



Garofalo & Associates
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OAKLAND BEACH FORCE MAIN REHABILITATION

Warwick, Rhode Island

ENGINEER'S ESTIMATE

REVISED 7/23/2024

GAROFALO & ASSOCIATES' OPINION OF PROBABLE TOTAL PROJECT COSTS ARE MADE ON THE BASIS OF EXPERIENCE AND QUALIFICATIONS AND REPRESENT THE BEST JUDGMENT AS AN EXPERIENCED AND QUALIFIED PROFESSIONAL ENGINEER, FAMILIAR WITH THE CONSTRUCTION INDUSTRY; HOWEVER, GAROFALO & ASSOCIATES CANNOT AND DOES NOT GUARANTEE THAT PROPOSALS, BIDS OR ACTUAL TOTAL PROJECT OR CONSTRUCTION COSTS WILL NOT VARY FROM OPINIONS OF PROBABLE COST PREPARED. IF PRIOR TO THE BIDDING OR NEGOTIATING PHASE THE OWNER WISHES GREATER ASSURANCE AS TO TOTAL PROJECT OR CONSTRUCTION COSTS, THE OWNER SHALL EMPLOY AN INDEPENDENT COST ESTIMATOR.

Item Id	Description	UM	Quantity	WAUP	Total
201.0403	REMOVE AND DISPOSE SIDEWALKS (BYPASS)	SY	290	\$28.00	\$8,120
201.0407	REMOVE AND DISPOSE PAVEMENT AND RIGID BASE	SY	13	\$45.00	\$585
201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT	SY	205	\$15.00	\$3,075
201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT (BYPASS)	SY	564	\$15.00	\$8,460
201.0428	REMOVE AND DISPOSE FRAME AND GRATE OR FRAME AND COVER	EACH	14	\$155.00	\$2,170
201.0440	REMOVE AND DISPOSE ASBESTOS CEMENT PIPE ALL TYPES AND SIZES	LF	125	\$40.00	\$5,000
202.0100	MISC. EARTH EXCAVATION	CY	250	\$25.00	\$6,250
202.0100	EARTH EXCAVATION BELOW GRADE	CY	250	\$25.00	\$6,250
202.0800	ADDITIONAL GRAVEL BORROW	CY	400	\$50.00	\$20,000
204.0100	TRIMMING AND FINE GRADING	SY	204	\$4.00	\$816
204.0100	TRIMMING AND FINE GRADING (BYPASS)	SY	1,609	\$4.00	\$6,436
205.0240	TRENCH ROCK EXCAVATION	CY	5	\$300.00	\$1,500
206.0301	COMPOST FILTER SOCK	LF	300	\$5.50	\$1,650
209.0200	SACK INSERT CATCH BASIN INLET PROTECTION	EACH	30	\$150.00	\$4,500
302.0100	GRAVEL BORROW SUBBASE COURSE	CY	69	\$85.00	\$5,865
302.0100	GRAVEL BORROW SUBBASE COURSE (BYPASS)	CY	202	\$85.00	\$17,170
303.0100	SPECIAL GRADED AGGREGATE FOR DRIVEWAYS (BYPASS)	CY	6	\$85.00	\$510
401.1000	CLASS 19.0 HMA (STATE ROAD BASE COURSE)	TON	5	\$175.00	\$875
401.2000	CLASS 12.5 HMA (STATE ROAD FINAL OVERLAY)	TON	25	\$280.00	\$7,000
401.2002	CLASS 12.5 HMA FOR LEVELLING	TON	16	\$95.00	\$1,520
401.2003	CLASS 12.5 HMA FOR PATCHING	TON	5	\$190.00	\$950
401.2100	MODIFIED CLASS 12.5 HMA (STATE ROAD BINDER COURSE)	TON	4	\$150.00	\$600
401.3000	CLASS 9.5 HMA (LOCAL ROAD FINAL OVERLAY)	TON	83	\$205.00	\$17,015
401.3000	CLASS 9.5 HMA (LOCAL ROAD FINAL OVERLAY) (BYPASS)	TON	67	\$205.00	\$13,735
401.3000	CLASS 9.5 HMA (DRIVEWAYS AND SIDEWALKS) (BYPASS)	TON	140	\$205.00	\$28,700
401.3002	CLASS 9.5 HMA FOR LEVELING	TON	56	\$205.00	\$11,480
401.3002	CLASS 9.5 HMA FOR LEVELING (BYPASS)	TON	45	\$205.00	\$9,225
401.3005	CLASS 9.5 HMA FOR PATCHING	TON	25	\$205.00	\$5,125
401.3005	CLASS 9.5 HMA FOR PATCHING (BYPASS)	TON	89	\$205.00	\$18,245
403.0300	ASPHALT EMULSION TACK COAT	SY	1,166	\$0.85	\$991
403.0300	ASPHALT EMULSION TACK COAT (BYPASS)	SY	739	\$0.85	\$628
501.0103	PORTLAND CEMENT CONCRETE BASE	SY	13	\$100.00	\$1,300
601.9901	CAST IN PLACE CONCRETE	CY	146	\$250.00	\$36,500
603.1000	CONTROLLED LOW STRENGTH MATERIAL	CY	348	\$240.00	\$83,520
701.8003	PIPE BEDDING CLASS C	CY	11	\$45.00	\$495
701.8003	PIPE BEDDING CLASS C (BYPASS)	CY	547	\$45.00	\$24,615
701.9901	12" CURED-IN-PLACE STRUCTURAL PIPE LINER	LF	8,373	\$300.00	\$2,511,900
702.9901	SEWER MANHOLE STRUCTURES	VLF	28	\$7,000.00	\$196,000
702.9902	30" HEAVY-DUTY ROUND LOCKING FRAME AND COVER	EACH	14	\$1,100.00	\$15,400
704.0400	RECONSTRUCT MANHOLE/VERTICAL WALLS	VLF	28	\$450.00	\$12,600
704.9901	FLAT SLAB MANHOLE TOP	EACH	14	\$1,450.00	\$20,300
707.1900	ADJUST FRAME & COVER TO GRADE	EACH	5	\$500.00	\$2,500
707.2000	ADJUST FRAME & GRATE TO GRADE	EACH	6	\$550.00	\$3,300
708.9042	CLEANING MANHOLES ALL TYPES AND SIZES	EACH	14	\$165.00	\$2,310
713.0100	ADJUST CURB STOP BOX TO GRADE	EACH	7	\$75.00	\$525
713.8269	ADJUST WATER GATE BOXES TO GRADE	EACH	15	\$370.00	\$5,550
713.8300	ADJUST GAS GATE BOXES TO GRADE	EACH	12	\$365.00	\$4,380
904.0100	REMOVE AND RESET FENCE AND/OR RAILING (BYPASS)	LF	100	\$85.00	\$8,500
905.0110	PORTLAND CEMENT SIDEWALK MONOLITHIC STANDARD 43.1.0 (BYPASS)	CY	5	\$400.00	\$2,000

905.0115	PORTLAND CEMENT CONCRETE DRIVEWAY STANDARD 43.5.0 (BYPASS)	CY	6	\$400.00	\$2,400
906.0700	REMOVE & RESET CURB, STRAIGHT, CIRCULAR ALL TYPES (BYPASS)	LF	150	\$40.00	\$6,000
907.0200	CALCIUM CHLORIDE FOR DUST CONTROL	LB	2,000	\$0.25	\$500
923.0125	PLASTIC PIPE TYPE III BARRICADE STANDARD 26.3.1	EACH	15	\$140.00	\$2,100
932.0200	FULL DEPTH SAWCUT OF BITUMINOUS PAVEMENT	LF	720	\$2.70	\$1,944
932.0200	FULL DEPTH SAWCUT OF BITUMINOUS PAVEMENT (BYPASS)	LF	2,660	\$2.70	\$7,182
932.0210	FULL DEPTH SAWCUT OF BITUMINOUS PAVEMENT AND RIGID BASE	LF	44	\$4.50	\$198
932.0220	FULL DEPTH SAWCUT OF BITUMINOUS SIDEWALK/DRIVEWAY (BYPASS)	LF	2,250	\$2.70	\$6,075
932.0230	FULL DEPTH SAWCUT OF CONCRETE SIDEWALK/DRIVEWAY (BYPASS)	LF	140	\$3.15	\$441
935.0400	REMOVING BITUMINOUS PAVEMENT BY MICROMILLING	SY	179	\$5.00	\$895
935.0400	REMOVING BITUMINOUS PAVEMENT BY MICROMILLING (BYPASS)	SY	114	\$5.00	\$570
936.0110	SITE PREPARATION	LS(5%)	1	\$217,815.00	\$217,815
L01.0102	LOAM BORROW 4 INCHES DEEP (BYPASS)	SY	250	\$6.10	\$1,525
L02.0102	RESIDENTIAL SEEDING (TYPE 2) (BYPASS)	SY	250	\$3.00	\$750
L08.0109	TREE TRIMMING	LS	1	\$7,500.00	\$7,500
	ADDITIONAL SELECTED MATERIAL	CY	250	\$85.00	\$21,250
	CONSTRUCTION ROAD SIGNS	SF	450	\$60.00	\$27,000
	TRAFFIC BARRELS W/ TYPE A OR TYPE C LIGHT	BDAY	3,600	\$0.50	\$1,800
	SOIL COMPACTION TESTING	LS	1	\$6,000.00	\$6,000
	EXISTING FORCE MAIN CLEANING	LF	8,373	\$4.00	\$33,492
	EXISTING FORCE MAIN VIDEO INSPECTION	LF	8,373	\$5.00	\$41,865
	PHASED TEMPORARY BYPASS PUMPING OPERATIONS	LS	1	\$200,000.00	\$200,000
	MISCELLANEOUS UTILITY RELOCATION (ALLOWANCE)	LS	1	\$150,000.00	\$150,000
	POLICE PROTECTION ALLOWANCE (PAID BY WARWICK SEWER AUTHORITY)	LS	1	\$200,000.00	\$200,000
	25% FULL TRENCH REPLACEMENT OF FORCE MAIN (ALLOWANCE)*	LS	1	\$500,000.00	\$500,000
				SUBTOTAL	\$4,583,443
				20% CONTINGENCY	\$916,688.65
				TOTAL BID PRICE	\$5,500,131.90

*25% Full Trench Replacement Allowance includes deduction for unneeded 2,100 LF of CIPP operations

SCHEDULE OF PRICES

Item No.	Description	UM	Quantity	Unit Bid Price	Total
1	Site Preparation	LS	1	\$217,815.00	\$217,815
2	Rock Excavation	CY	5	\$300.00	\$1,500
3	Misc. Earth Excavation	CY	250	\$25.00	\$6,250
4	Earth Excavation Below Grade	CY	250	\$25.00	\$6,250
5	Additional Selected Material	CY	250	\$85.00	\$21,250
6	Calcium Chloride	LB	2,000	\$0.25	\$500
7	Additional Gravel Borrow	CY	400	\$50.00	\$20,000
8	Phased Temporary Bypass Operations	LS	1	\$384,315.15	\$384,315
9	Existing Force Main Cleaning	LF	8,373	\$4.00	\$33,492
10	Existing Force Main CCTV	LF	8,373	\$5.00	\$41,865
11	12" Cured-In-Place Structural Pipe Liner	LF	8,373	\$300.00	\$2,511,900
12	Access Point Modifications to Existing Manholes	EA	14	\$10,128.21	\$141,795
13	Sewer Manhole Structures	VLF	28	\$7,000.00	\$196,000
14	Cold Planing (Curb to Curb at Access Points Per State Regulations)	SY	179	\$5.00	\$895
15	2" Pavement Patch Class 9.5 HMA	TON	25	\$472.24	\$11,806
16	1" Leveling Course Class 9.5 HMA	TON	56	\$205.00	\$11,480
17	1-1/2" Permanent Pavement Overlay Class 9.5 HMA	TON	83	\$473.25	\$39,280
18	Cast in Place Concrete	CY	146	\$250.00	\$36,500
19	Compost Filter Sock	LF	300	\$5.50	\$1,650
20	Silt Sack Sediment Trap	EA	30	\$150.00	\$4,500
21	Soil Compaction Testing (Allowance)	LS	1	\$6,000.00	\$6,000
22	Construction Road Signs	SF	450	\$60.00	\$27,000
23	Traffic Barrels w/ Type A or Type C Light	BDAY	3,600	\$0.50	\$1,800
24	Traffic Barricades	EA	15	\$140.00	\$2,100
25	Tree Trimming (Allowance)	LS	1	\$7,500.00	\$7,500
26	Police Protection Allowance (Paid by Warwick Sewer Authority)	LS	1	\$200,000.00	\$200,000
27	Miscellaneous Utility Relocation (Allowance)	LS	1	\$150,000.00	\$150,000
28	Full Trench Replacement of Force Main (Allowance)	LS	1	\$500,000.00	\$500,000
				SUBTOTAL	\$4,583,443
				20% CONTINGENCY	\$916,688.65
				TOTAL	\$5,500,131.90

Item Id	Add Alternate Bid 1 Description	UM	Quantity	WAUP	Total
8	Phased Temporary Bypass Operations (Remove)	LS	1	\$384,315.15	\$384,315
29	Single-Phased Temporary Bypass Operations (Add)	LS	1	\$384,315.15	\$384,315
ADD ALTERNATE BID 1 SUBTOTAL					\$0
10% CONTINGENCY					\$0.00
TOTAL ADD ALTERNATE BID 1 PRICE					\$0.00
ADD ALTERNATE BID TOTAL					\$5,500,131.90