

PRELIMINARY
WATER SYSTEM ANALYSIS AND REPORT
TO SOUTHERN BROOKFIELD

Prepared for the Town of Brookfield

by



CCA, LLC
40 Old New Milford Road
Brookfield, CT 06804
203-775-6207

February 19, 2008

Terminology:

BWC Brookfield Water Company
RWC Rural Water Company
UWC United Water Company, New Milford, CT
DEP State of Connecticut Department of Environmental Protection
DOT State of Connecticut Department of Transportation
Gpd gallons per day
Gpm gallons per minute
Lf linear feet

There are approximately 110 individual water companies within Brookfield. Until recently there were no public water company mains within the Town. Most commercial projects were developed individually with their own on-site water systems for both fire protection and domestic use. Approximately 10 years ago BWC was formed and shortly thereafter took over a small deficient water company known as Ironworks Aqueduct Water Company which served the Four Corners area of Brookfield. Subsequently BWC developed wells, installed and acquired water mains and now serves approximately 100 or so customers. CCA has been involved in one way or another with the water mains on Federal Road and the Four Corners area by providing engineering, environmental and surveying services.

The following is a summary of the key issues relative to water supply in Brookfield:

Brookfield is divided into water company service areas which in general are as follows:
BWC – northern half of Brookfield from Elbow Hill Road and Silvermine Road north.
RWC - southern half of Brookfield from Elbow Hill Road and Silvermine Road south.

BWC has a water diversion permit from the State of Connecticut DEP to withdraw 140,000 gpd. BWC filed an application in the beginning of November 2007 to increase the withdrawal rate from their wells to over 300,000 gpd. As of this date no comments have been received from DEP. The majority of the 140,000 gpd will eventually be used to serve existing BWC customers, future customers within the BWC service area and future customers of RWC along the Federal Road water main to its terminus at Route 133.

RWC has no significant water supply available to serve customers on Federal Road.

RWC currently has a State approved agreement to purchase just under 50,000 gpd from the BWC. Most of that supply is spoken for by existing and/or future customers who paid for a portion of the improvements.

BWC has an agreement with UWC to purchase just less than 50,000 gpd through a meter station located at the New Milford town line. Currently this water service area is not

connected to the Four Corner area; there is a 2500 lf gap. The water main in the gap area has been designed; a \$500,000 STEAP grant has been issued to the Town to assist in constructing this portion of the water main. This water main will connect the BWC and the UWC systems. This connection will provide significant back-up to the BWC system.

The existing BWC pump station has very limited capacity, 15,000 gallons of storage in two tanks and dual 80 gpm pumps. However, the well system is substantial and estimates indicate withdrawal capacities of greater than 300,000 gpd are feasible.

The Town, BWC, RWC and BRT (a private developer) are currently working together to expand the water system by the construction of a 150,000 gallon tank at the pump station site, pump upgrades and extension of the water main from Orchard Street southerly to Route 133. This system will vastly improve the BWC system, but is not sufficient to serve the entire Federal Road corridor without additional improvements.

*BY RT 7
ENTRANCE*

CCA has sat in on numerous meetings with State officials regarding the issue of water in Brookfield and in general the State officials favor the extension of water mains within Brookfield. Some State agencies favor the prevention of new satellite water companies within Brookfield and view the extension of water mains within Federal Road to be a favorable improvement.

The following are necessary to expand the water system from Route 133 south:

BWC must obtain approval of the water diversion permit for an increase in well withdrawal rates. As noted above the application was submitted and preliminary indications are it will be approved, but it has to go through the process, we estimate this to take approximately 6 months. It may be feasible to proceed without this permit but generally work should be limited to engineering and permitting.

BWC and RWC must seek a diversion permit in order for BWC to transfer water to RWC at flow rates above 50,000 gpd. This would fall under one of the DEP "general permits". The DPH would have to approve this transfer also. These permits should be straight forward and approved. However they will probably be subject to approval of the BWC diversion permit.

The existing BWC pump station (after current improvements are complete) will have a capacity of approximately 150,000 gpd. This is due to the current maximum well withdrawal rate of 140,000 gpd and a storage tank size of 150,000 gallons. The pump capacity for domestic flows only is in the order of 180,000 gpd. The BWC pump station improvements and tank currently under contract must be completed and functioning. Additional pump station improvements may be necessary. The extent of these improvements are dependent upon BWC and State requirements and whether the system is interconnected with the City of Danbury system. CCA estimates that additional power upgrades, tank storage and additional pumps are required. In lieu of these improvements, an elevated storage tank could be considered or connection to the Danbury water system. We estimate that the Federal Road corridor will require approximately 375,000 gpd of

domestic flow at average daily flow rates. Extending the water main from Route 133 south without considering upgrading the water supply system is ill-advised.

The water main extension from Route 133 south must be designed, approved and constructed. Approvals would be required by DPH for a water main extension. RWC would be the operator of this section of the pipe and would review and approve the plans. It is anticipated that the pipe would be constructed within the Right of Way (ROW) of Federal Road (Route 202). A DOT encroachment permit is required for construction of the water main within the State ROW.

The Town would need to appropriate the funds to construct the water system and upon completion would assess the property owners along the route. In order for the Town to appropriate the funds, a Board of Selectmen, Town meeting and possibly Town referendum would be required.

Zoning approval would be required if any above grade structures are necessary. The meter building at the City line would require zoning approval, as well as any above ground tanks.

Town Inland Wetland approval is required if any of the pipeline is within 100 feet of a watercourse or 50 feet of a wetland. Since all work is proposed in or adjacent to the road this approval should be readily obtained.

Eight hundred lineal feet of water main within Danbury must be constructed to make the fire supply available to Brookfield.

In our opinion, the logical solution is to connect to the City of Danbury water system for fire protection only. It is our understanding that the City will approve a fire protection only connection. This would require an inter-municipal agreement between Brookfield and Danbury as well as State approvals. A meter station with a valve which opens when a pressure drop on the Brookfield side is sensed would be required in the vicinity of the City line. Again, State cooperation is expected since they are one of the forces driving the extension of the Federal Road water main.

Should the water main be extended and connected to the Danbury system, minimum fire flows of 2500 gpm could be expected with a 12" water main. Consideration should be given to constructing the water main to 16" or 20" at the lower end of Federal Road, thereby providing additional fire capacity.

If the water main is not connected to Danbury a storage tank is required near the southern terminus of the water main. The tank should be approximately 500,000 gallons and located at an elevation of approximately 550 feet.

The above summarizes the existing, near future and potential improvements that would be required as part of a water main extension to the Southern Brookfield.

Recommended Project Path:

- The Town, RWC and BWC form an agreement to provide domestic water and fire protection to Federal Road from Route 133 south
- The Town may approach some future developments to front some of the money to extend the water main to Danbury, to upgrade the pump station and perform related water improvements.
- The Town should apply for STEAP grants to reduce overall costs.
- The Town maintains ownership of the line upon completion.
- The Town leases the line to RWC.
- RWC is responsible for maintenance of the water main.
- The Town assesses the owners along the water main route for all of the infrastructure improvements.

APPENDIX

**Opinion of Probable Costs.
Back-up Data for Opinion of Probable Costs.**



OPINION OF PROBABLE COSTS

Water Main Extension #2C - Prepared 1-14-2008

2008 ESTIMATE

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$6,000.00	1	\$6,000.00
2	Maintenance & Protection of Traffic	LS	\$32,000.00	1	\$32,000.00
3	Flagmen	HOURS	\$40.00	480	\$19,200.00
4	Rock in Trench Excavation	CY	\$150.00	680	\$102,000.00
5	Compacted Gravel Fill	CY	\$30.00	100	\$3,000.00
6	Temporary Trench Patch	SY	\$65.00	800	\$52,000.00
7	Permenant Trench Pavement Restoration	SY	\$45.00	340	\$15,300.00
8	Bituminous Concrete Lip Curbing	LF	\$7.00	1700	\$11,900.00
9	Pavement Restoration	TONS	\$125.00	240	\$30,000.00
10	DI Water Main - 12" Dia.	LF	\$125.00	2365	\$295,625.00
11	Tee - 12" x 12"	EA	\$1,700.00	1	\$1,700.00
12	Bend - 12" x 11.25	EA	\$1,000.00	1	\$1,000.00
13	Bend - 12" x 22.5	EA	\$1,000.00	2	\$2,000.00
14	Bend - 12" x 45	EA	\$1,000.00	17	\$17,000.00
15	End Cap - 12"	EA	\$1,000.00	1	\$1,000.00
16	Gate Valve - 12"	EA	\$2,500.00	7	\$17,500.00
17	Nitrile Gaskets	EA	\$35.00	50	\$1,750.00
18	Manual Air Relief Valve	EA	\$1,200.00	1	\$1,200.00
19	2" Blow-off Assembly	EA	\$1,200.00	1	\$1,200.00
20	Hydrant Assembly	EA	\$4,500.00	5	\$22,500.00
21	Pipe Bedding Material	CY	\$25.00	130	\$3,250.00
22	Grass Surface Restoration	SY	\$8.00	1310	\$10,480.00
TOTAL					\$647,605.00

TOTAL LINEAL FOOTAGE = 2365

COST PER L.F.=\$274 PER L.F

SUMMARY OF CONSTRUCTION COSTS

Water Main #3- Prepared July 24, 2007

2007 BID RESULTS



FIRM	TOTAL COST	
M. Rondano, Inc.	\$	1,137,018.00
Anthony Julian Railroad Construction Co., Inc.	\$	1,194,591.00
Earthmovers, Inc.	\$	1,054,211.00
Land Service Group, Inc.	\$	1,195,083.00
Butterworth & Scheck, Inc.	\$	1,017,137.80
Trumbull Construction Company, Inc.	\$	995,150.20
AVERAGE	\$	1,098,865.17

TOTAL LINEAL FOOTAGE = 6804

COST PER L.F.=\$162 PER L.F

M. RONDANO, INC.

Water Main Extension #3 - Prepared 6-25-2007

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$50,000.00	1	\$50,000.00
2	Maintenance & Protection of Traffic	LS	\$65,000.00	1	\$65,000.00
3	Flagmen-Non Uniformed Traffic Men	HOURS	\$42.00	160	\$6,720.00
4	Flagmen-Uniformed Police Officers	HOURS	\$50.00	1000	\$50,000.00
5	Rock in Trench Excavation	CY	\$200.00	100	\$20,000.00
6	Compacted Gravel Fill	CY	\$24.00	100	\$2,400.00
7	Temporary Trench Patch (Town Road)	SY	\$40.00	50	\$2,000.00
8	Temporary Trench Patch (State Road)	SY	\$90.00	1115	\$100,350.00
9	Permenant Trench Pavement Restoration (State Road)	SY	\$15.00	650	\$9,750.00
10	Permenant Trench Pavement Restoration (Town Road & Driveways)	SY	\$35.00	1060	\$37,100.00
11	Bituminous Concrete Lip Curbing	LF	\$6.00	1440	\$8,640.00
12	Pavement Restoration(State Road)	TONS	\$195.00	290	\$56,550.00
13	DI Water Main - 12" Dia.	LF	\$87.00	6804	\$591,948.00
14	Tee - 12" x 12"	EA	\$400.00	1	\$400.00
15	Bend - 12" x 11.25	EA	\$250.00	4	\$1,000.00
16	Bend - 12" x 22.5	EA	\$250.00	11	\$2,750.00
17	Bend - 12" x 45	EA	\$250.00	30	\$7,500.00
18	End Cap - 12"	EA	\$250.00	2	\$500.00
19	Gate Valve - 12"	EA	\$2,500.00	13	\$32,500.00
20	Nitrile Gaskets	EA	\$50.00	5	\$250.00
21	Pipe Bedding Material	CY	\$20.00	378	\$7,560.00
22	Manual Air Relief Valve	EA	\$1,500.00	2	\$3,000.00
23	2" Blow-off Assembly	EA	\$1,000.00	1	\$1,000.00
24	Hydrant Assembly	EA	\$4,500.00	14	\$63,000.00
25	Grass Surface Restoration	SY	\$6.00	2850	\$17,100.00
TOTAL					\$1,137,018.00

ANTHONY JULIAN RAILROAD CONSTRUCTION COMPANY

Water Main Extension #3 - Prepared 6-25-2007

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$10,000.00	1	\$10,000.00
2	Maintenance & Protection of Traffic	LS	\$50,000.00	1	\$50,000.00
3	Flagmen-Non Uniformed Traffic Men	HOURS	\$45.00	160	\$7,200.00
4	Flagmen-Uniformed Police Officers	HOURS	\$65.00	1000	\$65,000.00
5	Rock in Trench Excavation	CY	\$50.00	100	\$5,000.00
6	Compacted Gravel Fill	CY	\$35.00	100	\$3,500.00
7	Temporary Trench Patch (Town Road)	SY	\$40.00	50	\$2,000.00
8	Temporary Trench Patch (State Road)	SY	\$50.00	1115	\$55,750.00
9	Permenant Trench Pavement Restoration (State Road)	SY	\$50.00	650	\$32,500.00
10	Permenant Trench Pavement Restoration (Town Road & Driveways)	SY	\$40.00	1060	\$42,400.00
11	Bituminous Concrete Lip Curbing	LF	\$5.00	1440	\$7,200.00
12	Pavement Restoration(State Road)	TONS	\$150.00	290	\$43,500.00
13	DI Water Main - 12" Dia.	LF	\$102.75	6804	\$699,111.00
14	Tee - 12" x 12"	EA	\$1,000.00	1	\$1,000.00
15	Bend - 12" x 11.25	EA	\$1,000.00	4	\$4,000.00
16	Bend - 12" x 22.5	EA	\$1,000.00	11	\$11,000.00
17	Bend - 12" x 45	EA	\$1,000.00	30	\$30,000.00
18	End Cap - 12"	EA	\$250.00	2	\$500.00
19	Gate Valve - 12"	EA	\$2,000.00	13	\$26,000.00
20	Nitrile Gaskets	EA	\$250.00	5	\$1,250.00
21	Pipe Bedding Material	CY	\$35.00	378	\$13,230.00
22	Manual Air Relief Valve	EA	\$500.00	2	\$1,000.00
23	2" Blow-off Assembly	EA	\$500.00	1	\$500.00
24	Hydrant Assembly	EA	\$4,500.00	14	\$63,000.00
25	Grass Surface Restoration	SY	\$7.00	2850	\$19,950.00
TOTAL					\$1,194,591.00

LAND SERVICE GROUP, INC.

Water Main Extension #3 - Prepared 6-25-2007

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$7,150.00	1	\$7,150.00
2	Maintenance & Protection of Traffic	LS	\$18,000.00	1	\$18,000.00
3	Flagmen-Non Uniformed Traffic Men	HOURS	\$37.25	160	\$5,960.00
4	Flagmen-Uniformed Police Officers	HOURS	\$49.20	1000	\$49,200.00
5	Rock in Trench Excavation	CY	\$119.00	100	\$11,900.00
6	Compacted Gravel Fill	CY	\$42.25	100	\$4,225.00
7	Temporary Trench Patch (Town Road)	SY	\$38.40	50	\$1,920.00
8	Temporary Trench Patch (State Road)	SY	\$78.50	1115	\$87,527.50
9	Permenant Trench Pavement Restoration (State Road)	SY	\$102.60	650	\$66,690.00
10	Permenant Trench Pavement Restoration (Town Road & Driveways)	SY	\$67.75	1060	\$71,815.00
11	Bituminous Concrete Lip Curbing	LF	\$4.25	1440	\$6,120.00
12	Pavement Restoration(State Road)	TONS	\$98.70	290	\$28,623.00
13	DI Water Main - 12" Dia.	LF	\$91.00	6804	\$619,164.00
14	Tee - 12" x 12"	EA	\$1,500.00	1	\$1,500.00
15	Bend - 12" x 11.25	EA	\$645.00	4	\$2,580.00
16	Bend - 12" x 22.5	EA	\$645.00	11	\$7,095.00
17	Bend - 12" x 45	EA	\$645.00	30	\$19,350.00
18	End Cap - 12"	EA	\$545.00	2	\$1,090.00
19	Gate Valve - 12"	EA	\$3,430.00	13	\$44,590.00
20	Nitrile Gaskets	EA	\$26.00	5	\$130.00
21	Pipe Bedding Material	CY	\$50.75	378	\$19,183.50
22	Manual Air Relief Valve	EA	\$1,165.00	2	\$2,330.00
23	2" Blow-off Assembly	EA	\$2,780.00	1	\$2,780.00
24	Hydrant Assembly	EA	\$6,750.00	14	\$94,500.00
25	Grass Surface Restoration	SY	\$7.60	2850	\$21,660.00
TOTAL					\$1,195,083.00

BUTTERWORTH & SCHECK, INC

Water Main Extension #3 - Prepared 6-25-2007

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$10,600.00	1	\$10,600.00
2	Maintenance & Protection of Traffic	LS	\$9,750.00	1	\$9,750.00
3	Flagmen-Non Uniformed Traffic Men	HOURS	\$40.00	160	\$6,400.00
4	Flagmen-Uniformed Police Officers	HOURS	\$40.00	1000	\$40,000.00
5	Rock in Trench Excavation	CY	\$0.01	100	\$1.00
6	Compacted Gravel Fill	CY	\$23.00	100	\$2,300.00
7	Temporary Trench Patch (Town Road)	SY	\$12.00	50	\$600.00
8	Temporary Trench Patch (State Road)	SY	\$45.00	1115	\$50,175.00
9	Permenant Trench Pavement Restoration (State Road)	SY	\$70.00	650	\$45,500.00
10	Permenant Trench Pavement Restoration (Town Road & Driveways)	SY	\$25.50	1060	\$27,030.00
11	Bituminous Concrete Lip Curbing	LF	\$4.00	1440	\$5,760.00
12	Pavement Restoration(State Road)	TONS	\$150.00	290	\$43,500.00
13	DI Water Main - 12" Dia.	LF	\$91.70	6804	\$623,926.80
14	Tee - 12" x 12"	EA	\$1,055.00	1	\$1,055.00
15	Bend - 12" x 11.25	EA	\$585.00	4	\$2,340.00
16	Bend - 12" x 22.5	EA	\$585.00	11	\$6,435.00
17	Bend - 12" x 45	EA	\$585.00	30	\$17,550.00
18	End Cap - 12"	EA	\$425.00	2	\$850.00
19	Gate Valve - 12"	EA	\$2,035.00	13	\$26,455.00
20	Nitrile Gaskets	EA	\$20.00	5	\$100.00
21	Pipe Bedding Material	CY	\$20.00	378	\$7,560.00
22	Manual Air Relief Valve	EA	\$600.00	2	\$1,200.00
23	2" Blow-off Assembly	EA	\$750.00	1	\$750.00
24	Hydrant Assembly	EA	\$4,200.00	14	\$58,800.00
25	Grass Surface Restoration	SY	\$10.00	2850	\$28,500.00
TOTAL					\$1,017,137.80

EARTHMOVERS, INC.

Water Main Extension #3 - Prepared 6-25-2007

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$10,650.00	1	\$10,650.00
2	Maintenance & Protection of Traffic	LS	\$13,950.00	1	\$13,950.00
3	Flagmen-Non Uniformed Traffic Men	HOURS	\$33.00	160	\$5,280.00
4	Flagmen-Uniformed Police Officers	HOURS	\$38.50	1000	\$38,500.00
5	Rock in Trench Excavation	CY	\$85.00	100	\$8,500.00
6	Compacted Gravel Fill	CY	\$27.00	100	\$2,700.00
7	Temporary Trench Patch (State Road)	SY	\$114.00	1115	\$127,110.00
8	Permanent Trench Pavement Restoration (State Road)	SY	\$121.00	650	\$78,650.00
9	Permanent Trench Pavement Restoration (Town Road & Driveways)	SY	\$97.50	1060	\$103,350.00
10	Bituminous Concrete Lip Curbing	LF	\$2.50	1440	\$3,600.00
11	Pavement Restoration(State Road)	TONS	\$153.50	290	\$44,515.00
12	DI Water Main - 12" Dia.	LF	\$71.50	6804	\$486,486.00
13	Tee - 12" x 12"	EA	\$450.00	1	\$450.00
14	Bend - 12" x 11.25	EA	\$300.00	4	\$1,200.00
15	Bend - 12" x 22.5	EA	\$305.00	11	\$3,355.00
16	Bend - 12" x 45	EA	\$305.00	30	\$9,150.00
17	End Cap - 12"	EA	\$165.00	2	\$330.00
18	Gate Valve - 12"	EA	\$1,575.00	13	\$20,475.00
19	Nitrile Gaskets	EA	\$50.00	5	\$250.00
20	Pipe Bedding Material	CY	\$25.00	378	\$9,450.00
21	Manual Air Relief Valve	EA	\$750.00	2	\$1,500.00
22	2" Blow-off Assembly	EA	\$1,290.00	1	\$1,290.00
23	Hydrant Assembly	EA	\$4,440.00	14	\$62,160.00
24	Grass Surface Restoration	SY	\$6.60	2850	\$18,810.00
TOTAL					\$1,054,211.00

TRUMBULL CONSTRUCTION COMPANY, INC.

Water Main Extension #3 - Prepared 6-25-2007

Item No.	Description	Units	Unit Cost	Quantity	Total
1	Erosion and Sediment Control	LS	\$25,000.00	1	\$25,000.00
2	Maintenance & Protection of Traffic	LS	\$30,000.00	1	\$30,000.00
3	Flagmen-Non Uniformed Traffic Men	HOURS	\$0.01	160	\$1.60
4	Flagmen-Uniformed Police Officers	HOURS	\$0.01	1000	\$10.00
5	Rock in Trench Excavation	CY	\$75.00	100	\$7,500.00
6	Compacted Gravel Fill	CY	\$40.00	100	\$4,000.00
7	Temporary Trench Patch (Town Road)	SY	\$0.01	50	\$0.50
8	Temporary Trench Patch (State Road)	SY	\$0.01	1115	\$11.15
9	Permenant Trench Pavement Restoration (State Road)	SY	\$0.01	650	\$6.50
10	Permenant Trench Pavement Restoration (Town Road & Driveways)	SY	\$0.01	1060	\$10.60
11	Bituminous Concrete Lip Curbing	LF	\$4.25	1440	\$6,120.00
12	Pavement Restoration(State Road)	TONS	\$0.01	290	\$2.90
13	DI Water Main - 12" Dia.	LF	\$123.00	6804	\$836,892.00
14	Tee - 12" x 12"	EA	\$600.00	1	\$600.00
15	Bend - 12" x 11.25	EA	\$0.01	4	\$0.04
16	Bend - 12" x 22.5	EA	\$0.01	11	\$0.11
17	Bend - 12" x 45	EA	\$0.01	30	\$0.30
18	End Cap - 12"	EA	\$250.00	2	\$500.00
19	Gate Valve - 12"	EA	\$1,750.00	13	\$22,750.00
20	Nitrile Gaskets	EA	\$100.00	5	\$500.00
21	Pipe Bedding Material	CY	\$22.00	378	\$8,316.00
22	Manual Air Relief Valve	EA	\$750.00	2	\$1,500.00
23	2" Blow-off Assembly	EA	\$1,000.00	1	\$1,000.00
24	Hydrant Assembly	EA	\$3,600.00	14	\$50,400.00
25	Grass Surface Restoration	SY	\$0.01	2850	\$28.50
TOTAL					\$995,150.20

OPINION OF PROBABLE COSTS
 FEDERAL ROAD - BROOKFIELD, CT.
 PREPARED BY:
 CCA, LLC
 February 13, 2008



**WATER MAIN EXTENSION FROM
 ROUTE 133 TO CANDLEWOOD LAKE ROAD INTERSECTION**

ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
12" WATER MAIN WITH HYDRANTS AND VALVES	LF	8500.00	\$220	\$1,870,000
INFRASTRUCTURE - SUBTOTAL				\$1,870,000
SOIL BORINGS			2.00%	\$37,400
ENGINEERING-DESIGN			5.00%	\$93,500
PERMITTING			5.00%	\$93,500
LEGAL			5.00%	\$93,500
CONSTRUCTION INSPECTION			2.50%	\$46,750
CONSTRUCTION ADMINISTRATION			2.50%	\$46,750
AS-BUILTS			1.00%	\$18,700
CONTINGENCY			10.00%	\$187,000
TOTAL				\$2,467,100

**WATER MAIN EXTENSION FROM
 CANDLEWOOD LAKE ROAD TO DANBURY TOWN LINE**

ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
18" WATER MAIN WITH HYDRANTS AND VALVES	LF	1800.00	\$260	\$468,000
INFRASTRUCTURE - SUBTOTAL				\$468,000
SOIL BORINGS			2.00%	\$9,360
ENGINEERING-DESIGN			5.00%	\$23,400
PERMITTING			5.00%	\$23,400
LEGAL			5.00%	\$23,400
CONSTRUCTION INSPECTION			2.50%	\$11,700
CONSTRUCTION ADMINISTRATION			2.50%	\$11,700
AS-BUILTS			1.00%	\$4,680
CONTINGENCY			10.00%	\$48,800
TOTAL				\$622,440

**WATER MAIN EXTENSION FROM
 DANBURY TOWN LINE TO EXISTING WATER MAIN IN DANBURY**

ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
18" WATER MAIN WITH HYDRANTS AND VALVES	LF	800.00	\$260	\$208,000
INFRASTRUCTURE - SUBTOTAL				\$208,000
SOIL BORINGS			2.00%	\$4,160
ENGINEERING-DESIGN			10.00%	\$20,800
PERMITTING			10.00%	\$20,800
LEGAL			10.00%	\$20,800
CONSTRUCTION INSPECTION			5.00%	\$10,400
CONSTRUCTION ADMINISTRATION			5.00%	\$10,400
AS-BUILTS			2.00%	\$4,160
CONTINGENCY			10.00%	\$20,800
TOTAL				\$320,320

METER STATION-DANBURY/BROOKFIELD TOWN LINE

ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
METER STATION	LS	1.00	\$250,000	\$250,000
LAND ACQUISITION	LS	1.00	\$50,000	\$50,000
INFRASTRUCTURE - SUBTOTAL				\$300,000
SOIL BORINGS			2.00%	\$6,000
ENGINEERING-DESIGN			10.00%	\$30,000
PERMITTING			10.00%	\$30,000
LEGAL			10.00%	\$30,000
CONSTRUCTION INSPECTION			5.00%	\$15,000
CONSTRUCTION ADMINISTRATION			5.00%	\$15,000
AS-BUILTS			2.00%	\$6,000
CONTINGENCY			10.00%	\$30,000
TOTAL				\$462,000

UPGRADES TO BWC PUMP STATION-150 GPM TO 300 GPM

ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
PUMP STATION UPGRADES	LS	1.00	\$350,000	\$350,000
UPGRADE FROM SINGLE PHASE TO THREE PHASE POW	LS	1.00	\$75,000	\$75,000
INFRASTRUCTURE - SUBTOTAL				\$425,000
ENGINEERING-DESIGN			5.00%	\$21,250
PERMITTING			5.00%	\$21,250
LEGAL			5.00%	\$21,250
CONSTRUCTION INSPECTION			2.50%	\$10,825
CONSTRUCTION ADMINISTRATION			2.50%	\$10,825
CONTINGENCY			10.00%	\$42,500
TOTAL				\$552,500

NEW TANK IN SOUTHERN BROOKFIELD-ALTERNATE IN LIEU OF CONNECTION TO DANBURY

ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
500,000 GALLON STORAGE TANK WITH TANK CONTROL	LS	1.00	\$700,000	\$700,000
12" WATER MAIN WITH HYDRANTS AND VALVES	LF	1500.00	\$220	\$330,000
LAND ACQUISITION	LS	1.00	\$50,000	\$50,000
INFRASTRUCTURE - SUBTOTAL				\$1,080,000
SOIL BORINGS			2.00%	\$21,600
ENGINEERING-DESIGN			5.00%	\$54,000
PERMITTING			5.00%	\$54,000
LEGAL			5.00%	\$54,000
CONSTRUCTION INSPECTION			2.50%	\$27,000
CONSTRUCTION ADMINISTRATION			2.50%	\$27,000
AS-BUILTS			2.00%	\$21,600
CONTINGENCY			10.00%	\$108,000
TOTAL				\$1,447,200