

CITY OF SUFFOLK
RT 460 CULVERT DESIGN
CONSTRUCTION COST ESTIMATE
(INCLUDES SHEETING AND DEWATERING)

I. PAVING AND EARTHWORK

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	Engineer's Estimate		TA Sheets		Kevcor		Tidewater Utility		Gaston Brother		Shaw Construction	
					UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
1	513	Mobilization	1	LS	\$50,000.00	\$50,000	\$45,000.00	\$45,000	\$65,000.00	\$65,000	\$50,000.00	\$50,000	\$50,000.00	\$50,000	\$76,803.46	\$76,803.46
2	517	Contractor Construction Surveying	1	LS	\$5,000.00	\$5,000	\$8,000.00	\$8,000	\$17,000.00	\$17,000	\$12,500.00	\$12,500	\$25,000.00	\$25,000	\$9,064.08	\$9,064.08
3	315	Asphalt Concrete Surface Course, VDOT STD SM-9.5A (2" MIN)	46	TONS	\$200.00	\$9,185	\$240.00	\$11,040	\$165.00	\$7,590	\$225.00	\$10,350	\$300.00	\$13,800	\$228.57	\$10,514.22
4	315	Asphalt Concrete Intermediate Course, VDOT STD IM-19.0A (4" MIN)	80	TONS	\$150.00	\$11,979	\$180.00	\$14,400	\$162.00	\$12,960	\$150.00	\$12,000	\$250.00	\$20,000	\$156.64	\$12,531.20
5	315	Asphalt Concrete Base Course, VDOT STD BM-37.5 (6" MIN)	120	TONS	\$150.00	\$17,969	\$180.00	\$21,600	\$160.00	\$19,200	\$155.00	\$18,600	\$150.00	\$18,000	\$162.42	\$19,490.40
6	305	Aggregate Base Course VDOT Type 1 No. 21B (12" MIN)	237	TONS	\$50.00	\$11,843	\$100.00	\$23,700	\$110.00	\$26,070	\$75.00	\$17,775	\$75.00	\$17,775	\$46.40	\$10,996.80
7	315	Sawcut	90	LF	\$8.00	\$720	\$10.00	\$900	\$30.00	\$2,700	\$10.00	\$900	\$10.00	\$900	\$143.57	\$12,921.30
8	515	Flexible Pavement Planing (2" depth)	50	SY	\$40.00	\$2,000	\$130.00	\$6,500	\$118.00	\$5,900	\$120.00	\$6,000	\$100.00	\$5,900	\$169.46	\$8,473.00
9	310	Tack Coat, (0.15 GAL/SY)	8	GAL	\$20.00	\$160	\$50.00	\$400	\$23.00	\$184	\$45.00	\$360	\$100.00	\$800	\$45.32	\$362.56
10	311	Prime Coat, (0.15 GAL/SY)	49	GAL	\$20.00	\$980	\$10.00	\$490	\$23.00	\$1,127	\$50.00	\$2,450	\$100.00	\$4,900	\$56.65	\$2,775.85
11	315	Temporary Pavement VDOT STD IM-19.0A (2" MIN)	18	TONS	\$150.00	\$2,632	\$200.00	\$3,600	\$170.00	\$3,060	\$175.00	\$3,150	\$300.00	\$5,400	\$270.86	\$4,875.48
12	315	Temporary Pavement VDOT STD BM-37.5 (4" MIN)	80	TONS	\$150.00	\$11,979	\$200.00	\$16,000	\$155.00	\$12,400	\$175.00	\$14,000	\$250.00	\$20,000	\$141.12	\$11,289.60
13	315	Temporary Pavement VDOT Type 1 No. 21B (6" MIN)	118	TONS	\$50.00	\$5,921	\$200.00	\$23,600	\$110.00	\$12,980	\$175.00	\$20,650	\$50.00	\$5,900	\$71.57	\$8,445.26
14	303	Minor Structure Excavation	1,000	CY	\$20.00	\$20,000	\$60.00	\$60,000	\$42.00	\$42,000	\$45.00	\$45,000	\$25.00	\$25,000	\$520.21	\$520,210.00
15	303	Undercut Excavation	165	CY	\$20.00	\$3,300	\$50.00	\$8,250	\$78.00	\$12,870	\$50.00	\$8,250	\$75.00	\$12,375	\$59.16	\$9,761.40
16	305	Select Material, Type II, CBR - 20	485	CY	\$30.00	\$14,550	\$40.00	\$19,400	\$46.00	\$22,310	\$50.00	\$24,250	\$40.00	\$19,400	\$35.00	\$16,975.00
Subtotal Paving and Earthwork						\$168,218		\$262,880		\$263,351		\$246,235		\$244,250		\$735,489.61

II. STORM DRAINAGE

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
17	302	Concrete - Class A4 (Double 10ft x 4ft Box Culvert and Wing Walls)	126	CY	\$2,000.00	\$252,000	\$850.00	\$107,100	\$2,515.00	\$316,890	\$3,750.00	\$472,500	\$4,250.00	\$535,500	\$3,550.38	\$447,347.88
18	302	Reinforcing Steel (Double 10ft x 4ft Box Culvert and Wing Walls)	24,000	LBS	\$2.00	\$48,000	\$2.00	\$48,000	\$2.70	\$64,800	\$3.00	\$72,000	\$5.00	\$120,000	\$0.21	\$5,040.00
19	305	Box Culvert Bedding Material VDOT STD. #57 (6" MIN)	25	TONS	\$80.00	\$2,000	\$100.00	\$2,500	\$93.00	\$2,325	\$100.00	\$2,500	\$100.00	\$2,500	\$66.55	\$1,663.75
20	305	Box Culvert Leveling Material VDOT Standard Crusher Run #25 or #26 (4"MIN)	15	TONS	\$80.00	\$1,200	\$100.00	\$1,500	\$80.00	\$1,200	\$100.00	\$1,500	\$100.00	\$1,500	\$64.97	\$974.55
21	305	Biaxial Geogrid/Tensor Bx1100	190	SY	\$6.00	\$1,140	\$5.00	\$950	\$13.00	\$2,470	\$12.00	\$2,280	\$50.00	\$9,500	\$2.40	\$456.00
Subtotal Storm Drainage						\$304,340		\$160,050		\$387,685		\$550,780		\$669,000		\$455,482.18

III. SITE RESTORATION

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
22	505	Guardrail (GR-10)	25	LF	\$50.00	\$1,250	\$66.00	\$1,650	\$120.00	\$3,000	\$70.00	\$1,750	\$70.00	\$1,750	\$118.29	\$2,957.25
23	505	Guardrail (Texas T6)	70	LF	\$100.00	\$7,000	\$200.00	\$14,000	\$70.00	\$4,900	\$180.00	\$12,600	\$200.00	\$14,000	\$204.91	\$14,343.70
24	506	Guardrail (GR-2)	162	LF	\$30.00	\$4,860	\$60.00	\$9,720	\$162.00	\$26,244	\$50.00	\$8,100	\$55.00	\$8,910	\$58.75	\$9,517.50
25	602/603/NS	Topsoil, Class A 4" Min, Seed, Lime, Fertilize	52	SY	\$20.00	\$1,034	\$100.00	\$5,200	\$22.00	\$1,144	\$25.00	\$1,300	\$50.00	\$2,600	\$231.71	\$12,048.92
Subtotal Site Restoration						\$14,144		\$30,570		\$35,288		\$23,750		\$27,260		\$38,867.37

IV. DEMOLITION

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
26	301	Clearing and Grubbing	1	LS	\$25,000.00	\$25,000	\$50,000.00	\$50,000	\$38,000.00	\$38,000	\$25,000.00	\$25,000	\$15,000.00	\$15,000	\$29,714.43	\$29,714.43
27	301	Selective Tree Removal	1	LS	\$3,000.00	\$3,000	\$5,000.00	\$5,000	\$18,000.00	\$18,000	\$1.00	\$1	\$10,000.00	\$10,000	\$5,044.39	\$5,044.39
28	510	Remove Guardrail	255	LF	\$9.00	\$2,295	\$5.00	\$1,275	\$20.00	\$5,100	\$4.00	\$1,020	\$20.00	\$5,100	\$33.13	\$8,448.15
29	510	Remove Existing 8" Sanitary Sewer	50	LF	\$20.00	\$1,000	\$250.00	\$12,500	\$38.00	\$1,900	\$50.00	\$2,500	\$50.00	\$2,500	\$151.65	\$7,582.50
30	510	Remove Existing Sanitary Sewer Manhole	1	EA	\$800.00	\$800	\$5,000.00	\$5,000	\$1,200.00	\$1,200	\$800.00	\$800	\$3,500.00	\$3,500	\$3,791.16	\$3,791.16
31	510	Remove Existing 8" Force Main	70	LF	\$20.00	\$1,400	\$250.00	\$17,500	\$40.00	\$2,800	\$100.00	\$7,000	\$50.00	\$3,500	\$216.64	\$15,164.80
32	510	Force Main Offset (HDPE temp. piping, valves, cut in tees)	1	LS	\$42,000.00	\$42,000	\$35,000.00	\$35,000	\$65,210.00	\$65,210	\$20,000.00	\$20,000	\$90,000.00	\$90,000	\$49,349.31	\$49,349.31
33	510	Remove Existing 12" Water Main	60	LF	\$20.00	\$1,200	\$150.00	\$9,000	\$40.00	\$2,400	\$25.00	\$1,500	\$50.00	\$3,000	\$199.54	\$11,972.40
34	512	Eradication of Existing Pavement Markings	3,210	LF	\$2.00	\$6,420	\$2.00	\$6,420	\$6.50	\$20,865	\$0.80	\$2,568	\$2.00	\$6,420	\$1.28	\$4,108.80
35	508	Demolition of Pavement	511	SY	\$15.00	\$7,662	\$30.00	\$15,330	\$16.00	\$8,176	\$35.00	\$17,885	\$20.00	\$10,220	\$26.85	\$13,720.35
Subtotal Demolition						\$90,777		\$157,025		\$163,651		\$78,274		\$149,240		\$148,896.29

CITY OF SUFFOLK
RT 460 CULVERT DESIGN
CONSTRUCTION COST ESTIMATE
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V. PAVEMENT MARKING

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
36	704	Pavement Line Marking (4" Solid Yellow Line)	1,240	LF	\$3.00	\$3,720	\$2.00	\$2,480	\$3.50	\$4,340	\$1.10	\$1,364	\$2.00	\$2,480	\$2.20	\$2,728.00
37	704	Pavement Line Marking (6" Broken White Line)	1,295	LF	\$3.00	\$3,885	\$2.00	\$2,590	\$3.50	\$4,533	\$1.10	\$1,425	\$4.00	\$5,180	\$2.09	\$2,706.55
38	705	Pavement Line Marking (4" Solid White Line)	675	LF	\$3.00	\$2,025	\$2.00	\$1,350	\$3.50	\$2,363	\$0.59	\$398	\$2.00	\$1,350	\$2.42	\$1,633.50
39	705	Construction Pavement Marking (4" Solid White Line)	680	LF	\$2.00	\$1,360	\$2.00	\$1,360	\$3.50	\$2,380	\$1.20	\$816	\$2.00	\$1,360	\$3.03	\$2,060.40
40	706	Construction Pavement Marking (4" Solid Yellow Line)	2,690	LF	\$2.00	\$5,380	\$2.00	\$5,380	\$3.50	\$9,415	\$1.10	\$2,959	\$2.00	\$5,380	\$1.59	\$4,277.10
Subtotal Pavement Marking						\$16,370		\$13,160		\$23,030		\$6,962		\$15,750		\$13,405.55

VI. UTILITIES

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
41	520	12" Cut In Valve, Valve Box and Cover	2	EA	\$8,500.00	\$17,000	\$15,000.00	\$30,000	\$12,300.00	\$24,600	\$8,000.00	\$16,000	\$12,250.00	\$25,000	\$10,431.57	\$20,863.14
42	520	Air Release Assembly	1	EA	\$2,000.00	\$2,000	\$2,000.00	\$2,000	\$4,300.00	\$4,300	\$2,500.00	\$2,500	\$3,500.00	\$3,500	\$3,003.79	\$3,003.79
43	520	12" Water Main Class 52 DIP	70	LF	\$160.00	\$11,200	\$200.00	\$14,000	\$360.00	\$25,200	\$325.00	\$22,750	\$250.00	\$17,500	\$304.03	\$21,282.10
44	520	8" Force Main Class 53 DIP	60	LF	\$130.00	\$7,800	\$200.00	\$12,000	\$325.00	\$19,500	\$350.00	\$21,000	\$300.00	\$18,000	\$333.57	\$20,014.20
45	520	Sanitary Sewer Manhole	6	LF	\$1,500.00	\$9,000	\$8,000.00	\$48,000	\$1,600.00	\$9,600	\$800.00	\$4,800	\$2,500.00	\$15,000	\$1,768.62	\$10,611.72
46	520	Manhole Frame and Cover (includes insert)	2	EA	\$750.00	\$1,500	\$1,000.00	\$2,000	\$1,550.00	\$3,100	\$900.00	\$1,800	\$2,000.00	\$4,000	\$473.19	\$946.38
47	520	Gravity Sanitary Sewer - 8" Class 52 DIP	50	LF	\$125.00	\$6,250	\$200.00	\$10,000	\$270.00	\$13,500	\$225.00	\$11,250	\$1,200.00	\$60,000	\$341.82	\$17,091.00
Subtotal Utilities						\$54,750		\$118,000		\$99,800		\$80,100		\$143,000		\$93,812.33

VII. EROSION AND SEDIMENT CONTROL/STABILIZATION

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
48	414	Dry Rip-Rap, VDOT STD Class II (24" Depth)	488	TONS	\$90.00	\$43,897	\$140.00	\$68,320	\$320.00	\$156,160	\$630.00	\$307,440	\$375.00	\$183,000	\$116.27	\$56,739.76
49	303	Temporary Silt Fence	160	LF	\$4.00	\$640	\$5.00	\$800	\$6.00	\$960	\$8.00	\$1,280	\$5.00	\$800	\$2.55	\$408.00
50	NS	Type I Turbidity Curtain	45	LF	\$30.00	\$1,350	\$40.00	\$1,800	\$45.00	\$2,025	\$22.00	\$990	\$25.00	\$1,125	\$52.60	\$2,367.00
51	NS	Tree Protection	145	LF	\$10.00	\$1,450	\$5.00	\$725	\$12.00	\$1,740	\$5.00	\$725	\$5.00	\$725	\$2.09	\$303.05
Subtotal Erosion and Sediment Control/Stabilization						\$47,337		\$71,645		\$160,885		\$310,435		\$185,650		\$59,817.81

VIII. TRAFFIC CONTROL

ITEM NO.	VDOT Spec Section	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES	UNIT PRICES IN FIGURES	TOTAL ITEM PRICE IN FIGURES
52	512	Construction Signs	406	SF	\$20.00	\$8,120	\$30.00	\$12,180	\$29.00	\$11,774	\$25.00	\$10,150	\$20.00	\$8,120	\$33.23	\$13,491.38
53	512	Group 2 Channelization Device	9,630	DAY	\$1.00	\$9,630	\$5.00	\$48,150	\$4.25	\$40,928	\$2.00	\$19,260	\$0.80	\$7,704	\$6.00	\$57,780.00
54	512	Traffic Barrier Service (VDOT STD MB-10A)	1,410	LF	\$30.00	\$42,300	\$40.00	\$56,400	\$112.00	\$157,920	\$62.00	\$87,420	\$30.00	\$42,300	\$143.13	\$201,813.30
55	512	Electronic Arrow	720	HR	\$0.35	\$252	\$10.00	\$7,200	\$15.00	\$10,800	\$8.00	\$5,760	\$20.00	\$14,400	\$3.60	\$2,592.00
56	512	Impact Attenuator Service	2	EA	\$5,500.00	\$11,000	\$10,000.00	\$20,000	\$16,000.00	\$32,000	\$7,500.00	\$15,000	\$10,000.00	\$20,000	\$22,671.48	\$45,342.96
Subtotal Traffic Control						\$71,302		\$143,930		\$253,422		\$137,590		\$92,524		\$321,019.64

* Supplemental Specification

GRAND TOTAL - ITEMS I-VII						\$767,237		\$957,260.00		\$1,387,111.50		\$1,434,125.75		\$1,526,674.00		\$1,866,790.78
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increase	\$58,040	\$248,063.18	\$677,914.68	\$724,928.93	\$817,477.18	\$1,157,593.96
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