Appendix C

Cost Estimates

Alerus Center - 43rd Street/17th Avenue Temporary Roadway Section Preliminary Cost Estimate

Printed: 3/31/2006 10:57 AM

Prepared By: SRF Consulting Group, Inc., January 30, 2006

		UNIT	EST.	EST.
ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	AMOUNT
PAVING AND GRADING COSTS	Oitii	TRIOL	QUANTITI	AMOUNT
1 Excavation (for 15" aggregate)	cu. yd.	\$5.00	3,500	\$17,500
Subgrade Preparation - Type A 12 inch	sq. yd.	\$2.00	10,200	\$20,400
3 Aggregate Base Course (for 15" aggregate)	cu. yd.	\$20.00	2,200	\$44,00
4 Geotextile Fabric	sq. yd.	\$2.50	5,300	\$13,250
SUBTOTAL PAVING AND GRADING COSTS:			,	\$95,150
MISC. UNIT or PERCENTAGE OF PAVING AND GRAD	ING COSTS			
1 Removal - Miscelaneous	l.s.	\$20,000	1	\$20,000
Drainage - rural storm sewer	l.s.	\$10,000	1	\$10,00
3 Turf Establishment & Erosion Control	l.s.	\$20,000	1	\$20,00
SUBTOTAL MISC. PERCENTAGE COSTS:				\$50,00
SIGNAL AND LIGHTING COSTS				
SUBTOTAL LIGHTING COSTS:				
SIGNING COSTS				
1 Mainline Signing	mile	\$30,000	0.3	\$9,600
SUBTOTAL SIGNING & STRIPING COSTS:				\$9,60
SUBTOTAL CONSTRUCTION COSTS:				\$154,75
MISCELLANEOUS COSTS				· · · · ·
1 Mobilization and Contract Bond	5%			\$8,00
2 Contingencies & Minor Items	10%			\$15,00
3 Engineering - Design & Administration	25%			\$39,00
SUBTOTAL MISCELLANEOUS COSTS:		\$62,00		
ESTIMATED TOTAL CONSTRUCTION & MISCELI	iggregate):	\$216,7		
ESTIMATED TOTAL CONSTRUCTION & MISCELI	agragata).	\$262,65		

NOTE This estimate does not include potential costs for special treatment of existing contaminated soils.

Alerus Center - 43rd Street/17th Avenue Full Urban Roadway Section Preliminary Cost Estimate

Printed: 3/31/2006 10:56 AM

Prepared By: SRF Consulting Group, Inc., November 14, 2005

			UNIT	EST.	EST.
	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	AMOUNT
PA\	ING AND GRADING COSTS	•			
1	Excavation	cu. yd.	\$5.00	7,650	\$38,250
2	Subgrade Preparation - Type A 12 inch	sq. yd.	\$2.00	10,200	\$20,400
3	Aggregate Base Course CL-5	cu. yd.	\$20.00	3,400	\$68,000
4	Bituminous Pavement	sq. yd.	\$20.00	7,600	\$152,000
5	Curb and Gutter	lin. ft.	\$12.00	3,400	\$40,800
	SUBTOTAL PAVING AND GRADING COSTS:				\$319,450
	C. UNIT or PERCENTAGE OF PAVING AND GRAI				
1_	Removal - Miscelaneous	l.s.	\$20,000	1	\$20,000
2	Drainage - urban storm sewer (1)	l.s.	\$40,000	1	\$40,000
3	Turf Establishment & Erosion Control	l.s.	\$20,000	1	\$20,000
	SUBTOTAL MISC. PERCENTAGE COSTS:				\$80,000
	NAL AND LIGHTING COSTS				
1	Traffic Signals - Upgrade at 42nd Street	each	\$25,000	1	\$25,000
	SUBTOTAL LIGHTING COSTS:				\$25,000
<u>SIG</u>	NING COSTS			0.01	# 40.00
1	Mainline Signing & Striping	mile	\$50,000	0.3	\$16,000
	SUBTOTAL SIGNING & STRIPING COSTS:				\$16,000
	SUBTOTAL CONSTRUCTION COSTS:				\$440,450
MIS	CELLANEOUS COSTS				
1	Mobilization and Contract Bond	5%			\$22,000
2	Contingencies & Minor Items	10%			\$44,000
3	Engineering - Design & Administration	25%			\$110,000
	SUBTOTAL MISCELLANEOUS COSTS:		\$176,000		
			1		
	ESTIMATED TOTAL CONSTRUCTION & MISCEL		\$616,45		

NOTE This estimate does not include potential costs for special treatment of existing contaminated soils.

Alerus Center - 38th Street/32nd Avenue **Intersection Improvements** Preliminary Cost Estimate Prepared By: SRF Consulting Group, Inc., January 13, 2006

Printed: 3/31/2006 10:58 AM

FEM DESCRIPTION G AND GRADING COSTS xcavation ubgrade Preparation - Type A 12 inch ggregate Base Course CL-5 -inch Non-Reinforced Concrete Pavement CL AE-Doweled urb and Gutter oncrete Sidewalk aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COS emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	Cu. yd. sq. yd. cu. yd. sq. yd. lin. ft. sq. yd. lin. ft. sq. yd. lin. ft. styd. lin. ft. sq. yd. lin. ft.	\$5.00 \$2.00 \$2.00 \$40.00 \$12.00 \$44.00 \$4.00 \$4.00 \$5.25 \$30,000 \$5.000	## Company of the image is a company of the	\$6,080 \$3,242 \$10,800 \$34,800 \$10,440 \$4,060 \$3,480 \$72,902 \$3,480 \$761 \$30,000		
G AND GRADING COSTS xcavation ubgrade Preparation - Type A 12 inch ggregate Base Course CL-5 -inch Non-Reinforced Concrete Pavement CL AE-Doweled urb and Gutter oncrete Sidewalk aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COS emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	cu. yd. sq. yd. cu. yd. sq. yd. lin. ft. sq. yd. lin. ft. sq. yd. lin. ft. st. sq. yd. lin. ft.	\$5.00 \$2.00 \$20.00 \$40.00 \$12.00 \$28.00 \$4.00 \$4.00 \$5.25 \$30,000	1,216 1,621 540 870 870 145 870 145 145	\$6,080 \$3,242 \$10,800 \$34,800 \$10,440 \$4,060 \$3,480 \$72,902		
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ubgrade Preparation - Type A 12 inch ggregate Base Course CL-5 -inch Non-Reinforced Concrete Pavement CL AE-Doweled urb and Gutter oncrete Sidewalk aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COS emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	sq. yd. cu. yd. sq. yd. lin. ft. sq. yd. lin. ft. sq. yd. lin. ft. STS lin. ft. sq. yd. l.s.	\$2.00 \$20.00 \$40.00 \$12.00 \$28.00 \$4.00 \$5.25 \$30,000	1,621 540 870 870 145 870 145 145	\$3,242 \$10,800 \$34,800 \$10,440 \$4,060 \$3,480 \$72,902		
ggregate Base Course CL-5 inch Non-Reinforced Concrete Pavement CL AE-Doweled urb and Gutter oncrete Sidewalk aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COST emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	sq. yd. lin. ft. sq. yd. lin. ft. STS lin. ft. sq. yd. lin. ft.	\$40.00 \$12.00 \$28.00 \$4.00 \$5.25 \$30,000	870 870 145 870 870 145 1	\$10,800 \$34,800 \$10,440 \$4,060 \$3,480 \$72,902		
urb and Gutter oncrete Sidewalk aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COST emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	lin. ft. sg. yd. lin. ft. STS lin. ft. sg. yd. l.s.	\$12.00 \$28.00 \$4.00 \$4.00 \$5.25 \$30,000	870 145 870 870 145 1	\$10,440 \$4,060 \$3,480 \$72,902 \$3,480 \$761		
oncrete Sidewalk aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COS emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	sq. yd. lin. ft. STS lin. ft. sq. yd. l.s.	\$28.00 \$4.00 \$4.00 \$5.25 \$30,000	870 145 145 1	\$4,060 \$3,480 \$72,902 \$3,480 \$761		
aw Cut SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COS emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	lin. ft. STS lin. ft. sq. yd. l.s.	\$4.00 \$4.00 \$5.25 \$30,000	870 870 145 1	\$3,480 \$72,902 \$3,480 \$761		
SUBTOTAL PAVING AND GRADING COSTS: UNIT or PERCENTAGE OF PAVING AND GRADING COST emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	STS lin. ft. sq. yd. l.s.	\$4.00 \$5.25 \$30,000	870 145 1	\$72,902 \$3,480 \$761		
UNIT or PERCENTAGE OF PAVING AND GRADING COS emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	lin. ft. sq. yd. l.s.	\$5.25 \$30,000	145 1	\$3,480 \$761		
emoval - Curb & Gutter emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	lin. ft. sq. yd. l.s.	\$5.25 \$30,000	145 1	\$761		
emoval - Sidewalk rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	sq. yd. I.s.	\$5.25 \$30,000	145 1	\$761		
rainage - urban storm sewer urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:	l.s.	\$30,000	1			
urf Establishment & Erosion Control SUBTOTAL MISC. PERCENTAGE COSTS:				\$30,000		
SUBTOTAL MISC. PERCENTAGE COSTS:	l.s.	\$5.000				
		, 40,000	1	\$5,000		
				\$39,241		
L AND LIGHTING COSTS						
raffic Signals - Upgrade at 32nd Avenue	each	\$15,000	1	\$15,000		
SUBTOTAL LIGHTING COSTS:				\$15,000		
IG COSTS						
bliteration of Pavement Marking	sa. ft.	\$1.15	900	\$1,035		
reformed Patterned Pavement Marking 4-in Line-Grooved,	lin. ft.	\$2.35	150	\$353		
reformed Patterned Pavement Marking 4-in Line-Grooved,	lin. ft.	\$2.35	4100	\$9,635		
reformed Patterned Pavement Marking 4-in Line-Grooved,	lin. ft.	\$2.35	570	\$1,340		
reformed Patterned Pavement Marking 8-in Line-Grooved,	lin. ft.		250	\$1,713		
				\$741		
	sq. ft.	\$23.00	273	\$6,279 \$21,095		
SUBTOTAL SIGNING & STRIPING COSTS:						
SUBTOTAL CONSTRUCTION COSTS:				\$148,238		
LLANEOUS COSTS						
lobilization and Contract Bond	5%			\$7,000		
				\$15,000		
ŭ				\$37,000		
5 5 5	20/0					
SUBTOTAL WISCELLANEOUS COSTS:				\$59,000		
		П	Т			
STIMATED TOTAL CONSTRUCTION & MISCELLANEOU	S COSTS:			\$207,238		
	AND LIGHTING COSTS affic Signals - Upgrade at 32nd Avenue SUBTOTAL LIGHTING COSTS: G COSTS bliteration of Pavement Marking reformed Patterned Pavement Marking 4-in Line-Grooved, reformed Patterned Pavement Marking 4-in Line-Grooved, reformed Patterned Pavement Marking 4-in Line-Grooved, reformed Patterned Pavement Marking 8-in Line-Grooved, reformed Patterned Pavement Marking 8-in Line-Grooved, reformed Patterned Pavement Marking Message (1) SUBTOTAL SIGNING & STRIPING COSTS: SUBTOTAL CONSTRUCTION COSTS: LLANEOUS COSTS obilization and Contract Bond ontingencies & Minor Items rigineering - Design & Administration SUBTOTAL MISCELLANEOUS COSTS:	AND LIGHTING COSTS affic Signals - Upgrade at 32nd Avenue each SUBTOTAL LIGHTING COSTS: G COSTS Diliteration of Pavement Marking sq. ft. reformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. reformed Patterned Pavement Marking 8-in Line-Grooved, lin. ft. reformed Patterned Pavement Marking 24-in Line-Grooved lin. ft. reformed Thermo Plastic Pavement Marking Message (1) sq. ft. SUBTOTAL SIGNING & STRIPING COSTS: SUBTOTAL CONSTRUCTION COSTS: LLANEOUS COSTS obilization and Contract Bond 5% ontingencies & Minor Items 10% regineering - Design & Administration 25%	AND LIGHTING COSTS affic Signals - Upgrade at 32nd Avenue each \$15,000 SUBTOTAL LIGHTING COSTS: G COSTS Diliteration of Pavement Marking seformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. \$2.35 eformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. \$2.35 eformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. \$2.35 eformed Patterned Pavement Marking 8-in Line-Grooved, lin. ft. \$2.35 eformed Patterned Pavement Marking 8-in Line-Grooved, lin. ft. \$6.85 eformed Patterned Pavement Marking 24-in Line-Grooved, lin. ft. \$18.53 eformed Thermo Plastic Pavement Marking Message (1) sq. ft. \$23.00 SUBTOTAL SIGNING & STRIPING COSTS: SUBTOTAL CONSTRUCTION COSTS: LLANEOUS COSTS obilization and Contract Bond 5% ontingencies & Minor Items 10% ngineering - Design & Administration 25% SUBTOTAL MISCELLANEOUS COSTS:	AND LIGHTING COSTS affic Signals - Upgrade at 32nd Avenue each \$15,000 1 SUBTOTAL LIGHTING COSTS: G COSTS Diliteration of Pavement Marking sq. ft. \$1.15 900 reformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. \$2.35 150 reformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. \$2.35 570 reformed Patterned Pavement Marking 4-in Line-Grooved, lin. ft. \$2.35 570 reformed Patterned Pavement Marking 8-in Line-Grooved, lin. ft. \$6.85 250 reformed Patterned Pavement Marking 24-in Line-Grooved, lin. ft. \$18.53 40 reformed Patterned Pavement Marking 24-in Line-Grooved, lin. ft. \$18.53 40 reformed Patterned Pavement Marking Message (1) sq. ft. \$23.00 273 SUBTOTAL SIGNING & STRIPING COSTS: SUBTOTAL CONSTRUCTION COSTS: LANEOUS COSTS obilization and Contract Bond 5% 50 ontingencies & Minor Items 10% rigineering - Design & Administration 25% SUBTOTAL MISCELLANEOUS COSTS:		

NOTEThis estimate does not include potential costs for special treatment of existing contaminated soils.

Table 2
Estimated Cost per Event (1)

Event with 8,400 people (e.g., Non-Football Event)					Event with 12,000 people (e.g., Football Event)					
	Quantity Rate Cost		t		Quantity			Cost		
Overflow Parking Shuttle Buses					Overflow Parking Shuttle Buses					
Altru Shuttles	3	\$100/hour for 8 hours	\$	2,400.00	Altru Shuttles	3	\$100/hour for 8 hours	\$	2,400.00	
Other Shuttles	0	\$100/hour for 8 hours	\$	-	UND Shuttles	22	\$100/hour for 8 hours	\$	17,600.00	
Stationary Signs	22	\$2/sign/day	\$	44.00	Stationary Signs	25	\$2/sign/day	\$	50.00	
Variable Message Signs ⁽²⁾	8	\$300/sign/day	\$	2,400.00	Variable Message Signs ⁽²⁾	8	\$300/sign/day	\$	2,400.00	
Barricades ⁽³⁾	33	\$4.50/day/barricade	\$	148.50	Barricades ⁽³⁾	30	\$4.50/day/barricade	\$	135.00	
Cones (4)	201	\$0.30/day/cone	\$	60.30	Cones (4)	201	\$0.30/day/cone	\$	60.30	
Traffic Control Setup Staff (5)	10	\$20/hour for 2 hours	\$	400.00	Traffic Control Setup Staff (5)	10	\$20/hour for 2 hours	\$	400.00	
Traffic Control Staff - Police					Traffic Control Staff - Police					
During Event Arrival	4	\$70/hour for 2 hours	\$	560.00	During Event Arrival	4	\$70/hour for 2 hours	\$	560.00	
During Event Departure	12	\$70/hour for 2 hours	\$	1,680.00	During Event Departure	12	\$70/hour for 2 hours	\$	1,680.00	
Traffic Control Staff - Alerus					Traffic Control Staff - Alerus					
During Event Arrival	24	\$20/hour for 2 hours	\$	960.00	During Event Arrival	22	\$20/hour for 2 hours	\$	880.00	
During Event Departure	16	\$20/hour for 2 hours	\$	640.00	During Event Departure	16	\$20/hour for 2 hours	\$	640.00	
Total			\$	9,293.00	Total			\$	26,805.00	

⁽¹⁾ Assumes all shuttle buses, signs (including variable message signs), barricades and cones must be rented at regular market rate. Does not account for Alerus Center's inventory.

⁽²⁾ Includes permenant variable message sign near Demers Avenue and Columbia Road. The cost of this sign may be eliminated if no fee is charged for its use

⁽³⁾ General event: 33 barricades needed during arrival, 32 during departure. Football game: 30 barricades needed during arrival and departure.

⁽⁴⁾ 201 cones needed during departure for each event, only 108 cones needed during arrival.

⁽⁵⁾ Traffic control setup staff is responsible for setting up all signs, barricades and cones prior to event arrival and departure.