

# Salem State University – Proposed Garage Peer Review Findings



**SSU Neighborhood Advisory Committee Meeting**

**Salem, MA**

**March 18, 2015**



City of Salem, Massachusetts  
Kimberley Driscoll, Mayor  
City of Salem Departments: Engineering |  
Planning & Community Development

**FAY, SPOFFORD & THORNDIKE**





## FST's Key Tasks

- Peer review the North Campus Access Study
- Review intersection of Lafayette Street (Route 114) at Loring Avenue for safety/capacity enhancements
- Review Lafayette Street and Loring Avenue to see if bike enhancements possible; identify impacts on-street parking/loading



# Key Findings

- Study used *generally acceptable traffic analysis procedures*
- Consolidating the parking supply on North Campus with the *proposed garage satisfies an immediate SSU staff/visitor/commuter and resident student parking needs*
- Without changes to on on-street parking supply *on-street parkers will avoid the garage if on-street spaces remain available*



# Key Findings








- We anticipate ***poor peak operations at Loring Avenue/College Drive*** during afternoon exiting peak hours
- ***Lafayette Street at Loring Avenue intersection requires safety and operational enhancements***
- ***Mitigation measures are recommended*** to encourage non-auto commuting & trip making



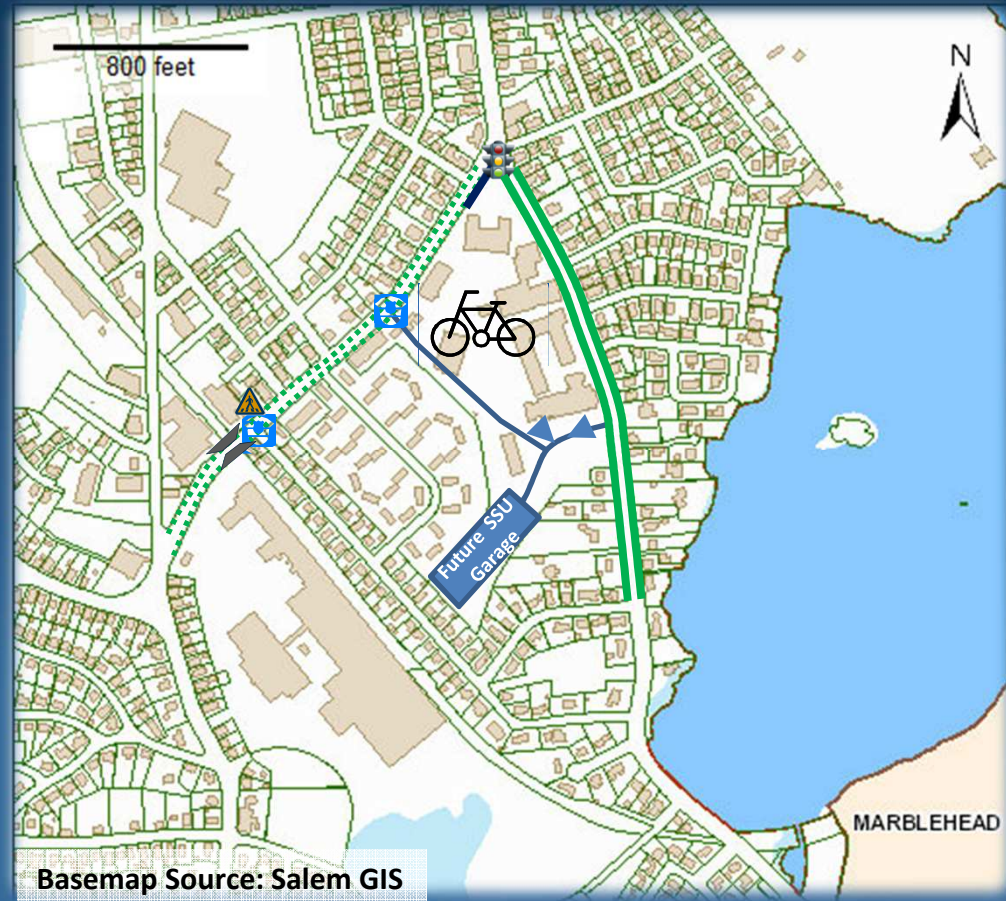


# Recommended Mitigation Overview

## Legend

-  Buffered cycle track w/on-street parking removal\*
-  New bike lanes w/on-street parking removal\*
-  Additional bike storage – consider providing 5% of campus population
-  Monitoring- Peak Manual Control\*
-  Extend right lane storage
-  Implement pedestrian/bike crossing bump-out enhancements\*
-  Upgrade traffic signal

\* Implement immediately after garage



Basemap Source: Salem GIS



# Recommended Mitigation

## New Signal at Loring Avenue at Lafayette Street (intersection safety & operations upgrades)

- ADA-compliant ramps
- ADA-compliant push buttons on the southeastern corner
- Fiber optic “No Turn on Red” signs on southbound approach during the pedestrian phase
- Overhead video detection
- New overhead mast-arm signals with back plates
- Estimated Cost = \$200,000-\$250,000



**Purpose: Multi-modal safety enhancements**



# Recommended Mitigation

**Monitor** modified intersection of Loring Avenue at College Drive – if necessary, provide police/crossing guard control, allow rights only or, if all else fails, a future coordinated signal

- Afternoon Peak Hours
- Special Events



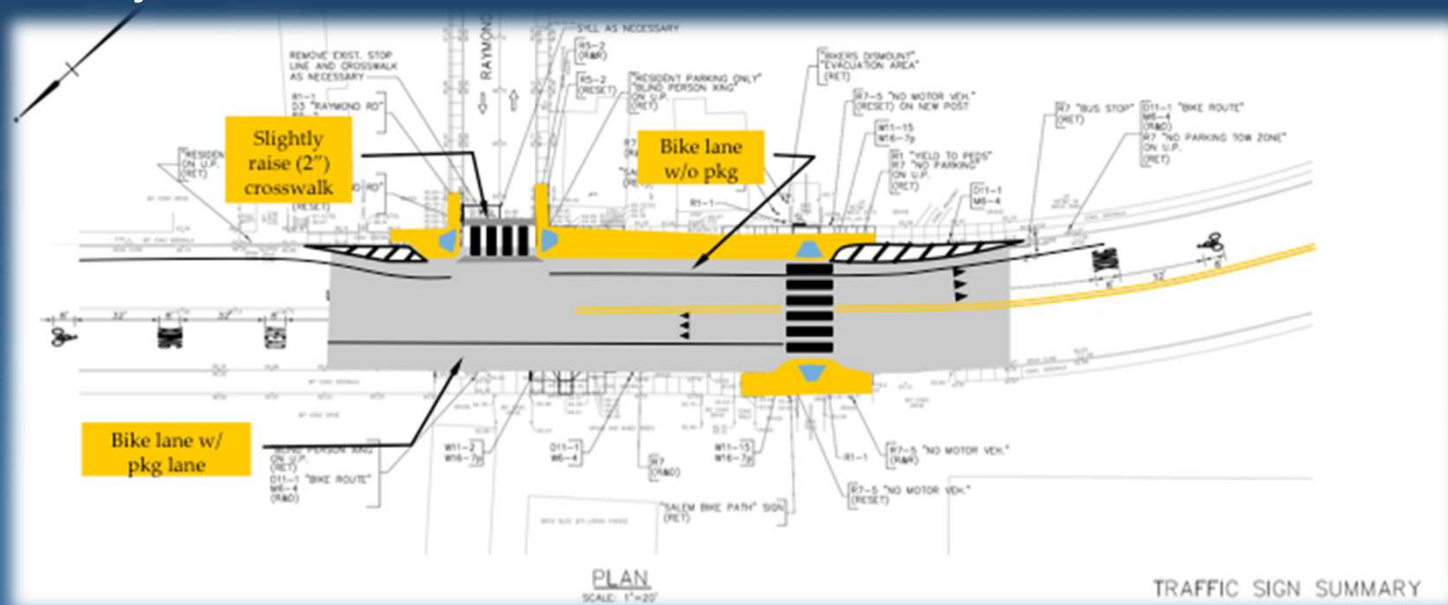
**Purpose: Minimize Loring Avenue conflicts, congestion, maximize safety**





# Recommended Mitigation

With bike lanes include bump-outs/curb extensions at intersection of Loring Avenue at Raymond Road



Estimated Cost  
=\$50,000

**Purpose: Encourage non-auto travel/reduce garage impact**





# Recommended Mitigation

Provide police/crossing guard control of the  
Loring Avenue at Raymond Road intersection

*Afternoon Peak Hours  
Special Events*



**Purpose: Create gaps in pedestrians for neighbors  
trying to exit onto Loring Avenue; reduce garage  
impact**



# Recommended Mitigation

Relocate existing on-street parking spaces used by SSU on Lafayette Street and Loring Avenue to the proposed garage

- Approximately 115 vehicles (45- Loring Ave/ 70- Lafayette Street)
- Improves sight distance at College Drive/ Loring Avenue
- Maintain Resident Parking



**Purpose: Encourage non-auto travel/reduce garage impact**



# Recommended Mitigation

## Enhance bicycle circulation/pedestrian environment on Lafayette Street

- Alter southbound bike lane to provide a two-way cycle track
- Address residential parking and loading requirements



**Purpose: Encourage non-auto travel/reduce garage impact**



# Recommended Mitigation

## Enhance bicycle circulation/pedestrian environment on Lafayette Street

- 10 foot wide cycle track
- 3 foot buffer
- 13.5 foot wide southbound vehicle lane
- 13.5 foot wide northbound vehicle lane
- 5 foot northbound bike lane
- Estimated Cost = \$50,000 - \$400,000



**Purpose: Encourage non-auto travel/reduce garage impact**





# Recommended Mitigation

## Enhance bicycle circulation/pedestrian environment on Loring Avenue

- 8 foot wide parking lane
- 2 foot buffer (to reduce doorings),
- 5 foot westbound bike lane,
- 11 foot wide westbound vehicle lane
- 11 foot wide eastbound vehicle lane
- 5-6 foot eastbound bike lane.
- Estimated Cost = \$75,000



**Purpose: Encourage non-auto travel/reduce garage impact**



# Recommended Mitigation

## Encourage Alternative Transportation Choices

- **Expand bicycle storage facilities on campus**
  - SSU should increase its on-campus bike storage facilities to represent 5% or more of the campus population
  - Consider adding a new North Campus Salem Spins share-a-bike station 7:30 AM-6:30 PM near Ellison Center
- **Advocate for creation of South Salem MBTA Commuter Rail stop**
- **Improve and expand utilization of Campus Cruiser shuttle service**



**Purpose: Encourage non-auto travel/reduce garage impact**



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FAY, SPOFFORD & THORNDIKE **FST**  
100 YEARS

# Thank you Questions?



# Recommended Mitigation

- Potential Mitigation

- *Relocate existing on-street parking spaces used by SSU on Lafayette Street (not resident parking) and Loring Avenue to the proposed garage*
- *Enhance bicycle circulation/pedestrian environment on Lafayette Street*
- *Enhance bicycle circulation/pedestrian environment on Loring Avenue*
- *Install additional bike racks throughout SSU to serve at least 5% of campus population*
- *Provide Loring Avenue at Lafayette Street intersection upgrades*
- *Provide police/crossing guard control of the Loring Avenue at College Drive intersection*
- *Construct bump-outs/curb extensions at the intersection of Loring Avenue and Raymond Road*
- *Provide police/crossing guard control of the Loring Avenue at Raymond Road intersection*