



BOLTON & MENK, INC.

Consulting Engineers & Surveyors

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MEMORANDUM

Date: October 29, 2014
To: Justin Femrite, P.E., City Engineer
From: Cody Holmes, P.E., Project Manager
Mark D. Kasma, P.E., Senior Principal Engineer
Subject: 165th Avenue NW & Jarvis Street NW- 36' Roadway Option
City of Elk River
BMI Project No. N15.108340

This memo is a follow up to your direction after the recent City Council meeting regarding 165th and Jarvis. Based on your request, we have generated a revised profile, cross sections and quantities for a 36' roadway that will include the trail. Based on those results, we have generated a revised preliminary cost estimate of \$3,985,100 (see attached). The estimated cost for the 32' roadway with no trail was \$3,795,400 (see attached). A cost difference of \$189,700.

The estimated additional cost for the City of Ramsey's share for the 36' roadway is \$56,910. The revised total estimated cost share for Ramsey is then \$920,352 (\$863,442 +\$56,910).

The proposed roadway design is summarized as follows:

- 36' face-to-face roadway (originally discussed at Kick-off Meeting)
- Catchbasins with outlet pipes at ponding areas only
- Curbcuts every 250' +/- to outlet water from the roadway where ditch elevations are too low to accept a catchbasin with an outlet. This should allow us to stay within the existing ROW and prescribed easement areas. Final design will confirm.
- There are some infiltration and ponding areas located outside of the existing ROW
- A typical section is attached

In regard to our work to date on this portion of the project, the preliminary design work completed by our Team is approximately 2.5-3 times what was originally estimated in our proposal. This is based on the additional options analyzed and completed. We have done this work in an effort to make sure that the City's final product meets and exceeds expectations. However, we believe that additional fees are more than warranted. I'll summarize those fees for you early next week so we can discuss before going any further. Please call either of us if you have any questions about the most recent work.

**165TH AVENUE NW & JARVIS STREET NW - 36' ROADWAY
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$50,000.00	\$50,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$15,000.00	\$15,000.00
3	RECLAIM BITUMINOUS PAVEMENT (8")	SQ YD	30952	\$4.00	\$123,808.00
4	SUBGRADE EXCAVATION	CU YD	10208	\$3.50	\$35,728.00
5	COMMON EXCAVATION	CU YD	26565	\$2.00	\$53,130.00
6	POND EXCAVATION	CU YD	5000	\$8.00	\$40,000.00
7	GRANULAR BORROW (LV)	CU YD	4500	\$5.00	\$22,500.00
8	AGGREGATE BASE CLASS 5	TON	29503	\$11.00	\$324,533.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E) - 2"	TON	5554	\$75.00	\$416,550.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B) - 2.5"	TON	6942	\$70.00	\$485,940.00
11	TACK COAT	GA	4381	\$5.00	\$21,905.00
12	REMOVE & REPLACE DRIVEWAYS	EA	40	\$800.00	\$32,000.00
13	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	25324	\$11.00	\$278,564.00
14	COMMON TOPSOIL BORROW	CU YD	9910	\$15.00	\$148,650.00
15	SODDING TYPE LAWN	SQ YD	20000	\$3.50	\$70,000.00
16	STRIPING AND SIGNAGE	LUMP SUM	1	\$15,000.00	\$15,000.00
17	SILT FENCE	LIN FT	27800	\$2.00	\$55,600.00
18	TREE REMOVAL	ACRE	3.0	\$10,000.00	\$30,000.00
19	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$12,000.00	\$12,000.00
20	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
21	SEED, FERTILIZER & MULCH	ACRE	11	\$2,500.00	\$27,500.00
SUBTOTAL STREETS COST					\$2,298,400.00
10% CONTINGENCIES					\$229,800.00
TOTAL STREETS COST					\$2,528,200.00
INDIRECT COSTS (10%)					\$252,900.00
TOTAL STREETS COST					\$2,781,100.00
STORM SEWER					
1	REMOVE CULVERT	LIN FT	1172	\$10.00	\$11,720.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	72	\$310.00	\$22,320.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	118	\$300.00	\$35,400.00
6	CASTINGS	EACH	38	\$700.00	\$26,600.00
7	12" RC PIPE CULVERT	LIN FT	2108	\$32.00	\$67,456.00
8	15" RC PIPE CULVERT	LIN FT	29	\$30.00	\$870.00
9	18" RC PIPE CULVERT	LIN FT	288	\$35.00	\$10,080.00
10	24" RC PIPE CULVERT	LIN FT	64	\$36.00	\$2,304.00
11	12" RC PIPE APRON	EACH	3	\$600.00	\$1,800.00
12	15" RC PIPE APRON	EACH	1	\$500.00	\$500.00
13	18" RC PIPE APRON	EACH	1	\$650.00	\$650.00
14	24" RC PIPE APRON	EACH	2	\$700.00	\$1,400.00
15	RANDOM RIPRAP CLASS IV	CU YD	75	\$90.00	\$6,750.00
16	STORM DRAIN INLET PROTECTION	EACH	38	\$150.00	\$5,700.00
17	SPILLWAYS	EACH	56	\$800.00	\$44,800.00
18	DRIVEWAY CULVERT	LIN FT	1000	\$25.00	\$25,000.00
SUBTOTAL STORM SEWER COST					\$265,100.00
10% CONTINGENCIES					\$26,500.00
TOTAL STORM SEWER COST					\$291,600.00
INDIRECT COSTS (10%)					\$29,200.00
TOTAL STORM SEWER COST					\$320,800.00

**165TH AVENUE NW & JARVIS STREET NW - 36' ROADWAY
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

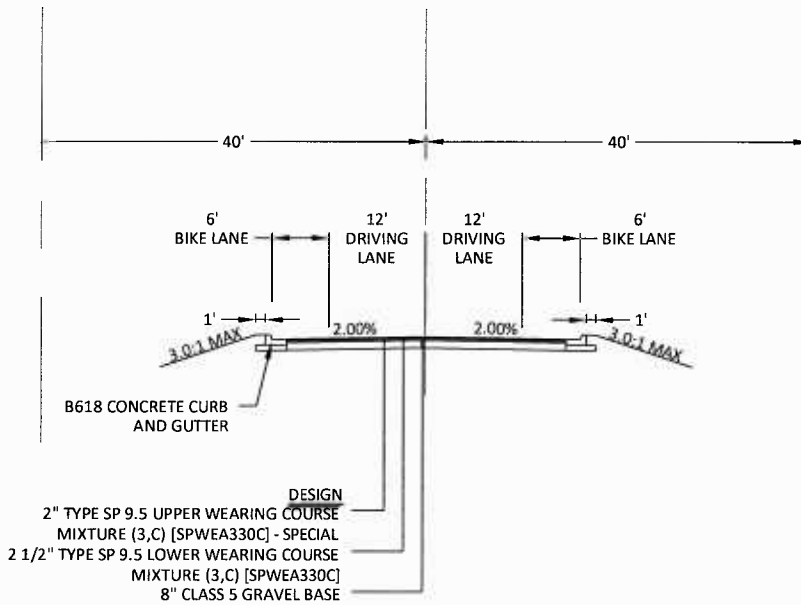
NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
RAILROAD CROSSING IMPROVEMENTS AT 165TH AVENUE & JARVIS STREET					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	128	\$1,400.00	\$179,200.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	2	\$250,000.00	\$500,000.00
3	COMMON EXCAVATION	CU YD	300	\$14.00	\$4,200.00
4	AGGREGATE BASE CLASS 5	TON	160	\$28.00	\$4,480.00
5	5" CONCRETE WALK	SQ FT	0	\$6.00	\$0.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	640	\$18.00	\$11,520.00
7	TRUNCATED DOMES	SQ FT	0	\$42.00	\$0.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	2	\$12,500.00	\$25,000.00
9	SIGN PANEL TYPE C	SQ FT	100	\$35.00	\$3,500.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	1000	\$2.00	\$2,000.00
				SUBTOTAL QUIET ZONE COST	\$729,900.00
				10% CONTINGENCIES	\$73,000.00
				TOTAL QUIET ZONE COST	\$802,900.00
				INDIRECT COSTS (10%)	\$80,300.00
				TOTAL QUIET ZONE COST	\$883,200.00
				TOTAL PROJECT COST	\$3,985,100.00

165TH AVENUE NW & JARVIS STREET NW - NO TRAIL OPTION
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER

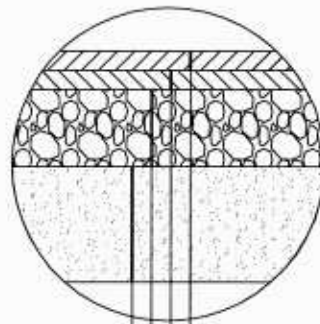
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STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$50,000.00	\$50,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$15,000.00	\$15,000.00
3	RECLAIM BITUMINOUS PAVEMENT (8")	SQ YD	30952	\$4.00	\$123,808.00
4	SUBGRADE EXCAVATION	CU YD	9074	\$3.50	\$31,759.00
5	COMMON EXCAVATION	CU YD	20250	\$2.00	\$40,500.00
6	POND EXCAVATION	CU YD	5000	\$8.00	\$40,000.00
7	GRANULAR BORROW (LV)	CU YD	4000	\$5.00	\$20,000.00
8	AGGREGATE BASE CLASS 5	TON	26225	\$11.00	\$288,475.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E) - 2"	TON	4937	\$75.00	\$370,275.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B) - 2.5"	TON	6171	\$70.00	\$431,970.00
11	TACK COAT	GA	4100	\$5.00	\$20,500.00
12	REMOVE & REPLACE DRIVEWAYS	EA	40	\$800.00	\$32,000.00
13	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	25324	\$11.00	\$278,564.00
14	COMMON TOPSOIL BORROW	CU YD	9910	\$15.00	\$148,650.00
15	SODDING TYPE LAWN	SQ YD	20000	\$3.50	\$70,000.00
16	STRIPING AND SIGNAGE	LUMP SUM	1	\$15,000.00	\$15,000.00
17	SILT FENCE	LIN FT	27800	\$2.00	\$55,600.00
18	TREE REMOVAL	ACRE	3.0	\$10,000.00	\$30,000.00
19	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$12,000.00	\$12,000.00
20	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
21	SEED, FERTILIZER & MULCH	ACRE	11	\$2,500.00	\$27,500.00
				SUBTOTAL STREETS COST	\$2,141,600.00
				10% CONTINGENCIES	\$214,200.00
				TOTAL STREETS COST	\$2,355,800.00
				INDIRECT COSTS (10%)	\$235,600.00
				TOTAL STREETS COST	\$2,591,400.00
STORM SEWER					
1	REMOVE CULVERT	LIN FT	1172	\$10.00	\$11,720.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
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4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	72	\$310.00	\$22,320.00
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9	SIGN PANEL TYPE C	SQ FT	100	\$35.00	\$3,500.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	1000	\$2.00	\$2,000.00
				SUBTOTAL QUIET ZONE COST	\$729,900.00
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				INDIRECT COSTS (10%)	\$80,300.00
				TOTAL QUIET ZONE COST	\$883,200.00
				TOTAL PROJECT COST	\$3,795,400.00



TYPICAL SECTION
36' FACE TO FACE WITH TRAIL ON ROADWAY



- DESIGN
- 2" TYPE SP 9.5 UPPER WEARING COURSE MIXTURE (3,C) [SPWEA330C] - SPECIAL
 - 2 1/2" TYPE SP 9.5 LOWER WEARING COURSE MIXTURE (3,C) [SPWEA330C]
 - 8" CLASS 5 GRAVEL BASE
 - 24"-60" SELECT GRANULAR BORROW (VARIES)

TYPICAL SECTION
SUBGRADE EXCAVATION



CITY OF ELK RIVER, MINNESOTA
 165TH AVENUE NW AND JARVIS STREET NW
 TYPICAL SECTION - 36' FACE TO FACE WITH TRAIL ON ROADWAY

OCTOBER, 2014

FIGURE NO. 1