Route 79/I-195 Interchange Improvement Study
Fall River, Massachusetts

January 15, 2010
Agenda

- Overview of the Study and Schedules
- Task Force Operations & Ground Rules
- Existing Conditions Review
- Land Use & Growth Assumptions
- Goals & Objectives
- Discussion
Study Team

• Jacobs Engineering Group
  (planning, environmental analysis and conceptual engineering)

• FXM Associates
  (socio-economic analysis)

• Public Archeology Lab
  (historic resources)

• Nitsch Engineering
  (traffic)
Route 79/I-195 Interchange Study Area

Study area limits
Accelerated Bridge Program Opportunity: 2 options for interchange improvements

A. Comprehensive rehabilitation of viaduct and ramps
B. Eliminate viaduct and replace with at-grade roadways
## Schedule: Opportunities & Constraints

**Accelerated Bridge Program ends in 2016**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternatives Study &amp; Interchange Justification Report</td>
<td>6 mos.</td>
<td>Summer 2010</td>
</tr>
<tr>
<td>Environmental Notification Form</td>
<td>9 mos.</td>
<td>Spring 2011</td>
</tr>
<tr>
<td>Permitting &amp; Preliminary Design</td>
<td>32 mos.</td>
<td>Spring 2012</td>
</tr>
<tr>
<td>Design/Build procurement</td>
<td>11 mos.</td>
<td>Spring 2013</td>
</tr>
<tr>
<td>Est. Construction Duration</td>
<td>36 mos.</td>
<td>Fall 2016</td>
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Task Force Operations & Ground Rules

- We need a commitment
- Active participation is essential—no holding back!
- Timely feedback required
- Respect other views and time
- Develop and agree to ground rules
- Assist with outreach to the public
Existing Conditions Summary

• Physical condition of viaduct and ramps
• Traffic
• Environmental
• Pedestrian and bicycle facilities
• Land use, historic resources, socio-economic
• Other
Rte. 79 Viaduct & Ramps

- Constructed in 1965
- 111 Spans (incl. 21 two-level spans)
- Over 8,600 feet of structure
**Existing Structure**

- 111 Spans (incl. 21 2-level)
  - Two 200-ft. Truss Spans
- 287,000 SF (+/-) Deck Area
- Over 600 Steel Stringers
- 14 Concrete Abutments
- 78 Piers
  - 40 Concrete Piers
  - 20 Concrete Columns with Steel Girder
  - 18 Steel Frames with Cross Girders
On-Going Activities for Emergency Repair Contract

Bridge Inspections
  • Most recent inspection completed in December 2009
  • Most critical members now inspected every 6 months

Load Rating Analysis
  • All 11 sections of interchange being analyzed now
  • Preliminary results indicate many members with low capacities

Emergency Repair Contract Will Be Advertised Soon
Existing Conditions
Roadway Deck

- Typical Conditions – Require Constant Repair
  - Potholes on the surface
  - Loose and spalling concrete on the underside
Existing Conditions
Pin & Hanger Connections

- 148 Total
- 33 in Poor Condition
Existing Conditions

Ends of Beams

- Typical conditions (over 50 locations)
  - Webs have buckled
  - Severe section loss including holes
Existing Conditions
Cross Girders at Piers

- Typical conditions
  - Areas of severe deterioration
Local Road Bridges

- Viaduct Street over the CSX RR
- Central Street over the CSX RR
- Central Street over the Quequechan River
- Anawan Street over the CSX RR
Existing Central Street Bridge and Retaining Walls
Bridge No. F-02-016

- Stone Arch Built in 1904
- May be eligible for historic designation
- Need to widen to accommodate relocated Ramp F
Existing Viaduct Street Bridge

- 9 spans
- 630 ft. long
- Built 1985
- Widen from 43’-6” to 70’-6” ±
Existing Viaduct Street Bridge
Option B:
Eliminate Viaduct & Reconfigure Interchange
Proposed Rte. 79 Interchange Study Work Flow

1. Project Initiation
   - Kick-off meeting / Study area limits
   - Communications / Task Force Members

2. Goals & Objectives
   - Goals & Objectives / Evaluation Criteria
   - Purpose & Need Statement

3. Existing Conditions
   - Draft & Final Existing Conditions Summary

4. No Build Analysis
   - Traffic / Socio-economic / Land Use

5. Alternatives Development
   - Alternatives Development / Screening of Alternatives

6. Alternatives Analysis
   - Mobility / Safety / Environmental
   - Socio-economic / Structures / Costs

7. Report Recommendations
   - Final Report / Public Meeting

8. Prepare Environmental Notification Form
   - Certificate on the ENF
Traffic Study Area
Existing Traffic Volumes (Fall 2009 ADT)

Volume per Day (weekday)

- < 5,000
- 5,000-10,000
- 10,000-15,000
- Greater than 15,000
Existing Hourly Traffic Profiles (Fall 2009 ADT)

Rte 138 Ground Level
(south of Central St)

Hourly Volume

Time of Day (over 2 weekdays)

NB
SB
Existing Travel Speeds AM

Average Speeds (mph)

<table>
<thead>
<tr>
<th>Speed Range</th>
<th>Color</th>
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<tbody>
<tr>
<td>21-25</td>
<td>Red</td>
</tr>
<tr>
<td>26-30</td>
<td>Yellow</td>
</tr>
<tr>
<td>31-35</td>
<td>Blue</td>
</tr>
<tr>
<td>36-40</td>
<td>Gray</td>
</tr>
<tr>
<td>41-45</td>
<td>Green</td>
</tr>
</tbody>
</table>
Existing Travel Speeds PM

Average Speeds (mph)

21-25  26-30  31-35  36-40  41-45
Existing Traffic Operations (2009)
**Existing 2009 Traffic Operations**

**Interchange Operations**

SB Left from I-195 Off Ramp at Milliken Blvd (LOS F)

**Unsignalized Intersections**

WB Left from Central Street at Route 138 (LOS F)
SB approach on Route 138 at Anawan St (LOS F)

**Signalized Intersections**

WB Left from Columbia St at Broadway (LOS F)
Master Plan Bicycle & Pedestrian Recommendations in the Study Area (excerpt)

- Develop gateways/greenways to the city
- Quequechan River Regional Shared-Use Path
- Pursue new multi-use path along waterfront
- Make connections and improve walkways around parks, schools, transit
- Pursue opportunities to create bikes lanes during street reconstruction
- Plan for new intermodal station on Davol St.
**Existing Conditions – Public Transit**

- Provided by SRTA
- 14 Routes (including school route trips), plus response service demand
No Build Traffic Conditions – Traffic Modeling

- Travel Demand Modeling to provide:
  - Base 2009
  - Future No-Build 2030
  - Future 2030 with new 79/I-195 interchange
  - Future 2030 with new 79/I-195 interchange and city pier development
  - Data - Speed, volume, v/c for the AM and PM peak hours, and ADT
No-Build Traffic Conditions 2030

Normal Background Growth (Population and Employment)

Study-Area Site-Specific Projects

Planned Adjustments to 2030 Network

Evaluate alternatives
No-Build Traffic Conditions – Historic Traffic Volume Trends

- 2009 traffic down approximately 7% compared to 2000 volumes.
Issues

- Maintain existing functions to I-195
- Maintain high-level of mobility
- Accommodate other City and State initiatives
- Minimize environmental impacts
  - Historic buildings
  - Parkland
  - Potential hazardous materials
Existing Mill Buildings
Existing Building Constraints

Less than 80 feet between buildings at closest point
Critical Cross Section

RTE 79 NB

RTE 79 SB

42'-0" SOUTHBOUND ROADWAY
25'-0" NORTHBOUND ROADWAY

3'-0" SHLD.

8'-0"

walk

11'-0"

travel lane

11'-0"

travel lane

11'-0"

travel lane

11'-0"

travel lane

11'-0"

travel lane

8'-0"

walk

TYPICAL SECTION 2
Fall River Energy Enterprise

Crescent Falls at City Center
Fall River Energy Enterprise

Reclaim the Waterfront
Discussion/Next Steps