

Town of Richmond, Vermont
 Opinion of Probable Cost
 West Main Street - 3" Low Pressure Force Main
 GME Project # 24-029

Revised 2-19-21

| Description | Phase 1 Option A - School to Reap Property | | |
|------------------------------------------------------|--------------------------------------------|----------|------------------|
| | Unit Cost | Quantity | Total Cost |
| CONSTRUCTION | | | |
| 3" Low Pressure Force Main (ft) | \$25 | 3,100 | \$77,500 |
| Valves (Each) | \$1,000 | 1 | \$1,000 |
| Blasting/Rock Removal (YD) | \$200 | 20 | \$4,000 |
| Surface Restoration/Landscaping (LS) | \$10,000 | 1 | \$10,000 |
| Erosion Control (LS) | \$10,000 | 1 | \$10,000 |
| Signage/Traffic Control (LS) | \$5,000 | 1 | \$5,000 |
| Surveying/Layout | \$5,000 | 1 | \$5,000 |
| Mobilization (LS) | \$30,000 | 1 | \$30,000 |
| Bonds (LS) | \$5,000 | 1 | \$5,000 |
| Contingency (20%) | | 0.20 | \$29,500 |
| Subtotal | | | \$177,000 |
| PLANNING & ENGINEERING | | | |
| A. Initial Planning | \$0 | 1 | \$0 |
| B. Preliminary Engineering (Step I) | \$9,900 | 1 | \$9,900 |
| Test Pits/Soil Borings | Incl. | 1 | \$0 |
| Wetlands Delineation | Incl. | 1 | \$0 |
| Archeology | \$5,000 | 1 | \$5,000 |
| C. Final Design/Permitting (Step II) | \$14,163 | 1 | \$14,163 |
| ROW and Boundary Surveying | \$5,000 | 1 | \$5,000 |
| VT AOT Permitting | \$0 | 1 | \$0 |
| Wastewater Permit Amendment | Incl. | 1 | \$0 |
| D. Construction Phase (Step III) | \$25,966 | 1 | \$25,966 |
| Subtotal | | | \$60,029 |
| ADMINISTRATION | | | |
| A. Permit Fees | \$5,000 | 1 | \$5,000 |
| B. Legal (Municipal Bond Issuance) | \$3,000 | 1 | \$3,000 |
| C. Easement survey (allowance) | \$10,000 | 1 | \$10,000 |
| D. Legal (Right of Way Certification & Easements) ** | \$2,500 | 1 | \$2,500 |
| E. Misc. | \$5,000 | 1 | \$5,000 |
| Subtotal | | | \$25,500 |

| Phase 1 Option B - Route 2 to Reap Property | | |
|---------------------------------------------|----------|------------------|
| Unit Cost | Quantity | Total Cost |
| \$25 | 3,300 | \$82,500 |
| \$1,000 | 1 | \$1,000 |
| \$200 | 20 | \$4,000 |
| \$10,000 | 1 | \$10,000 |
| \$10,000 | 1 | \$10,000 |
| \$25,000 | 1 | \$25,000 |
| \$5,000 | 1 | \$5,000 |
| \$30,000 | 1 | \$30,000 |
| \$5,000 | 1 | \$5,000 |
| | 0.20 | \$34,500 |
| | | \$207,000 |
| \$0 | 1 | \$0 |
| \$9,900 | 1 | \$9,900 |
| Incl. | 1 | \$0 |
| \$5,000 | 1 | \$5,000 |
| \$5,000 | 1 | \$5,000 |
| \$16,233 | 1 | \$16,233 |
| \$5,000 | 1 | \$5,000 |
| \$2,500 | 1 | \$2,500 |
| Incl. | 1 | \$0 |
| \$29,761 | 1 | \$29,761 |
| | | \$73,394 |
| \$5,000 | 1 | \$5,000 |
| \$3,000 | 1 | \$3,000 |
| N/A | 1 | \$0 |
| \$2,500 | 1 | \$2,500 |
| \$5,000 | 1 | \$5,000 |
| | | \$15,500 |

Total **\$262,529**

\$295,894

Notes

1. Opinion of Probable Cost assumes CWSRF Funding is utilized. assumes the pump station construction, pumps, controls and electrical by others.
2. Route 2 Assumes Right of Way/easement purchase is not required.
3. Pump Station construction, pumps, controls and electrical by others.
4. Step 1 Engineering based on draft agreement.
5. Step II & III Engineering Estimates are based on the State fee curve.

TABLE C-8 OPINION OF PROBABLE CONSTRUCTION COST

Town of Richmond
West Main Street- Access Road with Water & Sewer Extensions
Scoping Study
Phase 2: 3" Low Pressure Sewer Forcemain- Reap Property to Gateway District Boundary

| Description | Quantity | Units | ENR 9,750 | ENR 9,750 | ENR 9,800 | ENR 10,000 | ENR 10,200 | ENR 11,500 | |
|--------------------------------------|----------|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|
| | | | 2014 Unit Price | 2014 Total Cost | 2015 Total Cost | 2016 Total Cost | 2017 Total Cost | 2021 Total Cost | |
| WASTEWATER SYSTEM | | | | | | | | | |
| 3" HDPE LPS | 1,600 | L.F. | \$42 | \$67,200 | \$67,545 | \$68,923.08 | \$70,301.54 | \$79,261.54 | |
| 5' Diameter Air Release Manhole | 1 | EA. | \$8,000 | \$8,000 | \$8,041 | \$8,205.13 | \$8,369.23 | \$9,435.90 | |
| 5' Diameter Cleanout Manhole | 1 | EA. | \$8,000 | \$8,000 | \$8,041 | \$8,205.13 | \$8,369.23 | \$9,435.90 | |
| 1 1/2" LPS Service | 110 | L.F. | \$35 | \$3,850 | \$3,870 | \$3,948.72 | \$4,027.69 | \$0.00 | |
| 1 1/2" Curb Stops and Boxes | 11 | EA. | \$250 | \$2,750 | \$2,764 | \$2,820.51 | \$2,876.92 | \$3,243.59 | |
| Class "B" Concrete | 10 | C.Y. | \$250 | \$2,500 | \$2,513 | \$2,564.10 | \$2,615.38 | \$2,948.72 | |
| Miscellaneous Extra Excavation | 50 | C.Y. | \$24 | \$1,200 | \$1,206 | \$1,230.77 | \$1,255.38 | \$1,415.38 | |
| Below-Grade Rock Removal (pipelines) | 50 | C.Y. | \$125 | \$6,250 | \$6,282 | \$6,410.26 | \$6,538.46 | \$7,371.79 | |
| Replacement of Unsuitable Material | 50 | C.Y. | \$32 | \$1,600 | \$1,608 | \$1,641.03 | \$1,673.85 | \$1,887.18 | |
| Boulder Excavation | 10 | C.Y. | \$50 | \$500 | \$503 | \$512.82 | \$523.08 | \$589.74 | |
| Erosion Control | 1 | L.S. | \$2,500 | \$2,500 | \$2,513 | \$2,564.10 | \$2,615.38 | \$2,948.72 | |
| Dust Control | 1 | Ton | \$500 | \$250 | \$251 | \$256.41 | \$261.54 | \$294.87 | |
| Permanent Trench Pavement Repair | 0 | S.Y. | \$60 | \$0 | \$0 | \$0.00 | \$0.00 | \$0.00 | |
| Traffic Control | 1 | L.S. | \$10,000 | \$10,000 | \$10,051 | \$10,256.41 | \$10,461.54 | \$11,794.87 | |
| Site Prep and Miscellaneous (8%) | 1 | L.S. | \$9,168 | \$9,168 | \$9,215 | \$9,403.08 | \$9,591.14 | \$10,813.54 | |
| Contingency (10%) | 1 | L.S. | \$12,377 | \$12,377 | \$12,440 | \$12,694.15 | \$12,948.04 | \$14,598.28 | |
| Contractor's Bonds (2%) | 1 | L.S. | \$2,723 | \$2,723 | \$2,737 | \$2,792.71 | \$2,848.57 | \$3,211.62 | |
| Subtotal | | | | | \$138,868 | \$139,580 | \$142,428 | \$145,277 | \$159,252 |
| USE | | | | | \$139,000 | \$140,000 | \$143,000 | \$146,000 | \$160,000 |

Notes:

- The construction cost estimates are based on preliminary phase estimates only. More detailed costs shall be developed during Final Design Phase Engineering based on actual design quantities.
- ENR= Engineering News Record Construction Cost Index.

TABLE C-9 OPINION OF PROBABLE CONSTRUCTION COST

Town of Richmond
West Main Street- Access Road with Water & Sewer Extensions
Scoping Study

Phase 3- 3" Low Pressure Sewer Force Main - Gateway District Boundary to River View Commons Mobile Home Park

| Description | Quantity | Units | ENR 9,750 | ENR 9,750 | ENR 9,800 | ENR 10,000 | ENR 10,200 | ENR 11500 | |
|--------------------------------------|----------|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|
| | | | 2014 Unit Price | 2014 Total Cost | 2015 Total Cost | 2016 Total Cost | 2017 Total Cost | 2021 Total Cost | |
| WASTEWATER SYSTEM | | | | | | | | | |
| 3" HDPE LPS | 4,150 | L.F. | \$42 | \$174,300 | \$175,194 | \$178,769 | \$182,345 | \$205,585 | |
| 16" Jack & Bore Steel Sleeves | 350 | L.F. | \$500 | \$175,000 | \$175,897 | \$179,487 | \$183,077 | \$206,410 | |
| 5' Diameter Air Release Manhole | 2 | EA. | \$8,000 | \$16,000 | \$16,082 | \$16,410 | \$16,738 | \$18,872 | |
| 5' Diameter Cleanout Manhole | 2 | EA. | \$8,000 | \$16,000 | \$16,082 | \$16,410 | \$16,738 | \$18,872 | |
| 3" LPS Service | 30 | L.F. | \$42 | \$1,260 | \$1,266 | \$1,292 | \$1,318 | \$0 | |
| 3" Curb Stops and Boxes | 1 | EA. | \$500 | \$500 | \$503 | \$513 | \$523 | \$590 | |
| 1 1/2" LPS Service | 30 | L.F. | \$35 | \$1,050 | \$1,055 | \$1,077 | \$1,098 | \$0 | |
| 1 1/2" Curb Stops and Boxes | 3 | EA. | \$250 | \$750 | \$754 | \$769 | \$785 | \$885 | |
| Class "B" Concrete | 10 | C.Y. | \$250 | \$2,500 | \$2,513 | \$2,564 | \$2,615 | \$2,949 | |
| Miscellaneous Extra Excavation | 50 | C.Y. | \$24 | \$1,200 | \$1,206 | \$1,231 | \$1,255 | \$1,415 | |
| Below-Grade Rock Removal (pipelines) | 50 | C.Y. | \$125 | \$6,250 | \$6,282 | \$6,410 | \$6,538 | \$7,372 | |
| Replacement of Unsuitable Material | 50 | C.Y. | \$32 | \$1,600 | \$1,608 | \$1,641 | \$1,674 | \$1,887 | |
| Boulder Excavation | 10 | C.Y. | \$50 | \$500 | \$503 | \$513 | \$523 | \$590 | |
| Erosion Control | 1 | L.S. | \$2,500 | \$2,500 | \$2,513 | \$2,564 | \$2,615 | \$2,949 | |
| Dust Control | 5 | Ton | \$500 | \$2,500 | \$2,513 | \$2,564 | \$2,615 | \$2,949 | |
| Permanent Trench Pavement Repair | 0 | S.Y. | \$60 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| Traffic Control | 1 | L.S. | \$30,000 | \$30,000 | \$30,154 | \$30,769 | \$31,385 | \$35,385 | |
| Site Prep and Miscellaneous (8%) | 1 | L.S. | \$34,553 | \$34,553 | \$34,730 | \$35,439 | \$36,148 | \$40,755 | |
| Contingency (10%) | 1 | L.S. | \$46,646 | \$46,646 | \$46,885 | \$47,842 | \$48,799 | \$55,019 | |
| Contractor's Bonds (2%) | 1 | L.S. | \$10,262 | \$10,262 | \$10,315 | \$10,525 | \$10,736 | \$12,104 | |
| Subtotal | | | | | \$523,371 | \$526,055 | \$536,791 | \$547,527 | \$614,585 |
| USE | | | | | \$524,000 | \$527,000 | \$537,000 | \$548,000 | \$615,000 |

Notes:

1. The construction cost estimates are based on preliminary phase estimates only. More detailed costs shall be developed during Final Design Phase Engineering based on actual design quantities.
2. ENR= Engineering News Record Construction Cost Index.