



Division of Transportation  
 System Development  
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February 5, 2010

North-South Freeway Reconstruction

Airport Freeway  
 City of Milwaukee Sanitary Sewer  
 IH 43 / 894  
 Milwaukee County  
 Design Project ID 1030-20-00  
 Construction Project ID 1030-10-73

**MUNICIPAL AGREEMENT AMENDMENT VS. AUDIT AGREEMENT COSTS:**

Relocation Percentage Calculation:

Length of existing sewer to be relocated - in R/W	1017 LF	93%
Length of existing sewer to be relocated - outside R/W	77 LF	7%
Total length of existing sewer to be relocated	1094 LF	100%

Cost Calculation:

Total Relocation Cost \$1,522,372.23

Municipal Agreement #79

90% State Share, 10% City Share  
 1030-21-47, UA 517

$$\$1,522,372.23 \times (0.93) = \$1,415,806.17$$

Audit Agreement

100% State Share, 0% City Share  
 1030-21-44, Parcel 527

$$\$1,522,372.23 \times (0.07) = \$106,566.06$$

N-S FREEWAY  
 Airport Freeway  
 City of Milwaukee Sanitary Sewer  
 IH 43 / 894  
 Milwaukee County

Utility ID's 1030-21-44 / 1030-21-47  
 RW Project ID 1030-20-20  
 Parcel 527 / UA517  
 Construction Project ID 1030-10-73

Item	Unit	Price <sup>1</sup>	Quantity	Cost
Shaft Excavation	CY	\$75.60	562	\$42,487.20
Trench Excavation	CY	\$13.30	893	\$11,876.90
Temporary excavation support (shaft)	SF	\$51.90	6819	\$353,906.10
Temporary excavation support (trench)	SF	\$3.70	11558	\$42,764.60
Dewatering	day	\$790.00	25	\$19,750.00
15" (jacked)	LF	\$250.00	288	\$72,000.00
18" (jacked)	LF	\$300.00	1311	\$393,300.00
18" (intrench)	LF	\$64.90	287	\$18,626.30
4' ID Precast MH (8' deep)	ea	\$2,357.00	6	\$14,142.00
Addl MH Depth	VF	\$316.00	82	\$25,912.00
4' ID Precast MH w/shaft lid (14' deep)	ea	\$4,253.00	1	\$4,253.00
Addl 3' ID Riser Depth	VF	\$300.00	7	\$2,100.00
Mobilization	LS	\$25,000.00	1	\$25,000.00
Granular Backfill	CY	\$10.10	603	\$6,090.30
Slurry Backfill	CY	\$41.00	500	\$20,500.00
Abandon 10" sewer	LF	\$4.50	610	\$2,745.00
Abandon 15" sewer	LF	\$9.50	439	\$4,170.50
Abandon MH	VF	\$95.50	15	\$1,432.50
CCTV Inspection	LF	\$5.00	2235	\$11,175.00
<b>Subtotal</b>				<b>\$1,072,231.40</b>
Contingency	20%			\$214,446.28
<b>Total Construction Cost</b>				<b>\$1,286,677.68</b>

Equivalent Unit Cost \$682/LF

(1) Cost as of July 2010; Est. ENR CCI = 8840

### COST ESTIMATE

#### **BID ITEMS**

City Precast Concrete Manhole	Ea	\$8,000.00	6	\$48,000.00
City Precast Concrete Manhole with Shaft Fram And Lid	Ea	\$8,300.00	1	\$8,300.00
Jacking Sanitary Sewer, 15-inch	LF	\$600.00	288	\$172,800.00
Sanitary Sewer, 18-inch	LF	\$400.00	287	\$114,800.00
Jacking Sanitary Sewer, 18-inch	LF	\$700.00	1311	\$917,700.00
Abandoning Existing 10-inch Sanitary Sewer	LF	\$10.00	610	\$6,100.00
Abandoning Existing 15-inch Sanitary Sewer	LF	\$15.00	439	\$6,585.00
Sanitary Sewer Examination CCTV	LF	\$6.00	2235	\$13,410.00
<b>SUBTOTAL</b>				<b>\$1,287,695.00</b>

#### **DESIGN & INSPECTION**

Design - City of Milwaukee				\$128,769.50
Design - Milwaukee Transportation Partners				\$41,522.98
Inspection - City of Milwaukee				\$64,384.75
Field Services - City of Milwaukee				\$0.00
<b>SUBTOTAL</b>				<b>\$234,677.23</b>

**TOTAL \$1,522,372.23**