



ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST									
Project: Fairfield Riverview Drive Siphon Upgrade									
Location: Fairfield, Connecticut									
Estimate Type: <input type="checkbox"/> Conceptual <input type="checkbox"/> Preliminary Design <input checked="" type="checkbox"/> Design Development									
Construction Change Order									
100 % Complete									
Prepared By: DRF									
Date Prepared: 1/20/2021									
T&B Project No.:									
RIVERVIEW DRIVE SIPHON									
Spec. Section No.	Item No.	Description	Qty	Units	Material/Installed Cost		Installation		Total
					\$/Unit	Total	\$/Unit	Total	
<b>DIVISION 1 - GENERAL CONDITIONS</b>									
(Costs included in unit prices in other Divisions)									
1 Mobilization/Demobilization (5%)									
SUBTOTAL - DIVISION 1									
1 LS \$24,140 \$24,140 \$0 \$24,140									
SUBTOTAL - DIVISION 1									
<b>DIVISION 2 - SITE WORK</b>									
1 Mob/Demob of Bypass System									
3.0 MO \$35,000 \$35,000 \$0 \$35,000									
Bypass of sewer flows									
1 LS \$50,000 \$50,000 \$0 \$50,000									
Demo Existing Siphon & Structures									
74 CY \$40 \$2,963 \$0 \$2,963									
Test Pits									
23 CY \$30 \$686 \$0 \$686									
Unsuitable Material Removal - Material below Pipe Grade									
11 CY \$80 \$880 \$0 \$880									
Crushed Stone Foundation									
318 CY \$85 \$27,024 \$0 \$27,024									
Excav/Backfill/Comp - MHs									
83 CY \$0 \$0 \$40 \$3,319									
Excav/Backfill/Comp - 36" RCP									
33 CY \$0 \$0 \$40 \$1,333									
Excav/Backfill/Comp - 18" siphon below river									
71 CY \$0 \$0 \$40 \$2,844									
Excav/Backfill/Comp - 18" siphon beyond river									
167 Ton \$0 \$0 \$100 \$16,711									
Contaminated Sediment Handling & Disposal									
40 LF \$315 \$12,600 \$0 \$12,600									
RFP Pipe and Fittings (36" Diameter Pipe)									
300 LF \$250 \$75,000 \$0 \$75,000									
C-905 PVC Pipe and Fittings (18" Diameter Pipe)									
3 EA \$1,800 \$5,400 \$0 \$5,400									
18" DI Coupling									
12 EA \$2,500 \$30,000 \$0 \$30,000									
18" DI Elbows									
500 LBS \$5 \$2,500 \$0 \$2,500									
Pipe Fittings									
Isolation Slide Plates (2 per siphon)									
6 EA \$1,300 \$7,800 \$0 \$7,800									
SUBTOTAL - DIVISION 2									
\$354,885 \$24,207 \$379,093									
<b>DIVISION 3 - CONCRETE</b>									
Siphon entrance & discharge structures w/ Rim & MH Cover									
2.00 EA \$26,250 \$52,500 \$6,563 \$59,063									
Doghouse manholes									
2.00 EA \$10,000 \$20,000 \$0 \$20,000									
Concrete/Brick Channel & Fill Form in Existing Siphon									
18.00 CY \$1,000 \$18,000 \$0 \$18,000									
SUBTOTAL - DIVISION 3									
\$90,500 \$13,125 \$103,625									
<b>CONSTRUCTION ITEMS COST</b>									
CONTRACTOR OH & P									
15% \$469,525 \$37,332 \$506,858									
SUBTOTAL									
\$70,429 \$5,600 \$76,029									
PRORATED ITEMS (15% OF TOTAL)									
\$539,954 \$42,932 \$582,886									
Materials Testing									
\$6,000									
Cofferdam									
\$82,500									
Water Handling & Dewatering									
\$37,500									
Maintenance & Protection of Traffic									
\$3,750									
SUBTOTAL									
\$712,636									
CONTINGENCY AS A PERCENTAGE OF CONSTRUCTION COST									
10% \$71,264									
TOTAL									
\$783,900									
Construction Total:									
\$784,000									

860,000 (2023) WH

## EAST TRUNK SEWER COST SUMMARY

Construction - 2020 Estimate includes 10% contingency (see estimate sheet)	\$ 7.30
Construction Admin/Inspection (see estimate)	\$ 0.85
Remediation	\$ 0.05
Updating Engineering /utility plans/testing	\$ 0.30
Additional Contingency (paving/utilities)	\$ 0.30
Inflation (Three Years @ approx 8% a year)	\$ 2.20
<b>Total</b>	<b>\$ 11.00</b>

3/29/22  
INSPECTION

**DRAFT**

John Clancy, WPCA Inspector  
Town of Fairfield Sewer Department  
725 Old Post Road  
Fairfield, CT 06824

Re: East Trunk Sewer Relocation

Dear Mr. Clancy,

As requested, the following is a general outline of the tasks that are anticipated to update the design of the East Trunk Sewer Relocation project. The attached spreadsheet is a rough manhour estimate of the effort that may be involved in completing the project including updating the plans, permit applications, bidding, construction contract administration and construction observation. Please let me know if there are any other items that should be included.

1. Review the Peer Review Report prepared by Wright Pierce
2. Perform additional Soil Borings as recommended in the Peer Review report (An allowance of \$ 15,000 is included for soil borings and geotechnical engineering)
3. Review the trench support requirements and update plans and cost estimate if necessary
4. Review feasibility of pipe jacking and prepare a conceptual cost estimate as per Peer Review comments (Note: the cost to redesign the plans and specifications to include pipe jacking has not been included)
5. Review Tighe & Bond Soil Report. Incorporate Tighe & Bond plans and specifications for handling contaminated soil and groundwater. (The cost for preparation of plans/specifications by Tighe & Bond has not been included)
6. Update plans to reflect any changes to existing site conditions from original survey in 2017. (It is assumed that there are not any significant changes and that one day of field survey will be sufficient)
7. Incorporate any changes in existing utilities or changes in the proposed utility relocation work
8. Update plans to eliminate the sewer relocation on private property at 59 Post Road
9. Provide a preliminary cost estimate for the abandonment of the trunk sewer after all laterals are relocated. (preparation of plans and specs, if required, is not included)
10. Estimate the cost to reconnect sewer laterals from existing trunk to new or existing sewer in street (preparation of plans and specs, if required, is not included)
11. Resubmit updated plans to CTDOT & incorporate their comments.
12. Update cost estimate after completing tasks 1-11.
13. Resubmit permit applications, as necessary
14. Attend meetings with Town and CTDOT staff. A total of six meetings are assumed.
15. Provide Bid and Award Phase Services
16. Contract Administration
17. Resident Project Representative services.

March 29, 2022

The attached spreadsheet is a rough manhour estimate of the effort that may be involved in completing the project including updating the plans, permit applications, bidding, construction contract administration and construction observation.

The estimated cost for these services is as follows:

A. Verify, update existing conditions plan	\$ 13,000.
B. Update Original Design Plans	25,000.
C. Pipe Jacking Feasibility	13,000.
D. Contaminated Soil & GW Coordination	7,000.
E. Cost estimate-abandonment of trunk sewer & laterals	6,000.
F. Additional Soil Borings and Geotechnical Engineering	23,000.
G. Update Permit Applications	13,000.
H. Meetings	10,000.
I. Bid and Award Phase Services	10,000.
J. Construction Contract Administration	140,000.
K. Resident Project Representative	<u>505,000.</u>
Total estimated cost	\$ 765,000.

As discussed at the meeting, we would proceed on a cost-plus basis and only complete the work that is necessary. As noted above, this estimate does not include the cost of redesigning the project to incorporate pipe jacking or micro-tunneling or the cost for Tighe and Bond to prepare plans and specifications for handling and disposal of contaminated soil and groundwater. It is also assumed that there have been no significant changes to existing site conditions, utility locations, or utility relocation plans and that the design of the abandonment of the trunk sewer and reconnection of sewer laterals would be included in a future project. The above fee estimate for the construction phase is based on providing one full time resident project representative for a 14-month construction project.

If you should have any questions, or require additional information, please do not hesitate to call.

Very truly yours,

CARDINAL ENGINEERING ASSOCIATES, INC.

Joseph A. Cermola, III, P.E.

Cc: William Hurley, P.E, Town Engineer