

APPENDIX H

COST ESTIMATES

Introduction

This appendix contains supportive data for the conceptual cost estimates for the six I-71 access alternatives recommended for further study.

For each interchange alternative there are three documents as follows:

Initially, is a spread sheet with the calculation of the quantities of commonly used units of construction.

These quantities were limited to major cost categories such as, bridge construction and replacement, retaining wall construction and replacement as well as pavement and shoulder construction.

Secondly these quantities were entered into the Ohio Department of Transportations' Estimator TM Program to provide updated unit cost information and arrive at a 2005 conceptual cost estimate. This included a 30% design contingency for items not included in the quantity take off such as utility relocation, lighting and traffic control etc.

Lastly the 2005 conceptual cost estimate was entered into the Ohio Department of Transportations' Project Inflation Calculator Spreadsheet which provides an inflated cost estimate with low, medium and high ranges of inflation applied for the year of construction specified. In this case the I-71 access alternatives have been assumed to begin construction in FY 2015.

Cost for Right of Way acquisition have been based on the most recent valuation of the affected parcels by the Hamilton County Auditor and do not reflect all costs associated with acquisition including, legal services, site assessments, and relocation mitigation expenses. A 3.5% annual inflation rate was assumed for the appreciation of the affected parcels per instructions from staff at ODOT District 8.

Conceptual Costs for the addition of mainline capacity (additional lane in each direction) on I-71 was calculated separately in a stand alone spreadsheet as shown.

**OKI Uptown Transportation Study
Estimated Construction Quantities
OPTION BR-1**

| PAVEMENT & SHOULDER | | | | | | | | | | | | | |
|----------------------------|--------|--------|--------|--------|---------|---------|-------------------------------|--------|--------|--------|--------|---------|---------|
| | L (ft) | Pavt W | Shdr W | A (SY) | # Lanes | Lane*Mi | | L (ft) | Pavt W | Shdr W | A (SY) | # Lanes | Lane*Mi |
| I-71 SB | | | | 0 | 0 | 0.00 | I-71 NB | | | | 0 | 0 | 0.00 |
| | | | | 0 | 0 | 0.00 | | | | | 0 | 0 | 0.00 |
| MLK SB Exit Ramp | 2600 | 16 | 9 | 7,200 | 1 | 0.66 | MLK NB Entrance Ramp | 2900 | 16 | 9 | 8,100 | 1 | 0.73 |
| | 500 | 20 | 0 | 1,100 | 2 | 0.16 | | | | | 0 | 0 | 0.00 |
| MLK SB Entrance Ramp | 2700 | 16 | 9 | 7,500 | 1 | 0.68 | MLK NB Exit Ramp | 3300 | 16 | 9 | 9,200 | 1 | 0.83 |
| | | | | 0 | 0 | 0.00 | | 200 | 8 | 0 | 200 | 1 | 0.03 |
| Service Rd SB | | | | 0 | 0 | 0.00 | Service Rd NB | | | | 0 | 0 | 0.00 |
| | | | | 0 | 0 | 0.00 | | | | | 0 | 0 | 0.00 |
| TM SB Exit Ramp | 3200 | 16 | 9 | 8,900 | 1 | 0.81 | TM NB Entrance Ramp | 2900 | 16 | 9 | 8,100 | 1 | 0.73 |
| | 600 | 20 | 0 | 1,300 | 2 | 0.19 | | 700 | 8 | 0 | 600 | 1 | 0.09 |
| TM SB Entrance Ramp | 2600 | 16 | 9 | 7,200 | 1 | 0.66 | TM NB Exit Ramp | 1900 | 16 | 9 | 5,300 | 1 | 0.48 |
| | | | | 0 | 0 | 0.00 | | 500 | 20 | 0 | 1,100 | 2 | 0.16 |
| TM Connector SB side | 800 | 36 | 5 | 3,600 | 3 | 0.45 | TM Connector NB side | 700 | 24 | 5 | 2,300 | 2 | 0.27 |
| Relocated Whittier | 400 | 24 | 5 | 1,300 | 2 | 0.15 | | | | | 0 | 0.00 | |
| Fredonia | 300 | 36 | 5 | 1,400 | 3 | 0.17 | | | | | 0 | 0.00 | |
| MLK | 1200 | 96 | 5 | 13,500 | 8 | 1.82 | | | | | 0 | 0.00 | |
| Tuxedo | 700 | 36 | 5 | 3,200 | 3 | 0.40 | | | | | 0 | 0.00 | |
| Taft Rd | 1600 | 48 | 5 | 9,400 | 4 | 1.21 | | | | | 0 | 0.00 | |
| Total New Pavt & Shdr Area | | | | | | | 100,500 SY 10.7 Lane*Miles | | | | | | |

| BRIDGES | | | | | | | |
|----------------------------|--------|--------|------------|--------------------------------|--------|--------|----------------|
| | L (ft) | W (ft) | New A (SF) | | L (ft) | W (ft) | Removal A (SF) |
| Woodburn | | | 0 | Woodburn | | | 0 |
| Victory Prkwy | | | 0 | Victory Prkwy | | | 0 |
| Gilbert-Blair Connection | | | 0 | Gilbert-Blair Connection | | | 0 |
| Fredonia | 100 | 70 | 7,000 | Fredonia | | | 0 |
| RR | | | 0 | RR | 280 | 30 | 8,400 |
| MLK | 390 | 110 | 42,900 | MLK | 710 | 80 | 56,800 |
| Lincoln | | | 0 | Lincoln | 240 | 60 | 14,400 |
| Tuxedo | 490 | 60 | 29,400 | | | | 0 |
| Oak | | | 0 | Oak | 260 | 60 | 15,600 |
| Taft | 170 | 120 | 20,400 | Taft | 340 | 60 | 20,400 |
| McMillan | 380 | 60 | 22,800 | McMillan | 270 | 60 | 16,200 |
| McGregor | 300 | 60 | 18,000 | McGregor | 310 | 60 | 18,600 |
| NB MLK Entrance | 140 | 40 | 5,600 | | | | |
| NB Taft Entrance | 100 | 48 | 4,800 | | | | |
| SB MLK Entrance | 140 | 40 | 5,600 | | | | |
| | | | 0 | | | | |
| | | | 0 | | | | |
| | | | 0 | | | | |
| | | | 0 | | | | |
| Total New Bridge Area (SF) | | | 156,500 | Total Removed Bridge Area (SF) | | | 150,400 |

| WALLS | | | | | | | |
|---|--------|--------|--------|---------|--------|--------|--------|
| | L (ft) | H (ft) | A (SF) | | L (ft) | H (ft) | A (SF) |
| SB Side | 2200 | 20 | 44,000 | NB Side | 600 | 20 | 12,000 |
| Total Retaining Wall Exposed Face Area (SF) | | | | 56,000 | | | |

