9.	Enhance pedestrian crossings along the Bayfront with painted crosswalks	9
10.	Upgrade or add trail lighting throughout corridor	5
11.	Transit shelters with real time transit information at locations throughout the corridor	6

Conceptual Improvement Options	Improvement Description	Total Votes
Bayfront V	Vest Improvement Concepts	
12.	Shared bike lane along Lincoln Ave. and 8th St.	11
13.	Arch gateway treatment over roadway near Greengarden Blvd.	4
14.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	4
15.	Reversible managed lanes from 8th St. to Sassafras St. Ext.	10
16.	Rapid Flash Beacon for ped/bike crossing at Cranberry St. and the intersection of W. 8th St. and Greengarden Rd.	6
17.	Restrict left turns from Cranberry St. during peak hours	14

Conceptual Improvement Options	Improvement Description	Total Votes
Bayfront C	Central Improvement Concepts	
18.	Construct a two-way frontage road from Liberty Park to State St. and extend multi-use trail	11
19 A.	Pedestrian bridge over Bayfront Parkway connecting to an elevator equipped building within the Bayfront Place development OR	0
19 B.	Pedestrian bridge over the Bayfront Parkway near Peach St.	10
20.	People mover system within the central Bayfront with a dedicated route	6
21 A.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot OR	17
21 B.	Realign travel lanes at State St. intersection and extend left turn lanes on the Bayfront Parkway	1
22.	Pedestrian bridge over Bayfront Parkway connecting to an elevator equipped building within the Harbor Place development	2
23.	Redesign Holland St. intersection to extend left turning lanes on the Bayfront Parkway, add turning lanes on Holland St.	0
24.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St.	0
25.	Four lane roadway on the Bayfront Parkway from Holland St. to Port Access Rd.	4

Conceptual Improvement Options	Improvement Description	Total Votes
Bayfront E	ast Improvement Concepts	
26.	Narrow travel lanes to 11 ft. from Port Access Rd. to E. 12th St.	0
27.	Pedestrian refuge at intersections from E. 6th St. to E. 10th St.	20
28.	Two bus pull-off areas (one east side and one west side between 8th St. and 10 St.) and relocate multi-use trail around the bus pull-off	1
29.	Gateway treatments at E. 12th St.	2
30.	Add speed display signs at E. 12th St.	5
31.	Dual-lane roundabout at E. 12th St.	18

While reviewing the votes, the following comments were noted:

- Consider alternatives to the pedestrian bridges.
- The study team was urged to look at finding an alternative solution for State Street.
- Consider how to make connections easier for pedestrians.

V. Next Steps

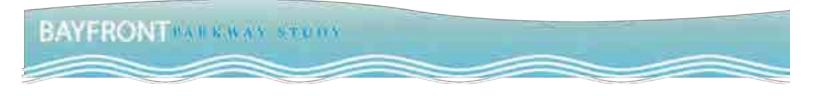
Mr. Petit reviewed the next steps for the project but also acknowledged that more steps will need to be taken prior to completing the study. He suggested at least one more PAC Meeting may be needed to help the group reach consensus on improvements and that he hopes to meet with the City of Erie, and County Planning prior to the completion of the study. He also mentioned the possibility of introducing additional improvements to better reflect the conversation during this meeting.

The study team will meet to discuss the new proposed activities and update the PAC once a schedule for these activates has been set.

With no further questions or discussions, the meeting was adjourned at approximately 12:30 p.m. We believe this report accurately describes what transpired at this meeting. If anyone has a different understanding of what occurred, please contact Dana Sklack at (412) 922-6880 within two weeks of receipt. If no comments are received, this report will be considered final.

Prepared by: McCormick Taylor, Inc.

Jennifer Threats Dana Sklack

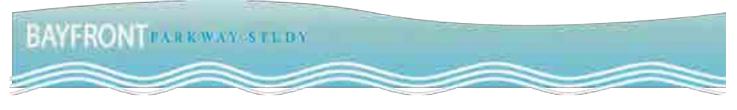


## Appendix List

- A. Project Advisory Committee Meeting #5 Agenda
- B. Project Advisory Committee Meeting #5 PowerPoint Slides
- C. Email Blast
- D. West Bayfront Map
- E. Central Bayfront Map
- F. East Bayfront Map
- G. Improvement Matrix (handout version)
- H. Public Meeting Comment Summary

## APPENDIX A:

## Project Advisory Committee Meeting #5 Agenda



#### PROJECT ADVISORY COMMITTEE MEETING #5

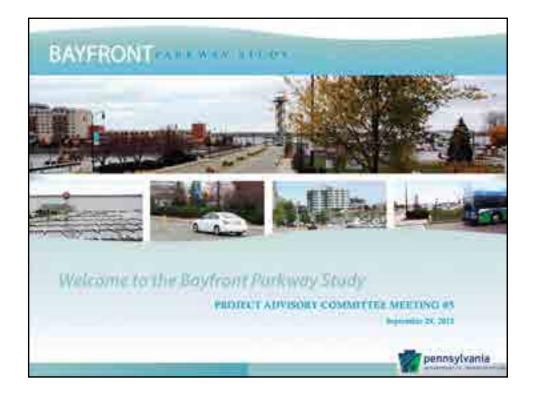
- Date: September 29, 2015
- Time: 10:30 a.m. to 12:00 p.m.
- Location: Tom Ridge Environmental Center

## **AGENDA**

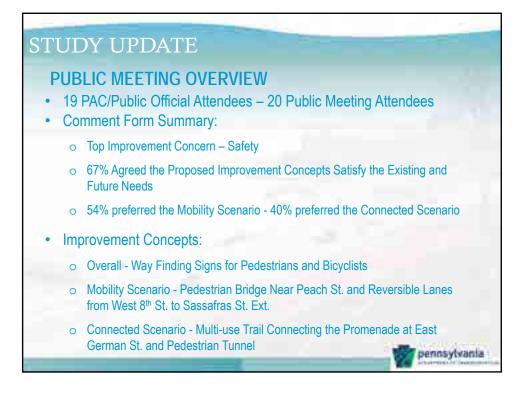
1.	Welcome – Bill Petit, P.E., PennDOT District Executive Jennifer Threats, McCormick Taylor	10:30 a.m. – 10:35 a.m.
	<ul><li>Welcome</li><li>Opening Remarks</li></ul>	
2		10-25 a.m. 10-45 a.m.
2.	Study Update – Jennifer Threats, McCormick Taylor	10:35 a.m. – 10:45 a.m.
	<ul><li>Public Meeting Overview</li><li>Developer Input</li></ul>	
3.	Blended Scenario Detail – John Petulla, P.E., Jennifer Threats, McCormick Taylor	10:45 a.m. – 11:30 a.m.
	<ul> <li>Bayfront West Improvement Concepts</li> <li>Bayfront Central Improvement Concepts</li> <li>Bayfront East Improvement Concepts</li> </ul>	
4.	Improvement Concept Priority Activity – Jennifer Threats, McCormick Taylor	11:30 p.m. – 11:55 p.m.
	<ul> <li>Improvement Concept Stations (4- Overall/West/Central/East)</li> <li>Results Overview</li> </ul>	
5.	Next Steps – Bill Petit, P.E., PennDOT District Executive	11:55 p.m. – 12:00 p.m.
	Refine Blended Scenario	
	Draft Study Report (October 2015)	
	<ul> <li>Send to PAC for Input/Review</li> <li>Finalize Study Report (November 2015)</li> </ul>	

## **APPENDIX B:**

## Project Advisory Committee Meeting #5 PowerPoint Slides







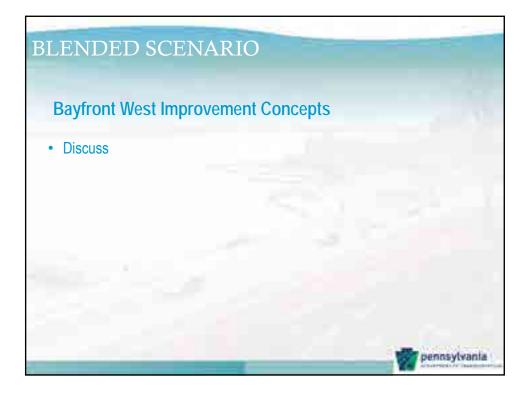






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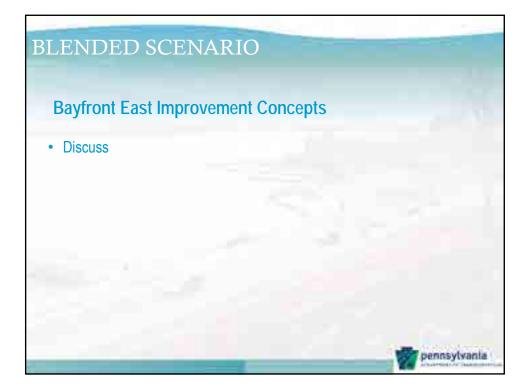




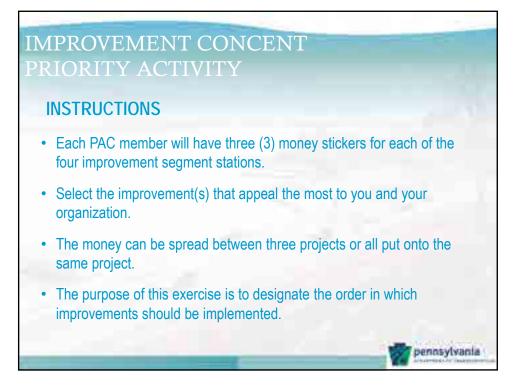


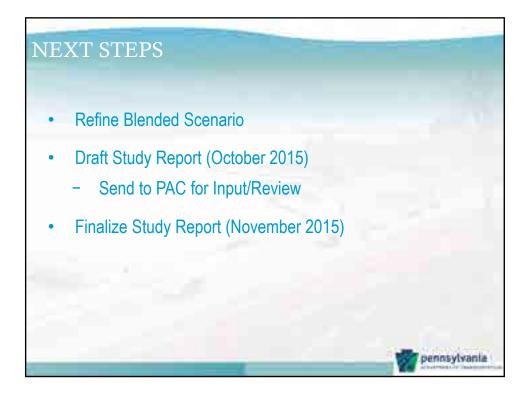


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Direction	Direction	No Build Option		Dual Lane F	nded on A Roundabout e Street	Bler Optio Signalized I at State	on B ntersection
	AM	PM	AM	PM	AM	PM	
Bayfront EB: Lincoln Ave to E 12th St	67.4 min 5 mph	15.9 min 19 mph	10.7 min 27 mph	15.6 min 19 mph	11.7 min 25 mph	16.9 min 19 mph	
Bayfront WB: E 12th St to .incoln Ave	14.4 min 20 mph	20.2 min 15 mph	12.5 min 23 mph	12.6 min 23 mph	14.5 min 20 mph	13.0 min 22 mph	





**APPENDIX C:** 

Email Blast

# BAYFRONTPARKWAY STUDY

# WE NEED YOUR INPUT! PAC MEETING #5 (FINAL MEETING)

A NEW "BLENDED" IMPROVEMENT SCENARIO FOR THE BAYFRONT PARKWAY HAS BEEN DEVELOPED! Since our last PAC Meeting and Public Meeting, the study team has been working to develop a third Improvement Scenario that blends the preferred improvement options from the Mobility Scenario and Connected Scenario into one Blended Improvement Scenario. The Blended Scenario will be presented for your input and discussion at our final PAC Meeting.



# Tuesday, September 29, 2015 10:30 a.m.

PLEASE REPLY TO RSVP



*Tom Ridge Environmental Center 30 Peninsula Drive Erie, PA 16505* 

# PREPARE FOR THE MEETING



Please take a few moments to review the materials prior to the PAC Meeting.

ftp://Bayfront:parkway@ftp.mccormicktaylor.com Username: bayfront Password: parkway



DOES THIS SCENARIO PROVIDE COMPREHENSIVE IMPROVEMENTS?

HOW WOULD YOU PRIORITIZE THEM?

HOW SHOULD THEY BE FUNDED?

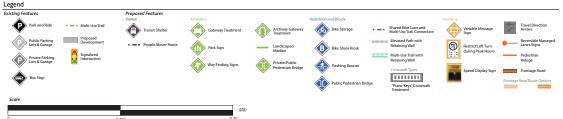


**APPENDIX D:** 

West Bayfront Map

# BAYFRONT PARKWAY STUDY





### Blended Scenario - West Bayfront





**APPENDIX E:** 

Central Bayfront Map



APPENDIX F:

East Bayfront Map

# BAYFRONT PARKWAY STUDY





### Blended Scenario - East Bayfront





**APPENDIX G:** 

Improvement Matrix (handout version)

# BAYFRONT PARKWAY STUDY

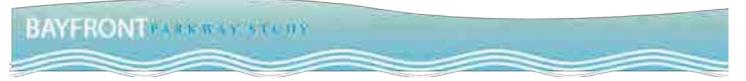
Conceptual Improvement Options	Improvement Description	Reduces Congestion & Improves Operations (Y/N)	Provides Multi-Modal Connection Along the Bayfront (Y/N)	Property and Utility Impacts (High, Medium, Low)	Engineering/ Constructability Concerns (Y/N)	Estimated Delivery Time - Short Term (1-2 years) Mid Term (3-4 years) Long Term (5 or more years)	Сопсерtua Соз <10К - 100К	I Construction t Range 100K - 1M	>1M	Potential Funding Sources*
OVERAL	L IMPROVEMENT CONCEPTS									
1	Variable message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	Ν	Ν	Low	Ν	Short Term	Х			TIP
2	Bike Share Program with hubs located throughout the corridor	Ν	Y	Low	Ν	Short Term		Х		MMTF, P, TA
3	Bike shelters/storage at locations throughout the corridor	Ν	Y	Medium	Ν	Short Term		Х		MMTF, P, TA
4	Replace existing luminaire and mast arms with ornamental features to match proposed lighting and gateway treatment	Ν	Ν	Low	Ν	Short Term	Х			LF, TA, MMTF
5	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	Ν	Ν	Low	Ν	Short Term	Х			TA, MMTF, LF, P
6	Decorative park signs with consistent treatments	Ν	Ν	Low	Ν	Short Term	Х			LF, MMTF, P
7	Upgrade pedestrian push buttons, traffic signal equipment and timings, and place reflective signal backplates	Y	Y	Low	Ν	Short Term	Х			TIP, LF, TA, G
8	Add buffer between roadway and bikeway	Ν	Y	Low	Ν	Short Term		Х		MMTF, TA, TIP, LF
9	Enhance pedestrian crossings along the Bayfront with painted crosswalks	Ν	Y	Low	Ν	Short Term	Х			LF, TA
10	Upgrade or add trail lighting throughout corridor	Ν	Ν	Medium	Ν	Mid Term			Х	TA, MMTF, P
11	Transit shelters with real time transit information at locations throughout the corridor	Y	Y	Low	Ν	Short Term	Х			TIP (Transit), MMTF
BAYFRO	NT WEST IMPROVEMENT CONCEPTS									
12	Shared bike lane along Lincoln Ave. and 8th St.	Ν	Y	Low	Ν	Short Term	Х			LF, TA
13	Arch gateway treatment over roadway near Greengarden Blvd.	Ν	Ν	Low	Ν	Short Term		Х		LF, P
14	Modify W. 8th St. intersection to include one through lane, one shared through/right-turn lane (eastbound) with merge after intersection	Y	Ν	Low	Ν	Short Term	Х			TIP, LF
15	Reversible managed lanes from 8th St. to Sassafras St. Ext.	Y	Y	Medium	Ν	Mid Term		Х		ARLE, G, TIP, MMTF
16	Rapid Flash Beacon for ped/bike crossing at Cranberry St. and the intersection of W. 8th St. and Greengarden Rd.	Ν	Y	Low	Ν	Short Term	Х			TIP, LF, TA
17	Restrict left turns from Cranberry St. during peak hours	Y	Ν	Low	Ν	Short Term	Х			LF

# BAYFRONT PARKWAY STUDY

Conceptual Improvement Description Options		Reduces Congestion & Improves Operations (Y/N)	Provides Multi-Modal Connection Along the Bayfront (Y/N)	Property and Utility Impacts (High, Medium, Low)	Engineering/ Constructability Concerns (Y/N)	Estimated Delivery Time - Short Term (1-2 years) Mid Term (3-4 years) Long Term (5 or more years)	С <10К	Conceptual Cost I 10K - 100K	Constructio Range 100K - 1M	n >1M	Potential Funding Sources*
BAYFRON	IT CENTRAL IMPROVEMENT CONCEPTS										
18	Construct a two-way frontage road from Liberty Park to State St. and extend multi-use trail	Y	Y	Medium	Y	Mid Term				Х	P, LF, TA, MMTF, TIGER
19 A.	Pedestrian bridge over Bayfront Parkway connecting to an elevator equipped building within the Bayfront Place development OR	Ν	Y	High	Y	Mid Term				Х	P, MMTF, TA, TIGER
19 B.	Pedestrian bridge over the Bayfront Parkway near Peach St.	Ν	Y	High	Y	Mid Term				Х	MMTF, TA, TIP, TIGER
20	People mover system within the central Bayfront with a dedicated route	Y	Y	Low	Ν	Mid Term		Х			Р
21 A.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot OR	Y	Ν	High	Y	Long Term				Х	TIP, TIGER
21 B.	Realign travel lanes at State St. intersection and extend left turn lanes on the Bayfront Parkway	Y	Ν	Medium	Y	Mid Term			Х		TIP
22	Pedestrian bridge over Bayfront Parkway connecting to an elevator equipped building within the Harbor Place development	Ν	Y	High	Y	Mid Term				Х	P, MMTF, TA, TIGER
23	Redesign Holland St. intersection to extend left turning lanes on the Bayfront Parkway, add turning lanes on Holland St.	Y	Ν	Medium	Ν	Mid Term			Х		TIP, P
24	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St.	Ν	Y	High	Ν	Long Term			Х		TA, MMTF, LF
25	Four lane roadway on the Bayfront Parkway from Holland St. to Port Access Rd.	Y	Ν	Medium	Ν	Long Term			Х		TIP, P, MMTF
BAYFRON	IT EAST IMPROVEMENT CONCEPTS										
26	Narrow travel lanes to 11 ft. from Port Access Rd. to E. 12th St.	Ν	Y	Low	Ν	Short Term			Х		TIP, TA
27	Pedestrian refuge at intersections from E. 6th St. to E. 10th St.	Ν	Y	Low	Ν	Short Term			Х		TIP, ARLE, TA,MMTF
28	Two bus pull-off areas (one east side and one west side between 8th St. and 10 St.) and relocate multi-use trail around the bus pull-off	Y	Y	Low	Ν	Short Term		Х			TIP (Transit), MMTF
29	Gateway treatments at E. 12th St.	Ν	Ν	Low	Ν	Short Term		Х			LF, P
30	Add speed display signs at E. 12th St.	Y	Y	Low	Ν	Short Term		Х			ARLE, MMTF
31	Dual-lane roundabout at E. 12th St.	Y	Ν	High	Y	Long Term				Х	TIP, MMTF
*Potent Funding S	<b>0</b>	unding Multimodal Transportation F		vate Funding ransportation Alternatives		ansportation Investments Ge portation Improvement Prog		conomic Re	ecovery		

### **APPENDIX H:**

Public Meeting Comment Summary



#### PUBLIC MEETING COMMENT FORM SUMMARY

Comment forms were made available to the public at the Public Meeting held on June 24, 2015. As of August 7, 2015, 12 Comment Forms have been completed and submitted. Respondents were able to provide more than one answer to each question.

#### 1. How often to you travel the Bayfront Parkway Corridor?

	,	5	,
a.	Daily	9	
b.	Weekly	2	
C.	Monthly	0	
d.	Yearly	0	
	Other	1 (several tin	nes a week)

2. Which of the following best describes the interest area you represent related to the Bayfront Parkway Corridor Study (circle all that apply).

,	5.	11.37
a.	City Resident	9
b.	Business Owner	2
C.	Emergency Service	3
d.	Commuter/Traveler	6
e.	Government Official	1
f.	Economic Development	1
g.	Bayfront Event Attendee	4
h.	Tourist	0
i.	Recreational User (Bike/Ped)	5

3. What types of improvements are you most interested in seeing implemented along the Bayfront Parkway Corridor? (circle your <u>top 4</u> improvements)

a.	Speed Reduction	7
b.	Safety	10
C.	Transit Upgrades	2
d.	Traffic Flow/Congestion	8
e.	Increased Pedestrian/Bicycle Access	7
f.	Increased Vehicle Access	2
g.	Alternative Route Improvements	4
h.	Strategic Parking and Facilities	0

**4.** The improvement concepts presented by the Study Team satisfy the existing and future needs along the Bayfront Parkway Corridor.

а.	Strongly Agree	1
b.	Agree	5
C.	Neutral	3
d.	Disagree	1

e. Strongly Disagree 0





Comments:

- Both Scenarios seem to prioritize auto traffic rather than pedestrian traffic. A true pedestrian friendly environment wouldn't require people to go underground to cross the Bayfront. A pedestrian signal will be needed at rotary (roundabout). It will not be safe!
- Like the traffic circles (roundabouts). Don't like the planted median.
- More Roundabouts! More Pedestrian access to the Bayfront! Slow Down Traffic!
- There should be more neighborhood outreach to balance the concerns of locals, commuters, and tourists
- Please add to future needs: Bayfront connector (East Side) southbound and Northbound between E 12 to Broad St - Please raise speed limit from 35 MPH to 45 MPH. This stretch of road has no residences or businesses. Hence, no driveways. Thank you for your consideration.
- Appreciate new light at Liberty Park! Need one now are Cranberry. Also could move one at water authority east to road leading to second. Then make an access road to connect Cherry Street boat launch parking lot to that light - through water authority parking lot (perhaps close current entrance to that lot) then people can safely turn left.
- 5.As presented tonight, the list of improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?

#### Mobility

a. Strongly Agree	
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b.	Agree	4
C.	Neutral	3

- 2 d. Disagree
- e. Strongly Disagree

#### **Connected**

a.	Strongly Agree	2
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- b. Agree
- c. Neutral 4
- 0 d. Disagree 2
- e. Strongly Disagree

Comments

Protected bus lanes and at grade pedestrian crossings

1

1

3

- More pedestrian connections in neighborhoods
- Connected issues brought up with plantings in median very valid
- The relative lack of synergistic development below the bluff calls to question the tourism aspect of consideration.
- No to Improvement #30, #38 one through lane, one turn lane only lane (make southbound mirror Northbound)
- Good to know much study and statistics have gone into concepts



#### 6. In general, how would you rate the Mobility and Connected Scenarios?

4

0

1

0 4

0

1

#### Mobility

- 2 Strongly Preferred a. 4
- Preferred b.
- Need Improvement C.
- Dislike d.
- Strongly Dislike e.

#### **Connected**

- a. Strongly Preferred
- Preferred b.
- 5 Need Improvement C.
- d. Dislike
- Strongly Dislike e.

#### Additional Comments:

- Would like new signals at west 8th and Bayfront with right turn arrows on the Bayfront. Need a right turn lane on the Bayfront for West 8th
- Excellent Presentation, Thank you
- Very concerned that the improvements should provide jobs and job training and business opportunities to local residents with a commitment to community benefits. This plan SHOULD be part of a comprehensive Bayfront Plan with attention paid to best practices of urban waterfront development.
- Erie needs limited access East/West ability below I-90. Think Cleveland and Toronto
- #15 Strongly agree with implementing reversible managed lanes. This is idea is 20 years late. Forget roundabout at State and Bayfront. Better to utilize tunnel passage for bikes and pedestrians.
- Makes no sense to us to continue developing Bayfront (North) if people can't easily and safely access these. Alternate commuter corridors need to be developed and marketed. (Time lights on 12th and put right turns back!) If you want to encourage use of park and rides - there should be shelters for commuters (wind, rain, snow). Erie lacks bus shelters throughout entire EMTA system. Pedestrian crossing signs and public education campaign for both drivers and pedestrians are so needed. Pedestrians either ignore or don't understand to wait until left turn light cycle completes. Drivers don't yield to pedestrians in crosswalks! (All over Erie!) We LOVE the new light at Liberty Park. It was surely needed. Add signage/explanation on when to walk for Pedestrian crossings. Add protected left turn in all directions at Holland and State intersections.



#### **IMPROVEMENT CONCEPTS**

In addition to the provided comment forms, respondents were asked to select their 10 most preferred improvement concepts presented at the Public Meeting. The improvement concepts were divided into three sections, Overall Improvement Concepts, Mobility Scenario Improvement Concepts, and Connected Scenario Improvement Concepts. Each improvement was numbered, and the maps displayed at Station 3 had each improvement labeled using the same numbering system. (To view all six maps displayed at meeting, see Appendix L and M) As of August 7, 2015, 11 forms were returned. Below is a summary of the responses.

#### OVERALL IMPROVEMENT CONCEPTS

1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	2
2.	Add speed display signs at E. 12th Street	0
3.	Add buffer between Roadway and Bikeway	3
4.	Upgrade trail lighting throughout corridor	4
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	1
6.	Upgrade pedestrian push buttons	2
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	6
8.	Park signs with consistent treatment	0
9.	Real time transit information at bus stops	1
10.	Transit shelters at locations throughout the corridor	4
11.	Bike shelters/storage at locations throughout the corridor	4
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	1

#### MOBILITY SCENARIO IMPROVEMENT CONCEPTS

13. Arch gateway treatment over roadway	3
14. Shared bike lane along Lincoln and 8th St	5
15. Reversible managed lanes from 8th Street to Sassafras St. Ext.	6
16. Right-turn Only from Cranberry St.	3
17. Rapid Flash Beacon for ped/bike crossing at Cranberry St	3
18. A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	3
19. Pedestrian bridge over the Bayfront Parkway near Peach St.	8
20. Pedestrian bridge over the Bayfront Parkway near Holland St.	5
21. Dual-lane roundabout at State St. with separate service road to UPMC Hamot	2
22. Dual-lane roundabout at 12th St.	2
<ol> <li>Redesign Holland St. intersection to add turning lanes and remove railroad equipment</li> </ol>	4
24. Widen Bayfront to four lanes from Holland St. to Port Access Rd.	4
25. Two bus pull-off areas (one east side and one west side between 8th St. and 10 St.) and relocate multi-use trail around the bus pull-off	0
26. Enhance pedestrian crossings along the Bayfront with painted crosswalks (Type 2)	5



#### CONNECTED SCENARIO CONCEPTS

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	1
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	3
29.	Bike Share Program with hubs located throughout the corridor	4
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	2
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	4
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	0
33.	Restrict left turns from Cranberry St. during peak hours	1
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	2
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	1
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right-turn lane (eastbound) with merge after intersection	2
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	6
38.	Extend left turn lanes at State St. and Holland St.	2
39.	Realign travel lanes at State Street intersection	0
40.	People mover system within the central Bayfront with a dedicated route	1
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	8
42.	Remove railroad equipment at Holland St. and adjust stop bar	1
43.	Single-lane roundabout at Port Access Road	3
44.	Park and Ride between 8th St and 10th St on the east side of the road	0







# **APPENDIX D:**

# SUMMARY OF PUBLIC MEETING COMMENTS

BAYFRONT PARKWAY STUDY



# **Public Meeting Report**

Meeting Date: June 24, 2015 Location: Erie, Erie County, PA

### **Table of Contents**

- I. Executive Summary
- II. Meeting Format
- III. Meeting Details
- IV. Presentation Summary
- V. Information Gathering
- VI. Appendix



### I. Executive Summary

On Wednesday, June 24, 2015, a Public Meeting and Public Officials Briefing were held by the Pennsylvania Department of Transportation (PennDOT) Engineering District 1-0 at the Bayfront Convention Center for the Bayfront Parkway Corridor Study.

A total of 20 people signed-in for the Public Meeting, while 19 public officials or PAC members attended the Briefing. The purpose of the meeting was to discuss the purpose and need of the study, present improvement concepts, describe the study process and next steps, and gather public input. The format for the meeting included an Open House area with displays and a presentation. Attendees were encouraged to view the displays prior to the presentation. Study team members were stationed throughout the area to answer any attendees questions.

The informational displays included:

- o Corridor Features Map
- o Travel Time Comparison
- o Levels of Service
- o Public Outreach
- o Mobility Scenario Improvement Concepts for West Bayfront, Central Bayfront and East Bayfront
- Connected Scenario Improvement Concepts for West Bayfront, Central Bayfront, and East Bayfront.
- o Study Work Plan

Comments were solicited from the public and public officials during the meeting and via a comment form, improvement scenario handout. As of August 7, 2015, a total of 12 comment forms and 11 improvement concept forms were returned. The following is a summary of the comment form and improvement concept form responses:

- A majority of the attendees were City of Erie residents who travel the parkway daily and safety was their top improvement concern.
- Sixty-seven percent of the respondents agreed that the proposed improvement concepts satisfy the existing and future needs along the Bayfront Parkway Corridor.
- Forty-five percent of respondents thought the Connected and Mobility Scenario Concepts were comprehensive.
- Fifty-four percent of respondents strongly preferred or preferred the Mobility Scenario while forty percent of respondents preferred the Connected Scenario.
- The most preferred option in the Overall Improvements Concepts was the way finding signs for pedestrians and bicyclist.
- The top two improvements most preferred for the Mobility Scenario were the pedestrian bridge near Peach Street and the reversible lanes from West 8<sup>th</sup> Street to Sassafras Street Extension.
- The top two improvements most preferred for the Connected Scenario were the mutli-use trail connecting the promenade at East German Street down the bluff to Holland Street and a Pedestrian Tunnel under the State Street and Bayfront intersection





• Many of the attendees were also interested in traffic flow and congestion improvements as well as speed reductions and increased pedestrian and bicycle access.

A detailed summary of all comments received can be found in Section V of this report.



### **II. Meeting Format**

When:	Wednesday, June 24, 2015
Time:	Public Officials Briefing, 4:00 p.m. – 5:00 p.m. Public Meeting, 5:30 p.m. – 8:00 p.m. (Presentation 6:00 p.m.)
Location:	<b>Bayfront Convention Center</b> 1 Sassafras Pier Erie, PA 16507
Format:	Open House Plans Display with Presentation
Purpose:	The purpose of the meeting is to discuss the purpose and need of the study, present improvement concepts, describe the study process and next steps, and gather public input.

#### **Meeting Notification:**

Letters were mailed to public officials to announce the purpose of the Public Meeting and to invite them to the Public Officials' Briefing. An email blast was sent to all Project Advisory Committee (PAC) members and to the general public mailing list. PAC members were encouraged to share the Public Meeting email blast with their area contacts to help spread the word about the meeting. Additionally, a press release was distributed to local media to notify the public.

#### Attendance:

Twenty (20) people registered and attended the Public Meeting, and 19 people registered and attended the Public Officials' Briefing. In addition, the following study team members also attended:

#### PennDOT, Engineering District 1-0

Bill Petit, P.E. – District 1-0 Executive Mark Nicholson, P.E. – Civil Engineer Jim Carroll – District Press Officer Brian Yedinak, P.E. – Assistant District Executive, Design Tom McClelland, P.E., PTOE – Design Services Engineer Brian Smith, P.E. – Traffic Engineer

#### McCormick Taylor, Inc.

John Petulla, P.E. – Project Manager Jennifer Threats – Public Involvement Specialist John Sada, P.E., PTOE – Transportation Engineer Dana Sklack – Communications Specialist



### **III. Meeting Details**

Both the Public Officials Briefing and the Public Meeting were held in meeting room 140 at the Bayfront Convention Center, Erie, Pennsylvania. The meeting was structured as an Open House format with a presentation that began at 4:30 for Public Officials and Project Advisory Committee (PAC) members, and a second presentation began at 6:00 p.m. for the general public. The meeting format provided an opportunity for the public to speak one-on-one with members of the project team. Project team members were available throughout the evening to address public questions/concerns and gather input.

#### **OPEN HOUSE AREA**

Listed below is a description of the Open House stations: (see Appendix K-L for PDF versions of the displays)

- 1. **Station 1: Registration** Attendees were asked to sign in at the registration table. After registering, attendees received a Comment Form and an Improvement Concept Selection Form. A team member was available to explain the meeting format.
- 2. Station 2: Understanding the Corridor Four displays were included in this section. They included:
  - **Corridor Features Map** Features highlighted included planned economic development, parking, transit routes and stops, and multi-use pedestrian and bicycle trails along the corridor.
  - Travel Time Comparison This display showed future travel times from one end of the corridor to the other in the year 2034 in 4 different conditions; No-Build Option: 2034 – background traffic data with and without development growth, and the Mobility Option and Connected Option with background and development growth.
  - Levels of Service This display focused on forecasted levels of service conditions at 12 signalized intersections along the Bayfront Parkway within the corridor for the year 2034.
  - Public Outreach This set of display boards focused on reviewing previous Stakeholder Interviews, Survey Results, and overall Outreach Opportunities.
- Station 3: Developing Improvement Concepts This station featured two improvement scenarios, Connected and Mobility. Each scenario was broken into three sections; West Bayfront, Central Bayfront, and East Bayfront.
  - Mobility Scenario This scenario focused on minimizing delays throughout the corridor for all modes of transportation.
  - Connected Scenario This scenario focused on better connecting downtown Erie to the Bayfront and treating the Bayfront Parkway as more of a city street instead of high speed bypass for the city.
- 4. **Station 4**: **Next Steps** The project's work plan was displayed at this station to show the key steps completed during the study so far and identified the steps that still need to be completed.

#### **PRESENTATION AREA**

A PowerPoint presentation was used to review the progress so far in the Bayfront Parkway Corridor Study, to detail some of the improvement concepts that make up the Connected and Mobility Scenarios and to present Next Steps. The same presentation was given to both the public officials and the general public. A copy of the PowerPoint presentation is located in Appendix O of this report.



### **IV. Presentation Summary**

The Public Officials Briefing was held from 4:00 p.m. to 5:00 pm and both Public Officials and Project Advisory Committee members were invited. The presentation used for this portion of the meeting was also used for the public presentation held at 6:00 p.m.

#### **MEETING INTRODUCTION**

Both presentations began with Mr. Bill Petit, P.E., PennDOT District 1-0 Executive, introducing himself and the rest of the study team. A full list of the study team members who attended can be found in Section II of this report. Mr. Petit also discussed the meeting's purpose and the study area limits. The purpose of the meeting is to discuss the purpose and need of the study, present improvement concepts, describe the study process and next steps, and gather public input. The study area limits include the Bayfront Parkway from I-79 to the west and 12 Street to the east. Then, Mr. Petit handed the presentation over to Mr. John Petulla, P.E., the Consultant Team's Project Manager.

#### **IDENTIFYING A VISION**

Mr. Petulla reviewed the Study's Purpose, Needs and the Improvement Considerations used to identify improvements throughout the Bayfront Parkway corridor. The Purpose and Need and the Improvement Considerations were developed based on technical studies and feedback received through the online public survey, stakeholder interviews, and meetings with the Project Advisory Committee (PAC).

The purpose of the study is to complete an extensive analysis of the corridor (S.R. 4034), utilizing traffic data and involving stakeholders, to identify future projects that will improve safety, improve congestion, increase compliance with applicable current design standards, improve mobility throughout the corridor, and support existing and future economic development initiatives.

The study needs were noted as follows:

- Safety concerns exist in the study area.
- There are congestion concerns in the study area.
- There are operational concerns in the study area.
- · Alternative modes are lacking parallel to the Bayfront (east/west).
- Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

Improvement Considerations were developed to ensure the thoughts and interests of stakeholders were incorporated as scenario options were developed. As such, the analysis will consider if the improvement concepts are:

- Be consistent with local planning guidance (Destination Erie: A Regional Vision, City of Erie Comprehensive Plan: Background Analysis Principles; Erie Waterfront Master Plan)
- Maximize land Use
   (Consolidate Parking, Brownfield Utilization, etc.)
- Enhance Aesthetics
- Support Livability by Improving Pedestrian and Bicycle Access (Work & Play)
- Accommodate Emergency Service/Incident Access

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- Accommodate Event Access and Mobility
- Enhance Travel Communication/Intelligence
- Minimize Environmental Impacts
   (Property Impacts, Natural Resources, Cultural Resources)
- Able to Maintain Improvement
- Fundable

#### **STUDY APPROACH**

Mr. Petulla then reviewed the study work plan and deliverables. To view the study's work plan, see Appendix N. He identified the study deliverables as the Purpose and Need, Conceptual Improvements, Project Prioritization Plan, Funding Scenarios, and the Final Study Report and provided an overview of their progress. The Purpose and Need statement has been completed and the Conceptual Improvements are currently being refined with the public meeting being one of the final parts of this step. Over the next couple months, the study team with work on project prioritization, funding scenarios, and the study report. The study is anticipated to be complete this Fall.

#### UNDERSTANDING THE CORRIDOR

The technical studies, including the safety analysis, traffic study and transportation features of the corridor were summarized by Mr. Petulla as follows:

- Traffic studies were initiated in August 2014, including traffic counts and origin-destination studies along the Bayfront Parkway between the western and eastern ends of 12th Street.
- Parking, both planned and existing, has also been looked at as part of the study. According the Erie
  Parking Study in 2008, there are 4500 available parking spaces in the downtown and in the Bayfront area.
  The current supply of parking is higher than the demand. Once all of the proposed development has been
  built, there is a potential for another five garages being added to just the Bayfront area. Mr. Petit noted, that
  with such an abundance of parking consideration should be given to ideas that would consolidate or share
  parking in the area.
- The Safety Analysis identified 246 recorded crashes along the Bayfront Parkway corridor study area and 80% of those crashes occurred at intersections. Four percent of the crashes involved a fatality or major injury. The study will consider those crash areas and try to improve safety.
- On the eastern side of the corridor from Port Access Road to East 12<sup>th</sup> Street, the average speed is 46 mph. Traveling in the opposite direction, it is 29 mph. On the Western side from Cranberry Street to Sassafras Street Extension, the average speed is 42 mph and the opposite direction is 43 mph.

The traffic studies also considered the existing and future levels of service (LOS) at each signalized intersection. The LOS uses an A-F rating scale. While on a highway, an A rating would be ideal, in an urban environment, a C rating is usually ideal. The LOS data was gathered in September 2014 during the morning and evening weekday peak travel times. A full explanation of the LOS ratings can be referenced in Appendix K. Future LOS was considered for average traffic growth and for average traffic growth with planned economic development within the next twenty years. Six of the twelve intersections scored below a



C rating for the year 2034 with average traffic increases. Ten of the twelve intersections scored below a C rating for the year 2034 with average traffic increases and full development buildout.

 Projected travel times through the corridor were evaluated from one end of the corridor to the other during peak a.m. and p.m. travel times. The most notable of these was the travel time of over an hour from Lincoln Ave. to East 12<sup>th</sup> Street during the a.m. travel time.

Direction	2034 No Build Option: Background without Development Growth		2034 No Build Option: Background and Development Growth	
	AM	PM	AM	PM
Bayfront EB: Lincoln Ave to E 12th St	11.7 mins 25 mph	12.5 mins 23 mph	67.4 mins 5 mph	15.9 mins 19 mph
Bayfront WB: E 12th St to Lincoln Ave	11.1 mins 25 mph	11.7 mins 24 mph	14.4 mins 20 mph	20.2 mins 15 mph

Next, Mr. Petulla reviewed the public involvement activities completed to date, including:

- Stakeholder Interviews September and October 2014
- Project Advisory Committee (PAC) Meetings December 17, 2014, March 10, 2015, and April 14, 2015
- Online Public Survey December 2014 to February 2015
- Project Website Launched in December 2014

Mr. Petulla noted that over 50 participants were contacted to take part in a series of stakeholder interviews conducted in person or over the phone. From the stakeholders interviewed, the PAC was selected and invited to attend three meetings to discuss the different aspects of the study. One additional PAC meeting is anticipated. The PAC members represent a variety of interests and concerns in the community.

Sections of the community that are represented include:

- Neighborhood and City Access
- Economic Development
- Alternate Transportation Modes
- Public Facilities
- Transportation Planning and Programming
- Emergency Services
- Bayfront Development

Mr. Petulla provided an overview of the online survey. The survey had nearly 500 responses and ran from December 19, 2014 to February 27, 2015. In one of the survey sections, respondents were asked to rank their top five priorities from a provided list. The PAC was also asked to rate the same priorities. With the exception of one priority, speed, the PAC chooses all of the same priorities as the public (see the chart on the next page for more detail).



Priorities	Overall Survey Ranking	Overall PAC Ranking
Traffic Flow/Congestion	х	х
Pedestrian and Bicycle Access	Х	Х
Safety	Х	Х
Speed	Х	
Vehicle Access	Х	х
Parking and Facilities		
Transit		
Alternative Route Improvements		Х

#### **DEVELOPING SOLUTIONS**

Mr. Petulla explained that when developing the conceptual improvement options, the project's Purpose and Needs, Improvement Considerations, Public and Stakeholder Input and Existing and Future Traffic Projections were all taken into consideration. As a result, two Improvement Scenarios were developed: Scenario 1 – Mobility, Scenario 2 -Connected. Some of the improvement options included in the scenarios can be moved to either option, but to avoid repeating improvements on both options, most of the improvement concepts are only shown once on one of the scenarios with the exception of twelve improvements that were added to both maps as 'Overall Improvement Concepts'. These improvements mostly focused on improving overall safety conditions throughout the corridor and will work with any combination of improvement options. (To see the full list of improvements, please see Appendix Q.)

Mr. Petulla provided the following overview of both scenarios. Mr. Petit encouraged attendees to ask questions throughout the presentation of the scenarios. (See Section V of this report for question and answer clarifications.)

#### SCENARIO 1: MOBILITY

The goal of the Mobility Scenario was to develop a series of coordinated improvement options to provide greater east-west access and minimizing delays through the corridor considering all modes of transportation. This was accomplished by adding pedestrian walkways away from the main roads and intersections, adding an additional service road, and enhancing transit access. Below is a list of the improvement concepts Mr. Petulla presented.

- Shared bike lanes along Lincoln Avenue
- Reversible managed lanes from West 8th Street to Sassafras Street Extension
- Two-way frontage road
- Two pedestrian bridges
- Two dual-lane roundabouts

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- Widen to four lanes from Holland Street to Port Access Road
- Bus pull offs between East 8th Street and East 10th Street
- Enhanced pedestrian crossings, painted crosswalks, and upgraded pedestrian push buttons

After the Mobility Scenario improvement options were detailed, a comparison of travel times was presented. The comparison demonstrated how travel time would change with and without the Mobility Scenario improvements for the year 2034. In summary, the Mobility Scenario improvements would improve or maintain travel times. (See the chart below for details.)

Direction	2034 - No Build Option: Background and Development Growth		2034 - Mobility Option: Background and Development Growth	
	AM	PM	AM	PM
Bayfront EB: Lincoln Ave to E 12th St	67.4 mins 5 mph	15.9 mins 19 mph	11.4 mins 25 mph <mark>(- 56 mins)</mark>	15.9 mins 18 mph (no change)
Bayfront WB: E 12th St to Lincoln Ave	14.4 mins 20 mph	20.2 mins 15 mph	12.4 mins 23 mph (- 2 mins)	12.7 mins 22 mph (- 7.5 mins)

#### **SCENARIO 2: CONNECTED**

The goal of the Connected Scenario was to develop a series of coordinated improvement options to provide a better connection to the downtown area, while considering delays to traffic, though minimizing delays is not a priority of this option. This scenario is an attempt to make the Bayfront Parkway act more like a downtown boulevard or street. This option focused on connecting existing multi-use paths, using traffic calming techniques to slow traffic and added aesthetic features throughout the corridor. Below is a list of the improvement concepts Mr. Petulla presented.

- Enhanced pedestrian crossings with stylized pavers and upgraded pedestrian push button
- Bike share
- Reduced travel lanes to 11 feet from Greengarden Road to East 10th Street with a planted median
- Pedestrian tunnel under State Street
- People mover system within Central Bayfront
- Multi-use trail connecting the promenade at E. German Street down the bluff to Holland St.
- Single-lane roundabout at Port Access
- Park and ride between East 8th Street and East 10th Street on the east side of the road

After the Connected Scenario improvement options were detailed, a comparison of travel times was presented. The comparison demonstrated how travel time would change with and without the Connected Scenario improvements for the year 2034. In Summary, the Connected Scenario improvements would increase or maintain travel times. (See the chart on the next page for details.)



Direction	2034 - No Build Option: Background and Development Growth		2034 - Connected Option: Background and Development Growth	
	AM	PM	AM	PM
Bayfront EB: Lincoln Ave to E 12th St	67.4 mins 5 mph	15.9 mins 19 mph	18.3 mins 17 mph <mark>(- 49.1 mins)</mark>	14.9 mins 20 mph (- 1 mins)
Bayfront WB: E 12th St to Lincoln Ave	14.4 mins 20 mph	20.2 mins 15 mph	35.1 mins 11 mph (+ 20.7)	20.0 mins 14 mph (no change)

#### **NEXT STEPS**

In conclusion, Mr. Petulla discussed the next steps for the Bayfront Parkway Corridor Study. He explained, that by the early fall, a blended scenario will be developed that would likely include a mix of improvement concepts from the Mobility and Connected Scenarios. Once developed, the Blended Scenario will be shared with PAC to gather their input and to begin prioritizing improvements. Concurrently, the improvement options will be looked at from a cost prospective and potential funding options will be identified. During the fall of 2015, the Study Report will be drafted and finalized. It will be posted on the Bayfront Parkway Corridor Study website shortly after.



### **V. Information Gathering**

#### PRESENTATION COMMENTS/CLARIFICATIONS

The following clarifications were made to address questions and/or comments received during the Public Officials' Briefing and Public Meeting presentations.

#### **GENERAL QUESTIONS/COMMENTS**

- The Bayfront and Downtown Erie area have been the focus of numerous past studies. Many of them have resulted in the changes we see in the area today, while others are yet to be fully realized. These past studies are being considered as part of the Bayfront Parkway Corridor Study and for the improvement concepts that advance will be consistent and supplement their planned outcomes.
- Studies conducted during 2006 and 2008 focused on alternative modes of transportation and that
  information is being used as part of this study. Additionally, the improvement concepts presented
  incorporate bike/pedestrian facilities, transit and other alternate modes of transportation. Input
  related to needs and existing use of these types of facilities was gathered during the stakeholder
  interviews, online survey, and PAC Meetings.

#### SPEED ANALYSIS

- An attendee expressed concern for emergency service access and travel speed. As more development and traffic come into the area, consideration for emergency service was requested. They noted that currently it is easier to leave the regional trauma center (Hammot Hospital) than it is to get there.
- It was observed from the information presented that speeds are higher leaving the Erie Bayfront area and speeds are slower coming into the area.
- An attendee was especially concerned about the speeds on the eastern portion of the Parkway (from Port Access Road to 12<sup>th</sup> Street) during peak travel times because school age children need to cross the parkway to get to and from school.

#### **MOBILITY SCENARIO**

#### Reversible Managed Lanes from 8th Street to Sassafras Street Extension

• Managed lanes would operate as most two lane roads, allowing for left turns. When a vehicle attempts to turn left there is the potential for vehicles to stack behind; however traffic traveling in the other direction is anticipated to be low volume as it would not be peak hour traffic.



#### Two-way Frontage Road

• The exact location of the frontage road has not been determined; however, it likely would run through part of the Water Works Property. More details will be determined if the frontage road improvement concept is advanced to preliminary engineering.

#### Two dual-lane roundabouts

- Roundabouts can function well with high levels of vehicle and pedestrian traffic; however if the volume of either were to be extreme it would hinder the efficiency of travel for both modes.
- Concern was expressed about the State Street roundabout causing issues with Hamot employees
  crossing from the parking area on one side of the Bayfront to the hospital on the other side.
  Barbara Sandberg noted that the parking lot would most likely be moved or not exist once the
  roundabout is built. Scott Enterprises owns the land and intends to build a parking garage on the
  site. Part of their proposed plans includes a pedestrian bridge from the garage to the hospital.
- Pedestrian counts were conducted during traffic counts at the intersection of State Street and the Bayfront Parkway. Pedestrian counts will be provided as a follow up to the meeting.

#### Bus pull offs between E. 8th St and E. 10th St

A dedicated bus lane throughout the corridor was considered, but according to Mr. Petulla, the
project team did not add one into either of the options because transit demand did not warrant
adding a lane. However, consideration for bus pull offs on the East side of the corridor is being
considered. There are currently no bus stops or bus route directly on the Bayfront Parkway. This
was illustrated on the Corridor Features map, which shows that bus routes only cross the Bayfront
and do not travel along the parkway. There are existing trolley services in the Central Bayfront
area, but they mostly only go to the park and rides and between Central Bayfront and Downtown.

#### Additional Questions and Comments

- Right turn lanes were suggested for the intersection of West 8<sup>th</sup> Street and the Bayfront Parkway.
- A participant asked if there is any consideration for the public being wrong about the lack of need for public transit expansion.
- One attendee suggested changing the parking rates to help change the Public's approach to parking.

#### CONNECTED SCENARIO

#### Bike share

• An attendee suggested the bike share program be expanded into Downtown Erie.

#### Reduced travel lanes to 11 feet from Greengarden Road to East 10th Street with a planted median

- The planted medians would include breaks to allow for left turning movements.
- An attendee noted concern that the medians would hinder access for Emergency Service and not accommodate disable vehicles.



• The planted medians are being considered for traffic calming purposes and to enhance aesthetics. One participant suggested adding pull-offs to allow for cars to stop without blocking traffic if needed. This would also give vehicles space to allow Emergency Service vehicles to pass them.

#### Pedestrian Tunnel under State Street

• An additional North/South tunnel was suggested in between State Street and Holland Street.

#### People Mover system within Central Bayfront

• The People Mover system would operate similar to the trolleys; however, they are intended to operate more frequently and with added convenience for users who want to travel within the central Bayfront quickly.

#### Additional Comments and Questions

- One participant suggested changing an existing North/South connection road into a shared lane bikeway to allowed for additional bicycle and possibly pedestrian, access to and from the parkway from the city grid.
- Demographic information was not collected as part of the survey.
- The Study Team is working with all of the developers to help incorporate their plans into the Bayfront Parkway Corridor Study results.
- Alternative routes have been considered; however traffic studies have not been performed.
- Additional access from the bluff to the Bayfront was requested by a few attendees. They also said that there needs to be another North/South connection between the Bluff and the Parkway. They would also like to see 12th Street used as the city bypass route and the Bayfront Parkway treated more as a city street.
- An attendee suggested that a Master Plan is needed that takes all improvements and proposed economic development into consideration to develop a clear plan for all of the Bayfront and downtown.



#### PUBLIC MEETING COMMENT FORM SUMMARY

Comments forms were made available to the public at the Public Meeting held on June 24, 2015. As of August 7, 2015, 12 Comment Forms have been completed and submitted. Respondents were able to provide more than one answer to each question.

#### 1. How often to you travel the Bayfront Parkway Corridor?

a.	Daily	9
b.	Weekly	2
C.	Monthly	0
d.	Yearly	0
	Other	1 (several times a week)

# 2. Which of the following best describes the interest area you represent related to the Bayfront Parkway Corridor Study (circle all that apply).

a.	City Resident	9
b.	Business Owner	2
C.	Emergency Service	3
d.	Commuter/Traveler	6
e.	Government Official	1
f.	Economic Development	1
g.	Bayfront Event Attendee	4
h.	Tourist	0
i.	Recreational User (Bike/Ped)	5

## 3.What types of improvements are you most interested in seeing implemented along the Bayfront Parkway Corridor? (*circle your <u>top 4</u> improvements*)

a.	Speed Reduction	7
b.	Safety	10
C.	Transit Upgrades	2
d.	Traffic Flow/Congestion	8
e.	Increased Pedestrian/Bicycle Access	7
f.	Increased Vehicle Access	2
g.	Alternative Route Improvements	4
h.	Strategic Parking and Facilities	0

# 4. The improvement concepts presented by the Study Team satisfy the existing and future needs along the Bayfront Parkway Corridor.

-		
a.	Strongly Agree	1
b.	Agree	5
C.	Neutral	3
d.	Disagree	1

e. Strongly Disagree 0



#### Comments:

- Both Scenarios seem to prioritize auto traffic rather than pedestrian traffic. A true pedestrian friendly environment wouldn't require people to go underground to cross the Bayfront. A pedestrian signal will be needed at rotary (roundabout). It will not be safe!
- Like the traffic circles (roundabouts). Don't like the planted median.
- More Roundabouts! More Pedestrian access to the Bayfront! Slow Down Traffic!
- There should be more neighborhood outreach to balance the concerns of locals, commuters, and tourists
- Please add to future needs: Bayfront connector (East Side) southbound and Northbound between E 12 to Broad St Please raise speed limit from 35 MPH to 45 MPH. This stretch of road has no residences or businesses. Hence, no driveways. Thank you for your consideration.
- Appreciate new light at Liberty Park! Need one now are Cranberry. Also could move one at water authority east to road leading to second. Then make an access road to connect Cherry Street boat launch parking lot to that light - through water authority parking lot (perhaps close current entrance to that lot) then people can safely turn left.

# 5.As presented tonight, the list of improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?

#### Mobility

a.	Strongly Agree
----	----------------

b. Agree	
----------	--

C.	Neutral	3
C.	Neutral	3

- d. Disagree 2
- e. Strongly Disagree

#### Connected

a.	Strongly Agree	2
----	----------------	---

- b. Agree
- c. Neutral
- d. Disagree 0
- e. Strongly Disagree

#### Comments

- Protected bus lanes and at grade pedestrian crossings

1 4

1

3

4

2

- More pedestrian connections in neighborhoods
- Connected issues brought up with plantings in median very valid
- The relative lack of synergistic development below the bluff calls to question the tourism aspect of consideration.
- No to Improvement #30, #38 one through lane, one turn lane only lane (make southbound mirror Northbound)
- Good to know much study and statistics have gone into concepts



#### 6.In general, how would you rate the Mobility and Connected Scenarios?

2

4 4

0

1

0

4

0

1

#### Mobility

- a. Strongly Preferred
- b. Preferred
- c. Need Improvement
- d. Dislike
- e. Strongly Dislike

#### Connected

- a. Strongly Preferred
- b. Preferred
- c. Need Improvement 5
- d. Dislike
- e. Strongly Dislike

#### Additional Comments:

- Would like new signals at west 8th and Bayfront with right turn arrows on the Bayfront. Need a right turn lane on the Bayfront for West 8th
- Excellent Presentation, Thank you
- Very concerned that the improvements should provide jobs and job training and business opportunities to local residents with a commitment to community benefits. This plan SHOULD be part of a comprehensive Bayfront Plan with attention paid to best practices of urban waterfront development.
- Erie needs limited access East/West ability below I-90. Think Cleveland and Toronto
- #15 Strongly agree with implementing reversible managed lanes. This is idea is 20 years late. Forget roundabout at State and Bayfront. Better to utilize tunnel passage for bikes and pedestrians.
- Makes no sense to us to continue developing Bayfront (North) if people can't easily and safely access these. Alternate commuter corridors need to be developed and marketed. (Time lights on 12th and put right turns back!) If you want to encourage use of park and rides - there should be shelters for commuters (wind, rain, snow). Erie lacks bus shelters throughout entire EMTA system. Pedestrian crossing signs and public education campaign for both drivers and pedestrians are so needed. Pedestrians either ignore or don't understand to wait until left turn light cycle completes. Drivers don't yield to pedestrians in crosswalks! (All over Erie!) We LOVE the new light at Liberty Park. It was surely needed. Add signage/explanation on when to walk for Pedestrian crossings. Add protected left turn in all directions at Holland and State intersections.



#### **IMPROVEMENT CONCEPTS**

In addition to the provided comment forms, respondents were asked to select their 10 most preferred improvement concepts presented at the Public Meeting. The improvement concepts were divided into three sections, Overall Improvement Concepts, Mobility Scenario Improvement Concepts, and Connected Scenario Improvement Concepts. Each improvement was numbered and the maps displayed at Station 3 had each improvement labeled using the same numbering system. (To view all six maps displayed at meeting, see Appendix L and M) As of August 7, 2015, 11 forms had been returned. Below is a summary of the responses.

#### **OVERALL IMPROVEMENT CONCEPTS**

1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	2
2.	Add speed display signs at E. 12th Street	0
3.	Add buffer between Roadway and Bikeway	3
4.	Upgrade trail lighting throughout corridor	4
5.	Replace existing luminaire and mast arms with ornamental features to match proposed lighting and gateway treatment	1
6.	Upgrade pedestrian push buttons	2
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	6
8.	Park signs with consistent treatment	0
9.	Real time transit information at bus stops	1
10.	Transit shelters at locations throughout the corridor	4
11.	Bike shelters/storage at locations throughout the corridor	4
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	1

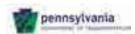
#### MOBILITY SCENARIO IMPROVEMENT CONCEPTS

13. Arch gateway treatment over roadway		3
14. Shared bike lane along Lincoln and 8th S	St	5
15. Reversible managed lanes from 8th Stre	et to Sassafras St. Ext.	6
16. Right-turn Only from Cranberry St.		3
17. Rapid Flash Beacon for ped/bike crossin	g at Cranberry St	3
18. A two-way frontage road from Liberty Pa	rk to State St. with relocated multi-use trail	3
19. Pedestrian bridge over the Bayfront Park	way near Peach St.	8
20. Pedestrian bridge over the Bayfront Park	way near Holland St.	5
21. Dual-lane roundabout at State St. with se	eparate service road to UPMC Hamot	2
22. Dual-lane roundabout at 12th St.		2
23. Redesign Holland St. intersection to add equipment	turning lanes and remove railroad	4
24. Widen Bayfront to four lanes from Hollan	d St. to Port Access Rd.	4
25. Two bus pull-off areas (one east side and St.) and relocate multi-use trail around the		0
26 Enhance pedestrian crossings along the	Bayfront with painted crosswalks (Type 2)	5



#### **CONNECTED SCENARIO CONCEPTS**

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	1
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	3
29.	Bike Share Program with hubs located throughout the corridor	4
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	2
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	4
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	0
33.	Restrict left turns from Cranberry St. during peak hours	1
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	2
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	1
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right-turn lane (eastbound) with merge after intersection	2
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	6
38.	Extend left turn lanes at State St. and Holland St.	2
39.	Realign travel lanes at State Street intersection	0
40.	People mover system within the central Bayfront with a dedicated route	1
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	8
42.	Remove railroad equipment at Holland St. and adjust stop bar	1
43.	Single-lane roundabout at Port Access Road	3
44.	Park and Ride between 8th St and 10th St on the east side of the road	0



## **VI. Appendix**

- A. Meeting Plan
- B. Public Officials Letter
- C. Public Officials Mailing List
- D. Email text to the Project Advisory Committee
- E. Project Advisory Committee Contact List
- F. Email Blast
- G. General Public Email List
- H. Press Release
- I. Public Officials Briefing Sign-in Sheet
- J. Public Meeting Sign-in Sheet
- K. Station 2: Understanding the Corridor Displays (Corridor Features Map, Levels of Service, Travel Time, Public Outreach)
- L. Station 3: Developing Improvement Concepts Displays (Mobility Scenario)
- M. Station 3: Developing Improvement Concepts Displays (Connected Scenario)
- N. Station 4: Next Steps Display (Work Plan)
- O. Presentation PowerPoint
- P. Comment Form
- Q. Improvement Concepts List
- R. Contact information from the Comment Forms
- S. News article GoErie.com





Appendix A: Meeting Plan

Public Meeting Plan DRAFT As of 6/16/15

PROPOSED		STATIONS	BOARDS	OTHER MATERIALS	STAFF
dates: Time:	Wednesday, June 24 PAC/Public Official Briefing: 4 p.m. to 5 p.m. Public Meeting: 5:30 p.m. to 8	Station 1: Registration	1. Welcome Display (24x36)	<ul> <li>Sign-in sheets</li> <li>Comment Forms and Comment Form Box</li> <li>Meeting Handout</li> <li>Media Packet</li> </ul>	<ul> <li>1 McCormick Taylor Representative</li> </ul>
Location: Purpose:	p.m. Bayfront Convention Center The purpose of the meeting is to discuss the purpose and need of the study, present improvement concepts, describe the study process	Station 2: Understanding the Corridor	<ol> <li>Corridor Features Map - Include: Economic Development, Parking, Transit, Bike/Ped</li> <li>Travel Time Comparison</li> <li>Levels of Service – 12 intersections future no build, and future build for am/pm)</li> <li>Public Outreach – Outreach Opportunities, Stakeholder Interviews, Public Online Survey</li> </ol>	<ul> <li>Laptop with Survey Map Results Projected</li> <li>Video of Syncro</li> </ul>	<ul> <li>2 McCormick Taylor Representative</li> <li>1 PennDOT Representative</li> </ul>
NOTICES:	and next steps, and gather public input. Letter/Invitation to Public Officials (to be distributed two weeks prior to meeting), email to the PAC, and a District	Station 3: Developing Improvement Concepts	<ol> <li>Mobility Scenario – West Bayfront</li> <li>Mobility Scenario – Central Bayfront</li> <li>Mobility Scenario – East Bayfront</li> <li>Connected Scenario – West Bayfront</li> <li>Connected Scenario – Central Bayfront</li> <li>Connected Scenario – East Bayfront</li> <li>Mode Diagona</li> </ol>		<ul> <li>2 PennDOT Representative</li> <li>1 McCormick Taylor Representative</li> </ul>
	Press Release	Station 4: Next Steps	12. Work Plan		<ul> <li>1 PennDOT Representative</li> </ul>
Handouts: Boards:	Informational Handout (about scenarios, project purpose and need, and next steps), and Comment Form All Boards are 40x60 (36x56) unless otherwise noted.	Presentation		PowerPoint	Speakers: • PennDOT TBD • McCormick Taylor: John Petulla, Jennifer Threats

Appendix B: Public Officials Letter



June 10, 2015

«Courtesy\_Title» «First» «Last» «Organization» «Address\_1» «Address\_2» «City», «State» «Zip»

SUBJECT: Bayfront Parkway Corridor Study Public Meeting Bayfront Parkway Study Erie County, PA

#### Dear «Courtesy\_Title» «Last»:

The Pennsylvania Department of Transportation (PennDOT), Engineering District 1-0, is pleased to invite you to attend a Public Officials Briefing to discuss the Bayfront Parkway Corridor Study.

The purpose of the Briefing is to discuss the purpose and need of the study, present preliminary improvement concepts, describe the study process, and review next steps. With your input, the project team will refine potential improvements and identify a project implementation strategy. The Briefing will be held as follows:

Date:	Wednesday, June 24, 2015
Location:	Bayfront Convention Center 1 Sassafras Pier Erie, PA 16507
Time:	4:00 p.m. to 5:00 p.m.

Following the Public Officials' Briefing, a Public Meeting will be held from 5:30 to 8:00 p.m. at the same location with a presentation beginning at 6 p.m.

The location of the meetings is compliant with the Americans with Disabilities Act (ADA). If you or an individual with whom you are familiar does not speak English as their primary language and who has a limited ability to read, write, speak, or understand English desires to participate in this meeting, or if you require special assistance to attend and/or participate in this meeting, or need additional information please contact Dana Sklack, at McCormick Taylor, Inc. at (412) 922-6880. Pursuant to Title VI of the Civil Rights Act of 1964, PennDOT does not discriminate on the basis of race, color, national origin, gender, age, or disability. If you feel that you have been denied the benefits of, or participation in a PennDOT program or activity, you may contact the Pennsylvania

Department of Transportation, Bureau of Equal Opportunity, DBE/Title VI Division at 717-787-5891 or 800-468-4201.

The overall goal of the Bayfront Parkway Study is to perform an extensive analysis of the corridor, utilizing traffic data and involving stakeholders, to identify future projects that will improve the safety and mobility of the Bayfront Parkway and support economic development plans in the area.

We encourage your participation in the Public Officials Briefing and look forward to working together with you to create a vision for Bayfront Parkway improvements. If you are able to attend the Public Officials' Briefing, please RSVP to <u>BayfrontParkwayStudy@mtmail.biz</u> or call Dana Sklack at the number above by Monday, June 22, 2015. For additional project related information, please contact Lyndsie DeVito, P.E., Project Manager, PennDOT District 1-0, at (814) 678-7174. We look forward to seeing you at the Public Officials' Briefing and/or Public Meeting.

Very truly yours,

William G. Petit, P.E. District Executive, Engineering District 1-0

# Appendix C: Public Officials Mailing List

Envelope_Title	<b>Courtesy Title</b>	First	Last	Organization	Job Title	Address 1	Address 2	City	State	Zip
				Pennsylvania House of						
The Honorable	Representative	Patrick	Harkins	Representatives	Representative	460 E. 26th Street		Erie	PA	16504
				Pennsylvania House of						
The Honorable	Representative	Florindo	Fabrizio	Representatives	Representative	1216 West 26th Street		Erie	PA	16508
				Pennsylvania House of			1101 Peninsula Drive,			
The Honorable	Representative	Ryan	Bizzarro	Representatives	Representative	Peninsula Plaza	Suite 209	Erie	PA	16505
				Pennsylvania State						
The Honorable	Senator	Sean	Wiley	Senate	Senator	1314 Griswold Plaza	Suite 100	Erie	PA	16501
The Honorable	Senator	Robert	Casey	U.S. Senate	Senator	17 South Park Row	Suite B-150	Erie	PA	16501
The Honorable	Senator	Patrick	Toomey	U.S. Senate	Senator	17 South Park Row	Suite B-120	Erie	PA	16501
				U.S. House of						
The Honorable	Representative	Mike	Kelly	Representatives	Representative	208 E. Bayfront Parkway	Suite 102	Erie	PA	16507
	Mayor	Joseph	Sinnott	City of Erie	Mayor	626 State Street	Room 500	Erie	PA	16501
Ms.	Ms.	Rose	Robie	City of Erie	City Clerk	626 State Street	Room 104	Erie	PA	16501
The Honorable	Councilman	Melvin	Witherspoon	City of Erie	Council President	832 East 36th Street		Erie	PA	16504
The Honorable	Councilman	Casimir	Kwitowski	City of Erie	Council Member	4015 Stanley Avenue		Erie	PA	16504
The Honorable	Councilman	Curtis	Jones, Jr.	City of Erie	Council Member	603 Pittsburgh Avenue		Erie	PA	16505
The Honorable	Councilman	David	Brennan	City of Erie	Council Member	3407 Glenside Avenue		Erie	PA	16508
The Honorable	Councilman	James	Winarski	City of Erie	Council Member	1140 East 31st Street		Erie	PA	16504
The Honorable	Councilwoman	Jessica	Horan-Kunco	City of Erie	Council Member	439 W Arlington Road		Erie	PA	16509
The Honorable	Councilman	Robert	Merski	City of Erie	Council Member	3701 Wallace Street		Erie	PA	16504
The Honorable	Ms.	Kathy	Dahlkemper	Erie County	County Executive	Erie County Courthouse	140 West Sixth Street	Frie	PA	16501
Ms.	Ms.	Rose	Robie	City of Erie	City Clerk	626 State Street	Room 104	Erie		16501
					Planning Commission,					
Mr.	Mr.	Richard	Speicher	City of Erie	Chair	626 State Street	Room 500	Erie	PA	16501
Ms.	Mr.	Jon	Tushak	City of Erie	Bureau of Engineering	626 State Street	Room 400	Erie		16501
Mr.	Mr.	Bruce	Dougherty	City of Erie	Bureau of Parks, Chief	626 State Street	Room 504	Erie		16501
		Bruce	Dougherty							10501
					Department of					
Mr.	Ms.	Kim	Green	City of Erie	Economic Development	626 State Street		Erie	PA	16501
					Department of Public					
Mr.	Mr.	Doug	Mitchell	City of Erie	Works, Director	626 State Street	Room 504	Erie	PA	16501
					Division of Traffic					
Mr.	Ms.	LeAnn	Parmenter	City of Erie	Engineering	626 State Street	Room 508	Erie	PA	16501
Mr.	Mr.	Charles	Zysk	City of Erie	Bureau of Streets, Chief	2001 French Street		Erie	PA	16503
					Director of					
Mr.	Mr.	Gary	Lee	Erie County	Administration	140 West Sixth Street		Erie	PA	16501
					Council Member,					
The Honorable	Mr.	André	Horton	Erie County	District 2	Erie County Courthouse	140 West Sixth Street	Erie	PA	16501

Envelope_Title	<b>Courtesy Title</b>	First	Last	Organization	Job Title	Address 1	Address 2	City	State	Zip
					Council Member,					
The Honorable	Mr.	Fiore	Leone	Erie County	District 3	Erie County Courthouse	140 West Sixth Street	Erie	PA	16501
Mr.	Mr.	John	Morgan	Erie County	Planning Department	140 West Sixth Street	Room 111	Erie	PA	16501
				Governor's NW						
Ms.	Ms.	Julie	Slomski	Regional Office	Director	100 State Street	Suite 205	Erie	PA	16507

# Appendix D: Email text to the Project Advisory Committee

#### Sklack, Dana

From:	Sklack, Dana on behalf of BayfrontParkwayStudy
Sent:	Wednesday, June 10, 2015 9:58 AM
То:	'Barbara Chaffee'; 'Brenda Sandberg'; 'Brett Wiler'; 'Brian Mesaros'; 'Brian Weber'; 'Chris Groner';
	'Erika Ramalho'; 'Jacqueline Spry'; 'Jake Welsh'; 'Jason Sayers'; 'Jeff Brinling'; 'Jeff Kidder';
	'Jeremy Bloeser'; 'Joe Walko'; 'John Grappy'; 'John Buchna'; 'John 'Casey' Wells'; 'John Morgan';
	'Jon Tushak'; 'Justin Smith'; 'Kale Asp'; 'LeAnn Parmenter'; 'Melani Scott'; 'Mike Tann'; 'Nicholas
	Scott'; 'Pat Durkin'; 'Paul Vojtek'; 'Ray Moluski'; 'RaymondMassing'; 'Ron Costantini'; 'Tom
	Kennedy'; 'Tony Pol'; 'Traci Irwin'; 'V. James Fiorenzo'
Cc:	Threats, Jennifer
Subject:	PAC Public Officials Briefing Announcement
	'Jon Tushak'; 'Justin Smith'; 'Kale Asp'; 'LeAnn Parmenter'; 'Melani Scott'; 'Mike Tann'; 'Nicholas Scott'; 'Pat Durkin'; 'Paul Vojtek'; 'Ray Moluski'; 'RaymondMassing'; 'Ron Costantini'; 'Tom Kennedy'; 'Tony Pol'; 'Traci Irwin'; 'V. James Fiorenzo' Threats, Jennifer

Hello Bayfront Parkway Corridor Study Project Advisory Committee (PAC) Members!

We are pleased to announce our next PAC Meeting will occur as part of a larger public outreach effort to involve local officials and the public.

As a PAC member, we invite you to attend a Public Officials Briefing that will be held just prior to a Public Meeting. The purpose of the Briefing is to discuss the purpose and need of the study, present preliminary improvement concepts (updated since our last meeting), describe the study process, and review next steps. The Briefing will be held as follows:

Date:	Wednesday, June 24, 2015
Location:	Bayfront Convention Center 1 Sassafras Pier Erie, PA 16507

Time: 4:00 p.m. to 5:00 p.m.

You are also encouraged to participate in the ensuing Public Meeting, which will be held from 5:30 to 8:00 p.m. at the same location with a presentation beginning at 6 p.m. Also, we will follow-up with another email to you with a specific Public Meeting announcement that we hope you will share with your contact lists to promote the meeting.

With the input we gather from both meetings, the project team will further refine potential improvements and identify a project implementation strategy. If possible, please confirm your availability to attend the Public Officials Briefing by Monday, June 22, 2015, by emailing the Study Team, <u>BayfrontParkwayStudy@mtmail.biz</u>.

Thank you again for your commitment to the Bayfront Parkway Corridor Study. If you have any questions for our team prior to our next meeting, please do not hesitate to email us or call 412.922.6880.

Sincerely,

Jennifer Threats The Bayfront Parkway Corridor Study Team Seven Parkway Center, Suite 700 Pittsburgh, PA 15220

# Appendix E: Project Advisory Committee Contact List

							Bayfront Pa	arkway Corridor Study PA	C List					
Envelop		Courtesy Title	First	Last	suffix	Organization	Job Title	Address 1	Address 2	City	State Zip	Phone	Fax	Email
eighborhoo	od/City A	ccess												
As.		Ms.	LeAnn	Parmenter	,P.E.	City of Erie	Traffic Engineer	626 State Street	Room 508	Erie	PA 1	16501 (814) 870-1379		Iparmenter@erie.pa.us
1r.		Mr.	John	Buchna		Erie Downtown	Chief Executive Officer	40 East Fifth Street		Erie	PA 1	16507 (814) 455-3743		John.Buchna@eriedowntown.com
							Director of Community and							
ls.		Ms.	Erika	Ramalho		Gannon University	Government Relations	109 University Square		Erie	PA	16541 (814) 871-5584		RAMALHO001@gannon.edu
						Bayfront Eastside Taskforce								
Ir.		Mr.	Jeremy	Bloeser		(BEST)	Director	420 Parade Street		Erie	PA	16507 (814) 456-7062		jbloeser@besterie.org
												(814) 877-6000 814-877	<u>'-</u>	
r.		Mr.	V. James	Fiorenzo		UPMC Hamot	President	201 State Street		Erie	PA	6550 6878		fiorenzoj2@upmc.edu
							Vice President of General							
		Mr.	Ray	Moluski		UPMC Hamot	Services	201 State Street		Erie	PA	16550		moluskire@upmc.edu
			i tuy							Eno				
														jeff.Brinling@ErieInsurance.com
Ir.		Mr.	Jeff	Brinling		Erie Insurance	Senior Vice President	100 Erie Insurance Place		Erie	PA	16530 814-870-2558		j.brinling@erieinsurance.com
conomic De	evelonm			g										
	ovoropin					Erie Regional Chamber & Growth								
ls.		Ms.	Barbara	Chaffee		Partnership	President/CEO	208 E. Bayfront Parkway	Suite 100	Erie	PA	16507 814-454-7191 x134		bchaffee@eriepa.com
13.		1013.	Darbara	Chance		Erie Regional Chamber & Growth								
		Mr	Drott	Wilor		Partnership	Business Service Outreach	209 E. Doufront Darkwow	Suite 100	Erie		16507		
		Mr.	Brett	Wiler			Business Service Outreach	208 E. Bayfront Parkway	Suite 100	Ene	PA 1	16507		bwiler@eriepa.com
.							Economic Development							
lr.		Mr.	Chris	Groner		City of Erie	Specialist	626 State Street		Erie	Pa	16501 (814) 870-1272		cgroner@erie.pa.us
ternative T	ranspor	tation Mode	S											
lr.		Mr.	Mike	Tann		Erie Metropolitan Transit Authority	Director of Operations	127 E 14th Street		Erie	PA 1	16503 (814) 452-3515		mtann@ride-the-e.com
r.		Mr.	Justin	Smith		Bike Erie	President					(814) 580-9108		justin@bikeerie.org
ublic Facilii	ties	1	-1				1		_					
												(814) 455-7557		
ls.		Ms.	Brenda	Sandberg		Erie-Western PA Port Authority	Executive Director	1 Holland Street		Erie	PA	16507 ext. 223		bsandberg@porterie.org
		1013.	Diciliud				Director of Operations/							
		Ma	Davia	Demorali		Erie-Western PA Port Authority	Harbormaster	1 Helland Otra - t		<b>F</b> _*'-		(814) 455-7557 16507 ext. 224		
		Mr.	Doug	Pomorski				1 Holland Street		Erie	PA	UDDU/ EXI. 224		
.		M	Devil	11-:+-1-			Chief Executive Officer	040 14/ 40% 01		<b></b>		10504 (914) 970 9000 out 202		
r.		Mr.	Paul	Vojtek		Erie Water Works	Chief Executive Officer	240 W 12th Street		Erie	PA 1	16501 (814) 870-8000, ext. 303		pvojtek@eriewaterworks.org
		Mr.	Ron	Costantini		Erie Water Works	Manager of Administration	240 W 12th Street		Erie		16501		rcostantini@eriewaterworks.org
r.		Mr.	Jon	Tushak	, P.E.	City of Erie	City Engineer	626 State Street	Room 400	Erie	PA 1	16501 (814) 870-1370		jtushak@erie.pa.us

						Bayfront P	arkway Corridor Study P	AC List						
	Courtesy													
nvelop	Title	First	Last	suffix	Organization	Job Title	Address 1	Address 2	City	State Z	·	Phone	Fax	Email
1r.	Mr.	Jason	Sayers	,P.E.	City of Erie	Assistant City Engineer	626 State Street	Room 400	Erie	PA		(814) 870-1370		jsayers@erie.pa.us
lr.	Mr.	Raymond	Massing		Erie Parking Authority	Executive Director	25 E 10th Street		Erie	PA	16501	(814) 456-7588 ext. 3		raymassing@eriepark.org
ransportation	Planning and Pr	ogramming				1								
						Planning Department,								
Mr.	Mr.	Kathy	Wryosdick		Erie County	Director	140 West Sixth Street	Room 111	Erie	PA		(814) 451-7003		kwyrosdick@eriecountygov.org
/Ir.	Mr.	John	Morgan		Erie County	Transportation Planner	140 West Sixth Street		Erie	PA	16501	(814) 451-6012		jmorgan@eriecountygov.org
Emergency Ser	rvices								1					
											10504			
Ar.	Lt.	Pat	Durkin		Erie Police		626 State Street		Erie	PA		(814) 870-1107		pdurkin@erie.pa.us
lr.	Chief	Tony	Pol		City of Erie	Fire Chief	626 State Street	Room 509	Erie	PA		(814) 870-1400	(814) 4	15 apol@erie.pa.us
lr.	Mr.	Joe	Walko		City of Erie	Assistant Chief	311 Marsh St		Erie	PA		(814) 870-1400		jwalko@erie.pa.us
1r.	Mr.	Kale	Asp		Erie County	911 Coordinator	2880 Flower Road		Erie	PA	16509	(814) 923-2679		kasp@eriecountygov.org
						Director of E-911 & Public					40504	(014) 454 7045		
Ar.	Mr.	John	Grappy		Erie County	Safety	140 West Sixth Street		Erie	PA	16501	(814) 451-7945		jgrappy@eriecountygov.org
		<b>.</b>				Asst. Emergency					40504	(014) 454 7045		
	Mr.	Brian	Mesaros		Erie County	Management Coordinator	140 West Sixth Street		Erie	PA	16501	(814) 451-7945		bmesaros@eriecountygov.org
	opment													
Ir.	Mr.	John 'Casey'	Wells		ErieEvents (Erie County Convention Center Authority)	Executive Director (Owner/Remediator)	809 French Street		Erie	PA	16501	(814) 480-6012	(814) 4	15 casey@erieevents.com
lr.	Mr.	, ,			Convention Center Authority) Kidder Wachter Architecture and	(Owner/Remediator)							(814) 4	
ſr.		John 'Casey'	Wells Kidder		Convention Center Authority) Kidder Wachter Architecture and Design	(Owner/Remediator) Architect/Partner	809 French Street 201 French Street		Erie	PA PA		(814) 480-6012 (814) 452-2414	(814) 4	15 casey@erieevents.com jkidder@kidderwachter.com
Ar.	Mr. Mr.	Jeff	Kidder		Convention Center Authority) Kidder Wachter Architecture and Design Kidder Wachter Architecture and	(Owner/Remediator) Architect/Partner urban planner/project	201 French Street		Erie	PA	16507	(814) 452-2414	(814) 4	jkidder@kidderwachter.com
Ar.	Mr.	, ,			Convention Center Authority) Kidder Wachter Architecture and Design	(Owner/Remediator) Architect/Partner						(814) 452-2414	(814) 4	
	Mr. Mr.	Jeff	Kidder		Convention Center Authority) Kidder Wachter Architecture and Design Kidder Wachter Architecture and	(Owner/Remediator) Architect/Partner urban planner/project	201 French Street	2225 Downs Drive, 6th Floor Executive Suites	Erie Erie	PA	16507 16507	(814) 452-2414	(814) 4	jkidder@kidderwachter.com
	Mr. Mr. Ms. Mr.	Jeff Jacqueline Nicholas	Kidder Spry Scott		Convention Center Authority) Kidder Wachter Architecture and Design Kidder Wachter Architecture and Design Scott Enterprises	(Owner/Remediator) Architect/Partner urban planner/project manager President	201 French Street 201 French Street	Drive, 6th Floor	Erie Erie	PA PA	16507 16507	(814) 452-2414 (814) 868-9500	(814) 4	jkidder@kidderwachter.com jspry@kidderwachter.com nick@visitscott.com
	Mr. Mr. Ms.	Jeff Jacqueline	Kidder Spry		Convention Center Authority) Kidder Wachter Architecture and Design Kidder Wachter Architecture and Design	(Owner/Remediator) Architect/Partner urban planner/project manager	201 French Street 201 French Street	Drive, 6th Floor	Erie Erie	PA PA	16507 16507	(814) 452-2414	(814) 4	jkidder@kidderwachter.com jspry@kidderwachter.com
VIr.	Mr. Mr. Ms. Mr. Mr.	Jeff Jacqueline Nicholas Brian	Kidder Spry Scott Weber		Convention Center Authority) Kidder Wachter Architecture and Design Kidder Wachter Architecture and Design Scott Enterprises	(Owner/Remediator) Architect/Partner urban planner/project manager President Owner/Architect	201 French Street 201 French Street Hilton Garden Inn	Drive, 6th Floor Executive Suites	Erie Erie Erie	PA PA PA	16507 16507 16509	(814) 452-2414 (814) 868-9500 814-678-7130	(814) 4	jkidder@kidderwachter.com jspry@kidderwachter.com nick@visitscott.com <u>bweber@wm</u>
Ar.	Mr. Mr. Ms. Mr.	Jeff Jacqueline Nicholas	Kidder Spry Scott		Convention Center Authority) Kidder Wachter Architecture and Design Kidder Wachter Architecture and Design Scott Enterprises Weber Architecture Renaissance Centre/Cobblestone	(Owner/Remediator) Architect/Partner urban planner/project manager President Owner/Architect	201 French Street 201 French Street	Drive, 6th Floor	Erie	PA PA	16507 16507 16509	(814) 452-2414 (814) 868-9500	(814) 4	jkidder@kidderwachter.com jspry@kidderwachter.com nick@visitscott.com

Appendix F: Email Blast

## You're Invited to the Bayfront Parkway Corridor Study Public Meeting

Join us at the Public Meeting to learn more about potential transportation improvements that could occur along the Bayfront Parkway Corridor. The Pennsylvania Department of Transportation (PennDOT) Engineering District 1-0 will host the meeting and present improvement options to address safety concerns, decrease future congestion, and improve multi-modal connections. With your input, the project team will refine potential improvements and identify a project implementation strategy.

### The purpose of the meeting is to:

- discuss the purpose and need of the study,
- present improvement concepts,
- describe the study process and next steps,
- and gather public input.

The Plans Display location is accessible to persons having disabilities. Any person requiring special assistance may contact Dana Sklack at 412.922.6880 by June 18, 2015 to coordinate arrangements.

## **MEETING DETAILS**

Date:	Wednesday, June 24, 2015
Location:	Bayfront Convention Center 1 Sassafras Pier Erie, PA 16507
Time:	Plans Display - 5:30 p.m. to 8:00 p.m. Presentation - 6:00 p.m.

"The Bayfront Parkway is an area of mixed use and future development and with that comes a variety of transportation interests and needs. This study will utilize both technical studies and public outreach to help better determine those needs and identify future transporation solutions."

- Bill Petit, P.E. PennDOT District Executive



For more information about the project, please visit www.bayfrontparkwaystudy.com



Appendix G: General Public Email List

#### Bayfront Parkway Survey Fmailblast

		Emailblast
First	Last	Email Address
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Erin	Ahlgren	eahlgren@flagshipniagara.org
Jerrie	Allen	watchcouncil@yahoo.com
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Randy	Bowers	rbowers@erie.pa.us
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#### Bayfront Parkway Survey Emailblast

		Emailblast
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#### Bayfront Parkway Survey Emailblast

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		bmerski@erie.pa.us		
jimwski@gmail.com				
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		gardencourtwatch@aol.com		
<b>D</b> 1 · · · · ·		c7katzhaven@aol.com		
Bankable Consulting jim@bankableconsulting.com				

Appendix H: Press Release



## FOR IMMEDIATE RESEASE June 15, 2014

### PennDOT to Hold Meeting On Erie Bayfront Parkway Corridor Study

**Oil City, PA** – The Pennsylvania Department of Transportation invites the public to a meeting regarding the Bayfront Parkway Corridor Study.

The study area includes the Bayfront Parkway corridor in the City of Erie from the intersection with Interstate 79, Lincoln Avenue to the intersection with East 12<sup>th</sup> street.

The purpose of the meeting is to discuss the purpose and need of the study, present improvement concepts, and review next steps related to the finalization of the study and an implementation plan. The public is encouraged to attend and share their input to help the project team refine potential improvements and identify a project implementation strategy.

The public meeting will be held:

Date: June 24, 2015 Time: 5:30 PM to 8 PM, presentation at 6 PM Location: Bayfront Convention Center 1 Sassafras Pier Erie, PA 16507

The purpose of the study is to perform an extensive analysis of the corridor, using traffic data and involving stakeholders to identify future projects that will improve the safety and mobility of the Bayfront Parkway and support economic development plans in the area.

The public meeting is part of an overall public outreach plan for the Bayfront Parkway Corridor Study that was initiated in August 2014. To date, the study team has conducted over 25 stakeholder interviews, met with a Project Advisory Committee and conducted an online public survey.

The public meeting location is compliant with the Americans with Disabilities Act (ADA). In addition, if you or an individual with whom you are familiar does not speak English as their primary language and who has a limited ability to read, write, speak, or understand English desires to participate in this meeting, or if you require special assistance to attend and/or participate in this meeting, or need additional information please contact Dana Sklack, at

McCormick Taylor, Inc. at (412) 922-6880. Pursuant to Title VI of the Civil Rights Act of 1964, PennDOT does not discriminate on the basis of race, color, national origin, gender, age, or disability. If you feel that you have been denied the benefits of, or participation in a PENNDOT program or activity, you may contact the Pennsylvania Department of Transportation, Bureau of Equal Opportunity, DBE/Title VI Division at (717) 787-5891 or (800) 468-4201.

For more information about the Bayfront Parkway Corridor Study, please visit <u>www.bayfrontparkwaystudy.com</u> or contact PennDOT's Project Manager, Lyndsie DeVito, (814) 678-7174.

Media Contact: Jim Carroll, (814) 678-7095

###

# Appendix I: Public Officials Briefing Sign-in Sheet

(Please Print) **Public Meeting** June 24, 2015 Add me to the Phone Number Address Name Email Email List essicatorm kunco Yes or No 439W. ASINGTON Rd 454-0587 KUNCO @ ERIE. Pa. KS Molyli Yes or No Brinling Yes or No Yes or No 464 7236 Mikotte polaineur 870.1270 Agreen Cerie, pa.us Yes or No 464 7236 ELANI 1001 STATE ST BREEN Yes or No 626 STATE 1101 Renninsula POUVE aschmidt@pahouse.net Any Schmet 835-2880 Yes or No Yes or No homas Pietras 626 STRIE 870-1125 ull Nichelson Yes or No 255 Elm St. Dillity Yes or No



(b) 100 [25] - 11 [1] [24]

Public Meeting		(Please Print)		June 24, 2015
Name	Add me to the Email List	Address	Phone Number	Email
JASONE SAVERS	Yes or No		870-1397	Sayers Deneraus
LeAnntamenter	Yes or No		870-1379	Iparmenter Certepars
JoHN BUCKIN	Wes or No		455-3748	John buchera & eveldonisterins
Ronald Costavitini	Yes or No	340 W. Bayfront	870.8056	rcostantinie eriewaterworks.org.
(MASE=) WELLS	Yes or No	809 PRENCH ST HIE	480-6012	Casef @ evicevents. any
Kash Warosdide	Ves or No		415-7003	Kuyrosdick @ erizeountgov.org
Intishak	Yes r No	140 GAUST RUM 111 626 State St Room Yoo Erie PA 16501	814 870-1377	jtushak@erie, pa. us
Brendre Gudberg	Yesot No	1 Holland St Erie PA 16507	455.7557	bsandberg@poterie.og
0	Yes or No			7
	Yes or No			



Public Meeting		(Please Print)		June 24, 2015
Name	Add me to the Email List	Address	Phone Number	Email
Dave Brennan	Yes of No	3407 Glanside Ave	814 806 4059	d brennane ene, pa.us
Dolle Stan St.	Yes or No	1005144e51. 50, 4e205 Eric, P#16501	819- \$78-5719	ene, pa.us Js/unJ/(1e pt, son
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			



# Appendix J: Public Meeting Sign-in Sheet

## Public Meeting

(Please Print)

June 24, 2015

Name	Add me to the Email List	Address	Phone Number	Email
WINSTON CHN	Yes or No	3916 State St Erie 16508	\$14-814-8244	winhtin Chatmail.com
JIM CARSTATER	Yes or No	1971 RATON FAIDUREN 1645	814-392-6225	JCANSTATER 201. COM
Jeremy Bloeser	Yes or No	420 Parade Street Erie, PA 16507	814-456-7062	jbloesere besterie.org
Veronica Rexford	Yes or No	4129 W. Kidge Rd. Eric, PA 16506	814-806-0979	Vrexford@gmail.com
FJASON WIECZOPEK	Ves or No	945 W. 974 (6502	330-289-0065	WIEEROPEKJE POSTWICKDESUN.Con
PM HIEGEL	Yes or No	USI LAKEDE PULIER	814.899 934	networking @ 201-con
BOB CRONMILLER	Yes or No	633 MOHAWK DRIVE	814-455-5082	BOBCRONMILLER @ GMAIL, COM
JUSAN MILLER	Yes or No	1348 JOUTH SHORE DR 16505	814.881-3288	SUSAN MILLER 20 MARE.
LISA AUSTIN	Yes or No		Lise	Com Com
Tom PODSKALAY	Yes or No	4252 AARON RUAD, ERCE	814-453-5702	+ mpodskalay @ URBANENSINEERS. Com

## Public Meeting

(Please Print)

June 24, 2015

DEPARTMENT OF TRANSPORTATION

Name	Add me to the Email List	Address	Phone Number	Email
Kerth Music	Yes or No	113 E. Macheron	(914) 384 - 2278	KETTH DOTO 23 OM SO
Angela Beaumout	Yes or No	5116 Exeter Rd, Erie	814 - 580 - 9769	beauaut Geserie org
Michal Fihrma	Yes or No	3914 Elit Rd	814968-3181	
PIERRE Milamick	Yes or No	23 NIAGARA Green ENTE	608712-5021	PIEMER @WDBUD. COM
Sonya Arrington	(Yes)or No	P.O. Box 11414 Eeiz RA. 16514	814-572-9567	Songeerico Aolicon
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			

DEPARTMENT OF TRANSPORTATION

## BAYFRON TPARKWAY STUDY

## Public Meeting

(Please Print)

June 24, 2015

Name	Add me to the Email List	Address	Phone Number	Email
SEAN FEDORKO	Yes or No	5130 FOXPARK DR 16415	814 397 1485	SFEDORKO C LIVE. COM
Jason C Brendel	(Yest or No	4171 McClelland ave Sie AA	814 5247842	YOUKTRUCOLORZQ HOTMAIL.COM
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			

June 24, 2015

# Public Meeting (Please Print) Add me to Address Phone Number

Name	Add me to the Email List	Address	Phone Number	Email
Roy Leonard;	Yes or No		870-6680	ron. leonard, a timesnew.com
Judy Troester	Yes or No	114E 36th St 16504	456-0545	troesterir @verizon.net
Rold Troester	Yes or No	Some		$\rightarrow$
Peter Lombardi	Yes or No	Janestun, N/	(716)882-8615	Plombord i @czb. org
anna Frante	Yes or No	208 E Bayfront Pky	814 454-7191 ext 143	afrantz@eriepa.com
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			
	Yes or No			

# Appendix K: Station 2: Understanding the Corridor Displays (Corridor Features Map, Levels of Service, Travel Time, Public Outreach)

## **STAKEHOLDER INTERVIEWS**

To learn more about the Bayfront Parkway Corridor, the study team conducted a series of Stakeholder Interviews.



City of Erie\* Erie County\* Emergency Services\* Local Businesses UPMC Hamot\* Bayfront Cobblestone Inn\* Scott Enterprises\* S.O.N.S. of Lake Erie Erie Regional Chamber and Growth Partnership\* Erie Metropolitan Transit Authority\* Gannon University\* Erie County Public Library Erie-Western PA Port Authority\* Destination Erie Erie Downtown Partnership\* Erie Events\* Bayfront Eastside Taskforce (BEST) Develop Erie All Aboard Erie Erie Water Works\* Erie Insurance\* Erie Parking Authority\*

\* Project Advisory Committee (PAC) Members

## **Stakeholder Common Themes**



### Traffic Flow/Congestion

- Left turns are difficult from the Bayfront Parkway
- Traffic signal synchronization needed
- Widen the Bayfront Parkway
- 8th Street right turn lane creates congestion



### Speed/Safety

- Better enforcement of posted speed limits
- Improve Emergency Service access throughout the Bayfront area
- Dead man's curve is concern near Liberty Park



### Pedestrian and Bicycle Access

- Improve pedestrian access points throughout the corridor
- Improve connections between the Bayfront and other parts of the city
- Increase access on the Eastside to other parts of Erie and the Bayfront
- Pave and improve existing pathways



#### Vehicle Access

- Consider managed lanes
- Erie Water Works intersection needs improved
- Add a service roads to connect current and future attractions along the Bayfront
- Consider connecting routes



### Alternative Route Improvements

- Traffic signal synchronization
- Improve connections



### Parking and Facilities

- Congestion near larger parking garages during evening rush hour
- Additional Park-and-Ride Location on the Eastside
- Increase incentives to utilize Park-and-Ride lots

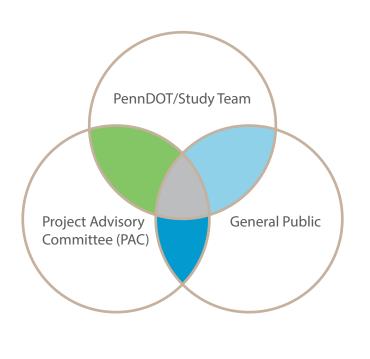


#### Transit

- Better incentives to encourage transit usage
- Add a transit lane that Emergency Services can also use

## **STAYING INVOLVED**

## INVOLVEMENT OPPORTUNITIES



Stakeholder Outreach

### Project Advisory Committee (PAC) Meetings

- December 17, 2014
- March 10, 2015
- April 14, 2015

## Public Outreach

### **Stakeholder Interviews**

- September/October 2014
- 22 Participating Organizations

#### Website & Public Survey

- Online December 19, 2014

### **Public Meetings**

- June 24, 2015





## Study Development

#### **PAC Outreach**

# **ONLINE PUBLIC SURVEY**

#### THE RESULTS ARE IN!

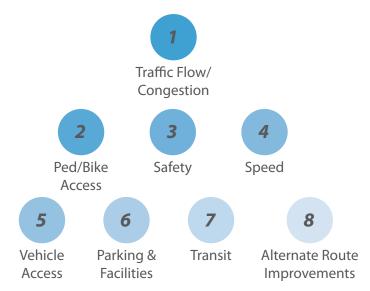


#### Nearly **500** Respondents OVER **1900** COMMENTS

The survey consisted of five screens. The first screen was an introduction to the survey and contained facts about the existing conditions within the corridor and planned future development.

#### **SCREEN 2 PRIORITIES**

The survey results indicated an overall ranking of the eight priorities as follows:



#### SCREEN 3 DETAILS

Participants were asked to rate detail statements related to the improvement priorities they selected on screen. Below is a summary of notable results for each priority.

#### **Traffic Flow/Congestion**

- Improve peak travel time
- Improve event travel time
- Improve coordination/timing of alternate route traffic signals

#### Pedestrian and Bicycle Access

- Improve east side access
- Improve ped/bike access to the City from the Bayfront

#### Safety

- Improve ped/bike safety crossing the Bayfront
- Improve vehicle safety turning on/off of the Bayfront

#### Vehicle Access

- Improve coordination/timing of traffic signals along the Bayfront

#### Speed

- Do not decrease speed on the Bayfront

#### **Parking and Facilities**

- Improve event parking
- Add more bike storage
- Consider alternative means to move people within the central Bayfront area

#### Transit

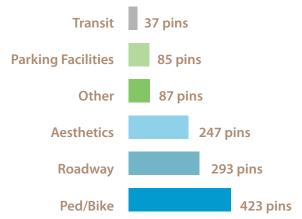
- Consider additional east side access

#### Alternative Route Improvements

- Consider improving alternate routes to remove traffic from the Bayfront

#### **SCREEN 4 INTERACTIVE MAP**

On screen 4, participants were invited to drop pins on a map of the Bayfront Parkway Corridor to show where they would like to see improvements.



Review the interactive results map to see more details and comments provided for each icon, *www.bayfrontparkwaystudy.com/surveycomments.html*.

#### **SCREEN 5 OPPORTUNITIES**

Screen 5 asked respondents how they would like the Bayfront Parkway to function.

High traffic volume and speed serving primarily cross-town traffic with limited vehicle, and bike/ped access

Moderate traffic volume and speed serving primarily Bayfront amenities and the City of Erie with moderate vehicle, and bike/ped access similar to a city street

**18%** 

Lower traffic volume and speed serving primarily as a downtown street with maximum vehicle, and bike/ped access



21%

Other - provided written comment

# Level of Service (LOS)

Highway traffic congestion is expressed in terms of Level of Service (LOS) as defined by the Highway Capacity Manual (HCM). LOS is a letter code ranging from "A" for excellent conditions to "F" for failure conditions. The conditions defining the LOS for roadways are summarized from the HCM as follows:



## LOS A

Represents the best operating conditions and is considered free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.



# LOS B

Represents reasonably free-flowing conditions but with some influence by others.

# LOS C

Represents constrained constant flow below speed limits, with additional attention required by the drivers to maintain safe operations. Comfort and convenience levels of the driver decline noticeably.

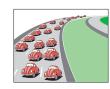
# los D

Represents traffic operations approaching unstable flow with high passing demand and passing capacity near zero, characterized by drivers being severely restricted in maneuverability.



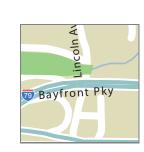
## LOS E

Represents unstable flow near capacity. LOS E often changes to LOS F very guickly because of disturbances (road conditions, accidents, etc.) in traffic flow.



# 

Represents the worst conditions with heavily congested flow and traffic demand exceeding capacity, characterized by stop-and-go waves, poor travel time, low comfort and convenience, and increased accident exposure.



#### Lincoln Ave/ **Bayfront Parkway**

Average Traffic Increase: Traffic Increase with Full Development:

# ssafras Ext Bayfront Pky

Bayfront Pky

St State Sassafras Ext/ **Bayfront Parkway** 

Average Traffic Increase: Traffic Increase with Full Development:



### Greengarden Road/ **Bayfront Parkway**

Average Traffic Increase: Traffic Increase with Full Development:



# West 8<sup>th</sup> Street/ **Bayfront Parkway** Average Traffic Increase:

Traffic Increase with Full Development:



#### State Street/ **Bayfront Parkway**

Average Traffic Increase: Traffic Increase with

Full Development:

Iolland St

# Bayfront Pky

Holland Street/ **Bayfront Parkway** 

Average Traffic Increase:

Traffic Increase with Full Development:

Bayfront Pky

### Liberty Park/ **Bayfront Parkway**

Average Traffic Increase: N/A\*



# Access Rd E B Bayf



Average Traffic Increase:

Traffic Increase with Full Development:





# Forecasted LOS 2034 Conditions at Signalized Intersections



#### East 6<sup>th</sup> Street/ **Bayfront Parkway**

Average Traffic Increase:

Traffic Increase with Full Development:



#### East 8<sup>th</sup> Street/ **Bayfront Parkway**

Average Traffic Increase:



Traffic Increase with Full Development:



### East 10<sup>th</sup> Street/ **Bayfront Parkway**

Average Traffic Increase:

Traffic Increase with Full Development:



### East 12<sup>th</sup> Street/ **Bayfront Parkway**

Average Traffic Increase:

Traffic Increase with Full Development:

Disclaimer: The traffic information was gathered in September 2014 and predates the traffic light at the intersection of Liberty Park and Bayfront Parkway.



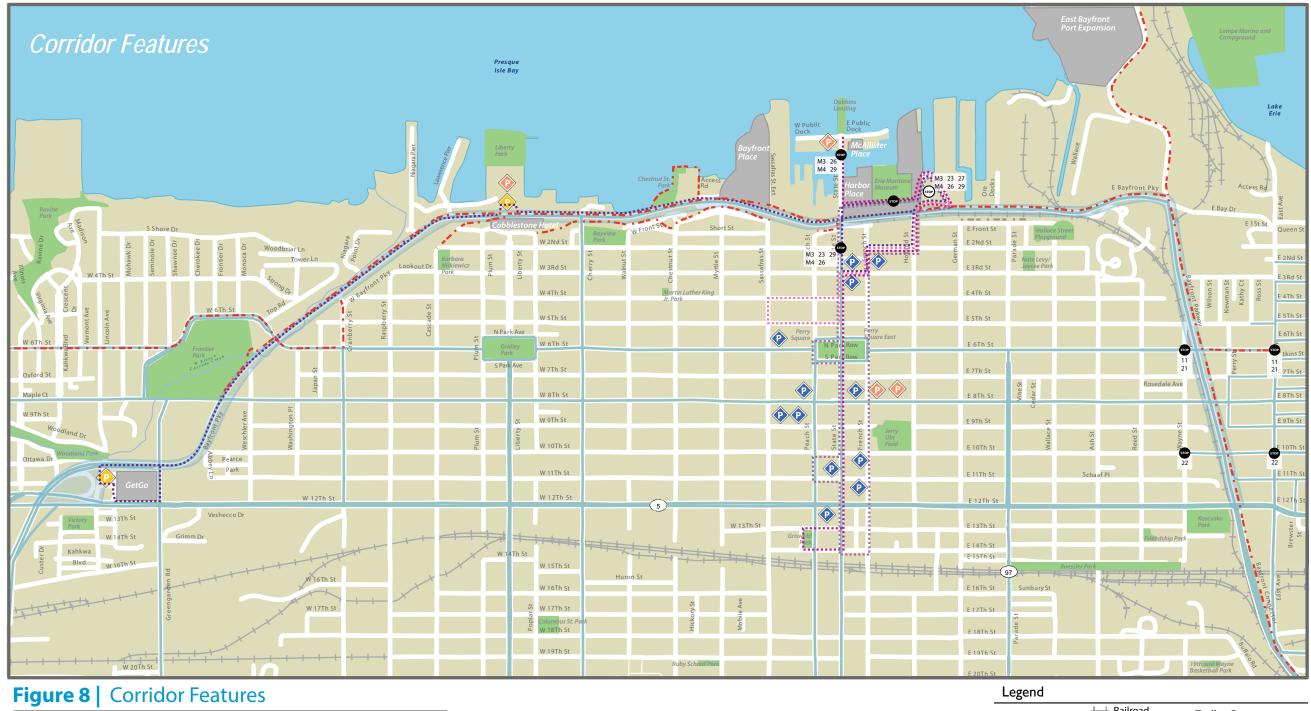
# **Bayfront Parkway Future Corridor - Travel Time Comparison**

Direction	2034 - Ba	l Option: ckground opment Growth	No Build Option: 2034 - Background and Development Growth		Build Option: 2034 - Mobility Option Background and Development Growth		Build Option: 2034 - Connected Option Background and Development Growth	
	AM	PM	AM	PM	AM	PM	AM	РМ
Bayfront Eastbound:	11.7 mins	12.5 mins	67.4 mins	15.9 mins	11.4 mins	15.9 mins	18.3 mins	14.9 mins
Lincoln Ave to E 12th St	25 mph	23 mph	5 mph	19 mph	25 mph	18 mph	17 mph	20 mph
Bayfront Westbound:	11.1 mins	11.7 mins	14.4 mins	20.2 mins	12.4 mins	12.7 mins	35.1 mins	20.0 mins
E 12th St to Lincoln Ave	25 mph	24 mph	20 mph	15 mph	23 mph	22 mph	11 mph	14 mph

xxx mins - Total Travel Time in Minutes

xx mph - Avg. Vehicle Speed Through Corridor





City of Erie | Erie County, Pennsylvania TAYLOR September 30th, 2014 | Source: ESRI 0.5  $\mathcal{I}_N$ 0

/liles

1 inch = 1,210 feet

Park-N-Rides

Public Parking Lots & Garages Private Parking Lots & Garages Proposed Development M4 Transit Route

+ Heilroad --- Multi-Use Trail State Road Local Road Parks Study Area Intermodal Center Bus Stop

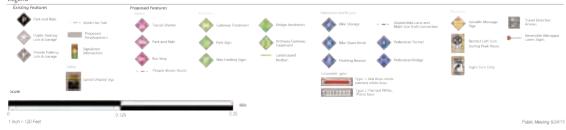
#### Trolley Routes

Court House Loop Lincoln Park & **Ride Shuttle** ····· Trolley ----- Cultural Loop



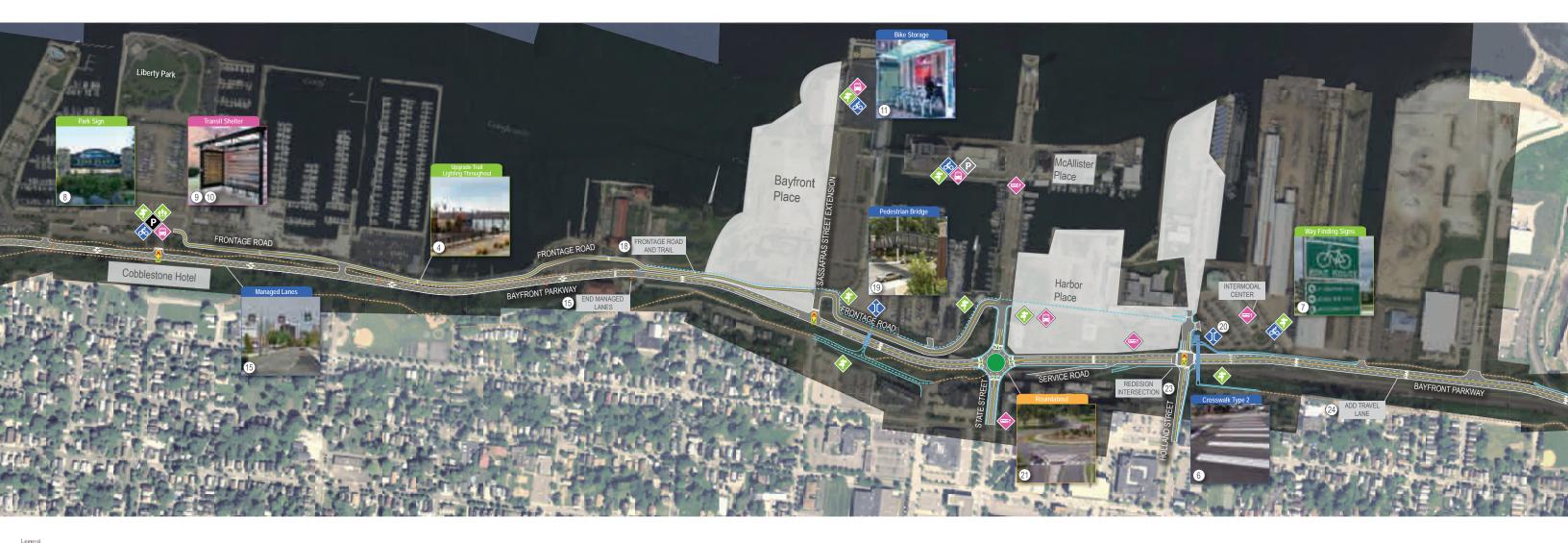
# Appendix L: Station 3: Developing Improvement Concepts Displays (Mobility Scenario)

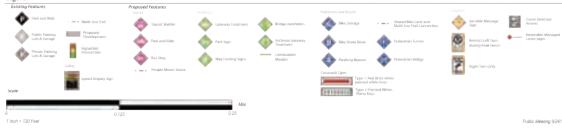




## West Bayfront - Mobility Scenario



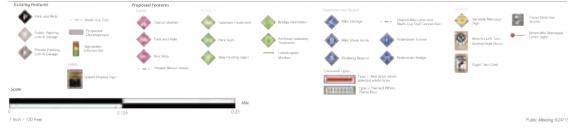




# Central Bayfront - Mobility Scenario







## East Bayfront - Mobility Scenario



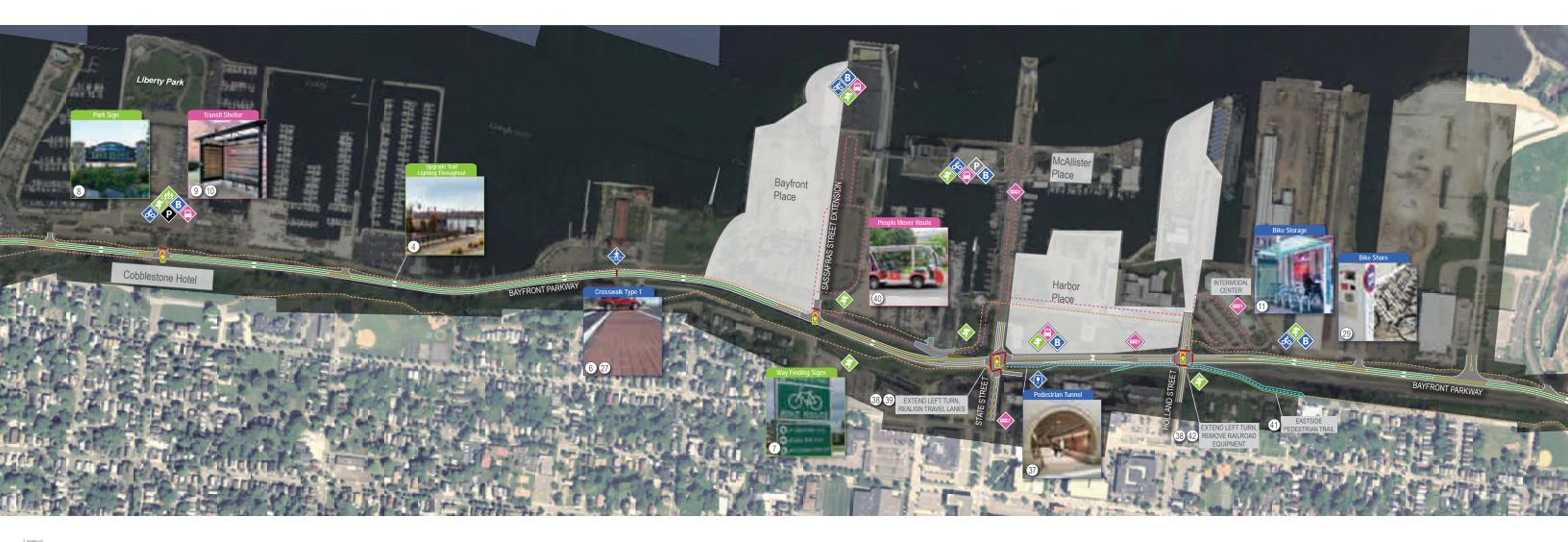
# Appendix M: Station 3: Developing Improvement Concepts Displays (Connected Scenario)

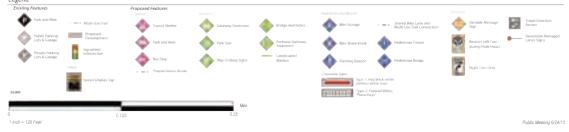




# West Bayfront - Connected Scenario



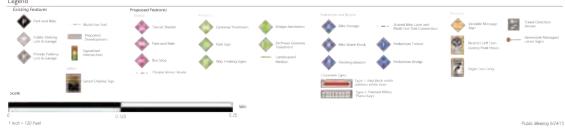




## Central Bayfront - Connected Scenario







## East Bayfront - Connected Scenario



Appendix N: Station 4: Next Steps Display (Work Plan)

	STANDING ORRIDOR			DENTIFYI	NG A VIS	ION	DEVI	ELOPING	SOLUTION	IS
Launch the F • Define Study A • Kick off Meeting • Traffic Data Co	rea g with the District llection and O&D Stud <b>Establish the</b> • Collect Existing - Traffic - Crash Data - Planning - Environmen • Select Project	Baseline Data and Document - Bike/Ped - Transit - Land Use tal	<ul> <li>Study Area</li> <li>Field verify da sensitive feature problem areas of</li> <li>Existing Traffi</li> <li>Draft Purpose</li> </ul>	ta and identify es, identify or red flags c Analysis & Need • De • De • Ide Bike/ • Co Surve	re Conditions velop Traffic Synchro velop Potential Impro ntify Anticipated Trar Ped Plans nclude and summariz ey Results alize Purpose & Nee	o Analysis ovement Concepts nsit and ze the	Developme	Alternatives Alternatives Refine Concep Prepare Cost E Identify Potenti	tual Alternatives	
August	September	October	November	December	January	February	March	April	May	Ju
Press Relea • Traffic Studies	In se #1	onduct Stake terviews	nolder	<ul> <li>PAC Meetin</li> <li>Identify impro</li> <li>Press Relea</li> <li>Public Survey Launch</li> </ul>	ovement priorities			odate #1	<b>g #3</b> nceptual alternatives entify	

## **PUBLIC INVOLVEMENT**

# **Project Work Plan**

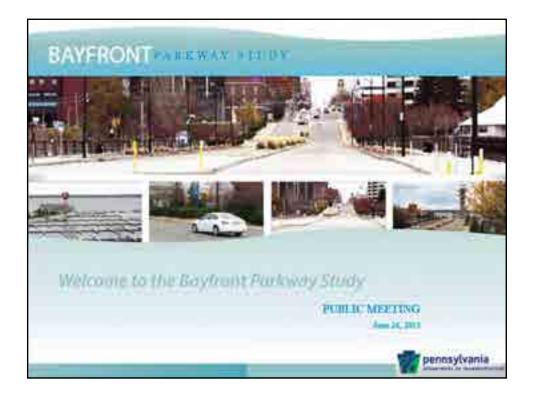
# **DELIVERING A PLAN**





As of 6/03/15

Appendix O: Presentation PowerPoint









### **IDENTIFYING A VISION**

#### **STUDY PURPOSE**

The purpose of the study is to complete an extensive analysis of the corridor (S.R. 4034), utilizing traffic data and involving stakeholders, to identify future projects that will improve safety, improve congestion, increase compliance with applicable current design standards, improve mobility throughout the corridor, and support existing and future economic development initiatives.

pennsylvania

pennsylvania

### **IDENTIFYING A VISION**

#### **STUDY NEEDS**

- Safety concerns exist in the study area.
- There are congestion concerns in the study area.
- There are operational concerns in the study area.
- Alternative modes are lacking parallel to the Bayfront (east/west).
- Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

### **IDENTIFYING A VISION**

**IMPROVEMENT CONSIDERATIONS** 

- Consistent with Local
   Planning Guidance
   (Destination Erie: A Regional Vision, City of Erie
   Comprehensive Plan: Background Analysis
   Principles; Erie Waterfront Master Plan)
- Maximize Land Use
   (Consolidate Parking, Brownfield Utilization, etc.)
- Enhances Aesthetics
- Supports Livability by Improving Pedestrian and Bicycle Access (Work & Play)
- Accommodates Emergency Service/Incident Access

- Accommodates Event Access and Mobility
- Enhances Travel Communication/Intelligence
   Minimizes Environmental
- Impacts (Property Impacts, Natural Resources, Cultural Resources)
- Ability to Maintain Improvement
- Total Project Costs/Available
   Funding
   penesytvania

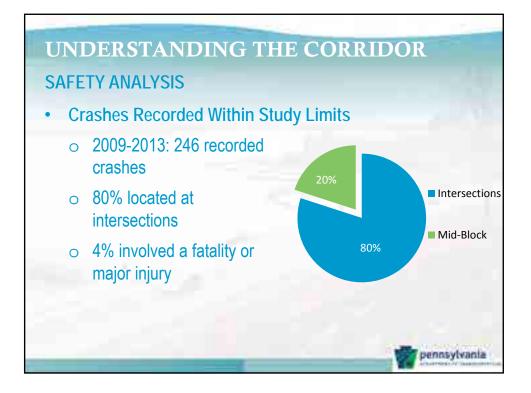
STUDY A	PPROACH	and the second second	
WORK PLAN			
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	A service of the serv		
	PUBLIC I	NVOLVEMENT	
	-		pennsylvania

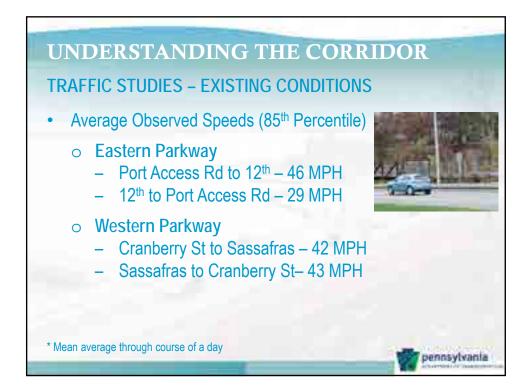












### UNDERSTANDING THE CORRIDOR

#### **TRAFFIC STUDIES - LEVEL OF SERVICE DEFINED**

#### LOS A

LOS B

5

LOS C

-

-



-

н

by others.

Represents the best operating conditions and is considered free flow, individual cars are simally unieffected by the presence of others to the traffic atrains.

Represents reasonably free flowing providences had with some influences

Represents a constrained constant Now below upond limits, with

additional attantion required by

conversions levels of the driver decime noticeably

the drivers to maintain safe

operations. Comfort and



Represents truffic operations approaching constable flow with high possing downood and paroing cases ty new zero, characterized by interia being severally restricted inmanarcentrality.



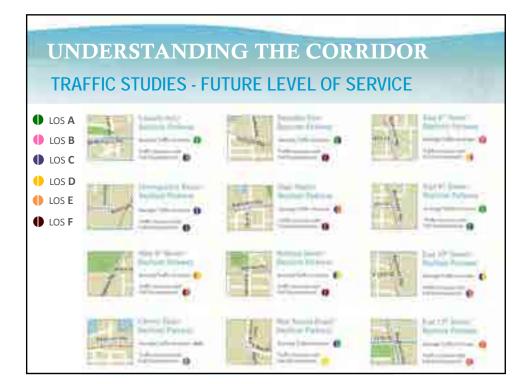
Represents unstable flow near separity 105 E often charges to USS F wery quickly feasure of disturbances (road conditions, accidents, etc.) in traffic flow

# LOS F

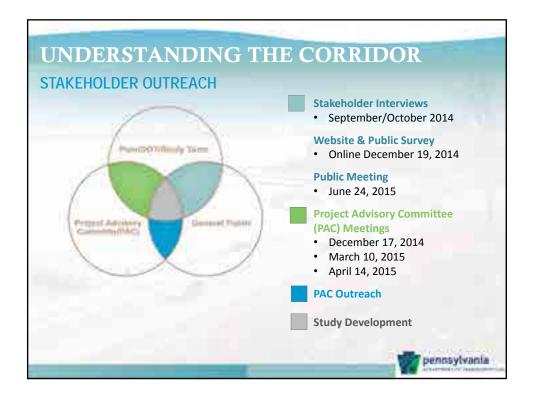


Impresents the worst conditions with heaving congetted flows and traffic demand epideolog capacity, characterized by tool and go waves, poor travel time, now comfort and conversions, and increased access to expose

pennsylvania



Direction	Backgrou	uild Option: nd without ent Growth	2034 No Build Option: Background and Development Growth		
	AM	PM	AM	PM	
Bayfront EB:	11.7 mins	12.5 mins	67.4 mins	15.9 mins	
Lincoln Ave to E 12th St	25 mph	23 mph	5 mph	19 mph	
Bayfront WB:	11.1 mins	11.7 mins	14.4 mins	20.2 mins	
E 12th St to Lincoln Ave	25 mph	24 mph	20 mph	15 mph	





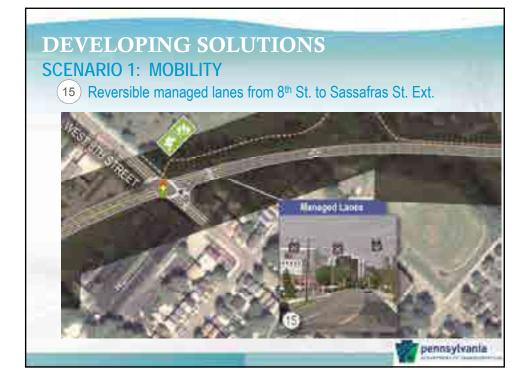


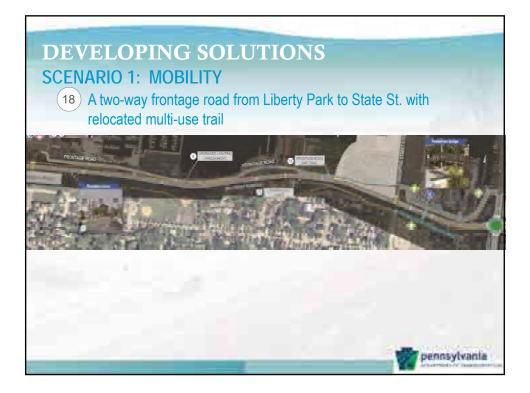
PUBLIC SURVEY & PAG		
<ul> <li>Top 5 Priorities Ident</li> <li>Priorities</li> </ul>	(ITIEC) Overall Survey Ranking	Overall PAC Ranking
Traffic Flow/Congestion	x	X
Pedestrian and Bicycle Access	x	x
Safety	x	x
Speed	x	2
Vehicle Access	Х	X
Parking and Facilities		
Transit		
Alternative Route Improvements		X

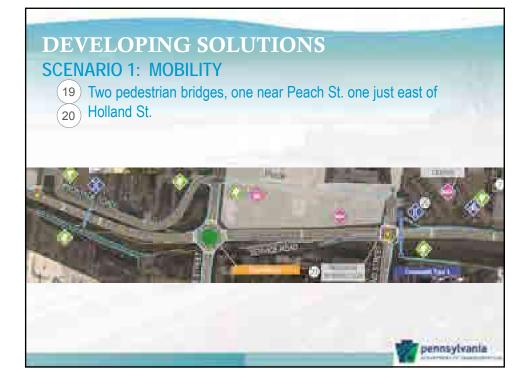




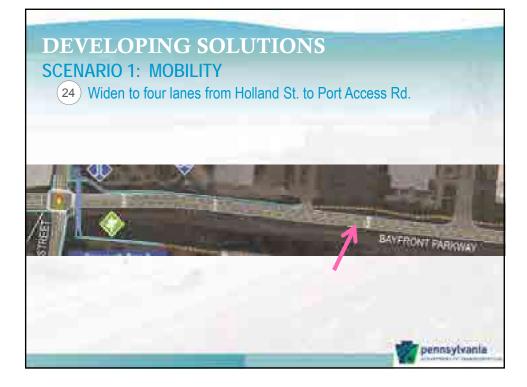




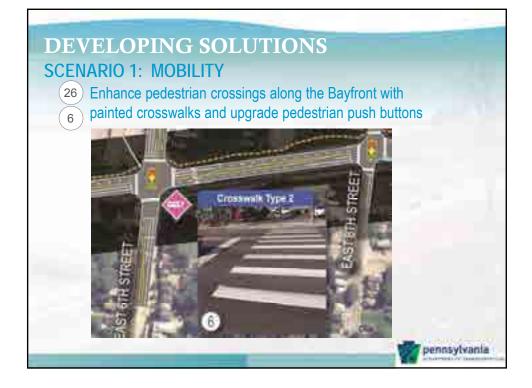




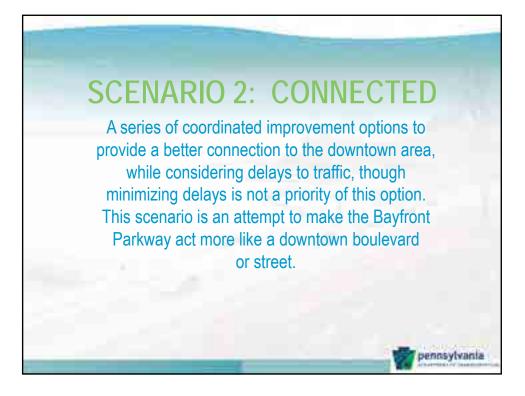








Direction	2034 - No B Backgro Developme	und and	2034 - Mobility Option Background and Development Growth		
	AM	PM	AM	PM	
Bayfront EB: Lincoln Ave to E 12th St	67.4 mins 5 mph	15.9 mins 19 mph	11.4 mins 25 mph (- 56 mins)	15.9 mins 18 mph (no change)	
Bayfront WB: E 12th St to Lincoln Ave	14.4 mins 20 mph	20.2 mins 15 mph	12.4 mins 23 mph (- 2 mins)	12.7 mins 22 mph (- 7.5)	















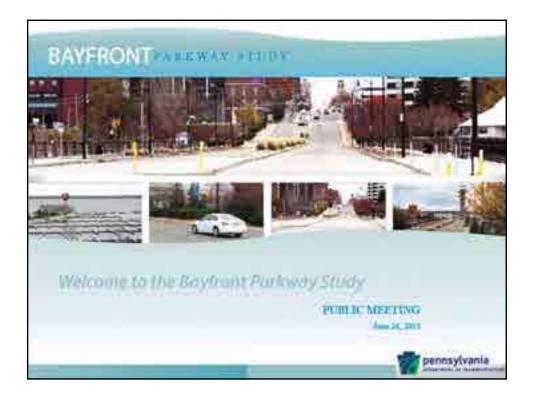




SCENARIO 2: (	CONNECTE	D			
Direction	Backgro	uild Option: ound and ent Growth	2034 - Connected Option Background and Development Growth		
	AM	PM	AM	PM	
Bayfront EB: Lincoln Ave to E 12th St	67.4 mins 5 mph	15.9 mins 19 mph	18.3 mins 17 mph (- 49.1 mins)	14.9 mins 20 mph (- 1 mins)	
Bayfront WB: E 12th St to Lincoln Ave	14.4 mins 20 mph	20.2 mins 15 mph	35.1 mins 11 mph (+ 20.7)	20.0 mins 14 mph (no change)	







Appendix P: Comment Form



#### **COMMENT FORM**

Please complete and deposit in the comment form box provided or mail to the address on the last page of this form by July 8, 2015.

a. Daily	b. Weekly	c. Monthly	d. Yearly
Other:			
Which of the fo	ollowing best describ	bes the interest area you repre	sent related to the Bayfront
	dor Study <i>(circle <u>all</u> t</i>		
a. City Reside	ent c	d. Commuter/Traveler	g. Bayfront Event Attendee
b. Business O	)wner e	e. Government Official	h. Tourist
c. Emergency	/ Service f	Economic Development	i. Recreational User (Bike/Ped)
Other:			
			nplemented along the Bayfront Pa
Corridor? (circ	ele your <u>top 4</u> improv	ements)	
a. Speed Red	luction d	. Traffic Flow/Congestion	f. Increased Vehicle Access
b. Safety	e	. Traffic Flow/Congestion . Increased Pedestrian/Bicycle	g. Alternative Route Improveme
•	e	Ū	
b. Safety c. Transit Upg	e grades	<ul> <li>Increased Pedestrian/Bicycle Access</li> </ul>	<ul><li>g. Alternative Route Improveme</li><li>h. Strategic Parking and Facilitie</li></ul>
b. Safety c. Transit Upg	e grades	. Increased Pedestrian/Bicycle	<ul><li>g. Alternative Route Improveme</li><li>h. Strategic Parking and Facilitie</li></ul>
b. Safety c. Transit Upg Other:	e grades ent concepts presen	<ul> <li>Increased Pedestrian/Bicycle Access</li> </ul>	<ul><li>g. Alternative Route Improveme</li><li>h. Strategic Parking and Facilitie</li></ul>
<ul> <li>b. Safety</li> <li>c. Transit Upg</li> <li>Other:</li> <li>The improvement</li> </ul>	e grades ent concepts presen way Corridor.	<ul> <li>Increased Pedestrian/Bicycle Access</li> </ul>	<ul> <li>g. Alternative Route Improvement</li> <li>h. Strategic Parking and Facilitie</li> <li>the existing and future needs alor</li> </ul>
b. Safety c. Transit Upg Other: The improveme Bayfront Parky	ent concepts presen way Corridor.	<ul> <li>Increased Pedestrian/Bicycle Access</li> <li>Access</li> <li>Access</li> </ul>	<ul> <li>g. Alternative Route Improvement</li> <li>h. Strategic Parking and Facilitien</li> <li>the existing and future needs alor</li> <li>agree e. Strongly Disagree</li> </ul>
<ul> <li>b. Safety</li> <li>c. Transit Upg</li> <li>Other:</li> <li>The improvement</li> <li>Bayfront Parkw</li> <li>a. Strongly A</li> </ul>	ent concepts presen way Corridor.	<ul> <li>Increased Pedestrian/Bicycle Access</li> <li>Access</li> <li>Acce</li></ul>	<ul> <li>g. Alternative Route Improvement</li> <li>h. Strategic Parking and Facilitien</li> <li>the existing and future needs alor</li> <li>agree e. Strongly Disagree</li> </ul>
<ul> <li>b. Safety</li> <li>c. Transit Upg</li> <li>Other:</li> <li>The improvement</li> <li>Bayfront Parkw</li> <li>a. Strongly A</li> </ul>	ent concepts presen way Corridor.	<ul> <li>Increased Pedestrian/Bicycle Access</li> <li>Access</li> <li>Acce</li></ul>	<ul> <li>g. Alternative Route Improvement</li> <li>h. Strategic Parking and Facilitien</li> <li>the existing and future needs alor</li> <li>agree e. Strongly Disagree</li> </ul>
<ul> <li>b. Safety</li> <li>c. Transit Upg</li> <li>Other:</li> <li>The improvement</li> <li>Bayfront Parkw</li> <li>a. Strongly A</li> </ul>	ent concepts presen way Corridor.	<ul> <li>Increased Pedestrian/Bicycle Access</li> <li>Access</li> <li>Acce</li></ul>	<ul> <li>g. Alternative Route Improvement</li> <li>h. Strategic Parking and Facilitien</li> <li>the existing and future needs alor</li> <li>agree e. Strongly Disagree</li> </ul>



306	presented tonight, enarios is comprehe	-	ement concepts asso	ciated with the Mobility and Connected
МС	DBILITY			
a.	Strongly Agree	b. Agree	c. Neutral	d. Disagree e. Strongly Disagree
CO	ONNECTED			
b.	Strongly Agree	b. Agree	c. Neutral	d. Disagree e. Strongly Disagree
Ple	ease explain or list ad	ditional improvem	ent concepts for conside	eration:
			cepts handout to identif pility and Connected S	y the proposed improvements you like best. cenarios?
	DBILITY	you rate the mos		
C.	Strongly Preferred	b. Preferred	c. Needs Improvem	ent d. Dislike e. Strongly Dislike
co	ONNECTED			
a.	Strongly Preferred	b. Preferred	c. Needs Improvem	ent d. Dislike e. Strongly Dislike
DL				
	ease introduce your	self to our team:		
Nai	me			
Add	dress		Ci	ty
			Phone	
	ate Zip _			



## Appendix Q: Improvement Concepts List

#### **IMPROVEMENT CONCEPT SELECTION**

Please identify up to 10 preferred improvement concepts.

Ref. No.	Improvement Concept Description	Preferred Concepts (Mark with "X")
OVERALL IN	IPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
MOBILITY S	CENARIO IMPROVEMENT CONCEPTS	
13.	Arch gateway treatment over roadway	
14.	Shared bike lane along Lincoln and 8th St	
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	
16.	Right-turn Only from Cranberry St.	
17.	Rapid Flash Beacon for ped/bike crossing at Cranberry St	
18.	A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	
19.	Pedestrian bridge over the Bayfront Parkway near Peach St.	
20.	Pedestrian bridge over the Bayfront Parkway near Holland St.	
21.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot	
22.	Dual-lane roundabout at 12th St.	
23.	Redesign Holland St. intersection to add turning lanes and remove railroad equipment	
24.	Widen Bayfront to four lanes from Holland St. to Port Access Rd.	
25.	Two bus pull-off areas (one east side and one west side between 8th St. and 10 St.) and relocate multi-use trail around the bus pull-off	
26.	Enhance pedestrian crossings along the Bayfront with painted crosswalks (Type 2)	

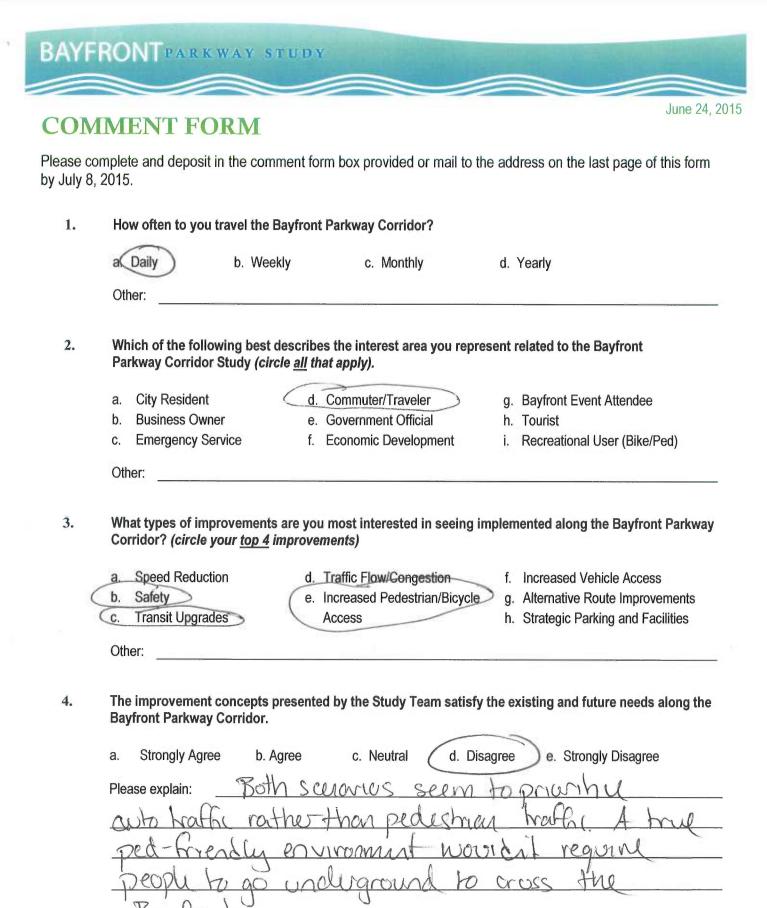
#### CONNECTED SCENARIO IMPROVEMENT CONCEPTS 27. Gateway treatments at Greengarden Blvd. and E. 12th St. intersections Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment 28. (Type 1) Bike Share Program with hubs located throughout the corridor 29. Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate 30. planted median with breaks at intersecting and access points Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the 31. Lincoln Avenue Park-and-Ride 32. Improve W. 6th St. Bridge aesthetics/architectural treatment 33. Restrict left turns from Cranberry St. during peak hours 34. Add pedestrian Rapid Flash Beacon at Cranberry St. 35. Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection Modify W. 8th St. intersection to include one through lane, one shared through/right-36. turn lane (eastbound) with merge after intersection 37. Enhance tunnel under State St. for bike/ped access under the Bayfront Extend left turn lanes at State St. and Holland St. 38. 39. Realign travel lanes at State Street intersection 40. People mover system within the central Bayfront with a dedicated route Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed 41. bike/ped tunnel Remove railroad equipment at Holland St. and adjust stop bar 42. 43. Single-lane roundabout at Port Access Road 44. Park and Ride between 8th St and 10th St on the east side of the road

# Appendix R: Contact information from the Comment Forms

#### Bayfront Parkway Corridor Study Comment Form - Contact Information

Einet Manna	Lest News		0.4	Otata	7:	Dhama	E molt
First Name	Last Name	Address 1	City	State	Zip	Phone	E-mail
Anna	Frantz						
		633 Mohawk Dr					
Bob	Cronmiller		Erie	PA	16505	814-455-5082	bobcronmiller@gmail.com
Susan	Miller	1348 South Shore Dr.	Erie	PA	16505	814-881-3288	
		3916 State St.					
Winston	Chu		Erie	PA	16508	814-864-8744	
		945 West 9th					
R. Jason	Wieczorek, AIA		Erie	PA	16502	330-289-0065	rwielzor@kent.edu
		4124 West ridge Rd					
Veronica	Rexford		Erie	PA	165206	814-806-0979	vrexford@gmail.com
		P.O. Box 11414					
Sonya	Arrlington		Erie	PA	16514	572-9567	sonyaerie@aol.com
			Erie	PA			
		23 Niagara Pier		-			
Pierre	McCormick		Erie	PA	16507	608-712-5021	pierrem@udbud.com
		P.O. Box 437					
James F.	Carstarter		Erie	PA	16415	814-392-6225	jcarstarter@aol.com
Paul	Detzel	530 Mohawk Dr	Erie	PA	16505	814-323-7009	
	<b>-</b> (	114 East 36th St	_ ·		40504		
Judy and Rod	Troester		Erie	PA	16504	814-456-0545	troesterjr@verizon.net

## Appendix S: Completed Comment Forms



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As presented tonight, the list of improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?

5.

6.

7.

8.

a.	Strongly Agree	b. Agree	c. Neutral	d. Disagree e. Strongly Disagree
~~		0		
		h Aaroo	Noutral	d Disease a Otransky Diseases
b.	Strongly Agree	b. Agree	c. Neutral	d. Disagree e. Strongly Disagree
Plea	ase explain or list ad	ditional improvem	ent concepts for cons	sideration:
_	Protect	d bus	Jane, a	the at-grade pedestm
	crossing	5	(	- <u>0</u> ,
	0			
-				
Ple	ase use the attached	Improvement Con	cepts handout to ide	ntify the proposed improvements you like best.
in g	jeneral, now would	you rate the Mol	bility and Connected	a Scenarios?
MO	BILITY			
С.	Strongly Preferred	b. Preferred	c. Needs Improve	ement d. Dislike e. Strongly Dislike
col	NNECTED			
a.	Strongly Preferred	b. Preferred	c. Needs Improv	ement d. Dislike e. Strongly Dislike
Plea	ase introduce yours	self to our team:		
Nan	ne Dana	Frant		
400	ress			City
Stat	e Zip _		Phone	
E-m	ail			
Plea	ase provide any add	ditional commen	ts you may have be	low:
		-		







5. As presented tonight, the list of improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?

MOBILITY				
a. Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
CONNECTED				
b. Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
Please explain or list	additional improve	ment concepts for co	onsideration:	
<u>V</u>		_		
Please use the attach	ed Improvement Co	oncents handout to id	lentify the propose	d improvements you like best.
			ionary and propose	a mprovemento you me best.
In general, how wou	ld you rate the Me	obility and Connect	ed Scenarios?	
MOBILITY				
	d b Droformad	a Naada Imm	a d	Dialika a Chanath Dialika
c.) Strongly Preferre	d D. Preterred	c. Needs Impre	ovement d. l	Dislike e. Strongly Dislike
CONNECTED				
a. Strongly Preferre	d b. Preferred	c) Needs Impro	ovement d. l	Dislike e. Strongly Dislike
Please introduce you	urself to our team	1:		
Name <u>Bo</u> B	(R DA)	MILLER		
Address <u>63</u>	3 MOH	AWK DR	City Er	LIE
State PA Zip	16505	_ Phone _ >	14 - 455	-5082
E-mail <u>Bo</u> B				
	CRONMI		MAIL, C	0 M
Please provide any a				
WOULD	LIKE	NEW SI	GNALS	HT WEST 8T
IND BA	Y FRUNY	WITLI RT	TURN	ARROWS
				RT TURN
ON THI	KA YI	RONT. N	EFY H	N TUNN
				ST RTH

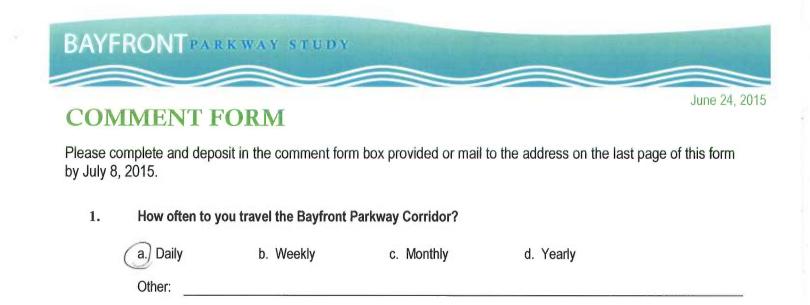
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Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned copy of your comment form to *BayfrontParkwayStudy@mtmail.biz* or mail your comment form to:





2. Which of the following best describes the interest area you represent related to the Bayfront Parkway Corridor Study (*circle <u>all</u> that apply*).

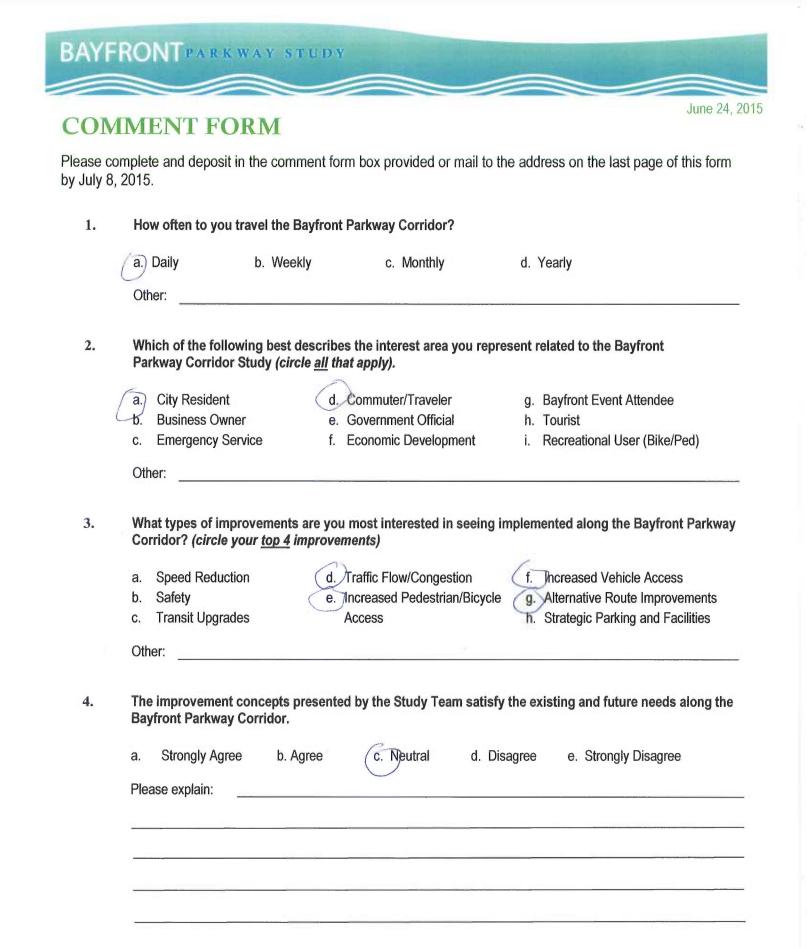
b. Business Owner	e. Government Official	h. Tourist
c. Emergency Service	f. Economic Development	(j.) Recreational User (Bike/Ped)
Other:		
	ts are you most interested in seeing in	nplemented along the Bayfront Par
Corridor? (circle your <u>top 4</u>	improvements)	
(a.) Speed Reduction	(d) Traffic Flow/Congestion	f. Increased Vehicle Access
Safety	e. Increased Pedestrian/Bicycle	g. Alternative Route Improvemen
C.) Transit Upgrades	Access	h. Strategic Parking and Facilities
Other:		
The improvement concents	presented by the Study Team satisfy	the existing and future needs along
	presented by the olday reall substy	the existing and fatare needs along

a. Strongly Agree (b.)Agree c. Neutral d. Disagree e. Strongly Disagree
Please explain:



a.) Strongly Agree	b. Agree	c. Neutral	d. Disagree e. Strongly Disagre	e.
<i>o</i>				
CONNECTED	b. Agree	c. Neutral	d. Disagree e. Strongly Disagre	
Please explain or list a	dditional improven	nent concepts for c	onsideration:	
Please use the attached	d Improvement Co	ncepts handout to i	dentify the proposed improvements you lik	e bes
			, , , , , , , , , , , , , , , , , , , ,	
In general, how would	you rate the Mo	bility and Connec	ted Scenarios?	
MOBILITY				
c. Strongly Preferred	(b) Preferred	c. Needs Impr	ovement d. Dislike e. Strongly D	islike
CONNECTED	0			
a. Strongly Preferred	(b)Preferred	c. Needs Impr	ovement d. Dislike e. Strongly D	slike
Please introduce your	self to our team:			
Name 5 USA	MILL MILL	ER		
Address 134 8	SOUTH	SITORE DR	- City <u>ERIE</u> 14 - 881 -3288	
	11 5 8 6		UN 991 3298	
State <u>I</u> Zip	14005	Phone	7-081 280	
E-mail				
Please provide any ad	ditional commen	ts you may have	below:	
EXCE	HENT I	RESENTATI	on. THANK you	
			0	



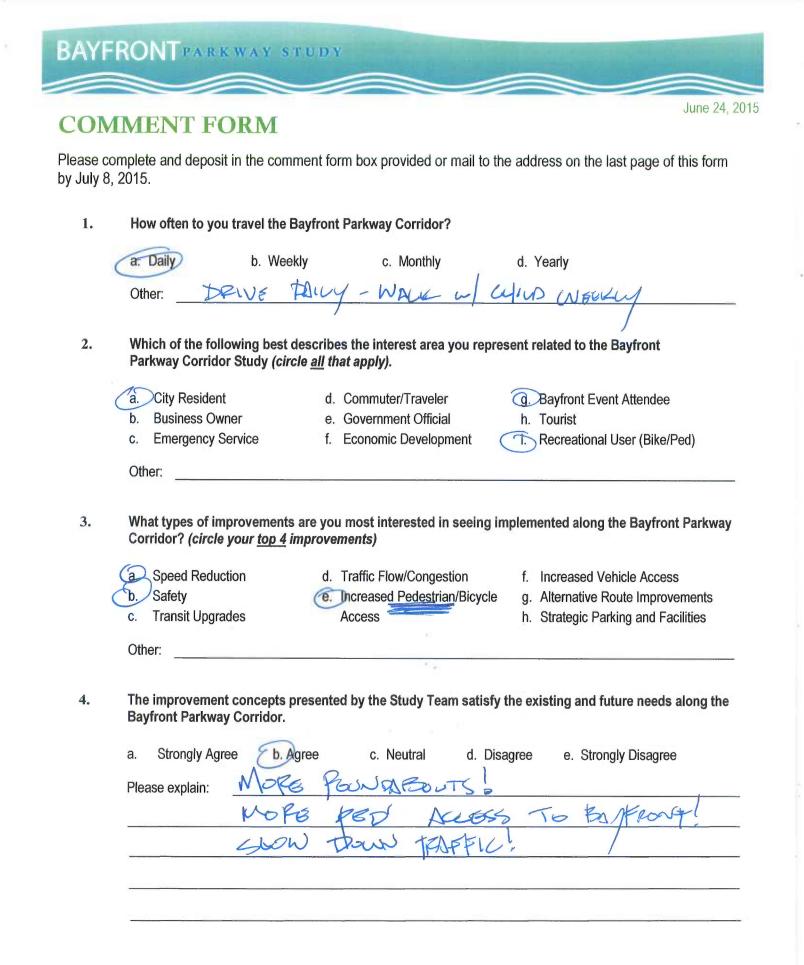




	enarios is comprehe	ensive?			
MO	BILITY				
a.	Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
со	NNECTED		2		
b.	Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
Plea	ase explain or list add	ditional improve	ment concepts for co	onsideration:	
					1
Ple	ase use the attached	Improvement Co	oncepts handout to it	dentify the proposed	l improvements you like bes
In g	eneral, how would	you rate the Me	obility and Connect	ted Scenarios?	
MO	BILITY				
C.	Strongly Preferred	b. Preferred	c. Needs Impro	ovement d. D	islike e. Strongly Dislike
CO	NNECTED				
	NNECTED Strongly Preferred	b. Preferred	c. Needs Impro	ovement d. D	islike e. Strongly Dislike
a.				ovement d. D	islike e. Strongly Dislike
a.	Strongly Preferred	elf to our team		ovement d. D	
a. Plea Nan	Strongly Preferred ase introduce yours neSco	elf to our team	:: {		
a. <b>Plea</b> Nan Add	Strongly Preferred ase introduce yours ne <u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>	elf to our team	:: {	City	27
a. Plea Nan Add Stat	Strongly Preferred ase introduce yours ne <u>winsco</u> ress <u>3916</u> re <u>Ac</u> Zip _	elf to our team	: - Phone <u>\$6</u>	City <u>Càrc</u> 4-8744	27
a. Plea Nan Add Stat	Strongly Preferred ase introduce yours ne <u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>	elf to our team	: - Phone <u>\$6</u>	City <u>Càrc</u> 4-8744	27
a. Plea Nan Add Stat E-m	Strongly Preferred ase introduce yours ne <u>winsco</u> ress <u>3916</u> re <u>Ac</u> Zip _	elf to our team	: - Phone <u>\$6</u>	City <u>Căre</u> <u>4-8744</u>	27
a. Plea Nan Add Stat E-m	Strongly Preferred ase introduce yours ne <u>WINSCO</u> Iress <u>3916</u> re <u>Ar</u> Zip _ nail	elf to our team	: - Phone <u>\$6</u>	City <u>Căre</u> <u>4-8744</u>	27
a. Plea Nan Add Stat E-m	Strongly Preferred ase introduce yours ne <u>WINSCO</u> Iress <u>3916</u> re <u>Ar</u> Zip _ nail	elf to our team	: - Phone <u>\$6</u>	City <u>Căre</u> <u>4-8744</u>	27

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5. As presented tonight, the list of improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?

MOBILITY a. Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
CONNECTED				
b. Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
Please explain or list ac				NEIGH BOR HODD
<i>Please use the attached</i> In general, how would				d improvements you like best.
	you rate the mo	binty and connoc		
MOBILITY c. Strongly Preferred	b. Preferred	c. Needs Impro	vement d. D	Dislike e. Strongly Dislike
CONNECTED a. Strongly Preferred		c. Needs Impro	vement d. C	Dislike e. Strongly Dislike
Please introduce your	self to our team	MESTO	ROX, AIA	
Address Zip	45 W.		City <u>FF1</u> 30-289-	E . 5565
	16czor	ekent.e	TPU .	
Please provide any ad	ditional comme	nts you may have b	elow:	

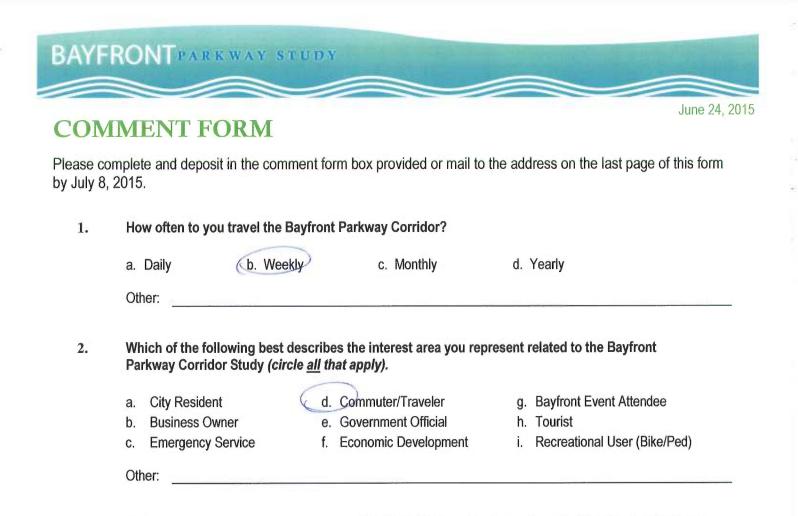
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Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned copy of your comment form to <u>BayfrontParkwayStudy@mtmail.biz</u> or mail your comment form to:





3. What types of improvements are you most interested in seeing implemented along the Bayfront Parkway Corridor? (*circle your <u>top 4</u> improvements*)

a_Speed Reduction	d. Traffic Flow/Congestion	f. Increased Vehicle Access
b. Safety	e. Increased Pedestrian/Bicycle	g. Alternative Route Improvements
c. Transit Upgrades	Access	h. Strategic Parking and Facilities

4. The improvement concepts presented by the Study Team satisfy the existing and future needs along the Bayfront Parkway Corridor.

Other:

a.	Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree	
Pleas	se explain:	There st	rould be	more	neighborhoof	
	outrea	ch to b2	lance to	he conc	ernsof	
	locals,	commite		urists		



As presented tonight, the list of improvement concepts associated with the Mobility and Connected 5. Scenarios is comprehensive?

	MOBILITY
	a. Strongly Agree (b. Agree) c. Neutral d. Disagree e. Strongly Disagree
	CONNECTED
	b. Strongly Agree (b. Agree) c. Neutral d. Disagree e. Strongly Disagree
	Please explain or list additional improvement concepts for consideration:
	Connected - issues brought up w/ plantings in
	median - very valid.
	0
	Please use the attached Improvement Concepts handout to identify the proposed improvements you like best.
6.	In general, how would you rate the Mobility and Connected Scenarios?
	MOBILITY
	CONNECTED Some aspects of each - pocus on Cocal traffic
	c. Strongly Preferred b. Preferred c. Needs Improvement d. Dislike e. Strongly Dislike residents/ CONNECTED a. Strongly Preferred b. Preferred c. Needs Improvement d. Dislike e. Strongly Dislike bike access
7.	Please introduce yourself to our team:
	Name Wonica Rexford
	Address <u>4124 W. Ridge Rd.</u> City Trik
	State PA Zip 16506 Phone 814-806-0979
	E-mail Vrex Ford @ amail. Com
8.	Please provide any additional comments you may have below:
	Very concerned that the improvements should
	provide jobs & job training & business opportunities
	to local residents with a commitment to
	Community benefits THISPION SHOULD be part
-1h .	Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned
Paractica	For TON
the han wa	Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned copy of your comment form to <u>BayfrontParkwayStudy@mtmail.biz</u> or mail your comment form to: 400 Attn: Bayfront Parkway Study, c/o: McCormick Taylor, 1000 Omega Drive, Suite 1550, Pittsburgh, PA 15205 20
DENTONNOP	2 Department of transportation





Please complete and deposit in the comment form box provided or mail to the address on the last page of this form by July 8, 2015.

a. Daily b. Weel	kly c. Monthly	d. Yearly
Other:		
Which of the following best of Parkway Corridor Study (circ	describes the interest area you re cle <u>all</u> that apply).	present related to the Bayfront
a City Resident	d. Commuter/Traveler	g. Bayfront Event Attendee
b. Business Owner	e. Government Official	h. Tourist
C Emergency Service	(f.) Economic Development	(i.) Recreational User (Bike/Ped)
Other:		
What types of improvements Corridor? (circle your top 4 in a.) Speed Reduction b.) Safety c. Transit Upgrades		g implemented along the Bayfront Park f. Increased Vehicle Access cle (g) Alternative Route Improvement h. Strategic Parking and Facilities
Other:	N	
The improvement concepts p Bayfront Parkway Corridor.	presented by the Study Team satis	sfy the existing and future needs along
<b>Bayfront Parkway Corridor.</b> a. Strongly Agree b. A	-	sfy the existing and future needs along Disagree e. Strongly Disagree
Bayfront Parkway Corridor.	-	
<b>Bayfront Parkway Corridor.</b> a. Strongly Agree b. A	-	



	2		
a. Strongly Agree	(b)Agree	c. Neutral	d. Disagree e. Strongly Disagree
CONNECTED			
b. Strongly Agree	b. Agree	C. Neutral	d. Disagree e. Strongly Disagree
Please explain or list a	dditional improve	ment concepts for cons	deration:
Please use the attache	d Improvement Co	oncents handout to iden	tify the proposed improvements you like b
			ny me proposed improvements you nite b
In general, how would	d you rate the Mo	obility and Connected	Scenarios?
MOBILITY			
c. Strongly Preferred	b. Preferred	C. Needs Improve	ment d. Dislike e. Strongly Dislil
CONNECTED			
connected a. Strongly Preferred	b. Preferred	c. Needs Improve	ment d. Dislike e. Strongly Disli
a. Strongly Preferred			ment d. Dislike e. Strongly Dislil
			ment d. Dislike e. Strongly Dislil
a. Strongly Preferred Please introduce you Name	rself to our team	:	
a. Strongly Preferred Please introduce you Name	rself to our team	:	
a. Strongly Preferred Please introduce your Name <u>Songa</u> Address <u>2.0.3</u>	rself to our team	: 	City _ Eke
a. Strongly Preferred Please introduce your Name <u>Sowya</u> Address <u>Po. 3</u> State <u>Pa</u> Zip	Areingt Areingt box 1141 16514	: <u>-</u> Phone <u>572</u>	City <u>Eese</u> -9567
a. Strongly Preferred Please introduce your Name <u>Sowya</u> Address <u>Pos</u> <u>Zip</u>	Areingt Areingt box 1141 16514	: <u>-</u> Phone <u>572</u>	City _ Eke

Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned copy of your comment form to <u>BayfrontParkwayStudy@mtmail.biz</u> or mail your comment form to:

Attn: Bayfront Parkway Study, c/o: McCormick Taylor, 1000 Omega Drive, Suite 1550, Pittsburgh, PA 15205



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TOT	MENT FODM			June 24, 20
	IMENT FORM			
lease c y July 8		nent form box provided or mail to th	ne ado	tress on the last page of this form
1.	How often to you travel the E	Bayfront Parkway Corridor?		
	a. Daily b. Weel	kly c. Monthly	d.	Yearly
	Other:			
	<ul> <li>Parkway Corridor Study (circle)</li> <li>(a) City Resident</li> <li>b. Business Owner</li> </ul>	lescribes the interest area you repre ele <u>all</u> that apply). d. Commuter/Traveler (e.)Government Official	g.	Bayfront Event Attendee Tourist
	c. Emergency Service	f. Economic Development		Recreational User (Bike/Ped)
3.	What types of improvements Corridor? <i>(circle your <u>top 4</u> in</i> a. Speed Reduction	d. Traffic Flow/Congestion	mplen f.	Increased Vehicle Access
	c. Transit Upgrades	e. Increased Pedestrian/Bicycle Access	-	Alternative Route Improvements Strategic Parking and Facilities
	Other:			
4.	The improvement concepts p Bayfront Parkway Corridor.	presented by the Study Team satisfy	the e	xisting and future needs along the
	a. Strongly Agree b. A	gree c. Neutral d. Dis	agree	e. Strongly Disagree
	a. Strongly Agree b. A	gree c. Neutral d. Dis	agree	e. Strongly Disagree



MOBILITY	h Aara-	o Moutual		o Ohanahi Diaa	-
a. Strongly Agree	b. Agree	c. Neutral	C d: Disagre	e e. Strongly Disagre	e
CONNECTED		a. 3 T	12125		
b.) Strongly Agree	b. Agree	c. Neutral	d. Disagre	e e. Strongly Disagre	е
Please explain or list ad	ditional improver	ment concepts for c	onsideration:		_
		мулар, <u>то стата с стата</u> то			
Please use the attached	Improvement Co	ncepts handout to	dentify the propo	sed improvements you lil	ce be
In general, how would	you rate the Mo	bility and Connec	ted Scenarios?		
MOBILITY					
c. Strongly Preferred	b. Preferred	c. Needs Imp	ovement d	Dislike e. Strongly D	islik
CONNECTED			C		
a. Strongly Preferred	b. Preferred	c. Needs Imp	ovement d	. Dislike e. Strongly D	islik
Please introduce yours	elf to our team				
	tean				
Name					
Address			City		
State Zip _		_ Phone			
E-mail					
Please provide any add	litional comme	nts you may have	below:		





Please complete and deposit in the comment form box provided or mail to the address on the last page of this form by July 8, 2015.

e.	Daily	b. Weekly		c. Monthly	d.	Yearly
Ot	her:					
	hich of the followi arkway Corridor St				epresent	related to the Bayfront
a.	City Resident		d. Co	ommuter/Traveler	0.	Bayfront Event Attendee
b.	Business Owner	1		overnment Official	-	Tourist
C.	Emergency Servi			onomic Development	<i.	Recreational User (Bike/Ped)
Ot	her:					
(b)	Safety	. (	1	reased Pedestrian/Bicy cess	•	Alternative Route Improvement Strategic Parking and Facilities
c. Ot	Transit Upgrades					
Ot Th Ba a.	her:	oncepts pres	ented t	by the Study Team sat		xisting and future needs along



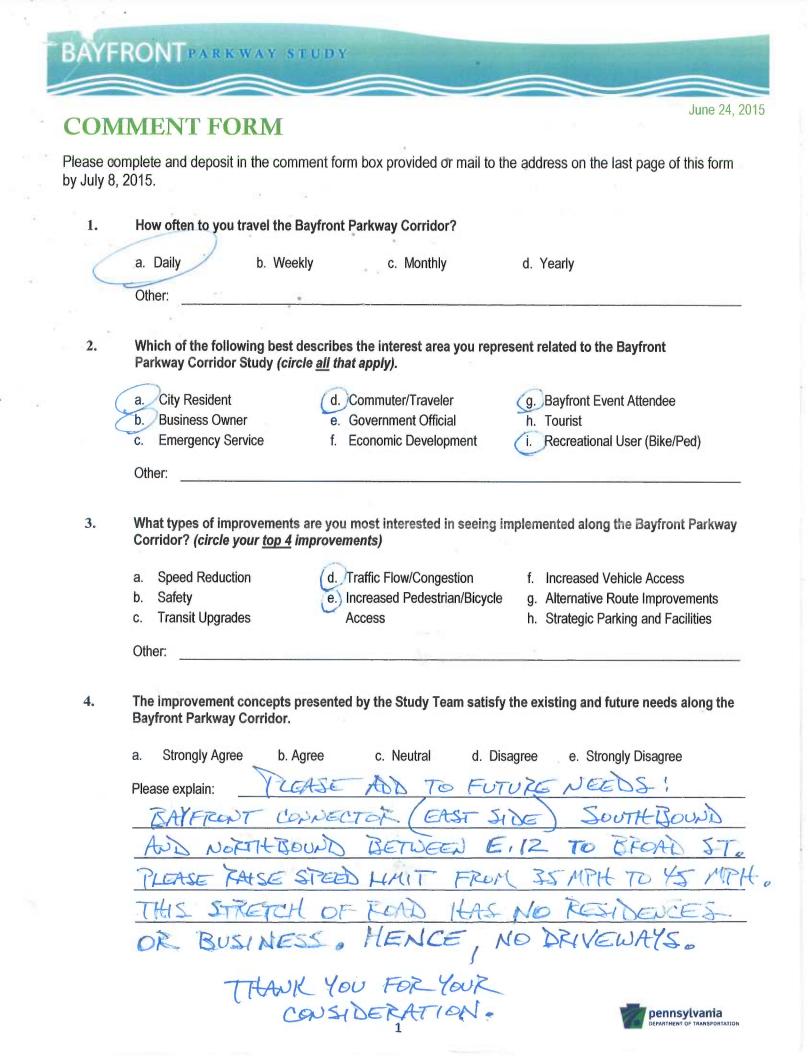
5.	As presented tonight, the list of improvement concepts associated with the Mobility and Connected
	Scenarios is comprehensive?

MOBILITY a. Strongly Agree	b. Agree	c. Neutral	d Disaaroo	e. Strongly Disagree
	b. Ayree	c. Neural	u. Disayiee	e. Strongly Disagree
CONNECTED	$\bigcirc$	S 00-03		
b. Strongly Agree	b. Agree	c. Neutral	d. Disagree	e. Strongly Disagree
Please explain or list a	dditional-improver	nent concepts for con	sideration:	
	<u>.</u>			
·				
Please use the attache	d Improvement Co	ncepts handout to ide	ntify the propose	d improvements you like besi
In general, how would	d you rate the Mo	bility and Connecte	d Scenarios?	
MOBILITY			_	
c. Strongly Preferred	b. Preferred	c. Needs Improv	ement d. D	vislike e. Strongly Dislike
CONNECTED	$\frown$			
a. Strongly Preferred	b. Preferred	c. Needs Improv	ement d. D	islike e. Strongly Dislike
	$\sim$			
Please introduce you	rself to our team	in .		
Name PIERRI	E M Carm	ick		
Address 23	NIAGANA	PIER	City ER	16
State <u>P4</u> Zip			08 712.	-5021
E-mail Pien				
Please provide any ac	ditional comme	nts vou mav have be	low:	
				,
				-

copy of your comment form to <u>BayfrontParkwayStudy@mtmail.biz</u> or mail your comment form to:

Attn: Bayfront Parkway Study, c/o: McCormick Taylor, 1000 Omega Drive, Suite 1550, Pittsburgh, PA 15205





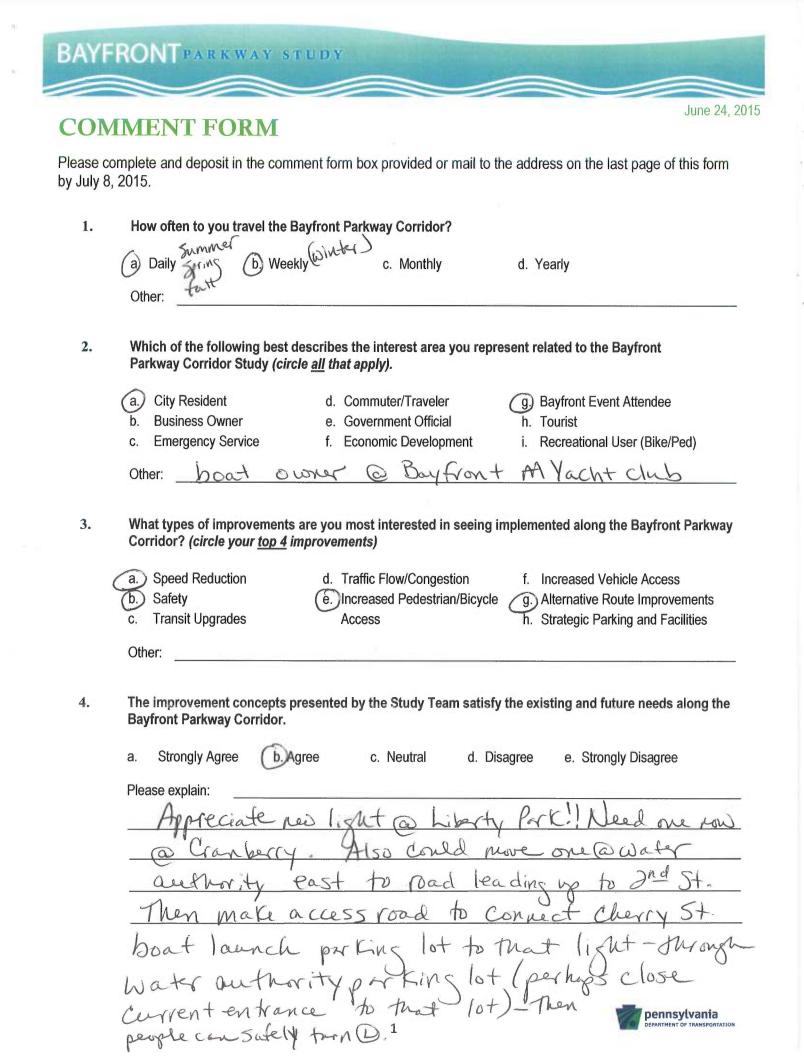
As presented tonight, the list of improvement concepts associated with the Mobility and Connected 5. Scenarios is comprehensive?

	MOBILITY
	a. Strongly Agree b. Agree c. Neutral d. Disagree e. Strongly Disagree
	CONNECTED
	b. Strongly Agree b. Agree c. Neutral d. Disagree e. Strongly Disagree
	Please explain or list additional improvement concepts for consideration:
	THE HARDEN NO TO #30
	#36 - WE THROUGH LANE, ONE FIGHTURN ONLY LANE
	#36 - OVE THEROUGH LANE, ONE FIGHETURN ONLY LANE (MAKE SOUTH BOUND MIRROR TO NORTH BOUND)
	Please use the attached Improvement Concepts handout to identify the proposed improvements you like best.
6.	In general, how would you rate the Mobility and Connected Scenarios?
	MOBILITY
	c. Strongly Preferred b. Preferred c. Needs Improvement d. Dislike e. Strongly Dislike
	CONNECTED
	a. Strongly Preferred b. Preferred c. Needs Improvement d. Dislike e. Strongly Dislike
7.	Please introduce yourself to our team:
	Name PAUL DETZEL
	Address 530 MoltAwk DRIVE City ERIE
	State <u>PA</u> Zip <u>16505</u> Phone <u>814-323-7009</u>
	E-mail
8.	Please provide any additional comments you may have below:
¥[]	- STRONGLY AGREE WITH IMPLOMENTING
	REVERSIBLE MANAGED LANES. THIS IDEA
	15 (20) YEARS LATE. FORLET ROUNDADOUT O STATE
#37-	AND BAYFRONT. BETTER TO UTILIZE TUNNEL RASSACE FOR BIKES AND PEDESTRIANS. Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned
	FOR ISTRES AND FODESTRADS. Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned
	copy of your comment form to <u>BayfrontParkwayStudy@mtmail.biz</u> or mail your comment form to:

Attn: Bayfront Parkway Study, c/o: McCormick Taylor, 1000 Omega Drive, Suite 1550, Pittsburgh, PA 15205



 $\rightarrow$ 



5.	As presented tonight, the list of improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?
	MOBILITY
	a. Strongly Agree (b) Agree c. Neutral d. Disagree e. Strongly Disagree
	CONNECTED
	b. Strongly Agree (b. Agree c. Neutral d. Disagree e. Strongly Disagree
	Please explain or list additional improvement concepts for consideration:
	Good to Know much spidy 3 Statistics have gove into concepts
	Chavegore into concepts
	Please use the attached Improvement Concepts handout to identify the proposed improvements you like best.
6.	In general, how would you rate the Mobility and Connected Scenarios?
	MOBILITY
	Strongly Preferred b. Preferred c. Needs Improvement d. Dislike e. Strongly Dislike
	CONNECTED
	a. Strongly Preferred b. Preferred C. Needs Improvement d. Dislike e. Strongly Dislike
7.	Please introduce yourself to our team:
	Name Judy & Rod Troester
	Address 114 E 36 mSt City Gré
	State <u>PA</u> zip 16504 Phone 4520-0545
	E-mail troesterjr @ Werizon.net
8.	Please provide any additional comments you may have below:
	Makes no sense to us to continue developing Bay Front (North)
if	people con't easily & safely access these. Alternate commuter
cor	ridors need to be developed 3 marketed (time lights on 12th-
ph	Mates no sense to us to continue access these. Alternate commuter people con't easily 3 safely access these. Alternate commuter idors need to be developed 3 marketed (time lights on 12th- t (R) turn lanes buck!) - If you want to encourage USE
1	Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned

copy of your comment form to <u>BayfrontParkwayStudy@mtmail.biz</u> or mail your comment form to:





June 24, 2015

**COMMENT FORM** 

Please complete and deposit in the comment form box provided or mail to the address on the last page of this form by July 8, 2015.

Parkw a. Ci b. Bu	of the follo	Study (circle	escribes e <u>all</u> tha d. e.	s the intere <i>t apply).</i> Commuter/	st area you	represent	related to the Bayfront
Parkw a. Ci b. Bu c. Er	ay Corridor ly Resident isiness Own	Study (circle	$e \underline{all} that (d.) = $	<b>t apply).</b> Commuter/			related to the Bayfront
b. Bu c. Er	siness Own		θ.		Traveler		
c.) Er				Callarana		-	. Bayfront Event Attendee
Sala and a state of the second se	nergency Se	rvice			t Official		. Tourist
Other:	·		f. 1	Economic [	Development	i.	Recreational User (Bike/Ped
Outer.	·····						
c. Tr Other:	ansit Upgrad	les	ŀ	Access		ł	n. Strategic Parking and Facili
Oaner.	-						
	provement nt Parkway		resented	t by the St	udy Team s	atisfy the	existing and future needs al
a. S	trongly Agre	e b. Ag	iree	c. Ne	utral d	d. Disagre	e e. Strongly Disagree
Please	explain:						



5. As presented tonight, the list of Improvement concepts associated with the Mobility and Connected Scenarios is comprehensive?

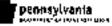
6.

7.

8.

MOBILITY				
a. Si <b>rong</b> iy Agree	b. Agree	(c.)leutral	d. Disagre	e e. Strongly Disagree
CONNECTED				
b. Strangly Agree	b. Agree	c. Neuirai	d, Disagre	e e. Skrongly Disagree
Please explain or list a	dditional improver	nent concepts for co	insideration:	
THE RELAT	TVE LAC	COF S	YNERGI	SAL DEVELOPNER
SELOW THE	BLUF	e CALLS	70 QU	<u>SAC DEVELOPNE</u> L <u>ESTON THE</u>
TOURISM A				
	OFC Y			//////
Please use the attache	d Improvement Co	ncepla handout to k	lentify the propo	sed improvementa you like best.
In connet have would	d construction that below		وريد المراجع	
in general, how woul	u you rate (ne mi	puità sud cotruéd	nen ocenanos t	
MOBILITY	~			
<ol> <li>Strangly Preferred</li> </ol>	b.Preferred	<ul> <li>Needs Impr</li> </ul>	overnænt d	l. Dislike e. Strongly Dislike
CONNECTED				
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Please return this form to the sign in table. If it is not completed before you leave, you may email a scanned copy of your comment form to <u>BayfrontPerkwayStudy@mtmail.biz</u> or mail your comment form to:



# Appendix T: Completed Improvement Concept Forms

### Bob Cronmiller

# BAYFRONT PARKWAY STUDY

### **IMPROVEMENT CONCEPT SELECTION**

Ref. No.	Improvement Concept Description	Preferred Concept (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	×
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	
13.	Arch gateway treatment over roadway	
14.	Shared bike lane along Lincoln and 8th St	
15.		1
	Reversible managed lanes from 8th Street to Sassafras St. Ext.	X
16.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St.	× ×
16. 17.	and the second	× ×
	Right-turn Only from Cranberry St.	××
17.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	×××
17. 18.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	××
17. 18. 19.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St.	××
17. 18. 19. 20.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St.	×
17. 18. 19. 20. 21.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot	×××
17. 18. 19. 20. 21. 22.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	X X X X X
<ol> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	×××

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections		
21.	Gateway treatments at Greengarden bivd, and E. 12th St. Intersections		
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)		
29.	Bike Share Program with hubs located throughout the corridor		
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points		
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride		
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment		
33.	Restrict left turns from Cranberry St. during peak hours	×	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.		
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection		
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	×	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	X	
38.	Extend left turn lanes at State St. and Holland St.		
39.	Realign travel lanes at State Street intersection		
40.	People mover system within the central Bayfront with a dedicated route		
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel		
42.	Remove railroad equipment at Holland St. and adjust stop bar		
43.	Single-lane roundabout at Port Access Road		
44.	Park and Ride between 8th St and 10th St on the east side of the road		
	<ul> <li>28.</li> <li>29.</li> <li>30.</li> <li>31.</li> <li>32.</li> <li>33.</li> <li>34.</li> <li>35.</li> <li>36.</li> <li>37.</li> <li>38.</li> <li>39.</li> <li>40.</li> <li>41.</li> <li>42.</li> <li>43.</li> </ul>	28.Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)29.Bike Share Program with hubs located throughout the corridor30.Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points31.Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride32.Improve W. 6th St. Bridge aesthetics/architectural treatment33.Restrict left turns from Cranberry St. during peak hours34.Add pedestrian Rapid Flash Beacon at Cranberry St.35.Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection36.Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection37.Enhance tunnel under State St. for bike/ped access under the Bayfront38.Extend left turn lanes at State Street intersection40.People mover system within the central Bayfront with a dedicated route41.Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and adjust stop bar42.Remove railroad equipment at Holland St. and adjust stop bar43.Single-lane roundabout at Port Access Road	28.Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)29.Bike Share Program with hubs located throughout the corridor30.Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points31.Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride32.Improve W. 6th St. Bridge aesthetics/architectural treatment33.Restrict left turns from Cranberry St. during peak hours34.Add pedestrian Rapid Flash Beacon at Cranberry St.35.Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection36.Woify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection37.Enhance tunnel under State St. for bike/ped access under the Bayfront38.Extend left turn lanes at State St. and Holland St.39.Realign travel lanes at State Street intersection40.People mover system within the central Bayfront with a dedicated route41.Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel42.Remove railroad equipment at Holland St. and adjust stop bar43.Single-lane roundabout at Port Access Road

Susan Miller

### **IMPROVEMENT CONCEPT SELECTION**

Ref. No.	Improvement Concept Description	Preferred Concep (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	×
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	×
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	
13.	Arch gateway treatment over roadway	×
14.	Shared bike lane along Lincoln and 8th St	
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	$\times$
16.	Right-turn Only from Cranberry St	X
17.	Rapid Flash Beacon for ped/bike crossing at Cranberry St	
18.	A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	
19.	Pedestrian bridge over the Bayfront Parkway near Peach St.	X
	Deductions building assess the Development Devlopment Hollowed Ct	
20.	Pedestrian bridge over the Bayfront Parkway near Holland St.	
20. 21.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot	X
		X
21.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot	X
21. 22.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	×
21. 22. 23.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	×

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	
29.	Bike Share Program with hubs located throughout the corridor	
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	X
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	X
38.	Extend left turn lanes at State St. and Holland St.	
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	X
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	
44.	Park and Ride between 8th St and 10th St on the east side of the road	

Winkton Chy

## IMPROVEMENT CONCEPT SELECTION

Ref. No.	Improvement Concept Description	Preferred Concept (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	X
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	X
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	
13.	Arch gateway treatment over roadway	$\times$
14.	Shared bike lane along Lincoln and 8th St	1
4.5		X
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	X
15. 16.		X
	Reversible managed lanes from 8th Street to Sassafras St. Ext.	X
16.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St.	XX
16. 17.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	XXX XXX
16. 17. 18.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	XXXX XXX
16. 17. 18. 19.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St.	XXX
16. 17. 18. 19. 20.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St.	XXX XXX
16. 17. 18. 19. 20. 21.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot	X X X X
16. 17. 18. 19. 20. 21. 22.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	XXX XX
16. 17. 18. 19. 20. 21. 22. 23.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	XXX XX

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	
29.	Bike Share Program with hubs located throughout the corridor	
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	X
38.	Extend left turn lanes at State St. and Holland St.	
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	
44.	Park and Ride between 8th St and 10th St on the east side of the road	

### IMPROVEMENT CONCEPT SELECTION

Ref. No.	Improvement Concept Description	Preferred Concept (Mark with "X")
OVERALL	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	2.20
9.	Real time transit information at bus stops	X
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
	SCENARIO IMPROVEMENT CONCEPTS	1000
MOBILITY		And the second states in the second
13.	Arch gateway treatment over roadway	~
COLUMN TO SERVICE		×
13.	Arch gateway treatment over roadway	×
13. 14.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St	×
13. 14. 15.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext.	×
13. 14. 15. 16.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St.	×
13. 14. 15. 16. 17.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	×
13. 14. 15. 16. 17. 18.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	X X
13. 14. 15. 16. 17. 18. 19.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St.	XXX
13. 14. 15. 16. 17. 18. 19. 20.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St.	X X X X
13. 14. 15. 16. 17. 18. 19. 20. 21.	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> <li>Dual-lane roundabout at State St. with separate service road to UPMC Hamot</li> </ul>	X XX X
<ol> <li>13.</li> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> </ol>	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> <li>Pedestrian bridge over the Bayfront Parkway near Holland St.</li> <li>Dual-lane roundabout at State St. with separate service road to UPMC Hamot</li> <li>Dual-lane roundabout at 12th St.</li> </ul>	X X X X
<ol> <li>13.</li> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> <li>Pedestrian bridge over the Bayfront Parkway near Holland St.</li> <li>Dual-lane roundabout at State St. with separate service road to UPMC Hamot</li> <li>Dual-lane roundabout at 12th St.</li> <li>Redesign Holland St. intersection to add turning lanes and remove railroad equipment</li> </ul>	X X X X



#### CONNECTED SCENARIO IMPROVEMENT CONCEPTS 27. Gateway treatments at Greengarden Blvd. and E. 12th St. intersections Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment 28. (Type 1) 29. Bike Share Program with hubs located throughout the corridor Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate 30. planted median with breaks at intersecting and access points Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the 31. Lincoln Avenue Park-and-Ride 32. Improve W. 6th St. Bridge aesthetics/architectural treatment 33. Restrict left turns from Cranberry St. during peak hours 34. Add pedestrian Rapid Flash Beacon at Cranberry St. Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection 35. Modify W. 8th St. intersection to include one through lane, one shared through/right-36. turn lane (eastbound) with merge after intersection Enhance tunnel under State St. for bike/ped access under the Bayfront 37. Extend left turn lanes at State St. and Holland St. 38. Realign travel lanes at State Street intersection 39. People mover system within the central Bayfront with a dedicated route 40. Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed 41. bike/ped tunnel Remove railroad equipment at Holland St. and adjust stop bar 42. 43. Single-lane roundabout at Port Access Road 44. Park and Ride between 8th St and 10th St on the east side of the road



### IMPROVEMENT CONCEPT SELECTION

Ref. No.	Improvement Concept Description	Preferred Concept (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	×
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	×
11.	Bike shelters/storage at locations throughout the corridor	×
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	展
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	
13.	Arch gateway treatment over roadway	×
14.	Shared bike lane along Lincoln and 8th St	
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	
16.	Right-turn Only from Cranberry St.	
17.	Rapid Flash Beacon for ped/bike crossing at Cranberry St	
18.	A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	X
19.	Pedestrian bridge over the Bayfront Parkway near Peach St.	×
20.	Pedestrian bridge over the Bayfront Parkway near Holland St.	$\times$
	the company of the second s	
21.	Dual-lane roundabout at State St. with separate service road to UPMC Hamot	
	Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	
21.		×
21. 22.	Dual-lane roundabout at 12th St.	×
21. 22. 23.	Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	×

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	×
29.	Bike Share Program with hubs located throughout the corridor	>
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	
38.	Extend left turn lanes at State St. and Holland St.	
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	X
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	
44.	Park and Ride between 8th St and 10th St on the east side of the road	

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Sonya Arrington

### IMPROVEMENT CONCEPT SELECTION

Please identify up to 10 preferred improvement concepts.

Ref. No.	Improvement Concept Description	Preferred Concepts (Mark with "X")
OVERALL	IMPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
G	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	
	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
(II)	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	NI STREET
13.	Arch gateway treatment over roadway	
(14)	Shared bike lane along Lincoln and 8th St	
(15)	Reversible managed lanes from 8th Street to Sassafras St. Ext.	
16.	Right-turn Only from Cranberry St.	
17	Rapid Flash Beacon for ped/bike crossing at Cranberry St	

- 18. A two-way frontage road from Liberty Park to State St. with relocated multi-use trail
- 19.) Pedestrian bridge over the Bayfront Parkway near Peach St.
- 20. Pedestrian bridge over the Bayfront Parkway near Holland St.
- 21. Dual-lane roundabout at State St. with separate service road to UPMC Hamot
- 22. Dual-lane roundabout at 12th St.

25.

26,

- 23. Redesign Holland St. intersection to add turning lanes and remove railroad equipment
  - Widen Bayfront to four lanes from Holland St. to Port Access Rd.
    - Two bus pull-off areas (one east side and one west side between 8th St. and 10 St.) and relocate multi-use trail around the bus pull-off
      - Enhance pedestrian crossings along the Bayfront with painted crosswalks (Type 2)

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)
29.	Bike Share Program with hubs located throughout the corridor
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment
33.	Restrict left turns from Cranberry St. during peak hours
34.)	Add pedestrian Rapid Flash Beacon at Cranberry St.
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront
38.	Extend left turn lanes at State St. and Holland St.
39.	Realign travel lanes at State Street intersection
40.	People mover system within the central Bayfront with a dedicated route
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel
42.	Remove railroad equipment at Holland St. and adjust stop bar
43.	Single-lane roundabout at Port Access Road
44.	Park and Ride between 8th St and 10th St on the east side of the road

### **IMPROVEMENT CONCEPT SELECTION**

Ref. No.	Improvement Concept Description	Preferred Concep (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
NOBILITY	SCENARIO IMPROVEMENT CONCEPTS	and the second
13.	Arch gateway treatment over roadway	
14.	Shared bike lane along Lincoln and 8th St	-2
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	
	Neversible managed failes norm our street to sussailas st. Ext.	
16.	Right-turn Only from Cranberry St.	
16. 17.		X
	Right-turn Only from Cranberry St.	X
17.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	X
17. 18.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	X
17. 18. 19.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St.	X
17. 18. 19. 20.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St.	X
17. 18. 19. 20. 21.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot	X
<ol> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> </ol>	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	X
<ol> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	X

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	
29.	Bike Share Program with hubs located throughout the corridor	
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	X
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	$\times$
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	
38.	Extend left turn lanes at State St. and Holland St.	F
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	X
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	X
44.	Park and Ride between 8th St and 10th St on the east side of the road	

Pierre McCormick

## IMPROVEMENT CONCEPT SELECTION

Ref. No.	Improvement Concept Description	Preferred Concep (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	×
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	$\times$
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	X
11.	Bike shelters/storage at locations throughout the corridor	X
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	A fina white
13.	Arch gateway treatment over roadway	
14.	Shared bike lane along Lincoln and 8th St	X
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	
15. 16.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St.	
16.	Right-turn Only from Cranberry St.	
16. 17.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	×
16. 17. 18.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	× X
16. 17. 18. 19.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St.	× X
16. 17. 18. 19. 20.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St.	× X
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16. 17. 18. 19. 20. 21. 22.	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	X X
<ol> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	X X

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	×
29.	Bike Share Program with hubs located throughout the corridor	X
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	×
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	<u>e</u>
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	×
38.	Extend left turn lanes at State St. and Holland St.	
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	×
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	X
44.	Park and Ride between 8th St and 10th St on the east side of the road	

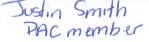
Judyo Kod Troester

### IMPROVEMENT CONCEPT SELECTION

ef. No.	Improvement Concept Description	Preferred Concepts (Mark with "X")
OVERALL	IMPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	X
4.	Upgrade trail lighting throughout corridor	×
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons + Signage then when to walk	) X
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	×
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	×
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
OBILITY	SCENARIO IMPROVEMENT CONCEPTS	new and
13.	SCENARIO IMPROVEMENT CONCEPTS Arch gateway treatment over roadway	
COLUMN COMPOSITION	A Second S	
13.	Arch gateway treatment over roadway	NO
13. 14.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext.	No
13. 14. 15.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext.	No X
13. 14. 15. 16.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Possible of Staplight	No X
13. 14. 15. 16. 17.	Arch gateway treatment over roadway Shared bike lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	No X X
13. 14. 15. 16. 17. 18.	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> </ul>	No X X X
13. 14. 15. 16. 17. 18. 19.	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> </ul>	No X XX NO! J
<ol> <li>13.</li> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> </ol>	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> </ul>	No X XX NO! J
<ol> <li>13.</li> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> </ol>	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> </ul>	NO X XX NO! 7 X - Protect e
<ol> <li>13.</li> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> </ol>	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> </ul>	NO: X XX NO: X - Protect e X - Diturn
<ol> <li>13.</li> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	<ul> <li>Arch gateway treatment over roadway</li> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> </ul>	NO: X XX NO: X Protect e X X

#### CONNECTED SCENARIO IMPROVEMENT CONCEPTS Gateway treatments at Greengarden Blvd. and E. 12th St. intersections 27. Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment 28. (Type 1) Bike Share Program with hubs located throughout the corridor 29. Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate 30. planted median with breaks at intersecting and access points Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the X 31. Lincoln Avenue Park-and-Ride Improve W. 6th St. Bridge aesthetics/architectural treatment 32. Restrict left turns from Cranberry St. during peak hours 33. 34. Add pedestrian Rapid Flash Beacon at Cranberry St. 35. Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection Modify W. 8th St. intersection to include one through lane, one shared through/right-36. turn lane (eastbound) with merge after intersection Enhance tunnel under State St. for bike/ped access under the Bayfront 37. Extend left turn lanes at State St. and Holland St. + protected () lights 38. directions 39. Realign travel lanes at State Street intersection 40. People mover system within the central Bayfront with a dedicated route Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed 41. bike/ped tunnel 42. Remove railroad equipment at Holland St. and adjust stop bar 43. Single-lane roundabout at Port Access Road

of park & rides - there shall be shelters for commuters (wind, rain 3now) - Grie lacks bus shelters throughout entire EmTA System. Shelters throughout entire EmTA System. Redestrian Crossing Signs & public education Redestrian for both drivers & pedestrians is De compaign for both drivers & pedestrians is De compaign for both drivers & pedestrians is De unded. Pedestrians either is nore or don it understand nuded. Pedestrians either is nore or don it understand wait until D turn light cycle completes. Driver's to wait until D turn light cycle completes. Driver's don it yield to peds in cross walk! (all over trie) We LOVE the New light @ Liberty Park - The was



## IMPROVEMENT CONCEPT SELECTION

Ref. No.	Improvement Concept Description	Preferred Concept (Mark with "X")
OVERALL I	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	$\times$
4.	Upgrade trail lighting throughout corridor	$\times$
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	×
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	
11.	Bike shelters/storage at locations throughout the corridor	X
12.	Variable Message signs entering th <mark>e Parkway along I-79 N. and the Bayfront Connector displaying travel time</mark>	
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	
13.		
15.	Arch gateway treatment over roadway	
13.	Shared bike lane along Lincoln and 8th St	
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14. 15. 16. 17. 18. 19. 20. 21. 22.	<ul> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> <li>Pedestrian bridge over the Bayfront Parkway near Holland St.</li> <li>Dual-lane roundabout at State St. with separate service road to UPMC Hamot</li> <li>Dual-lane roundabout at 12th St.</li> </ul>	$\times$
<ol> <li>14.</li> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	<ul> <li>Shared bike lane along Lincoln and 8th St</li> <li>Reversible managed lanes from 8th Street to Sassafras St. Ext.</li> <li>Right-turn Only from Cranberry St.</li> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St</li> <li>A two-way frontage road from Liberty Park to State St. with relocated multi-use trail</li> <li>Pedestrian bridge over the Bayfront Parkway near Peach St.</li> <li>Pedestrian bridge over the Bayfront Parkway near Holland St.</li> <li>Dual-lane roundabout at State St. with separate service road to UPMC Hamot</li> <li>Dual-lane roundabout at 12th St.</li> <li>Redesign Holland St. intersection to add turning lanes and remove railroad equipment</li> </ul>	$\times$

27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	
29.	Bike Share Program with hubs located throughout the corridor	X
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	X
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	X
38.	Extend left turn lanes at State St. and Holland St.	
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	$\rangle$
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	
44.	Park and Ride between 8th St and 10th St on the east side of the road	

X

### **IMPROVEMENT CONCEPT SELECTION**

Please identify up to 10 preferred improvement concepts.

Jacqueline Spry

Ref. No.	Improvement Concept Description	Preferred Concep (Mark with "X")
OVERALL	MPROVEMENT CONCEPTS	
1.	Upgrade traffic signal equipment and timings to include reflective signal backplates	
2.	Add speed display signs at E. 12th Street	
3.	Add buffer between Roadway and Bikeway	
4.	Upgrade trail lighting throughout corridor	×
5.	Replace existing luminar and mast arms with ornamental features to match proposed lighting and gateway treatment	
6.	Upgrade pedestrian push buttons	
7.	Way finding signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	×
8.	Park signs with consistent treatment	
9.	Real time transit information at bus stops	
10.	Transit shelters at locations throughout the corridor	×
11.	Bike shelters/storage at locations throughout the corridor	
12.	Variable Message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	
MOBILITY	SCENARIO IMPROVEMENT CONCEPTS	
13.	Arch gateway treatment over roadway	
14.		
1 1.	Shared bike lane along Lincoln and 8th St	
15.	Shared blke lane along Lincoln and 8th St Reversible managed lanes from 8th Street to Sassafras St. Ext.	×
		×
15.	Reversible managed lanes from 8th Street to Sassafras St. Ext.	×
15. 16.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St.	×
15. 16. 17.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St	× × ×
15. 16. 17. 18.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail	× ×
15. 16. 17. 18. 19.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St.	× ×
15. 16. 17. 18. 19. 20.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St.	× ×
15. 16. 17. 18. 19. 20. 21.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot	× × ×
15. 16. 17. 18. 19. 20. 21. 22.	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St.	× × ×
<ol> <li>15.</li> <li>16.</li> <li>17.</li> <li>18.</li> <li>19.</li> <li>20.</li> <li>21.</li> <li>22.</li> <li>23.</li> </ol>	Reversible managed lanes from 8th Street to Sassafras St. Ext. Right-turn Only from Cranberry St. Rapid Flash Beacon for ped/bike crossing at Cranberry St A two-way frontage road from Liberty Park to State St. with relocated multi-use trail Pedestrian bridge over the Bayfront Parkway near Peach St. Pedestrian bridge over the Bayfront Parkway near Holland St. Dual-lane roundabout at State St. with separate service road to UPMC Hamot Dual-lane roundabout at 12th St. Redesign Holland St. intersection to add turning lanes and remove railroad equipment	× ×

CONNECTED SCENARIO IMPROVEMENT CONCEPTS		
27.	Gateway treatments at Greengarden Blvd. and E. 12th St. intersections	$\times$
28.	Enhance pedestrian crossings along the Bayfront with stylized brick paver treatment (Type 1)	
29.	Bike Share Program with hubs located throughout the corridor	
30.	Reduce travel lane width to 11 ft. from Greengarden Rd. to E. 10th St and incorporate planted median with breaks at intersecting and access points	
31.	Extend the multi-use trail on the north side of the Bayfront from Frontier Park to the Lincoln Avenue Park-and-Ride	
32.	Improve W. 6th St. Bridge aesthetics/architectural treatment	
33.	Restrict left turns from Cranberry St. during peak hours	
34.	Add pedestrian Rapid Flash Beacon at Cranberry St.	
35.	Remove left turn only lanes on the Bayfront at the Greengarden Rd. intersection	
36.	Modify W. 8th St. intersection to include one through lane, one shared through/right- turn lane (eastbound) with merge after intersection	
37.	Enhance tunnel under State St. for bike/ped access under the Bayfront	
38.	Extend left turn lanes at State St. and Holland St.	
39.	Realign travel lanes at State Street intersection	
40.	People mover system within the central Bayfront with a dedicated route	
41.	Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St. and continue along the south side of the Bayfront to the proposed bike/ped tunnel	×
42.	Remove railroad equipment at Holland St. and adjust stop bar	
43.	Single-lane roundabout at Port Access Road	
44.	Park and Ride between 8th St and 10th St on the east side of the road	

# Appendix U: Additional Email Comments

#### Sklack, Dana

From:	pointnbirds <pointnbirds@aol.com></pointnbirds@aol.com>
Sent:	Thursday, July 16, 2015 9:07 AM
То:	BayfrontParkwayStudy
Subject:	Underground tunnel

I have a couple thought on the tunnel.

1. Such a beautiful view why would you put people underground where they cant see erie. Maybe a above ground walkway instead?? Windows to the bay.

2. A lot of homeless people and drug addicts need shelter. Will there be security? Will it be closed at night? Who's going to monitor traffic of people thru there? These populations of people look for shelters like this . As a woman I wouldn't walk thru there by myself!

I like the above walkway idea better!

Best wishes!

Teri Propst 814-881-7564 Feel free to contact me

Sent from my Verizon Wireless 4G LTE smartphone

#### Sklack, Dana

From:	Brian Pitzer <bkpitzer@gmail.com></bkpitzer@gmail.com>
Sent:	Saturday, July 18, 2015 12:30 PM
То:	BayfrontParkwayStudy
Subject:	Bayfront Parkway Study comment

Based on what I have been able to learn about the Bayfront Parkway Study from the study's website I have the following comment:

The plan fails to consider long-range use of the existing rail line for possible light rail or passenger rail needs over the next 25 years. If the existing rail lines along the Bayfront Parkway west of State St. are removed it will be extremely difficult and expensive to replace them in the future when the need for additional transportation options become apparent. Rail remains the most efficient and environmentally friendly form of surface transportation. It can play a very critical role in meeting the growing transportation demands of the Bayfront as that area is extremely space sensitive requiring the most efficient land use.

Although the Study does not specifically call for the removal of the tracks, the lack of their inclusion in the report along with comments such as: adding turning lanes, repurposing the railroad tunnel, express bus lanes, adding a reversible lane, etc., all suggest use of the small amount of land the tracks now occupy. How ironic it will be to have a fully developed Bayfront including the GAF site, Harbor Place and new hotels currently under construction, and have an already crowded two-lane road as the only means of accessing Erie's premier location.

Please create no plan that will call for the removal of these tracks.

Thank you.

Brian Pitzer Executive Director All Aboard Erie

814-440-0617

### Sklack, Dana

From:	Mark Davis <davism@atlanticbb.net></davism@atlanticbb.net>
Sent:	Sunday, July 19, 2015 10:00 AM
То:	BayfrontParkwayStudy
Subject:	Include Bayfront access to high speed rail

To Whom It May Concern:

Please make it compulsory to Include Bayfront access to high speed rail line planning. It is a vital part of tourism and local access. Karen Davis 10 Crescent Park

Warren, PA 16365

## Appendix V: News article – GoErie.com

Published: June 25. 2015 12:01AM

## **PennDOT outlines possible Bayfront Parkway improvements**

By <u>Ron Leonardi</u> <u>814-870-1680</u>

Erie Times-News

Between 18,000 and 20,000 vehicles travel the Bayfront Parkway daily.

Making a 3-mile stretch of the parkway in Erie between Lincoln Avenue and East 12th Street safer for motorists, pedestrians and bikers is the focus of a corridor study by McCormick Taylor consulting engineers.

The study also aims to find ways to ease parkway traffic congestion and to accommodate continuing bayfront economic development and increasing traffic.

State Department of Transportation officials outlined possible improvements and study findings Wednesday evening at a public hearing at the Bayfront Convention Center.

"Clearly, there's a need for some connectivity back to Erie's grid system," said Bill Petit, PennDOT district executive in northwestern Pennsylvania.

"We would like to at least take a good look at pedestrian and bicycle access from north to south across the Bayfront Parkway," Petit said.

McCormick Taylor consulting engineers, of Pittsburgh, presented more than a dozen improvement options in their \$300,000 study, which began last summer and is to be completed late this summer.

The improvement options include:

- A shared bike lane along Lincoln Avenue and West Eighth Street.

http://www.goerie.com/apps/pbcs.dll/article?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=20150625&category=NEWS02&lopenr=306249662&Ref=AR&template=printarticle?avis=GE&date=2015062&category=NEWS02&lopenr=306249662&Ref=AR&template=PVIs=NEWS02&lopenr=306249662&Ref=AR&template=PVIs=NEWS02&lopenr=306249662&Ref=AR&template=PVIs=NEWS02&lopenr=306249662&Ref=AR&template=PVIs=NEWS02&lopenr=306249662&Ref=AR&template=PVIs=NEWS02&fite=PVIs=NEWS02

- Reversible managed lanes from West Eighth Street to the Sassafras Street exit.
- A two-way frontage road from Liberty Park to State Street, with a relocated multiuse trail.

- Pedestrian bridges near Peach Street and just east of Holland Street.

- A dual-lane roundabout at the intersection of State Street and the parkway, and a single-lane roundabout at the Port Access Road.

- Widening the parkway to four lanes from two lanes from Holland Street to the Port Access Road.
- Bus pull-off areas between East Eighth and East 10th streets.

- Enhanced pedestrian crossings along the parkway, with painted crosswalks and upgraded pedestrian push buttons.

- Enhancing a tunnel at the intersection of the parkway and State Street for bike and pedestrian access under the parkway.

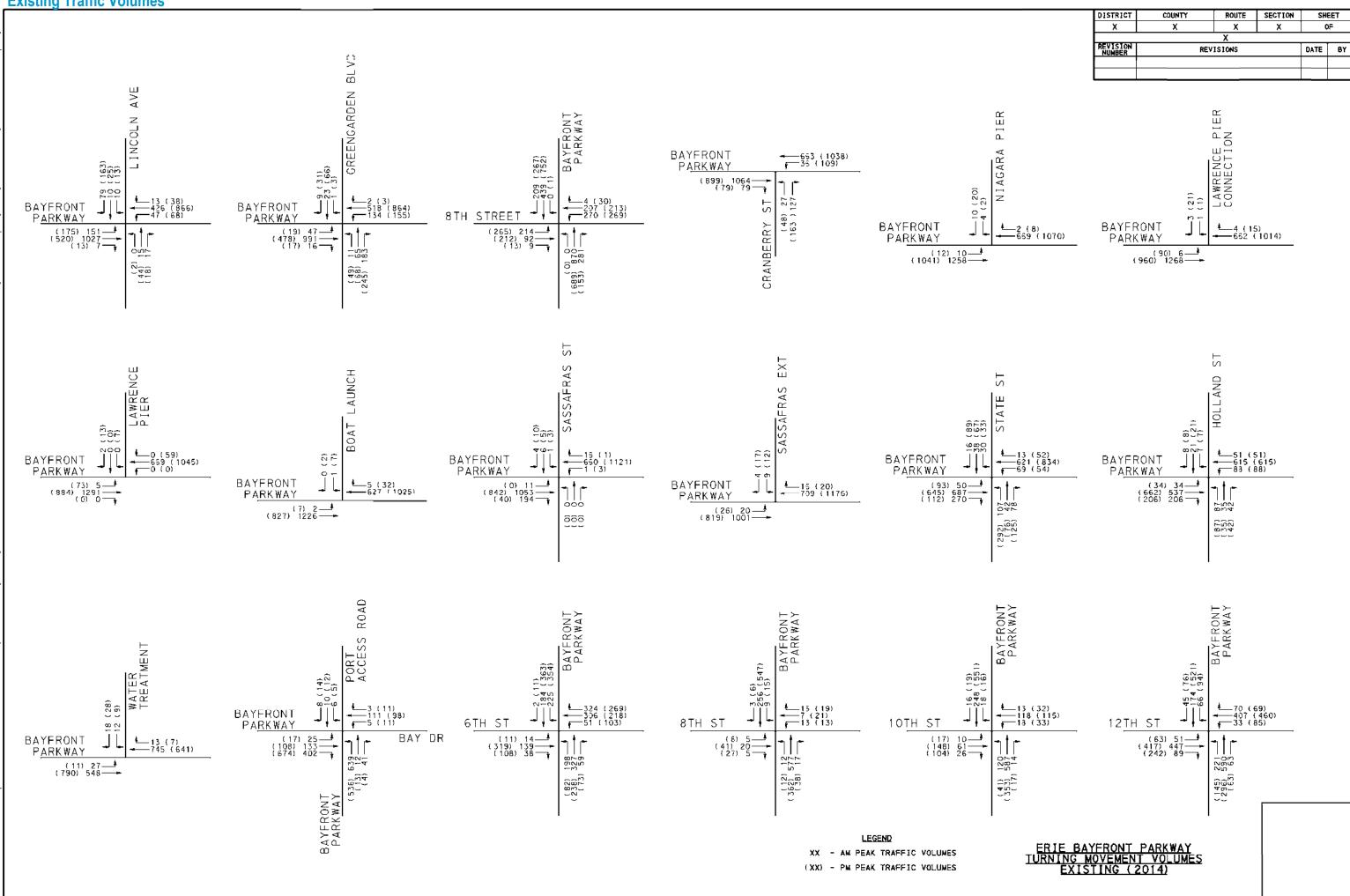
"We're going to take any and all input and rethink some of the strategies and concepts we've come up with, and then put them out there again and make sure we're capturing what they (the public) believe we should be investing in," Petit said.

RON LEONARDI can be reached at 870-1680 or by e-mail.



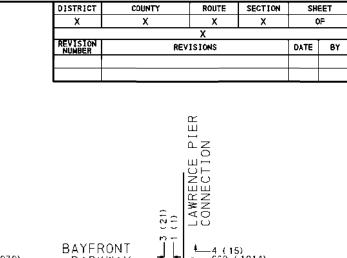
## **APPENDIX E:**

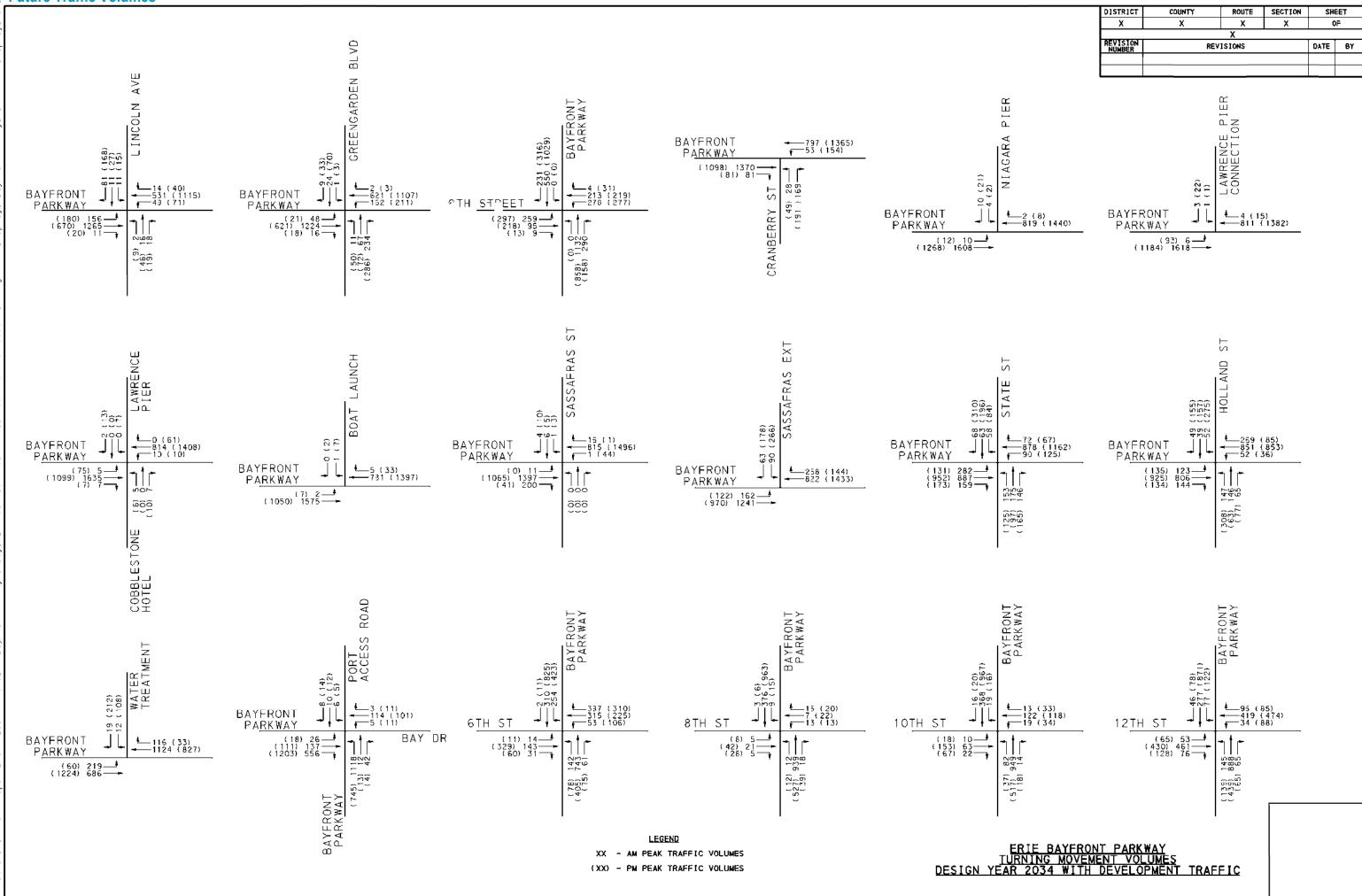
## **EXISTING AND FUTURE TRAFFIC VOLUMES**



**Existing Traffic Volumes** 

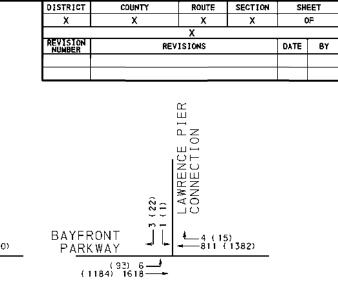
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3: 10: 56 PM mj † 37272017 R: \5613\_D





## **APPENDIX F:**

## **EXISTING AND FUTURE LEVELS OF SERVICE**



## Existing Level of Service

City of Erie | Erie County, Pennsylvania September 30th, 2014 | Source: ESRI 0.5

 $\mathcal{I}_N$ 

Miles

1 inch = 1,210 feet



Legend

▲\A

A\B

B\B

**Traffic Signals** Railroad Trails

Pedestrian Traffic Signals

Study Corridor

Parks & Recreation

State Road

Local Road



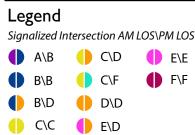
## **Future Level of Service**

City of Erie | Erie County, Pennsylvania September 30th, 2014 | Source: ESRI 0.5

Miles

 $\mathcal{I}_N$ 

1 inch = 1,210 feet



### 2034 No Build with Future Development Traffic



● F\F



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**Traffic Signals** Railroad Trails Pedestrian

Traffic Signals

Study Corridor

Parks & Recreation

- State Road
- Local Road



## **APPENDIX G:**

## **BAYFRONT ORIGIN AND DESTINATION SUMMARY**



Overview

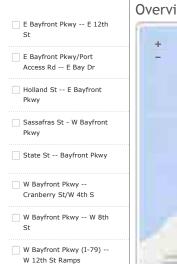
Period Filter Options

Home Projects **Travel Time Reports Origin-Destination Reports** 

### Origin-Destination Reports > Erie, PA BlueMAC OD and Travel Time Survey (2)

Go to Project Home Go to Travel Time Report

Download CSV



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	Sec. 1.	
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	1 20	100
Powered by Leaflet   © 2017 HE	RE, © AND, © 20	17 Microsoft
Loc Destination 1 2 3 4 5	6	7
E Bayfront Pkwy E 503 268 266 65 191	112	438
<sup>1</sup> 12th St 20.0% 10.6% 10.6% 2.6% 7.6%	4.4% 1	7.4%
E Bayfront Pkwy/Port 266 345 237 71 143		676
Access Rd E Bay Dr 10.9% 14.1% 9.7% 2.9% 5.9%	7.0% 2	7.7%
Holland St E 249 208 286 51 122		361
Bayfront Pkwy 15.3% 12.8% 17.6% 3.1% 7.5%	3.0% 2	2.2%
Sassafras St - W 65 54 40 67 56	20	85
Bayfront Pkwy 14.4% 11.9% 8.8% 14.8% 12.4%	4.4% 1	8.8%
State St Bayfront 298 192 122 143 400		536
Pkwy 13.1% 8.4% 5.4% 6.3% 17.6%	3.7% 2	3.6%
W Bayfront Pkwy 136 145 72 45 109		542
Cranberry St/W 4th S 8.2% 8.8% 4.4% 2.7% 6.6%	16.1% 3	2.7%
		615
W Bayfront Pkwy W 361 470 269 201 357	11.6% 1	8.8%
W Bayfront Pkwy W         361         470         269         201         357           7         8th St         11.1%         14.4%         8.2%         6.2%         10.9%		
7	459	979

NOTE: All times are in (UTC-05:00) Eastern Time (US & Canada).

(qp)

Go to Origin Destination Report



Home Projects Travel Time Reports Origin-Destination Reports

Go to Project Home

### Travel Time Reports > Erie, PA BlueMAC OD and Travel Time Survey (2)

Threshold Filter Options Download CSV Overview The minimum filter settings have been applied to this project. Matches that are less than 1mph or greater than 200mph are not included. ROUTE From E Bavfront Pkwy -- E 12th St ROUTE - E Bayfront Pkwy -- E 12th St to W Bayfront Pkwy (I-79) -- W To W Bayfront Pkwy 12th St Ramps (I-79) -- W 12th St Ramps Trip Distance(mi): 4.73 ROUTE From W Bayfront 517 (8:37) Expected Travel Time(s): Pkwy (I-79) -- W 12th St Ramps Number of Trips: 27247 To E Bayfront Pkwy -- E Mean/Median Speed 12th St 25.6 / 28.5 (mph): From E Bayfront Pkwy --Mean/Median Travel Time 664.1 (11:04) / 598 (9:58) E 12th St (s): To E Bayfront Standard Deviation: 378.9 Pkwy/Port Access Rd --15th Percentile Travel E Bay Dr 516.5 (8:36) Time(s): Powered by Leaflet | © 2010 NAVTEQ, © AND, © 2017 Microsoft From E Bayfront Pkwy --85th Percentile Travel 705 (11:45) Corporation E 12th St Time(s): To State St -- Bayfront 8/25/2014 5:00 PM 666s / 25.57mph 95th Percentile Travel 989.5 (16:29) Pkwv Time(s): From E Bayfront Pkwy --NOTE: You can click and drag to select a portion of the chart to view E 12th St in detail. Click Reset Chart to display the original chart. To W Bayfront Pkwy (I-79) -- W 12th St Observed Travel Times (s) from E Bayfront Pkwy -- E 12th St to W Bayfront Pkwy (I-79) -- W Ramps 12th St Ramps From E Bayfront Total Trips Mean Median Std. Deviation 15th Percentile 85th Percentile 95th Percentile Pkwy/Port Access Rd --12218 659.8 (10:59) 589 (9:49) 339.3 514 (8:34) 705 (11:45) 1024.5 (17:04) E Bay Dr To E Bayfront Pkwy -- E AM Peak (7-9am) PM Peak (4-6pm) 12th St Avg Travel Time(s) up to Holland St -- E Bayfront Pkwy Avg Travel Time(s) up to E Bayfront Pkwy/Port Access Rd -- E Bay Dr Avg Travel Time(s) up to State St -- Bayfront Pkwy Avg Travel Time(s) up to Sassafras St - W Bayfront Pkwy From E Bavfront Avg Travel Time(s) up to W Bayfront Pkwy -- Cranberry St/W 4th S Avg Travel Time(s) up to W Bayfront Pkwy -- W 8th St Pkwy/Port Access Rd --E Bav Dr 📕 Avg Travel Time(s) up to W Bayfront Pkwy (I-79) -- W 12th St Ramps To Holland Stoos E Bayfront Pkwy From Holland St -- E Bavfront Pkwv To E Bayfrontions Pkwv/Port Access Rd --E Bay Dr 2000s From Holland St -- E Bavfront Pk To State St -- Bayfront Pkwy 1000s From Sassafras St - W Bayfront Pkwy<sup>500s</sup> To State St -- Bavfront Pkwy 0s 8/19/2014 8/20/2014 8/21/2014 8/23/2014 8/22/2014 8/24 From Sassafras St - W 6:00 PM 6:00 PM 6:00 PM 6:00 PM 6:00 PM 6:0 Bayfront Pkwy To W Bayfront Pkwy --Cranberry St/W 4th S View: Daily Weekly **Bi-Weekly** Group By: 5 Mins 15 Mins Hourly Daily From State St --Bayfront Pkwy To E Bayfront Pkwy -- E 12th St Observed Travel Speeds (mph) from E Bayfront Pkwy -- E 12th St to W Bayfront Pkwy (I-79) --From State St --W 12th St Ramps Bavfront Pkwv

To Holland St -- E **Bayfront Pkwy** From State St --**Bayfront Pkwy** To Sassafras St - W **Bayfront Pkwy** From W Bayfront Pkwy -- Cranberry St/W 4th S To Sassafras St - W Bayfront Pkwy From W Bayfront Pkwy -- Cranberry St/W 4th S To W Bayfront Pkwy --W 8th St From W Bay Promt Pkwy -- W 8th St To W Bayfront Pkwy --Cranberry St/W 4th S From W Bayfront Pkwy -- W 8th St

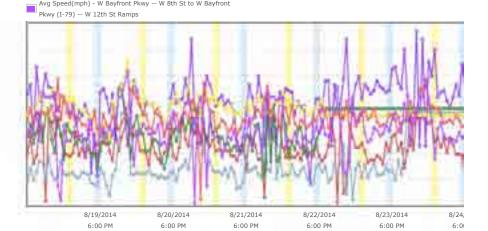
To W Bayfront Rkwy (I-79) -- W 12th St Ramps 10mph

From W Bayfront Pkwy (I-79) -- Woll-2,th St Ramps To E Bayfront Pkwy -- E 12th St

From W Bayfront Pkwy (I-79) -- W 12th St Ramps To W Bayfront Pkwy --W 8th St



Avg Speed(mph) - W Bayfront Pkwy -- Cranberry St/W 4th S to W Bayfront Pkwy -- W 8th St



NOTE: All times are in (UTC-05:00) Eastern Time (US & Canada).

Italicized values are estimates due to missing data.

12218

Bayfront Pkwy

Avg Speed(mph) - Sassafras St - W Bayfront Pkwy to W

Avg Speed(mph) - W Bayfront Pkwy -- W 8th St to W Bayfront

Bayfront Pkwy -- Cranberry St/W 4th S

Start Time	Average Speed(mph)	Average Travel Time(s)	Number of Trips	
8/18/2014 6:00 PM	26.7	639	110	
8/18/2014 7:00 PM	31.7	536.5	90	
8/18/2014 8:00 PM	24.2	705	86	
8/18/2014 9:00 PM	29.8	571.5	56	
8/18/2014 10:00 PM	33.1	515	52	
8/18/2014 11:00 PM	35.2	484	34	
8/19/2014 12:00 AM	7.2	2354	4	
8/19/2014 1:00 AM	35.9	475	3	
8/19/2014 2:00 AM	35.1	484.5	10	
8/19/2014 3:00 AM	30.8	553	7	
3/19/2014 4:00 AM	22.4	761.5	15	
8/19/2014 5:00 AM	9.7	1759	26	
8/19/2014 6:00 AM	28.4	599	98	
8/19/2014 7:00 AM	27.8	613	128	
8/19/2014 8:00 AM	26.8	635	100	
8/19/2014 9:00 AM	28.5	597	136	
8/19/2014 10:00 AM	29.5	576.5	171	
8/19/2014 11:00 AM	26.5	643.5	134	
8/19/2014 12:00 PM	27.6	617	168	
8/19/2014 1:00 PM	25	682	124	
8/19/2014 2:00 PM	26.8	635.5	215	
8/19/2014 3:00 PM	20.7	822.5	174	
8/19/2014 4:00 PM	24.4	698	182	
8/19/2014 5:00 PM	17.2	989	163	

Page 2 of 6

8/19/2014 6:00 PM	26.9	632	120
8/19/2014 7:00 PM	29.1	586	136
8/19/2014 8:00 PM	26.9	633.5	125
8/19/2014 9:00 PM	21.5	793.5	110
8/19/2014 10:00 PM	27	630	55
8/19/2014 11:00 PM	29.8	572	28
8/20/2014 12:00 AM	33.1	514	10
8/20/2014 1:00 AM	37.5	454	7
8/20/2014 3:00 AM	36.8	462.5	7
8/20/2014 4:00 AM	30.7	554.5	8
8/20/2014 5:00 AM	28.5	598	29
8/20/2014 6:00 AM	32.5	524.5	65
8/20/2014 7:00 AM	28.9	589	159
8/20/2014 8:00 AM	28.8	592	156
8/20/2014 9:00 AM	28	609	94
8/20/2014 10:00 AM	25.2	674.5	97
8/20/2014 11:00 AM	29.1	585	143
8/20/2014 12:00 PM	27.4	622	166
8/20/2014 1:00 PM	26.9	634	185
8/20/2014 2:00 PM	23.6	723	144
8/20/2014 3:00 PM	23	740.5	216
8/20/2014 4:00 PM	24.4	698	145
8/20/2014 5:00 PM	30.7	555.5	150
8/20/2014 6:00 PM	29.7	573	63
8/20/2014 7:00 PM	26.8	636.5	78
8/20/2014 8:00 PM	30	567	84
8/20/2014 9:00 PM	34.2	498	34
8/20/2014 10:00 PM	33.7	505.5	56
8/20/2014 11:00 PM	32.6	522	31
8/21/2014 12:00 AM	37.8	450.5	10
8/21/2014 1:00 AM	6	2849	4
8/21/2014 2:00 AM	33.6	506.5	10
8/21/2014 3:00 AM	14	1216.5	5
8/21/2014 4:00 AM	35.3	482.5	15
8/21/2014 5:00 AM	21.4	797.5	33
8/21/2014 6:00 AM	32.6	522	92
8/21/2014 7:00 AM	30.9	551	107
8/21/2014 8:00 AM	27.9	610	145
8/21/2014 9:00 AM	28.2	604	121
8/21/2014 10:00 AM	26.4	646	124
8/21/2014 11:00 AM	27.2	627	136
8/21/2014 12:00 PM	26.9	633.5	186
8/21/2014 1:00 PM	26.7	639	137
8/21/2014 2:00 PM	26.6	640.5	143
8/21/2014 3:00 PM	21.5	792	179
8/21/2014 4:00 PM	22.2	767	177
8/21/2014 5:00 PM	25.3	673	179

#### Page 4 of 6

8/21/2014 6:00 PM	24.9	683	124
8/21/2014 7:00 PM	31	549	108
8/21/2014 8:00 PM	28.5	596.5	55
8/21/2014 9:00 PM	29.7	573	79
8/21/2014 10:00 PM	28.9	590	50
8/21/2014 11:00 PM	25.4	669.5	36
8/22/2014 12:00 AM	10.5	1617	6
8/22/2014 1:00 AM	37.8	450	14
8/22/2014 2:00 AM	29.4	579	8
8/22/2014 3:00 AM	35.4	481	10
8/22/2014 4:00 AM	27.6	616.5	7
8/22/2014 5:00 AM	33	516	34
8/22/2014 6:00 AM	32.2	529.5	97
8/22/2014 7:00 AM	27.2	625.5	108
8/22/2014 8:00 AM	27.4	620.5	90
8/22/2014 9:00 AM	27.9	610.5	98
8/22/2014 10:00 AM	26.1	652	145
8/22/2014 11:00 AM	27.2	625	165
8/22/2014 12:00 PM	25.7	662.5	119
8/22/2014 1:00 PM	28.1	605.5	165
8/22/2014 2:00 PM	23.1	737	184
8/22/2014 3:00 PM	18.3	931.5	159
8/22/2014 4:00 PM	25	682.5	207
8/22/2014 5:00 PM	29.8	571	158
8/22/2014 6:00 PM	28.7	594	130
8/22/2014 7:00 PM	27.4	621.5	106
8/22/2014 8:00 PM	28.7	593	77
8/22/2014 9:00 PM	28.3	602	45
8/22/2014 10:00 PM	28	609	18
8/22/2014 11:00 PM	33.5	508.5	27
8/23/2014 12:00 AM	5.4	3145.5	20
8/23/2014 1:00 AM	33.5	509	15
8/23/2014 2:00 AM	13.7	1245.5	15
8/23/2014 3:00 AM	16.6	1024.5	9
8/23/2014 4:00 AM	28.6	595	10
8/23/2014 5:00 AM	22.2	766	10
8/23/2014 6:00 AM	30.2	564	23
8/23/2014 7:00 AM	31.3	544	25
8/23/2014 8:00 AM	30.5	557.5	32
8/23/2014 9:00 AM	29.9	569.5	45
8/23/2014 10:00 AM	26	656	63
8/23/2014 11:00 AM	27.2	627	72
8/23/2014 12:00 PM	28.4	599.5	77
8/23/2014 1:00 PM	28.2	604	95
8/23/2014 2:00 PM	27.2	626.5	70
8/23/2014 3:00 PM	26.3	647	80
8/23/2014 4:00 PM	30.7	554.5	88

8/23/2014 5:00 PM	29.2	583	85
8/23/2014 6:00 PM	32.6	523	57
8/23/2014 7:00 PM	31.9	534	43
8/23/2014 8:00 PM	30.4	559.5	50
8/23/2014 9:00 PM	29.8	572	46
8/23/2014 10:00 PM	28.4	599.5	18
8/23/2014 11:00 PM	31.7	537.5	18
8/24/2014 12:00 AM	32.7	520	4
8/24/2014 1:00 AM	30.5	558.5	12
8/24/2014 2:00 AM	38.4	444	8
8/24/2014 3:00 AM	33.6	507	1
8/24/2014 4:00 AM	39.9	427	6
8/24/2014 5:00 AM	34.1	500	3
8/24/2014 6:00 AM	38	448	14
8/24/2014 7:00 AM	36.5	466.5	27
8/24/2014 8:00 AM	30.4	561	35
8/24/2014 9:00 AM	33.2	513.5	51
8/24/2014 10:00 AM	32.2	528.5	46
8/24/2014 11:00 AM	32.3	527.5	51
8/24/2014 12:00 PM	29.7	574	73
8/24/2014 1:00 PM	31.2	546.5	64
8/24/2014 2:00 PM	30.9	551	78
8/24/2014 3:00 PM	29.8	571	75
8/24/2014 4:00 PM	30.1	566.5	78
8/24/2014 5:00 PM	30	567	52
8/24/2014 6:00 PM	14.5	1175	52
8/24/2014 7:00 PM	24.1	707	57
8/24/2014 8:00 PM	31.8	535.5	56
8/24/2014 9:00 PM	17.3	982.5	22
8/24/2014 10:00 PM	32.1	531	14
8/24/2014 11:00 PM	31.4	543	14
8/25/2014 12:00 AM	37.1	459	5
8/25/2014 1:00 AM	32.6	522	2
8/25/2014 2:00 AM	32.8	519	1
8/25/2014 3:00 AM	38	448	2
8/25/2014 4:00 AM	29	587.5	8
8/25/2014 5:00 AM	39.4	432	10
8/25/2014 6:00 AM	34.5	493.5	35
8/25/2014 7:00 AM	30.2	564	82
8/25/2014 8:00 AM	29	588	66
8/25/2014 9:00 AM	31.4	543	71
8/25/2014 10:00 AM	30.4	559.5	75
8/25/2014 11:00 AM	31.2	545	73
8/25/2014 12:00 PM	30.1	566.5	88
8/25/2014 1:00 PM	29.2	583	66
8/25/2014 2:00 PM	28.5	597.5	115
8/25/2014 3:00 PM	22.8	748	86

8/25/2014 4:00 PM	26.4	644	50
8/25/2014 5:00 PM	25.6	666	5
NOTE: All times are in (UTC-05:00) Eastern Time (U: Italicized values are estimates due to missing data.	5 & Canada).		

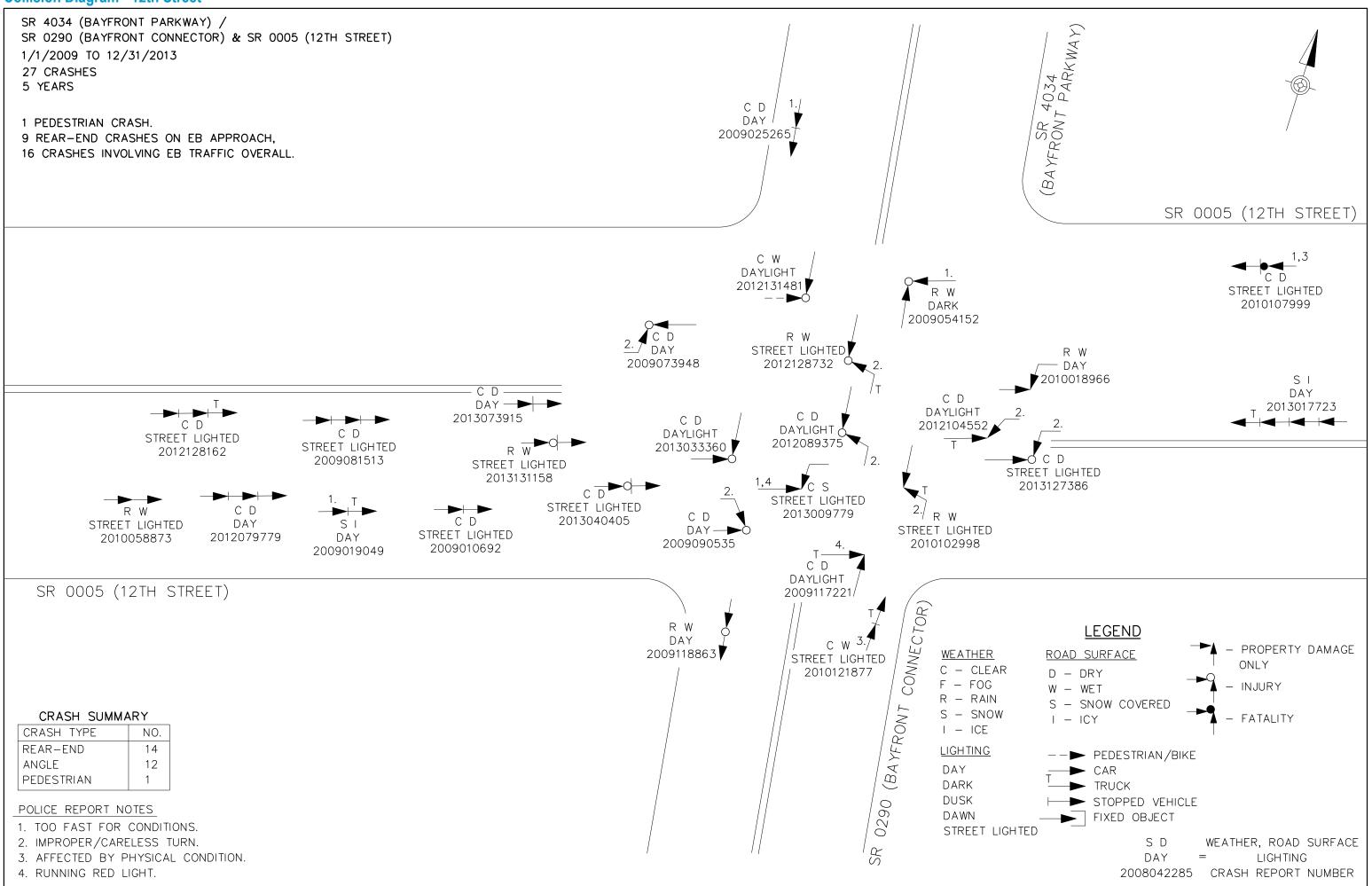
©2017 Digiwest. All rights reserved. Build - 201511061106



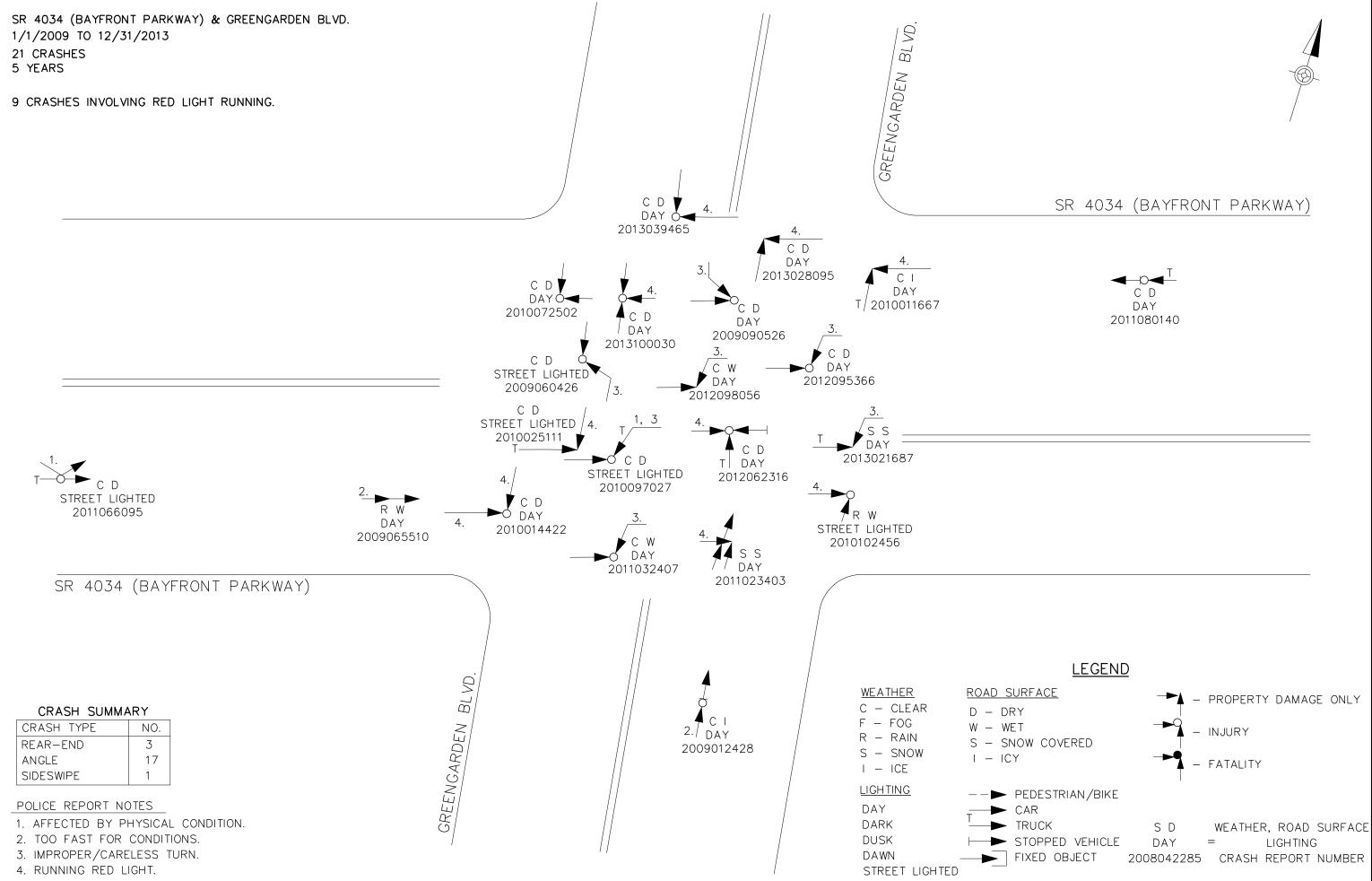
# **APPENDIX H:**

### **COLLISION DIAGRAMS**



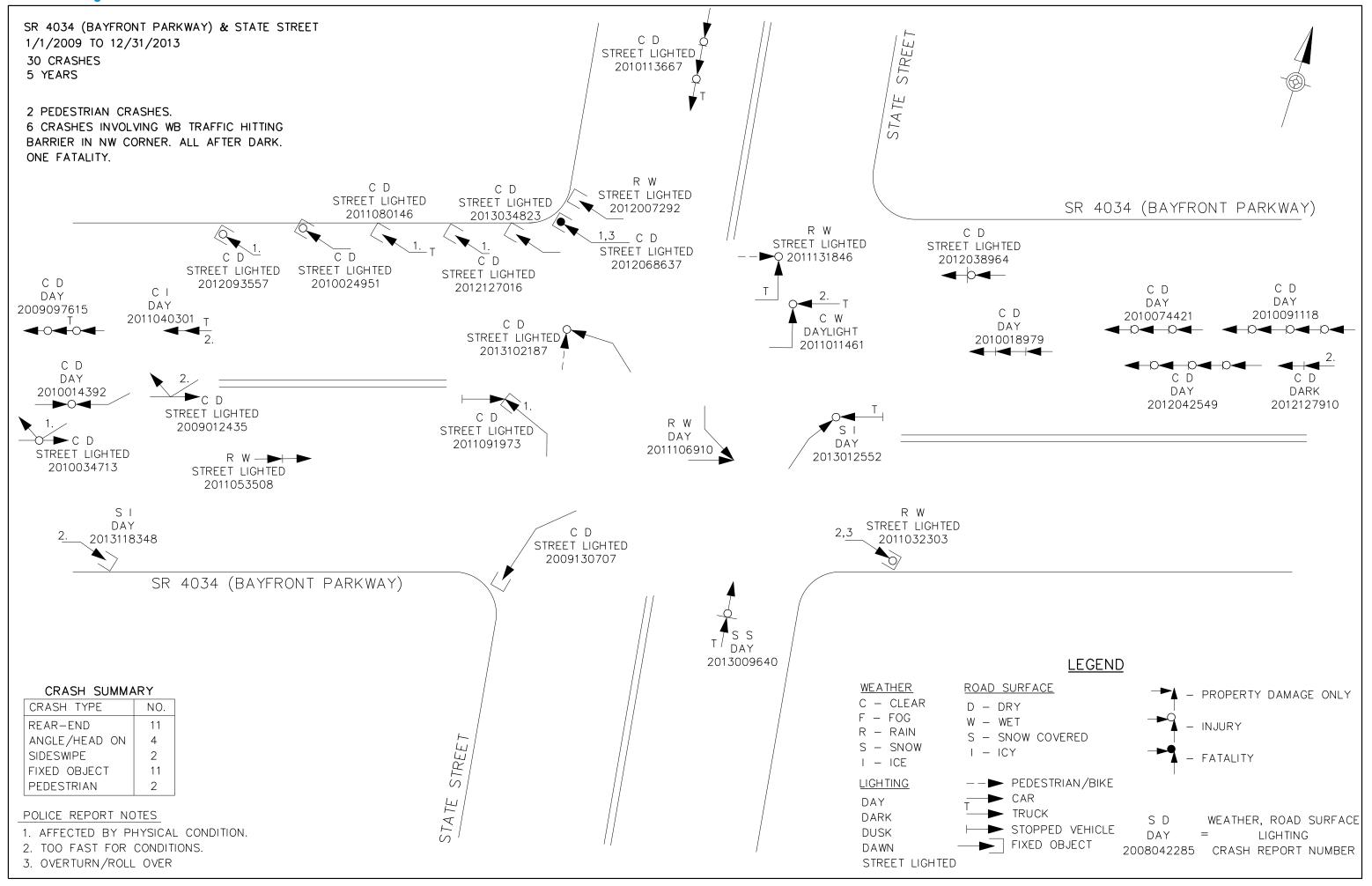








#### **Collision Diagram - State Street**





### **APPENDIX I:**

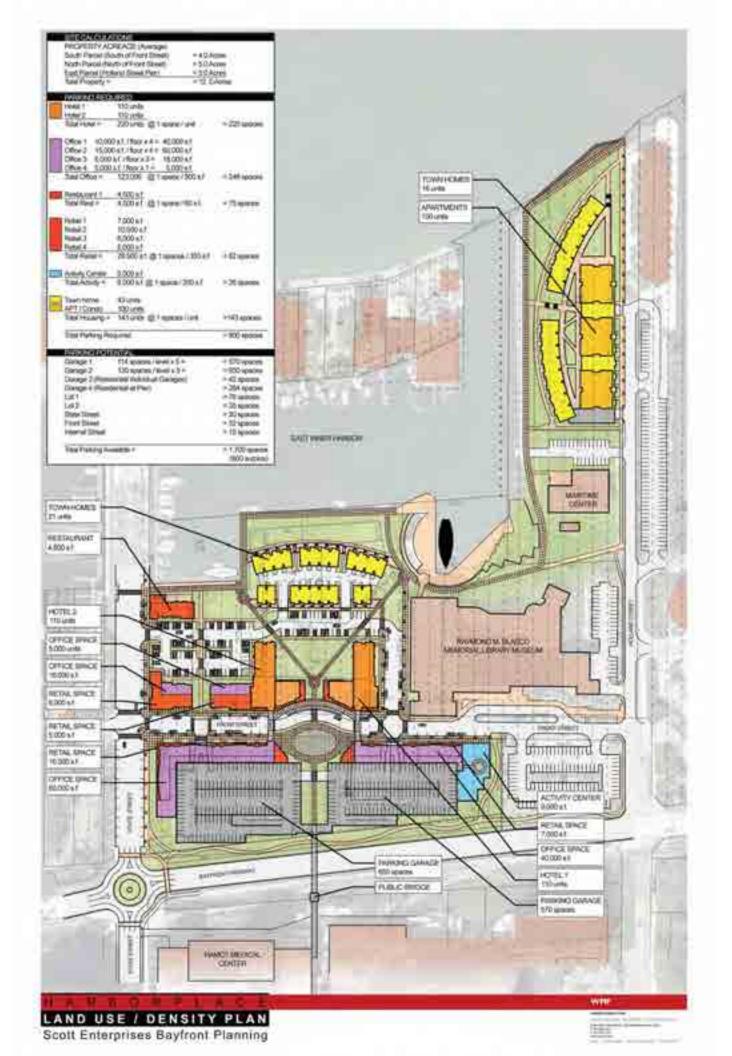
### **DEVELOPMENT SITE PLANS AND CONCEPTS**

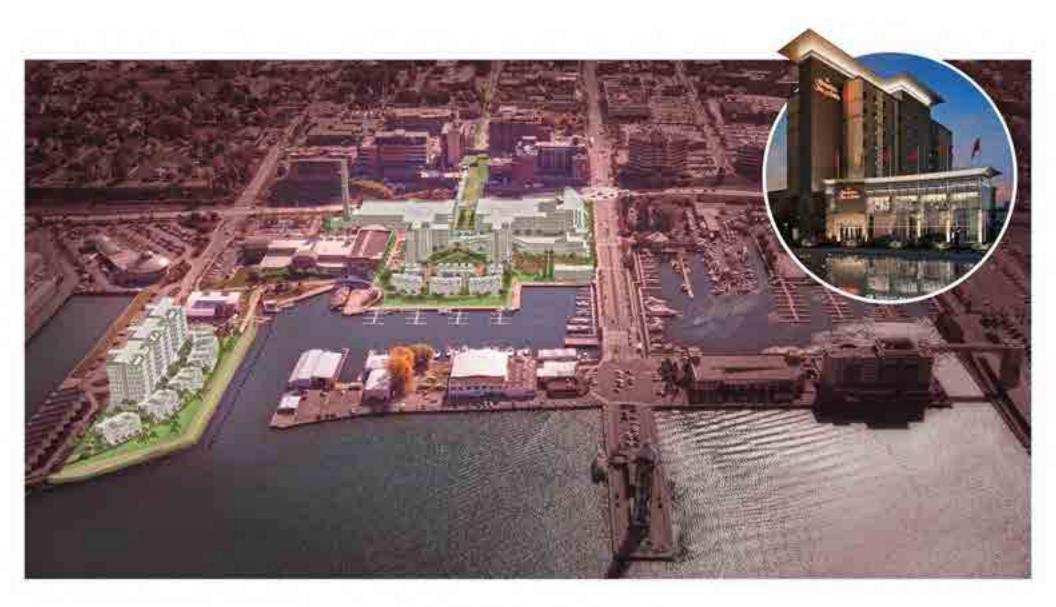
### Chapter 5 Preferred Concept Plan |

#### "For Instance" Development Schematic



Completing the Bayfront





The Bayfront District

Downtown Erie, Pennsylvania





### **APPENDIX J:**

### TRAFFIC FORECAST, ERIE BAYFRONT HIGHWAY (SR 4034)



Millie French, M.S.C.E., P.E. Highway Engineer

Jim French, Ph.D., P.E. Traffic Engineer & Analyst

#### Traffic and Transportation Engineers

- To: Mr. Bill Petit, P.E. PennDOT District Executive ATTN: Ms. Lyndsie DeVito, PennDOT Project Manager
- From: Jim French, P.E. French Engineering, LLC
- Re: Traffic Forecast Erie Bayfront Highway (S.R. 4034) I-79 to East 12th Street City of Erie PennDOT Engineering District 1-0

Date: October 27, 2014

The purpose of this technical memo is to document the overall methodology for forecasting future traffic demand on the Erie Bayfront Highway (S.R. 4034) from I-79 in the west to East 12th Street in the east. The forecast was performed using an *Excel* workbook, which accompanies this memo. This memo is intended to provide an "executive summary" level of detail and not to document the details programmed into the various cells in the spreadsheet. More details are available upon request and through investigation of the various sheets in the workbook.

#### Known and Anticipated Developments

Through discussions with economic and transportation-related stakeholders in the Erie area, five prospective developments were identified that were incorporated into the traffic forecast. The locations of these developments are illustrated on the attached location map. They are as follows (from west to east):

*Getgo Gas Station / Convenience Market* - This development is in the TIS development stage, and is assumed to include 16 fueling stations. It is located on the Bayfront Highway between Greengarden Boulevard and Lincoln Avenue. It is anticipated that this development will be open in approximately one year.

*Cobblestone Hotel* - This 54-room hotel is located on the south side of the Bayfront Highway opposite of Lawrence Pier driveway. It is near completion and is anticipated to be open soon. The intersection of its driveway with the Bayfront Highway will be signalized as part of the development.

*Bayfront Place* - This is property owned / controlled by the Convention Center Authority and is located north of the Bayfront Highway to the west of Sassafras Street Extension / the existing Convention Center. It is to include a 192-room Courtyard by Marriott hotel which should be open in approximately one year. Various other components can be included on the property but at this point they are speculative and several years off from development. A "for instance" plan was prepared in 2012, which was the basis for the assumptions for the rest of the property. The

assumptions were as follows: 46,000 SF of retail, 34,000 SF of office space, a 6,000 SF restaurant, 72 apartments, and 25 townhouses / carriage homes. The "for instance" plan is provided in the attachments to this memo. 946 parking spaces would be provided on site, which appears to include excess parking that can be used for patrons of other properties in the area.

*Harbor Place* - This property is owned by Scott Enterprises and is located between State Street and Holland Street, north of the Bayfront Highway. It is a multi-use development that is to include 220 hotel rooms, 28,500 SF of retail, 43 townhouses, 123,000 SF of office space, 100 apartments, and a 4,500 SF restraurant. It is anticipated that this development will progress on a faster schedule than Bayfront Place, but at this point there is no known schedule for the development. It is anticipated to include 1,700 parking spaces, which will provide ample parking for both Harbor Place and off-site destinations in the area. A proposed pedestrian bridge over State Street that is to connect in the vicinity of UPMC Hamot suggests that some hospital parking will be attracted to this new parking garage. A conceptual site plan for Harbor Place is provided in the attachments.

*Ore Dock Road Industrial* - "Develop Erie" is currently pursuing a project to upgrade the docks near Ore Dock Road and develop the remainder of the property in this area as industrial. It is anticipated that once the docks are upgraded, that additional freight will be attracted to this area, but it is uncertain as to whether its ground transportation will be via truck or rail. There is also approximately 50 acres of undeveloped property in this area that is likely to be developed industrial. A wood pellet processing plant was identified as an example of the type of industrial development that might be attracted to this area.

#### **Trip Generation**

The trip generation was performed using ITE Trip Generation (9th Edition). For the Bayfront Place and Harbor Place, an internal capture rate of 20% was assumed based on the information in the ITE Trip Generation Handbook. Pass-by trips for the Getgo gas station were assumed to be 63% in the AM Peak and 66% in the PM Peak. There were no pass-by trips assumed for the retail or restaurant components of the Bayfront Place or Harbor Place developments since, due to their location and the overall parking dynamic of the area, it is not anticipated that they will generate a significant amount of pass-by activity.

Table 1 contains a summary of the total "new" trip generation for five proposed developments in the area. Note that the pass-by trips for the gas station are not included, and that internal capture has been applied. Trips associated with excess parking spaces at the Bayfront Place and Harbor Place developments are also not included.

rubie i Trip Ceneration Sammary (1997 Enternar Trips Omy)								
Development	AM Inbound	AM Outbound	PM Inbound	PM Outbound				
Getgo Gas Station	49	49	52	52				
Cobblestone Hotel	17	12	17	16				
Bayfront Place	176	114	197	243				
Harbor Place	292	137	199	302				
Ore Dock Road Industrial	294	60	75	282				

 Table 1 - Trip Generation Summary (New External Trips Only)

#### **Background Growth Rate**

A background growth rate of 0.15% per year (compound) was applied, as per the latest PennDOT Bureau of Planning and Research guidance for urban non-interstates in Erie County. A design horizon of 20 years was assumed, resulting in total background growth of 3.04% for the 20-year period. Background growth was applied to all movements in the study area.

#### **Trip Distribution**

A few different trip distribution patterns were assumed depending on the specific generator in question. They are as follows:

#### Getgo Gas Station

It was not necessary to be concerned with the pass-by trips associated with this gas station since the gas station driveways are not being modeled or forecasted. The new trips associated with the gas station were assumed to be drawn from the immediate local area since there are a number of these types of facilities across the area, including one a quarter mile to the east at the intersection of West 8th Street and the Bayfront Highway. In short, the new trips were spread evenly (20% each) across the following five origins / destinations:

Lincoln Avenue to the north Lincoln Avenue to the south Greengarden Boulevard to the north Greengarden Boulevard to the south Bayfront Highway to the west.

#### Cobblestone Hotel

The Cobblestone Hotel will attract longer distance traffic, just as the Bayfront Place, Harbor Place, or Ore Dock Industrial developments. However, it is much smaller in scope and is not a high traffic generator. As such, a coarse trip distribution was desired to keep from having very small flows to assign to the network. The assumed trip distribution was as follows:

Bayfront West - 40% Bayfront East - 40% State Street - 20%

#### Bayfront Place, Harbor Place, and Ore Dock Industrial

Because these are major regional generators with relatively high trip generations, the trip distributions for these developments were spread out over many possible origins / destinations. The assumed trip distribution was as follows:

I-79 / Bayfront Highway to the west - 25% PA 290 / Bayfront Highway to the east - 25% State Street - 15% Cranberry St - 5% Holland St - 5% Sassafras St - 5% 12th St to the west - 5% 8th St to the west - 5% 12th St to the east - 3% 6th Street to the east - 7%

In the overall, it was assumed that approximately 50% of the traffic will come from longer distances that utilize the interstate / regional highway system. For the 50% that comes from the Erie metropolitan area, State Street should have a higher percentage (15%) than the other streets since it represents the main connector to downtown Erie. The others were split evenly at 5% except that in the east, 6th Street was favored over 12th Street slightly since the traffic shed east of the Bayfront Highway for 6th Street is clearly larger than 12th Street.

#### **Traffic Assignment**

Traffic was assigned to the network according to the logic established in the trip distribution. In the traffic forecasting workbook, each development is treated separately, with the excess parking associated with Bayfront Place and Harbor Place treated separately from the rest of the development. At Harbor Place, the Holland Street and State Street access points were treated separately. Finally, the inbound and outbound flows for each development are treated separately. This was done to ensure that trips were not lost and that flows balanced between intersections where appropriate.

For Harbor Place, the traffic was assigned between the State Street and Holland Street access points as follows:

-In the AM peak, the total site traffic was split 50/50 between the two access points because the background flows on each of these streets is low and roughly equal.

-In the PM peak, because background flows are heavier, the site traffic was split such that the final traffic assignment (background plus projected) would have an equal amount of total traffic using each street.

-In both cases, the traffic assigned to Holland Street was at least equal to the trip generation for the residential units located directly on Holland Street.

Finally, it is worth noting that for traffic originating or destined for 12th Street to the west of the study area, traffic was introduced to the network via Greengarden Boulevard to the south, since there is no direct connection between the Bayfront Highway and West 12th Street.

#### Parking Garages at Bayfront Place and Harbor Place

The proposed parking on the Bayfront Place and Harbor Place properties appear at first glance to have a significant amount of excess parking that would be available to the public at large. Harbor Place is planned to have 1,700 spaces with a pedestrian bridge connecting the parking garage to UPMC Hamot near French Street. The Bayfront Place appears to have approximately

946 spaces on site. As such, these two sites will have approximately 2,646 spaces but only have a combined peak hour directional flow of approximately 545 vph.

Some assumptions were required to account for the vehicles that would be attracted to these excess parking spaces. It was noted that the Harbor Place property currently provides some parking for UPMC Hamot, and as such some of these trips are already accounted for in the baseline traffic counts. In addition, it was desired to treat the parking garage trips as "pass-by" for vehicles already on the Bayfront Highway. For parking patrons that are not currently on the Bayfront Highway (e.g., a trip that might begin and end in the downtown area without ever using the Bayfront Highway), they were treated as "new" trips. The overall means of handling these parking spots is as follows:

#### Trip Generation

For both the Bayfront Place and Harbor Place, in each of the peak periods, the maximum directional flow was subtracted from the total number of parking spaces, and 40% of the excess was applied in the peak commuter flow direction (inbound in the AM and outbound in the PM) and 10% was applied in the opposite direction.

#### Trip Distribution

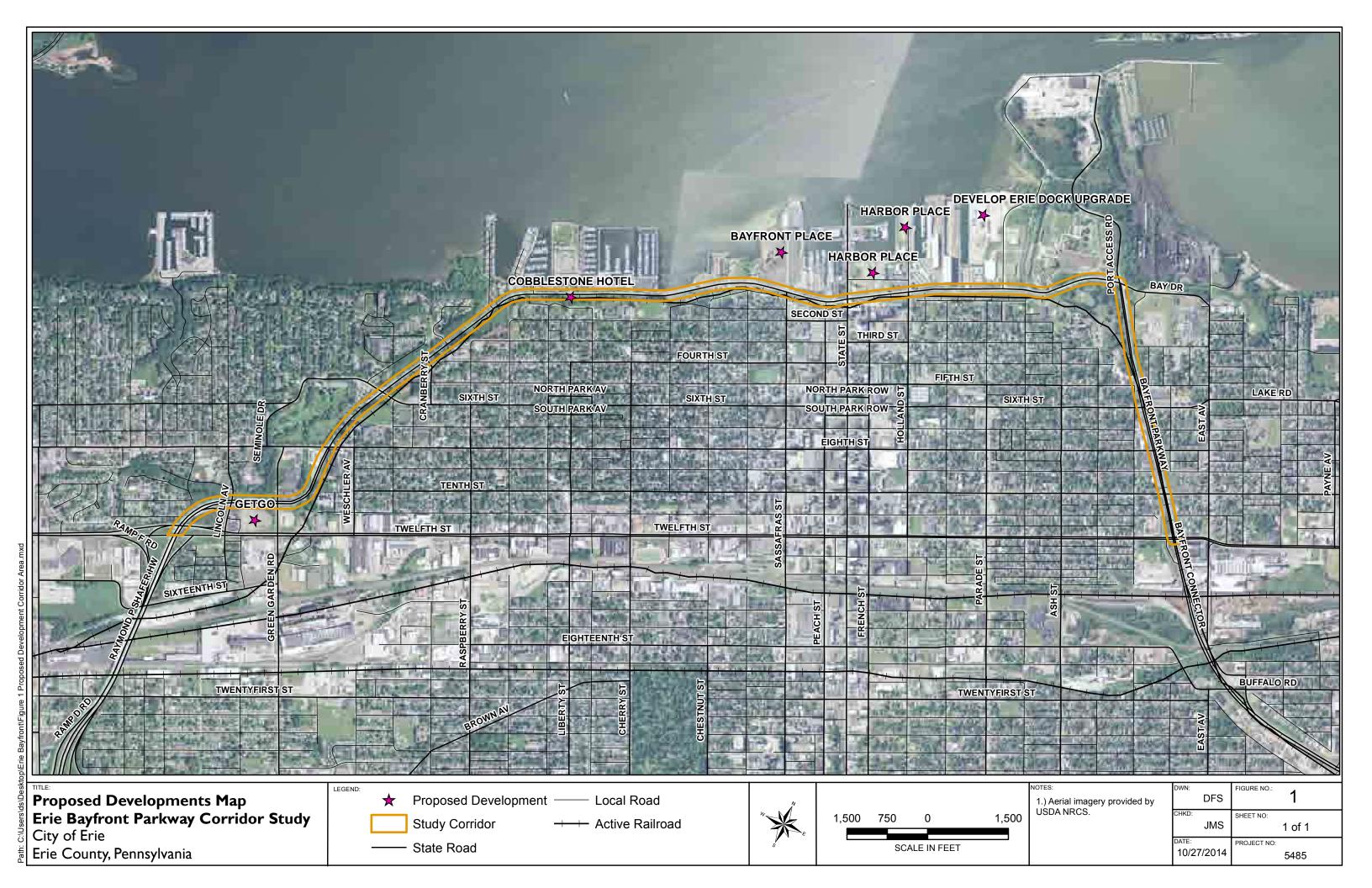
The following trip distribution was applied to the excess parking space trips:

Bayfront Highway East - 30% Bayfront Highway West - 30% State Street - 20% Holland Street - 20%

The trips coming in and out of State Street and Holland Street were treated as new trips. The trips from Bayfront West were treated as pass-by trips and were deducted from flows turning into and out of State Street and Holland Street. The trips from Bayfront East were also treated as pass-by trips and were deducted from flows in and out of East 12th Street, East 10th Street, and East 6th Street. It was assumed that these trips would have turned off the Bayfront Highway at one of these locations and parked downtown, but in the projected condition would stay on the Bayfront and park at one of these new facilities.

#### **Concluding Remarks**

A spreadsheet driven, bottom-up approach to forecasting traffic in the area was used so that the implications of the various assumptions that went into building the forecast would be readily apparent and could be easily changed. The trip generation assumptions that define the magnitude and composition of the various developments can be changed most easily, and will require virtually no manual input. The distribution of traffic among the various origins / destinations that are already included in the forecast can also be readily changed. Adding origins / destinations to the trip distribution or adding new developments to the trip generation will require the most amount of manual changes to the forecast.



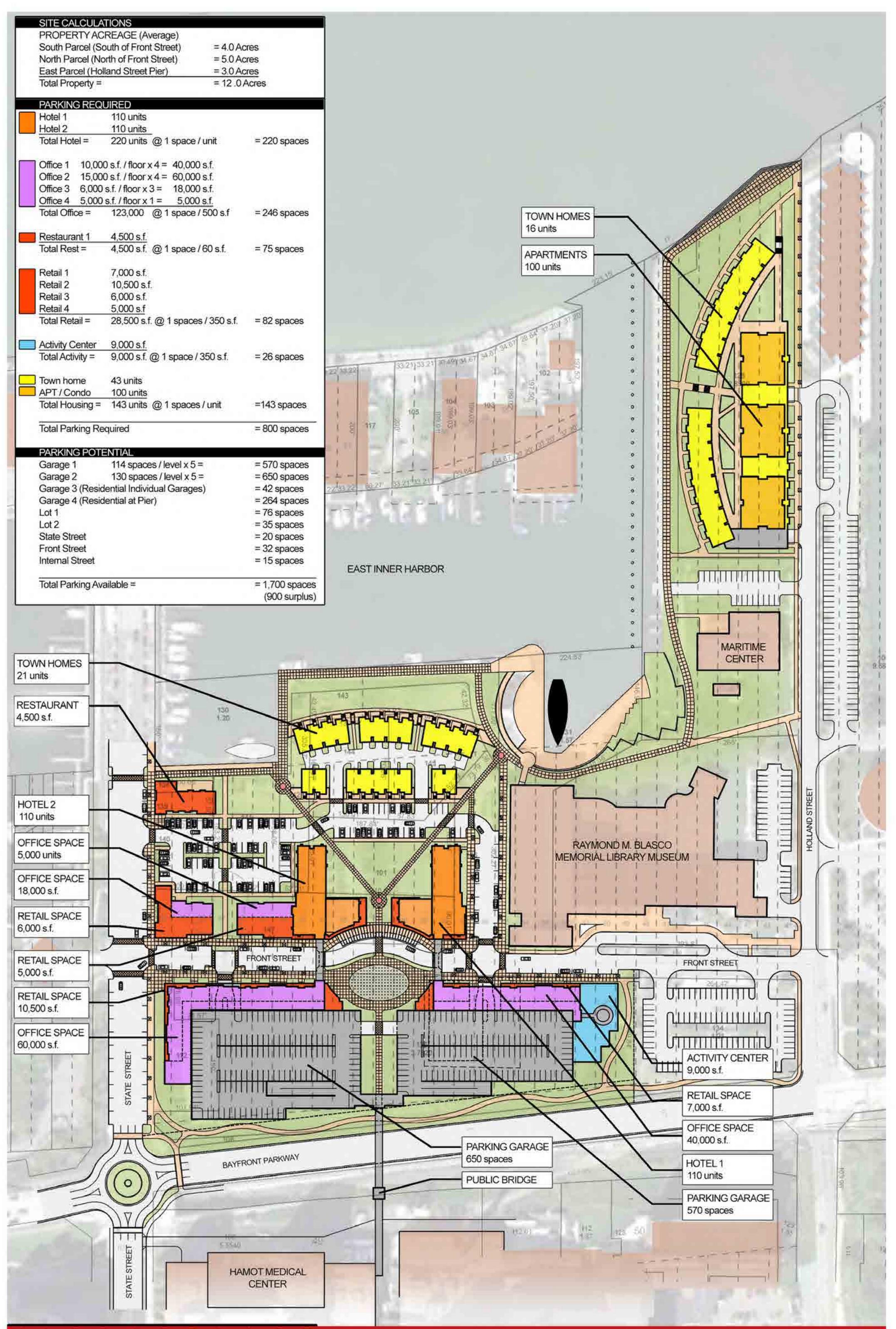
### Chapter 5 Preferred Concept Plan |

#### "For Instance" Development Schematic



Completing the Bayfront

	CREAGE (Average)		AL 47-11
	outh of Front Street)	= 4.0 Ac	
	orth of Front Street)	= 5.0 Ac	CARACIT N
The survey of the local diversion of the loca	lland Street Pier)	= 3.0 Ac	
Total Property =		= 12.07	Acres
PARKING REC	UIRED		
Hotel 1	110 units		
Hotel 2	110 units		
Total Hotel =	220 units @ 1 space	/ unit	= 220 space
Office 1 10,00	$00 \text{ s.f.} / \text{floor} \times 4 = 40,000$	) s.f.	
Office 2 15,00	0  s.f. / floor  x  4 = 60,000	) s.f.	
Office 3 6,000	s.f. / floor x 3 = 18,000	) s.f.	
Office 4 5,000	s.f. / floor x 1 = 5,000	) s.f.	
Total Office =	123,000 @ 1 space	/ 500 s.f	= 246 space
Restaurant 1	4,500 s.f.		
Total Rest =	4,500 s.f. @ 1 space	/60 s.f.	= 75 spaces
Retail 1	7,000 s.f.		
Retail 2	10,500 s.f.		
Retail 3	6,000 s.f.		
Retail 4	5,000 s.f		
Total Retail =	28,500 s.f. @ 1 space	s / 350 s.f.	= 82 spaces
Activity Center	9,000 s.f.		
Total Activity =	9,000 s.f. @ 1 space /	350 s.f.	= 26 spaces
Town home	43 units		
APT / Condo	100 units		
Total Housing =	143 units @ 1 spaces	s / unit	=143 spaces
Total Parking Re	equired		= 800 space
PARKING POT	ENTIAL		
Garage 1	114 spaces / level x 5	=	= 570 space



WMF

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ARCHITECTURE INTERIORS CONSTRUCTION 3230 WEST LAKE BOAD' EVELPENINSYDVANIA 14505 TI 814 836.1515 F: 114 836, 5757 www.winfine.com

ENIE CLEVELAND STATE COLLEGE CHARLOTTE

#### R E R В 0 P A C LAND USE / DENSITY PLAN

Scott Enterprises Bayfront Planning



## **APPENDIX K:**

### PURPOSE AND NEEDS MEMORANDUM



#### SUMMARY OF PURPOSE AND NEED - DRAFT

February 19, 2015

#### Introduction

This memo describes the methodologies utilized by the Pennsylvania Department of Transportation (PennDOT) District 1-0 to establish the purpose and needs associated with the Bayfront Parkway Study located in Erie, PA. The needs analysis has been prepared in accordance with Title 23 Code of Federal Regulations (CFR) Part 771, as well as PennDOT Publication 319, *Needs Study Handbook*, and Publication 10, Design Manual 1, *Transportation Program Development and Project Delivery Process*.

#### **Study Area Description**

The study is located along the Bayfront Parkway in the City of Erie, Erie County, Pennsylvania. **See Figure 1, Project Location Map.** The Bayfront Parkway (State Route (S.R.) 4034) begins at Interstate 79 on the west side of Erie, PA and connects to the Bayfront Connector and Interstate 90 on the east side of the city. The study area starts generally at W. 12th Street and follows the Bayfront Parkway to E. 12th Street. The corridor varies from 4 lanes to 2 lanes; however, the majority of the study area consists of 2 through lanes with a center left turn lane. There are approximately twenty intersections, with eleven (11) that feature traffic signals, within the study corridor. A series of bicycle trails, hiking trails, and railroad tracks run along the length of the Bayfront Parkway. Some of the trails are interconnected with each other while others only serve a small section of the Parkway. Additionally, there are currently five proposed developments along the corridor that could potentially affect the number of people traveling to and from the Bayfront in the coming years.

#### **Study Purpose**

The purpose of the study is to complete an extensive analysis of the corridor (S.R. 4034), utilizing traffic data and involving stakeholders, to identify future projects that will improve safety, improve congestion, increase compliance with applicable current design standards, improve mobility throughout the corridor, and support existing and future economic development initiatives.

The identified needs of this study are:

#### 1. Safety concerns exist in the study area.

There were 246 crashes within the study corridor over a 5-year period from January 1, 2009 to December 31, 2013. 80% of the crashes were located at an intersection. Crashes occurring at the intersections primarily consisted of angle and rear-end type of crashes. The crash rate between the Niagara Pier and the Boat Launch is approximately three (3) times the state average for similar types of roadways. Four (4) fatalities or major injuries occurred between East 6th Street and East 12th street. Reducing the number of documented crashes and increasing safety at pedestrian crossings was determined to be important to stakeholders.



According to the MetroQuest survey results obtained as part of this study, the majority of those taking the survey did not feel safe walking/biking across the Bayfront Parkway.

#### 2. There are congestion concerns in the study area.

Currently, traffic analyzed in the 2014 based year is experiencing Level of Service (LOS) D during the existing AM peak hour at the intersection of Bayfront and State Street. Future 2034 no-build traffic projections with anticipated development along the Bayfront increase delays to LOS F for the Bayfrontand State Streetintersection and increase travel times throughout the corridor.

LOS is an informal way to understand how well the transportation system functions given current land configurations and traffic volumes. LOS A indicates free flow operations with little interference from other vehicles, and LOS F indicates extremely congested conditions where travel demand exceeds the capacity of the facility (See Photo 1).

#### LOS A

LOS B



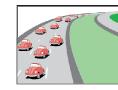
Represents the best operating conditions and is considered free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.

#### LOS D



Represents traffic operations approaching unstable flow with high passing demand and passing capacity near zero, characterized by drivers being severely restricted in maneuverability.

#### LOS E



Represents unstable flow near capacity. LOS E often changes to LOS F very quickly because of disturbances (road conditions,

accidents, etc.) in traffic flow.

#### LOS F



Represents the worst conditions with heavily congested flow and traffic demand exceeding capacity, characterized by stop-and-go waves, poor travel time, low comfort and convenience, and increased accident exposure.

R Cr b

Represents reasonably free-flowing conditions but with some influence by others.

LOS C



Represents a constrained constant flow below speed limits, with additional attention required by the drivers to maintain safe operations. Comfort and convenience levels of the driver decline noticeably.

Photo 1: Level of Service

The Bayfront Place Concept Plan Report, April 2012, prepared by the Erie County Convention Center Authority states that the Bayfront Parkway is congested during peak hours. This report is available on this study's website <u>www.bayfrontparkwaystudy.com</u> for review. The report identifies a realistic plan for redevelopment of the former GAF Erie property (Bayfront Place) located along Sassafras Street and the Bayfront Parkway. The report says that this congestion may make access and egress to the Bayfront Place site difficult.



MetroQuest survey results that were obtained as part of this study show that, the majority of those taking the survey felt that traffic flow/congestion during peak and non-peak hours on the Bayfront Parkway and adjacent alternative routes could be improved.

#### **Future Projections**

The congestion problems are only anticipated to worsen due to economic development initiatives. Future traffic projections were based upon a background growth rate and the use of development plans and the resulting projected traffic growth from the ITE Trip Generation Manual (9th Edition). The 2034 Build year projections with anticipated development show increased traffic volumes and delays at each intersection within the corridor..

#### 3. There are operational concerns in the study area.

The intersection at Bayfront and W 8th Street heading north merges to one lane with the right lane only able to turn onto W 8th Street. Traffic has been observed stacking on the through lane with vehicles using the right lane to merge ahead of this queue and not making the required right turn. This queue has been contributing to a bottleneck at this intersection and increasing delays heading northbound and for turns onto W 8th Street. Project stakeholder and interviewees revealed a number of concerns about the function of this intersection and the right turn lane not being an effective way to move traffic through this intersection.

Signals at Bayfront, State Street, and Holland Street have left turn lanes along the Bayfront Parkway, though not separate signal phases for the left turn movement. The observations of these signals and input from the stakeholders has indicated this is an issue during the peak hours with traffic not being able to make a left turn with limited gaps in the opposing traffic.

According to MetroQuest survey results obtained as part of this study, the majority of those taking the survey felt that improvements to existing traffic signals are needed to improve access. The respondents also felt that there is a lack of bicycle storage options.

It is likely that future economic development initiatives will worsen the exist traffic operations of the corridor. As traffic volumes associated with the development increase, the ability to efficiently travel through the corridor will be difficult at intersections with current operational concerns. This will result in greater delays throughout the corridor.

Interviewed stakeholders have concerns that future economic development will limit access to convenient and affordable parking within the central Bayfront Parkway corridor, especially near the hospital.

#### 4. Alternative modes are lacking parallel to the Bayfront (east/west).

Stakeholders have indicated that there is a lack of pedestrian/bicycle connection and access points from Holland Street to 6th Street and from State Street to Cranberry Street. They also noted that pedestrian access at State Street needs improved.

# BAYFRONTPARKWAY STUDY

According to the Erie Waterfront Master Plan Summary Report, March 2009, prepared by the Erie-Western Pennsylvania Port Authority, "Many of the well-used public, civic and recreational spaces and facilities along the Bayfront are difficult to reach or are disconnected from other areas." The report also stated that, "East to west connections to either side of State Street are poorly designed and confusing at best." The report describes that the under-developed areas of the Bayfront lack proper pedestrian and even vehicular circulation options. The report is available on this study's website at <u>www.bayfrontparkwaystudy.com</u> for review.

The Bayfront Place Concept Plan Report, April 2012, indicated that, "There are limited vehicular and pedestrian access points between the Site and the Bayfront Parkway that will influence internal site circulation and may prompt signalization modifications along the Bayfront Parkway".

Destination Erie's, Regional Vision, *Unlocking the Bayfront's Full Potential*, developed 10 principles to guide the successful development of Erie's Bayfront. This report lists connecting the Central Bayfront to the East and West Bay and implementing connections within the Central Bayfront as important to the successful development of the Bayfront. They believe that a "Bayfront Loop" is missing, water routes are missing, and there are "gaps" at the Presque Isle hinge, State Street, Bayfront, and at the Channel Gap.

According to MetroQuest survey results obtained as part of this study, the majority of those taking the survey felt that bicycle and pedestrian connections from the Eastside neighborhoods to the Bayfront were not adequate. The majority of those taking the survey also felt that more emphasis should be placed on alternative means to move people within the Central Bayfront area, as related to parking and facilities.

### 5. Transportation connections for all modes between Downtown Erie and the Bayfront (north/south) are lacking.

The Bayfront Parkway currently acts as a barrier for pedestrians and bicyclists between the City of Erie to the south and the Bayfront area along the north. There is a desire from the stakeholders to make the Bayfront area a connected part of downtown for vehicles, pedestrians, and bicycles.

The Erie Waterfront Master Plan Summary Report, March 2009, prepared by the Erie-Western Pennsylvania Port Authority, notes that "Neither pedestrian nor vehicular circulation routes have convenient north-south connections between the city and the Bayfront." The report goes on to say, "Pedestrian safety is also a concern between the city and the surrounding neighborhoods on the bluff and the Bayfront due to the heavy vehicular use of the Bayfront Parkway and the lack of well-designed cross-walks." The Erie Waterfront Master Plan Summary Report is available on this study's website at <u>www.bayfrontparkwaystudy.com</u> for review.

Destination Erie's, Regional Vision, *Unlocking the Bayfront's Full Potential*, lists connecting the Central Bayfront to Downtown as important to the successful development of Erie's Bayfront. They believe that all connections could be improved, especially at State Street.



The MetroQuest survey results that were gathered by this study showed that the majority of those taking the survey felt that bicycle and pedestrian connections from the downtown to the Central Bayfront area were not adequate.

#### **References:**

Erie County Convention Center Authority, April 2012, Completing the Bayfront, Bayfront Place Concept Plan Report

Domokur Architects, March 2009, Erie Waterfront Master Plan Summary Report, Erie-Western Pennsylvania Port Authority

Destination Erie's, Regional Vision, Unlocking the Bayfront's Full Potential

Bayfront Parkway Corridor Study, September 2014, *Stakeholder Interview Notes*, Pennsylvania Department of Transportation

Bayfront Parkway Corridor Study, January 2015, *MetroQuest Survey Results*, Pennsylvania Department of Transportation



### **APPENDIX L:**

### MOBILITY SCENARIO IMPROVEMENT CONCEPTS



### Mobility Scenario Improvement Concepts

City of Erie | Erie County, Pennsylvania September 30th, 2014 | Source: ESRI

$$\mathcal{I}_N$$

1 inch = 1,210 feet

0.5

Miles

TAYLOR



P

Private Parking

Lots & Garages

Proposed Development

#### +→ Railroad • -- Multi-Use Trail State Road Local Road

Parks



Transit



**Proposed Features** 

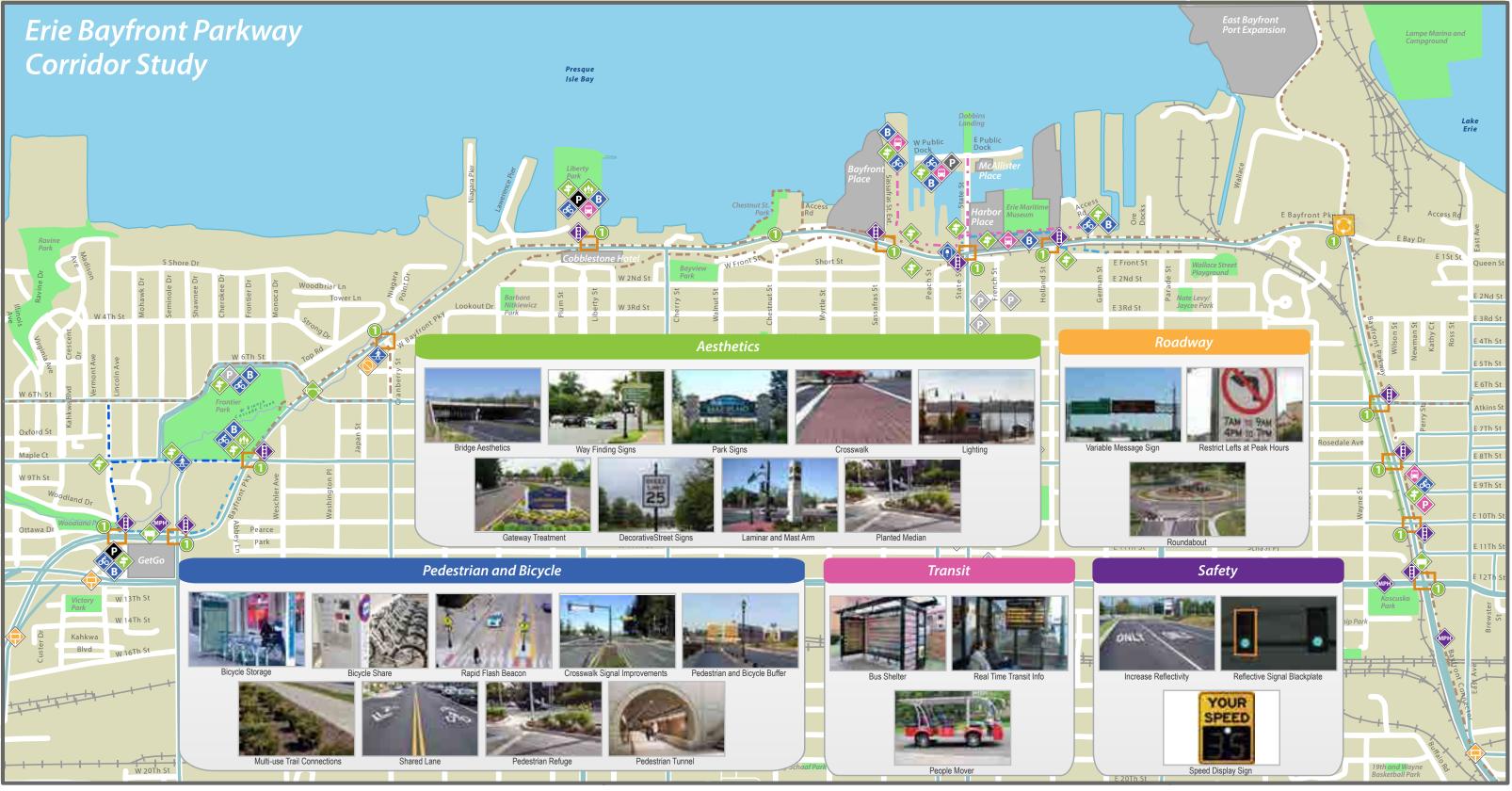
🔬 Park Sign



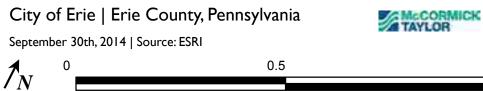


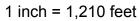
### **APPENDIX M:**

### CONNECTED SCENARIO IMPROVEMENT CONCEPTS



### Connected Scenario Improvement Concepts







Miles

### Legend



Lots & Garages

Development

Proposed

#### - -- Multi-Use Trail State Road Local Road

+→ Railroad

Parks

### Transit Shelter Bus Pull Off

Transit

--- People Mover Route Safety **Reflective Signal** Backplate

Proposed Features

MPH Speed Display Sign

Park Sign

Aesthetics









## **APPENDIX N:**

### **OVERALL CORRIDOR IMPROVEMENT LIST**

OVERALL IMPROVEMENT CONCEPTS	Reduces Congestion & Improves Operations (Y/N)	Provides Multi-Modal Connection Along the Bayfront (Y/N)	Property and Utility Impacts (High, Medium, Low)	Engineering/ Constructability Concerns (Y/N)	Estimated Delivery Time - Short Term (1-2 years) Mid Term (3-4 years) Long Term (5 or more years)	Conceptual Construction Cost Range <10K - >1M	Potential Funding Sources*
1. Bike Share Program with hubs located throughout the corridor	No	Yes	Low	No	Short Term	100K - 1M	MMTF, P, TA
2. Bike shelters/storage at locations throughout the corridor	No	Yes	Medium	No	Short Term	100K - 1M	MMTF, P, TA
3. Replace existing luminaire and mast arms with ornamental features to match proposed lighting and gateway treatment	No	No	Low	No	Short Term	10K - 100K	LF, TA, MMTF
4. Way signs for pedestrian/bicycle paths and enhance/improve attraction signs along the Bayfront Parkway	No	No	Low	No	Short Term	10K - 100K	TA, MMTF, LF, P
5. Decorative park signs with consistent treatments	No	No	Low	No	Short Term	10K - 100K	LF, MMTF, P
6. Upgrade pedestrian push buttons,	Yes	Yes	Low	No	Short Term	10K - 100K	TIP, LF, TA, G, HSIP
7. Add buffer between roadway and bikeway	No	Yes	Low	No	Short Term	100K - 1M	MMTF, TA, TIP, LF
<ol> <li>Enhance pedestrian crossings along the Bayfront with painted crosswalks</li> </ol>	No	Yes	Low	No	Short Term	10K - 100K	LF, TA, HSIP
9. Upgrade or add trail lighting throughout corridor	No	No	Medium	No	Mid Term	>1M	TA, MMTF, P
10. Transit shelters with real time transit information at locations throughout the corridor	Yes	Yes	Low	No	Short Term	10K - 100K	TIP (Transit), MMTF
*Potential Funding Sources							

ARLE – Automated Red Light Enforcement Fund G – Greenlight Go LF – Local Funding TIP – Transportation Improvement Program

P – Private Funding TA – Transportation Alternatives TIGER – Transportation Investments Generating Economic Recovery

MMTF – PA Multimodal Transportation Fund HSIP – Highway Safety Improvement Program



# **APPENDIX O:**

## **BAYFRONT PARKWAY FUTURE CORRIDOR – INTERSECTION DELAY COMPARISON**

## Bayfront Parkway Future Corridor - Intersection Delay Comparison

	2034 - Back	l Option: ground w/o ent Growth	2034 - Back	l Option: ground and ent Growth	2034 - Mobility Option *		2034 - Connected Option *	
Intersection	AM	PM	AM	PM	AM	PM	AM	PM
Lincoln Avenue	6.3 (A)	9.9 (A)	281.3 (F)	10.3 (A)	7.2 (A)	12.4 (B)	6.6 (A)	9.9 (A)
Green Garden Road	11.8 (B)	12.3 (B)	147.4 (F)	14.3 (B)	13.8 (B)	12.5 (B)	13.4 (B)	13.4 (B)
West 8th Street	38.4 (D)	29.4 (C)	194.5 (F)	52.7 (D)	24.7 (C)	41.9 (D)	49.0 (D)	27.1 (C)
Liberty Street Extension	N/A	N/A	56.1 (E)	9.0 (A)	4.6 (A)	20.3 (C)	17.9 (B)	8.0 (A)
Sassafras Extension	7.7 (A)	15.3 (B)	172.6 (F)	121.4 (F)	22.2 (C)	28.3 (C)	56.7 (E)	79.1 (E)
State Street	15.7 (B)	43.0 (D)	225.2 (F)	107.8 (F)	32.3 (C)	52.5 <b>(D)</b>	124.9 (F)	174.0 (F)
Holland Street	13.5 (B)	21.2 (C)	93.1 (F)	213.4 (F)	39.3 (D)	61.4 (E)	129.3 (F)	160.8 (F)
East Bay Drive & Port Access Road	13.5 (B)	8.4 (A)	21.4 (C)	21.8 (C)	13.2 (B)	9.4 (A)	158.7 (F)	28.2 (C)
East 6th Street	45.1 (D)	69.0 (E)	31.9 (C)	58.2 (E)	30.6 (C)	54.2 (D)	77.6 (E)	55.6 (E)
East 8th Street	8.8 (A)	9.0 (A)	8.2 (A)	18.1 (B)	6.0 (A)	7.9 (A)	63.7 (E)	16.9 (B)
East 10th Street	15.9 (B)	32.0 (C)	15.4 (B)	47.7 (D)	12.8 (B)	14.3 (B)	34.0 (C)	38.7 (D)
East 12th Street	38.7 (D)	48.9 (D)	43.4 (D)	63.5 (E)	11.8 (B)	10.8 (B)	163.5 (F)	53.5 (D)

\* - Evaluates Future 2034-year Development Traffic and Background Growth using an annual 0.15% growth rate (source: PennDOT Bureau of Planning and Research for Urban Non-Interstates in Erie County).

Note: Intersection delays reported using SIMTRAFFIC travel demand model and traffic signal Level-of-Service methodology. Delays are reported in seconds per vehicle.

Bold Text indicates intersections where a future Roundabout has been implemented



# **APPENDIX P:**

## BAYFRONT IMPROVEMENT LISTS – WESTERN, CENTRAL, EASTERN

BAYFRONT WEST IMPROVEMENT CONCEPTS	Reduces Congestion & Improves Operations (Y/N)	Provides Multi-Modal Connection Along the Bayfront (Y/N)	Property and Utility Impacts (High, Medium, Low)	Engineering/ Constructability Concerns (Y/N)	Estimated Delivery Time - Short Term (1-2 years) Mid Term (3-4 years) Long Term (5 or more years)	Conceptual Construction Cost Range <10K - >1M	Potential Funding Sources*
11. Variable message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	No	No	Low	No	Short Term	10K - 100K	TIP, HSIP
12. Shared bike lane along Lincoln Ave. and 8th St.	No	Yes	Low	No	Short Term	<10K	LF, TA
13. Arch gateway treatment over roadway near Greengarden Blvd.	No	No	Low	No	Short Term	100K - 1M	LF, P
14. Modify W. 8th St. intersection to include one through lane, one shared through/right-turn lane (eastbound) with merge after intersection	Yes	No	Low	No	Short Term	<10K	TIP, LF
15. Reversible managed lanes from 8th St. to Sassafras St. Ext.	Yes	Yes	Medium	No	Short Term	100K - 1M	ARLE, G, TIP, MMTF
<ol> <li>Rapid Flash Beacon for ped/bike crossing at Cranberry St. and the intersection of W. 8th St. and Greengarden Rd.</li> </ol>	No	Yes	Low	No	Mid Term	10K - 100K	TIP, LF, TA
17. Restrict left turns from Cranberry St. during peak hours	Yes	No	Low	No	Short Term	<10K	LF

\*Potential Funding Sources ARLE – Automated Red Light Enforcement Fund G – Greenlight Go LF – Local Funding TIP – Transportation Improvement Program

P – Private Funding TA – Transportation Alternatives TIGER – Transportation Investments Generating Economic Recovery

MMTF – PA Multimodal Transportation Fund HSIP – Highway Safety Improvement Program

BAYFRONT CENTRAL IMPROVEMENT CONCEPTS	Reduces Congestion & Improves Operations (Y/N)	Provides Multi-Modal Connection Along the Bayfront (Y/N)	Property and Utility Impacts (High, Medium, Low)	Engineering/ Constructability Concerns (Y/N)	Estimated Delivery Time - Short Term (1-2 years) Mid Term (3-4 years) Long Term (5 or more years)	Conceptual Construction Cost Range <10K - >1M	Potential Funding Sources*
<ol> <li>Construct a two-way marginal access road from Liberty Park to State St. and extend multi-use trail</li> </ol>	Yes	Yes	Medium	Yes	MidTerm	>1M	P, LF, TA, MMTF, TIGER
19A. Dual-lane roundabout at Marginal Access Road and Bayfront Parkway. Sassafras Ext becomes right in/right out only. OR	Yes	No	Medium	Yes	LongTerm	>1M	TIP, TIGER
19B. Construct a signalized intersection to connect Marginal Access Road and Bayfront Parkway. Sassafras Ext becomes right in/right out, only.	Yes	No	Medium	Yes	LongTerm	>1M	TIP, TIGER
20A. Pedestrian bridge over Bayfront Parkway connecting to an elevator equipped building within the Bayfront Place development OR	No	Yes	High	Yes	Mid Term	>1M	P, MMTF, TA, TIGER, HSIP
20B. Pedestrian bridge over the Bayfront Parkway near Peach St.	No	Yes	High	Yes	Mid Term	>1M	MMTF, TA, TIP, TIGER, HSIP
21. People mover system within the central Bayfront with a dedicated route	Yes	Yes	Low	No	Mid Term	10K - 100K	Р
22A. Dual-lane roundabout at State St. with separate service road to UPMC Hamot OR	Yes	No	High	Yes	Long Term	>1M	TIP, TIGER, HSIP
22B. Realign travel lanes at State St. intersection and extend left turn lanes on the Bayfront Parkway OR	Yes	No	Medium	Yes	Mid Term	100K - 1M	TIP, HSIP
22C. Grade Separation - Enhanced Modal Access	Yes**	Yes	High	Yes	Long Term	>1M	TIP, MMTF, TIGER, HSIP
22D. Grade Separation - Westbound/ Eastbound Full Ramp Access	Yes	Yes	High	Yes	Long Term	>1M	TIP, MMTF, TIGER, HSIP
23. Pedestrian bridge over Bayfront Parkway connecting to an elevator equipped building within the Harbor Place development	No	Yes	High	Yes	Mid Term	>1M	P, MMTF, TA, TIGER, HSIP
24A. Dual-lane roundabout at Holland St. OR	Yes	Yes	High	Yes	Long Term	>1M	TIP, TIGER, HSIP
24B. Redesign Holland St. intersection to extend left turning lanes on the Bayfront Parkway, add turning lanes on Holland St.	Yes	Yes	High	Yes	Long Term	>1M	TIP, TIGER, HSIP
25. Create a new multi-use trail connecting the promenade at East German St. down the bluff to Holland St.	No	Yes	High	No	Long Term	100K - 1M	TA, MMTF, LF
26. Four lane roadway on the Bayfront Parkway from Holland St. to Port Access Rd.	Yes	No	Medium	No	Long Term	100K - 1M	TIP, P, MMTF
** Based upon upgrades to 12th Street							

#### Based upon upgrades to 12th Street

\*Potential Funding Sources ARLE – Automated Red Light Enforcement Fund G – Greenlight Go LF – Local Funding TIP – Transportation Improvement Program

P – Private Funding TA – Transportation Alternatives TIGER – Transportation Investments Generating Economic Recovery

MMTF – PA Multimodal Transportation Fund HSIP – Highway Safety Improvement Program

BAYFRONT EAST IMPROVEMENT CONCEPTS	Reduces Congestion & Improves Operations (Y/N)	Provides Multi-Modal Connection Along the Bayfront (Y/N)	Property and Utility Impacts (High, Medium, Low)	Engineering/ Constructability Concerns (Y/N)	Estimated Delivery Time - Short Term (1-2 years) Mid Term (3-4 years) Long Term (5 or more years)	Conceptual Construction Cost Range <10K - >1M	Potential Funding Sources*
Improvement Description	ж <del>с</del>		ā t	ШO	т z v m	00	۵
27. Narrow travel lanes to 11 ft. from Port Access Rd. to E. 12th St.	No	Yes	Low	No	Short Term	100K - 1M	TIP, TA, HSIP
28. Pedestrian refuge at intersections from E. 6th St. to E. 10th St.	No	Yes	Low	No	Short Term	100K - 1M	TIP, ARLE, TA, MMTF, HSIP
29. Two bus pull-off areas (one east side and one west side between 8th St. and 10 St.) and relocate multi-use trail around the bus pull-off	Yes	Yes	Low	No	Short Term	10K - 100K	TIP (Transit), MMTF
30. Gateway treatments at E. 12th St.	No	No	Low	No	Short Term	10K - 100K	LF, P
31. Add speed display signs at E. 12th St.	Yes	Yes	Low	No	Short Term	10K - 100K	ARLE, MMTF, HSIP
32. Dual-lane roundabout at E. 12th St.	Yes	No	High	Yes	Long Term	>1M	TIP, MMTF, HSIP
33. Variable message signs entering the Parkway along I-79 N. and the Bayfront Connector displaying travel time	No	No	Low	No	Short Term	10K - 100K	TIP, HSIP

\*Potential Funding Sources ARLE – Automated Red Light Enforcement Fund G – Greenlight Go LF – Local Funding TIP – Transportation Improvement Program

P – Private Funding TA – Transportation Alternatives TIGER – Transportation Investments Generating Economic Recovery

MMTF – PA Multimodal Transportation Fund HSIP – Highway Safety Improvement Program



# **APPENDIX Q:**

## BAYFRONT IMPROVEMENT CONCEPTS – WESTERN, CENTRAL, EASTERN





### Blended Scenario - Western Bayfront Improvement Concepts





## Blended Scenario - Central Bayfront Improvement Concepts





## Blended Scenario - Eastern Bayfront Improvement Concepts





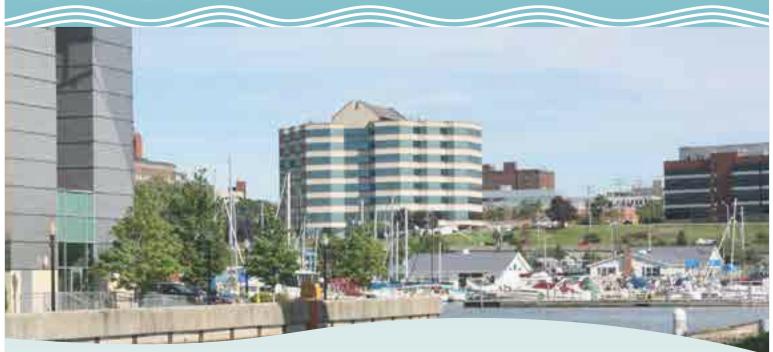






# **APPENDIX R:**

## **BAYFRONT PARKWAY TRAFFIC CIRCULATION STUDY (AUGUST 2016)**



## DRAFT

# **Bayfront Parkway Traffic Circulation Study**

Sassafras to Holland August 2016







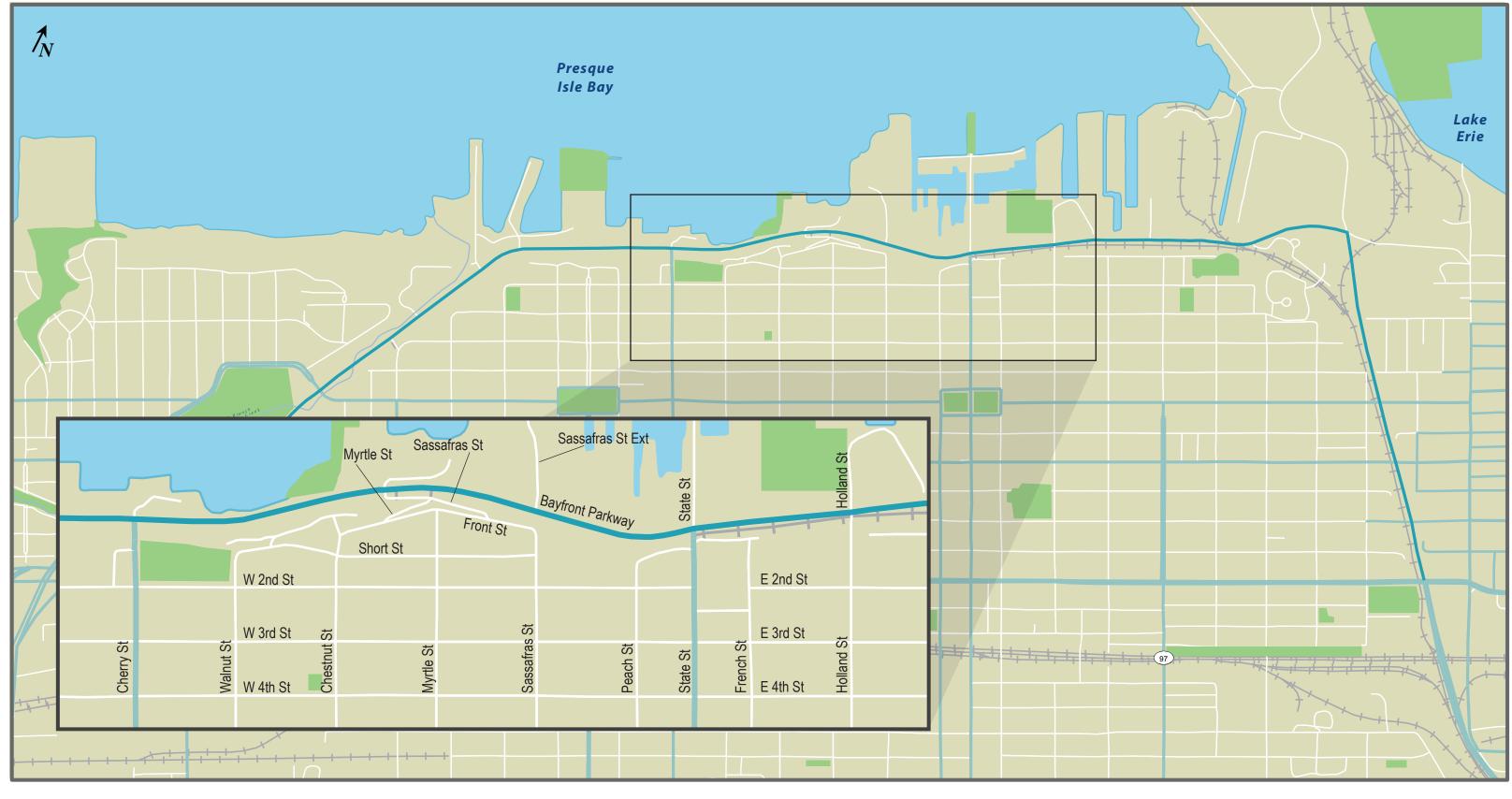
#### **OVERVIEW AND SUMMARY OF FINDINGS**

This memorandum and supporting documentation provides an analysis of the traffic circulation associated with a proposed 2034 future build improvement concept taking into account proposed development along the Bayfront. Several developments are proposed along the Bayfront adjacent to Lake Erie to the north of the Bayfront Parkway within the City of Erie. The focus study area for this analysis along the Bayfront Parkway is bounded to the west at Sassafras Street and at Holland Street to the east (see Figure 1 – Traffic Circulation Study Area). The purpose of this traffic analysis was to develop a traffic projection for the year 2034 that includes known potential developments, and evaluates a proposed build alternative (see Figure 2 – Bayfront Future Build Concept) for reconfiguring this area to accommodate the traffic demand. In short, it was determined that the proposed build alternative will accommodate the anticipated future traffic demand. While the many details that go into the analysis will need to be further refined as the Bayfront development plans and roadway improvement plans are advanced in tandem; it appears in concept that the proposed build improvement concept will work acceptably.

With the reconfiguration of the Bayfront Parkway and the emphasis on the redevelopment of the area, it would likely be beneficial to the regional circulation of traffic for longer distance through traffic to utilize 12th Street as an alternative to the Bayfront Parkway. As part of this overall project, it is recommended that the Department pursue improvements to 12th Street, such as adaptive traffic signal control, to improve travel time on 12<sup>th</sup> Street and consequently its attractiveness. Additionally, the deployment of ITS strategies along Interstate 79 located in advance of the Bayfront Parkway to provide real travel time information for trips along the Bayfront and 12<sup>th</sup> Street should be considered to better manage the travel demand along each route.

### BACKGROUND TRAFFIC VOLUMES

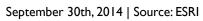
Intersections within the study area include Sassafras Street, Sassafras Street Extension, State Street, Holland Street and considering a new access point to the west of Sassafras St. Ext and east of the Waterworks Driveway. As a result, these intersections were counted August 2014 and inflated to the year 2034 using a background traffic growth rate of 0.15% per year, which was consistent with the Bureau of Planning and Research (BPR) annual growth rates for urban non-freeways in Erie County, as well as the regional travel demand forecasting model for the Erie metro area.



- Legend
- ++ Railroad
- State Road
- Local Road
- Parks
- ----- Bayfront Parkway

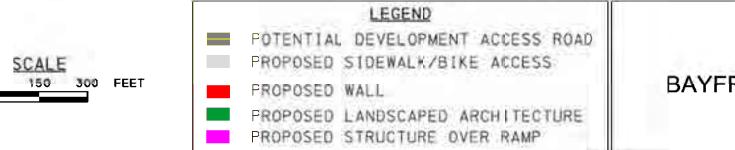
## Figure 1 Traffic Study Focus Area

### City of Erie | Erie County, Pennsylvania









## FIGURE 2 BAYFRONT FUTURE BUILD CONCEPT

AUGUST, 2016

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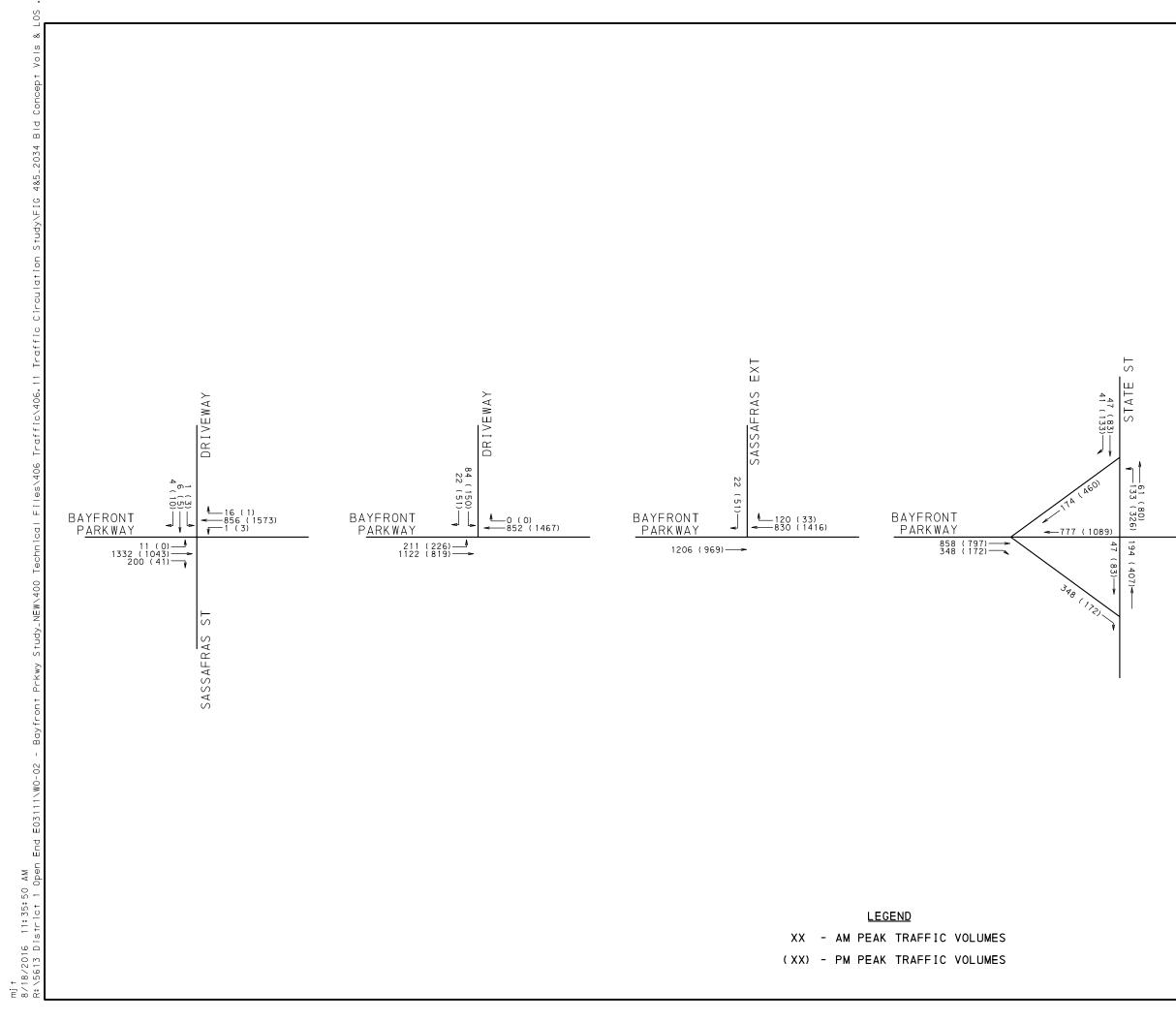


#### **PROPOSED DEVELOPMENTS**

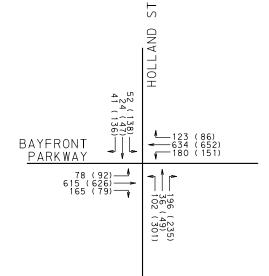
Traffic from the following proposed developments was included in the 2034 traffic forecast:

- Cobblestone Hotel 54 rooms, located to the west of the study area
- Ore Dock Road Industrial 200 employees / 50 acres of industrial development to the east of the study area
- Bayfront Place 192 room hotel; 25 townhouses; 72 apartments; 46,000 SF of retail; 34,000 SF of office space; and a 6,000 SF restaurant located north of the Bayfront Parkway in the vicinity of Sassafras Street
- Harbor Place 28,500 SF of retail; 220 room hotel; 43 townhouses; 123,000 SF of office space; 100 apartments; and a 4,500 SF restaurant located north of the Bayfront Parkway between State Street and Holland Street

The development traffic forecast is provided in a spreadsheet form (See – Appendix A). Note that the number of trip ends associated with each development was calculated using the materials in ITE's <u>*Trip</u></u> <u><i>Generation Manual* (9th Edition). In order to account for growth anticipated in the region, these trip ends were then compared to the trip productions, unbalanced attractions, and balanced attractions computed by the Erie County Regional Travel Demand Model (TDM). The TDM applied base socioeconomics associated with each development as specific inputs into the model. As a result of this analysis, the ITE-generated trip ends were then lowered by a percentage corresponding to the reduction in trip attractions at the development sites when the productions and attractions were balanced. This approach to traffic forecasting allowed the ITE trip generation projections to be customized for the Erie metropolitan area, and are more in line with the population and employment centers within the area, which are appropriate for use within the study (see Figure 4 –Build Concept 2034 Turning Movement Volumes).</u></u>



### ERIE BAYFRONT PARKWAY BUILD CONCEPT 2034 TURNING MOVEMENT VOLUMES FIGURE 4





#### PROPOSED BUILD ALTERNATIVE

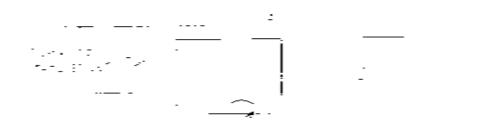
A concept drawing of the proposed build alternative is provided (see Figure 2 – Bayfront Future Build Concept). The following improvements are proposed to mitigate future traffic conditions at the intersections within the traffic circulation study area along the Bayfront Parkway (from west to east) as well as to provide better connectivity to the city of Erie's defined downtown area:

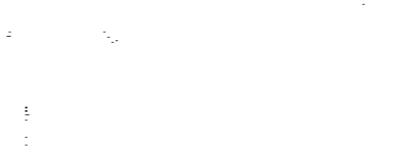
- o Sassafras Street No improvements proposed
- New Development Driveway A new driveway would connect to the Bayfront Parkway between Sassafras Street and Sassafras Street Extension. Through cross-connectivity of adjacent parcels, this driveway would provide access to Bayfront Place and Harbor Place. A two-lane roundabout is proposed at the intersection of the development driveway with the Bayfront. The two directional lanes on the Bayfront will need to extend to the west of the intersection for a minimum of 1,000-ft to avoid negatively impacting traffic operations along the Bayfront. The driveway approach to the roundabout appears as if it would function acceptably with either one lane or two lanes.
- o Sassafras Street Extension Converted to right-in / right-out operation
- State Street Grade-separated with ramps connecting the Bayfront Parkway EB with State Street SB; and State Street NB and SB with the Bayfront Parkway WB. The Bayfront will continue under a proposed bridge on State Street and the existing signalized intersection at the Bayfront and State will be eliminated (see Figure 3 – Bayfront/ State Street Grade Separation Concept).
- Holland Street Converted to a two-lane roundabout and connected to the proposed development in such a way that it functions as its eastern-most driveway entrance. The two directional lanes on the Bayfront will need to extend to the east of the intersection for a minimum of 1,000-ft to avoid negatively impacting traffic operations along the Bayfront. Most likely both approaches to Holland Street will need to be two lanes in order to operate at acceptable levels. From an operational standpoint, it appears the roundabout will accommodate projected traffic volumes; however, the steepness of the approach grades on Holland Street, in particular at the northbound approach, will need to be further investigated to ensure the roundabout is feasible.











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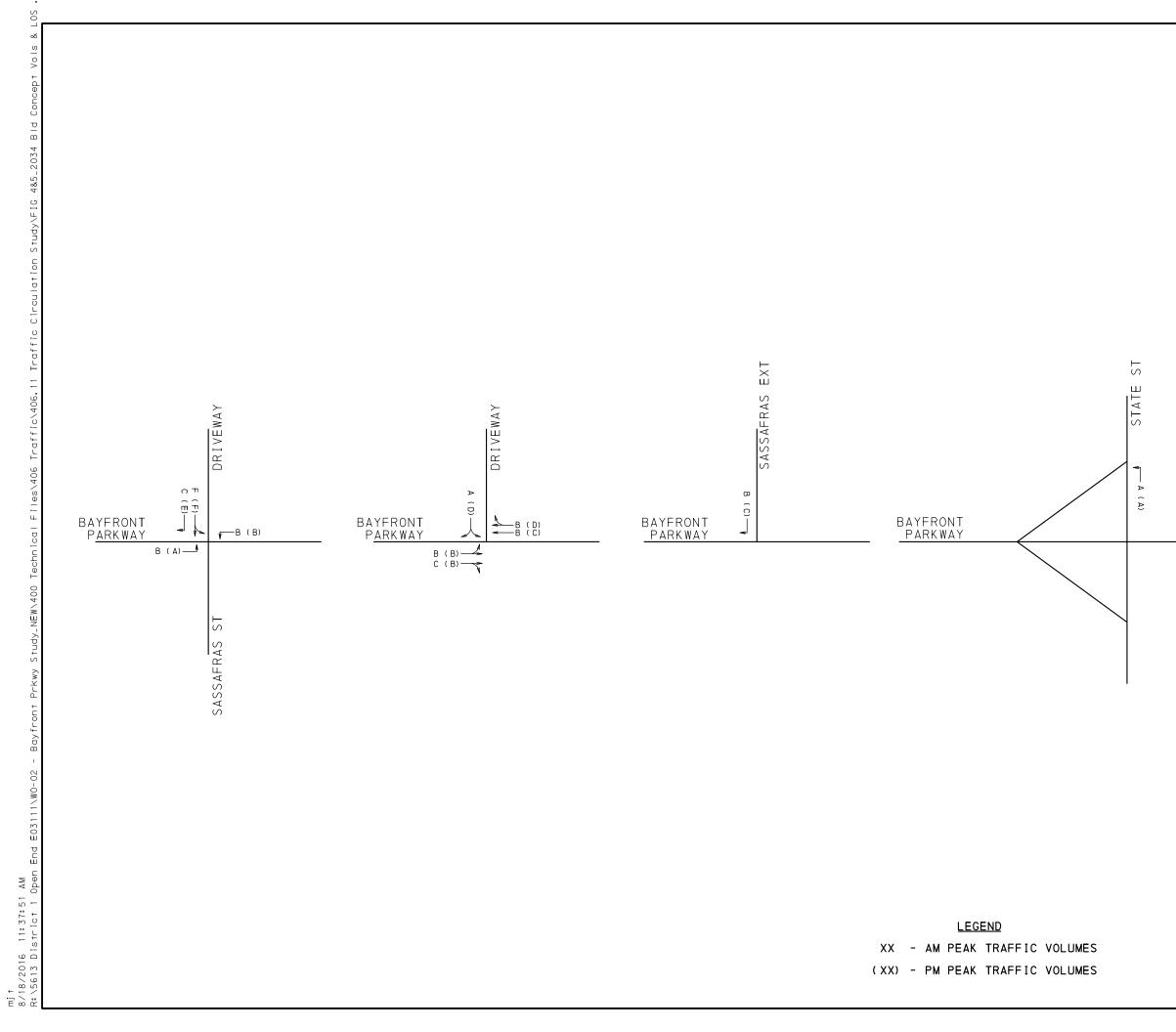


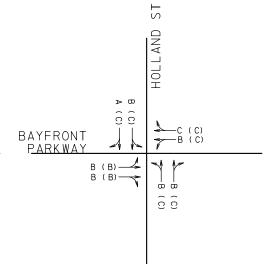
#### PROPOSED 2034 BUILD WITH DEVELOPMENT LEVEL OF SERVICE (LOS)

The Level-of-Service (LOS) was evaluated with the Highway Capacity Manual (HCM) procedures in Synchro where feasible. For the intersection of State Street with the WB on-ramp to the Bayfront Parkway, the Synchro procedures were required because HCM is not capable of evaluating it. Overall 2034 build intersection LOS is provided in Table 1, and the Synchro and/ or HCM output is provided in Appendix B. The 2034 Build Concept LOS by movement is provided in Figure 5. Please note the following:

- Currently, the Bayfront Parkway is one lane in each direction to the east and west of the study area, but assumed to be two lanes in each direction through the study area. At both the eastern and western limits, where the through lane is dropped, a bottleneck is expected. Since the two proposed roundabouts are on the eastern and western ends of the study area, the lane drops just beyond the roundabouts could impact the lane utilization and distribution in the roundabouts (i.e., traffic could overload the lane that is continuing on and avoid the lane that is dropping). This will have a significant impact on the capacity and LOS in these roundabouts. The lane drops must be moved a sufficient distance from the roundabouts to ensure normal lane utilization. For the purpose of this analysis, it is assumed this distance is a minimum of 1,000-ft at each limit. As the project advances, further analysis is warranted to better refine this distance.
- The Bayfront WB on-ramp from State Street appears to be overcapacity at its junction with the Bayfront Parkway when modeled as a right-turn at an intersection. It is assumed that in reality, this movement will be under capacity since it is a ramp junction and not a right turn movement.
- There will be some diversion of traffic south of the Bayfront Parkway in the street grid between State Street and Holland Street since it will no longer be possible to interchange directly between State Street to the south and the Bayfront Parkway to the east. The impacts to intersections such as 3rd Street at State Street or 3rd Street at Holland Street were not evaluated.
- Intersections that are internal to the development (Harbor Place and Bayfront Place) were not modeled with the exception of the approaches to the roundabouts on the Bayfront at the project limits. Most likely these intersections will not be configured until the development plans are advanced further. Key concerns would be whether backups from the internal intersections reach the Bayfront Parkway, and whether turning movements inside the development cause the uneven utilization of available lanes on the Bayfront Parkway.

The LOS of the "2034 Build with Development" scenario are summarized in Table 1.





### ERIE BAYFRONT PARKWAY FUTURE 2034 LOS BY MOVEMENT FIGURE 5

Table 1 - 2034 Build With Develo	pment Overall Intersection LOS Summary

Intersection	AM Peak	PM Peak
Sassafras Street	A	А
Development Driveway	В	С
Sassafras Street Extension	A	А
Holland Street	В	С
State Street at the WB On Ramp	А	А

#### PROPOSED 2034 BUILD WITH DEVELOPMENT QUEUE RESULTS

Our analysis of the 95th percentile queues from Synchro (stop-controlled intersections) and HCM 2010 (roundabouts) are summarized in Table 2 for the "2034 Build with Development" scenario. Note that some of the lanes that have little to no queuing in them (right-turn lanes and low volume left-turn lanes) were omitted from the tabulation. Also, many of the approaches have more than one lane, and in those cases, the longest queue on the approach is provided.

As can be seen, there are no problematic queues expected.

Intersection	Approach	AM	PM
Bayfront at Sassafras St	SB Sassafras St	5	8
	EB Bayfront	200	100
Bayfront Driveway	WB Bayfront	100	350
	SB Driveway	25	100
Bayfront at Sassafras St Ext	SB Sassafras St Ext	3	14
	EB Bayfront	100	100
Doufront at Holland St	WB Bayfront	125	175
Bayfront at Holland St	NB Holland St	50	125
	SB Holland St	25	50
State St at the WB On Ramp	NB State St Left-Turn	8	27

Table 2 - 2034 Build with Development 95th Percentile Queue Length Summary (feet)



#### **CONCLUDING REMARKS**

In summary, the traffic analysis of the conceptual improvements to the Bayfront Parkway from Sassafras Street to Holland Street demonstrates that the basic framework should provide a viable long-term solution for the area. As further details regarding the development and the design of the roadway improvements become available, the traffic analysis and assumptions should be revisited to ensure good traffic operations result. In addition, as additional details become available, it will be necessary to expand the study area to evaluate intersections and circulation patterns that are internal to the proposed developments, as well as key intersections along 12<sup>th</sup> Street and the city grid south of the Bayfront Parkway between State Street and Holland Street.



# Appendix A: Traffic Forecast Spreadsheet

#### Daily Trip Generation for Known Developments on Erie Bayfront

		Socio-					
	ITE Land	economic	Size of				
	Use #	Variable	SEV	Daily In%	Daily In	Daily Out	Total
Cobblestone Hotel	310	Rooms	54	0.5	221	221	441
Ore Dock Rd Industrial	130	Employees	200	0.5	453	453	906
Harbor Place							
Shopping Center (Rates)	820	1000 SF	28.5	0.5	608	608	1217
Hotel	310	Rooms	220	0.5	899	899	1797
Townhouses	230	Dwell Unit	43	0.5	154	154	309
General Office Building	710	1000 SF	123	0.5	768	768	1536
Apartment	220	Dwell Unit	100	0.5	333	333	665
High Turnover Restaurant	932	1000 SF	4.5	0.5	286	286	572
					3048	3048	6097
Internal Capture (20%)					610	610	1219
Total Trips					2439	2439	4877
Bayfront Place							
Courtyard by Marriott	310	Rooms	192	0.5	784	784	1569
Townhouses/Carriage Homes	230	Dwell Unit	25	0.5	96	96	193
Apartment	220	Dwell Unit	72	0.5	239	239	479
Shopping Center (Rates)	820	1000 SF	46	0.5	982	982	1964
General Office Building	710	1000 SF	34	0.5	289	289	578
High Turnover Restaurant	932	1000 SF	6	0.5	381	381	763
	002		Ū	0.0	2773	2773	5545
Internal Capture (20%)					555	555	1109
Total Trips					2218	2218	4436
					2210	2210	4400

Ore Dock Rd Industrial	130	Acres	50	0.5	1456	1456	2911

WRA Modeling Output

Productions and Attractions (w hotel HH's)

				Just Attractions	Factor				
	TAZ F	Productions	Unbalance Ba	lanced A	Unbal	Bal	% Reduction		
Harbor Place	402	1844	3744	2954	5588	4798	14%	21%	0.79
Bayfront Place	1210	1259	2784	2131	4043	3390	16%	23%	0.77
Ore Dock	1435	375	1303	1087	1678	1462	13%	17%	0.83
Cobblestone	1440	392	574	505	966	897	7%	12%	0.88
Getgo	1441	39	236	168	275	207	25%	29%	0.71

Socio- TTE Land Use #       Socio- econo Variable       Size of SEV       AM In %       PM In %       Sat In %       AM In       AM Out       PM In       PM Out       Sat In       Sat Out         Cobblestone Hotel       310       Rooms       54       0.59       0.51       0.56       15       10       15       14       19       15         Ore Dock Rd Industrial       130       Acres       50       0.62       0.64       18       19       25       23         Bank       912       1000 SF       10       0.62       0.48       0.52       6       4       18       19       25       23         Bank       912       1000 SF       3.5       0.57       0.5       0.51       24       18       43       43       47       45         Bank       Pass-by       8       8       20       20       17       17       17         New trips       21       13       34       36       49       45       45	
Use #         Variable         SEV         AM In %         PM In %         Sat In %         AM In         AM Out         PM In         PM Out         Sat In         Sat In         Sat Out           Cobblestone Hotel         310         310         Rooms         54         0.59         0.51         0.56         15         10         15         14         19         15           Ore Dock Rd Industrial         130         Acres         50         0.62         246         50         62         235         63         134           Shopping Center (Rates)         820         1000 SF         10         0.62         0.48         0.52         6         4         18         19         25         23           Bank         912         1000 SF         3.5         0.57         0.5         0.51         24         18         43         43         47         45           Bank         Pass-by         8         8         20         20         17         17           New trips         21         13         34         36         49         45	
Use #         Variable         SEV         AM In %         PM In %         Sat In %         AM In         AM Out         PM In         PM Out         Sat In         Sat In         Sat Out           Cobblestone Hotel         310         310         Rooms         54         0.59         0.51         0.56         15         10         15         14         19         15           Ore Dock Rd Industrial         130         Acres         50         0.62         246         50         62         235         63         134           Shopping Center (Rates)         820         1000 SF         10         0.62         0.48         0.52         6         4         18         19         25         23           Bank         912         1000 SF         3.5         0.57         0.5         0.51         24         18         43         43         47         45           Bank         Pass-by         8         8         20         20         17         17           New trips         21         13         34         36         49         45	
Ore Dock Rd Industrial       130       Acres       50       0.83       0.21       0.32       246       50       62       235       63       134         Shopping Center (Rates)       820       1000 SF       10       0.62       0.48       0.52       6       4       18       19       25       23         Bank       912       1000 SF       3.5       0.57       0.57       0.51       24       18       43       43       47       45         Bank       Pass-by       1       1       6       6       6       6       6       6       6         Wer trips       21       13       34       36       49       45       45         Harbor Place       Vertices       Vertices	
Shopping Center (Rates)       820       1000 SF       10       0.62       0.48       0.52       6       4       18       19       25       23         Bank       912       1000 SF       3.5       0.57       0.5       0.51       24       18       43       43       47       45         Bank       Pass-by       1       1       6       6       6       6         Bank       Pass-by       8       8       20       20       17       17         New trips       21       13       34       36       49       45	
Bank       912       1000 SF       3.5       0.57       0.5       0.51       24       18       43       43       47       45         Shopping       Pass-by       1       1       6       6       6       6         Bank       Pass-by       8       8       20       20       17       17         New trips       21       13       34       36       49       45	
Bank       912       1000 SF       3.5       0.57       0.5       0.51       24       18       43       43       47       45         Shopping       Pass-by       1       1       6       6       6       6         Bank       Pass-by       8       8       20       20       17       17         New trips       21       13       34       36       49       45	
Shopping       Pass-by       1       1       6       6       6         Bank       Pass-by       8       8       20       20       17       17         New trips       21       13       34       36       49       45	
Bank Pass-by 8 8 20 20 17 17 New trips 21 13 34 36 49 45	
Bank       Pass-by       8       8       20       20       17       17         New trips       21       13       34       36       49       45	
Harbor Place	
Harbor Place	
Shopping Center (Rates) 820 1000 SF 28.5 0.62 0.48 0.52 17 10 51 55 71 66	
Hotel 310 Rooms 220 0.59 0.51 0.56 69 48 67 65 89 70	
Townhouses 230 Dwell Unit 43 0.17 0.67 0.54 4 22 20 10 30 25 Things on Holland St	
General Office Building 710 1000 SF 123 0.88 0.17 0.54 199 27 37 179 29 24 AM In 12	
Apartment 220 Dwell Unit 100 0.2 0.65 0.5 11 42 47 25 30 30 AM Out 50	
High Turnover Restaurant 932 1000 SF 4.5 0.55 0.6 0.53 27 22 27 18 34 30 PM In 55	
257 135 196 278 223 193 PM Out 29	
Internal Capture (20%) 27 27 39 39 39 39	
Total Tips Total 230 108 157 239 184 155 Current Traffic on Holland and State	
Holland 115 54 145 146 Holland State	
State 115 54 12 93 AM In 120 105	
State 113 34 12 33 AM III 120 103 AM Out 36 84	
	133
Excess Faiking 0 0 0 0 0 0 0 0 PM m 88 221	53 92.81288
	55 92.01200
Bayfront Place Courtyard by Marriott 310 Rooms 192 0.59 0.51 0.56 60 42 59 56 77 61	
· · · · · · · · · · · · · · · · · · ·	
Apartment         220         Dwell Unit         72         0.2         0.65         0.5         8         31         37         20         24         24         0	
Shopping Center (Rates)         820         1000 SF         46         0.62         0.48         0.52         27         17         82         89         115         106	
General Office Building         710         1000 SF         34         0.88         0.17         0.54         71         10         20         97         8         7	
High Turnover Restaurant         932         1000 SF         6         0.55         0.6         0.53         36         29         35         24         45         40	
157 109 188 223 227 200	
Internal Capture (20%) 22 22 38 38 40 40	
Total Trips 135 87 151 186 187 160	
Parking Garage 0 0 0 0 0	
365 195 308 424 371 315	

#### Trip Distribution for everything but the gas station

I-79 / Bayfront Highway to the west:	25%
PA 290 / Bayfront Highway to the east:	25%
State Street:	15%
Cranberry St	10%
Holland St	5%
Sassafras	0%
12th St to the west	5%
8th St to the west	5%
12th St to the east	3%
6th Street to the east:	7%

#### Trip Distribution for the Getgo Outparcels (From Getgo TIS, Figure 10 "Primary Trip Distribution")

Pass-by trips do not need to be assigned to anything since the driveway is not being modeled.

New Trips		In	Out
Lincoln North	3%	SB TH at Lincoln	NB TH at Lincoln
Lincoln South	1%	Not on network	
Greengarden North	2%	SB TH at Greengarden	NB TH at Greengarden
Greengarden South	57% (Includes 12th St traffic)	Not on network	
Bayfront West	19%	RT at Lincoln	NB LT at Lincoln
Bayfront East	18%	LT at Greengarden	NB RT at Greengarden

#### **Trip Distribution for the Cobblestone**

Bayfront West	40%
Bayfront East	40%
State St	20%

#### **Trip Distribution for Parking Garages**

Pass-by on Bayfront, New Trips from DowntownBayfront West30%Bayfront East30%State St20%Holland St20%

#### AM Peak Traffic Forecast

	Bayfront Parkwa		
EB Bayfront	LT	11	
	TH	1332	
	RT	200	
WB Bayfront	LT	1	
	TH	856	
ND C	RT	16	
NB Sassafras	LT	0	
	TH	0	
6 B G (	RT	0	
SB Sassafras	LT	1	
	TH	6	
D.:	RT	4	
•	lyfront Parkway	214	All ED LTS and involves involve Chats and Case E.A. (200) from U. Band
EB Bayfront	LT	211	<all +="" 25%="" and="" assigned="" eb="" ext="" from="" holland<="" lts="" previously="" sass="" state="" td="" to=""></all>
	TH	1122	
WB Bayfront	TH	852	A basel for the transmission of the second section of the test of the
	RT	0	<0 by default. Too many other opportunities to turn RT in.
Driveway SB	LT	84	<all and="" ext="" half="" lts="" of="" out="" sass="" sb="" state<="" td=""></all>
	RT	22	<half ext<="" of="" out="" rts="" sass="" sb="" td=""></half>
	nsion at Bayfront		
EB Bayfront	тн	1206	
WB Bayfront	тн	830	
	RT	120	<half (other="" +="" go="" half="" holland)="" into="" previous<="" rts="" state="" td="" to="" wb=""></half>
Sass Ext SB	RT	22	<half (other="" driveway)<="" ext="" half="" new="" of="" out="" rts="" sass="" sb="" td="" to="" went=""></half>
	at Bayfront Park		
EB Bayfront	тн	858	
	RT	348	<previously +="" 25%="" at="" eb="" holland="" of="" rts="" rts<="" state="" td=""></previously>
WB Bayfront	тн	777	
SB Ramp	RT	174	<previous and="" lt="" nb="" of="" out="" rt="" sb="" state<="" td=""></previous>
EB Off Ramp at	t State St		
EB Off Ramp	RT	348	
NB State St	TH	194	<previous minus="" nb="" of="" out="" rt="" state<="" td=""></previous>
SB State St	тн	47	<-Previous SB TH
WB Off Ramp a	at State St		
NB State St	LT	133	<-Previous NB LT
	тн	61	<previous nb="" td="" th<=""></previous>
SB State St	тн	47	<previous sb="" td="" th<=""></previous>
ob otate ot	RT	41	<-Previous SB RT
Holland Stat B	ayfront Parkway	41	
EB Bayfront	LT	78	<-25% diverted to new driveway to west
LD Daynont	TH	615	<same and="" as="" before="" but="" half="" less="" lts="" minus="" nb="" of="" out="" rt="" sb="" state="" state<="" td="" the=""></same>
	RT	165	<same 25%="" as="" at="" before="" minus="" right="" state<="" td="" turned=""></same>
M/D Day frant			<-Same as before + WB LT into State
WB Bayfront	LT	180	<same all="" and="" as="" before="" but="" half="" into="" less="" lts="" rts="" state="" state<="" td="" wb=""></same>
	TH	634	<previous +="" half="" holland="" into="" rt="" rts="" state<="" td="" wb=""></previous>
ND Liellend	RT	123	<plevious +="" hall="" holialiu="" iiio="" kt="" kts="" state<="" td="" wb=""></plevious>
NB Holland	LT	102	
	TH	36	
	RT	196	<nb +="" holland="" nb="" of="" out="" rt="" state<="" td=""></nb>
SB Holland	LT	52	
			<all +="" half="" holland="" lts="" of="" out="" sb="" state<="" td=""></all>
	тн	24	<all +="" hair="" holland="" lts="" of="" out="" sb="" state<="" td=""></all>
	TH RT	24 41	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
			<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
Check of Balan	RT		<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
Check of Baland EB Leave Sass	RT		<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
	RT ce on Bayfront	41	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass	RT ce on Bayfront	41 1333	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Drive	RT <b>ce on Bayfront</b> way	41 1333	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver	RT <b>ce on Bayfront</b> way way	41 1333 1333 1206	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Drive	RT <b>ce on Bayfront</b> way way	41 1333 1333	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx	RT <b>ce on Bayfront</b> way way t	41 1333 1333 1206 1206	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasExt	RT <b>ce on Bayfront</b> way t t	41 1333 1333 1206 1206 1206	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx	RT <b>ce on Bayfront</b> way t t	41 1333 1333 1206 1206	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasExt EB Arrive State	RT <b>ce on Bayfront</b> way t t St Ramp	41 1333 1333 1206 1206 1206 1206	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Drivev EB Leave Drivev EB Arrive SasEx EB Leave SasEx EB Arrive State EB Leave State	RT ce on Bayfront way way t t St Ramp St Ramp	41 1333 1333 1206 1206 1206 1206 858	<all +="" half="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasExt EB Arrive State	RT ce on Bayfront way way t t St Ramp St Ramp	41 1333 1333 1206 1206 1206 1206	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Leave State EB Arrive Hollar	RT ce on Bayfront way way t t St Ramp St Ramp nd	41 1333 1333 1206 1206 1206 1206 858 858	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Arrive Hollar WB Leave Holla	RT ce on Bayfront way way t t St Ramp nd	41 1333 1333 1206 1206 1206 1206 858 858 858	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Leave State EB Arrive Hollar	RT ce on Bayfront way way t t St Ramp nd	41 1333 1333 1206 1206 1206 1206 858 858	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Arrive Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Arrive Hollar WB Leave Holla WB Arrive State	RT ce on Bayfront way way t t St Ramp st Ramp nd e St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 858	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Leave State EB Leave State EB Arrive Hollar WB Leave Holla WB Arrive State WB Leave State	RT ce on Bayfront way way t St Ramp nd and a St Ramp e St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 777 777 951	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Arrive Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Arrive Hollar WB Leave Holla WB Arrive State	RT ce on Bayfront way way t St Ramp nd and a St Ramp e St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 858	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Leave State EB Leave State EB Arrive Hollar WB Leave Holla WB Leave State WB Leave State	RT ce on Bayfront way way t St Ramp nd and a St Ramp e St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 777 777 951	<all +="" haif="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Leave Driver EB Arrive SasEx EB Leave SasEx EB Arrive State EB Leave State EB Leave State EB Arrive Hollar WB Leave Holla WB Leave State WB Leave State	RT ce on Bayfront way way t St Ramp st Ramp nd e St Ramp e St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 777 777 951	<all +="" hair="" holland="" lis="" of="" out="" sb="" state<="" td=""></all>
EB Leave Sass EB Arrive Driver EB Arrive SasEx EB Leave SasEx EB Leave State EB Arrive Hollar WB Leave Holla WB Leave State WB Leave State WB Leave State	RT ce on Bayfront way way t St Ramp St Ramp nd and and St Ramp c St Ramp c St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 858 777 777 777 951 951	<-All SB LIS out of Holland + Half out of State
EB Leave Sass EB Arrive Driver EB Arrive SasEx EB Arrive SasEx EB Leave SasEx EB Arrive State EB Arrive Hollar WB Leave Holla WB Leave State WB Leave State WB Leave State WB Leave State	RT ce on Bayfront way way t St Ramp St Ramp nd and and St Ramp c St Ramp c St Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 777 777 951 951 951 852	<-All SB LIS out of Holland + Half out of State
EB Leave Sass EB Arrive Driver EB Arrive SasEx EB Arrive SasEx EB Leave SasEx EB Arrive State EB Arrive Hollar WB Leave Holla WB Leave State WB Leave State WB Leave State WB Leave State	RT ce on Bayfront way way t St Ramp st Ramp nd e St Ramp e St Ramp xt st Ramp	41 1333 1333 1206 1206 1206 1206 858 858 858 777 777 951 951 951 852	<-All SB LIS out of Holland + Hait out of State
EB Leave Sass EB Arrive Driver EB Arrive SasEx EB Arrive SasEx EB Leave SasEx EB Arrive State EB Arrive Holla WB Leave State WB Leave State WB Arrive State WB Arrive SasE WB Leave Sas E	RT ce on Bayfront way way t St Ramp nd a St Ramp nd a St Ramp xt St Ramp xt ist Ramp xt ist Ramp xt ist Ramp xt ist Ramp	41 1333 1333 1206 1206 1206 1206 858 858 777 777 951 951 852 852	<-All SB LIS out of Holland + Hait out of State

- 1	7
- 1	1

#### PM Peak Traffic Forecast

	Bayfront Parkway		
EB Bayfront	LT	0	
	TH RT	1043 41	
W/R Pourfront	LT	41	
WB Bayfront	TH	1513	
	RT	1515	
NB Sassafras	LT	0	
140 383381183	тн	0	
	RT	0	
SB Sassafras	LT	3	
00 000001100	TH	5	
	RT	10	
Driveway at Ba			
EB Bayfront	LT	226	<all +="" 25%="" and="" assigned="" eb="" ext="" from="" holland<="" lts="" previously="" sass="" state="" td="" to=""></all>
	тн	819	. , .
WB Bayfront	TH	1467	
	RT	0	<0 by default. Too many other opportunities to turn RT in.
Driveway SB	LT	150	<all and="" ext="" half="" lts="" of="" out="" sass="" sb="" state<="" td=""></all>
	RT	51	<half ext<="" of="" out="" rts="" sass="" sb="" td=""></half>
Sassafras Exten	sion at Bayfront	Parkway	
EB Bayfront	TH	969	
WB Bayfront	TH	1416	
	RT	133	<half (other="" +="" go="" half="" holland)="" into="" previous<="" rts="" state="" td="" to="" wb=""></half>
Sass Ext SB	RT	51	<half (other="" driveway)<="" ext="" half="" new="" of="" out="" rts="" sass="" sb="" td="" to="" went=""></half>
	at Bayfront Park	way	
EB Bayfront	тн	797	
	RT	172	<previously +="" 25%="" at="" eb="" holland="" of="" rts="" rts<="" state="" td=""></previously>
WB Bayfront	тн	1089	
SB Ramp	RT	460	<previous and="" lt="" nb="" of="" out="" rt="" sb="" state<="" td=""></previous>
EB Off Ramp at	State St		
EB Off Ramp	RT	172	
NB State St	TH	407	<previous minus="" nb="" of="" out="" rt="" state<="" td=""></previous>
SB State St	тн	83	<-Previous SB TH
WB Off Ramp a			
NB State St	LT	326	<-Previous NB LT
	ТН	80	<previous nb="" td="" th<=""></previous>
SB State St	TH	83	<previous sb="" td="" th<=""></previous>
	RT	133	<-Previous SB RT
	ayfront Parkway		
EB Bayfront	LT	92	<-25% diverted to new driveway to west
	TH	626	<same and="" as="" before="" but="" half="" less="" lts="" minus="" nb="" of="" out="" rt="" sb="" stat<="" state="" td="" the=""></same>
	RT	79	<same 25%="" as="" at="" before="" minus="" right="" state<="" td="" turned=""></same>
WB Bayfront	LT	151	<-Same as before + WB LT into State
	TH RT	652 86	<same all="" and="" as="" before="" but="" half="" into="" less="" lts="" rts="" state="" state<br="" wb=""><previous +="" half="" holland="" into="" rt="" rts="" state<="" td="" wb=""></previous></same>
NB Holland	LT	301	<plevious +="" hall="" hollanu="" iiito="" rt="" rts="" state<="" td="" wb=""></plevious>
NB HUIIAIIU	TH	49	
	RT	235	<nb +="" holland="" nb="" of="" out="" rt="" state<="" td=""></nb>
SB Holland	LT	138	<all +="" half="" holland="" lts="" of="" out="" sb="" state<="" td=""></all>
36 Hollanu	TH	47	< All SE LIS out of Holianu + Hall out of State
	RT	136	
	NI	150	
Check of Baland	e on Bayfront		
EB Leave Sass	le on Baynon	1046	
EB Arrive Drive	M 2 M	1046	
LB AITIVE DITVEY	way	1040	
EB Leave Drivev	vav	969	
EB Arrive SasExt		969	
Lo mine basex		505	
EB Leave SasExt		969	
EB Arrive State		969	
ED AITIVE SLOLE	schamp	505	
EB Leave State S	St Ramn	797	
EB Leave State : EB Arrive Hollar		797	
Lo Annive Holiar		131	
	nd	1089	
WR LEAVE HOUS		1089	
	St Ramn	1003	
	st Ramp		
WB Arrive State		1549	
WB Arrive State	St Ramp	1549 1549	
WB Arrive State	St Ramp	1549 1549	
WB Arrive State WB Leave State WB Arrive SasE	St Ramp kt	1549	
WB Arrive State WB Leave State WB Arrive SasE WB Leave Sas E	St Ramp kt xt	1549 1467	
WB Arrive State WB Leave State WB Arrive SasE WB Leave Sas E	St Ramp kt xt	1549	
WB Arrive State WB Leave State WB Arrive SasE WB Leave Sas E WB Arrive Drive	St Ramp kt xt eway	1549 1467 1467	
WB Arrive State WB Leave State WB Arrive SasE WB Leave Sas E WB Arrive Drive WB Leave Drive	St Ramp kt xt eway	1549 1467 1467 1517	
WB Arrive State WB Leave State WB Arrive SasE WB Leave Sas E WB Arrive Drive WB Leave Drive	St Ramp kt xt eway	1549 1467 1467 1517 1517	VIQUS
WB Leave Holla WB Arrive State WB Leave State WB Arrive SasE: WB Leave Sas E WB Arrive Drive WB Leave Drive WB Arrive Sass FB Arriving Area	St Ramp kt xt eway way	1549 1467 1467 1517 1517 NEW	EVIOUS
WB Arrive State WB Leave State WB Arrive SasE: WB Leave Sas E WB Arrive Drive WB Leave Drive WB Arrive Sass EB Arriving Area	St Ramp kt xt eway way	1549 1467 1467 1517 1517 NEW 1084	1084
WB Arrive State WB Leave State WB Arrive SasE WB Leave Sas E WB Arrive Drive WB Leave Drive WB Arrive Sass	St Ramp kt xt eway way	1549 1467 1467 1517 1517 NEW	
WB Arrive State WB Leave State WB Arrive SasE WB Arrive Drive WB Leave Drive WB Leave Drive WB Arrive Sass EB Arriving Area EB Leaving Area	St Ramp kt xt way way	1549 1467 1467 1517 1517 1517 NEW 1084 1000	1084 1000
WB Arrive State WB Leave State WB Arrive SasE: WB Leave Sas E WB Arrive Drive WB Leave Drive WB Arrive Sass EB Arriving Area	St Ramp kt xt way way a a	1549 1467 1467 1517 1517 NEW 1084	1084

#### AM Peak Traffic Forecast Using Existing Road Configuration

			Jorrection	Aujusted	Background				Cobblestone		Industrial P		Bayfront Pla		BP Parking	<u>.</u>	Harbor Pla		1. Ch. 1	HP Parki	-	<b>.</b> .
		ont Parkway			Growth	(From TIS)	In	Out	In	Out	In	Out	In	Out	In	Out	In Holl	Out Holl	In State	Out State In	Out	Tot
Bayfront		151		151	5																	150
	TH	1027		1027	31	9			6		61		34				29		29			122
_	RT	7		7	0		4															11
Bayfront		47		47	1	1																49
	тн	426		426	13	9				4		13		22				14		14		51
	RT	13		13	0	1																14
Lincoln	LT	0		0	0			2														2
	ΤН	15		15	0			0														10
	RT	17		17	1																	1
incoln.	LT	10		10	0	1																1
	TH	10		10	0		1															1
	RT	79		79	2																	8
engarder	n Blvd at	Bayfront Par	kway																			
ayfront	LT	47		47	1																	48
	TH	991		991	30	5			6		61		34				29		29			11
	RT	16		16	0																	16
Bayfront	LT	122	12	134	4	5	4					3		4				3		3		1
	TH	471	47	518	16	5				4		13		22				14		14		6
	RT	2		2	0																	:
igarden		11		11	0																	1
	ΤН	65		65	2			0														6
	RT	183		183	6	5		2			12		7				6		6			22
garden	LT	1		1	0																	:
	TH	23		23	1		0															2
	RT	9		9	0																	9
Street at	Bayfron	nt Parkway																				
NB) Bfrt		0		0	0																	0
	ΤН	870		870	26				6		74		40				35		35			10
	RT	281		281	9																	29
(SB) Bfrt		0		0	0																	c
(- ) -	тн	488	-49	439	13					4		15		26				16		16		53
	RT	209		209	6							3		4				3		3		22
th St	LT	114	100	214	7						12		7				6		6			2
	тн	92		92	3																	9
	RT	9		9	0																	9
8th St	LT	370	-100	270	8																	2
	тн	207		207	6																	2:
	RT	4		4	0																	-
nberry St		ront Parkway			-																	
ayfront	-	1182	-118	1064	32				6		86		47				40		40			13
,	RT	79		79	2				-													-
Bayfront		36		36	1							5		9				5		5		6
	TH	663		663	20					4		18		31				19		19		7
ry NB		27		27	1					-		10		51				15		15		2
.,	RT	127		127	4						25		13				12		12			1
ara Pier		ont Parkway		/	Ŧ						23		15				16					-
ayfront		10		10	0																	1
aynont	TH	1258		1258	38				6		111		61				52		52			15
Bayfront		669		669	20				J	4		23	51	39			52	24	32	24		8
Daynoll	RT	2		2	20					4		23		35				24		24		٥
gara SB		4		4	0																	
5010 30	RT	4 10		4 10	0																	1
ronco Di		ction at Bayf	ront Darlow		U																	-
		•	I UIIL PAIKW	•	0																	
Bayfront	LI TH	6 1268		6	0				c		111		61				52		50			15
		1208		1268	39				6		111		61				52		52			158
Bayfront		662		662	20					4		23		39				24		24		79

	RT	4		4	0														
Lpier Con SB		1		1	0														
Cohblactory	RT	3	r at Bauf	3 Iont Barkway	0														
		5	er at Bayn	ont Parkway	0														
EB Bayfront	TH	5 1291		5 1291	39			111		61				52		52			
	RT	0		0	0	6		111		01				52		52			
						9													
WB Bayfron	TH	0		0 669	0 20	9			22		20				24		24		
		669							23		39				24		24		
	RT	0		0	0														
NB Hotel	LT	0		0	0		4												
	TH	0		0	0														
	RT	0		0	0		6												
SB Lpier	LT	0		0	0														
	TH	0		0	0														
	RT	2		2	0														
		ont Parkway																	
EB Bayfront		2		2	0														
	TH	1226		1226	37		6	111		61				52		52			
WB Bayfron		627		627	19	9	)		23		39				24		24		
	RT	5		5	0														
Boat Lnch SE		1		1	0														
	RT	0		0	0														
Sassafras St	at Bayfro	ont Parkway																	
EB Bayfront	LT	11		11	0														
	TH	1053	-33	1020	31		6	111		61				52		52			
	RT	194		194	6														
WB Bayfront	t LT	1		1	0				0		0				0		0		
	TH	660	55	715	22	9	)		23		39				24		24		
	RT	16		16	0														
NB Sassafras	s LT	0		0	0														
	тн	0		0	0														
	RT	0		0	0			0		0				0		0			
SB Sassafras		1		1	0														
	тн	6		6	0														
	RT	4		4	0														
Sassafras Ex		at Bayfront Pa	arkwav																
EB Bayfront		20		20	1					61		0							
,	тн	1001		1001	30		6	111		~-		0		52		52			
WB Bayfron		709	19	728	22	9			23			č	0		24		24		
	RT	16	10	16	0	5			25	74		0	5				-7		
Sass Ext SB		9		9	0						48	Ū	0						
JUD LAL JD	RT	4		4	0						48 39		0						
State St at B				-	0								5						
EB Bayfront		50		50	2											52		0	
20 Daynont	TH	687	3	690	21		4	111			35		0	52		52		0	
	RT	270	J	270	8		4				13	0	0	54				0	
WB Bayfron		69		69	8		2		8		12	U	0		8			U	
VVD DdyllOll	TH	621		621	19	6			8 23	54		0			8 24				
						0	,		25	54		U			24	10			
ND Ctata	RT	13		13	0	2				20		0	0			46			0
NB State	LT	107		107	3	3	•			20		U	0			47		~	0
	TH	42		42	1											17		0	
: -:	RT	78		78	2			37						17					
SB State	LT	30		30	1												22		
	TH	38		38	1												8		0
	RT	16		16	0												24		0
Holland St a																			
EB Bayfront		34		34	1									69					
	TH	537	21	558	17		4	147			31		0				19		

	RT	206		206	6						4		0				3	3	0
ayfron		88		88	3				3										0
	TH	615	-7	608	19	6			30	47		0				40			
	RT	51		51	2									40					0
Iolland	LT	87		87	3					7		0				6			
	TH	35		35	1														0
	RT	42		42	1			12						6					
Holland	LT	7		7	0										19				
	TH	21		21	1										3				
	RT	8		8	0										32				
e Dock) '		eatment at Ba	vfront Parkw	ay															
Bayfront		27	•	27	1			160											
.,	тн	548		548	17		4				31		0		19		19	19	
Bayfron		745		745	23	6				47		0	•	40		40			0
Duymon	RT	13		13	0	0		86		47		0		40		40			0
front CP		13		13	0			00	10										
Freat SB									18										
	RT	18		18	1				33										
		Bayfront Park	way																
Bayfront		25		25	1														
	TH	133		133	4														
	RT	402		402	12		4		18		31		0		19		19	19	
Bay Dr	LT	5		5	0														
	TH	111		111	3														
	RT	3		3	0														
Bayfront		639		639	19	6		86		47		0		40		40			0
,	тн	12		12	0														
	RT	41		41	1														
DAcc Pd	LT	6		6	0														
PAcc Rd					0														
	TH	10		10															
	RT	. 8		8	0														
	yfront Pa																		
6th St	LT	14		14	0														
	TH	139		139	4														
	RT	38		38	1								0						
6th St	LT	51		51	2														
	TH	306		306	9														
	RT	324		324	10			17		9				8		8			
Bayfront		198		198	6							0							
.,	тн	327		327	10	6		69		38		0		32		32			0
	RT	59		59	2	-						-							-
Bayfront		225		225	7				4		6				4		4	Л	
Jaynont	ТН	184		184	6		4		14		24		0		15		15		
	RT	2		2	0		4		14		24		U		13		15	13	
C+ ++ P -				2	U														
St at Ba	yfront Pa			-	0														
2+h C+	1.7	5		5	0														
8th St	LT	20		20	1														
8th St	тн	20			0														
	TH RT	5		5															
8th St 8th St	TH RT LT	5 13		13	0														
	TH RT LT TH	5																	
	TH RT LT	5 13		13	0														
	TH RT LT TH RT	5 13 7		13 7	0 0														
8th St	TH RT LT TH RT LT	5 13 7 15 12		13 7 15	0 0 0 0	6		69		38				32		32			0
8th St	TH RT LT TH RT LT TH	5 13 7 15 12 577		13 7 15 12 577	0 0 0 18	6		69		38				32		32			0
8th St Bayfront	TH RT LT TH RT LT TH RT	5 13 7 15 12 577 17		13 7 15 12 577 17	0 0 0 18 1	6		69		38				32		32			0
8th St	TH RT LT TH RT LT TH RT LT	5 13 7 15 12 577 17 9		13 7 15 12 577 17 9	0 0 0 18 1 0	6	4	69	14	38	24			32	15	32	15	15	0
8th St Bayfront	TH RT TH RT LT TH RT LT TH	5 13 7 15 12 577 17 9 256		13 7 15 12 577 17 9 256	0 0 0 18 1 0 8	6	4	69	14	38	24			32	15	32	15	15	0
8th St Bayfront Bayfront	TH RT LT TH RT LT TH RT TH RT	5 13 7 15 12 577 17 9 256 3		13 7 15 12 577 17 9	0 0 0 18 1 0	6	4	69	14	38	24			32	15	32	15	15	0
8th St Bayfront Bayfront <b>h St at B</b>	TH RT LT TH RT LT TH RT TH RT RT <b>ayfront P</b>	5 13 7 15 12 577 17 9 256 3 <b>arkway</b>		13 7 15 12 577 17 9 256 3	0 0 0 18 1 0 8 0	6	4	69	14	38	24			32	15	32	15	15	0
Bth St Bayfront ayfront	TH RT LT TH RT LT TH RT TH RT RT <b>ayfront P</b>	5 13 7 15 12 577 17 9 256 3		13 7 15 12 577 17 9 256	0 0 0 18 1 0 8	6	4	69	14	38	24			32	15	32	15	15	0

WB 10th St NB Bayfront SB Bayfront	TH RT LT TH RT	26 18 118 13 120 587 14 18 248 16	26 18 118 13 120 587 14 18 248 16	1 4 0 4 18 0 1 8 0				6	4	69	14	38	24			32	15	32	15	0 0	0	27 19 122 13 124 782 14 19 328 16
EB 12th St	LT TH RT	51 447 89	51 447 89	2 14 3																	0	53 461 92
-	LT TH RT	33 407 70	33 407 70	1 12 2						7		4				3		3				34 419 90
	TH RT	221 590 63 66	221 590 63 66	7 18 2 2				6		61	2	34	3			29	2	29	2	0 0		228 767 65 75
	TH RT	174 45	174 45	5 1					4		13		22				14		14		0	245 46
Check of Balar	nce on B	ayfront																				
EB Leave Sass		1054	1021	31	0	0	0	0	6	111	0	61	0	0	0	52	0	52	0	0	0	1333
EB Arrive SasE	xt	1021	1021	31	0	0	0	0	6	111	0	61	0	0	0	52	0	52	0	0	0	1333
EB Leave SasE>	xt	1010	1010	31	0	0	0	0	6	111	0	0	48	0	0	52	0	52	0	0	0	1309
EB Arrive State	e	1007	1010	31	0	0	0	0	6	111	0	0	48	0	0	52	0	52	0	0	0	1309
EB Leave State	5	795	798	24	0	0	0	0	4	147	0	0	35	0	0	69	0	0	22	0	0	1099
EB Arrive Holla	and	777	798	24	0	0	0	0	4	147	0	0	35	0	0	69	0	0	22	0	0	1099
WB Leave Holl	land	710	703	21	0	0	0	6	0	0	30	54	0	0	0	0	32	46	0	0	0	893
WB Arrive Stat	te	703	703	21	0	0	0	6	0	0	30	54	0	0	0	0	32	46	0	0	0	893
WB Leave Stat	te	744	744	23	0	0	0	9	0	0	23	74	0	0	0	0	24	0	24	0	0	921
WB Arrive Sas	Ext	725	744	23	0	0	0	9	0	0	23	74	0	0	0	0	24	0	24	0	0	921
WB Leave Sas	Ext	713	732	22	0	0	0	9	0	0	23	0	39	0	0	0	24	0	24	0	0	874
WB Arrive Sass	s	677	732	22	0	0	0	9	0	0	23	0	39	0	0	0	24	0	24	0	0	874

#### PM Peak Traffic Forecast Using Existing Road Configuration

incoln Ave :	at Bavfro	ont Parkway		.,	Background Growth	Getgo (From TIS)	In	Out	Cobblestone In	Out	Industrial P In	Out	Bayfront Plac In	Out	BP Parking In	Out	Harbor Plae In Holl		In State	HP Parkir Out State In	Out	
B Bayfront		175		175	5	(		out		out		out		out		out		outrion	motate	our state in	out	
,	тн	475	45	520	16	10			6		16		38				36		3			
	RT	13	45	13	0	10	7		0		10		50				50		5			
							/															
Bayfront		68		68	2	1																
	TH	866		866	26	10				6		59		46				36		23		
	RT	38		38	1	1																
3 Lincoln	LT	2		2	0			7														
	TH	44		44	1			1														
	RT	16	2	18	1																	
						2																
3 Lincoln	LT	12	1	13	0	2																
	TH	25		25	1		1															
	RT	163		163	5																	
eengarder	n Blvd at	<b>Bayfront Par</b>	kway																			
Bayfront		19		19	1	1																
baynone	тн	478		478	15	4			6		16		38				36		3			
						4			0		10		50				50		5			
	RT	17		17	1																	
'B Bayfront		155		155	5	4	6					12		9				7		5		
	TH	864		864	26	4				6		59		46				36		23		
	RT	3		3	0																	
B Ggarden		49		49	1																	
5 oguiuell	TH	68		68	2	1		1														
								1			_		~				_					
	RT	223	22	245	7	4		6			3		8				7		1			
B Ggarden	LT	3		3	0																	
	TH	66		66	2	1	1															
	RT	31		31	1	1																
th Street at				51	-	-																
B (NB) Bfrt		0		0	0																	
	TH	619	70	689	21				6		19		45				44		4			
	RT	153		153	5																	
VB (SB) Bfrt	LT	1		1	0																	
( ,	тн	752		752	23					6		71		56				44		28		
										0												
	RT	267		267	8							12		9				7		5		
B 8th St	LT	235	30	265	8						3		8				7		1			
	TH	212		212	6																	
	RT	13		13	0																	
VB 8th St	LT	269		269	8																	
	тн	213		213	6																	
	RT	27	3	30	1																	
ranberry St	: at Bayfr	ont Parkway																				
B Bayfront	ΤН	796	103	899	27				6		22		53				51		4			
	RT	79		79	2																	
VB Bayfront		109		109	3							24		19				15		9		
• D Daynoll										c												
	тн	1038		1038	32					6		82		65				51		32		
berry NB	LT	48		48	1																	
	RT	144	19	163	5						6		15				15		1			
iagara Pier		ont Parkway																				
B Bayfront		12		12	0																	
o buyn ont			122	1041	32				c		20		68				65		5			
	TH	919	122						6		28		δσ				65		э			
VB Bayfront		1070		1070	33					6		106		84				66		42		
	RT	8		8	0																	
liagara SB	LT	2		2	0																	
5	RT	20		20	1																	
wrones P!			cont Davi		-																	
		ction at Bayf	ont Parkw		-																	
B Bayfront		90		90	3																	
	TH	838	122	960	29				6		28		68				65		5			
VB Bayfront	TH	1014		1014	31					6		106		84				66		42		
,	RT	15		15	0																	
nior Con CD				15	0																	
pier Con SB		1																				
	RT	21		21	1																	
	Hotel /	Lawrence Pie	r at Bayfro	ont Parkwa	У																	
obblestone B Bayfront		73		73	2																	

23

	TH RT	762 0	122	884 0	27 0	6		28		68				65		5				1077 6
WB Bayfront	TH	0 1045		0 1045	0 32	9			106		84				66		42			9 1374
NB Hotel	RT LT	59 0		59 0	2 0		6													61 6
ind flotter	тн	0		0	0															0
SB Lpier	RT LT	0 7		0 7	0 0		8													8 7
ob spici	тн	0		0	0															0
Boat Launch	RT at Bayfro	13 nt Parkway		13	0															13
EB Bayfront		7		7	0															7
_	тн	705	122	827	25		8	28		68				65		5				1027
WB Bayfront	TH RT	1025 32		1025 32	31 1	9			106		84				66		42			1362 33
Boat Lnch SB		7		7	0															7
	RT	2		2	0															2
Sassafras St a EB Bayfront		nt Parkway 0		0	0															0
EB BayIroni	ТН	720	122	842	26		8	28		68				65		5				1043
	RT	40		40	1															41
WB Bayfront		3	- 1	3	0	0			0		0				0		0			3
	TH RT	1121 1	51	1172 1	36 0	9			106		84				66		42			1513 1
NB Sassafras		0		0	0															0
	тн	0		0	0															0
SB Sassafras	RT	0 3		0 3	0 0			0		0				0		0				0 3
50 585581185	TH	5		5	0															5
	RT	10		10	0															10
Sassafras Ext			rkway	26						<b>C0</b>										
EB Bayfront	TH	26 819		26 819	1 25		8	28		68		0 0		65		5				95 951
WB Bayfront		1176	-17	1159	35	9			106				0		66		42			1416
	RT	20		20	1					83		0								103
Sass Ext SB	LT RT	12 17		12 17	0 1						102 84		0 0							115 101
State St at Ba				1,	-						04		0							101
EB Bayfront		93		93	3											5		0		101
	TH RT	645 112	-19	626 112	19 3		6 3	28			74 28	0	0 0	65				0 0		818 146
WB Bayfront		54		54	2		5		35		20	0	0		22			0		113
	тн	834	-36	798	24	6			106	60		0			66					1060
NB State St	RT	52 292		52 292	2 9	3				23		0	0			5			0	58 326
ND State St	ТН	76		76	2	5				25		0	U			2		0	0	80
	RT	125		125	4			9						22						160
SB State St	LT	33		33	1												37			71
	TH RT	67 89		67 89	2 3												14 42		0 0	83 133
Holland St at				05	5														U	100
EB Bayfront		34		34	1									87						122
	TH RT	548 89	113	661 89	20 3		6	37			65 9		0 0				32 5	0		822 106
WB Bayfront		26		26	1				12		2		0				5	0		39
	тн	573		573	17	6			141	53		0				4				794
NB Holland	RT	6		6 284	0 9					8		0		51		1		0		57 301
імь нопала	LI TH	284 48		284 48	9					0		U				1		0		301 49
	RT	63		63	2			3						7				-		75
SB Holland	LT	50		50	2										51				0	103
	TH RT	39 47		39 47	1 1										7 87				0	47 136
					-															

B Bayfront		11	Bayfront Pa	11	0			41											
,	тн	909	-119	790	24		6				65		0		51		32		0
/B Bayfront		641		641	20	6				53		0		51		4		0	
., .	RT	7		7	0			22											
Treat SB		9		9	0				82										
incut 55	RT	28		28	1				153										
rt Access		Bayfront Pa	rkway	20	-				155										
Bayfront		17	IRway	17	1														
baynon	ТН	108		108	3														
	RT	793	-119	674	21		6		82		65		0		51		32		0
B Bay Dr	LT	11	-119	11	0		0		02		03		0		51		52		0
в вау рг																			
	TH	98 11		98 11	3 0														
	RT					6		22		50		0		F 4				0	
Bayfront		536		536	16	6		22		53		0		51		4		0	
	TH	13		13	0														
	RT	4		4	0														
PAcc Rd	LT	5		5	0														
	ΤН	12		12	0														
	RT	14		14	0														
h St at Bay																			
3 6th St	LT	11		11	0														
	TH	319		319	10														
	RT	108		108	3								0						
B 6th St	LT	103		103	3														
	тн	218		218	7														
	RT	269		269	8			4		11				10		1			
Bayfront		82		82	2							0							
	тн	238		238	7	6		17		42		0		41		3		0	
	RT	73		73	2														
Bayfront		354		354	11				16		13				10		6		
.,	тн	363		363	11		6		66		52		0		41		26		0
	RT	11		11	0		0		00		52		0				20		U
th St at Bay				**															
8 8th St	LT	8		8	0														
John Ju	ТН	41		41	1														
				41 27															
	RT	27			1 0														
'B 8th St	LT	13		13															
	TH	21		21	1														
	RT	19		19	1														
B Bayfront		12		12	0											-		-	
	TH	362		362	11	6		17		42				41		3		0	
	RT	38		38	1														
Bayfront		15		15	0														
	TH	547		547	17		6		66		52				41		26		0
	RT	6		6	0														
)th St at Ba	yfront P	Parkway																	
3 10th St	LT	17		17	1														
	ΤН	148		148	5														
	RT	104		104	3														0
/B 10th St	LT	33		33	1														
	тн	115		115	3														
	RT	32		32	1														
Bayfront		41		41	1													0	
.,	тн	353		353	11	6		17		42				41		3		0	
	RT	17		17	1	-										-		-	
Bayfront		16		16	0														
Saynont	ТН	551		551	17		6		66		52				41		26		0
	RT	19		19	17		υ		00		52				41		20		U
+h C+ -+ P-				13	T														
th St at Ba				62	2														
12th St		63		63	2														
	TH	417		417	13														
	RT	242		242	7														0
B 12th St		85		85	3														

TH RT NB Bayfront LT TH SB Bayfront LT TH RT	460 69 145 296 63 94 521 76	460 69 145 296 63 94 521 76	14 2 9 2 3 16 2				6	6	2 16	7 59	5 38	6 46			4 36	4 36	0 3	3 23	0 0	0	474 82 149 403 65 117 707 78
Check of Balance o																					
EB Leave Sass EB Arrive SasExt	723 845	845 845	26 26	0 0	0 0	0 0	0 0	8 8	28 28	0 0	68 68	0 0	0 0	0 0	65 65	0 0	5 5	0 0	0 0	0 0	1046 1046
EB Leave SasExt	831	831	25	0	0	0	0	8	28	0	0	102	0	0	65	0	5	0	0	0	1066
EB Arrive State	850	831	25	0	0	0	0	8	28	0	0	102	0	0	65	0	5	0	0	0	1066
EB Leave State	803	784	24	0	0	0	0	6	37	0	0	74	0	0	87	0	0	37	0	0	1049
EB Arrive Holland	671	784	24	0	0	0	0	6	37	0	0	74	0	0	87	0	0	37	0	0	1049
WB Leave Holland	904	904	28	0	0	0	6	0	0	141	60	0	0	0	0	87	5	0	0	0	1231
WB Arrive State	940	904	28	0	0	0	6	0	0	141	60	0	0	0	0	87	5	0	0	0	1231
WB Leave State	1215	1179	36	0	0	0	9	0	0	106	83	0	0	0	0	66	0	42	0	0	1520
WB Arrive SasExt	1196	1179	36	0	0	0	9	0	0	106	83	0	0	0	0	66	0	42	0	0	1520
WB Leave Sas Ext	1193	1176	36	0	0	0	9	0	0	106	0	84	0	0	0	66	0	42	0	0	1517
WB Arrive Sass	1125	1176	36	0	0	0	9	0	0	106	0	84	0	0	0	66	0	42	0	0	1517
EB Arriving Area EB Leaving Area																					1084 1000
WB Arriving Area WB Leaving Area																					890 1523



# Appendix B: Synchro Output Report (AM & PM)

0.6

#### Intersection

Int Delay, s/veh

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
11	1332	200	1	856	16	0	0	C
4	0	0	0	0	4	0	0	C
Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
-	-	None	-	-	None	-	-	None
60	-	-	-	-	0	-	-	-
-	0	-	-	0	-	-	0	-
-	0	-	-	0	-	-	0	-
89	89	89	89	89	89	89	89	89
0	3	0	0	5	0	2	2	2
12	1497	225	1	962	18	0	0	0
	11 4 Free - 60 - - 89 0	11         1332           4         0           Free         Free           -         -           60         -           -         0           -         0           89         89           0         3	11         1332         200           4         0         0           Free         Free         Free           -         -         None           60         -         -           -         0         -           -         0         -           -         0         -           -         0         -           -         0         -           -         0         -           89         89         89           0         3         0	11         1332         200         1           4         0         0         0           Free         Free         Free         Free           -         -         None         -           60         -         -         -           -         0         -         -           -         0         -         -           89         89         89         89           0         3         0         0	11         1332         200         1         856           4         0         0         0         0           Free         Free         Free         Free         Free           -         -         None         -         -           60         -         -         -         -           60         -         -         -         0           -         0         -         -         0           -         0         -         -         0           -         0         -         -         0           -         0         -         -         0           -         0         -         -         0           -         0         -         -         0           -         0         -         -         0           89         89         89         89         89           0         3         0         0         5	11         1332         200         1         856         16           4         0         0         0         0         4           Free         Free         Free         Free         Free         Free           -         -         None         -         -         None           60         -         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         89         89         89         89         89           0         3         0         0         5         0	11         1332         200         1         856         16         0           4         0         0         0         0         4         0           Free         Free         Free         Free         Free         Stop           -         -         None         -         -         None         -           60         -         -         -         0         -         -           60         -         -         -         0         -         -           60         -         -         -         0         -         -         -           -         0         -         -         0         -         -         -           -         0         -         -         0         -         -         -           -         0         -         -         0         -         -         -           89         89         89         89         89         89         89         89         89         2           0         3         0         0         5         0         2	11         1332         200         1         856         16         0         0           4         0         0         0         0         4         0

Major/Minor	Major1			Major2			
Conflicting Flow All	966	0	0	1721	0	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	4.1	-	-	4.1	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	2.2	-	-	2.2	-	-	
Pot Cap-1 Maneuver	721	-	-	373	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Platoon blocked, %		-	-		-	-	
Mov Cap-1 Maneuver	719	-	-	372	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	

Approach	EB	WB
HCM Control Delay, s	0.1	0
HCM LOS		

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	719	-	-	372	-	-	27	308	
HCM Lane V/C Ratio	0.017	-	-	0.003	-	-	0.291	0.015	
HCM Control Delay (s)	10.1	-	-	14.7	0	-	186	16.9	
HCM Lane LOS	В	-	-	В	А	-	F	С	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.9	0	

#### Intersection

Int Delay, s/veh

Movement	SBL	SBT	SBR
Vol, veh/h	1	6	4
Conflicting Peds, #/hr	4	0	4
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	89	89	89
Heavy Vehicles, %	0	0	0
Mvmt Flow	1	7	4

Major/Minor	Minor2			
Conflicting Flow All	2602	2714	970	
Stage 1	968	968	-	
Stage 2	1634	1746	-	
Critical Hdwy	6.4	6.5	6.2	
Critical Hdwy Stg 1	5.4	5.5	-	
Critical Hdwy Stg 2	5.4	5.5	-	
Follow-up Hdwy	3.5	4	3.3	
Pot Cap-1 Maneuver	28	21	310	
Stage 1	372	335	-	
Stage 2	177	142	-	
Platoon blocked, %				
Mov Cap-1 Maneuver	27	0	308	
Mov Cap-2 Maneuver	27	0	-	
Stage 1	369	0	-	
Stage 2	173	0	-	

Approach	SB
HCM Control Delay, s	124.5
HCM LOS	F

#### Minor Lane/Major Mvmt

Intersection	40.0						
Intersection Delay, s/veh	13.9						
Intersection LOS	В						
Approach		EB		WB		SB	
Entry Lanes		2		2		1	
Conflicting Circle Lanes		2		2		2	
Adj Approach Flow, veh/h		1498		957		119	
Demand Flow Rate, veh/h		1536		1005		119	
Vehicles Circulating, veh/h		94		237		1005	
Vehicles Exiting, veh/h		1030		1393		237	
Follow-Up Headway, s		3.186		3.186		3.186	
Ped Vol Crossing Leg, #/h		0		0		0	
Ped Cap Adj		1.000		1.000		1.000	
Approach Delay, s/veh		16.2		11.0		9.2	
Approach LOS		С		В		А	
Lane	Left	Right	Left	Right	Left		
Designated Moves	LT	TR	LT	TR	LR		
Assumed Moves	LT	TR	LT	TR	LR		
RT Channelized							
Lane Util	0.470	0.530	0.470	0.530	1.000		
<b>A</b> 141 - 1 - 1			0.470	0.550	1.000		
Critical Headway, s	4.293	4.113	4.293	4.113	4.113		
Critical Headway, s Entry Flow, veh/h	4.293 722						
· ·		4.113	4.293	4.113	4.113		
Entry Flow, veh/h	722	4.113 814	4.293 472	4.113 533	4.113 119		
Entry Flow, veh/h Cap Entry Lane, veh/h	722 1053	4.113 814 1058	4.293 472 946	4.113 533 957	4.113 119 559		
Entry Flow, veh/h Cap Entry Lane, veh/h Entry HV Adj Factor	722 1053 0.975	4.113 814 1058 0.975	4.293 472 946 0.953	4.113 533 957 0.952	4.113 119 559 1.000		
Entry Flow, veh/h Cap Entry Lane, veh/h Entry HV Adj Factor Flow Entry, veh/h	722 1053 0.975 704	4.113 814 1058 0.975 794	4.293 472 946 0.953 450	4.113 533 957 0.952 507	4.113 119 559 1.000 119		
Entry Flow, veh/h Cap Entry Lane, veh/h Entry HV Adj Factor Flow Entry, veh/h Cap Entry, veh/h	722 1053 0.975 704 1027	4.113 814 1058 0.975 794 1032	4.293 472 946 0.953 450 902	4.113 533 957 0.952 507 911	4.113 119 559 1.000 119 559		
Entry Flow, veh/h Cap Entry Lane, veh/h Entry HV Adj Factor Flow Entry, veh/h Cap Entry, veh/h V/C Ratio	722 1053 0.975 704 1027 0.686	4.113 814 1058 0.975 794 1032 0.769	4.293 472 946 0.953 450 902 0.499	4.113 533 957 0.952 507 911 0.557	4.113 119 559 1.000 119 559 0.213		

0.1

#### Intersection

Int Delay, s/veh

Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Vol, veh/h	0	1206	830	120	0	22	
Conflicting Peds, #/hr	1	0	0	1	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	Free	-	Yeild	
Storage Length	-	-	-	250	-	0	
/eh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	1	-3	-	-2	-	
Peak Hour Factor	93	93	93	93	93	93	
Heavy Vehicles, %	0	3	5	6	0	0	
Nvmt Flow	0	1297	892	129	0	24	

Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	892	0	-	0	1540	447	
Stage 1	-	-	-	-	892	-	
Stage 2	-	-	-	-	648	-	
Critical Hdwy	4.1	-	-	-	6.4	6.7	
Critical Hdwy Stg 1	-	-	-	-	5.4	-	
Critical Hdwy Stg 2	-	-	-	-	5.4	-	
Follow-up Hdwy	2.2	-	-	-	3.5	3.3	
Pot Cap-1 Maneuver	769	-	-	0	128	579	
Stage 1	-	-	-	0	404	-	
Stage 2	-	-	-	0	524	-	
Platoon blocked, %		-	-				
Mov Cap-1 Maneuver	768	-	-	-	128	579	
Mov Cap-2 Maneuver	-	-	-	-	265	-	
Stage 1	-	-	-	-	404	-	
Stage 2	-	-	-	-	524	-	

Approach	EB	WB	SB	
HCM Control Delay, s	0	0	11.5	
HCM LOS			В	

Minor Lane/Major Mvmt	EBL	EBT	WBT S	SBLn1
Capacity (veh/h)	768	-	-	579
HCM Lane V/C Ratio	-	-	-	0.041
HCM Control Delay (s)	0	-	-	11.5
HCM Lane LOS	А	-	-	В
HCM 95th %tile Q(veh)	0	-	-	0.1

### Lanes, Volumes, Timings 31: Off Ramp/On Ramp & Bayfront Pkwy

0/11/2010	8/1	7/2016	ì
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	۶	-	$\mathbf{r}$	4	-	*	1	t	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<b>∱</b> ⊅			<u></u>							1
Volume (vph)	0	858	348	0	777	0	0	0	0	0	0	174
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Grade (%)		0%			-3%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957										0.865
Flt Protected												
Satd. Flow (prot)	0	3744	0	0	3970	0	0	0	0	0	0	1781
Flt Permitted												
Satd. Flow (perm)	0	3744	0	0	3970	0	0	0	0	0	0	1781
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		673			1275			483			525	
Travel Time (s)		13.1			24.8			13.2			14.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	933	378	0	845	0	0	0	0	0	0	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1311	0	0	845	0	0	0	0	0	0	189
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.88	0.88	0.88	0.86	0.86	0.86	0.88	0.88	0.88	0.88	0.88	0.88
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Yield	
Intersection Summary												
51	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizat	ion 35.8%			IC	U Level o	of Service	A					

Analysis Period (min) 15

Intersection									
Intersection Delay, s/veh	13.2								
Intersection LOS	В								
Approach		EB		WB		NB		SB	
Entry Lanes		2		2		2		2	
Conflicting Circle Lanes		2		2		2		2	
Adj Approach Flow, veh/h		1010		1103		393		137	
Demand Flow Rate, veh/h		1067		1142		410		148	
Vehicles Circulating, veh/h		314		283		930		1118	
Vehicles Exiting, veh/h		952		1057		451		307	
Follow-Up Headway, s		3.186		3.186		3.186		3.186	
Ped Vol Crossing Leg, #/h		0		18		4		0	
Ped Cap Adj		1.000		0.984		1.000		1.000	
Approach Delay, s/veh		13.2		14.1		12.0		9.8	
Approach LOS		В		В		В		А	
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	LT	TR	LT	TR	LT	R	LT	TR	
RT Channelized									
Lane Util	0.470	0.530	0.470	0.530	0.424	0.576	0.473	0.527	
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113	4.293	4.113	
Entry Flow, veh/h	501	566	537	605	174	236	70	78	
Cap Entry Lane, veh/h	893	907	914	927	563	589	489	517	
Entry HV Adj Factor	0.947	0.946	0.965	0.966	0.931	0.979	0.922	0.933	
Flow Entry, veh/h	475	535	518	584	162	231	65	73	
Cap Entry, veh/h	846	858	868	881	524	577	450	482	
V/C Ratio	0.561	0.624	0.597	0.663	0.309	0.400	0.143	0.151	
Control Delay, s/veh	12.4	14.0	13.1	15.1	11.5	12.4	10.0	9.6	
LOS	В	В	В	С	В	В	В	А	
95th %tile Queue, veh	4	4	4	5	1	2	0	1	

	٦	$\mathbf{r}$	1	1	↓	1
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				- 4th	eî	
Volume (vph)	0	0	133	61	47	41
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt					0.937	
Flt Protected				0.967		
Satd. Flow (prot)	0	0	0	3783	1929	0
Flt Permitted				0.967		
Satd. Flow (perm)	0	0	0	3783	1929	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	525			422	720	
Travel Time (s)	11.9			11.5	19.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	145	66	51	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	211	96	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	

### Lanes, Volumes, Timings 62: State Street & Off Ramp

	٦	$\mathbf{i}$	1	1	Ŧ	-
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		1		<u></u>	•	
Volume (vph)	0	348	0	194	47	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Storage Length (ft)	0	300	0			0
Storage Lanes	0	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1781	0	3912	2059	0
Flt Permitted						
Satd. Flow (perm)	0	1781	0	3912	2059	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	483			1176	422	
Travel Time (s)	13.2			32.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	378	0	211	51	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	378	0	211	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.88	0.88	0.88	0.88	0.88	0.88
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	
Intersection Summary						
Area Type:						

Area Type:

1.2

#### Intersection

Int Delay, s/veh

EBL EBT EBR WBL WBT WBR	\\/DI				
	VVDL	EBR	EBT	EBL	Movement
0 1043 41 3 1513 1	3	41	1043	0	Vol, veh/h
3 0 0 0 3	0	0	0	3	Conflicting Peds, #/hr
Free Free Free Free Free Free	Free	Free	Free	Free	Sign Control
None None	-	None	-	-	RT Channelized
60 0	-	-	-	60	Storage Length
- 0 0 -	-	-	0	-	Veh in Median Storage, #
- 0 0 -	-	-	0	-	Grade, %
90 90 90 90 90 90 90	90	90	90	90	Peak Hour Factor
0 2 0 0 1 0	0	0	2	0	Heavy Vehicles, %
0 1159 46 3 1681 1	3	46	1159	0	Mvmt Flow
Free         Free         Free         Free         Free         Free           -         -         None         -         -         None           60         -         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           -         0         -         -         0         -           90         90         90         90         90         90           0         2         0         0         1         0	- - - 90 0	Free None - - - 90 0	- 0 0 90 2	- 60 - - 90	Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %

Major/Minor	Major1			Major2			
Conflicting Flow All	1684	0	0	1204	0	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	4.1	-	-	4.1	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	2.2	-	-	2.2	-	-	
Pot Cap-1 Maneuver	385	-	-	587	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Platoon blocked, %		-	-		-	-	
Mov Cap-1 Maneuver	384	-	-	586	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	

Approach	EB	WB
HCM Control Delay, s	0	0
HCM LOS		

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	384	-	-	586	-	-	17	116	
HCM Lane V/C Ratio	-	-	-	0.006	-	-	0.523	0.096	
HCM Control Delay (s)	0	-	-	11.2	0	-	\$ 357.1	39.3	
HCM Lane LOS	А	-	-	В	А	-	F	E	
HCM 95th %tile Q(veh)	0	-	-	0	-	-	1.4	0.3	

Synchro 8 Report Page 2

#### Intersection

Int Delay, s/veh

Movement	SBL	SBT	SBR
Vol, veh/h	3	5	10
Conflicting Peds, #/hr	3	0	3
Sign Control	Stop	Stop	Stop
RT Channelized	-	-	None
Storage Length	-	-	0
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	90	90	90
Heavy Vehicles, %	0	0	0
Mvmt Flow	3	6	11

Major/Minor	Minor2		
Conflicting Flow All	2873	2895	1687
Stage 1	1691	1691	-
Stage 2	1182	1204	-
Critical Hdwy	6.4	6.5	6.2
Critical Hdwy Stg 1	5.4	5.5	-
Critical Hdwy Stg 2	5.4	5.5	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	19	16	117
Stage 1	166	151	-
Stage 2	294	259	-
Platoon blocked, %			
Mov Cap-1 Maneuver	17	0	116
Mov Cap-2 Maneuver	17	0	-
Stage 1	153	0	-
Stage 2	293	0	-

Approach	SB
HCM Control Delay, s	180.5
HCM LOS	F

### Minor Lane/Major Mvmt

Intersection Delay, s/veh 22.4
Intersection Delay, s/ven 22.4
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Intersection LOS C
Approach EB WB SB
Entry Lanes 2 2 1
Conflicting Circle Lanes 2 2 2
Adj Approach Flow, veh/h 1161 1630 224
Demand Flow Rate, veh/h 1179 1646 224
Vehicles Circulating, veh/h 167 251 1646
Vehicles Exiting, veh/h 1703 1095 251
Follow-Up Headway, s 3.186 3.186 3.186
Ped Vol Crossing Leg, #/h 0 0 0
Ped Cap Adj 1.000 1.000 1.000
Approach Delay, s/veh 11.8 29.1 28.8
Approach LOS B D D
Lane Left Right Left Right Left
Designated Moves LT TR LT TR LR
Assumed Moves LT TR LT TR LR
RT Channelized
Lane Util 0.470 0.530 0.470 0.530 1.000
Critical Headway, s 4.293 4.113 4.293 4.113 4.113
Entry Flow, veh/h 554 625 774 872 224
Cap Entry Lane, veh/h 997 1005 936 948 357
Entry HV Adj Factor 0.985 0.984 0.990 0.991 1.000
Flow Entry, veh/h 546 615 766 864 224
Cap Entry, veh/h 982 990 926 939 357
V/C Ratio 0.556 0.622 0.827 0.920 0.627
V/C Ratio         0.556         0.622         0.827         0.920         0.627           Control Delay, s/veh         10.9         12.5         23.5         34.1         28.8
V/C Ratio 0.556 0.622 0.827 0.920 0.627

#### Intersection

Int Delay, s/veh

0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	969	1416	133	0	51
Conflicting Peds, #/hr	7	0	0	7	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yeild
Storage Length	-	-	-	250	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	-3	-	-2	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	1053	1539	145	0	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1539	0	-	0	2066	777
Stage 1	-	-	-	-	1539	-
Stage 2	-	-	-	-	527	-
Critical Hdwy	4.1	-	-	-	6.4	6.7
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	438	-	-	0	61	359
Stage 1	-	-	-	0	197	-
Stage 2	-	-	-	0	596	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	435	-	-	-	61	357
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.9
HCM LOS			С

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	435	-	-	357
HCM Lane V/C Ratio	-	-	-	0.155
HCM Control Delay (s)	0	-	-	16.9
HCM Lane LOS	А	-	-	С
HCM 95th %tile Q(veh)	0	-	-	0.5

### Lanes, Volumes, Timings 62: Off Ramp/On Ramp & Bayfront Pkwy

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<b>∱1</b> ≱										1
Volume (vph)	0	797	172	0	1089	0	0	0	0	0	0	460
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Grade (%)		0%			-3%			0%			0%	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973										0.865
Flt Protected												
Satd. Flow (prot)	0	3806	0	0	3970	0	0	0	0	0	0	1781
Flt Permitted												
Satd. Flow (perm)	0	3806	0	0	3970	0	0	0	0	0	0	1781
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		673			1275			483			525	
Travel Time (s)		13.1			24.8			13.2			14.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	866	187	0	1184	0	0	0	0	0	0	500
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1053	0	0	1184	0	0	0	0	0	0	500
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.88	0.88	0.88	0.86	0.86							

Intersection									
Intersection Delay, s/veh	17.9								
Intersection LOS	С								
Approach		EB		WB		NB		SB	
Entry Lanes		2		2		2		2	
Conflicting Circle Lanes		2		2		2		2	
Adj Approach Flow, veh/h		937		1046		688		377	
Demand Flow Rate, veh/h		969		1054		697		392	
Vehicles Circulating, veh/h		410		552		1039		1307	
Vehicles Exiting, veh/h		1289		1184		340		299	
Follow-Up Headway, s		3.186		3.186		3.186		3.186	
Ped Vol Crossing Leg, #/h		0		19		0		0	
Ped Cap Adj		1.000		0.989		1.000		1.000	
Approach Delay, s/veh		13.3		19.2		22.4		17.5	
Approach LOS		В		С		С		С	
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	LT	TR	LT	TR	L	TR	LT	TR	
RT Channelized									
Lane Util	0.470	0.530	0.470	0.530	0.508	0.492	0.469	0.531	
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113	4.293	4.113	
Entry Flow, veh/h	455	514	495	559	354	343	184	208	
Cap Entry Lane, veh/h	831	848	747	768	518	546	424	453	
Entry HV Adj Factor	0.968	0.966	0.993	0.992	1.000	0.975	0.964	0.962	
Flow Entry, veh/h	440	496	492	555	354	334	177	200	
Cap Entry, veh/h	804	819	734	753	518	532	409	435	
V/C Ratio	0.548	0.606	0.670	0.736	0.683	0.628	0.434	0.460	
Control Delay, s/veh	12.5	13.9	17.6	20.6	24.0	20.6	17.6	17.4	
LOS	В	В	С	С	С	С	С	С	
95th %tile Queue, veh	3	4	5	7	5	4	2	2	

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Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		-41	¢Î			
Volume (vph)	326	80	83	133	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.917			
Flt Protected		0.961				
Satd. Flow (prot)	0	3759	1888	0	0	0
Flt Permitted		0.961				
Satd. Flow (perm)	0	3759	1888	0	0	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		422	720		525	
Travel Time (s)		11.5	19.6		11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	354	87	90	145	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	441	235	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.88	0.88	0.88	0.88	0.88	0.88
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	tion 34.3%			IC	U Level o	of Service
Analysis Period (min) 15						

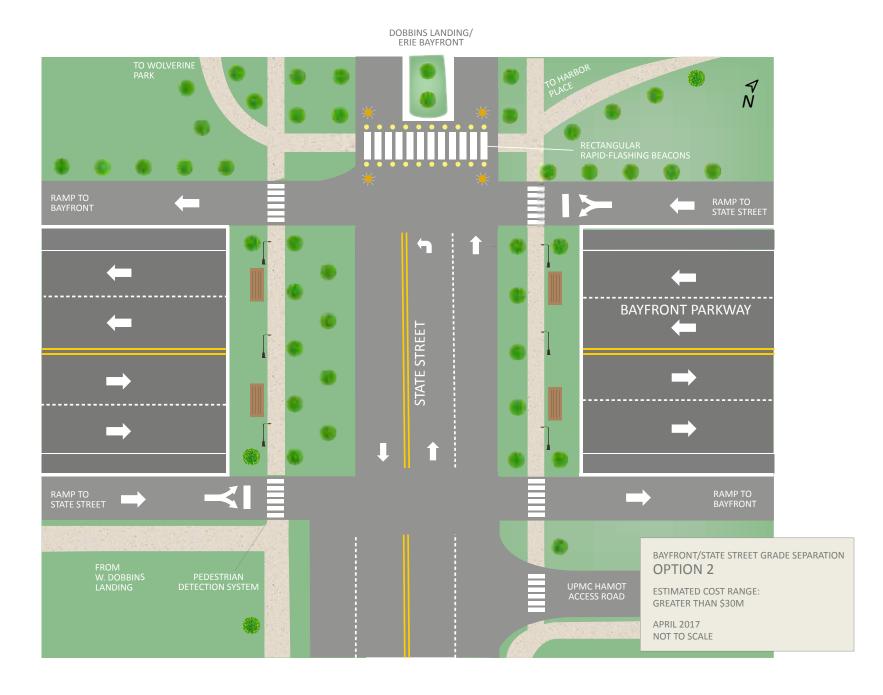
	٦	$\mathbf{r}$	1	1	Ŧ	1
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		1		- 11	<b>↑</b>	
Volume (vph)	0	172	0	407	83	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Storage Length (ft)	0	300	0			0
Storage Lanes	0	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1781	0	3912	2059	0
Flt Permitted						
Satd. Flow (perm)	0	1781	0	3912	2059	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	483			1176	422	
Travel Time (s)	13.2			32.1	11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	187	0	442	90	



# **APPENDIX S:**

## CONCEPTUAL BAYFRONT/STATE STREET GRADE SEPERATION (CAP) OPTIONS







## **APPENDIX T:**

## CONCEPTUAL BAYFRONT/STATE STREET GRADE SEPERATION RENDERINGS



### **Option 1** Bayfront/State Street Grade Separation



### **Option 2** Bayfront/State Street Grade Separation



# **APPENDIX U:**

## BAYFRONT CORRIDOR IMPLEMENTATION PLAN

### **Bayfront Corridor Draft Implementation Plan**

ł		Potential Projects	Potential Time Frame*	Estimated Planning Level Cost **					Proposed Improvement (Need Addressed)	Challe
				PE	FD	UTIL	ROW	CONS	Primary Study Needs - Safety/ Access/ Operational	
	1	Overall Corridor Improvements	Short-term Intermediate-term	A	A	В	В	B/C	<ul> <li>Construct traffic signal back plates (Safety)</li> <li>Enhanced pedestrian access points, way-finding signs, pedestrian crossings, roadway striping and upgraded roadway signing (Access)</li> <li>Evaluate and adjust signal coordination/ timings on Bayfront (Operational)</li> <li>Construct decorative ped/ roadway lighting along corridor with extra intensity at construct (Access)</li> </ul>	<ul> <li>Evaluating if the propose develop the design to av</li> <li>Coordination of decorative</li> </ul>
	2	ITS Structures I-79 (west) Connector (east)	Long-term Short-term	A/B	A/B				<ul> <li>- Intelligent Transportation System (ITS) structure(s) located to the west of 12th St. along I-79 and east of 12th St. along the Bayfront Connector (Operational). ITS architecture will consider travel times of key routes, events, incidents, closures, and weather related messaging.</li> </ul>	<ul> <li>Providing a power source</li> <li>Minimizing or avoiding R</li> <li>Coordinating capability o Stakeholders to ensure f</li> </ul>
			Intermediate-term Long-term			В	В	С		
			Long tonn							
	3	Western Bayfront Improvements	Short-term	В	В		А		<ul> <li>Reversible managed lanes - need to evaluate peak hr, EMS, and transit capabilities from 8th St. to Sassafras St. (Operational)</li> <li>Install shared bike lane at Bayfront/ Lincoln Ave along Lincoln, turning southeast along W 8th St. connecting to the Bayfront trail (Access)</li> <li>Upgrade W. 8th St. intersection including evaluation of lane assignments (Operational)</li> <li>Improved ped/ bikes connections across Bayfront at Cranberry, 8th, and Greengarden (Access)</li> </ul>	
			Intermediate-term			В		D		- Public education of the b - Consistency of ped/ bike
			Long-term							
	4	Central Bayfront Improvements	Short-term						<ul> <li>-Intersection improvement option at Bayfront and State St with improved ped/bike access. (Access/Safety)</li> <li>-Intersection improvements at Holland Street - possible roundabout options. (Operational)</li> <li>-New Frontage Road with two-way access from Liberty Park to Holland St. (Access)</li> <li>-New intersection connecting to frontage road west of Sassafras St. (Access)</li> <li>-Upgrades to 6th, 8th, and 10th St. city grid system considering Bayfront changing traffic movements (Operational)</li> </ul>	<ul> <li>Construction phasing will upgrades to city grid sys connections will be imported - Coordination with develo will be critical to integrate</li> <li>Underground utilities and issue if impacted.</li> <li>Emergency services imp</li> <li>Access road impact to m</li> <li>Impact to Wolverine Park</li> </ul>
			Intermediate-term	D	D	C/D	C/D			
			Long-term					Е		
	5	Eastern Bayfront Improvements	Short-term		В				<ul> <li>Pedestrian buffer refuge area between directional traffic from E. 6th to 10th St. (Access/ Safety)</li> <li>Dual-lane roundabout at E. 12th Street (Operational/ Safety)</li> <li>Bus pull-off areas for eastbound and westbound serving transit users along the Bayfront (Access)</li> <li>Traffic calming elements at E. 12th St. such as speed display signs (Safety)</li> </ul>	<ul> <li>Evaluate the feasibility of framework to minimize ir</li> <li>Coordination of routing w</li> <li>Ensuring the refuge area pedestrian use.</li> </ul>
			Intermediate-term	В		В	В	Е		
			Long-term							

\* Durations - Short-term (less than 1-yr); Intermediate-term (1-yrs to 3-yrs); and Long-term (3-yrs to 5-yrs)

\*\* Cost Ranges - A: less than \$100,000; B- \$100,000 to \$500,000; C- \$500,000 to \$1,000,000; D- \$1,000,000 to \$5,000,000; and E- greater than \$5,000,000

### lenges Affecting Design or Construction

- osed improvements will be affected by future projects and avoid/ minimize future project impacts.
- ative features with city and developer to ensure consistency.

arce within a reasonable distance. A ROW, primarily along the connector. Y of messaging and architecture with city, EMS, and Erie re the effectiveness to end user.

e benefits and function of the managed lanes. ike access with other projects within the City of Erie.

- will be critical and consider construction of frontage road, and system as early phases. Defining temporary access apportant.
- elopment improvements, Comp Plan, County/ Port Authority rate land use.
- and specifically an electric vault near State Street may be an
- npact analysis related to changing access or traffic patterns.
- marina and potential waterway permit.
- Park and potential mitigation.

y of roundabout within the intersection and adjacent roadway e impacts and property claims.

g with EMTA to further evaluate the feasibility of pull-offs. reas are constructed in locations of higher volumes of