



MEMORANDUM

To: Stephen Beers, Bruce Melton
From: Lucinda E. Gibson, P.E.
Date: 10 July 2007
Re: Cost Estimate for the Fix 290 Alternative

I have conducted research on cost estimate techniques used by TXDOT, and was not able to find any published recommended techniques. The Austin District of TXDOT provides a listing of recent average low bid unit prices, although this list is only a subset of all possible bid items, and does not include many of the bid items that would be needed to construct the Fix 290 plan. Therefore, the Texas Metropolitan Mobility Plan seemed to be the best source of cost history for the Austin Region, and this is what I used as the basis for the following cost estimate.

The following assumptions were used in the cost estimate:

Reconstructed or Widened Lane Miles: 13.1

Elevated Segment and Ramp Lane-Miles: 9.4

The TMMP numbers are differentiated between Urban and Suburban, and Freeway and Arterial. The Parkway's design features make it somewhere between a Freeway and Arterial, and the Oak Hill area is an area that could be considered urban or suburban depending on the specific location. For purposes of the cost estimate, the freeway numbers were assumed, as construction will require more careful staging and should be designed to minimize the footprint. For the area type, urban conditions were assumed for three lane miles, which reflect the portion of 290 that is heavily developed. The remaining portions of the project already have undergone right-of-way acquisition, and therefore reflect more open, suburban conditions. .

Applying the number of lane miles above to the TMMP cost numbers for freeway projects results in the estimate cost of \$77,000,000. This cost estimate does not include right-of-way acquisition costs.

The tables and figure on the following pages provides details of the cost estimate. Lane Miles were estimated by type of construction and by segment, and applied to the TMMP average cost figures for elevated ramps and segments, and for reconstruction/widening on existing alignment.

The locations of the segments described in Table 1 are located on Figure 1, shown on page 3.

Table 1: Segment Lengths and Lanes

Elevated Segment	miles	Lanes	lane miles
A	0.24	2	0.48
B	0.56	2	1.12
C	0.31	3	0.93
D	0.31	4	1.24
			3.77
Ramps			
E	0.30	2	0.60
F	0.41	1	0.41
G	0.25	2	0.50
H	0.21	2	0.42
I	0.57	2	1.14
J	0.29	2	0.58
K	0.25	2	0.50
L	0.25	2	0.50
M	0.25	4	1.00
			5.65
Reconstruction on alignment			
290/71 (east)	0.82	8	6.56
71 (north)	0.19	6	1.14
290 (west)	0.90	6	5.40
			13.10

Table 2 applies the TMMP unit costs for urban, suburban and elevated/ramp sections.

Table 2: Austin District Average Costs

	M\$		Lane-Miles	Cost (millions of \$)
Urban Freeway	4.0	per lane mile	3.0	12.0
Urban Arterial	2.5	per lane mile		0
				0
Suburban Freeway	3.0	per lane mile	10.1	30.3
Suburban Arterial	1.2	per lane mile		0
				0
				0
Elevated Lanes or Ramps				0
Urban	3.7	per lane mile	9.40	34.7
				0
				77.0
GRAND TOTAL ESTIMATE				\$ 77,000,000

Figure 1: Segments Used for Cost Estimate

