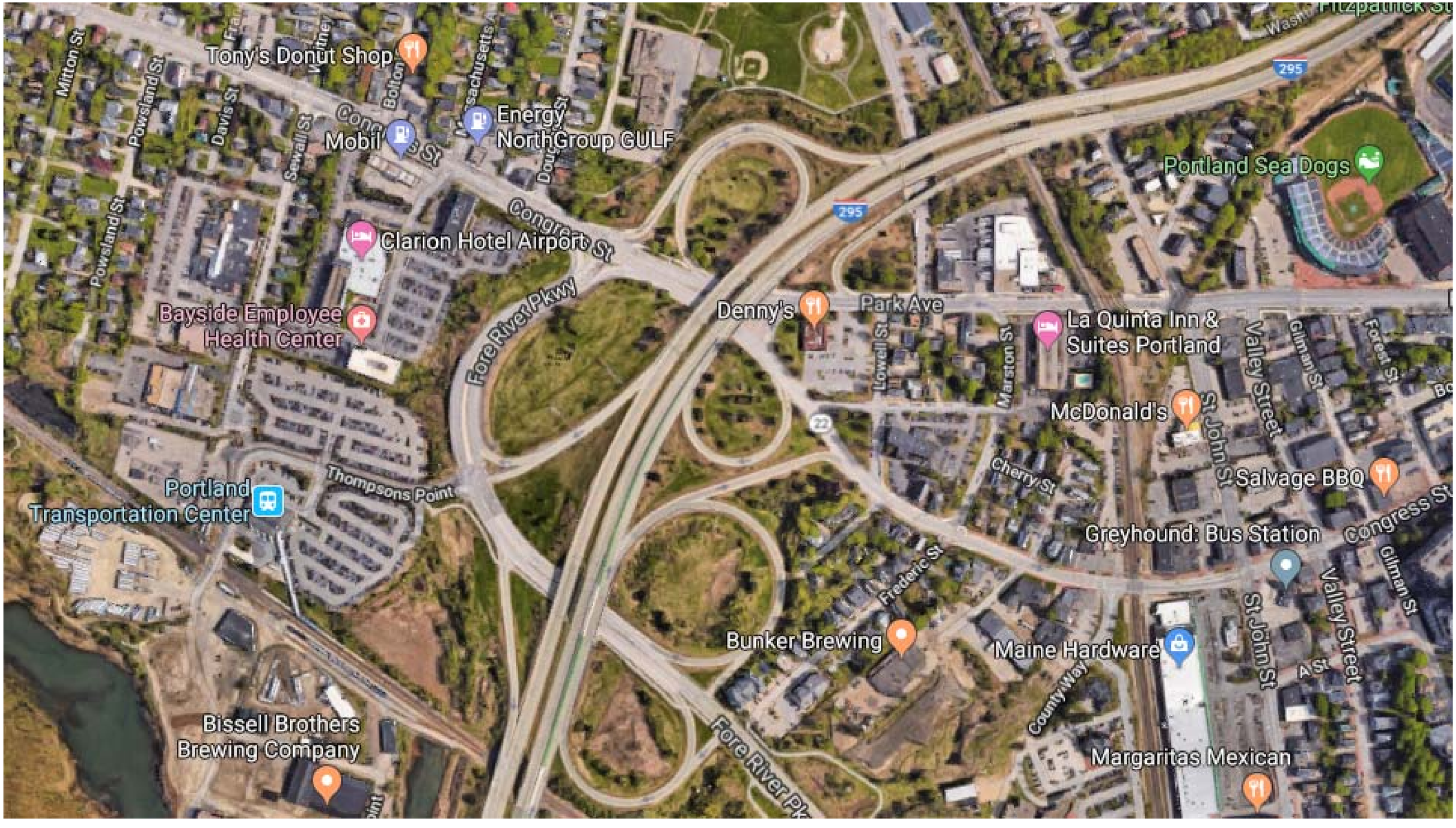
Libbytown Traffic Circulation and Streetscape Study
Traffic Analysis, Phase II

Sustainability and Transportation Committee
February 27, 2019

Libbytown Traffic Analysis, Phase II



Source: Google Maps

Libbytown Traffic Analysis, Phase II

<u>Timeline/How We Got Here/Some Context</u>:

Connecting Libbytown, 2009

- Bicycle and Pedestrian Improvements from Parkside to I-295 Vicinity

Libbytown Traffic Circulation & Streetscape Study, 2013

- Traffic Circulation – 1-Way/2-Way Analysis
- “Redundant Ramps”
- Sidewalk & Streetscape Conditions/Ped. Safety
- Bicycling Conditions/Safety

Bayside to PTC Pathway – On Hold by MaineDOT

<u>Neighborhood Changes Since 2013 Report</u>:

Sidewalk/ADA/Pedestrian Crossings – EDA Project

Pedestrian Scale-lighting under RR Bridge - CDBG

Added Bicycle Lane on Congress Street

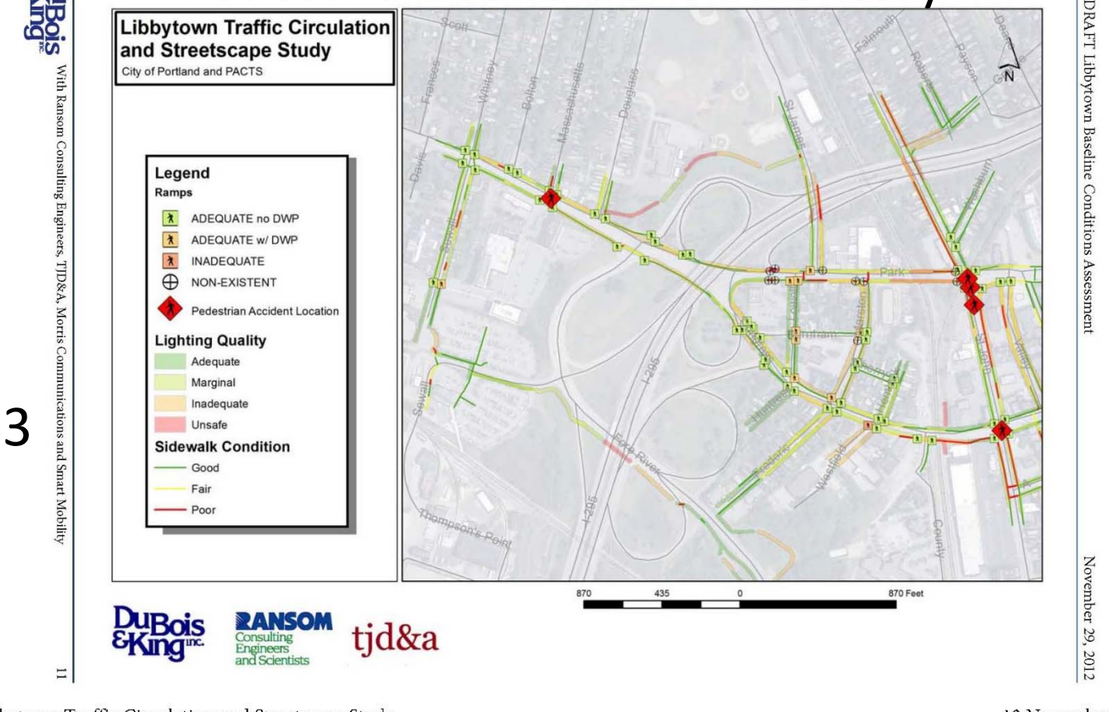
Added Parking on Congress Street

Fore River Parkway Pathway Link – EDA Project

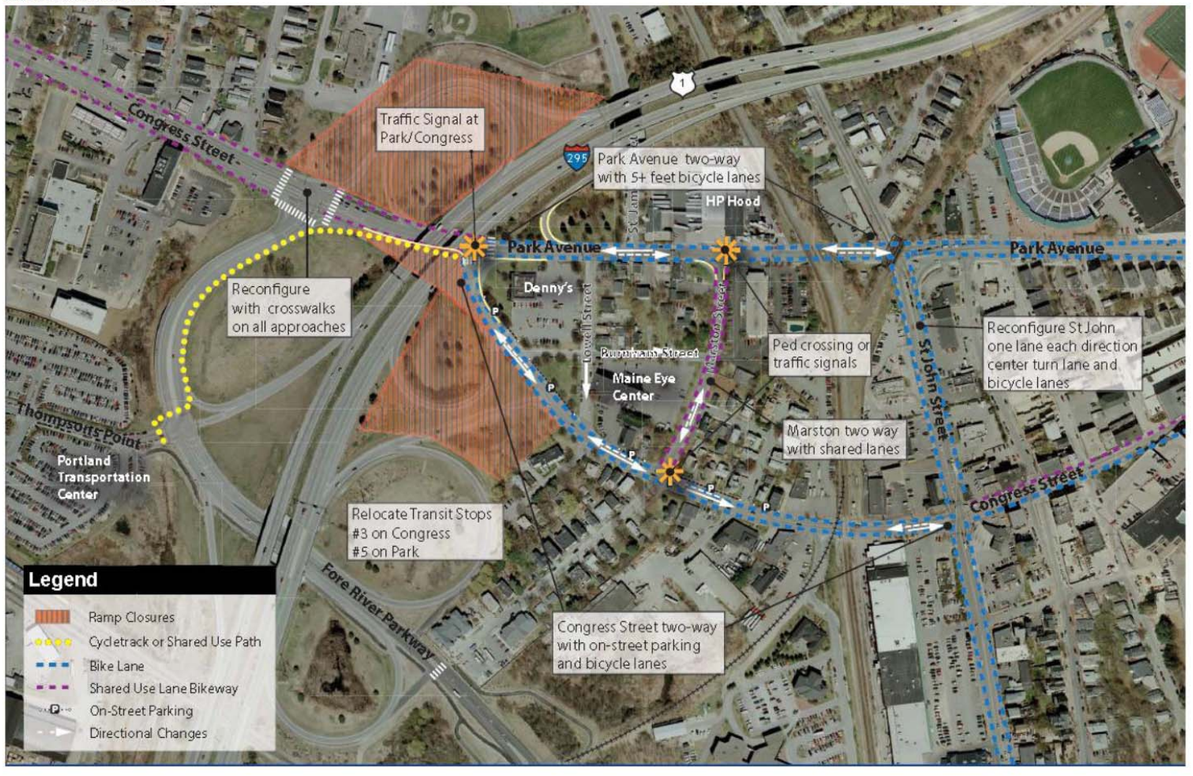
Frederic Street Crossing of FR Parkway – CDBG

3- Lane St. John Street w Bike Lanes – 2019/DD

Pedestrian Conditions Inventory

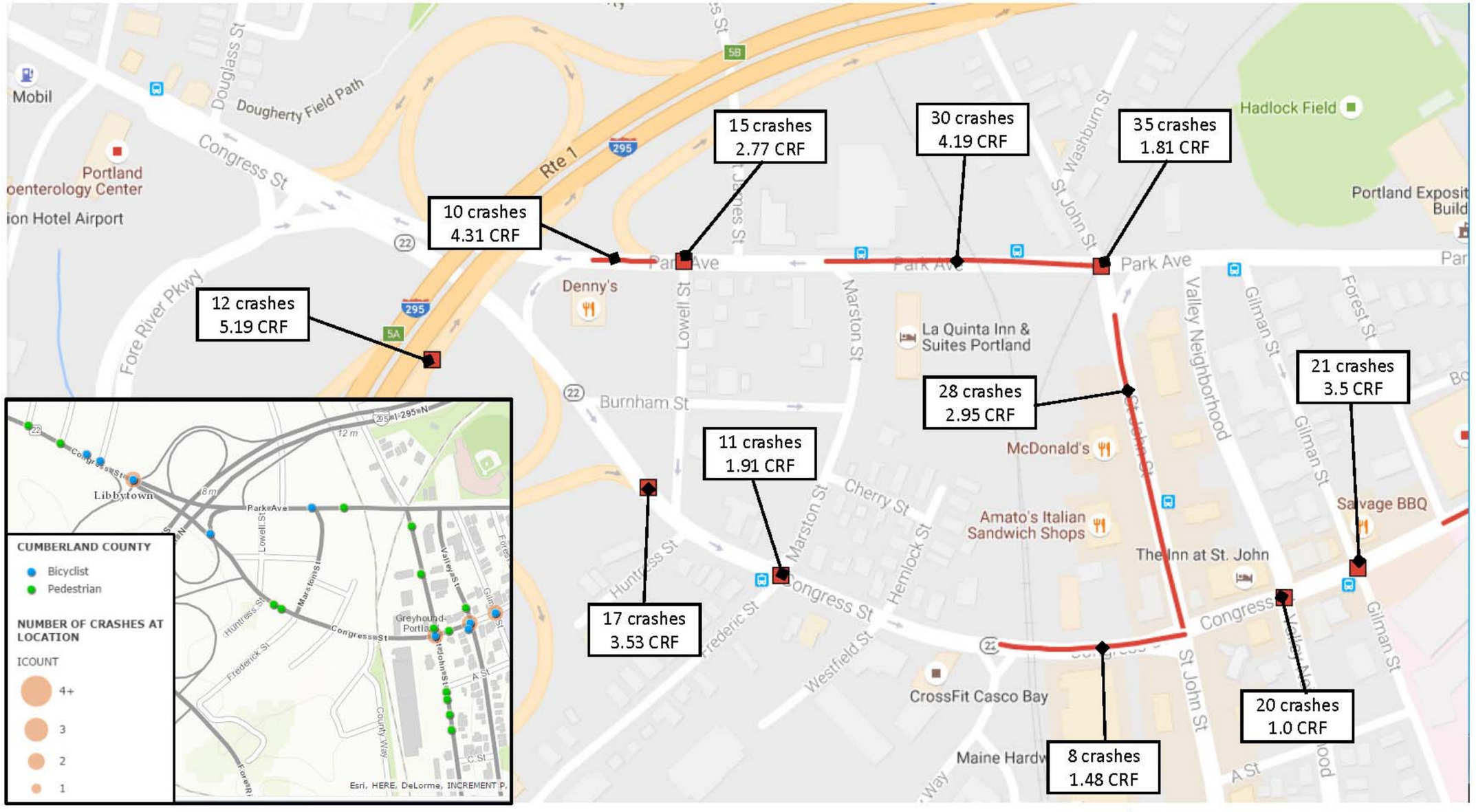


Recommendations



Libbytown Traffic Analysis, Phase II

Libbytown Traffic Circulation and Streetscape Study Area: High Crash Locations (2013-2015) & Bicycle-Pedestrian Crashes (2010-2015)



Google Basemap; Data source: MaineDOT.

CRF (Critical Rate Factor) is the rate of crashes that occur relative to similar locations (type of street and traffic volumes) - for example, a CRF of 4.19 (like for the road segment from St John to Marston on Park Ave) represents a 319% higher crash rate than expected for similar locations statewide.) Red squares are Intersection HCLs, red lines are road segment HCLs.

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New Analysis Assumptions:

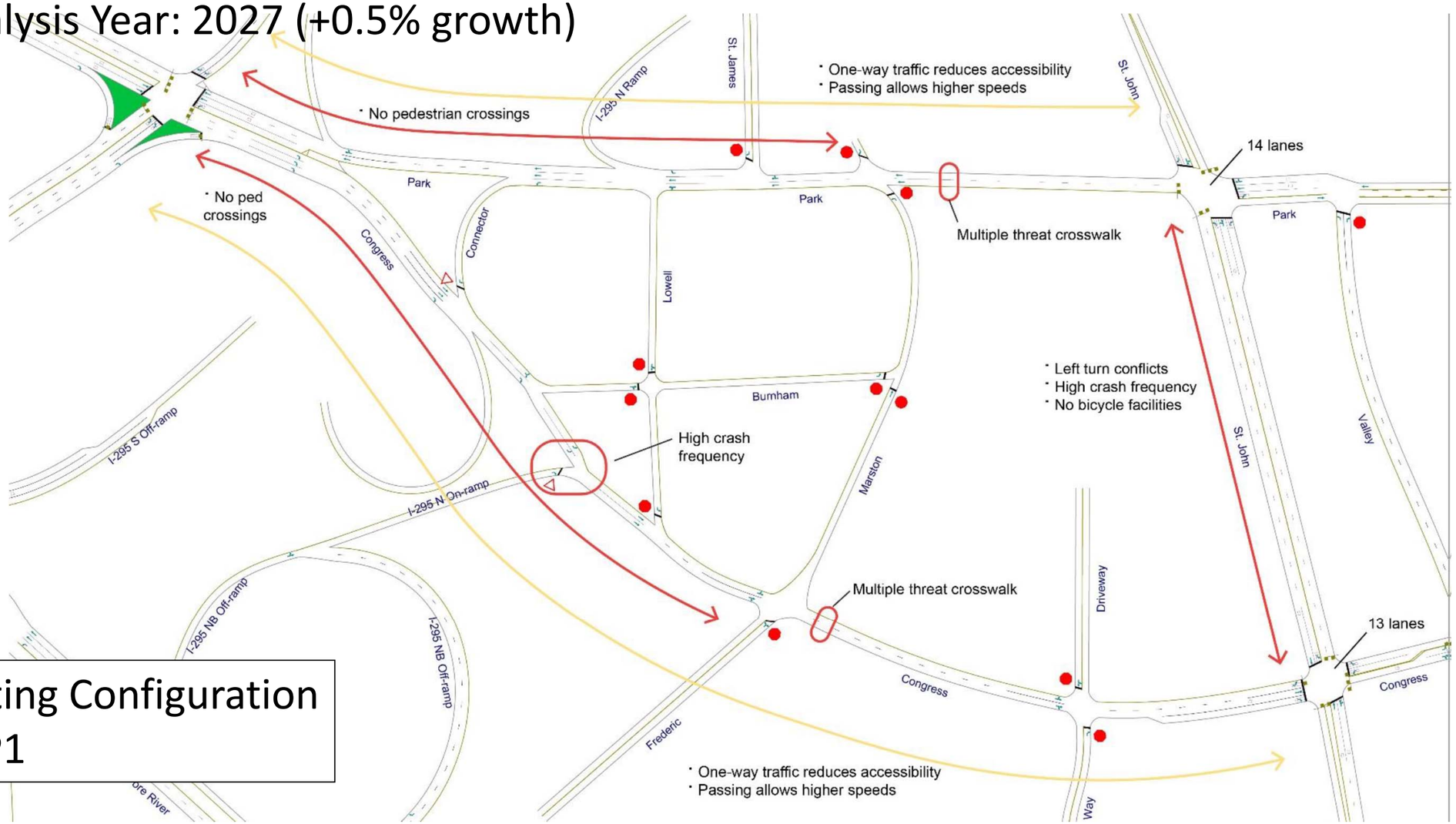
Thompson's Point Full Build-out/Traffic Permitted Level (same as in 2013 report)

New Maine Medical Center Parking Garage on St. John St (approx. 2450 spaces)

Removal of Valley Street at Congress Street Traffic Signal (does not meet warrants)

I-295 Interstate Ramps on Congress Street & Park Avenue Remain in the Traffic Network

Traffic Analysis Year: 2027 (+0.5% growth)



Existing Configuration
C1-P1

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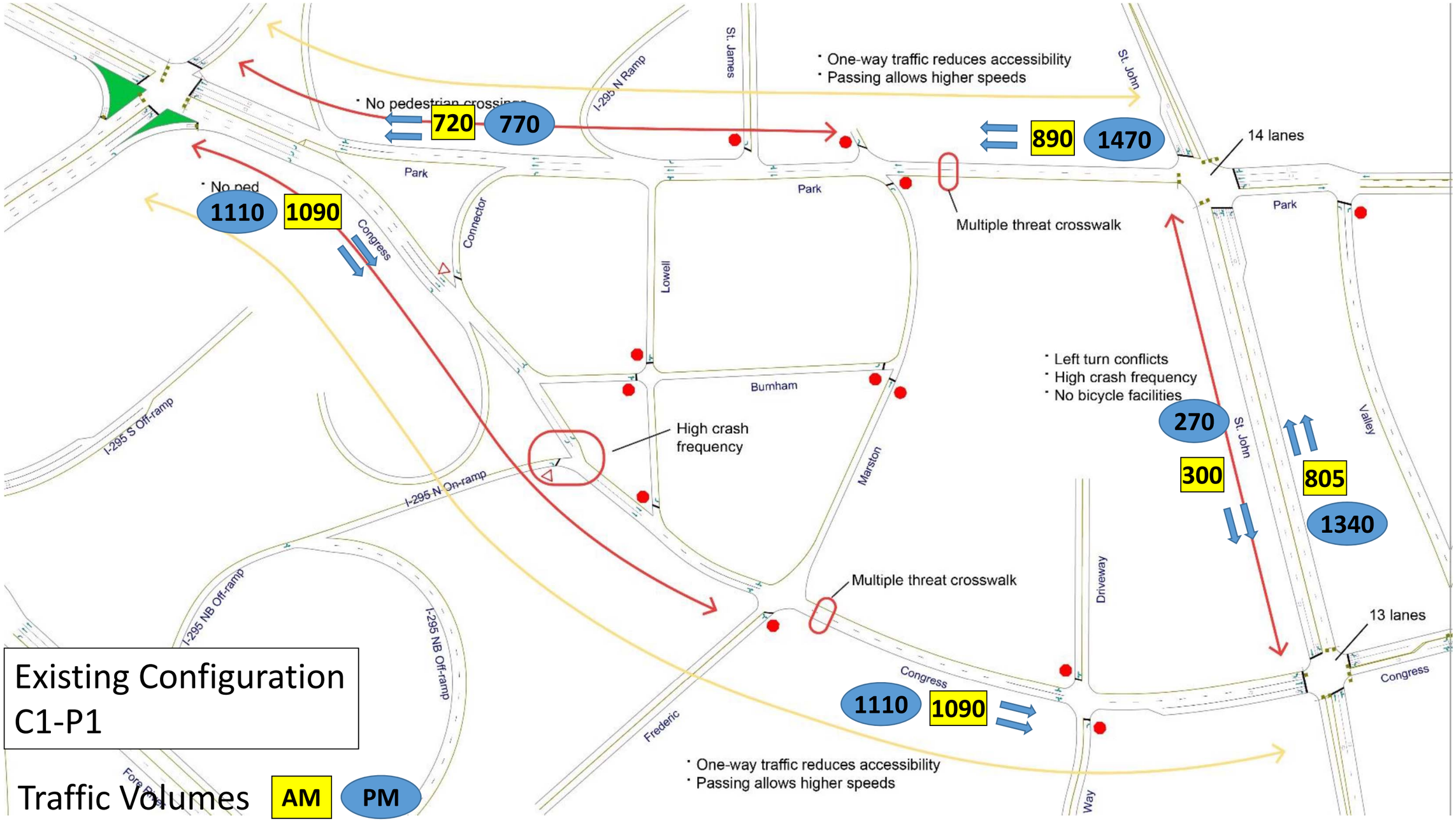

Existing Configuration
C1-P1

Traffic Volumes **AM** **PM**
2027

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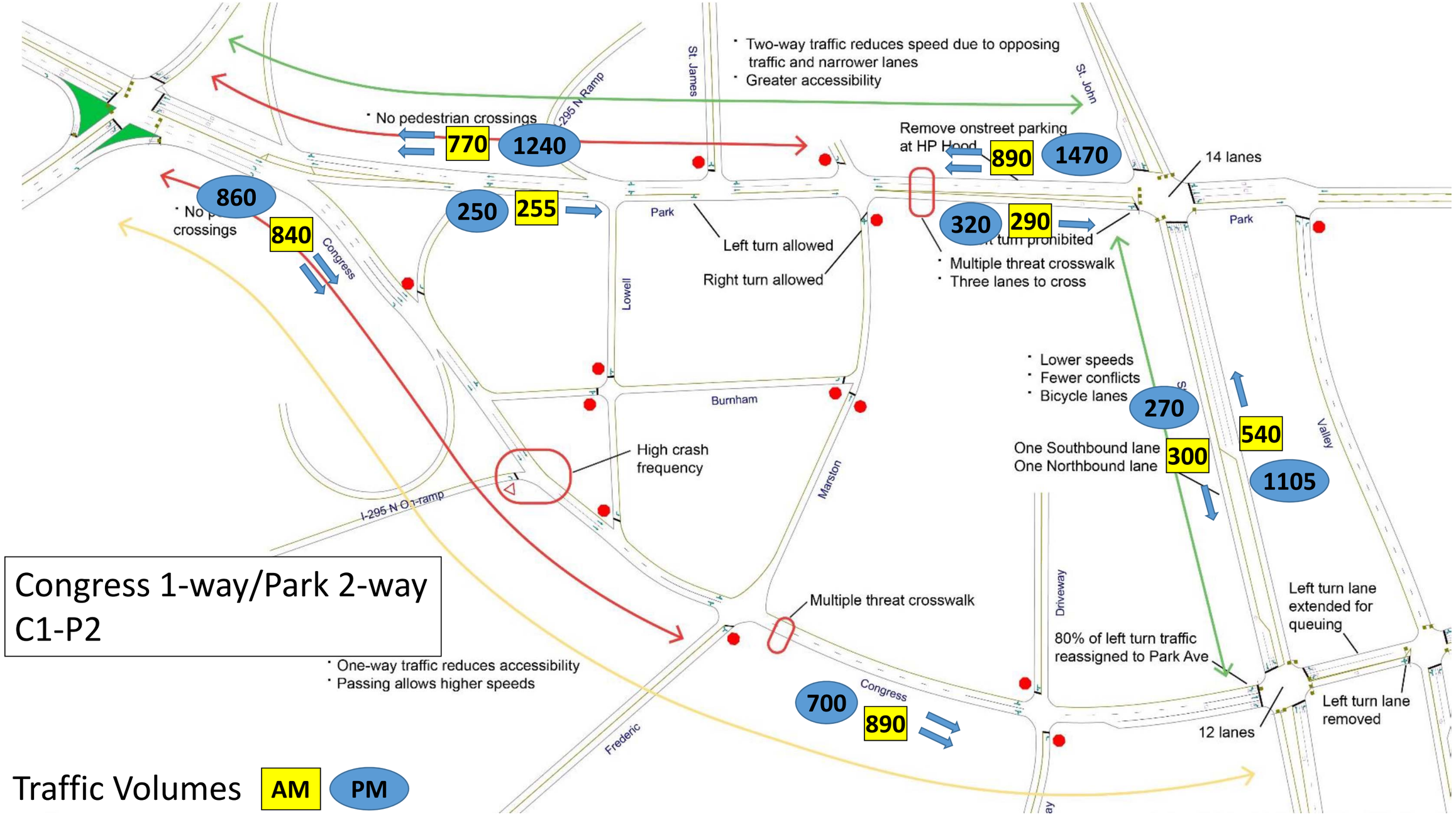

Congress 1-way/Park 2-way
C1-P2

Traffic Volumes **AM** **PM**
2027

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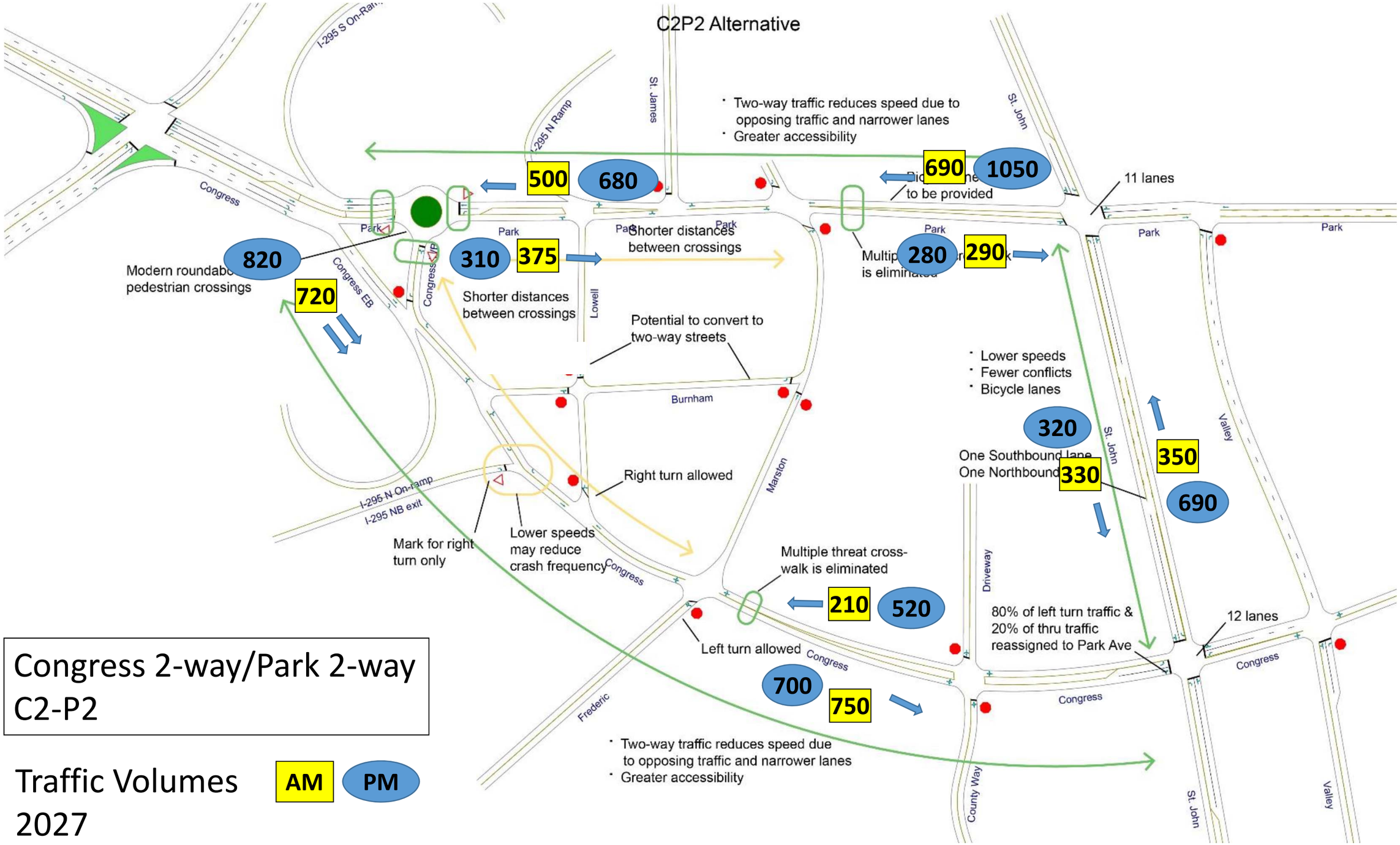

Congress 2-way/Park 2-way
C2-P2

Traffic Volumes
2027

AM PM

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Table 5: Multimodal Evaluation Summary

Scenario	Pedestrian Network	Bicycle Network
No Build	No additional pedestrian crossings; double threat crossings on Park and Congress remain in place	Potential for bicycle network with contraflow bike lane
C1P2	No additional pedestrian crossings; double threat crossings on Park and Congress remain in place; though volume on Congress is lower and speeds on Park will be reduced due to 2-way traffic	Park Ave cannot accommodate separated bicycle facilities through the railroad bridge due to inadequate width available.
C2P2	Additional safe crossing for pedestrians at Congress/Park intersection	Bicycle facilities can be provided on Park Ave as planned for Bayside Trail extension to Transportation Center (*Connecting Libbytown*)

Table 7: Speed and Safety Evaluation

Scenario	Speed/Safety
No Build	Higher speeds and ability to pass maintained
C1P2	Lower speeds on Park Ave due to narrower width and oncoming traffic; but ability to pass on westbound Park maintained
C2P2	Lower speeds on both Congress and Park due to friction created by two-way operations; no passing on Park and Congress reduces speeds and improves safety.

Table 8: Community Impacts Evaluation

Scenario	Accessibility	Emergency Access Impacts	Resiliency Impacts
No Build	Poor accessibility and inconvenient circulation is not addressed by this alternative	Access to Maine Medical from I-295 Exit 12 remains hindered by at-grade railroad crossings.	With Park Ave the only westbound route in the study area, flooding will more frequently affect circulation.
C1P2	Accessibility is improved along Park Ave in this alternative, but not along Congress St	Park Avenue provides an access route to Maine Medical that is not subject to railroad crossings.	With Park Ave the only westbound route in the study area, flooding will more frequently affect circulation.
C2P2	Accessibility is improved along both Park Ave and Congress St in this alternative	Park Avenue provides an access route to Maine Medical that is not subject to railroad crossings.	Congress provides two-way travel, and an alternative to Park Ave when it is closed due to flooding.

Conclusions

The following table summarizes the above analysis results for each performance measure:

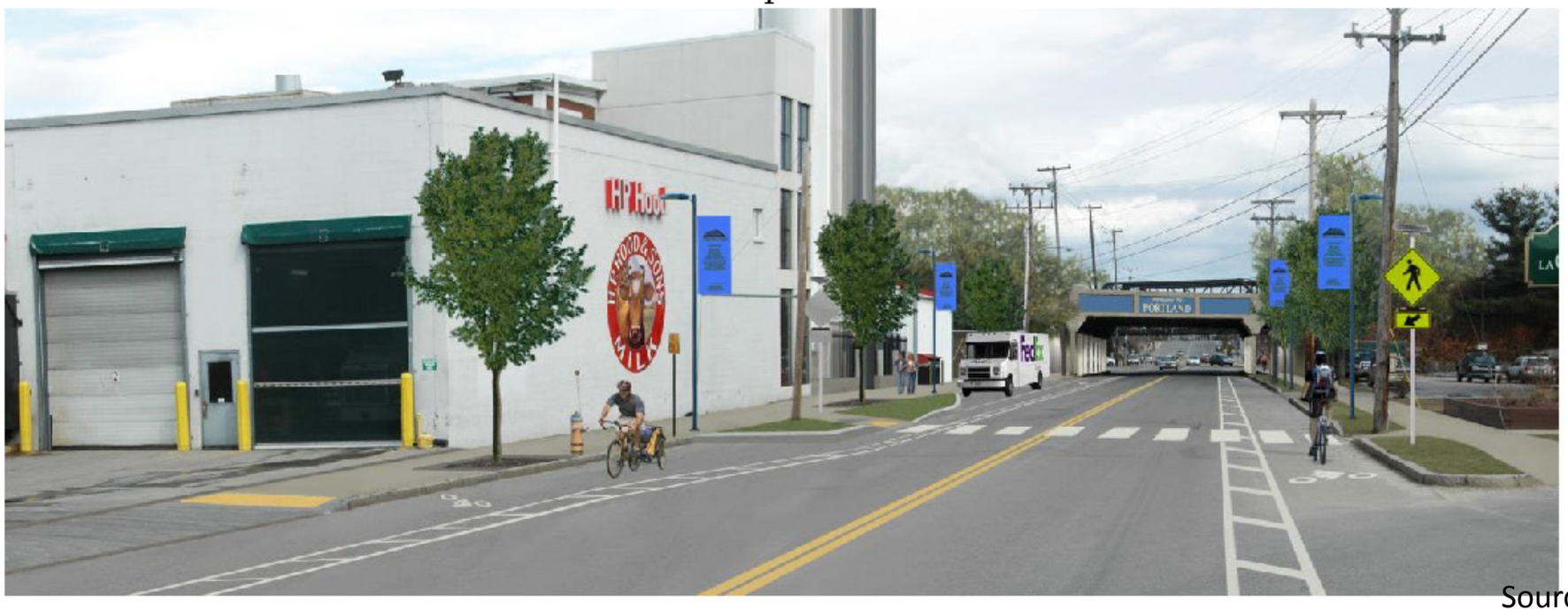
Measure	No Build	C1P2	C2P2
Level of Service			
Pedestrian			
Bicycle			
Efficiency			
Speed Management			
Economic Activity			
Public Safety Access			

Red = worst | white = median | green = best

Park Avenue (from 2013 Report)

Existing

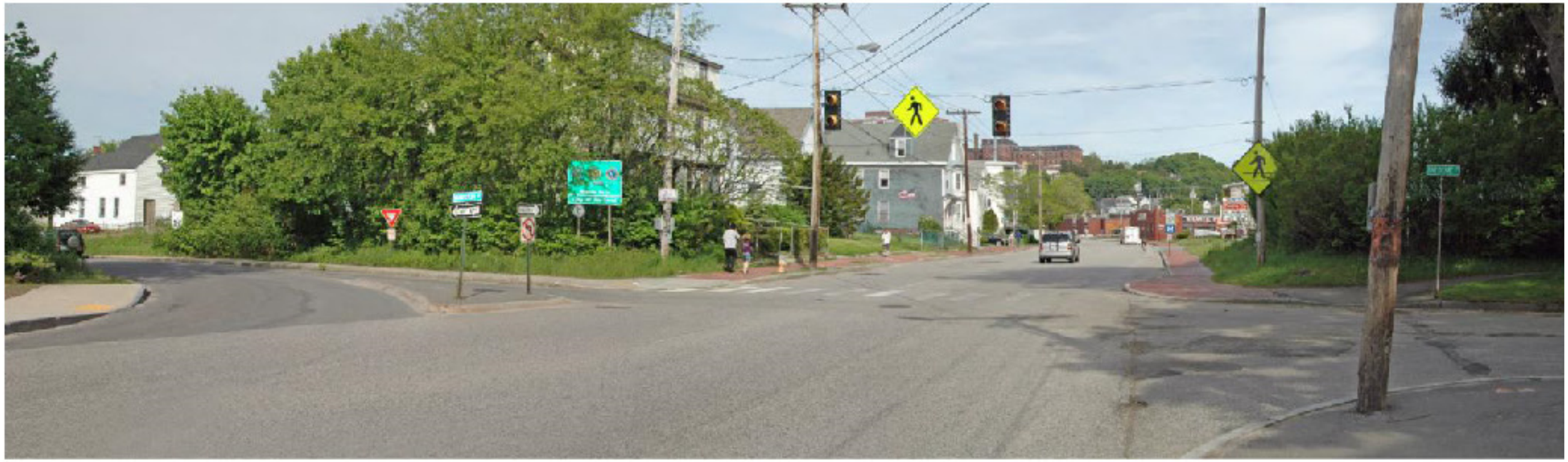
Proposed



Source: TJD&A, 2013.

Congress Street (from 2013 Report)

Existing



Proposed

Source: TJD&A, 2013.

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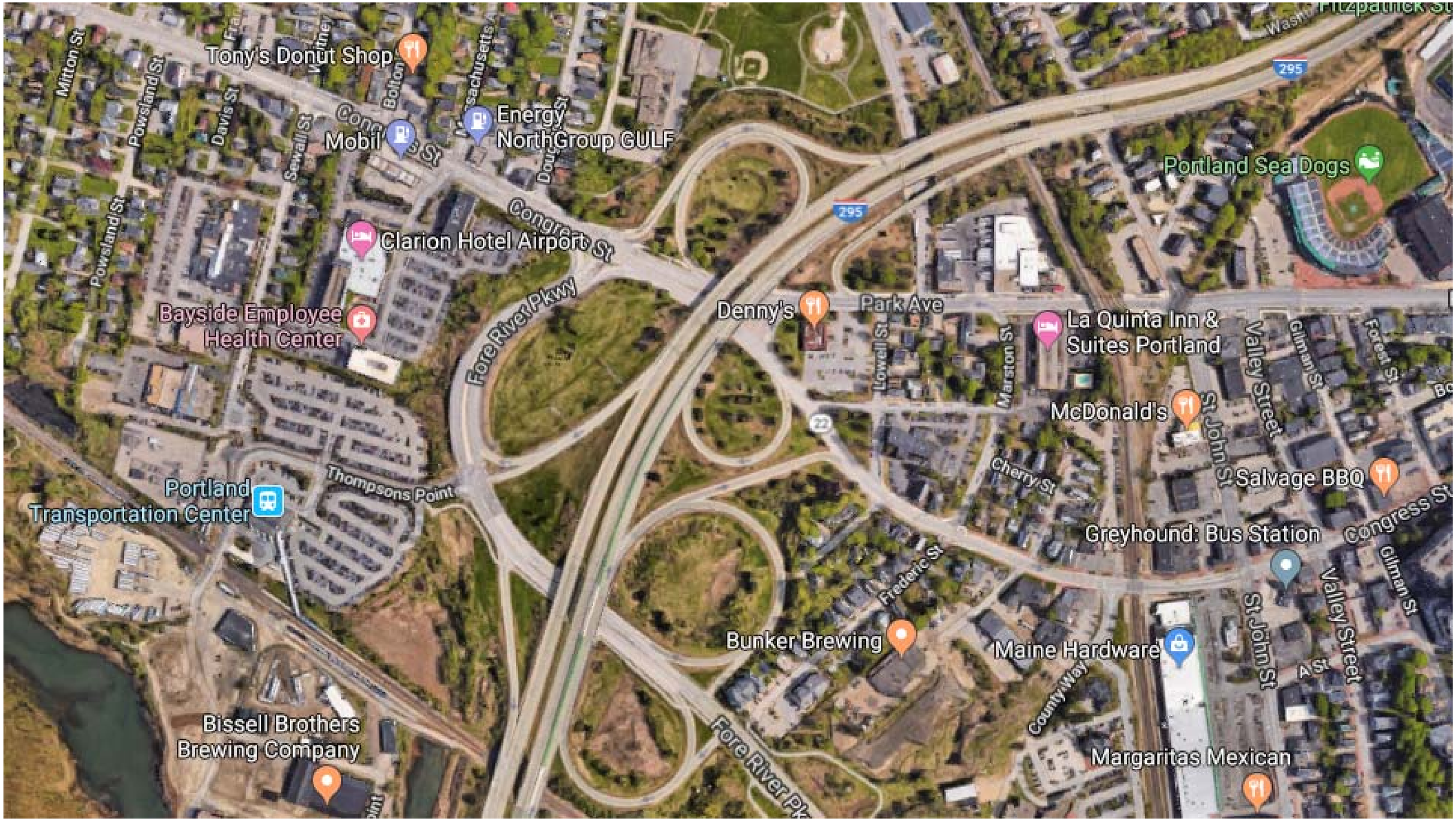

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