

Portland North Alternatives Modes Project

Coordination Meeting
December 10, 2009

Agenda

- Introductions
- Progress Update
- Summary of Alternatives
- Ridership Projections
- Preliminary Costs
- Small Starts
- Next Steps
- Schedule
- Other

What We Have Accomplished

- Station host community meetings
- FTA coordination
- Alternative refinement
 - Alignment
 - Station
 - Cost
 - Ridership

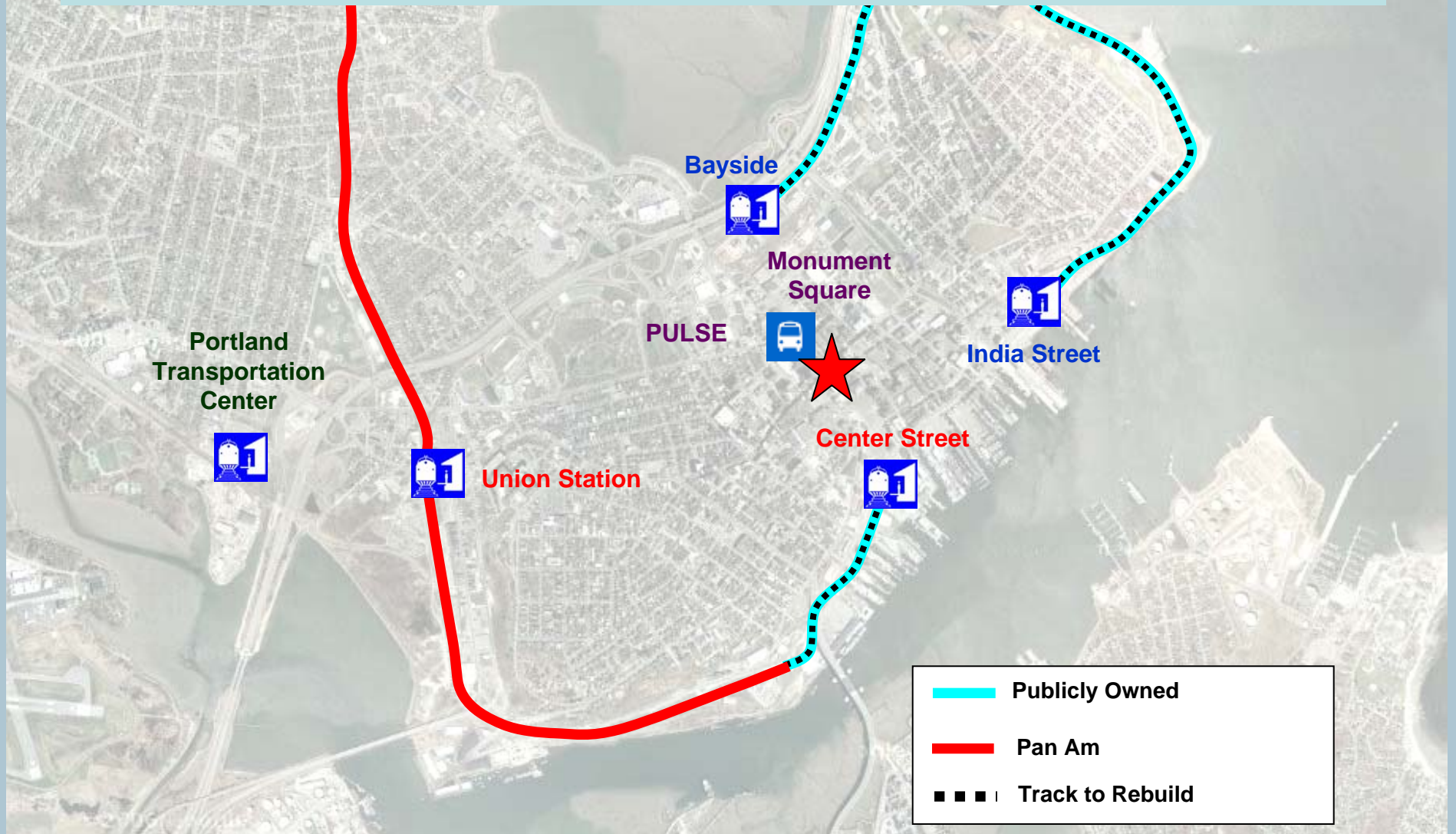
What Would be Served

- Three service alternatives
 - Yarmouth
 - Brunswick (Bath)
 - South Auburn (Lewiston)
- Three route alternatives:
 - Saint Lawrence and Atlantic Railway (SLR)
 - Pan Am Railway
 - Highways (Bus)
- Five Portland terminal alternatives:
 - Bayside (SLR)
 - India Street (SLR)
 - Union Station (Pan Am)
 - Center Street (Pan Am)
 - Monument Square (Express Bus)

How Often Service Would Operate

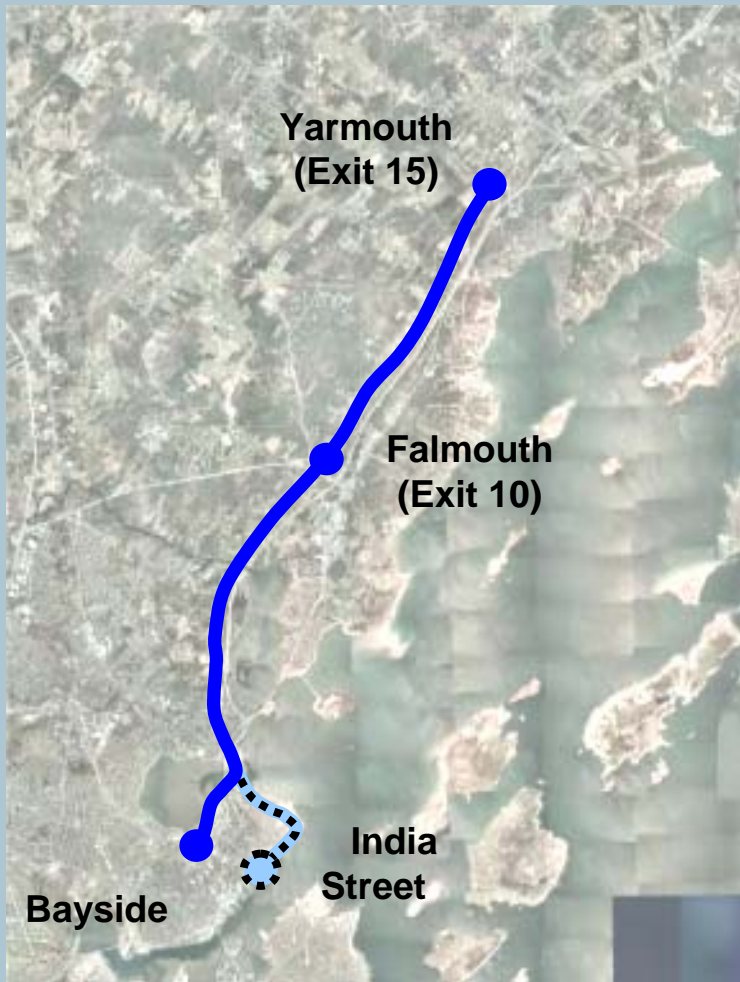
- 22 Roundtrips per Weekday
- Service Headways
 - 30 minute peak
 - 60 minute offpeak
- First trip arrives Portland: 6:45 AM
- Last trip departs Portland: 10:55 PM
- Shuttle Bus Service from some rail stations

Where Would it Leave You



Yarmouth Rail Service

SLR

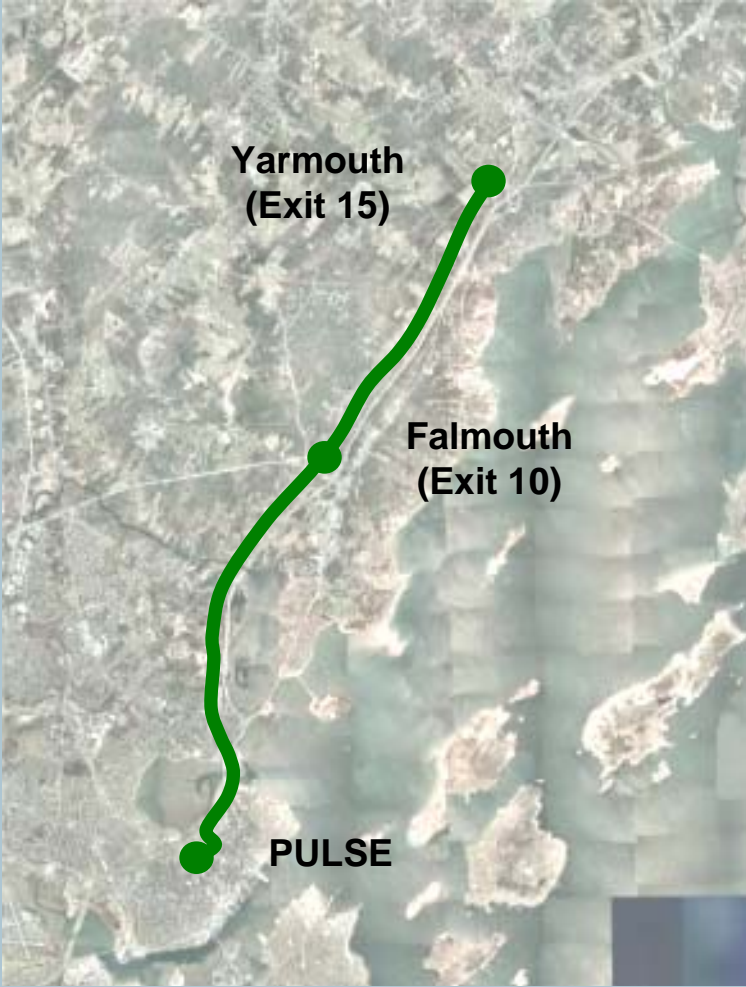


Pan Am

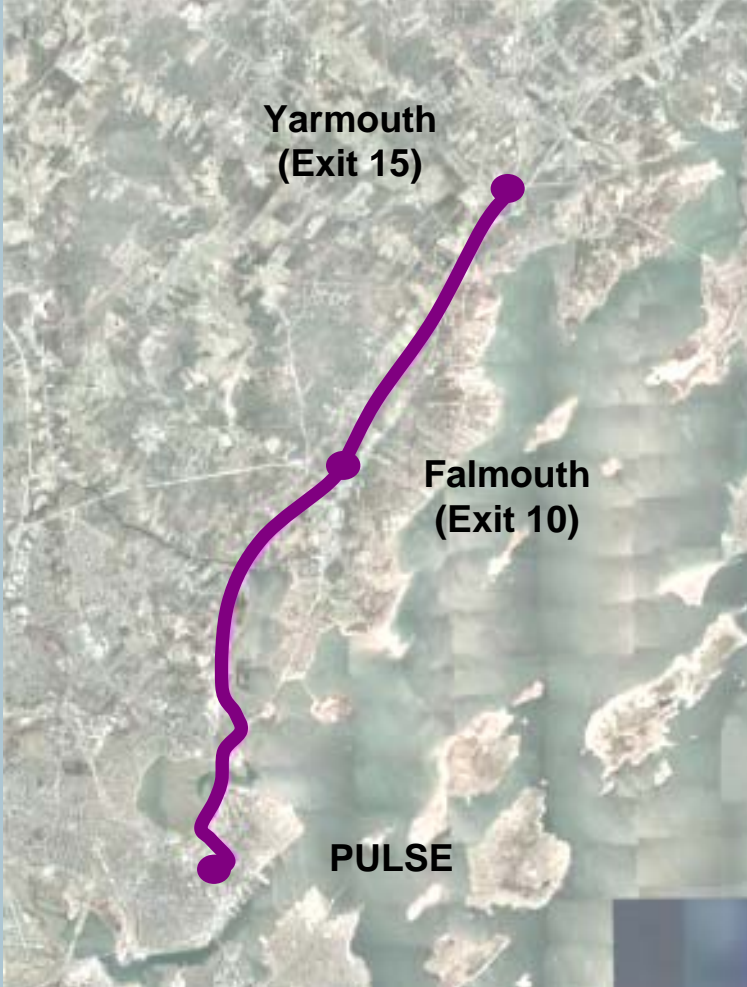


Yarmouth Express Bus Service

Exclusive ROW

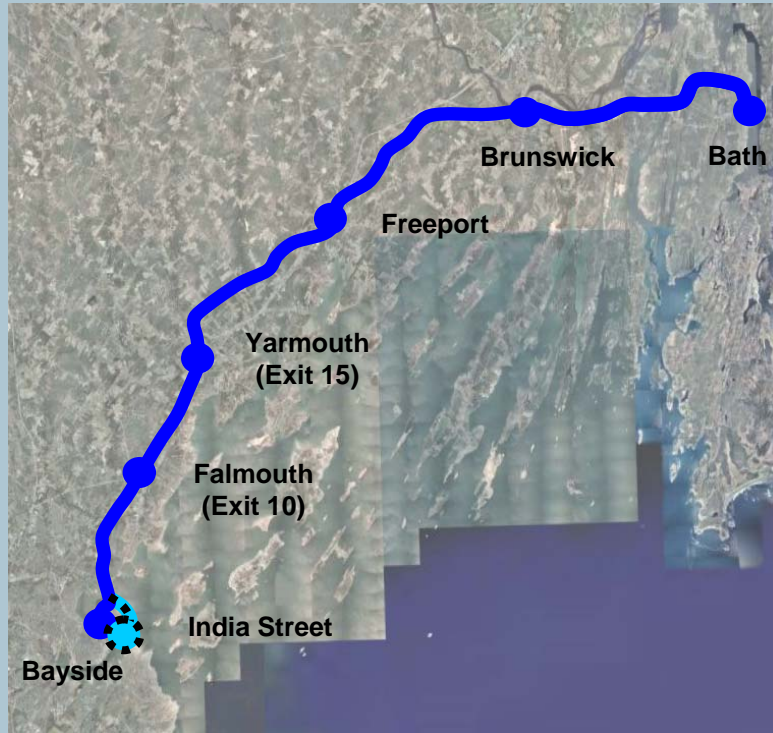


Highway Shoulder Running



Bath Rail Service

SLR



Pan Am

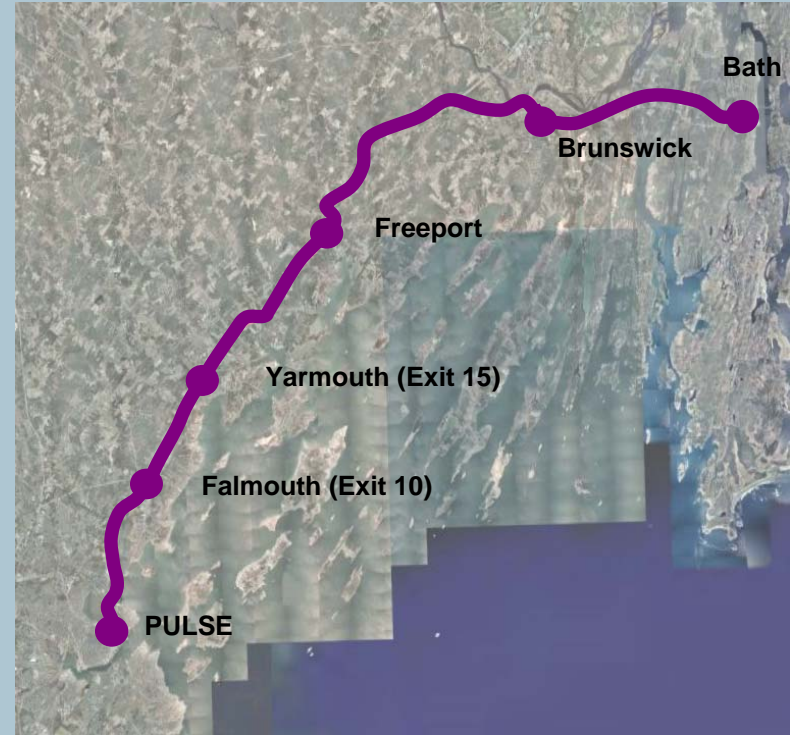


Bath Express Bus Service

Exclusive Bus ROW



Highway Shoulder Running

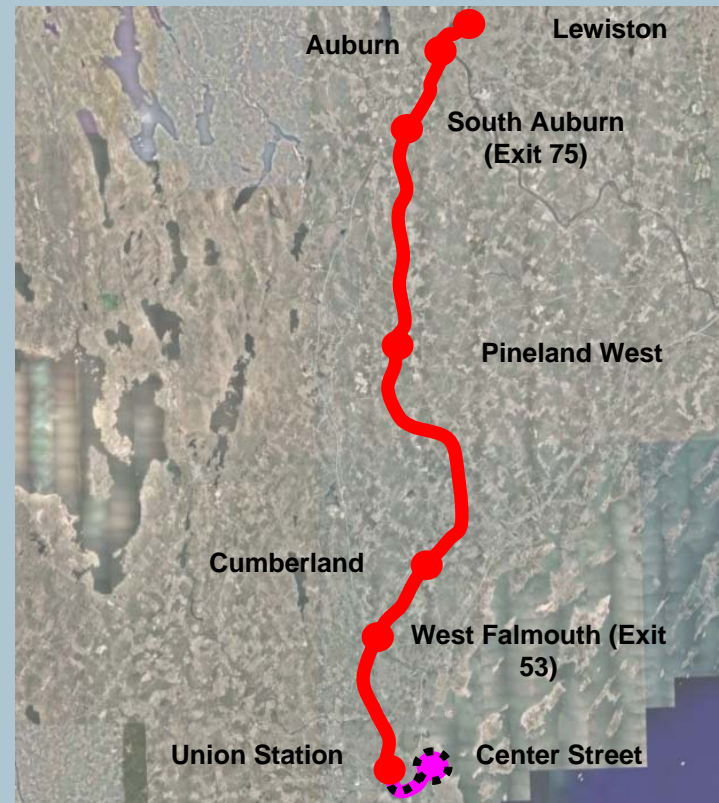


Lewiston Rail Service

SLR

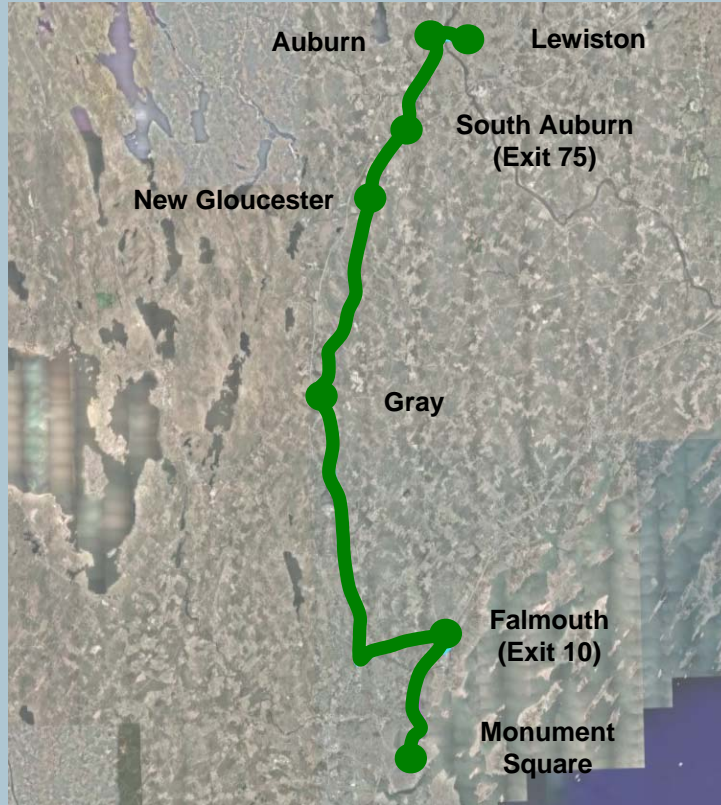


Pan Am

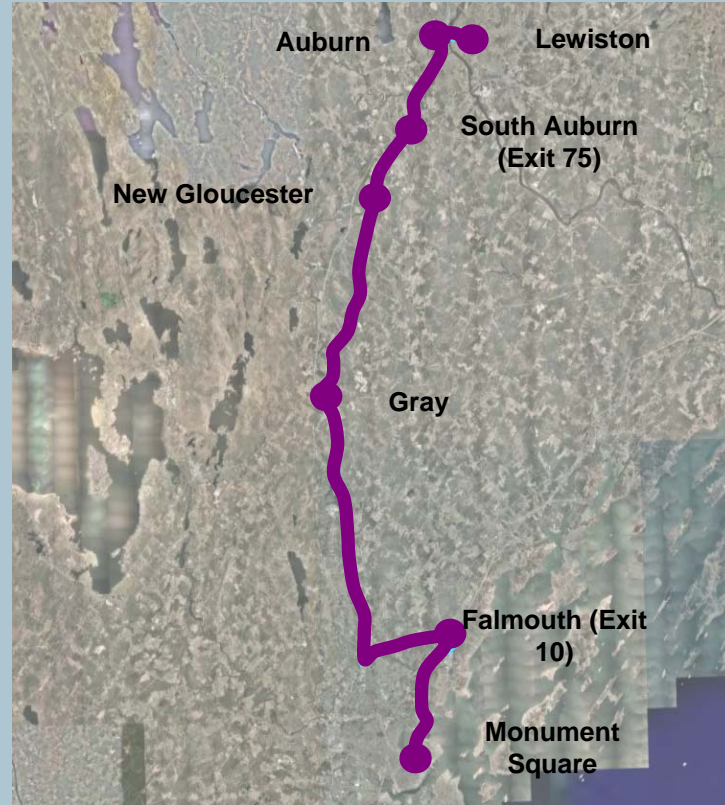


Lewiston Express Bus Service

Exclusive Bus ROW

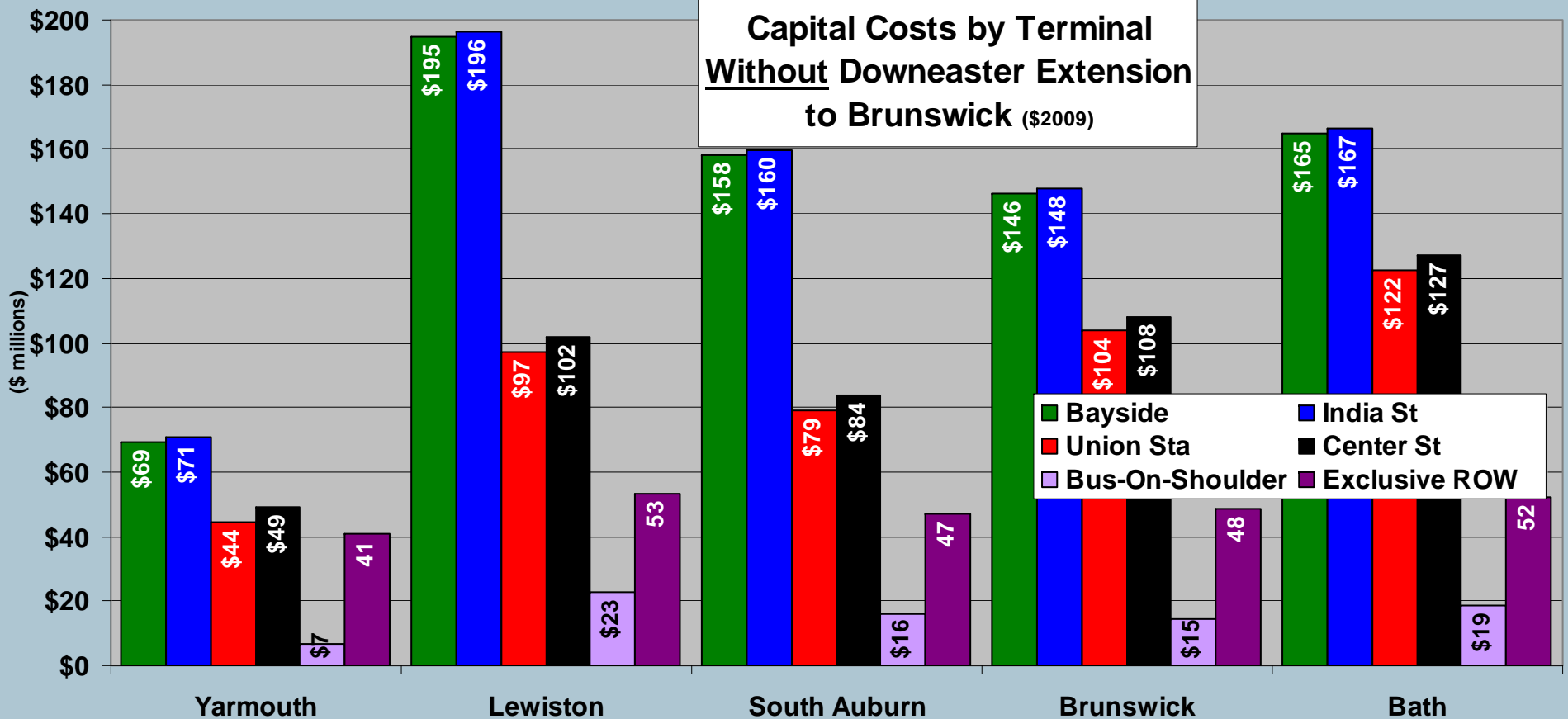


Express Bus

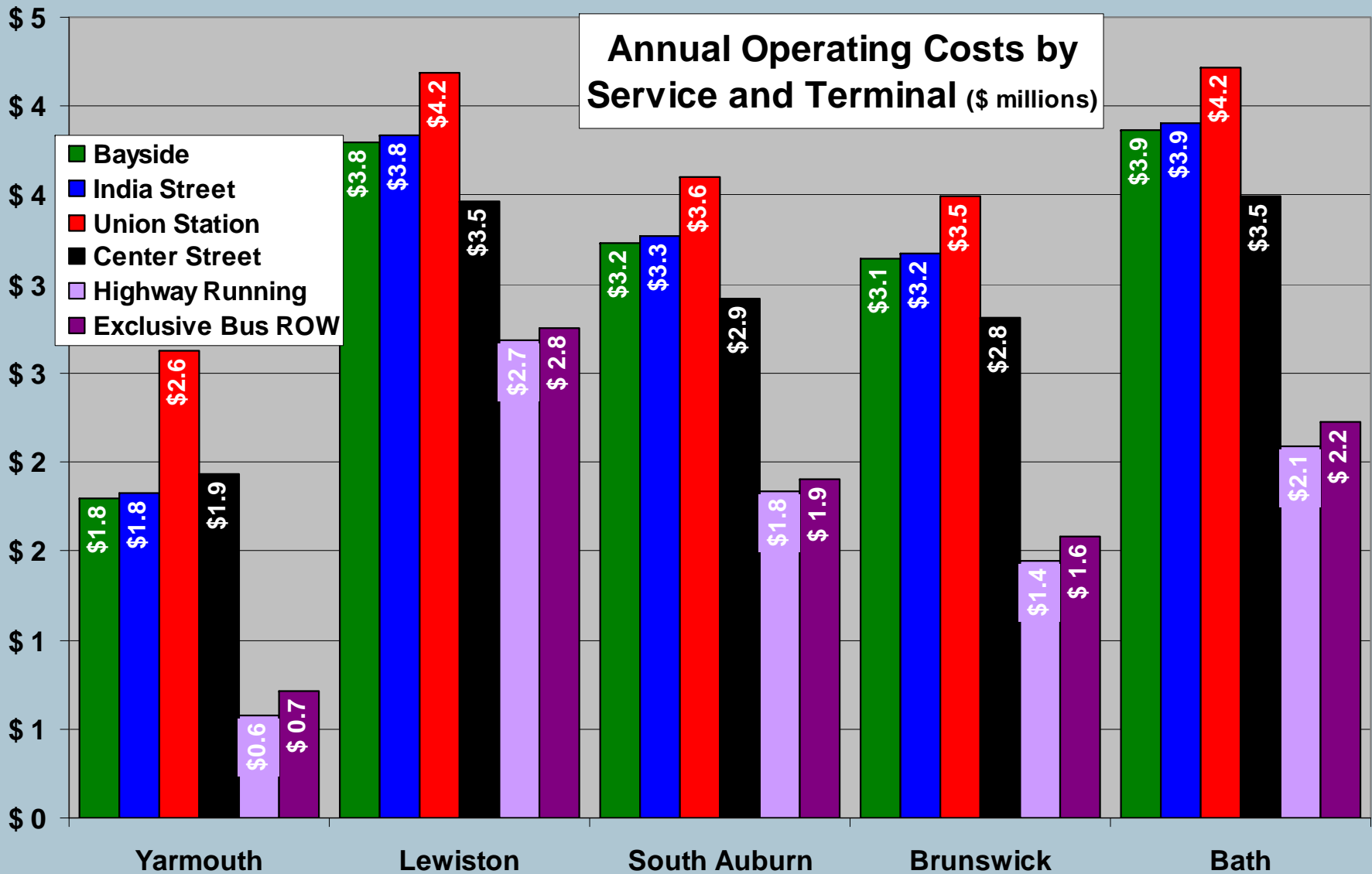


How Much it Would Cost to Build

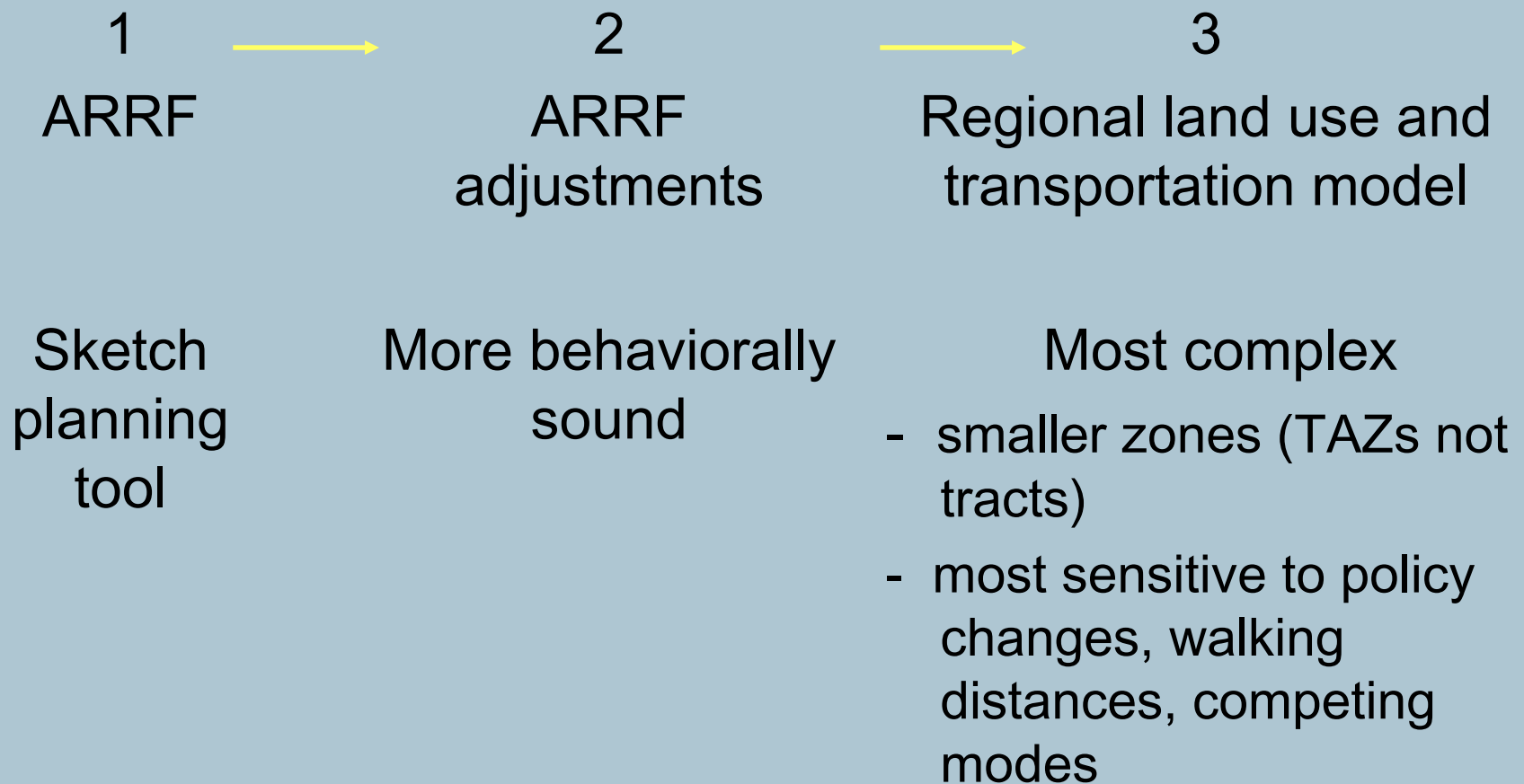
**Capital Costs by Terminal
Without Downeaster Extension
to Brunswick (\$2009)**



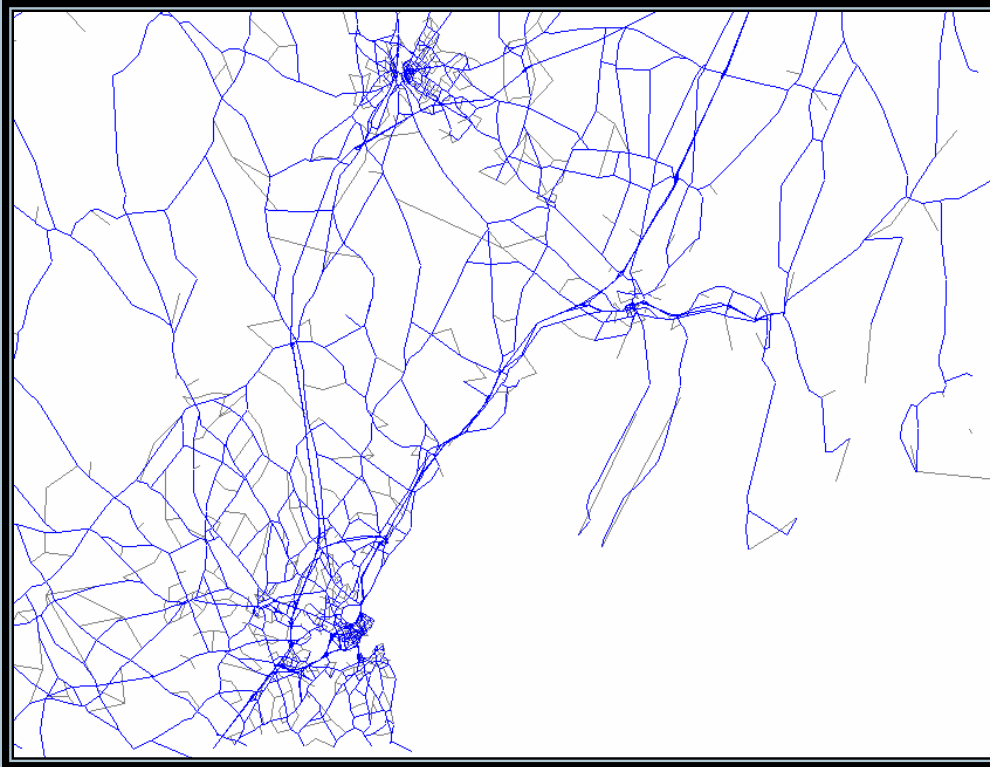
How Much it Would Cost to Operate



Our Approach to Calculating Riders



Regional Model Structure



- Based on Maine statewide model
- Represent all travel flows
- Mode choice for each zone pair
 - attributes of alternative modes
 - calibrate based on experiences elsewhere, common sense, locally to ZOOM

How well does model represent flows?

Vehicle volumes (screenlines)

screenline	ADT	model	% difference
North of Saco	137,225	137,545	0.23
East of Gorham	82,730	72,289	-12.62
North of Portland	75,220	59,049	-21.50
South of Yarmouth	80,122	88,701	10.71
South of Auburn	49,345	53,781	8.99
SE of Lewiston	22,968	31,776	38.35
South of Freeport	87,365	91,261	4.46
all screenlines	534,975	534,402	-0.11

How well does model represent flows?

Travel times (minutes)

	<u>model</u>	<u>observed times</u>	
	AM peak 3 hrs	leave 6:15	leave 7:35
from Lewiston (Oak & Bates) to Portland (Franklin & Marginal Way)	49.8	46	49
	AM peak 3 hrs	leave 6:00	leave 7:58
from Bath (Rt 1 & Washington St) to Portland (Franklin & Marginal Way)	45.3	37	34
	AM peak 3 hrs	Zoom schedule	
from Saco P&R to Congress & Bramhall	22.9	20 to 23	

How well does model represent flows?

ZOOM Turnpike Express Boardings

Daily boardings in either direction

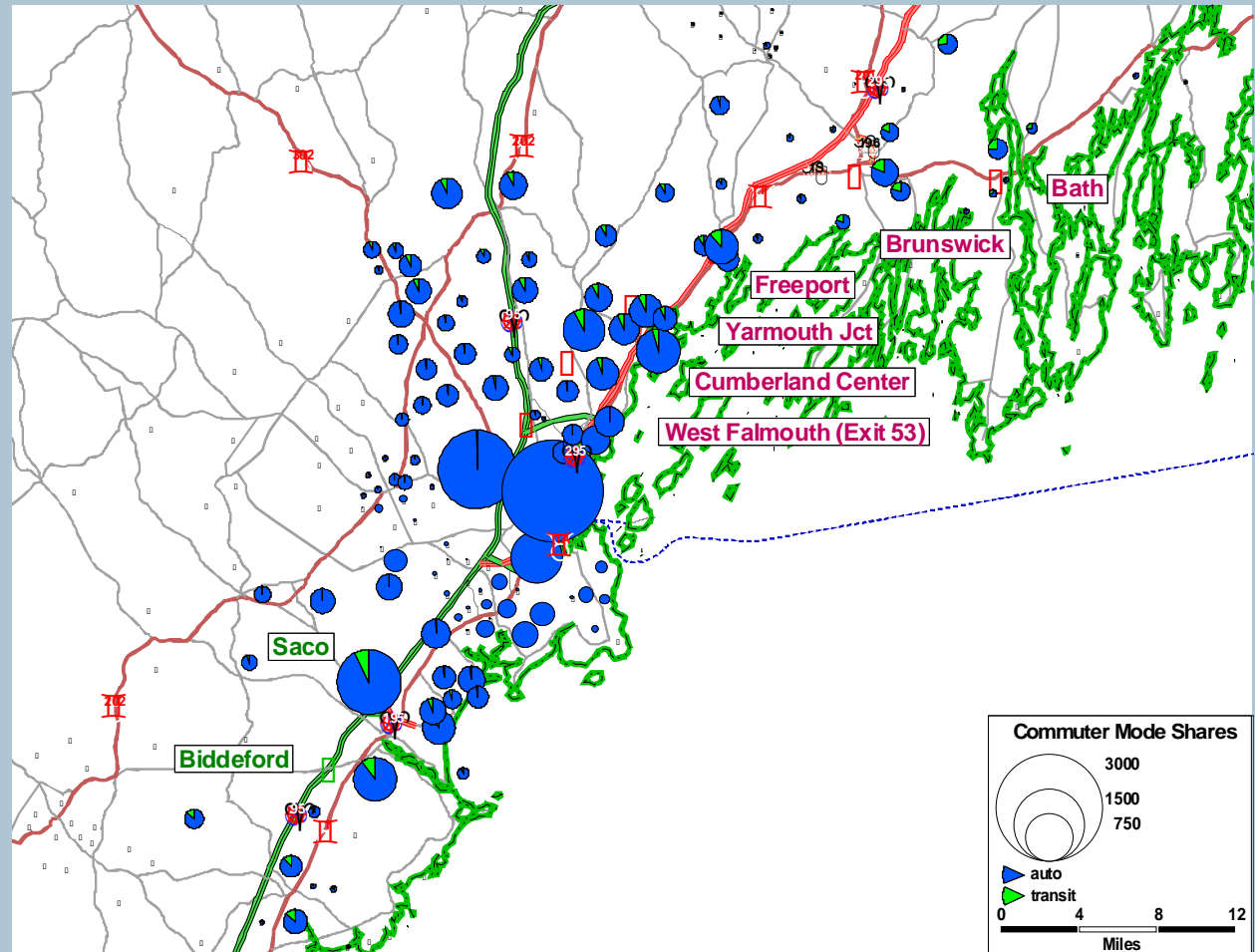
	<u>model</u>	<u>observed</u>
Biddeford P&R	82	85
Saco P&R	80	75
Bramhall & Congress	33	29
High & Congress	82	25
Monument Square	36	98
USM	11	8
Total	<u>324</u>	<u>320</u>

Key Factors Affecting Behavior

- Strong preference for auto
 - **transit ASC equal to 40 minutes IVTT**
- Increasing, non-linear penalty for walks over 10 minutes
- Direct service preferable to local bus connection
 - **transfer equal to 15 minutes IVTT**
- Travelers “don’t drive backwards” to a park & ride
- “let someone else drive” more important with increasing distance
- No modeled preference for rail compared to bus

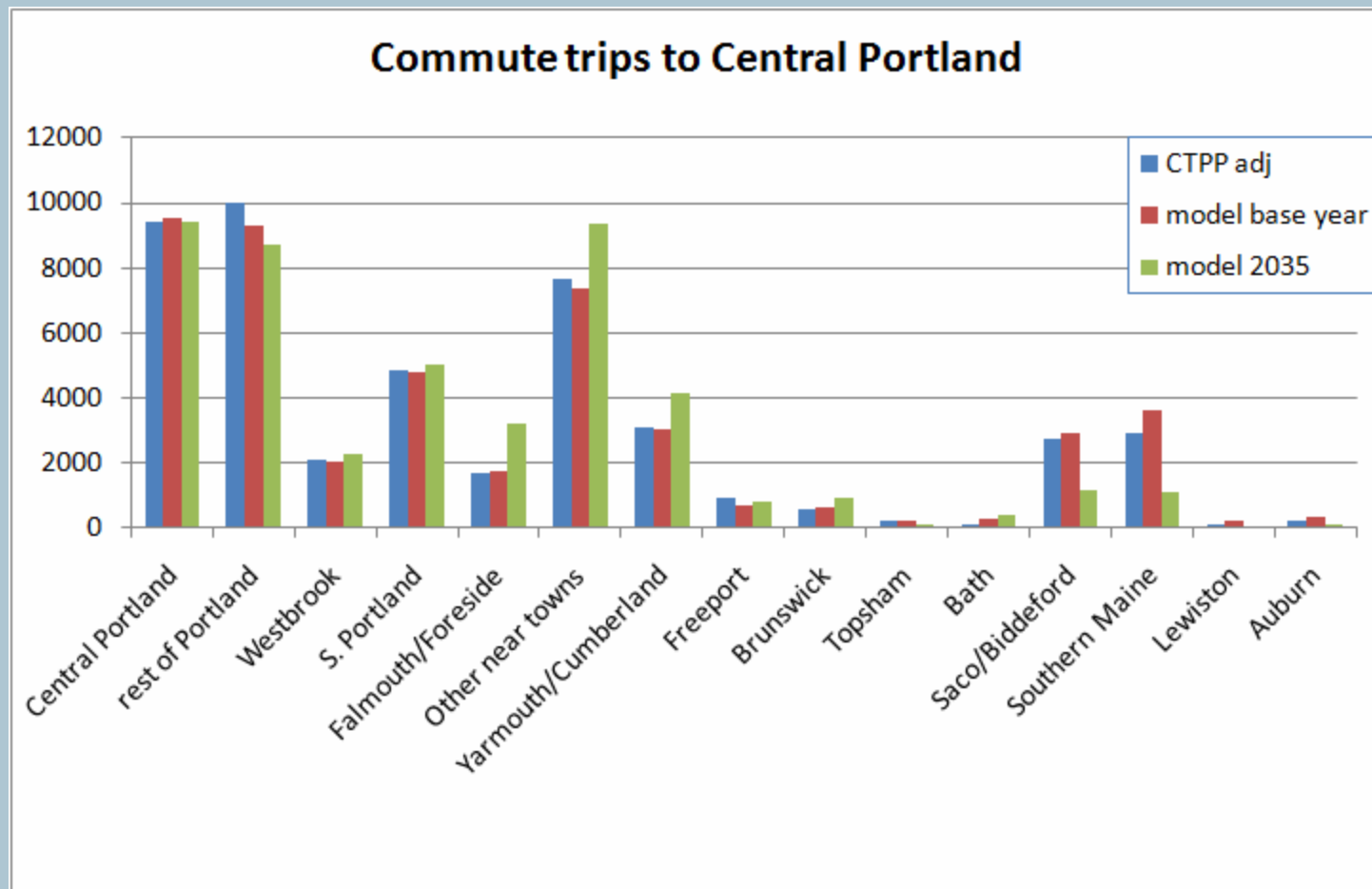
Mode Shares to Central Portland

- Bath Center Street alignment
- ZOOM Turnpike Express
- Base year shares



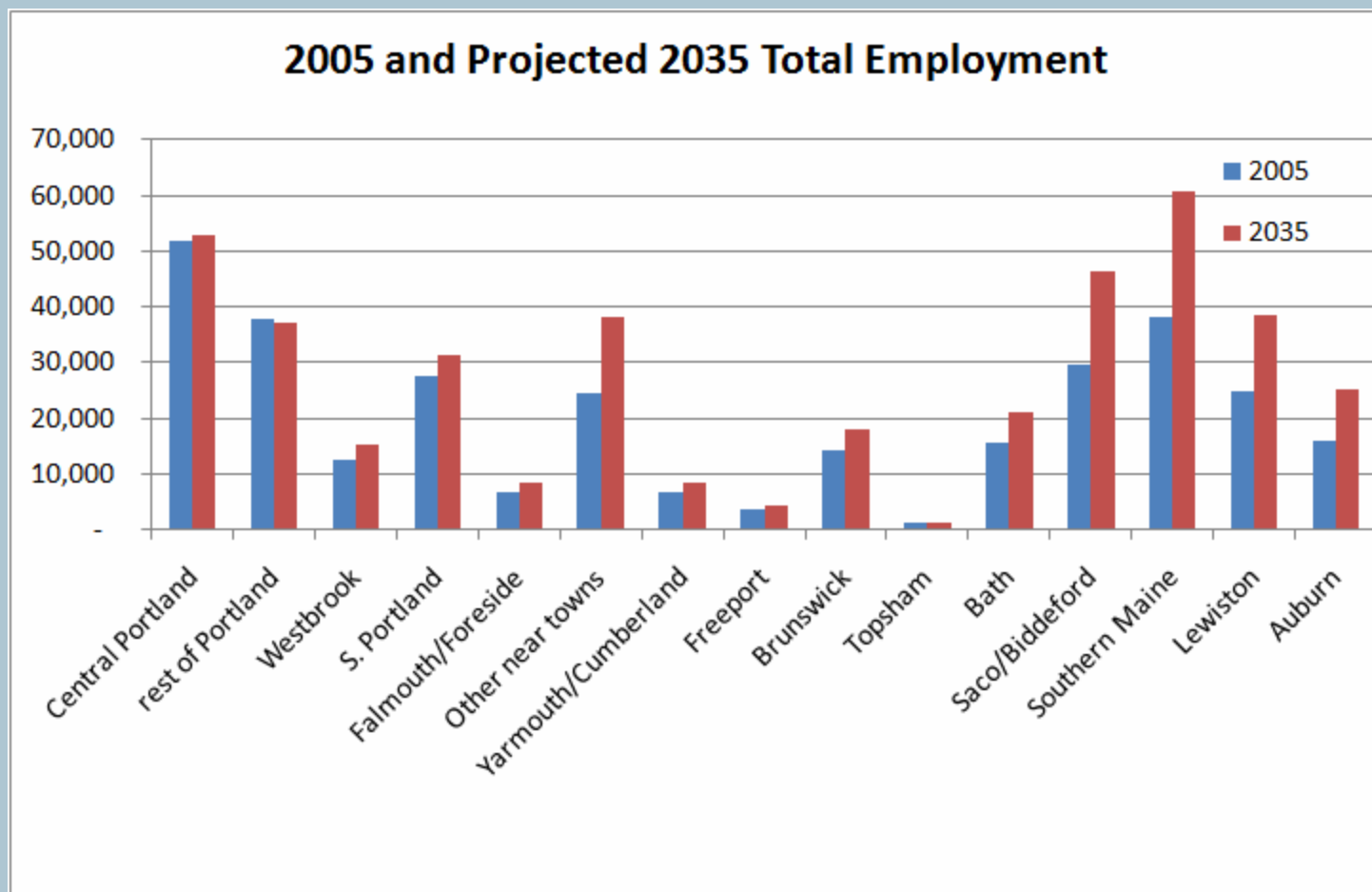
Forecasting to 2035

Trip origins of commuters to Portland

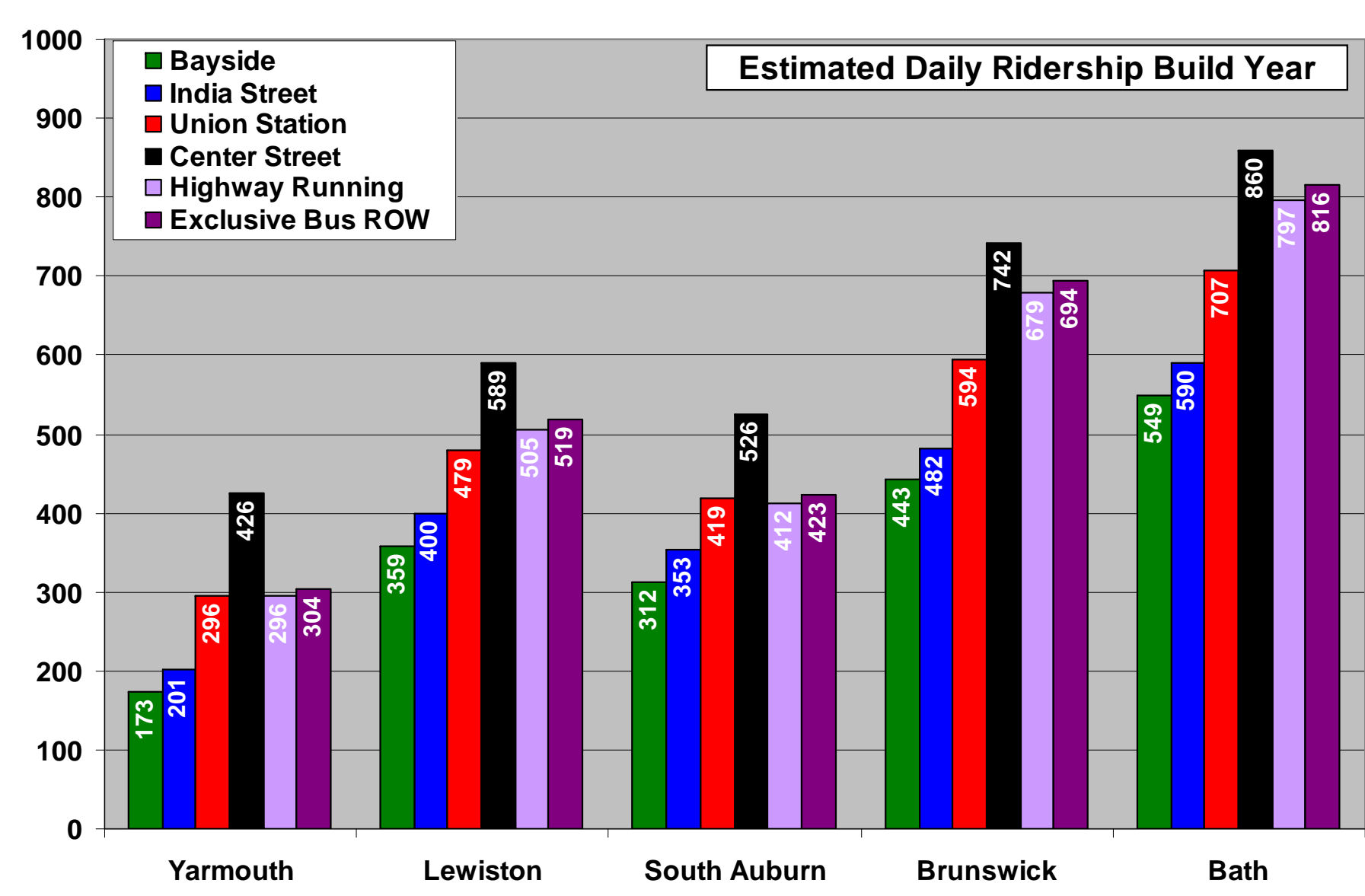


Forecasting to 2035

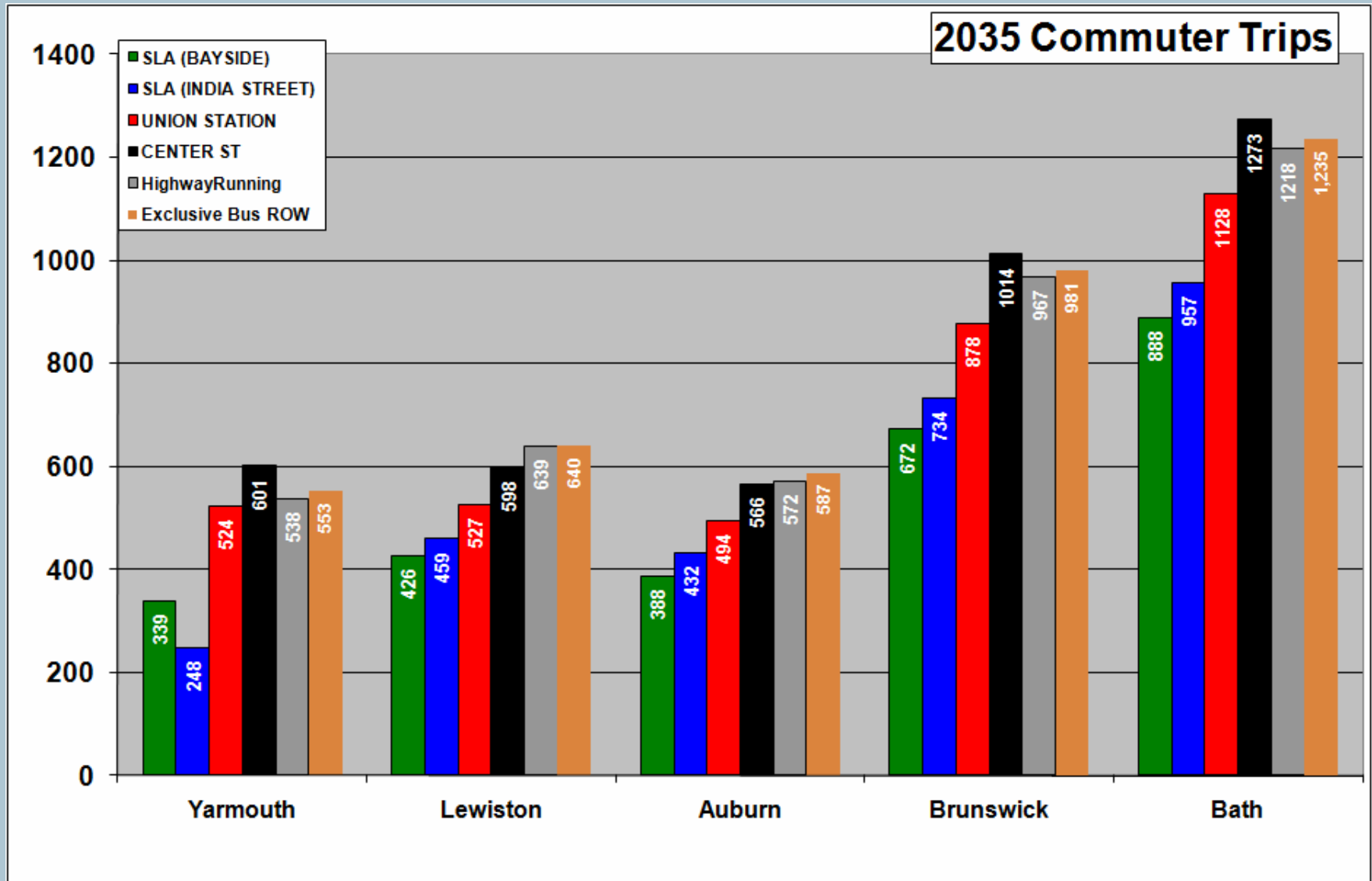
Changing work trip destinations



Estimated Daily Ridership (Build Year)



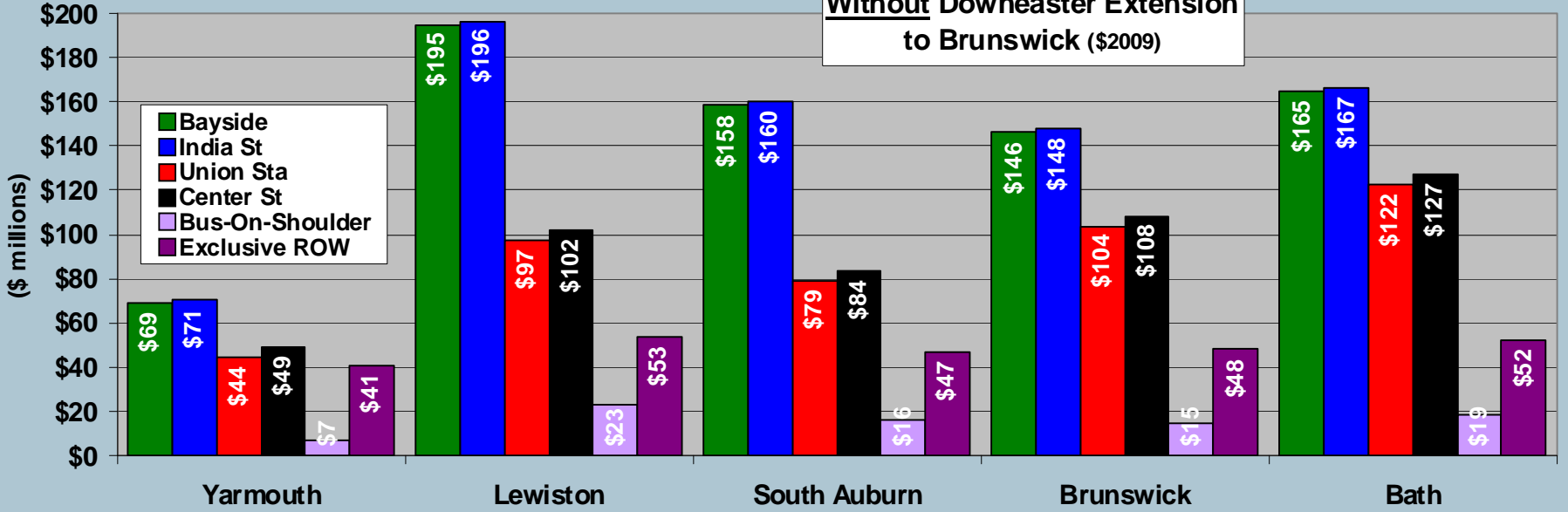
Estimated Daily Ridership (2035)



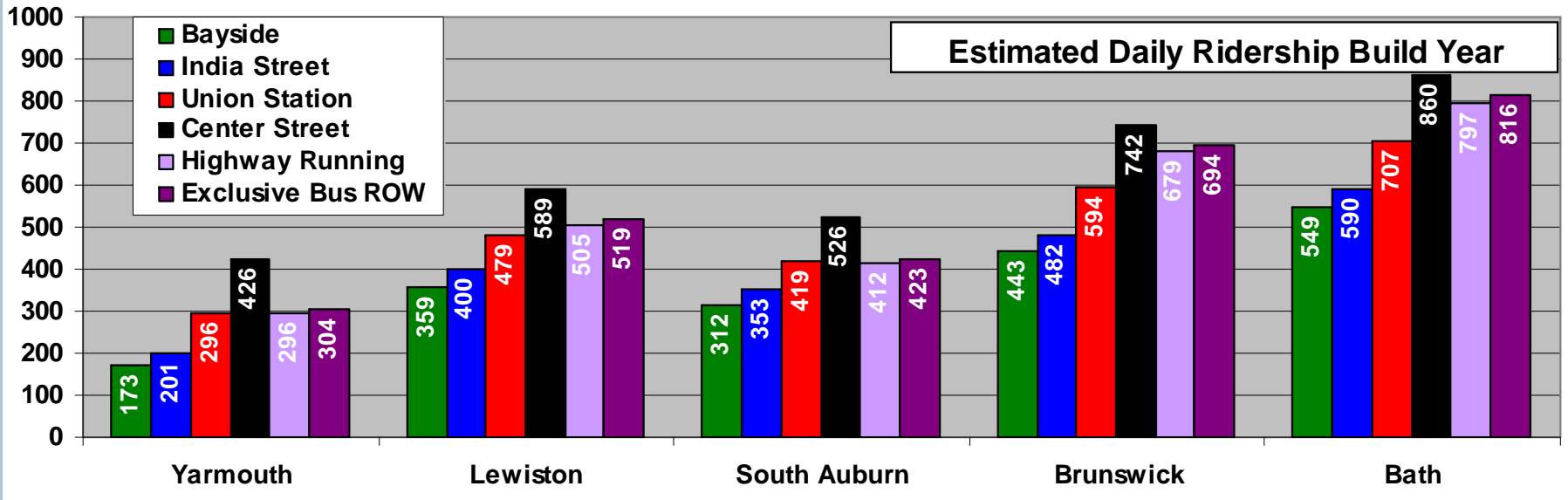
Ridership Observations

- Center Street service has highest ridership for each starting point
- Two key reasons for this:
 - Two stops in Portland, short walk to business centers
 - Line stops at Cumberland Center, not served by SLR or bus options
- Portland is attraction end for at least 79 percent of trips (99 percent for alignments only to Yarmouth)
- Model estimates ridership in same range as earlier methods--but shows a more sensible pattern by station

**Capital Costs by Terminal
Without Downeaster Extension
to Brunswick (\$2009)**



Estimated Daily Ridership Build Year



Small Starts Parameters

- Capital costs associated with new fixed guideway systems, extensions, and bus corridor improvements
- Requests under \$75 million and total project costs must be under \$250 million
- In addition, Small Starts eligible if:
 - **(a) meet the definition of a fixed guideway for at least 50 % of the project length in the peak period**
 - **(b) be a new fixed guideway project, or**

Small Starts (cont.)

- **(c) be new corridor-based bus project with all of the following minimum elements:**
 - **Substantial transit stations**
 - **Traffic signal priority/pre-emption, to the extent, if any, that there are traffic signals on the corridor**
 - **Low-floor vehicles or level boarding**
 - **Branding of the proposed service**
 - **10 minute peak/15 minute off peak headways or better while operating at least 14 hours per weekday**

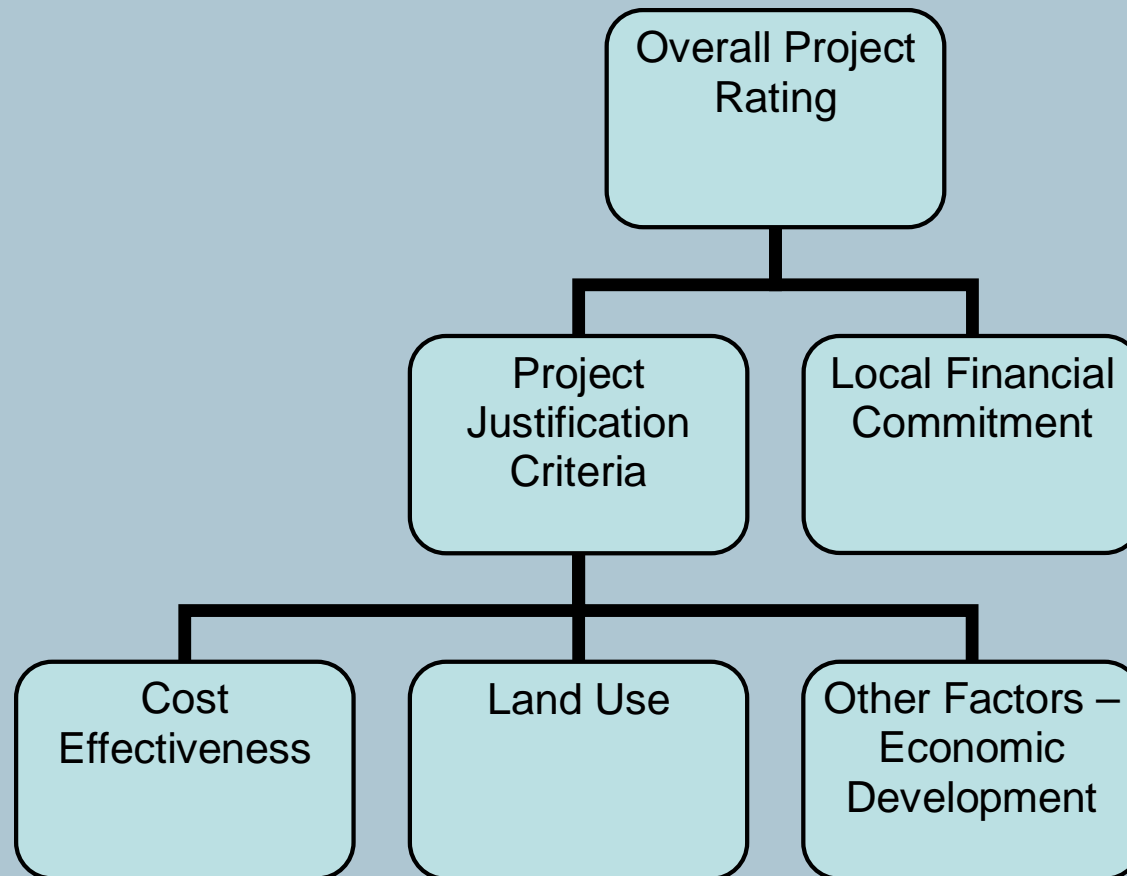
What Has Been Funded (FY10)

- \$174 Million for 16 projects
- Maximum grant \$54.5 Million

Geographic and Modal Distribution

- Flagstaff, AZ, Mountain Links BRT
- Livermore, CA, Livermore-Amador Route 10 BRT
- Los Angeles, CA, Metro Rapid Bus System Gap Closure
- Los Angeles, CA, Wilshire Boulevard Bus-Only Lane
- Monterey, CA, Monterey Bay Rapid Transit
- Riverside, CA, Perris Valley Line Medium
- San Bernardino, CA, E Street Corridor BRT
- San Diego, CA, Mid-City Rapid
- San Joaquin, CA, Metro Express - Airport Way Corridor BRT Project
- Fort Collins, CO, Mason Corridor BRT
- Roaring Fork Valley, CO, BRT Project
- Fitchburg, MA, Commuter Rail Improvements
- Kansas City, MO, Troost Corridor BRT
- Austin, TX, Metro Rapid BRT
- King County, WA, Bellevue - Redmond BRT
- King County, WA, Pacific Highway South BRT

FTA Critical Success Factors



FTA Small Starts Evaluation Criteria

- Cost Effectiveness (which is a combined measure of annual travel time savings and annualized cost)
- Total Cost compared to State and Local Financial Capacity
 - **Capital cost (including highway or rail improvements including railroad bridge costs)**
 - **Operations and Maintenance (O&M) costs**
- Transportation Measures (which would be roughly proportional to vehicular emissions)
 - **Level of Service**
 - **Total System Vehicle Miles Traveled**
 - **Total System Vehicle Hours Traveled**
- Land Use
 - **Existing Land Use Patterns**
 - **Transit supportive plans and policies**
 - **Performance and impact of these policies**
- Economic Development

What Happens Next

- Finalize Phase 1 – 12/09
- Initiate Phase 2 – 1/10
- Public meeting to present Phase 2 – 3/10
- Finalize Phase 2 – 4/10
- Initiate Small Starts application work

Questions?