

# Summary Findings and Recommendations

## Downtown/Riverfront Redevelopment Traffic Circulation & Parking Study

January 4, 2006

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ASSOCIATES  
A TETRA TECH COMPANY



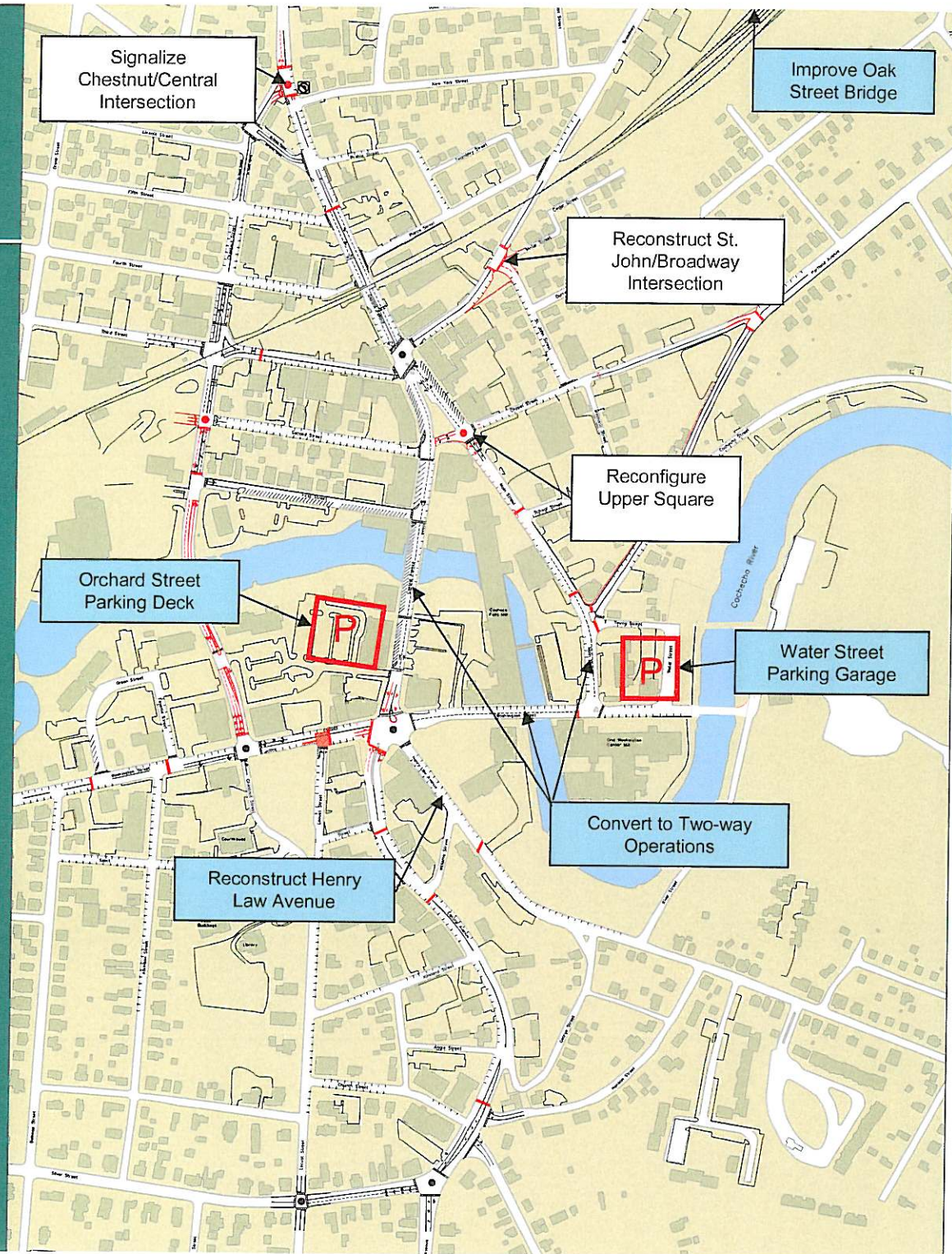


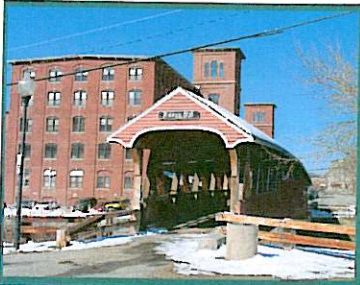
# Recommendations

## LEGEND:

Short Term

Long Term

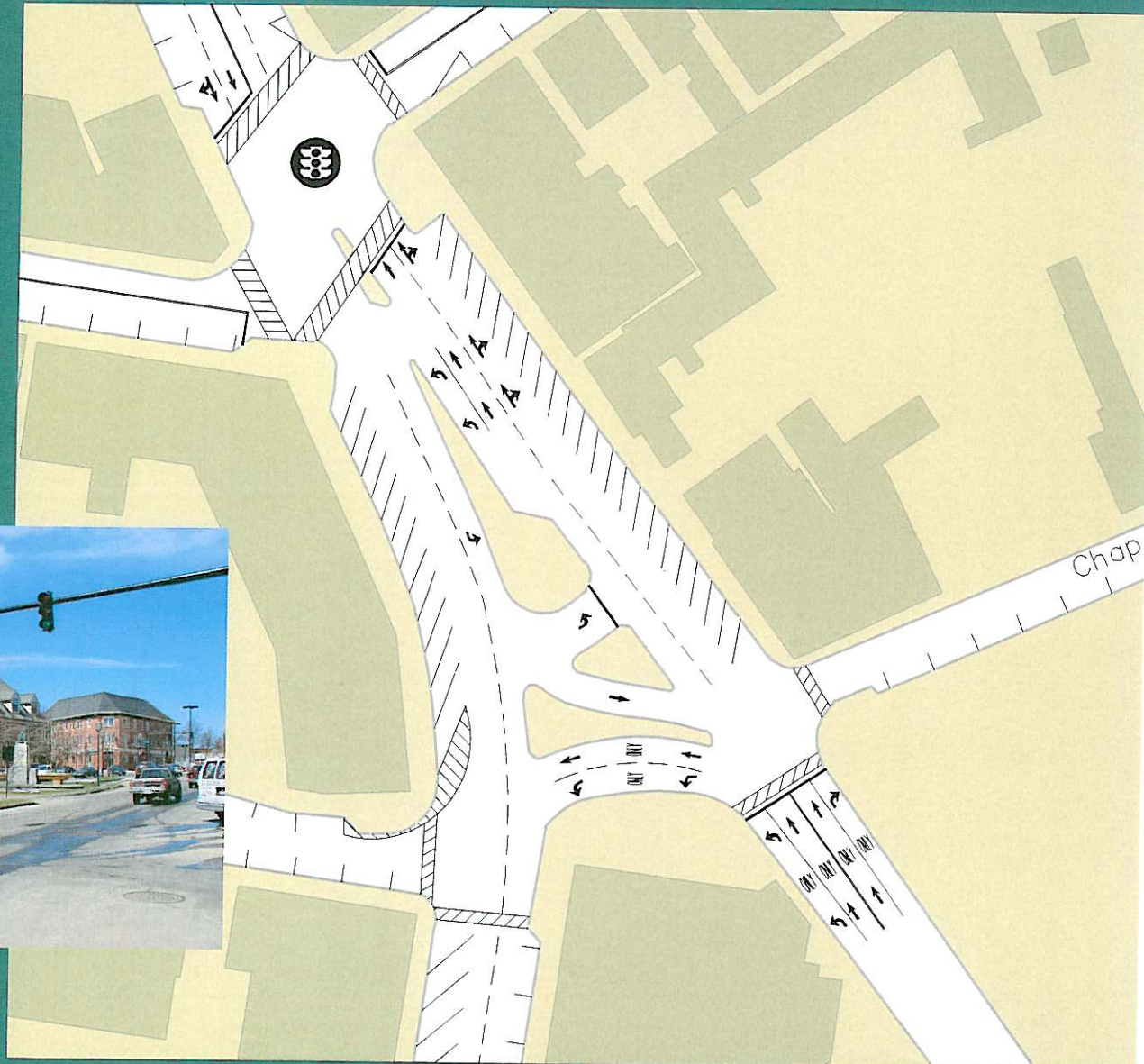




# Upper Square Existing Conditions

## Issues

- Conflicting movements
- High traffic volumes
- Wide pedestrian crossings
- High crash incidence
- Unusable median

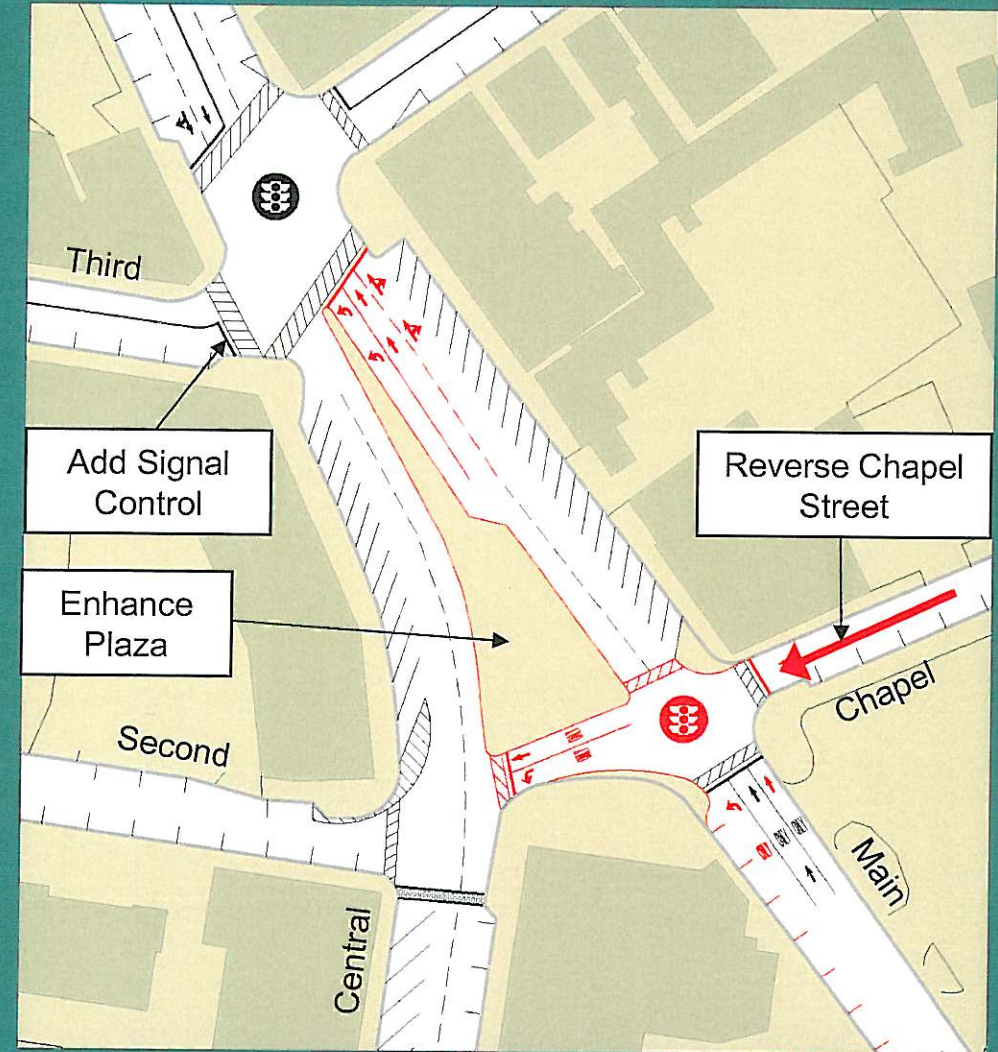


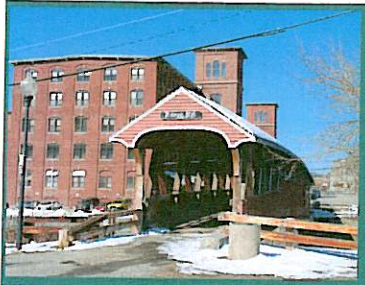


# Upper Square Short-Term Recommendations

## Benefits

- Improve access to downtown from Portland Avenue
- Reduce congestion at Main Street
- Simplify circulation
- Improve safety
- Create usable plaza space
- Enable 3<sup>rd</sup> Street to Central Avenue NB connection





# Broadway/ St. John Street/ Winter Street Existing Conditions



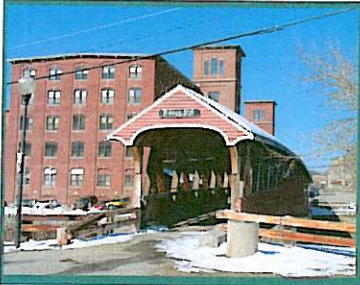
## Issues

- Confusing roadway alignment
- Excessive pavement



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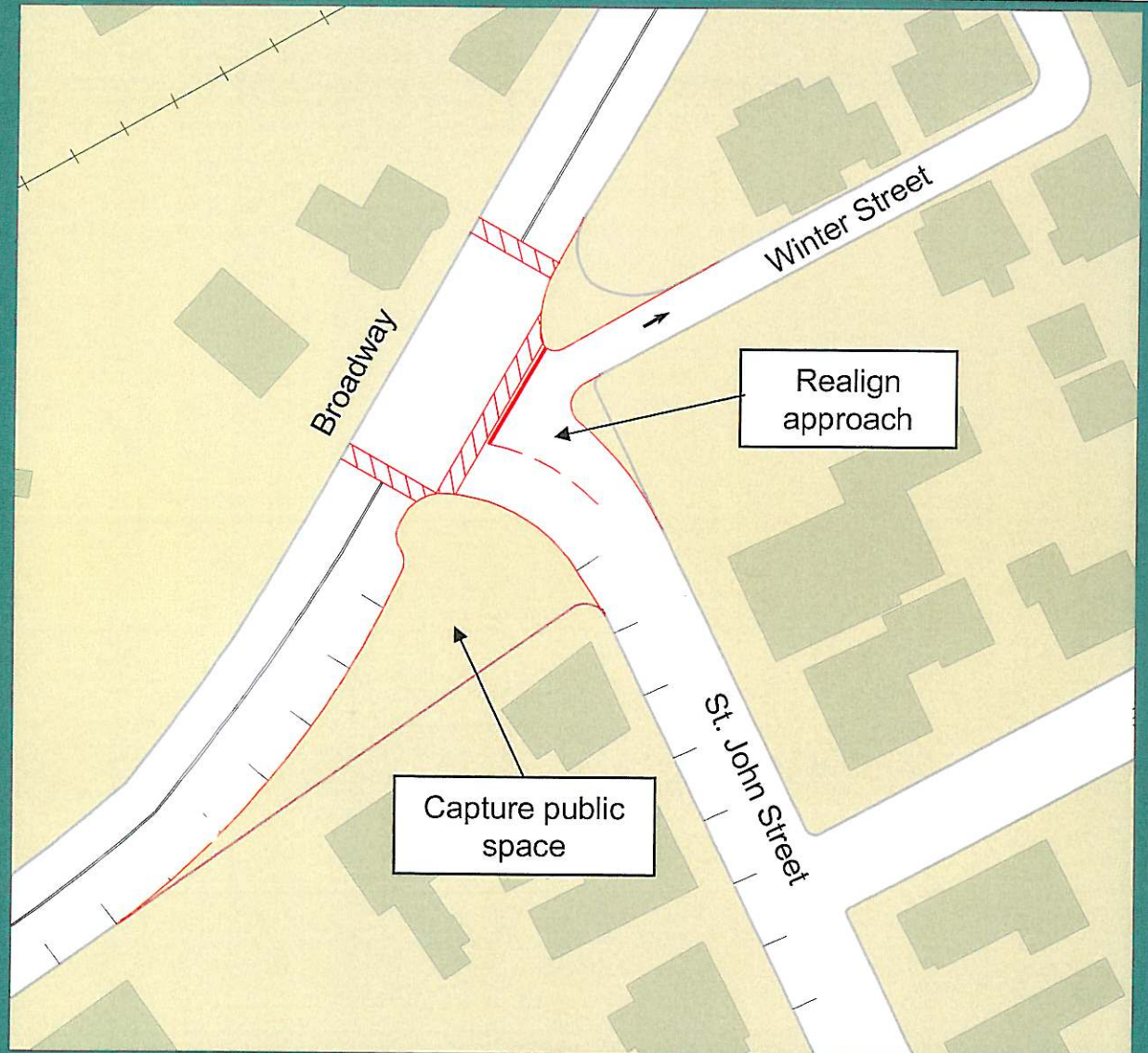
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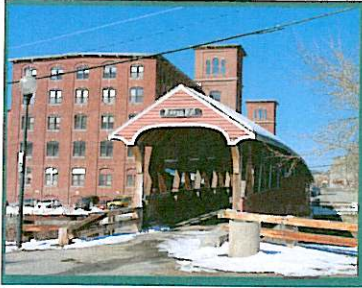


# Broadway/ St. John Street/ Winter Street Short-Term Recommendation

## Benefits

- Less driver confusion
- Fewer conflict points
- Opportunity for plaza

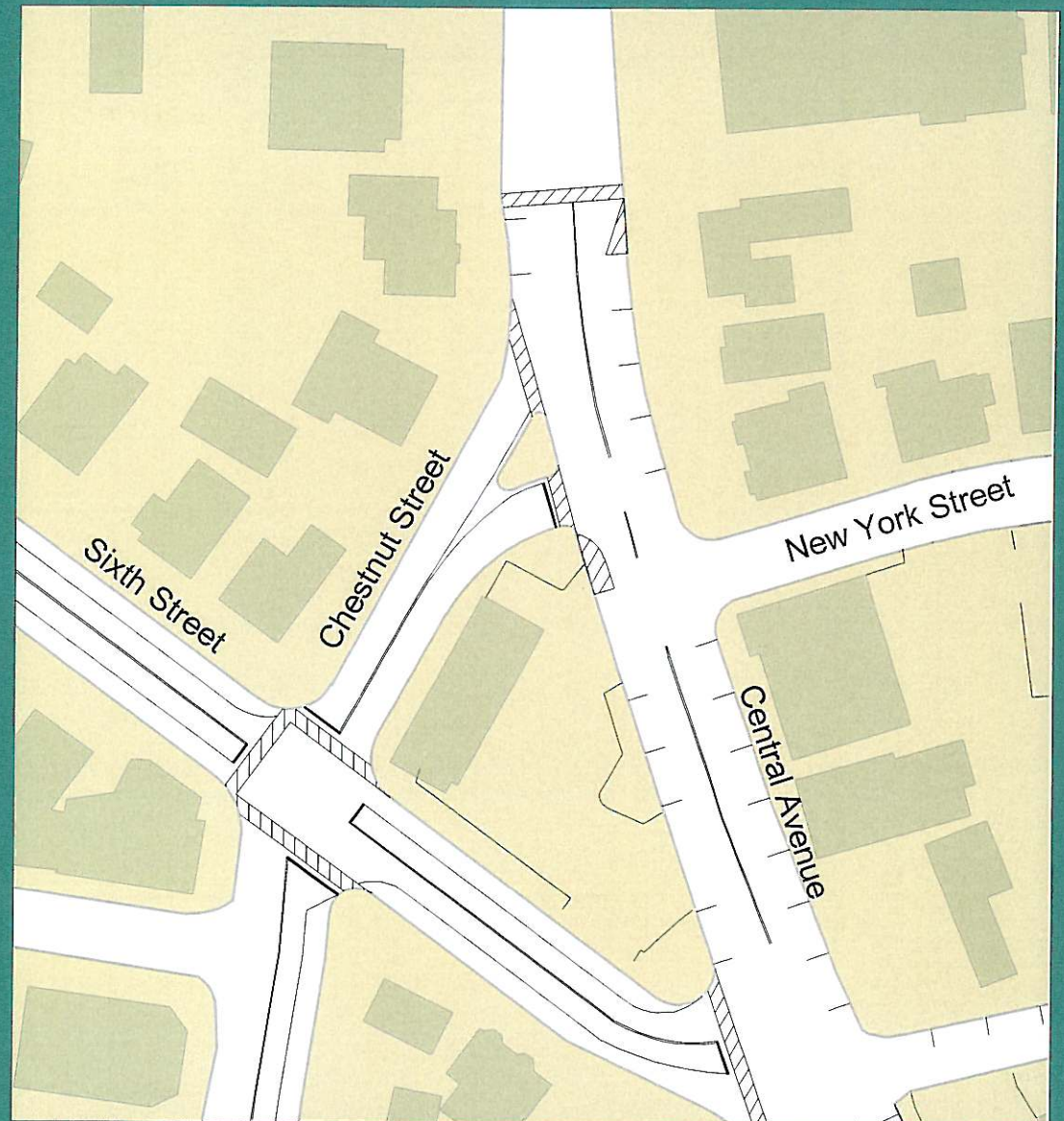


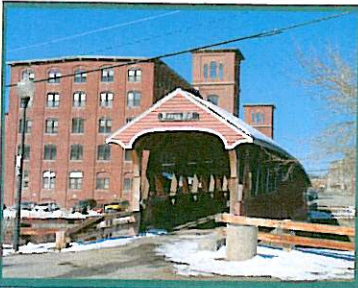


# Central Ave / Chestnut St / 6<sup>th</sup> St Existing Conditions

## Issues

- Significant congestion, especially from Chestnut St NB left turn onto Central Ave
- Chestnut St NB approach on steep grade – sight distance and acceleration issues
- Three closely spaced conflict points

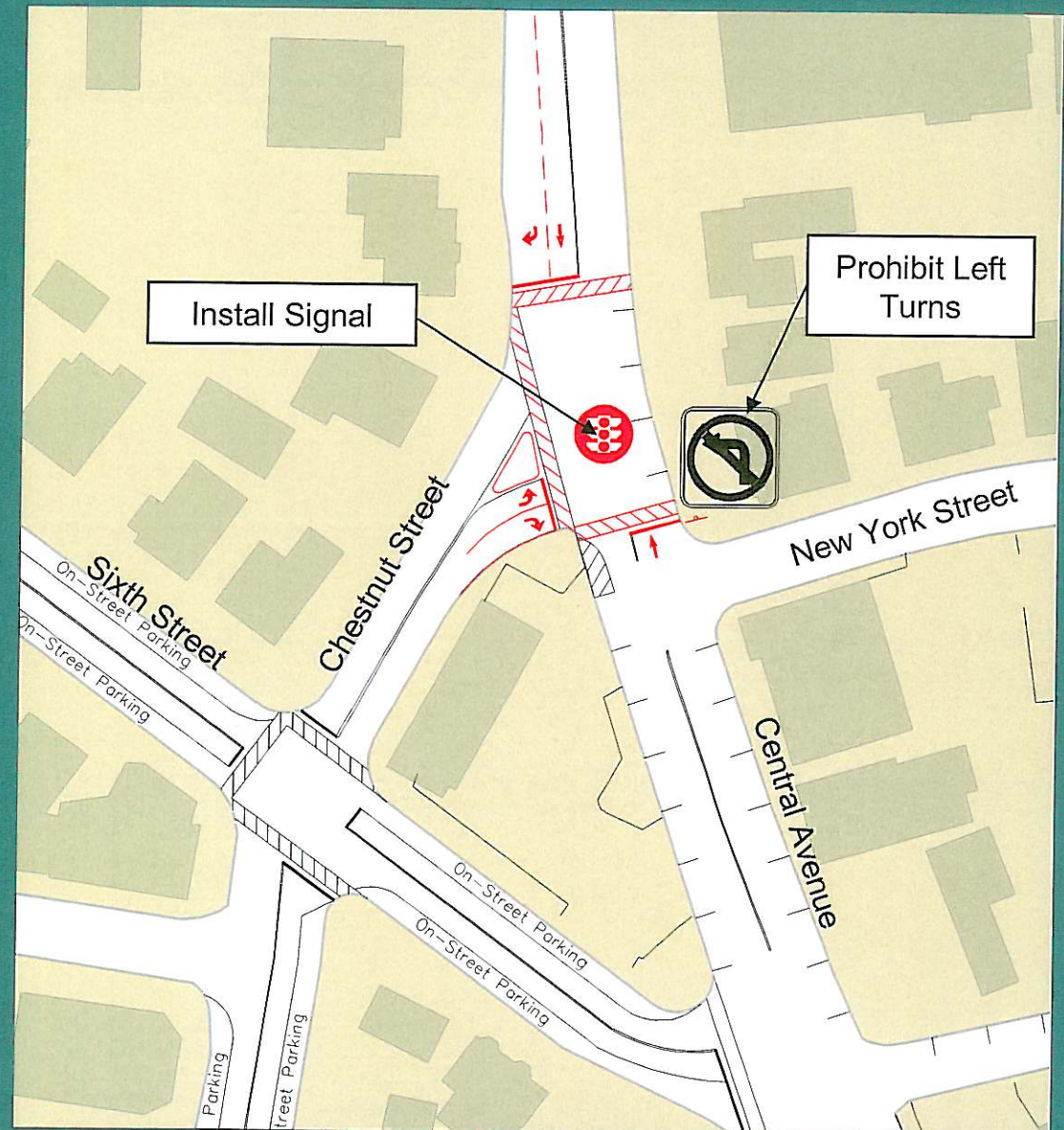




# Central Ave / Chestnut St / 6<sup>th</sup> St Short-Term Recommendations

## Benefits

- Reduce congestion
- Improve safety by eliminating sight distance issue, addressing acceleration issue
- Reduce queues at Chestnut Street and Sixth Street



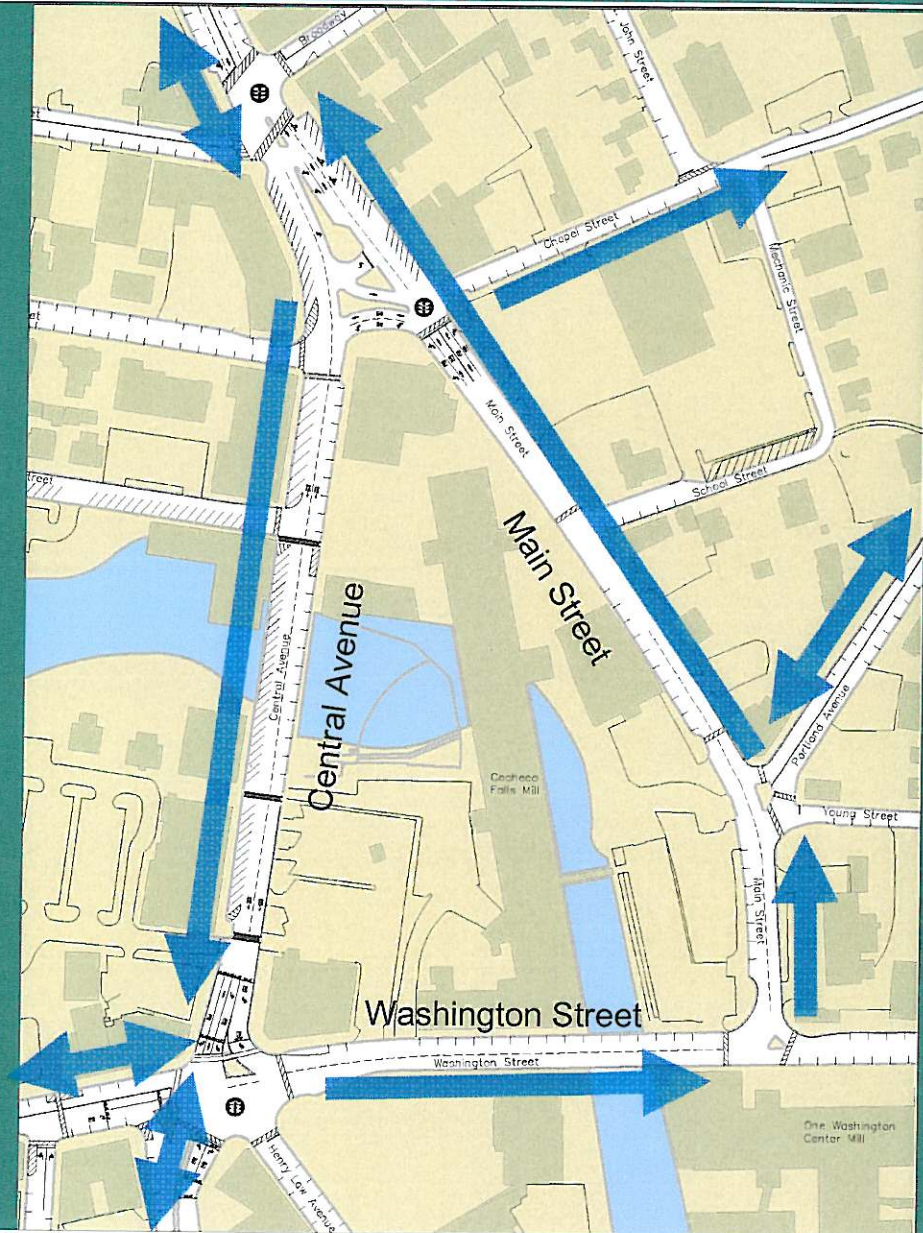




# Downtown Loop Existing Conditions

## Issues

- High capacity and high speeds
- Induced through traffic
- Limits pass-by traffic for retailers
- High volume left turn on Washington Street at bridge

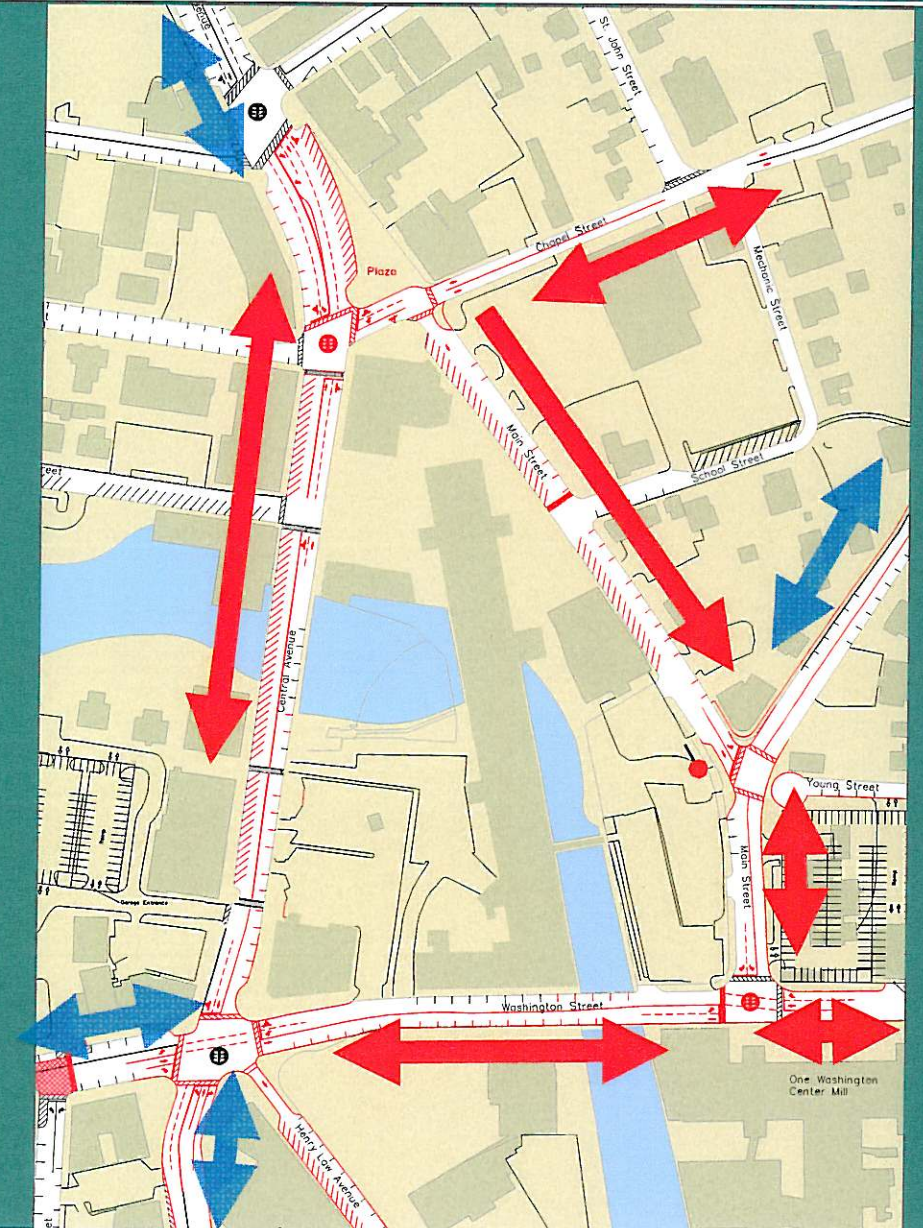




# Downtown Loop Long-Term Alternative

## Benefits

- Direct and intuitive access to downtown
- Easier access and improved visibility for Central Avenue merchants
- Reduced traffic speeds and safer pedestrian crossings
- Easier access to Riverfront (Economic Development)

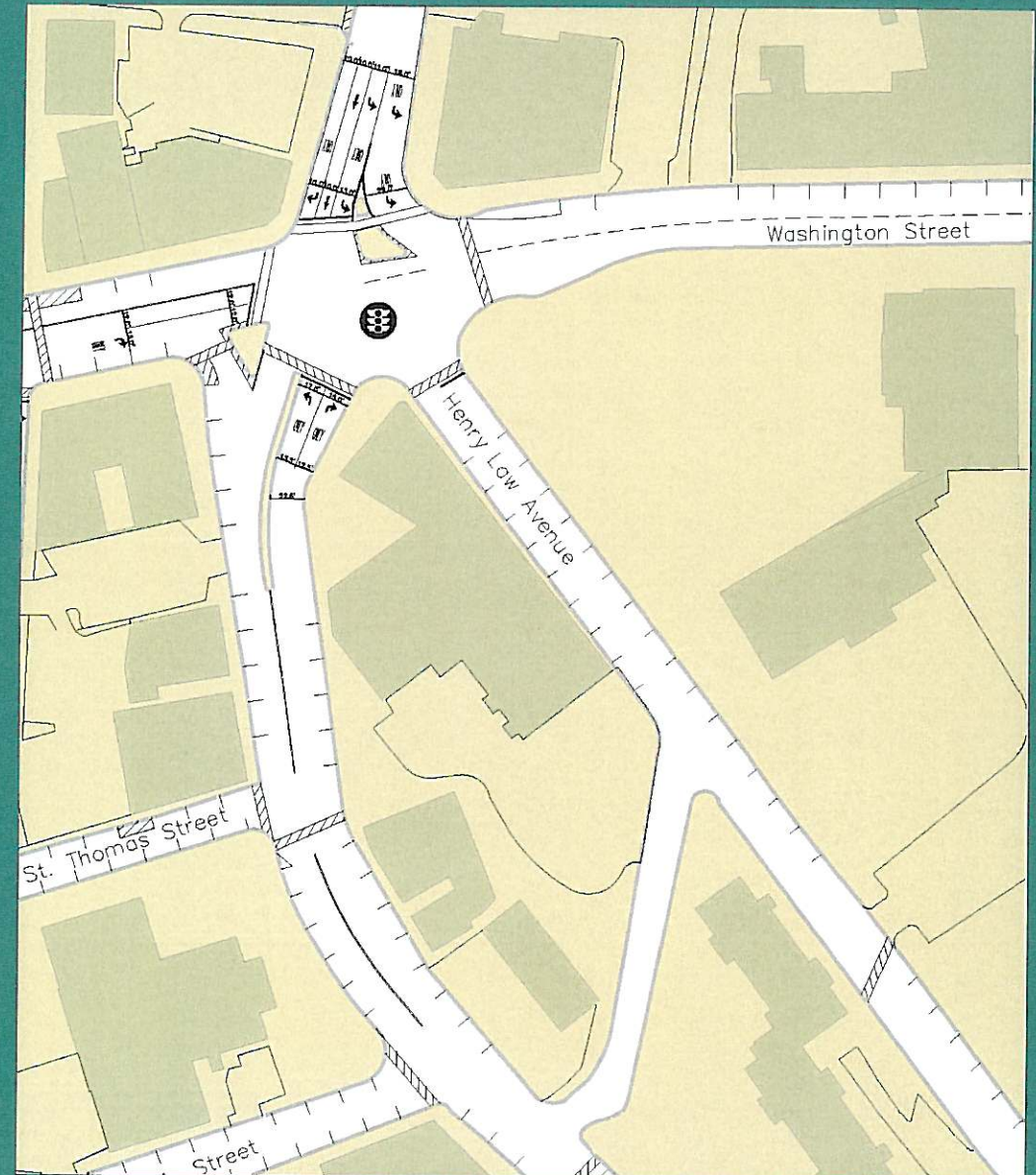




# Henry Law Avenue Existing Conditions

## Issues

- Traffic congestion in Lower Square
- Turning/safety conflicts in Lower Square
- High demand for on-street parking

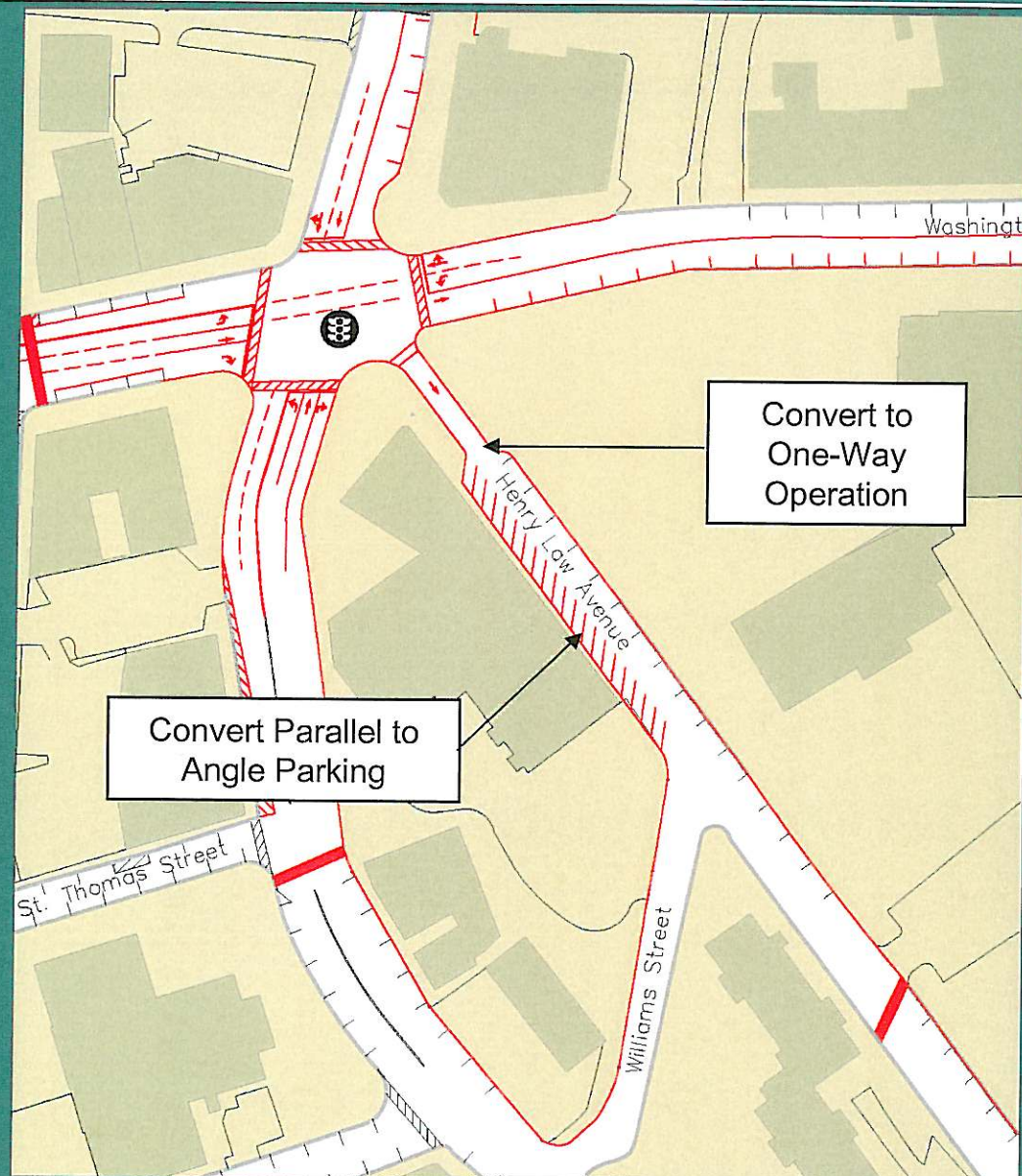




# Henry Law Avenue Long-Term Recommendations

## Benefits

- Fewer traffic conflicts in Lower Square
- Increased on-street parking supply (12 spaces)
- Easier access to on-street parking





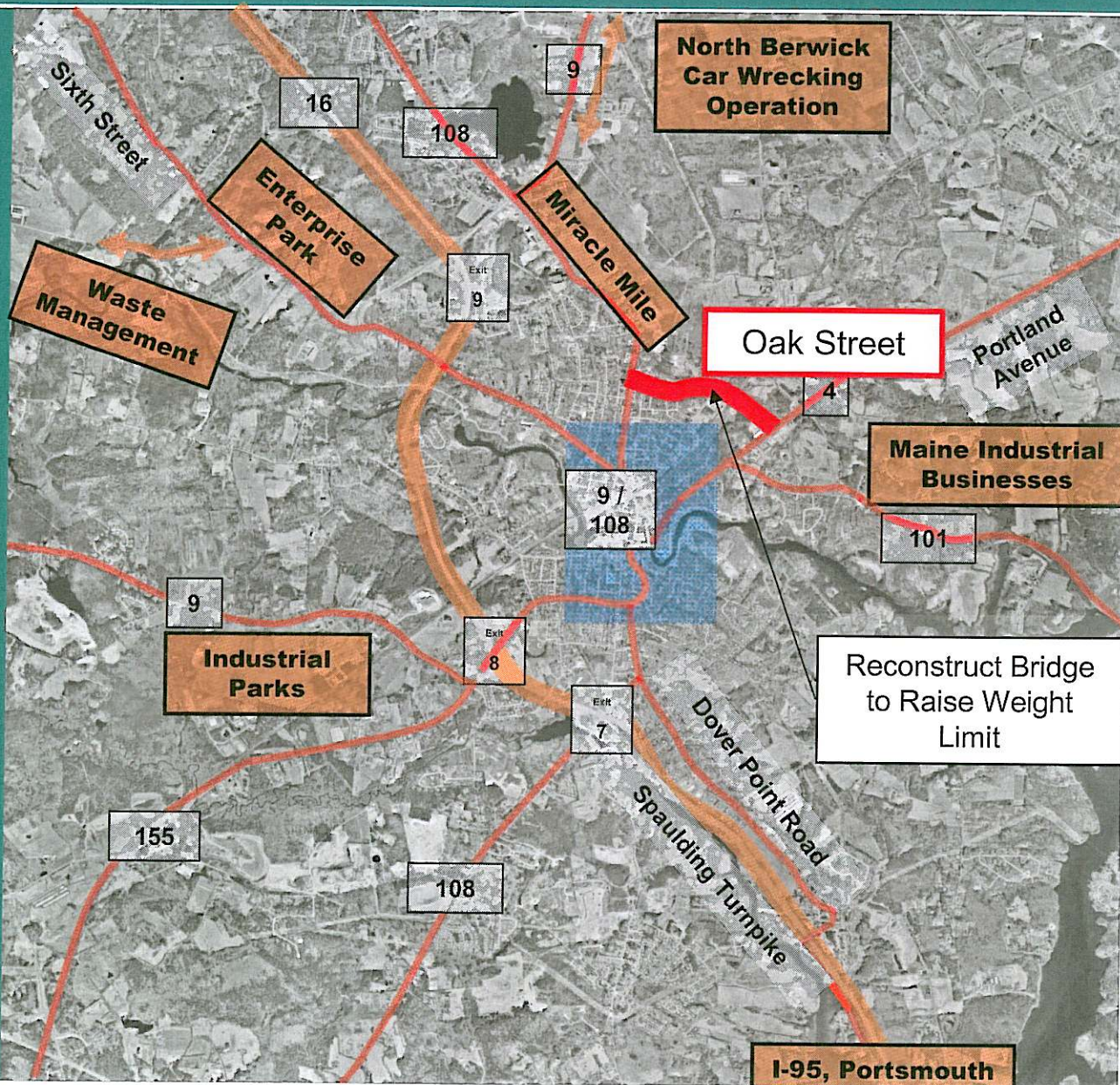
# Oak Street Bridge Reconstruction

## Issues

- Weight limit on Oak Street bridge
- Trucks passing through downtown loop

## Benefits

- Creates downtown bypass
- Removes 100 to 200 trucks per day from downtown loop



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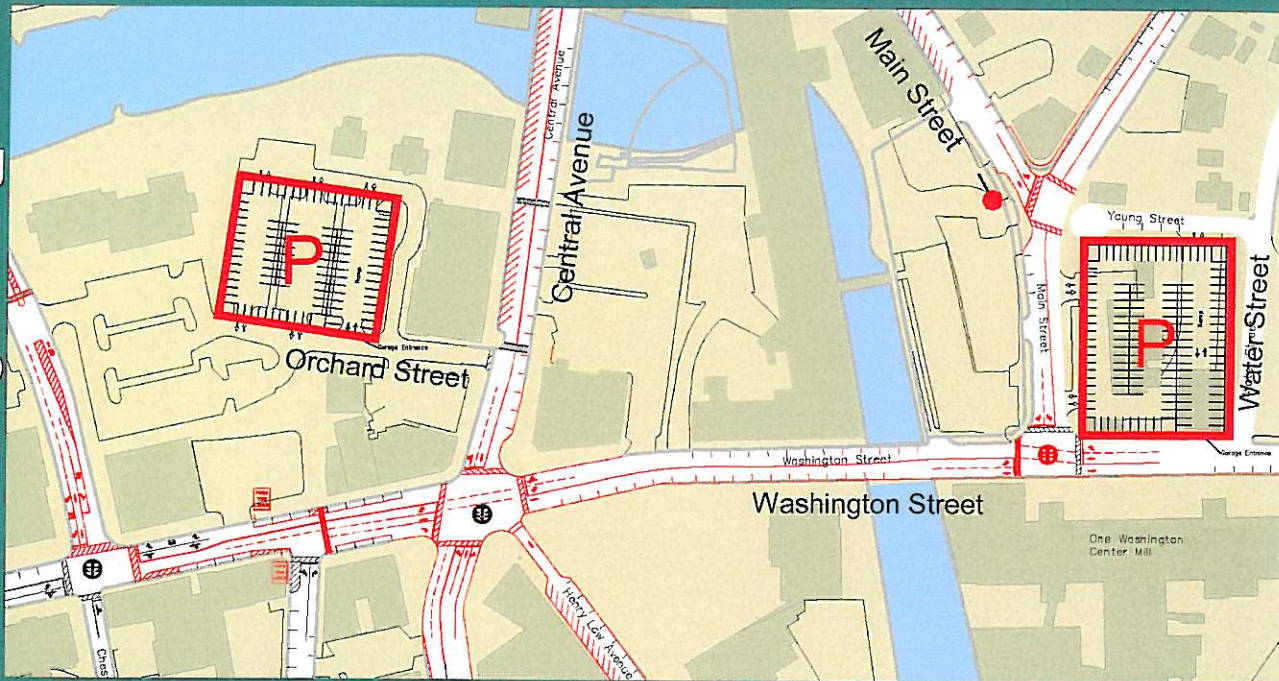
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# Parking Structure Recommendations

## Issues

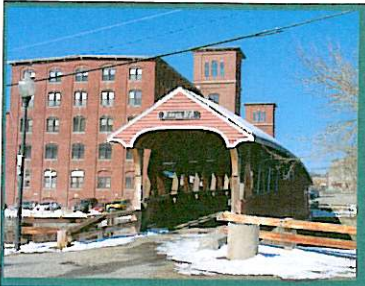
- Limited convenient short-term and employee parking for Central Avenue merchants
- Limited off-street parking to support employee growth in the mill complex



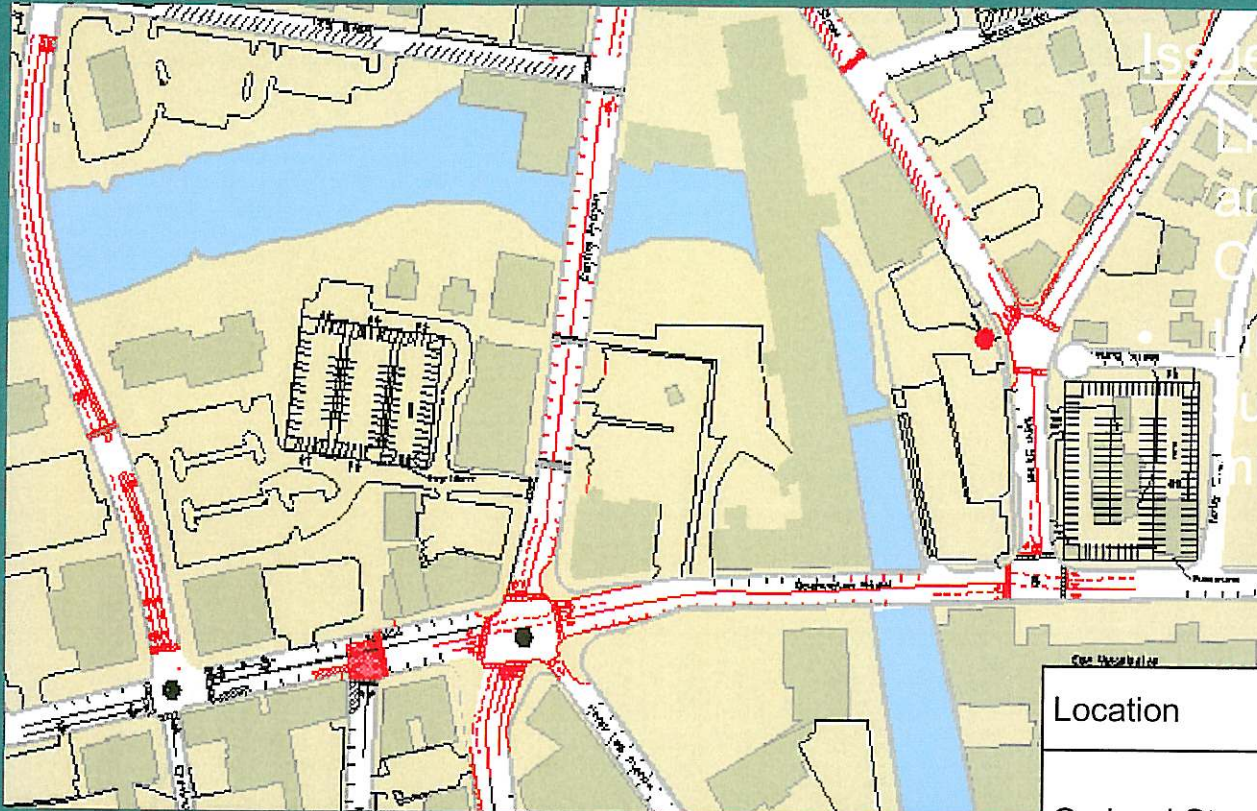
## Benefits

- Potential for future growth and development

Location	Existing	Increase	Total
Orchard Street	136	95	231
Water Street	89	410 3 levels	499



# Parking Structure Recommendations



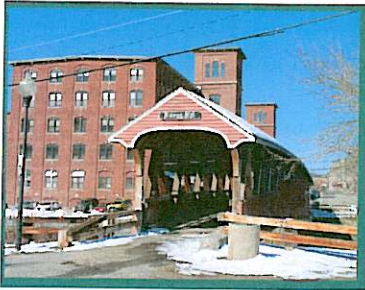
## Issues

- Limited convenient short-term and employee parking for Central Avenue merchants
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## Benefits

- Potential for future growth and development

Location	Existing	Increase	Total
Orchard Street	136	95	231
Water Street	89	410 3 levels	499



**Waste Management**

**North Berwick Car Wrecking Operation**

**Enterprise Park**

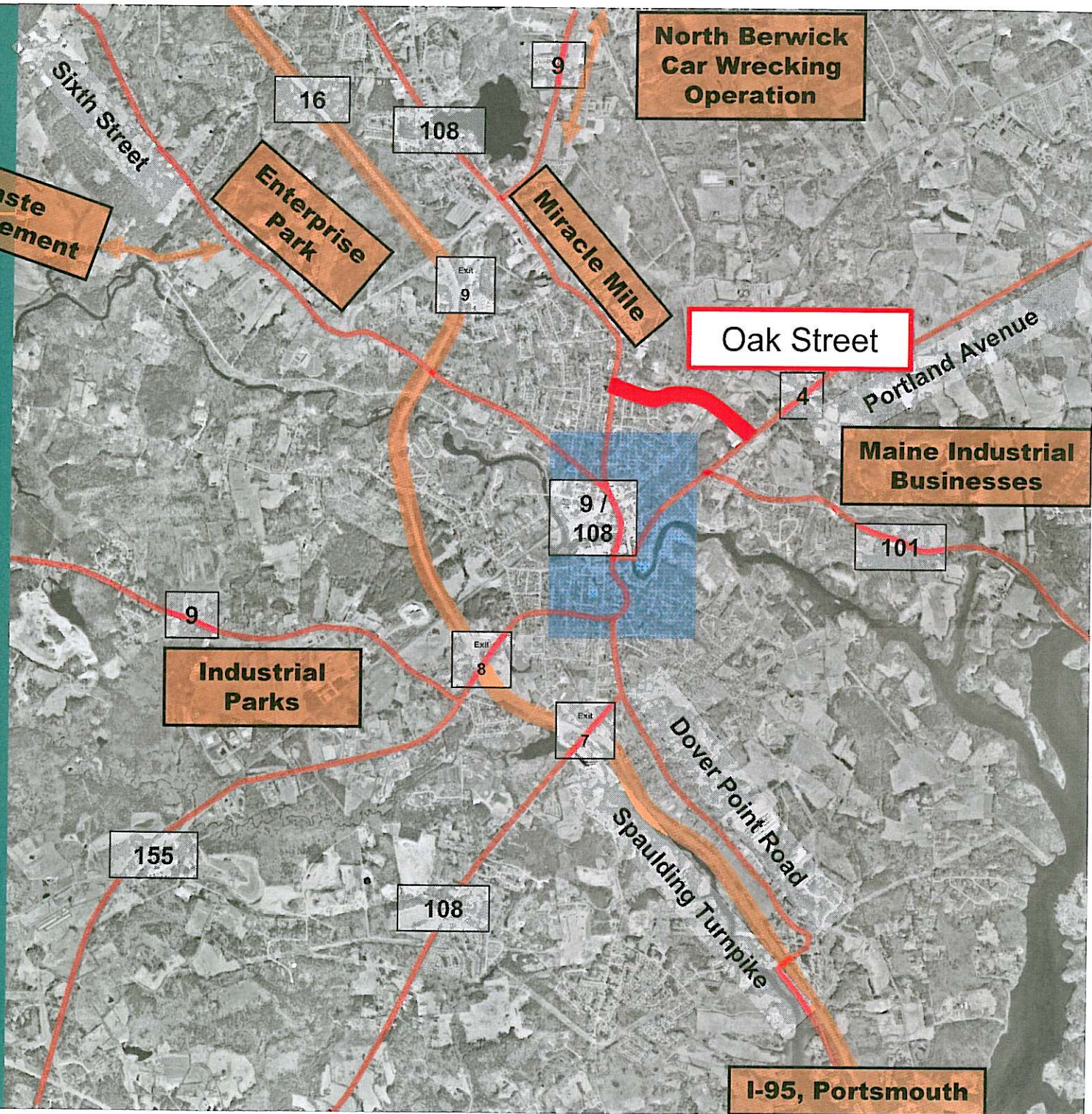
**Miracle Mile**

**Oak Street**

**Maine Industrial Businesses**

**Industrial Parks**

**I-95, Portsmouth**

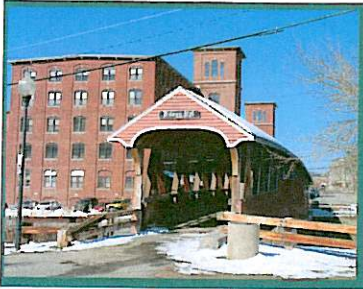






## Study Scope

- Motor vehicle traffic
- Truck traffic
- Parking supply and demand
- Public transit
- Pedestrians
- Bicycles
- Riverfront Development



## Study Goals

- **Traffic.** Reduce traffic congestion, enhance traffic safety, and improve access to and from downtown Dover.
- **Parking.** Optimize parking supply, demand, and utilization.
- **Economic Development.** Improve the transportation system to support economic development, in the existing downtown and at the Riverfront Development.

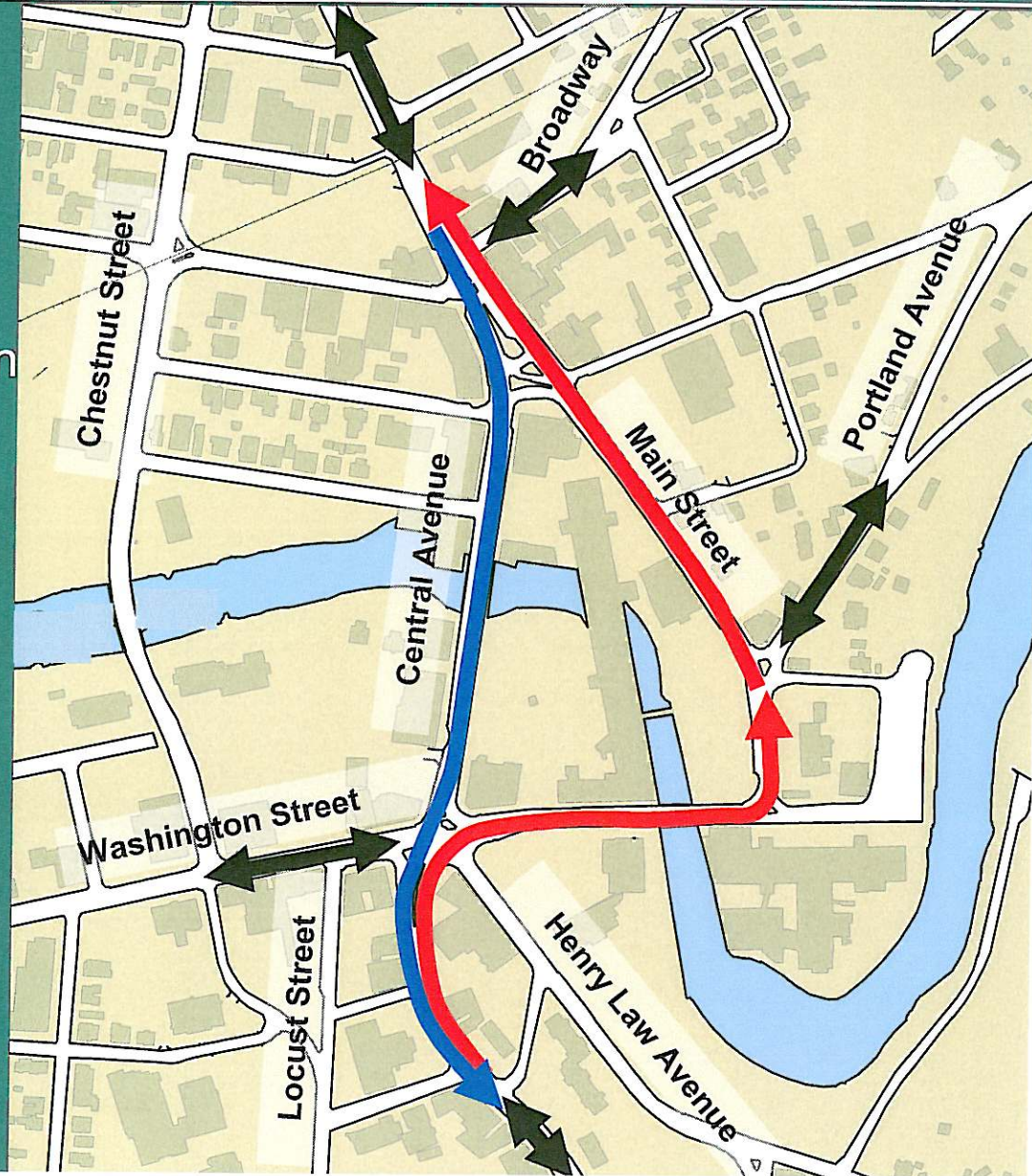


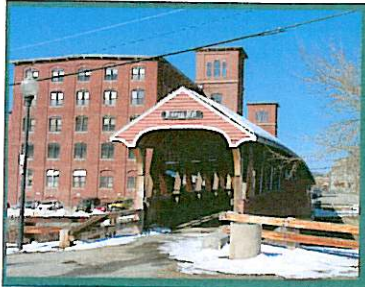


# Downtown Loop Existing Conditions

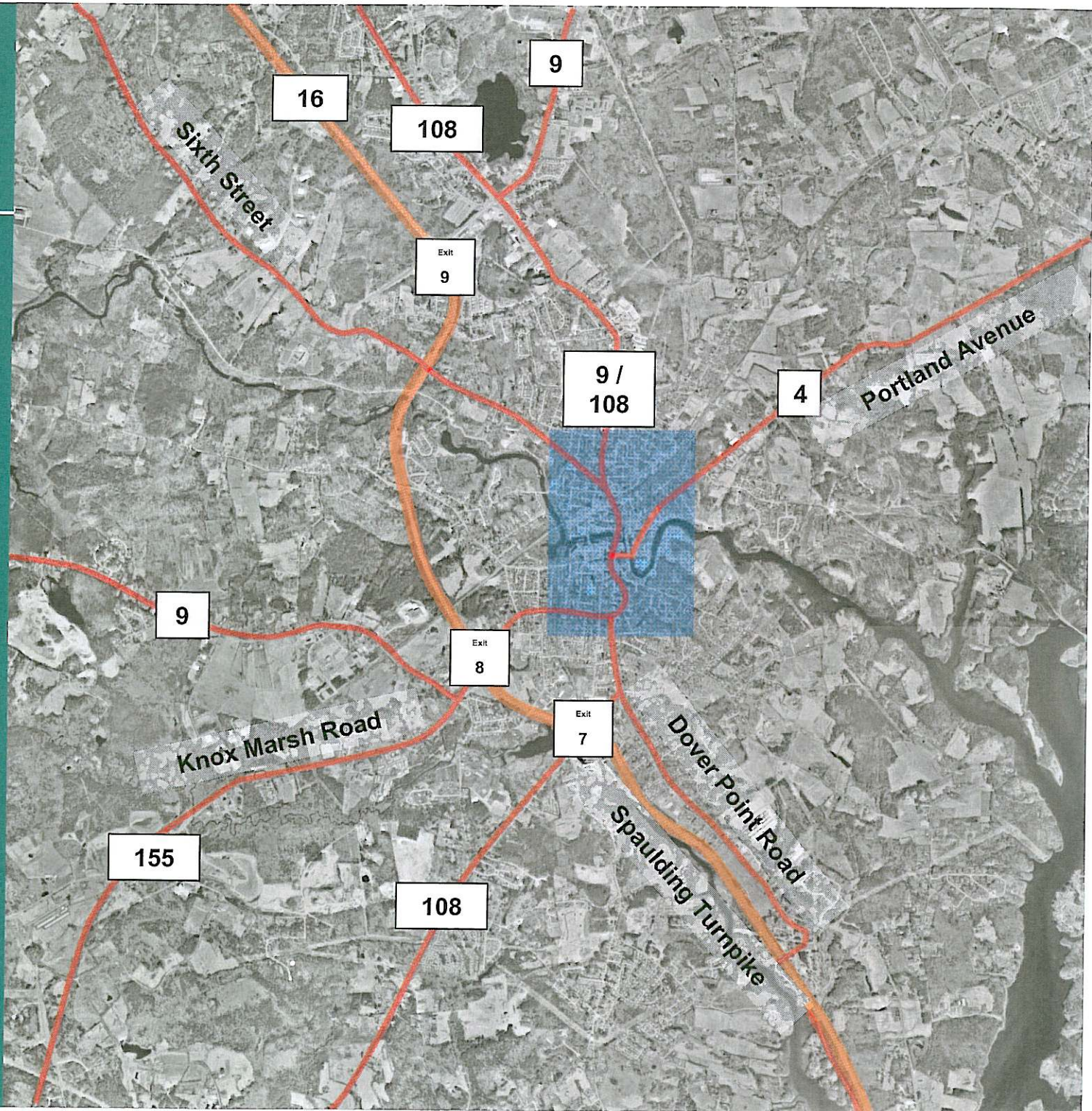
## Issues

- High capacity and high speeds
- Indirect through traffic
- Limits pass-by for retailers
- High volume left turn on Washington Street at bridge



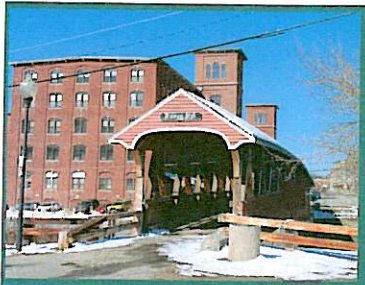


# Dover Region Transportation Network

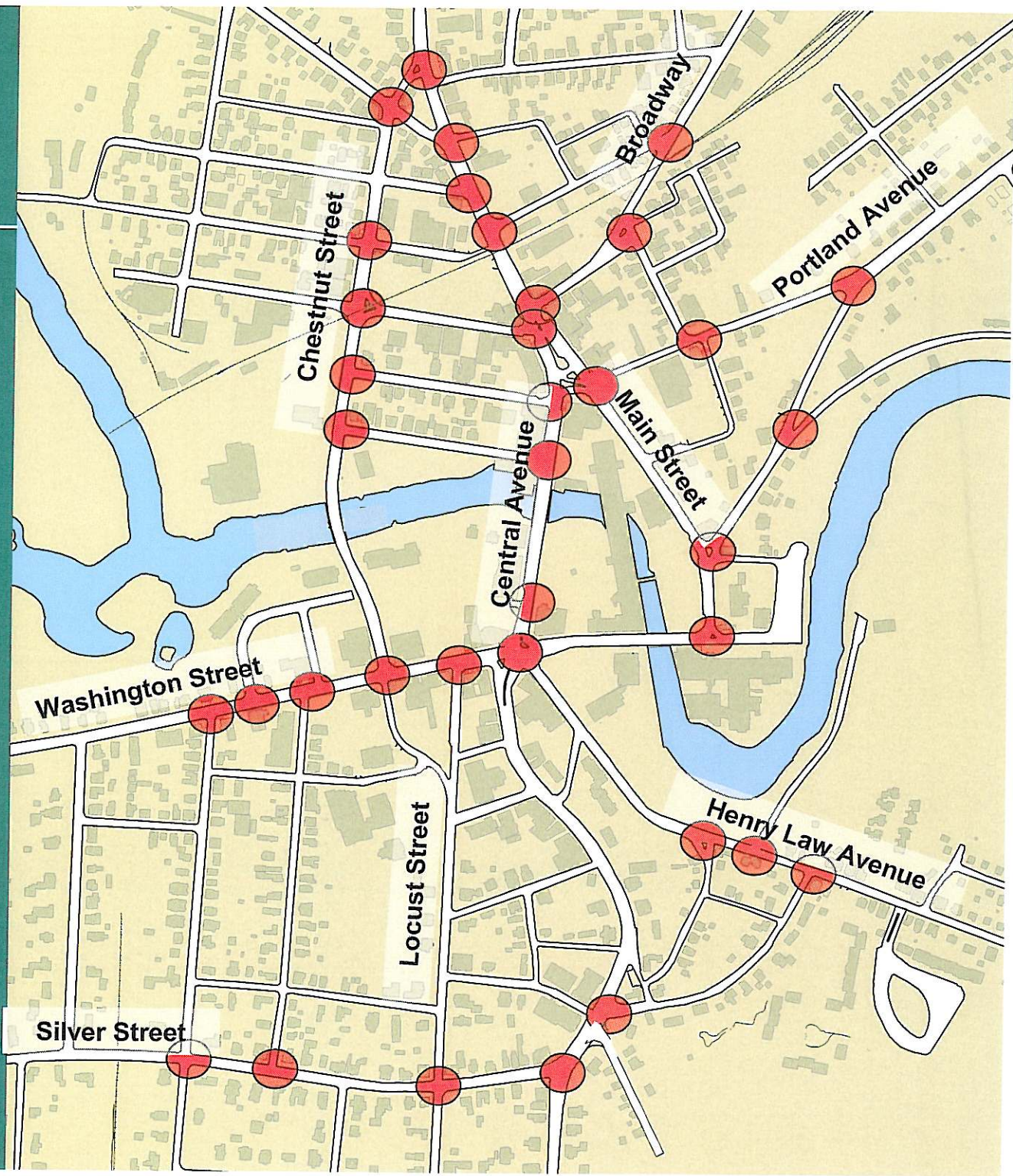


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# Study Area

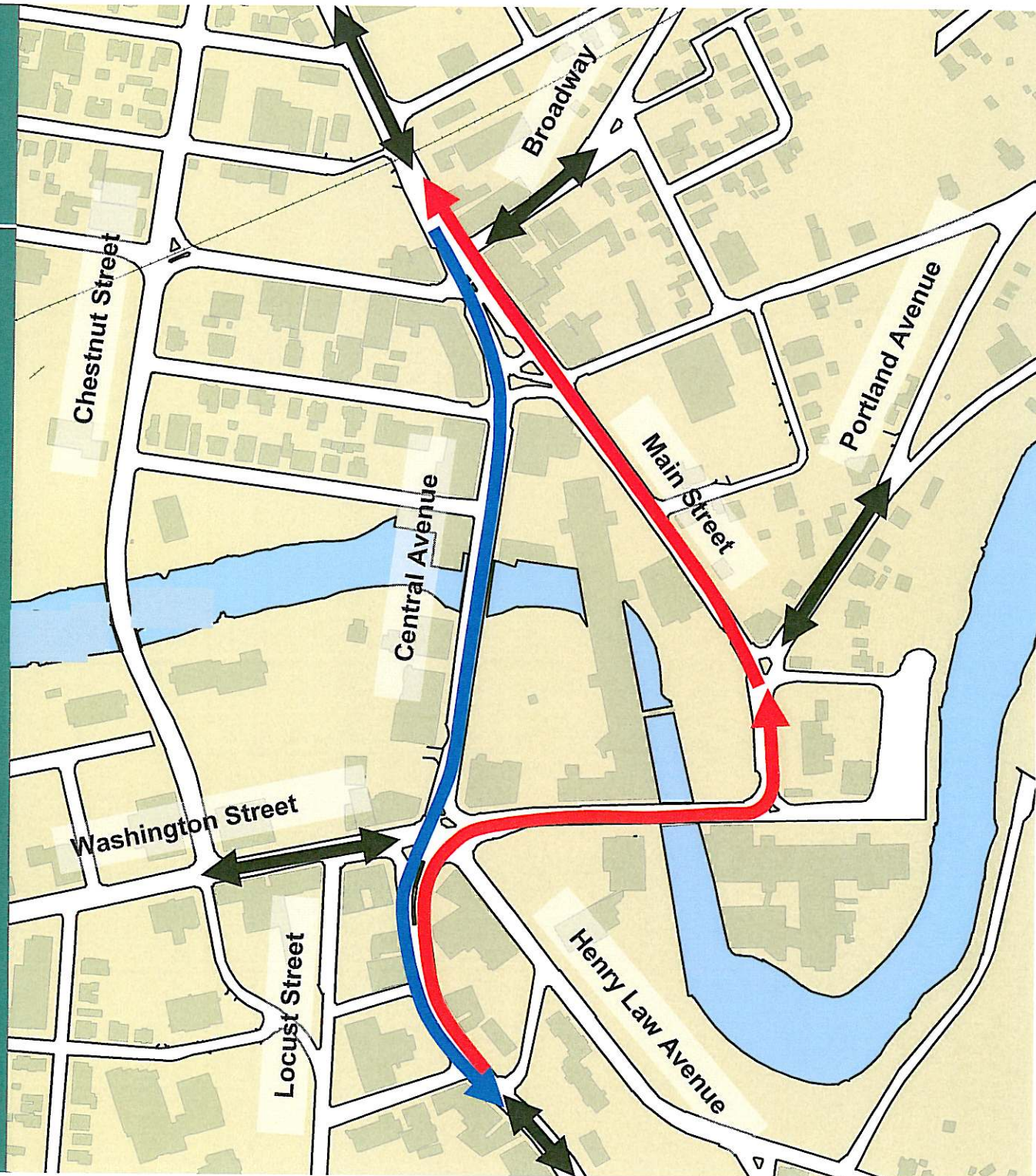




## One-Way Loop

### Disadvantages

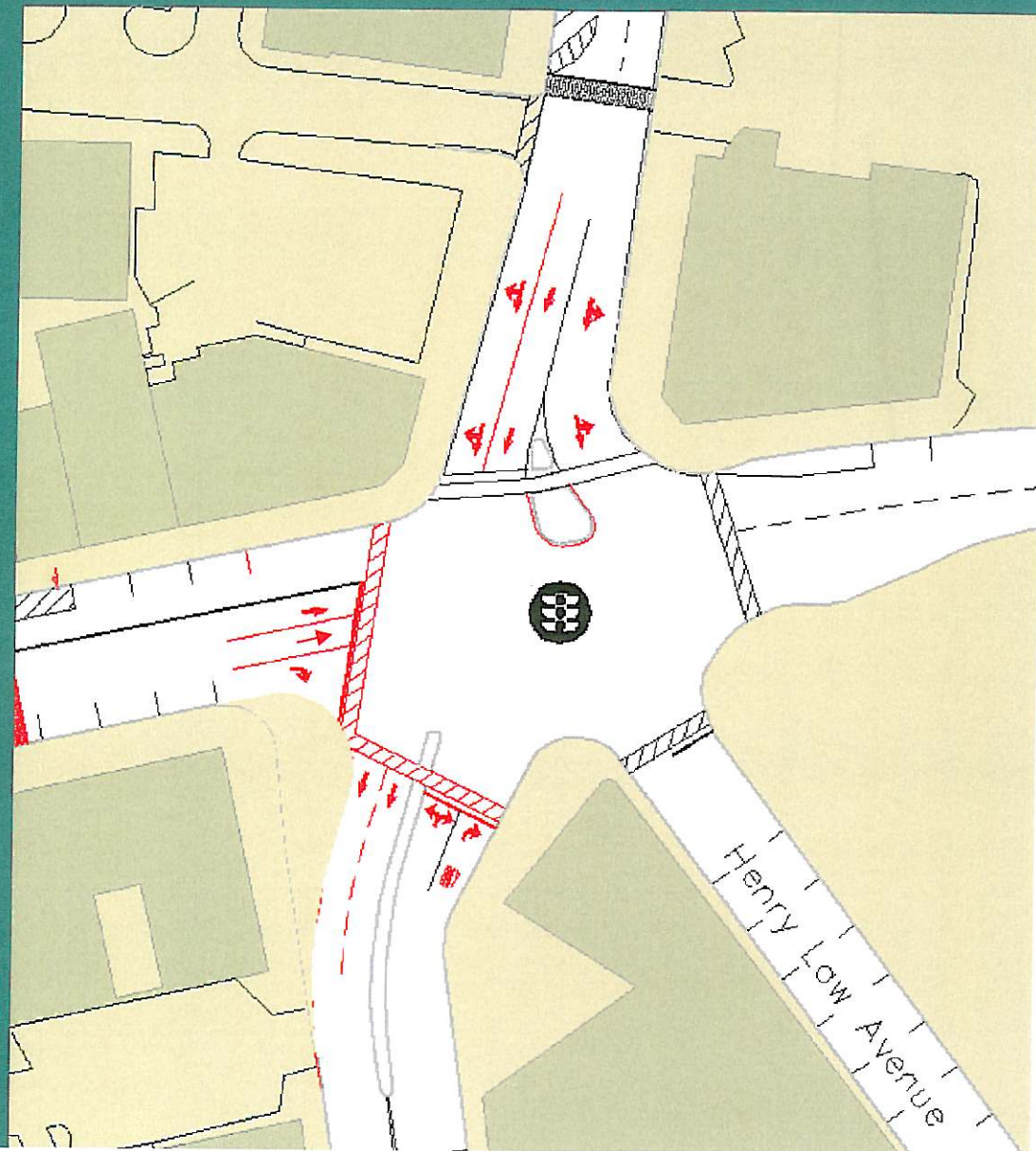
- Indirect, confusing circulation
- High speeds, esp. at Main St / Washington St
- Reduces traffic through main commercial corridor





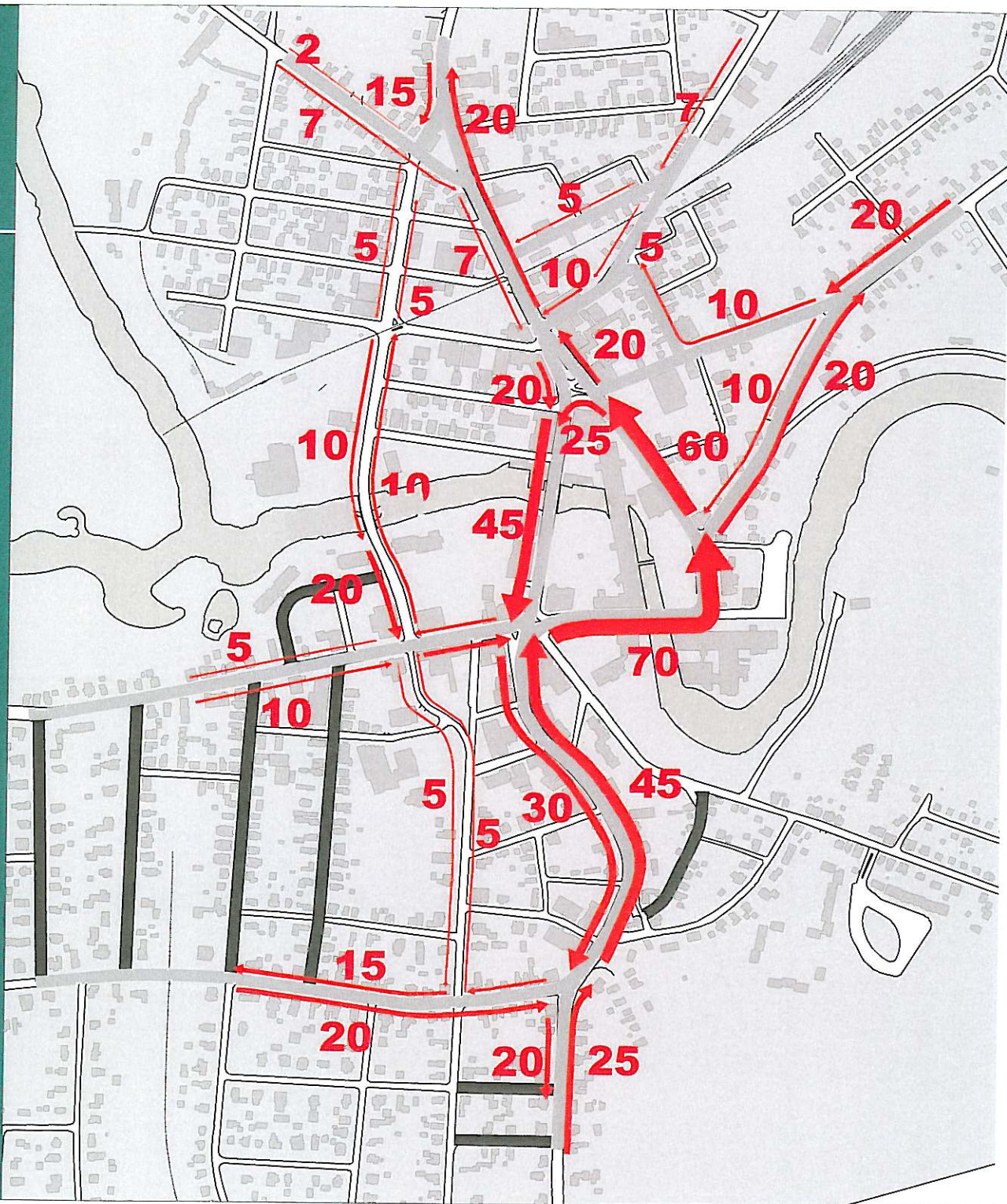
## Lower Square Short-Term Recommendation

- Northbound:
  - Right turn
  - Shared left turn / right turn
- Southbound: Reduced to 3 lanes
  - 2 through-lanes
  - 1 left turn lane  
(Washington St, Henry Law Ave turns share lane)
- NB and SB major movements:  
2 lanes

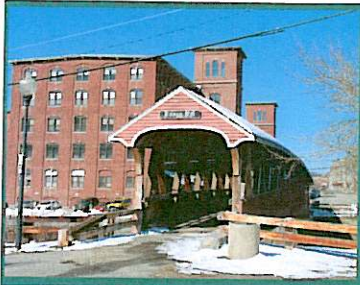




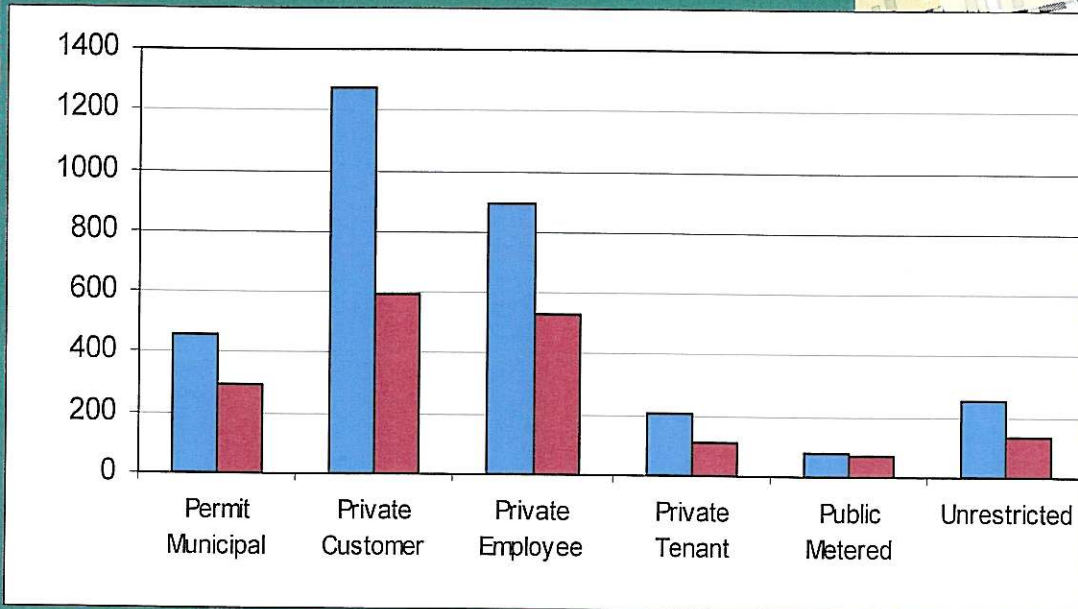
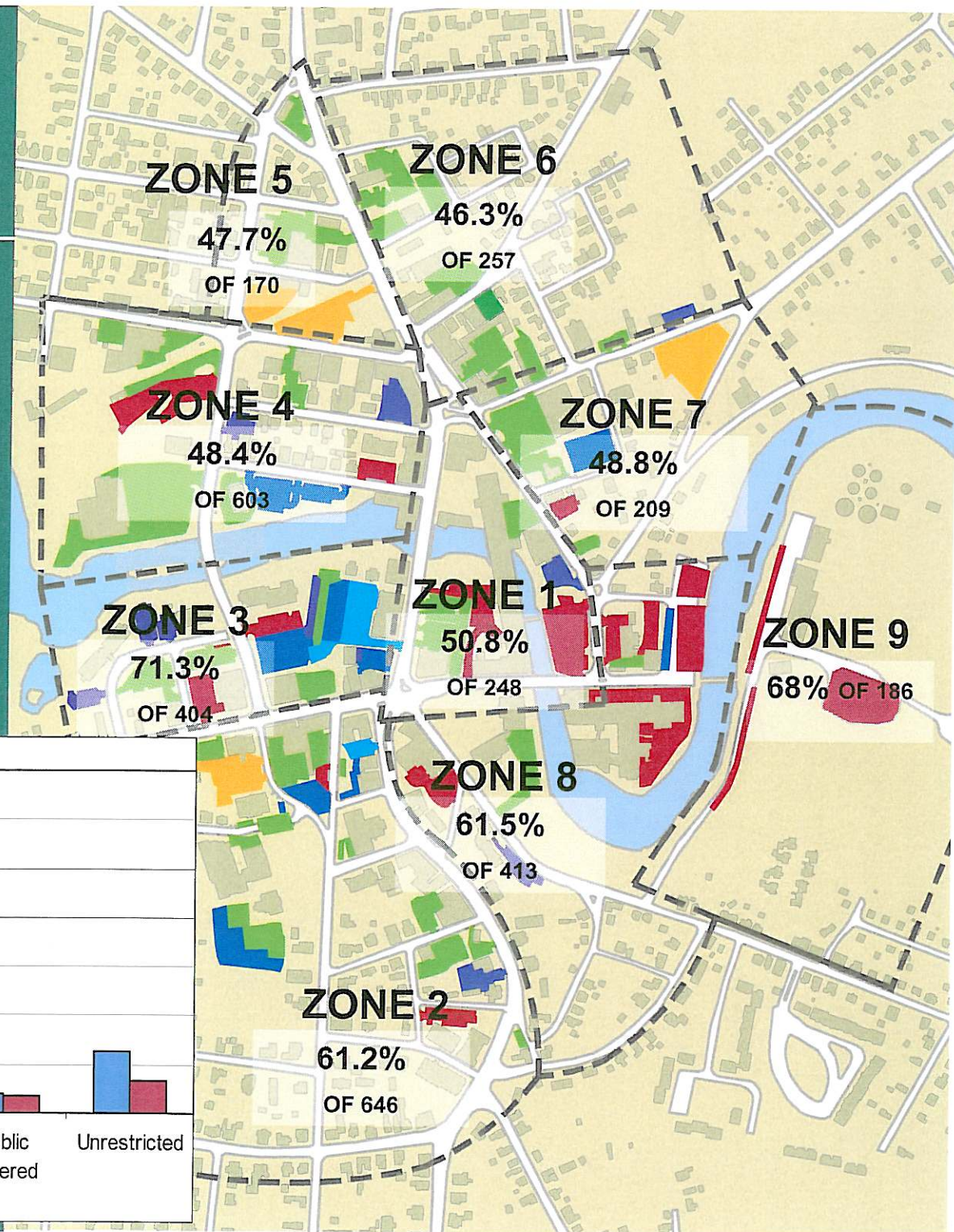
# PM Peak Hour Truck Traffic

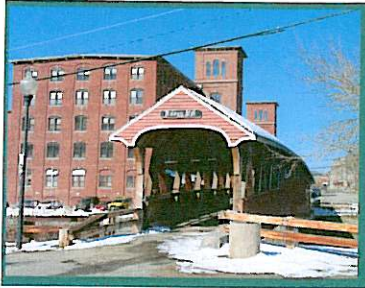




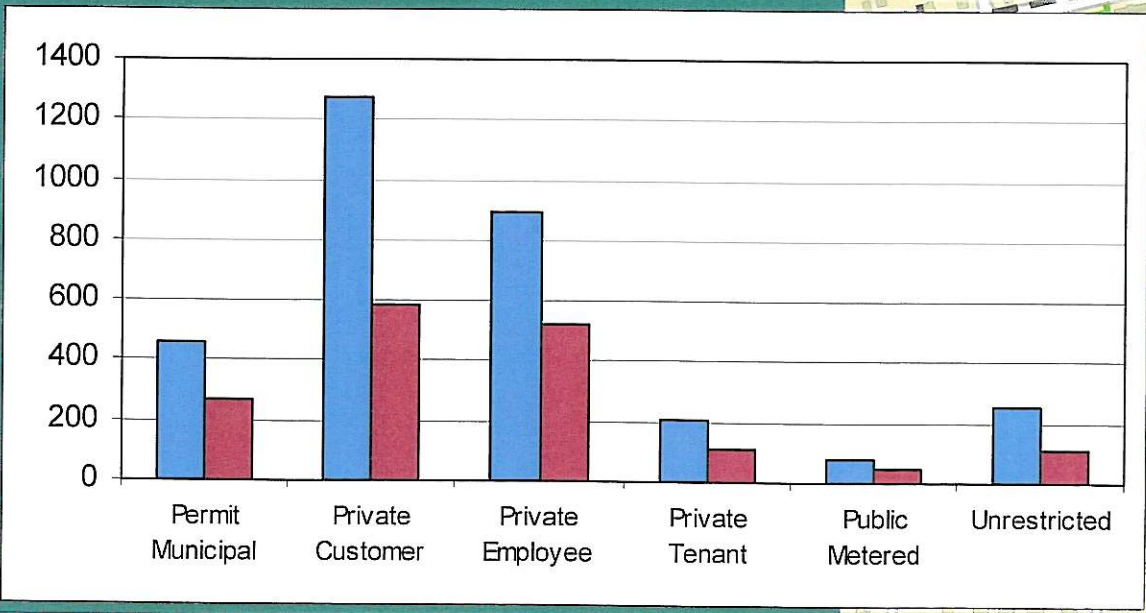
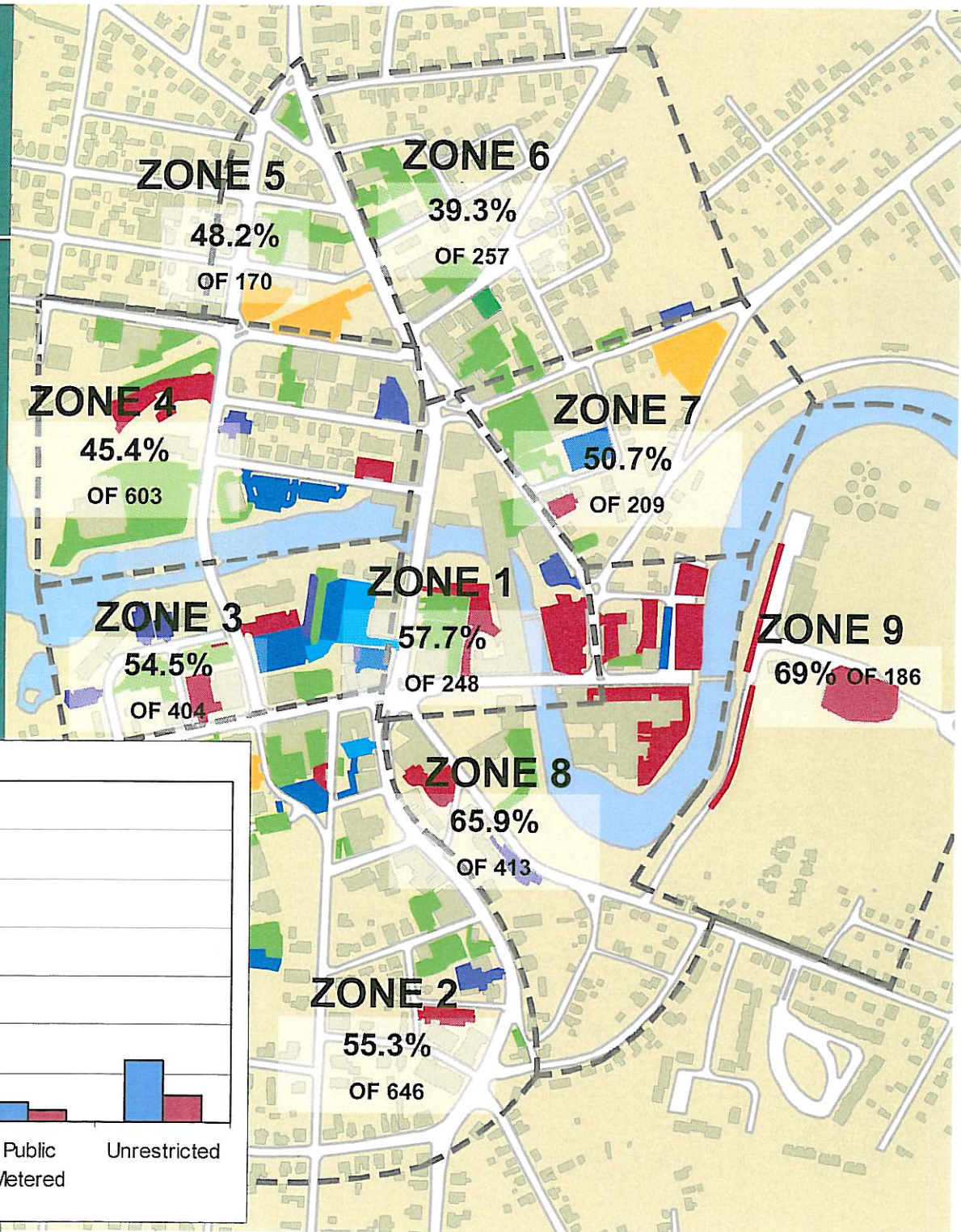


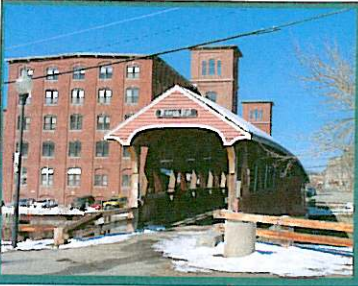
# Off-Street Parking Utilization – Morning





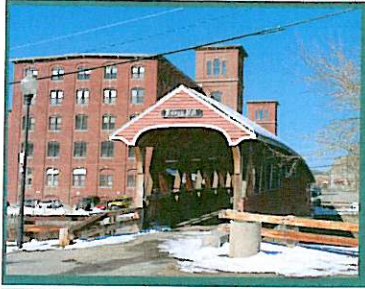
# Off-Street Parking Utilization – Afternoon





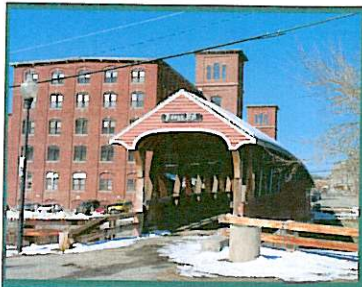
# Parking Utilization and Management Issues

- Central Avenue parking
  - Central Avenue businesses need short-term parking
  - Fairly high utilization
  - Short-term spaces taken up by “shuffling” of long-term parking
- Orchard Street parking lot
  - High demand, utilization
  - Metered spaces taken up by permit holders
- Cocheco Falls Mill parking needs
  - Mill 60% full – potential for 500 additional employees
  - Mill parking near Dover Transportation Center has low utilization



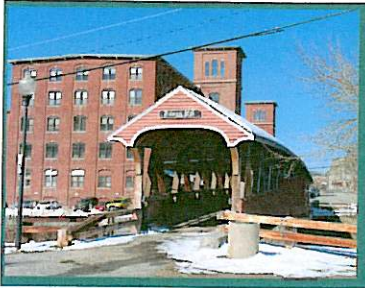
## Parking – Short-Term Recommendations To Improve Utilization and Management

- Central Avenue parking
  - Review regulations governing parking limits, “shuffling”
  - Outreach and education to discourage shuffling through downtown employers (mills, Central Avenue businesses)
- Orchard Street parking lot
  - Provide meters for all public spaces in lot (“master meters”?)
  - Increase supply of permits
- Cocheco Falls Mill parking needs
  - Improve pedestrian connections to parking lots –Transportation Center (signal at Chestnut/2<sup>nd</sup>, crosswalks), Portland Avenue municipal lot (new sidewalk)
  - Investigate daytime leasing of vacant private spaces (NH State Liquor Store)



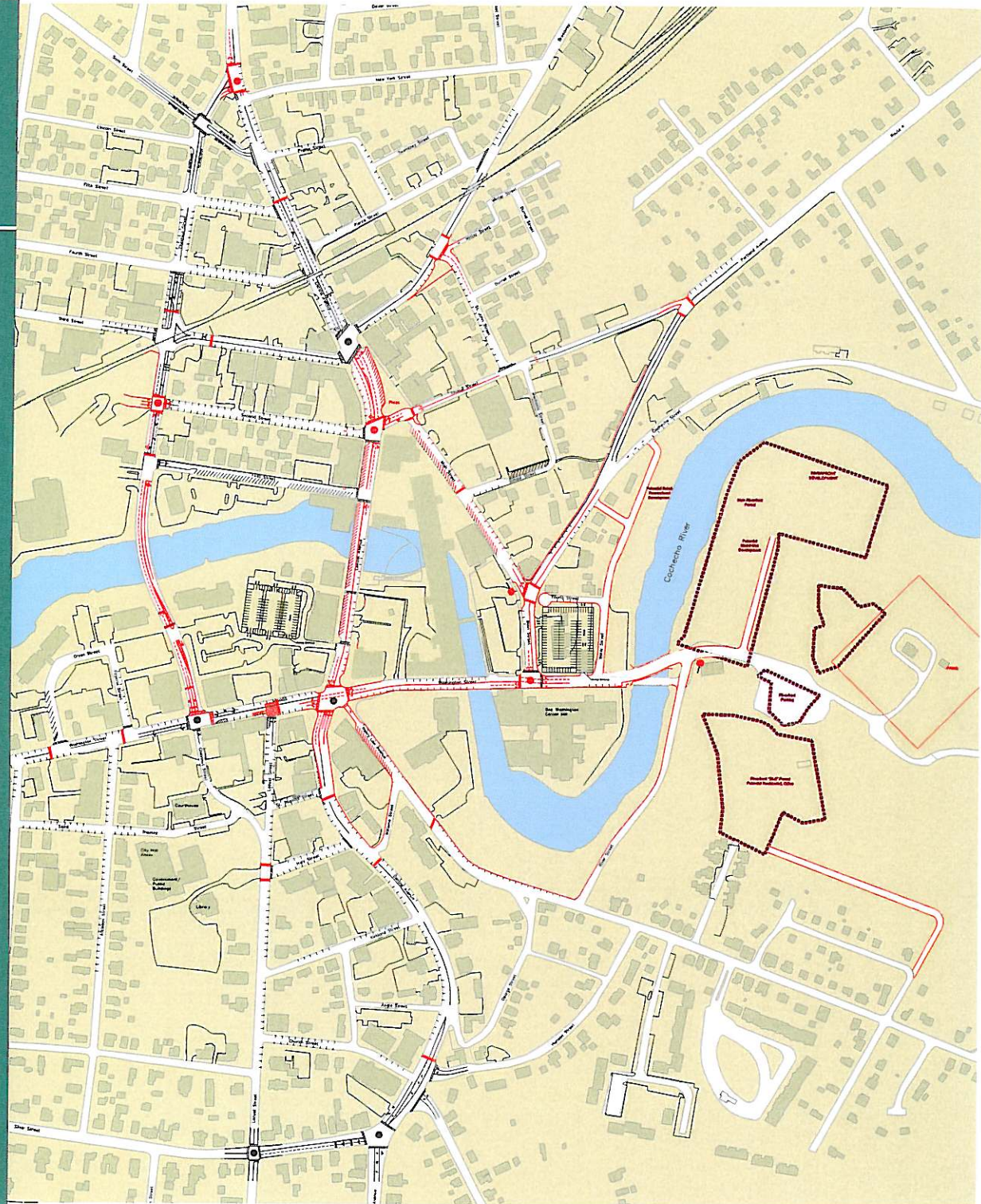
## Long-Term Recommendations

- Schedule: 5 – 10 years
- Ensure downtown growth, vitality
- Provide access for Riverfront development
- Motor vehicle traffic
  - Unified circulation plan
  - Improve downtown circulation, access to businesses
  - Reduce traffic congestion
  - Accommodate Riverfront access
- Parking
  - Increased parking supply
    - Storefront businesses
    - Downtown employees
    - Riverfront
  - Structured parking



## Long-Term Recommendations

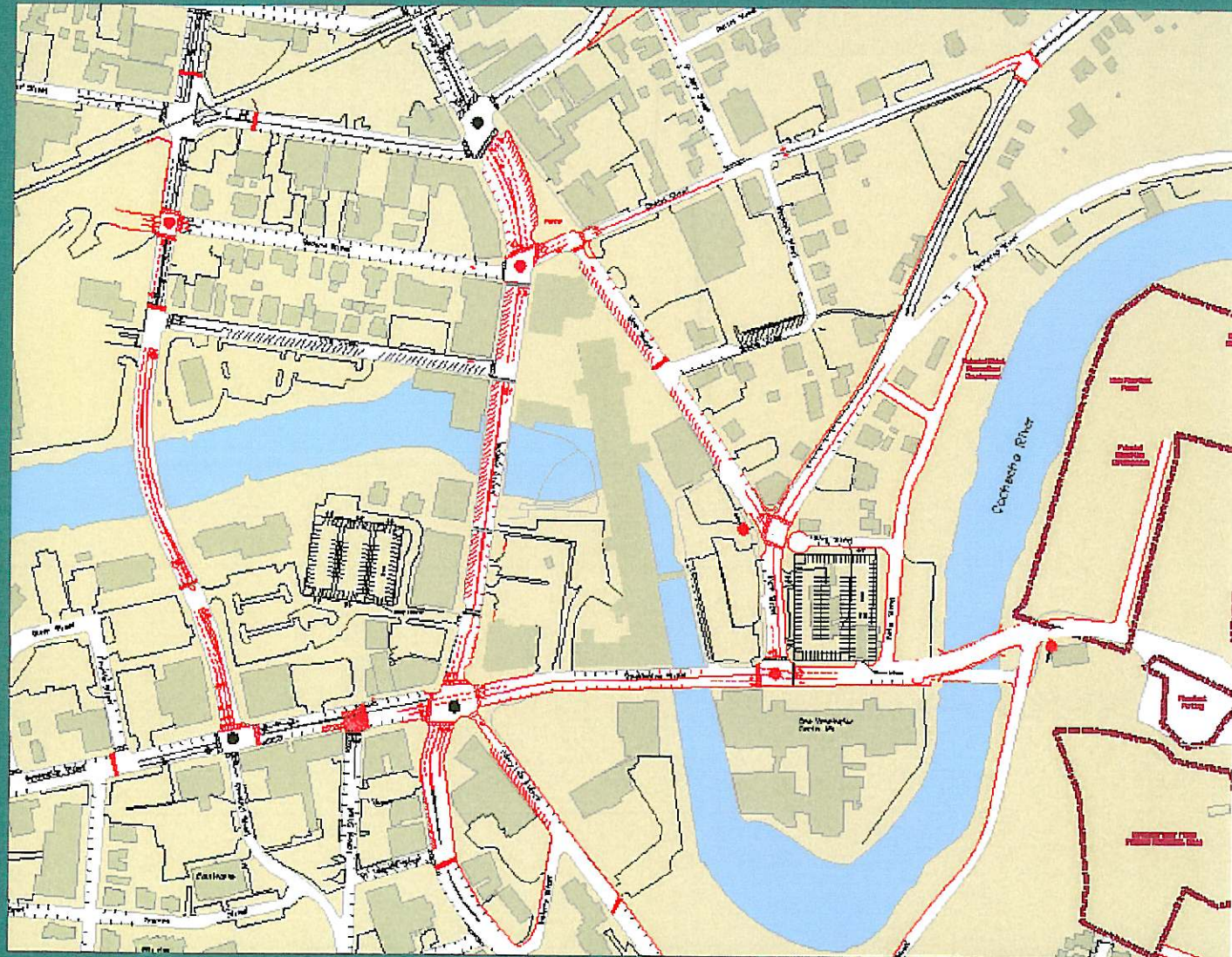
- Motor vehicle traffic
  - 2-way Washington St
  - 2-way Central Ave
  - 1-way SB Main St
- Parking
  - Orchard St: Parking deck
  - Water St: Parking garage
- Riverfront Development





# Long-Term Recommendations

- Riverfront Development
- Motor vehicle traffic
  - 2-way Washington St
  - 2-way Central Ave
  - 1-way SB Main St
- Parking
  - Orchard St: Parking deck
  - Water St: Parking garage







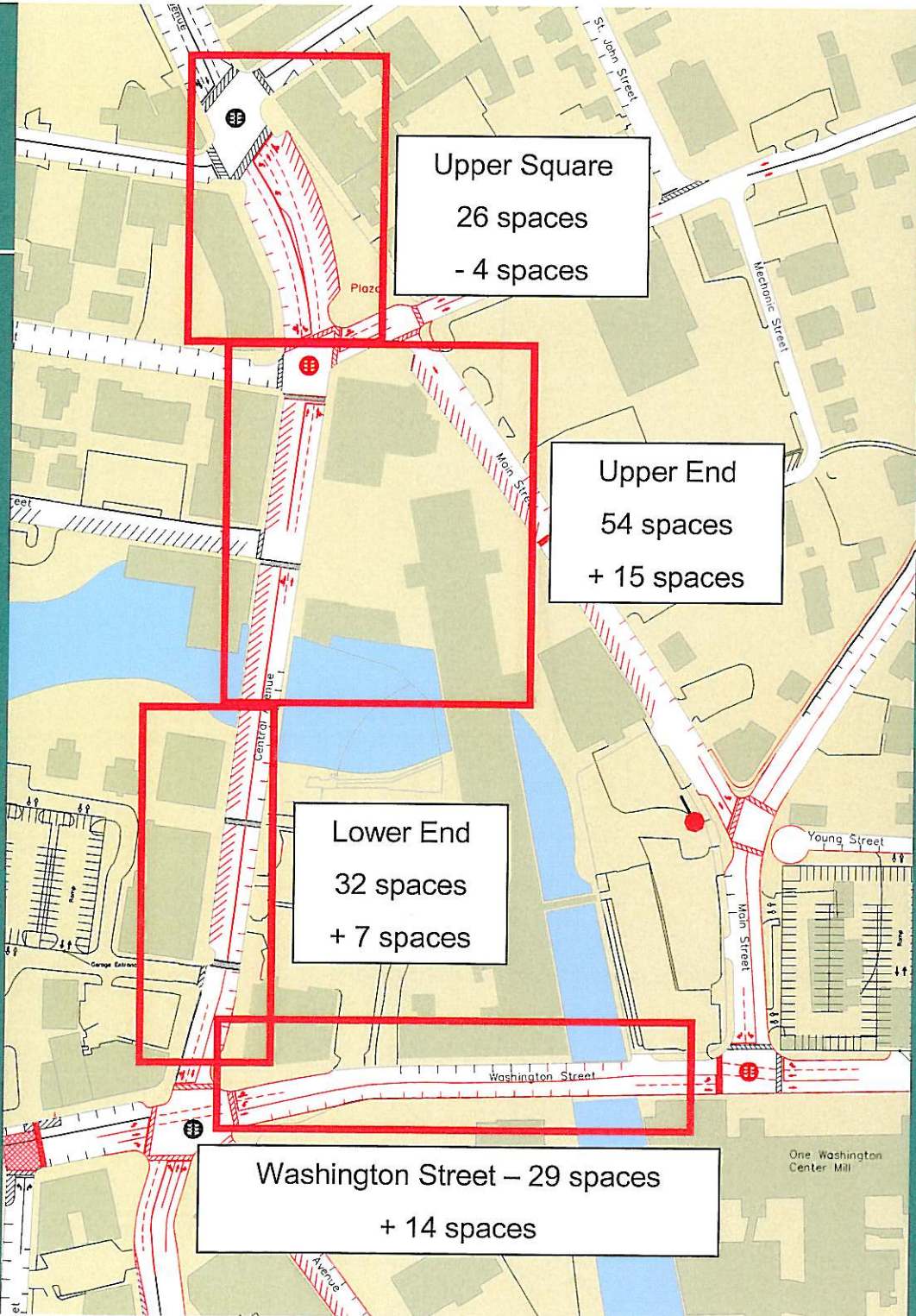


# Central Avenue Retail Corridor

## On-Street Parking

### Long-Term Preferred Alternative

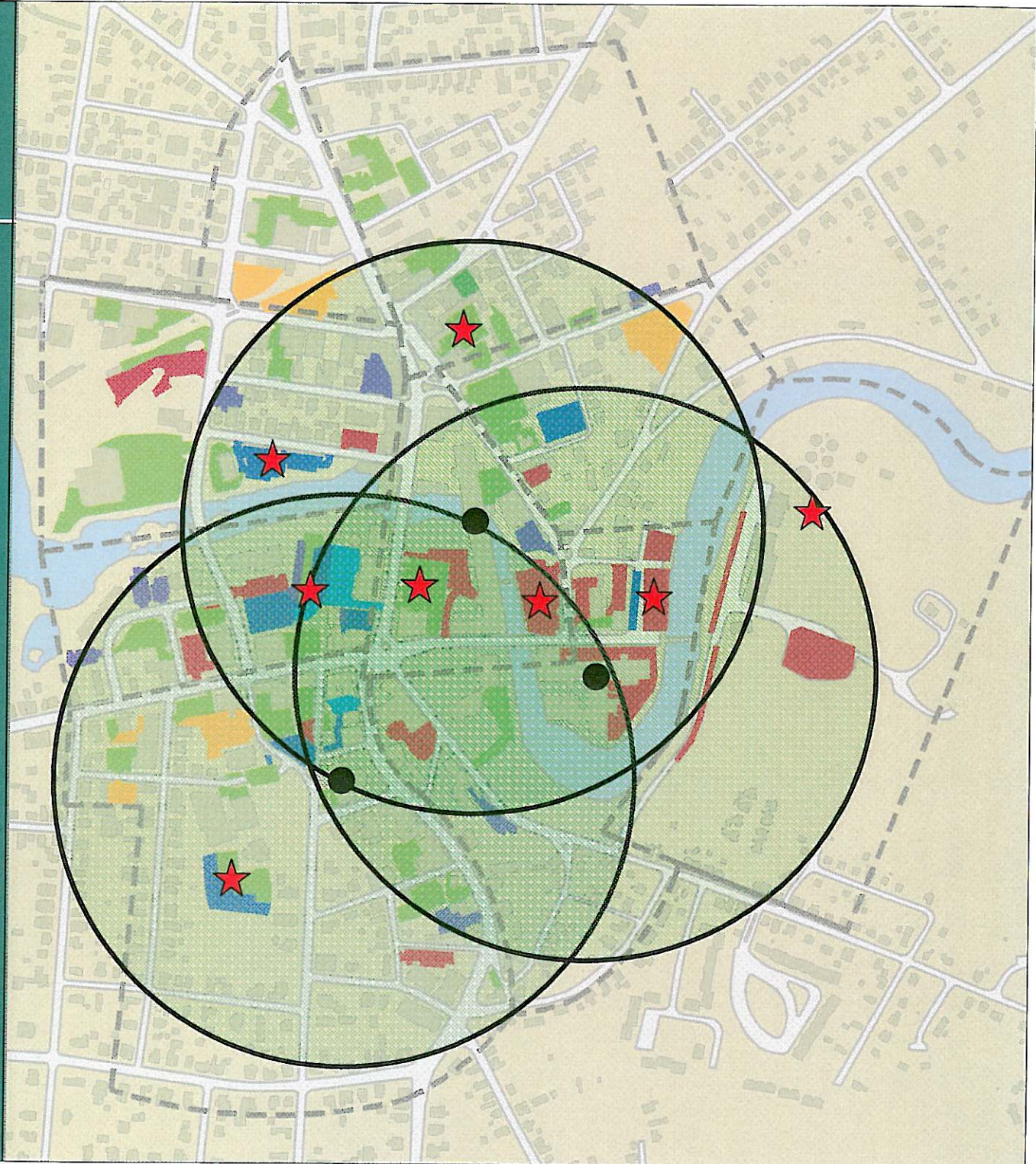
Total On-Street  
Spaces – 141

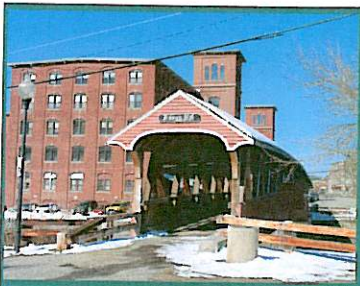




## Alternative Parking Locations –

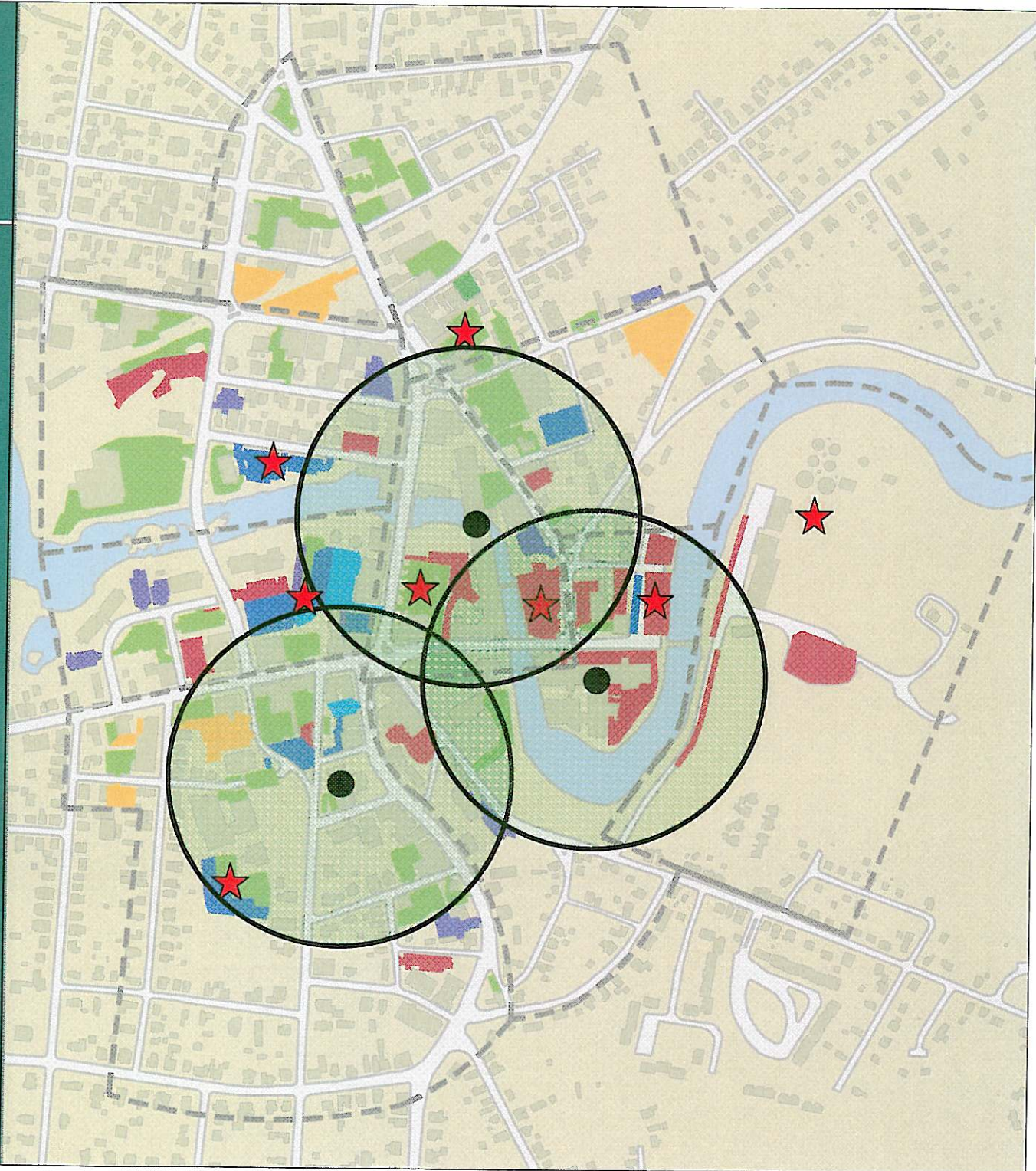
## Parking Garage or Parking Decks

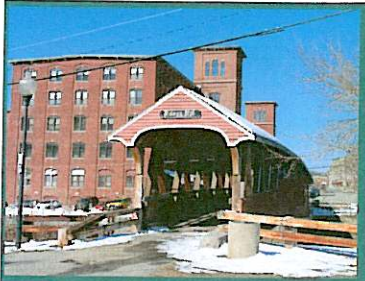




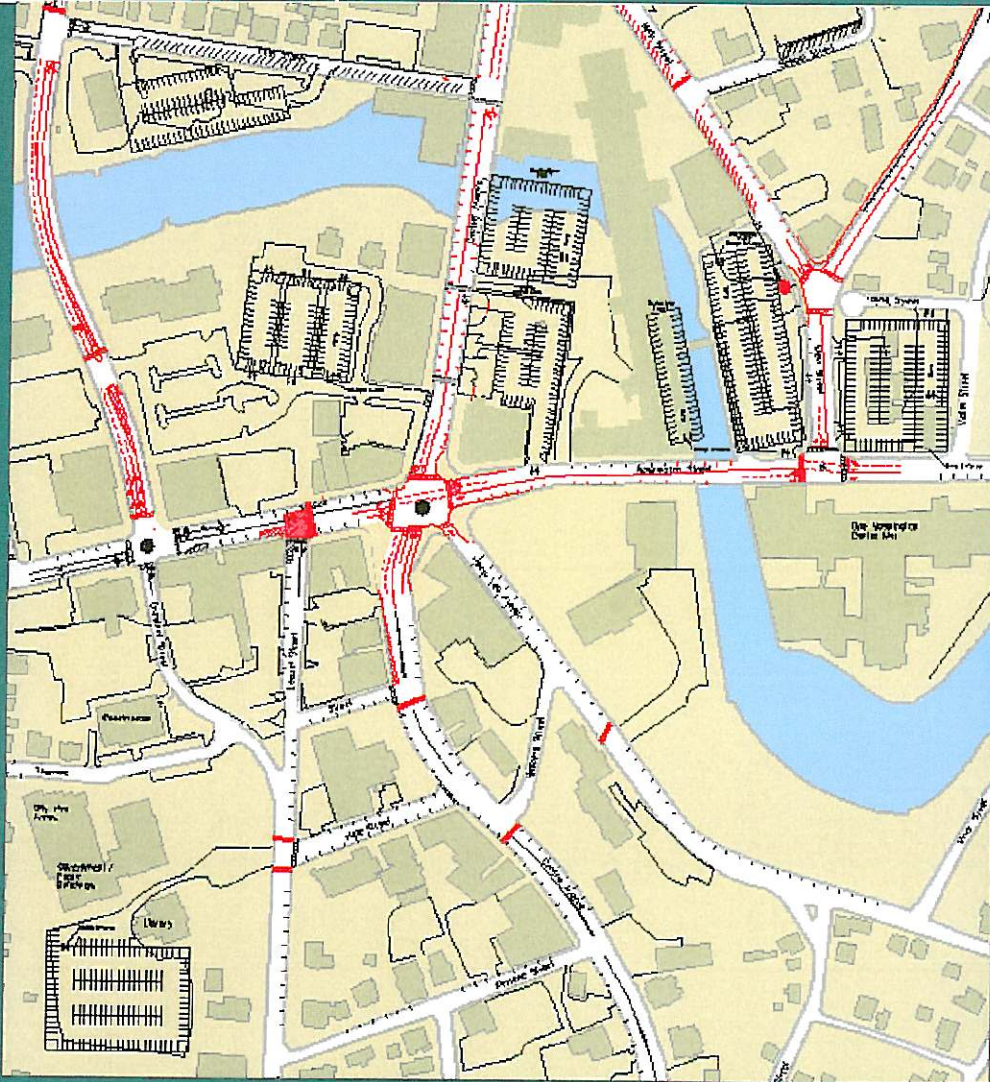
## Alternative Parking Locations –

## Parking Garage or Parking Decks





# Parking Structure Alternatives



Location	Existing	Increase	Total
Orchard Street	136	95	231
Behind Library	210	79	289
Bank of NH	92	85	177
Heating Plant	114	185 3 levels	299
Water Street	89	410 3 levels	499