

# List of Appendices

## ***A. Public Involvement***

- A.1 List of Task Force Members**
- A.2 ITF Meeting Summaries**
- A.3 Strategic Partnership Plan**
- A.4 List of Documents Posted to Website**
- A.5 Study Newsletters**

## ***B. Engineering Considerations***

- B.1 Geometric Deficiencies of the Existing I-93/I-95 Interchange**
- B.2 Design Criteria for Highway Improvements**

## ***C. Noise Monitoring***

## ***D. Conceptual Costs of Interchange Alternatives***

## ***E. Evaluation of Transit and TDM Components***

## ***F. Conceptual Costs of Transit and TDM Components***

## **Appendix D: Conceptual Costs of Interchange Alternatives**

The conceptual construction cost estimates for the alternatives were developed using MassHighway's 2006 Weighted Average Unit Bid Prices. Each alternative was broken down into the following major construction items – Full Depth Construction, Cold Plane and Overlay, Flyover Bridge Section, Conventional Bridge Section and Variable Width Boat Sections. Using the Weighted Average Bid Prices, a unit cost was developed for each of the items above. Measurements were calculated from AutoCAD for each alternative and were multiplied by the appropriate unit cost. A contingency was added to incorporate lesser items such as drainage, traffic management, guardrail, signage, etc. Finally, the cost for noise barrier installation project wide (\$21 million) was added to the estimated construction cost of each alternative to arrive at a Total Conceptual Construction Cost Estimate.

I-93/I-95 INTERCHANGE TRANSPORTATION STUDY

Project Location: I-93 / I-95 Interchange  
Estimator: MPW Checked by RA/MG  
LBG Job No.: CW 1435

Date: 3/1/2007  
Cost Estimate: Conceptual

**Alternative H3-OS**  
**Conceptual Cost Estimate**  
**Summary**

*Assumptions:*

Estimate based on Alternative H3-OS - Remove NW and SE Loop Ramp & Reconfigure Washington St. Ramps w/ Revisions to flyover ramps and modifications to Rte 128 NB CD road entrance

Add 4th lane Rte 128 SB from Rt 28 on-ramp to existing 4 lane section - 4,753 ft (0.9 miles)

Add 4th lane Rte 128 NB from existing 4 lane section (I-93) to off-ramp at Exit 40 (Rte 129) - 12,788 ft (2.4 miles)

Add 5th lane Rte 128 NB from existing 4 lane section (I-93) to off-ramp at Exit 36 - 2600 ft

Limits of work along Rt 128 from Mishawum Road overpass west of Washington Street to Exit 40 off-Ramp

Limits of work along I-93 from approximately 2,600 LF south of Rt 128 to 2,400 LF north of Rt 128

Reconstruction of Washington Street Bridge over Rte 128, bridge over CD road from Washington Street

Widen Rt 128 Bridge over Rail (West of Washington Street)

	Cost
1. Full Depth Construction	\$7,514,367
2. Cold Plane and Overlay	\$5,331,048
3. Flyover Bridge Section	\$63,825,000
4. Conventional Bridge Section	\$8,896,800
5. Boat Section 22' wide	\$10,773,923
6. Boat Section 38' wide	\$18,830,394
7. Boat Section 50' wide	\$24,156,218

**ESTIMATED CONSTRUCTION COST**

**\$139,400,000**

(Based on 2006 average  
weighted Bid Prices)

**ESTIMATED NOISE BARRIER COST**

**\$21,000,000.00**

**ESTIMATED TOTAL CONSTRUCTION COST**

**\$160,000,000**

I-93/I-95 INTERCHANGE TRANSPORTATION STUDY

Project Location: I-93 / I-95 Interchange  
Estimator: MPW Checked by RA/MG  
LBG Job No.: CW 1435

Date: 3/1/2007  
Cost Estimate: Conceptual

**Alternative H3-US**  
**Conceptual Cost Estimate**  
**Summary**

*Assumptions:*

Estimate based on Alternative H3-US - Remove NW and SE Loop Ramp & Reconfigure Washington St. Ramps w/ Revisions to semi-directional ramps and modifications to Rte 128 NB CD road entrance  
Add 4th lane Rte 128 SB from Rt 28 on-ramp to existing 4 lane section - 4,753 ft (0.9 miles)  
Add 4th lane Rte 128 NB from existing 4 lane section (I-93) to off-ramp at Exit 40 (Rte 129) - 12,788 ft (2.4 miles)  
Add 5th lane Rte 128 NB from existing 4 lane section (I-93) to off-ramp at Exit 36 - 2600 ft  
Limits of work along Rt 128 from Mishawum Road overpass west of Washington Street to Exit 40 off-Ramp  
Limits of work along I-93 from approximately 2,600 LF south of Rt 128 to 2,400 LF north of Rt 128  
Reconstruction of Washington Street Bridge over Rte 128, bridge over CD road from Washington Street  
Widen Rt 128 Bridge over Rail (West of Washington Street)

	Cost
<b>1. Full Depth Construction</b>	\$7,593,037
<b>2. Cold Plane and Overlay</b>	\$5,040,285
<b>3. Flyover Bridge Section</b>	\$35,155,500
<b>4. Conventional Bridge Section</b>	\$14,289,000
<b>5. Boat Section 22-ft</b>	\$40,143,938
<b>6. Boat Section 38-ft</b>	\$102,009,679
<b>7. Boat Section 50' wide</b>	\$24,156,218
 <b>ESTIMATED CONSTRUCTION COST</b>	 <b><u>\$228,400,000</u></b>
	(Based on 2006 average weighted Bid Prices)
 <b>ESTIMATED NOISE BARRIER COST</b>	 <b>\$21,000,000.00</b>
 <b>ESTIMATED TOTAL CONSTRUCTION COST</b>	 <b><u>\$249,000,000</u></b>