

**MINNEHAHA COUNTY | ENGINEER'S OPINION OF PROBABLE COSTS**  
**Structure No. 50-216-015**  
**Proposed Structure: 2 Barrel 11' X 9' Cast-in-Place Reinforced Concrete Box Culvert w/ 20° RHF Skew**

Updated: 8/22/2023



Inflation Percentage = 3.00%

**GRADING**

BID ITEM NUMBER	SDDOT ITEM NUMBER	DESCRIPTION	BASE BID QUANTITIES	UNIT	CURRENT YEAR 2023		FUTURE YEAR 2028	
					UNIT PRICE	TOTAL BID PRICE	UNIT PRICE	TOTAL BID PRICE
1	009E0010	Mobilization	1	Lump Sum	\$ 65,000.00	\$ 65,000.00	\$ 75,352.81	\$ 75,352.81
2	100E0100	Clearing	1	Lump Sum	\$ 2,500.00	\$ 2,500.00	\$ 2,898.19	\$ 2,898.19
3	110E0600	Remove Fence	150	Ft	\$ 1.50	\$ 225.00	\$ 1.74	\$ 260.84
4	110E1010	Remove Asphalt Concrete Pavement	900	SqYd	\$ 8.00	\$ 7,200.00	\$ 9.27	\$ 8,346.77
5	110E5020	Salvage Traffic Sign	20	Each	\$ 25.00	\$ 500.00	\$ 28.98	\$ 579.64
6	110E5451	Salvage Riprap	100	Ton	\$ 30.00	\$ 3,000.00	\$ 34.78	\$ 3,477.82
7	120E0010	Unclassified Excavation	1200	CuYd	\$ 15.00	\$ 18,000.00	\$ 17.39	\$ 20,866.93
8	120E0600	Contractor Furnished Borrow Excavation	800	CuYd	\$ 25.00	\$ 20,000.00	\$ 28.98	\$ 23,185.48
9	230E0010	Placing Topsoil	250	CuYd	\$ 15.00	\$ 3,750.00	\$ 17.39	\$ 4,347.28
10	260E1010	Base Course	685	Ton	\$ 28.00	\$ 19,180.00	\$ 32.46	\$ 22,234.88
11	320E1200	Asphalt Concrete Composite	340	Ton	\$ 165.00	\$ 56,100.00	\$ 191.28	\$ 65,035.28
12	320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	0.12	Mile	\$ 16,500.00	\$ 1,980.00	\$ 19,128.02	\$ 2,295.36
13	620E0020	Type 2 Right-of-Way Fence	150	Ft	\$ 12.00	\$ 1,800.00	\$ 13.91	\$ 2,086.69
14	632E2510	Type 2 Object Marker Back to Back	4	Each	\$ 40.00	\$ 160.00	\$ 46.37	\$ 185.48
15	632E3500	Reset Sign	1	Each	\$ 200.00	\$ 200.00	\$ 231.85	\$ 231.85
16	633E1230	High Build Waterborne Pavement Marking Paint, 6" White	600	Ft	\$ 1.00	\$ 600.00	\$ 1.16	\$ 695.56
17	633E1232	High Build Waterborne Pavement Marking Paint, 6" Yellow	90	Ft	\$ 1.00	\$ 90.00	\$ 1.16	\$ 104.33
18	634E0110	Traffic Control Signs	300	SqFt	\$ 6.25	\$ 1,875.00	\$ 7.25	\$ 2,173.64
19	634E0120	Traffic Control, Miscellaneous	1	Lump Sum	\$ 5,000.00	\$ 5,000.00	\$ 5,796.37	\$ 5,796.37
20	634E0275	Type 3 Barricade	10	Each	\$ 150.00	\$ 1,500.00	\$ 173.89	\$ 1,738.91
21	734E0010	Erosion Control	1	Lump Sum	\$ 6,000.00	\$ 6,000.00	\$ 6,955.64	\$ 6,955.64
22	734E0103	Type 3 Erosion Control Blanket	500	SqYd	\$ 4.00	\$ 2,000.00	\$ 4.64	\$ 2,318.55
23	734E0154	12" Diameter Erosion Control Wattle	160	Ft	\$ 4.50	\$ 720.00	\$ 5.22	\$ 834.68
24	734E0604	High Flow Silt Fence	600	Ft	\$ 4.50	\$ 2,700.00	\$ 5.22	\$ 3,130.04
25	734E0900	Temporary Diversion Channel for Fish Passage	1	Each	\$ 17,000.00	\$ 17,000.00	\$ 19,707.66	\$ 19,707.66
26	734E5005	Dewatering	1	Lump Sum	\$ 10,000.00	\$ 10,000.00	\$ 11,592.74	\$ 11,592.74
27	SPECIAL	SW Approach Culvert Work (Tie-into Box)	1	Lump Sum	\$ 7,500.00	\$ 7,500.00	\$ 8,694.56	\$ 8,694.56
28	900E1310	Concrete Washout Facility	1	Each	\$ 1,000.00	\$ 1,000.00	\$ 1,159.27	\$ 1,159.27
<b>SUBTOTAL (GRADING) =</b>					<b>\$ 255,580.00</b>		<b>\$ 296,287.27</b>	

**STRUCTURE**

BID ITEM NUMBER	SDDOT ITEM NUMBER	DESCRIPTION	BASE BID QUANTITIES	UNIT	CURRENT YEAR 2023		FUTURE YEAR 2028	
					UNIT PRICE	TOTAL BID PRICE	UNIT PRICE	TOTAL BID PRICE
29	250E0030	Incidental Work, Structure	1	Lump Sum	\$ 40,000.00	\$ 40,000.00	\$ 46,370.96	\$ 46,370.96
30	420E0200	Structure Excavation, Box Culvert	130	CuYd	\$ 75.00	\$ 9,750.00	\$ 86.95	\$ 11,302.92
31	421E0200	Box Culvert Undercut	220	CuYd	\$ 150.00	\$ 33,000.00	\$ 173.89	\$ 38,256.04
32	460E0120	Class A45 Concrete, Box Culvert	210	CuYd	\$ 1,000.00	\$ 210,000.00	\$ 1,159.27	\$ 243,447.56
33	480E0100	Reinforcing Steel	27,500	Lb	\$ 5.00	\$ 137,500.00	\$ 5.80	\$ 159,400.19
34	700E0210	Class B Riprap	170	Ton	\$ 55.00	\$ 9,350.00	\$ 63.76	\$ 10,839.21
35	831E0110	Type B Drainage Fabric	235	SqYd	\$ 5.00	\$ 1,175.00	\$ 5.80	\$ 1,362.15
36	831E0300	Reinforcement Fabric (MSE)	320	SqYd	\$ 6.00	\$ 1,920.00	\$ 6.96	\$ 2,225.81
<b>SUBTOTAL (STRUCTURE) =</b>					<b>\$ 442,695.00</b>		<b>\$ 513,204.84</b>	

**SUBTOTAL (GRADING + STRUCTURE) = \$ 809,492.10**

**CONTINGENCY (10%) = \$ 80,949.00**

**CONSTRUCTION OPINION OF PROBABLE COST = \$ 890,441.10**

**ENVIRONMENTAL ENGINEERING, WETLAND DELINEATION, CULTURAL RESOURCE, & NEPA (CATEX) = \$ 22,000.00**

**WETLAND MITIGATION (POTENTIAL) = \$ 35,000.00**

**PRELIMINARY DESIGN ENGINEERING (HYDRAULICS) = \$ 30,000.00**

**GEOTECHNICAL SOIL BORINGS & RECOMMENDATIONS = \$ 8,000.00**

**FINAL DESIGN ENGINEERING (STRUCTURE + GRADING PLANS) + BIDDING = \$ 55,000.00**

**CONSTRUCTION ENGINEERING = \$ 54,000.00**

**FISH BIOLOGIST (TOPEKA SHINER REMOVAL) = \$ 4,000.00**

**QC/QA MATERIAL TESTING = \$ 12,000.00**

**ENVIRONMENTAL, ENGINEERING, & TESTING TOTAL = \$ 220,000.00**

**TOTAL ENGINEER'S OPINION OF PROBABLE PROJECT COST = \$ 1,110,441.10**

**MINNEHAHA COUNTY | ENGINEER'S OPINION OF PROBABLE COSTS**  
**Structure No. 50-219-015**  
**Proposed Structure: 3 Barrel 12' X 6' Cast-in-Place Reinforced Concrete Box Culvert**  
**w/ 45° LHF or 30° RHF Skew**

Updated: 8/22/2023



Inflation Percentage = 3.00%

**GRADING**

BID ITEM NUMBER	SDDOT ITEM NUMBER	DESCRIPTION	BASE BID QUANTITIES	UNIT	CURRENT YEAR 2023		FUTURE YEAR 2028	
					UNIT PRICE	TOTAL BID PRICE	UNIT PRICE	TOTAL BID PRICE
1	009E0010	Mobilization	1	Lump Sum	\$ 75,000.00	\$ 75,000.00	\$ 86,945.56	\$ 86,945.56
2	100E0100	Clearing	1	Lump Sum	\$ 2,000.00	\$ 2,000.00	\$ 2,318.55	\$ 2,318.55
3	110E0600	Remove Fence	0	Ft	\$ 1.50	\$ -	\$ 1.74	\$ -
4	110E1010	Remove Asphalt Concrete Pavement	750	SqYd	\$ 8.00	\$ 6,000.00	\$ 9.27	\$ 6,955.64
5	110E5020	Salvage Traffic Sign	20	Each	\$ 25.00	\$ 500.00	\$ 28.98	\$ 579.64
6	110E5451	Salvage Riprap	50	Ton	\$ 30.00	\$ 1,500.00	\$ 34.78	\$ 1,738.91
7	120E0010	Unclassified Excavation	2500	CuYd	\$ 15.00	\$ 37,500.00	\$ 17.39	\$ 43,472.78
8	120E0600	Contractor Furnished Borrow Excavation	1000	CuYd	\$ 25.00	\$ 25,000.00	\$ 28.98	\$ 28,981.85
9	230E0010	Placing Topsoil	225	CuYd	\$ 15.00	\$ 3,375.00	\$ 17.39	\$ 3,912.55
10	260E1010	Base Course	580	Ton	\$ 28.00	\$ 16,240.00	\$ 32.46	\$ 18,826.61
11	320E1200	Asphalt Concrete Composite	285	Ton	\$ 165.00	\$ 47,025.00	\$ 191.28	\$ 54,514.86
12	320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	0.10	Mile	\$ 16,500.00	\$ 1,650.00	\$ 19,128.02	\$ 1,912.80
13	620E0020	Type 2 Right-of-Way Fence	0	Ft	\$ 12.00	\$ -	\$ 13.91	\$ -
14	632E2510	Type 2 Object Marker Back to Back	4	Each	\$ 40.00	\$ 160.00	\$ 46.37	\$ 185.48
15	632E3500	Reset Sign	0	Each	\$ 200.00	\$ -	\$ 231.85	\$ -
16	633E1230	High Build Waterborne Pavement Marking Paint, 6" White	500	Ft	\$ 1.00	\$ 500.00	\$ 1.16	\$ 579.64
17	633E1232	High Build Waterborne Pavement Marking Paint, 6" Yellow	70	Ft	\$ 1.00	\$ 70.00	\$ 1.16	\$ 81.15
18	634E0110	Traffic Control Signs	300	SqFt	\$ 6.25	\$ 1,875.00	\$ 7.25	\$ 2,173.64
19	634E0120	Traffic Control, Miscellaneous	1	Lump Sum	\$ 5,000.00	\$ 5,000.00	\$ 5,796.37	\$ 5,796.37
20	634E0275	Type 3 Barricade	10	Each	\$ 150.00	\$ 1,500.00	\$ 173.89	\$ 1,738.91
21	734E0010	Erosion Control	1	Lump Sum	\$ 5,000.00	\$ 5,000.00	\$ 5,796.37	\$ 5,796.37
22	734E0103	Type 3 Erosion Control Blanket	600	SqYd	\$ 4.00	\$ 2,400.00	\$ 4.64	\$ 2,782.26
23	734E0154	12" Diameter Erosion Control Wattle	120	Ft	\$ 4.50	\$ 540.00	\$ 5.22	\$ 626.01
24	734E0604	High Flow Silt Fence	600	Ft	\$ 4.50	\$ 2,700.00	\$ 5.22	\$ 3,130.04
25	734E0900	Temporary Diversion Channel for Fish Passage	1	Each	\$ 15,000.00	\$ 15,000.00	\$ 17,389.11	\$ 17,389.11
26	734E5005	Dewatering	1	Lump Sum	\$ 10,000.00	\$ 10,000.00	\$ 11,592.74	\$ 11,592.74
27	900E1310	Concrete Washout Facility	1	Each	\$ 1,000.00	\$ 1,000.00	\$ 1,159.27	\$ 1,159.27
<b>SUBTOTAL (GRADING) =</b>							<b>\$ 261,535.00</b>	<b>\$ 303,190.75</b>

**STRUCTURE**

BID ITEM NUMBER	SDDOT ITEM NUMBER	DESCRIPTION	BASE BID QUANTITIES	UNIT	CURRENT YEAR 2023		FUTURE YEAR 2028	
					UNIT PRICE	TOTAL BID PRICE	UNIT PRICE	TOTAL BID PRICE
28	250E0030	Incidental Work, Structure	1	Lump Sum	\$ 40,000.00	\$ 40,000.00	\$ 46,370.96	\$ 46,370.96
29	420E0200	Structure Excavation, Box Culvert	180	CuYd	\$ 75.00	\$ 13,500.00	\$ 86.95	\$ 15,650.20
30	421E0200	Box Culvert Undercut	340	CuYd	\$ 150.00	\$ 51,000.00	\$ 173.89	\$ 59,122.98
31	460E0120	Class A45 Concrete, Box Culvert	275	CuYd	\$ 1,000.00	\$ 275,000.00	\$ 1,159.27	\$ 318,800.37
32	480E0100	Reinforcing Steel	37,000	Lb	\$ 5.00	\$ 185,000.00	\$ 5.80	\$ 214,465.70
33	700E0210	Class B Riprap	325	Ton	\$ 55.00	\$ 17,875.00	\$ 63.76	\$ 20,722.02
34	831E0110	Type B Drainage Fabric	440	SqYd	\$ 5.00	\$ 2,200.00	\$ 5.80	\$ 2,550.40
35	831E0300	Reinforcement Fabric (MSE)	510	SqYd	\$ 6.00	\$ 3,060.00	\$ 6.96	\$ 3,547.38
<b>SUBTOTAL (STRUCTURE) =</b>							<b>\$ 587,635.00</b>	<b>\$ 681,230.02</b>

**SUBTOTAL (GRADING + STRUCTURE) = \$ 984,420.77**

**CONTINGENCY (10%) = \$ 98,442.00**

**CONSTRUCTION OPINION OF PROBABLE COST = \$ 1,082,862.77**

**ENVIRONMENTAL ENGINEERING, WETLAND DELINEATION, CULTURAL RESOURCE, & NEPA (CATEX) = \$ 22,000.00**

**WETLAND MITIGATION (POTENTIAL) = \$ 100,000.00**

**PRELIMINARY DESIGN ENGINEERING (HYDRAULICS) = \$ 32,000.00**

**GEOTECHNICAL SOIL BORINGS & RECOMMENDATIONS = \$ 6,500.00**

**FINAL DESIGN ENGINEERING (STRUCTURE + GRADING PLANS) + BIDDING = \$ 55,000.00**

**CONSTRUCTION ENGINEERING = \$ 54,000.00**

**FISH BIOLOGIST (TOPEKA SHINER REMOVAL) = \$ 4,000.00**

**QC/QA MATERIAL TESTING = \$ 12,000.00**

**ENVIRONMENTAL, ENGINEERING, & TESTING TOTAL = \$ 285,500.00**

**TOTAL ENGINEER'S OPINION OF PROBABLE PROJECT COST = \$ 1,368,362.77**

MINNEHAHA COUNTY | ENGINEER'S OPINION OF PROBABLE COSTS

Structure No. 50-277-015

Proposed Structure: 4 Barrel 11' X 9' Cast-in-Place Reinforced Concrete Box Culvert, No Skew

Updated: 8/22/2023



Inflation Percentage = 3.00%

**GRADING**

BID ITEM NUMBER	SDDOT ITEM NUMBER	DESCRIPTION	BASE BID QUANTITIES	UNIT	CURRENT YEAR 2023		FUTURE YEAR 2028	
					UNIT PRICE	TOTAL BID PRICE	UNIT PRICE	TOTAL BID PRICE
1	009E0010	Mobilization	1	Lump Sum	\$ 90,000.00	\$ 90,000.00	\$ 104,334.67	\$ 104,334.67
2	100E0100	Clearing	1	Lump Sum	\$ 2,500.00	\$ 2,500.00	\$ 2,898.19	\$ 2,898.19
3	110E0600	Remove Fence	300	Ft	\$ 1.50	\$ 450.00	\$ 1.74	\$ 521.67
4	110E1010	Remove Asphalt Concrete Pavement	675	SqYd	\$ 8.00	\$ 5,400.00	\$ 9.27	\$ 6,260.08
5	110E5020	Salvage Traffic Sign	20	Each	\$ 25.00	\$ 500.00	\$ 28.98	\$ 579.64
6	110E5451	Salvage Riprap	0	Ton	\$ 30.00	\$ -	\$ 34.78	\$ -
7	120E0010	Unclassified Excavation	1500	CuYd	\$ 15.00	\$ 22,500.00	\$ 17.39	\$ 26,083.67
8	120E0600	Contractor Furnished Borrow Excavation	1400	CuYd	\$ 25.00	\$ 35,000.00	\$ 28.98	\$ 40,574.59
9	230E0010	Placing Topsoil	200	CuYd	\$ 15.00	\$ 3,000.00	\$ 17.39	\$ 3,477.82
10	260E1010	Base Course	560	Ton	\$ 28.00	\$ 15,680.00	\$ 32.46	\$ 18,177.42
11	320E1200	Asphalt Concrete Composite	300	Ton	\$ 165.00	\$ 49,500.00	\$ 191.28	\$ 57,384.07
12	320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	0.10	Mile	\$ 16,500.00	\$ 1,650.00	\$ 19,128.02	\$ 1,912.80
13	620E0020	Type 2 Right-of-Way Fence	300	Ft	\$ 12.00	\$ 3,600.00	\$ 13.91	\$ 4,173.39
14	632E2510	Type 2 Object Marker Back to Back	4	Each	\$ 40.00	\$ 160.00	\$ 46.37	\$ 185.48
15	632E3500	Reset Sign	0	Each	\$ 200.00	\$ -	\$ 231.85	\$ -
16	633E1230	High Build Waterborne Pavement Marking Paint, 6" White	500	Ft	\$ 1.00	\$ 500.00	\$ 1.16	\$ 579.64
17	633E1232	High Build Waterborne Pavement Marking Paint, 6" Yellow	70	Ft	\$ 1.00	\$ 70.00	\$ 1.16	\$ 81.15
18	634E0110	Traffic Control Signs	300	SqFt	\$ 6.25	\$ 1,875.00	\$ 7.25	\$ 2,173.64
19	634E0120	Traffic Control, Miscellaneous	1	Lump Sum	\$ 5,000.00	\$ 5,000.00	\$ 5,796.37	\$ 5,796.37
20	634E0275	Type 3 Barricade	10	Each	\$ 150.00	\$ 1,500.00	\$ 173.89	\$ 1,738.91
21	734E0010	Erosion Control	1	Lump Sum	\$ 6,000.00	\$ 6,000.00	\$ 6,955.64	\$ 6,955.64
22	734E0103	Type 3 Erosion Control Blanket	500	SqYd	\$ 4.00	\$ 2,000.00	\$ 4.64	\$ 2,318.55
23	734E0154	12" Diameter Erosion Control Wattle	120	Ft	\$ 4.50	\$ 540.00	\$ 5.22	\$ 626.01
24	734E0604	High Flow Silt Fence	500	Ft	\$ 4.50	\$ 2,250.00	\$ 5.22	\$ 2,608.37
25	734E0900	Temporary Diversion Channel for Fish Passage	1	Each	\$ 18,000.00	\$ 18,000.00	\$ 20,866.93	\$ 20,866.93
26	734E5005	Dewatering	1	Lump Sum	\$ 10,000.00	\$ 10,000.00	\$ 11,592.74	\$ 11,592.74
27	900E1310	Concrete Washout Facility	1	Each	\$ 1,000.00	\$ 1,000.00	\$ 1,159.27	\$ 1,159.27
<b>SUBTOTAL (GRADING) =</b>							<b>\$ 278,675.00</b>	<b>\$ 323,060.70</b>

**STRUCTURE**

BID ITEM NUMBER	SDDOT ITEM NUMBER	DESCRIPTION	BASE BID QUANTITIES	UNIT	CURRENT YEAR 2023		FUTURE YEAR 2028	
					UNIT PRICE	TOTAL BID PRICE	UNIT PRICE	TOTAL BID PRICE
28	250E0030	Incidental Work, Structure	1	Lump Sum	\$ 55,000.00	\$ 55,000.00	\$ 63,760.07	\$ 63,760.07
29	420E0200	Structure Excavation, Box Culvert	210	CuYd	\$ 75.00	\$ 15,750.00	\$ 86.95	\$ 18,258.57
30	421E0200	Box Culvert Undercut	383	CuYd	\$ 150.00	\$ 57,450.00	\$ 173.89	\$ 66,600.30
31	460E0120	Class A45 Concrete, Box Culvert	325	CuYd	\$ 1,000.00	\$ 325,000.00	\$ 1,159.27	\$ 376,764.07
32	480E0100	Reinforcing Steel	45,000	Lb	\$ 5.00	\$ 225,000.00	\$ 5.80	\$ 260,836.67
33	700E0210	Class B Riprap	250	Ton	\$ 55.00	\$ 13,750.00	\$ 63.76	\$ 15,940.02
34	831E0110	Type B Drainage Fabric	285	SqYd	\$ 5.00	\$ 1,425.00	\$ 5.80	\$ 1,651.97
35	831E0300	Reinforcement Fabric (MSE)	575	SqYd	\$ 6.00	\$ 3,450.00	\$ 6.96	\$ 3,999.50
<b>SUBTOTAL (STRUCTURE) =</b>							<b>\$ 696,825.00</b>	<b>\$ 807,811.16</b>

**SUBTOTAL (GRADING + STRUCTURE) = \$ 1,130,871.86**

**CONTINGENCY (10%) = \$ 113,087.00**

**CONSTRUCTION OPINION OF PROBABLE COST = \$ 1,243,958.86**

**ENVIRONMENTAL ENGINEERING, WETLAND DELINEATION, CULTURAL RESOURCE, & NEPA (CATEX) = \$ 27,000.00**

**WETLAND MITIGATION (POTENTIAL) = \$ 40,000.00**

**PRELIMINARY DESIGN ENGINEERING (HYDRAULICS) = \$ 36,000.00**

**GEOTECHNICAL SOIL BORINGS & RECOMMENDATIONS = \$ 6,500.00**

**FINAL DESIGN ENGINEERING (STRUCTURE + GRADING PLANS) + BIDDING = \$ 60,000.00**

**CONSTRUCTION ENGINEERING = \$ 60,000.00**

**FISH BIOLOGIST (TOPEKA SHINER REMOVAL) = \$ 4,000.00**

**QC/QA MATERIAL TESTING = \$ 12,000.00**

**ENVIRONMENTAL, ENGINEERING, & TESTING TOTAL = \$ 245,500.00**

**TOTAL ENGINEER'S OPINION OF PROBABLE PROJECT COST = \$ 1,489,458.86**