




Memorandum
Town of Mount Pleasant

TO: Supervisor Fulgenzi & Town Board Members
FROM: David Smyth, P.E. 
Town Engineer/Superintendent of Water & Sewer
RE: **Water District Formation Study**
Town Residents Supplied Water by the Village of Pleasantville
Summary of Findings
DATE: May 2, 2024

As you may be aware a study was performed by Manganaro Engineers to provide an overview of the associated costs and what actions are required to create a water district to service town residents whom receive their water supply from the Village of Pleasantville. This study, which was funded under to town's portion of funds received from the American Recovery Program, has been completed. This memo serves as an overview of the final report to facilitate the discussions on considering to advance the recommendations from the study.

There are approximately 800 parcels located within the town that are currently receiving or can benefit from a municipal water supply from the Village of Pleasantville. For those whom currently receive village water, these residents pay higher out of district water rates and are responsible for any water main repairs/replacements that are completed. Other residents within this area rely on private wells some of which have been reported to be failing and very costly to replace. For those residents that are responsible for repairs on the out-of-district water mains, some repairs have been excess of \$2000 for a single repair with multiple repair bills occurring in a single year. As there is no replacement program for problematic or end of service life water mains, we can expect the number of water main repairs to increase annually as time progresses.

The study focused on three alternatives. The first alternative used the existing water mains where the conditions would permit and segmented the study areas into several potential districts as to keep district formation costs low. This alternative included only the installation of master meters and new town approved water meters where permissible.

The second alternative considered replacement of the all the existing water mains with new water mains and where possible, consolidation of parcels into existing town water districts or consolidation of existing districts into a new larger district. The third alternative was to replace all the water mains and to form a single larger water district.

Enclosed for your information is a table that provides the estimated annual cost differences for all three alternatives based on the street locations of the town residences. Based on these costs the preferred alternative is Alternative 1 as it results in the lowest and therefore the most realistic costs that may be considered by the residents in each area.

Costs provided in the study only highlights the engineering, construction, inspection and administration costs for infrastructure work as designed by a consultant with installation completed by a contractor. For smaller projects, i.e. Choate Lane, the costs to complete this work would be considerably less if designed and constructed in house. A sample breakdown of the cost is also enclosed for your review. There may be other locations where in house design and installation work can be completed but would be subject to time and availability of staff.

Memo to Supervisor & Town Board
Town Residents Supplied Water by Village
5/2/24

There are other costs to be considered and savings available in addition to those found in the study when establishing new water districts. The costs to form, operate and conduct annual sampling which are expected to be incurred are required to be considered when forming new districts. Also expected are the potential savings from the anticipated reduced water rate changes from out of district to in district rates. A sample has been included as to how these are calculated. Based on this initial review the cost to operate the district would be funded by the expected savings from the lower rates to be applied to a newly formed district less the unaccounted for water.

After the board has reviewed the study findings, it is recommended that the study and this overview be posted on the town's website for informational purposes. We will also look to send out a post card notifying the residents within the study area of the posting of the report on the website. Should they choose to, residents will then be permitted to commence the petition process to seek the formation of a district similarly in a manner as the recent Pleasant Ridge Water District Extension No 1. Our department will seek to hold public informational meetings to discuss the report findings as to make every effort to inform the residents. If requested, we are also available to present the findings and discuss the next steps at a Town Board Working Session.

Ultimately the decision on how to proceed with any new district formation relies on support of the residents of that potential district. It would be beneficial to at least consider advancing the Alternative 1 recommendations as the costs are the lowest of the three alternatives and more realistic when considering the potential existing water main repair costs, failing drinking water wells, drinking water well replacement costs and firefighting protections improvements.

Please do not hesitate to contact myself or Susan Maskiell-Closi at (914) 742-2317 should you have any additional questions on this matter.

Water District Formation Study
Town Residents Supplied Water by the Village of Pleasantville
Infrastructure Cost Summary for Establishing Districts
4/30/2024

Area I

Street Name	Number of Parcels	Year 1 Annual Cost/Parcel	Year 2 Annual Cost/Parcel	Year 3 Annual Cost/Parcel
Hardscrabble Road	11	\$310	\$4,420	\$3,440
Congress Street	0			
Hill Crest Avenue	8			
Reginald Street	3			
Mountain Road	22			
Hillside Avenue	17			
Alpine Terrace	10			
Rose Hill Road	14			
Gavin Drive	2			
Cedar Avenue	13			
West End Avenue	1			
Mountain Road	38			
Cornell Street	4			
Hays Street	4			
Sarles Lane	33			
Flag Hill Road	16			
Deborah Lane	6			
Flag Hill Rd (Easement)	0			

Water District Formation Study
Town Residents Supplied Water by the Village of Pleasantville
Infrastructure Cost Summary for Establishing Districts
4/30/2024

Area IIA

Street Name	Number of Parcels	Alter 1 Annual \$/Parcel	Alter 2 Annual \$/Parcel	Alter 3 Annual \$/Parcel
Bedford Road	16	\$2,840	\$2,980	\$3,440
Birch Drive	20			
Bruce Street	7			
Central Avenue	10			
Chestnut Street	8			
Chestnut Terrace	3			
Choate Lane	6			
Elliot Place	4			
Elmwood Street	4			
Fairview Avenue	9			
Foshay Avenue	32			
Highland Terrace	12			
Lake Drive	3			
Leroy Street	8			
Locust Road	43			
Manville Road	11			
Oak Drive	13			
Park Street	22			
Parkview Drive	9			
Polly Wiggle Lane	9			
Ridgewood Drive	13			
Sandford Street	8			
Short Street	1			
Underhill Road	2			
Woodland Drive	28			

Area IIB - Extension of Existing Town Pleasantville Road Water District

Street Name	Number of Parcels	Alter 1 Annual \$/Parcel	Alter 2 Annual \$/Parcel	Alter 3 Annual \$/Parcel
Choate Lane	12	\$2,477	\$2,980	\$3,440

**Water District Formation Study
 Town Residents Supplied Water by the Village of Pleasantville
 Infrastructure Cost Summary for Establishing Districts
 4/30/2024**

Area III

Street Name	Number of Parcels	Alter 1 Annual \$/Parcel	Alter 2A Annual \$/Parcel	Alter 2B Annual \$/Parcel	Alter 3 Annual \$/Parcel
Brook Lane	11	\$0	\$0	\$0	\$3,440
Randy Lane	13				
Meadowbrook Lane	9				
Marling Lane	4	\$750	\$4,180	NA	
Munson Pond Road	2				
Munson Road	16				
Bear Ridge Road - Seg 1	7				
Bear Ridge Road - Seg 2	52				
Brook Manor Lane	26				
Bryant Lane	3				
Carrick Circle	2				
Colony Glen Drive	17				
Cy Court	5				
Ferndale Road	6				
Foster Place	7				
High Ridge Court	14				
Lake Street	26				
Palmer Lane	10				
Ridgeview Drive	22				
Stephen Drive	23				
Virginia Road	8				
Woodbrook Road	13				
Oak Hill Circle	5	\$7,090			

Water District Formation Study
Town Residents Supplied Water by the Village of Pleasantville
District Operating Cost Summary for Establishing Districts
4/30/2024

Similar Size Existing Town District Operating Costs

	# of Parcels	Contract Expenses				District Annual Total	Charge for Joint Water Fund per
		Contract General	Laboratory Services	Charge for Joint Water Fund	Total		
Bear Ridge	146	\$ 500	\$ 4,000	\$ 32,409	\$ 156,909	\$ 232,886	\$ 221.98
Old Farm Hill	543	\$ 10,000	\$ 4,500	\$ 220,024	\$ 654,524	\$ 1,633,288	\$ 405.20
Apple Hill	68	\$ 800	\$ 2,000	\$ 9,348	\$ 52,148	\$ 53,753	\$ 137.47

Proposed Districts Operating Cost Estimate

	# of Parcels	Contract Expenses				District Annual Total	Charge for Joint Water Fund per parcel	Total Cost per Parcel
		Contract General	Laboratory Services	Charge for Joint Water Fund	Total			
Area I	202	\$ 1,000	\$ 4,000	\$ 55,550	\$ 60,752	\$ 60,752	\$ 275.00	\$ 300.75
Area II	317	\$ 1,250	\$ 4,250	\$ 110,950	\$ 116,767	\$ 116,767	\$ 350.00	\$ 368.35
Area III	241	\$ 1,100	\$ 4,000	\$ 69,890	\$ 75,231	\$ 75,231	\$ 290.00	\$ 312.16

**Choate Lane Extension into Pleasantville Road Water District
Conceptual District Extension Cost Estimates**

Date: April 2024

Total Project Costs

Construction Costs	\$	166,440
Permitting Cost	\$	500
Attorney Fees (Annexation)	\$	15,000
Total	\$	181,940
Total Costs/Parcel =	\$	15,162

Construction Costs

ITEM	Pleasantville Road Water Main			
	Qty.	UNIT	UNIT PRICE	AMT
8" C.L.P. WATER MAIN	300	LF	\$140	\$42,000
6" C.L.P. WATER MAIN	490	LF	\$120	\$58,800
6" GATE VALVE	4	EA	\$1,700	\$6,800
8" GATE VALVE	2	EA	\$2,100	\$4,200
HYDRANT	2	EA	\$4,500	\$9,000
CUT & CAP EXISTING WATER MAIN	1	EA	\$2,500	\$2,500
CONNECT TO EXISTING WATERMAIN	1	EA	\$8,000	\$8,000
HOUSE SERVICE CONNECTION STUB	12	EA	\$1,500	\$18,000
12" TO 8" REDUCER	1	EA	\$750	\$750
12" x 12" x 12" TEE	1	EA	\$1,200	\$1,200
8" x 6" x 6" TEE	2	EA	\$1,095	\$2,190
8" - 22.5° Bend	4	EA	\$500	\$2,000
8" - 45° Bend	4	EA	\$500	\$2,000
ASPHALT REPAIR	60	TON	\$150	\$9,000

TOTAL = \$166,440

Cost per Parcel = \$13,870

Pleasantville Water District

Water Rates & Fees

Date: April 2024

	2025	2024	2024	2024
	Rate per	Rate per	per 60k	per 100k
	1000 CF	1000 CF	gal/yr	gal/yr
Residents	\$ 70.04	\$ 67.35	\$540.24	\$900.40
Non Residents in a District	\$ 89.60	\$ 86.15	\$691.04	\$1,151.74
Non-Residents	\$ 105.32	\$ 101.27	\$812.33	\$1,353.88
NYC Raw Water Costs		\$ 2.22		
Residential Rate Plus NYC Raw Water Costs		\$ 69.57	\$558.08	\$930.14
		Diff. (Non-Resd. - Town Dist.) -	\$254.24	\$423.74
		Avg. (Non-Resd. - Town Dist.) -	\$338.99	

Ready to Service Quarterly Charges

Meter Size	Residential Charge	Non-Residential Charge
5/8"	\$ 57.00	\$ 71.00
3/4"	\$ 74.00	\$ 88.00
1"	\$ 121.00	\$ 134.00
1-1/4"	\$ 180.00	\$ 194.00
1-1/2"	\$ 253.00	\$ 267.00
2"	\$ 359.00	\$ 373.00

NYC Raw Water Rate - 2024

The Regulated Rate for water supplied to users outside the City from either the Croton or Catskill/Delaware systems that is within the allowance quantities set forth in Section 24-360 of the Administrative Code of the City of New York is \$2,224.32 per million gallons. The rate and charge for water provided to users outside of the City that exceeds the allowance quantities set forth in Section 24-360 of the Administrative Code of the City of New York is \$5,865.75 per million gallons

**New Water Districts
Formation Study for
Town Residents
Supplied by Village
of Pleasantville**

**Contract No.
2021-04**

CAMCE NO. 2000

T o w n o f M o u n t P l e a s a n t

Westchester County, New York



TOWN BOARD

**Carl Fulgenzi, Supervisor
Mark Saracino
Laurie Rogers Smalley
Thomas Sialiano
Danielle Zaino**

TOWN OFFICIALS

**Emily Costanza, Town Clerk
David A. Smyth, P.E., Town Engineer
& Superintendent of Water and Sewer**

April 2024



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Engineers Opinion of Probable Construction Cost for Alternates 1, 2 & 3

APPENDIX B

Figure No. 1 – Existing Water Mains Area I

Figure No. 2 – Existing Water Mains Area II

Figure No. 3 – Existing Water Mains Area III

Figure No. 4 – Existing Water Mains Area III

Figure No. 5 – Proposed and Existing Conditions

Figure No. 6 – Proposed Water Mains Area I - Alternate No. 1

Figure No. 7 – Proposed Water Mains Area II - Alternate No. 1

Figure No. 8 – Proposed Water Mains Area III - Alternate No. 1

Figure No. 9 – Proposed Water Mains Area III - Alternate No. 1

Figure No. 10 – Proposed Water Mains Area I - Alternate No. 2

Figure No. 11 – Proposed Water Mains Area II - Alternate No. 2

Figure No. 12 – Proposed Water Mains Area III - Alternate No. 2

Figure No. 13 – Proposed Water Mains Area III - Alternate No. 2

Figure No. 14 – Proposed Water Mains Area I - Alternate No. 3

Figure No. 15 – Proposed Water Mains Area II - Alternate No. 3

Figure No. 16 – Proposed Water Mains Area III - Alternate No. 3

Figure No. 17 – Proposed Water Mains Area III - Alternate No. 3

DESCRIPTION

1.1 BACKGROUND

The Town of Mount Pleasant, New York, is in central Westchester County. The Town's Water Department is responsible for the delivery of safe and pleasant drinking water within the Town operated water districts. There are currently ten water districts within the Town. They are as followed, Old Farm Hill Water District, Meadowbrook, Pleasantville Ext. No. 1, Pleasantville Road, Kensico, Pleasant Ridge, Apple Hill, Mill River, Pocantico and Bear Ridge Lake. Collectively these districts serve approximately 6,000 accounts through public water supply systems.

1.2 PROJECT DESCRIPTION

This study is being conducted under the American Rescue Plan (ARPA) grant awarded to offset the effects of Covid-19. The study area comprises of areas within the Town where town residents are receiving their drinking water from the Village of Pleasantville. This area has been divided into three sections and are designated as Area I, Area II and Area III. Parcels within the study areas located outside of the Village boundaries and as such are not required to pay water taxes to the Village for upkeep of the Village's water system. Therefore, the Village passes any costs associated with repair and maintenance of the water mains servicing the study area directly to the customer base.

In addition, the Village is not required to complete any upgrades to the system. This has lead to homes in portions of the study to suffer from low pressure, low volume and extended repairs to the system. The quantity and pressure of water available for firefighting in many portions of this area is substandard. The lack of adequate water mains or system improvements has resulted in a situation wherein future growth must be meticulously monitored. In extreme cases, permits for connection to the water system have been deferred until the water system can be upgraded thereby requiring private wells to be drilled regardless of the water quality of those wells.

In addition, water consumed in the area are assessed higher out of district water rates and repairs are conducted by private contractors who must be paid by prevailing wages. Repair costs are applied to

water billing and can be thousands of dollars.

Charles A. Manganaro Consulting Engineers, P.C. (CAMCE) has been tasked with a review of these three different Areas and asked to provide updated costs and recommendations to upgrade the existing water system infrastructure.

The study involves the feasibility, study and installation of new 6", 8" and 12" diameter water main pipes within these areas, isolating the current infrastructure and creating new water district/s in the areas where the residents of Town are currently serviced by the Village of Pleasantville. The new proposed system would also be designed to meet the system's daily and fire supply needs. This study will address the necessary system upgrades and modifications for both interim and final proposed system configuration.

1.3 REGULATORY REQUIREMENTS

The following will serve as a summary of the water supply and distribution regulations and their relation to the study area.

The size of distribution mains and pressure in the piping system are subject to New York State regulations. The New York State Department of Health has adopted the Recommended Standards for Water Works (also referred to as, "The Ten States Standards") as the guidance document for acceptable raw and treated water quality, as well as distribution system design specifications. According to this Standard, the minimum sized water main shall be 6-inch diameter. Static pressure sources, such as storage tanks, shall maintain operating water level variations of less than 30 feet. The normal working pressure in a distribution system should be 60 pounds per square inch (psi), and not less than 35 psi. A water distribution system shall also be designed to maintain a minimum pressure of 20 psi at ground level at all points in the system under all conditions of flow, including during firefighting events. The Ten State Standards also indicate that a system pressure more than 100 psi should be reduced using devices, such as a pressure reducing valves.

Fire flow requirements are established by the Insurance Service Office (ISO) and AWWA standards. As over 95% of the service area consists of single-family, less than three-story residential dwellings, the needed fire flow is essentially dependent upon the type of construction and distance between dwellings. The fire flow requirements for the concerned area varies from 500 gpm to 1,000 gpm. Based on the distance between buildings, in some cases being less than 30 feet, a fire flow of 1,000 gpm is needed. Additionally, needed fire flows must be maintained for two hours. Based upon fire flow

calculations, either 120,000 gallons of water storage capacity should be provided (just for fire protection), or a separate fire flow pumping (1,000 gpm) arrangement should be installed in a booster pumping station.

While most of the existing water distribution system in the areas of concern was installed before these regulations were formalized, any improvement to the water system will be required to meet these guidelines. All improvements to public water supplies must be submitted and approved by the Westchester County Department of Health (WCDOH).

1.4 LOCATIONS AND CONDITIONS

The existing water mains are shown in Figures No. 1, 2, 3 & 4. The location and boundaries of the any existing water districts are shown in Figure No. 5. The proposed water mains and potential new water districts are shown in Figures No. 6 to 17 while these figures also illustrate the layout of the existing distribution system and proposed distribution system in the Town of Mount Pleasant.

Under the current study, three areas have been delineated for study where the residents of the Town are currently being supplied water by the Village of Pleasantville. Review of existing watermains that will be required for the residents living along these roads will be analyzed to determine the most efficient and economical way of creating water districts for the Town of Mount Pleasant.

Area I: Located in the vicinity of north of the intersection of Pleasantville Road and Manville Road. Existing water mains are summarized in the following tables.

Street Name	Pipe Length (Linear Feet)	Number of Parcels
Hardscrabble Road (8-inch)	1,200 LF	11
Mountain Road (8-inch)	1,300 LF	22
Hillside Avenue (8-inch)	1,630 LF	17
Alpine Terrace (8-inch)	1,715 LF	10
Rose Hill Road (8-inch)	1,260 LF	14
Gavin Drive (8-inch)	470 LF	2
Cedar Avenue (8-inch)	1,825 LF	13
West End Avenue (8-inch)	1,550 LF	1
Mountain Road (8-inch)	2055 LF	38
Cornell Street (8-inch)	370 LF	4
Hays Street (8-inch)	380 LF	4

Street Name	Pipe Length (Linear Feet)	Number of Parcels
Sarles Lane (8-inch)	2,570 LF	33
Flag Hill Road (8-inch)	1,670 LF	16
Deborah Lane (8-inch)	590 LF	6
Flag Hill Road (Easement)	580 LF	0
Congress Street (6-inch)	130 LF	0
Hill Crest Avenue (6-inch)	1,030 LF	8
Reginald Street (6-inch)	570 LF	3

Area II: – Located in the vicinity south of the intersection of Pleasantville Road and Manville Road.

Existing water mains are summarized in the following tables.

Street Name	Pipe Length (Linear Feet)	Number of Parcels
Lake Drive (6-inch)	600 LF	3
Polly Wiggle Lane (6-inch)	1,015 LF	9
Highland Terrace (6-inch)	525 LF	12
Parkview Drive (6-inch)	570 LF	9
Birch Drive (6-inch)	630 LF	20
Oak Drive (6-inch)	760 LF	13
Park Street (6-inch)	1,290 LF	22
Elliot Place (6-inch)	375 LF	4
Elmwood Street (6-inch)	340 LF	4
Sandford Street (6-inch)	345 LF	8
Bruce Street (6-inch)	440 LF	7
Chestnut Street (6-inch)	785 LF	8
Short Street (6-inch)	605 LF	1
Leroy Street (6-inch)	754 LF	8
Underhill Road (6-inch)	315 LF	2
Chestnut Terrace (6-inch)	360 LF	3
Choate Lane (6-inch)	790 LF	12
Choate Lane (8-inch)	1025 LF	6
Woodland Drive (8-inch)	2,350 LF	28
Bedford Road (8-inch)	1620 LF	16
Manville Road (8-inch)	570 LF	11
Locust Road (8-inch)	2,820 LF	43
Ridgewood Drive (8-inch)	965 LF	13
Fairview Avenue (8-inch)	725 LF	9
Walnut Street (8-inch)	970 LF	16
Central Avenue (8-inch)	695 LF	10
Foshay Avenue (8-inch)	1,725 LF	32

Area III - Located in the vicinity of Pleasantville Water Tanks.

Existing water mains are summarized in the following tables.

Street Name	Pipe Length (Linear Feet)	Number of Parcels
Randy Lane (6-inch)	585 LF	13
Brook Lane (6-inch)	545	11
Meadowbrook Lane (8-inch)	870	9
Marling Lane (6-inch)	325 LF	4
Munson Pond Road (6-inch)	415 LF	2
Munson Road (8-inch)	1,245 LF	16
Palmer Lane (8-inch)	1535 LF	10
Bear Ridge Road (8-inch)	400 LF	7
Foster Place (6-inch)	495 LF	7
Virginia Road (6-inch)	880 LF	8
High Ridge Court (6-inch)	850 LF	14
Bryant Lane (6-inch)	335 LF	3
Woodbrook Road (6-inch)	1,000 LF	13
Carrick Circle (6-inch)	190 LF	2
Cy Court (6-inch)	330 LF	5
Brook Manor Lane (8-inch)	1,870 LF	26
Stephen Drive(8-inch)	1,715 LF	23
Bear Ridge Road (8-inch)	4930 LF	52
Ferndale Road (8-inch)	1,260 LF	6
Ridgeview Drive (8-inch)	1,065 LF	22
Lake Street (8-inch)	2,565 LF	26
Oak Hill Circle (8-inch)	490 LF	5
Colony Glen Drive	Town Water Meter Only	17

1.5 PURPOSE AND SCOPE OF WORK

The study analysis focused on those areas that have no public water supply, substandard water system operations and other aging works currently serving town residents supplied by the Village of Pleasantville. This report investigates the feasibility of modifying existing water main installation with new water main infrastructure to keep the cost to establish these districts as the most economical. Based on this cost emphasis, CAMCE is proposing three different alternatives.

- Alternate No. 1: Creating Several Water Districts with Different Levels of Improvement for Each District/Area:
- Alternate No. 2: Creating three Water Districts for Three Individual Areas
- Alternate No. 3: Creating One Water District for Three Different Areas

COST EVALUATION

2.1 GENERAL:

As per the Town requirements CAMCE conducted a detailed cost evaluation for three different Alternatives. The three alternatives and their cost evaluations are as follows,

ALTERNATIVE NO.1: CREATING SEVERAL WATER DISTRICTS WITH DIFFERENT LEVELS OF IMPROVEMENT FOR EACH DISTRICT/AREA:

In this study, CAMCE did a cost estimate for the removal of existing mains, construction of new water mains, installation of new water meters where warranted and cost to establish water districts for three individual areas (Area I, Area II and Area III). The following is a discussion of cost evaluation for individual Districts/Area's for Alternative 1.

Area I: This area is divided into 3 new potential water districts, District - 1, District - 2, and District – 3. Approximately 101 water meters will be replaced in District-1, 79 water meters will be replaced in District-2 and 22 water meters will be replaced in District-3 and 6 master meters will be installed as shown in Figure No. 6 under this alternate.

The existing water mains are summarized in the following tables and will be the basis of the limits for the work in this phase.

District - 1 PVC Pipes	
Street Name	Number of Parcels
Hardscrabble Road (8-inch)	11
Congress Street (6-inch)	0
Hill Crest Avenue (6-inch)	8
Reginald Street (6-inch)	3
Mountain Road (8-inch)	22
Hillside Avenue (8-inch)	17

Street Name	Number of Parcels
Alpine Terrace (8-inch)	10
Rose Hill Road (8-inch)	14
Gavin Drive (8-inch)	2
Cedar Avenue (8-inch)	13
West End Avenue (8-inch)	1
Total	101

District - 2 PVC Pipes	
Street Name	Number of Parcels
Mountain Road (8-inch)	38
Cornell Street (8-inch)	4
Hays Street (8-inch)	4
Sarles Lane (8-inch)	33
Total	79

District - 3 PVC Pipes	
Street Name	Number of Parcels
Flag Hill Road (8-inch)	16
Deborah Lane (8-inch)	6
Flag Hill Road (Easement)	0
Total	22

Total cost for the replacing existing 202 water meters and installation of 6-meter pits will be **\$862,580.00** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. Approximately there are 202 parcels in this area. So, the average annual cost per parcel is **\$310** which equates to approximately **\$26.00** per month per parcel.

Area II: This area was divided into 2 water districts as shown in Figure No. 7, In District 4 of this area, approximately 317 Water Meters will be replaced along with 9,709 LF of new 6-inch diameter and 13,465 LF of new 8-inch diameter PVC pipe will be installed. In the second district approximately 12 water service connections will be replaced and a total of 790 LF of 6 -inch diameter water main will be replaced on Choate Lane and this section is to be consolidated with existing Pleasantville Road Water District.

District - 4 and Pleasantville Road water district and are identified as containing new water mains are summarized in the following tables which will be the basis of the limits for the work in this phase.

District - 4 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Lake Drive (6-inch)	600 LF	3
Polly Wiggle Lane (6-inch)	1,015 LF	9

District - 4 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Highland Terrace (6-inch)	525 LF	12
Parkview Drive (6-inch)	570 LF	9
Birch Drive (6-inch)	630 LF	20
Oak Drive (6-inch)	755 LF	13
Park Street (6-inch)	1,290 LF	22
Elliot Place (6-inch)	375 LF	4
Elmwood Street (6-inch)	340 LF	4
Sandford Street (6-inch)	345 LF	8
Bruce Street (6-inch)	440 LF	7
Chestnut Street (6-inch)	785 LF	8
Short Street (6-inch)	605 LF	1
Leroy Street (6-inch)	755 LF	8
Underhill Road (6-inch)	315 LF	2
Chestnut Terrace (6-inch)	360 LF	3
Total	9,705 LF	133
Choate Lane (8-inch)	1025 LF	6
Woodland Drive (8-inch)	2,350 LF	28
Bedford Road (8-inch)	1620 LF	16
Manville Road (8-inch)	570 LF	11
Locust Road (8-inch)	2,820 LF	43
Ridgewood Drive (8-inch)	965 LF	13
Fairview Avenue (8-inch)	720 LF	9
Walnut Street (8-inch)	970 LF	16
Central Avenue (8-inch)	695 LF	10
Foshay Avenue (8-inch)	1,725 LF	32
Total	13,460 LF	184

(Pleasantville Road Water District) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Choate Lane (6-inch)	790 LF	12

Based on the study conducted by CAMCE, total cost for the construction of new water mains for District-4 will be **\$12,998,445.29** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. With the approximately 317 parcels in District-4, the average annual cost per parcel in District-4 is **\$2,980.00** which equates to approximately **\$250.00** per month per parcel. The total cost for new water mains and water meter replacement in Choate Lane will be **\$469,598.79** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) for 12 parcels in Choate Lane. is **\$2,840.00**. which equates to approximately **\$237** per month per parcel.

Area III: This area will consist of parcel placement into 2 districts, District – 5 and District – 6 as shown in Figure No. 8 and Figure 9. Single water district to be formed with only new water mains to be installed on Brook Manor Lane and Palmer Lane which includes 36 parcels. Three (3) master meters to be installed to register water flowing into the Village on Bear Ridge Road west of Brook Manor Lane while registering water to Old Farm Water District at Munson Pond Road and Palmer Lane. All the parcels in Area III (also includes 17 parcels of Colony Glen Drive) excluding Randy Lane and Meadowbrook Road and Brook Lane water districts will have their existing meters replaced with the new town issued water meters. Oak Hill Drive to be own district with master meter installed with town issued water meters and water mains as necessary.

The districts identified as requiring new water mains are summarized in the following tables and will be the basis of the limits for the work in this phase.

District - 5 Cement Mortar Lined Class 54 Ductile Iron Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Brook Manor Lane (8-inch)	1,870 LF	26
Total	1,870 LF	26

District - 5 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Palmer Lane (8-inch)	1,535 LF	10
Total	1,535 LF	10

District - 6 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Oak Hill Circle (8-inch)	490 LF	5
Total	490 LF	5

Based on the study conducted by CAMCE, the total cost for the construction of new water mains for District 5 will be **\$2,678,432.28** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. With the approximately 258 parcels in District-5 (Area III including 17 parcels of Colony Glen Drive and excluding Randy Lane, Brook Lane and Meadowbrook Road and Oakhill Road) the average annual cost per parcel for Alternate 1 is **\$750.00** which will cost approximately **\$63.00** per month per parcel. The total cost for new water mains and water meter replacement in Oak Hill Circle will be **\$488,065.93** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) for 5 parcels in Oak Hill Circle is **\$7,090.00**. which is Approx. **\$590** per month per parcel.

ALTERNATIVE NO.2: CREATING THREE WATER DISTRICTS FOR THREE INDIVIDUAL AREAS:

In this study, CAMCE did a cost estimate for the removal of existing mains, construction of new water mains and create three water districts for three individual areas (Area I, Area II and Area III). The following is a discussion of cost evaluation for individual areas for Alternative 2.

Area I: This area will be considered as District No. 1, as shown in Figure No. 10. A total of 6 master meters will be installed and a total of 1,720 LF of 6-inch diameter, 17,880 LF of 8-inch diameter and 1,200 LF of 12-inch diameter PVC pipe will be upgraded as part of Alternate 2.

The districts identified as requiring new water mains are summarized in the following tables and will be the basis of the limits for the work in this phase.

District - 1 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Congress Street (6-inch)	125 LF	0
Hill Crest Avenue (6-inch)	1,025 LF	8
Reginald Street (6-inch)	570 LF	3
Total	1,720 LF	11
Mountain Road (8-inch)	3,325 LF	60
Hillside Avenue (8-inch)	1,625 LF	17
Alpine Terrace (8-inch)	1,710 LF	10
Rose Hill Road (8-inch)	1,250 LF	14
Gavin Drive (8-inch)	465 LF	2
Cedar Avenue (8-inch)	1,820 LF	13
West End Avenue (8-inch)	1,550 LF	1
Cornell Street (8-inch)	365 LF	4
Hays Street (8-inch)	380 LF	4
Sarles Lane (8-inch)	2,565 LF	33
Flag Hill Road (8-inch)	1,670 LF	16
Deborah Lane (8-inch)	585 LF	6
Flag Hill Road (Easement)	570 LF	0
Total	17,880 LF	180
Hardscrabble Road (12-inch)	1,200 LF	11
Total	1,200 LF	11

Total cost for the construction of new water mains will be **\$12,280,897.91** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. There are approximately 202 parcels in this area which breaks

down to an average annual cost per parcel is going to be **\$4,420.00** or a monthly average of approximately **\$370** per each parcel.

Area II: In this area Two (2) master meters and all new water mains, water meters, services, valves & hydrants to be installed including on the full length of Choate Lane to form a single district of entire focus areas as shown in Figure No. 11.

The districts identified as requiring new water mains are summarized in the following tables and will be the basis of the limits for the work in this phase.

District - 2 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Lake Drive (6-inch)	600 LF	3
Polly Wiggle Lane (6-inch)	1,015 LF	9
Highland Terrace (6-inch)	525 LF	12
Parkview Drive (6-inch)	570 LF	9
Birch Drive (6-inch)	630 LF	20
Oak Drive (6-inch)	755 LF	13
Park Street (6-inch)	1,290 LF	22
Elliot Place (6-inch)	375 LF	4
Elmwood Street (6-inch)	340 LF	4
Sandford Street (6-inch)	345 LF	8
Bruce Street (6-inch)	440 LF	7
Chestnut Street (6-inch)	785 LF	8
Short Street (6-inch)	605 LF	1
Leroy Street (6-inch)	755 LF	8
Underhill Road (6-inch)	315 LF	2
Chestnut Terrace (6-inch)	360 LF	3
Total	9,705 LF	133
Choate Lane (8-inch)	2,380 LF	25
Woodland Drive (8-inch)	2,350 LF	28
Bedford Road (8-inch)	1,620 LF	16
Manville Road (8-inch)	570 LF	11
Locust Road (8-inch)	2,820 LF	43
Ridgewood Drive (8-inch)	965 LF	13
Fairview Avenue (8-inch)	720 LF	9
Walnut Street (8-inch)	970 LF	16
Central Avenue (8-inch)	695 LF	10
Foshay Avenue (8-inch)	1,725 LF	32
Total	14,815 LF	203

The total cost for the construction of new water mains under this alternate for Area II will be

\$13,801,321.17 (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. With the approximate 336 parcels in this area, the average annual cost per parcel is going to be **\$2,980.00**, which will cost an average of **\$250** per month for individuals for new water district No. 2 in Area II.

Area III: Parcels on Munson Road, Marling Lane & Munson Pond Road to be annexed to Old Farm Water District after master meter installed with all new water mains, water meters, services, valves & hydrants. The parcels for these three streets are to be considered as part of Alternate 2A as shown in Figure 12. Single water district to be formed with new water mains to be installed on Brook Manor Lane & Bear Ridge Road with two interconnections to be installed on Bear Ridge Road and at Palmer Lane as shown in Figure No. 12, Alternate 2B. Proposes consolidation of Meadowbrook WD, Pleasantville WD Ext. 1, and Northeast WD. Lake Shore WD shall remain independent. Includes the replacement of existing village issued meters to the new town issued water meters. Oak Hill Drive works and plans to remain the same in this alternate as Alternate #1 as shown in Figure No 12 and 13.

The districts identified as requiring new water mains are summarized in the following tables and will be the basis of the limits for the work in this phase.

District – 3 Cement Mortar Lined Class 54 Ductile Iron Pipes – Alternate-2B		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Brook Manor Lane (8-inch)	1,870 LF	26
Bear Ridge Road (8-inch)	5330 LF	59
Total	7200 LF	85

Old Farm Water District PVC Pipes – Alternate 2A		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Marling Lane (6-inch)	325 LF	4
Munson Pond Road (6-inch)	415 LF	2
Total	740 LF	6
Munson Road (8-inch)	1,245 LF	16
Total	1,245 LF	16

District - 4 PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Oak Hill Circle (8-inch)	490 LF	5
Total	490 LF	5

Total cost for the construction of new water mains for Alternate 2A, Figure No. 12 (which will be

consolidated to Old Farm Hill District) will be **\$1,265,774.06** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. There are approximately 22 parcels in this area. So, the average annual cost per parcel is going to be **\$4,180.00**, which will cost an average of **\$350** per month for individual houses.

Total cost for the construction of new water mains for Alternate 2B, Figure No. 12 (which will be consolidated as new District No. 3) will be **\$6,455,882.26** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. There are approximately 258 parcels (which includes 17 parcels of Colony Glen Drive) in this area as shown in Figure No. 12. So, the average annual cost per parcel is going to be **\$1,820.00**, which will cost an average of **\$152** per month for individual houses.

The total cost for new water mains and water meter replacement in Oak Hill Circle will be **\$488,065.93** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) for 5 parcels in Oak Hill Circle is **\$7,090.00**. which equates to an average of **\$590** per month per parcel.

ALTERNATIVE NO.3: CREATING ONE WATER DISTRICT FOR THREE DIFFERENT AREAS

In this study, CAMCE did a cost estimate for the removal of existing mains, construction of new water mains and creating a single new water district to include all three areas (Area I, Area II and Area III). The following is a discussion of cost evaluation by combining all three areas for Alternative 3.

In this alternative all the parcels shall remain in a single water district with all new water mains, meters, services, valves and hydrants. Master meters will be installed to separate and record flow out of the district to other Pleasantville Village or other town water district customers. Considers all areas to be consolidated into one water district. The 17 parcels of Colony Glen Drive will also be consolidated into this district for which town water meters will only be replaced. Oak Hill Drive works and plans to remain the same in this alternate as Alternate #1.

The districts identified as requiring new water mains are summarized in the following tables and will be the basis of the limits for the work in this phase.

District - 1 (Area-I) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Hardscrabble Road (12-inch)	1,200 LF	11
Total	1,200 LF	11
Congress Street (6-inch)	125 LF	0
Hill Crest Avenue (6-inch)	1,025 LF	8
Reginald Street (6-inch)	570 LF	3
Total	1,720 LF	11
Mountain Road (8-inch)	3,355 LF	60
Hillside Avenue (8-inch)	1,625 LF	17
Alpine Terrace (8-inch)	1,710 LF	10
Rose Hill Road (8-inch)	1,250 LF	14
Gavin Drive (8-inch)	465 LF	2
Cedar Avenue (8-inch)	1,820 LF	13
District - 1 (Area-I) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
West End Avenue (8-inch)	1,550 LF	1
Cornell Street (8-inch)	365 LF	4
Hays Street (8-inch)	380 LF	4
Sarles Lane (8-inch)	2,565 LF	33
Flag Hill Road (8-inch)	1,670 LF	16
Deborah Lane (8-inch)	585 LF	6
Flag Hill Road (Easement)	570 LF	0
Total	17,910 LF	180

District - 1 (Area-II) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Lake Drive (6-inch)	600 LF	3
Polly Wiggle Lane (6-inch)	1,015 LF	9
Highland Terrace (6-inch)	525 LF	12
Parkview Drive (6-inch)	570 LF	9
Birch Drive (6-inch)	630 LF	20
Oak Drive (6-inch)	755 LF	13
Park Street (6-inch)	1,290 LF	22
Elliot Place (6-inch)	375 LF	4
Elmwood Street (6-inch)	340 LF	4
Sandford Street (6-inch)	345 LF	8
Bruce Street (6-inch)	440 LF	7
Chestnut Street (6-inch)	785 LF	8
Short Street (6-inch)	605 LF	1
Leroy Street (6-inch)	755 LF	8
Underhill Road (6-inch)	315 LF	2
Chestnut Terrace (6-inch)	360 LF	3

Total	9,705 LF	133
Choate Lane (8-inch)	2,380 LF	25
Woodland Drive (8-inch)	2,350 LF	28
Bedford Road (8-inch)	1620 LF	16
Manville Road (8-inch)	570 LF	11
Locust Road (8-inch)	2,820 LF	43
Ridgewood Drive (8-inch)	965 LF	13
Fairview Avenue (8-inch)	720 LF	9
Walnut Street (8-inch)	970 LF	16
Central Avenue (8-inch)	695 LF	10
Foshay Avenue (8-inch)	1,725 LF	32
Total	14,815 LF	203

District – 1 (Area-III) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Randy Lane (6-inch)	585 LF	13
Brook Lane (6-inch)	545 LF	11
Marling Lane (6-inch)	325 LF	4
Munson Pond Road (6-inch)	415 LF	2
Foster Place (6-inch)	495 LF	7
Virginia Road (6-inch)	880 LF	8
High Ridge Court (6-inch)	850 LF	14
Bryant Lane (6-inch)	335 LF	3
District – 1 (Area-III) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Woodbrook Road (6-inch)	995 LF	13
Carrick Circle (6-inch)	190 LF	2
Cy Court (6-inch)	330 LF	5
Total	5,950 LF	82

District – 1 (Area-III) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Meadowbrook Lane (8-inch)	870	9
Munson Road (8-inch)	1,245 LF	16
Palmer Lane (8-inch)	1535 LF	10
Bear Ridge Road (8-inch)	400 LF	7
Brook Manor Lane (8-inch)	1,870 LF	26
Stephen Drive(8-inch)	1,715 LF	23
Bear Ridge Road (8-inch)	4930 LF	52
Ridgeview Drive (8-inch)	1,065 LF	22
Lake Street (8-inch)	2,565 LF	26

Total	16,195 LF	191
Ferndale Road (6-inch)	1,260 LF	6
Colony Glen Drive	Water Meter Replacement only	17
Total	1,260 LF	6

District - 2 (Area-III) PVC Pipes		
Street Name	Pipe Length (Linear Feet)	Number of Parcels
Oak Hill Circle (8-inch)	490 LF	5
Total	490 LF	5

CAMCE did a study by combining all the three areas. Total cost for the construction of new water mains in all three areas will be **\$39,507,294.15** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) will be based on 6% interest for a period of 30 years. There are approximately 834 parcels (including Colony Glen Drive) in these three areas which results in an average annual cost per parcel of **\$3,440.00**. This cost would equate to an average of **\$287** per month for an individual parcel. The total cost for new water mains and water meter replacement in Oak Hill Circle will be **\$488,065.93** (The detailed spread sheets of probable costs are shown in Appendix “A”) and total annual cost (6%, 30 years) for 5 parcels in Oak Hill Circle is **\$7,090.00**. which equates to an average of **\$590** per month per parcel.

The three alternates correspond to different upgrades for the areas and the town will decide on the alternate that it would approve for construction.

2.2 SUMMARY OF EVALUATION:

Besides the work to modify/remove existing water mains along with the installation of new water mains and costs formation of new water districts other measures were also considered and are as followed:

1. Extend the opportunity of public water supply to the unserved areas; eliminate deficient, old/failing water mains, which may not conform to the current Health Department requirements; and aid those residences which currently and in the past have been facing adversities due to the improper water system.
2. Complete Environmental Impact Assessment.
3. Dedicated supply main from the Village line to the pump station.
4. Water main distribution system (including valves, fire hydrants, pressure regulating valves (PRV's), new service connections and new water mains to existing homes).

5. Complete design, obtain permits and bid for construction.
6. Complete construction and place into operation.

2.3 CONCLUSION AND RECOMMENDATIONS:

Approximately 840 parcels that currently or have the ability to receive municipal water from the Village of Pleasantville but are located within the Town of Mount Pleasant, could benefit from upgrades in the water distribution system within their areas. While increased pressure and volume may be a primary benefit, the benefit of increased ability of the fire department to fight fires in this area along with decreased insurance rates for homeowners in this area are also achievable.

The distribution system modifications outlined herein represent substantial construction and considerable financial obligations to be undertaken. As this area represents a significant base of water consumers, it is recommended that a water district or similar entity be formed to facilitate financing of this project with the ability to seek in district water, rate from the supplier to lower costs to the district.

Should the Town wish to pursue the recommendations presented herein, the next step would be to comment considerable public outreach to commence proceedings of the formation of water districts within the areas. CAMCE recommends at least commencing the process of sharing the costs required to undertake each alternative within the highlighted areas to determine if advancement to the district formation stages is desirable.

Upon favorable movement and eventual formation of a district, next steps would involve the design and approval stages which starts with the development of a design memorandum. The design memorandum is required by the NYSDOH and will provide the technical basis for the design of the necessary modifications. Also based on the selected Alternative it may be important to initiate discussions with a New York State Legislator representing this area to support and present approval of any construction on park lands.

APPENDIX “A”

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.1 New Water District (Combined Districts 1, 2 & 3)- Figure 6 (Area - I) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SK Checked By: SRN

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$30,000.00	\$30,000.00
2	Replacement of Existing Water Meters Only	202	Units	\$500.00	\$101,000.00	0.00	\$0.00	\$101,000.00
3	Meter Pit (Two at Mountain Road & Sarles Lane, Deobrah Lane, West End Avenue and Easement)	6	Ea.	\$30,000.00	\$180,000.00	\$70,000.00	\$420,000.00	\$600,000.00
	Subtotal							\$731,000.00
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$131,580.00
	Total Cost - Base Bid							\$862,580.00
	TOTAL ANNUAL COST (6%, 30 years)							\$62,665.00
	TOTAL PARCELS IN DISTRICT							202
	AVERAGE ANNUAL COST PER PARCEL							\$310.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.1 New Water District No. 4 - Figure 7 (Area - II) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$390,000.00	\$390,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$2,500.00	\$2,500.00
3	As Built Record Drawings	1	L.S.				\$7,000.00	\$7,000.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	13,460	L.F.	\$67.50	\$908,550.00	\$202.50	\$2,725,650.00	\$3,634,200.00
	Choate Lane (8-inch)	1,025	L.F.					
	Woodland Drive (8-inch)	2,350	L.F.					
	Bedford Road (8-inch)	1,620	L.F.					
	Manville Road (8-inch)	570	L.F.					
	Locust Road (8-inch)	2,820	L.F.					
	Ridgewood Drive (8-inch)	965	L.F.					
	Fairview Avenue (8-inch)	720	L.F.					
	Walnut Street (8-inch)	970	L.F.					
	Central Avenue (8-inch)	695	L.F.					
	Foshay Avenue (8-inch)	1,725	L.F.					
4B	All work required to furnish & install 6-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	9,705	L.F.	\$58.75	\$570,168.75	\$176.25	\$1,710,506.25	\$2,280,675.00
	Lake Drive (6-inch)	600	L.F.					
	Polly Wiggle Lane (6-inch)	1,015	L.F.					
	Highland Terrace (6-inch)	525	L.F.					
	Parkview Drive (6-inch)	570	L.F.					
	Birch Drive (6-inch)	630	L.F.					
	Oak Drive (6-inch)	755	L.F.					
	Park Street (6-inch)	1,290	L.F.					
	Elliott Place (6-inch)	375	L.F.					
	Elmwood Street (6-inch)	340	L.F.					
	Sandford Street (6-inch)	345	L.F.					
	Bruce Street (6-inch)	440	L.F.					
	Chestnut Street (6-inch)	785	L.F.					
	Short Street (6-inch)	605	L.F.					
	Leroy Street (6-inch)	755	L.F.					
	Underhill Road (6-inch)	315	L.F.					
	Chestnut Terrace (6-inch)	360	L.F.					
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	317	Units	\$295.00	\$93,515.00	885.00	\$280,545.00	\$374,060.00
5B	Replacement of existing Water Service Connections.	317	EA	\$468.75	\$148,593.75	1,406.25	\$445,781.25	\$594,375.00
5C	Replacement of Existing Water Meters Only	317	Units	\$500.00	\$158,500.00	0.00	\$0.00	\$158,500.00
6	Installation of Fire Hydrant Assemblies	47	Units	\$2,493.75	\$117,206.25	7,481.25	\$351,618.75	\$468,825.00
7A	Installation of 6-inch Diameter Mechanical Joint Gate Valve + Valve Box	26	Each	\$312.50	\$8,125.00	937.50	\$24,375.00	\$32,500.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	48	Each	\$505.00	\$24,240.00	1,515.00	\$72,720.00	\$96,960.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	5,038	Ton	\$35.25	\$177,603.16	105.75	\$532,809.48	\$710,412.64
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	370,640	S.F.	\$0.11	\$40,770.40	0.33	\$122,311.20	\$163,081.60
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	4,479	Ton	\$35.25	\$157,869.48	105.75	\$473,608.43	\$631,477.90

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.1 New Water District No. 4 - Figure 7 (Area - II) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$5,000.00	\$5,000.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	6,435	C.Y.	\$8.38	\$53,922.97	25.14	\$161,768.92	\$215,691.89
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	643	C.Y.	\$39.65	\$25,513.67	118.95	\$76,541.02	\$102,054.69
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	5,791	C.Y.	\$8.38	\$48,530.68	25.14	\$145,592.03	\$194,122.70
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	1,287	C.Y.	\$11.25	\$14,478.13	33.75	\$43,434.38	\$57,912.50
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	400	L.F.	\$6.00	\$2,400.00	18.00	\$7,200.00	\$9,600.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	400	L.F.	\$8.75	\$3,500.00	26.25	\$10,500.00	\$14,000.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$8,000.00	\$8,000.00
12	Rock Excavation (15% of Trench Depth)	2,123	C.Y.	\$18.75	\$39,814.84	56.25	\$119,444.53	\$159,259.38
13	Temporary and Permanent Vegetation Cover - (As Needed)	18,000	S.F.	\$1.00	\$18,000.00	3.00	\$54,000.00	\$72,000.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	300	Ton	\$31.25	\$9,375.00	93.75	\$28,125.00	\$37,500.00
14B	Testing Allowance - Laboratory Analysis of Soil Samples	1	L.S.				\$5,000.00	\$5,000.00
15	Reconstruction of Uncharted and Mismarked Utilities	5,500	LF/In Dia/VF	\$0.62	\$3,410.00	1.88	\$10,340.00	\$13,750.00
16	Test Pits (As ordered by the Owner)	8	Ea.	\$75.00	\$600.00	225.00	\$1,800.00	\$2,400.00
17	Meter Pits (Bedford Road)	2	Ea.	\$30,000.00	\$60,000.00	70,000.00	\$140,000.00	\$200,000.00
18	Concrete Trush Blocks	450	C.Y.	\$66.25	\$29,812.50	198.75	\$89,437.50	\$119,250.00
19	Additional Foundation Material (As ordered by the Owner)	45	C.Y.	\$11.25	\$506.25	33.75	\$1,518.75	\$2,025.00
20	Additional Concrete Material (As ordered by the Owner)	22	C.Y.	\$75.00	\$1,650.00	225.00	\$4,950.00	\$6,600.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System located on Pleasantville Road.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	6	Each	\$875.00	\$5,250.00	2,625.00	\$15,750.00	\$21,000.00
23	Meter Chamber Interconnection Pit	0	Each	\$30,000.00	\$0.00	70,000.00	\$0.00	\$0.00
	Subtotal							\$10,794,733.30
24	Contingency Allowance	1	L.S.				\$100,000.00	\$100,000.00
	Subtotal							\$10,894,733.30
-	Surveying Cost	1	L.S.					\$92,660.00
-	Soil Borings & Rock Probes	1	L.S.					\$50,000.00
	Subtotal							\$11,037,393.30
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$1,961,051.99
	Total Cost - Base Bid							\$12,998,445.29
							TOTAL ANNUAL COST (6%, 30 years)	\$944,323.00
							TOTAL PARCELS IN DISTRICT	317
							AVERAGE ANNUAL COST PER PARCEL	\$2,980.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.1 Pleasantville Road Water District - Figure 7 (Area - II) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$15,000.00	\$15,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$700.00	\$700.00
3	As Built Record Drawings	1	L.S.				\$1,500.00	\$1,500.00
4A	All work required to furnish & install 6-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances for Choate Lane	790	L.F.	\$58.75	\$46,412.50	\$176.25	\$139,237.50	\$185,650.00
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	12	Units	\$295.00	\$3,540.00	885.00	\$10,620.00	\$14,160.00
5B	Replacement of existing Water Service Connections.	12	EA	\$468.75	\$5,625.00	1,406.25	\$16,875.00	\$22,500.00
5C	Replacement of Existing Water Meters Only	12	Units	\$500.00	\$6,000.00	0.00	\$0.00	\$6,000.00
6	Installation of Fire Hydrant Assemblies	2	Units	\$2,493.75	\$4,987.50	7,481.25	\$14,962.50	\$19,950.00
7A	Installation of 6-inch Diameter Mechanical Joint Gate Valve + Valve Box	5	Each	\$312.50	\$1,562.50	\$937.50	\$4,687.50	\$6,250.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	172	Ton	\$35.25	\$6,056.83	\$105.75	\$18,170.49	\$24,227.33
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	12,640	S.F.	\$0.11	\$1,390.40	\$0.33	\$4,171.20	\$5,561.60
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	153	Ton	\$35.25	\$5,383.85	\$105.75	\$16,151.55	\$21,535.40
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$750.00	\$750.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	219	C.Y.	\$8.38	\$1,838.94	\$25.14	\$5,516.83	\$7,355.78
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	22	C.Y.	\$39.65	\$870.10	\$118.95	\$2,610.29	\$3,480.39
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	198	C.Y.	\$8.38	\$1,655.05	\$25.14	\$4,965.15	\$6,620.20
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	44	C.Y.	\$11.25	\$493.75	\$33.75	\$1,481.25	\$1,975.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	70	L.F.	\$6.00	\$420.00	\$18.00	\$1,260.00	\$1,680.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	70	L.F.	\$8.75	\$612.50	\$26.25	\$1,837.50	\$2,450.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$2,000.00	\$2,000.00
12	Rock Excavation (15% of Trench Depth)	72	C.Y.	\$18.75	\$1,357.81	\$56.25	\$4,073.44	\$5,431.25
13	Temporary and Permanent Vegetation Cover - (As Needed)	800	S.F.	\$1.00	\$800.00	\$3.00	\$2,400.00	\$3,200.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	25	Ton	\$31.25	\$781.25	\$93.75	\$2,343.75	\$3,125.00
15	Reconstruction of Uncharted and Mismarked Utilities	200	LF/In Dia/VF	\$0.62	\$124.00	\$1.88	\$376.00	\$500.00
16	Test Pits (As ordered by the Owner)	1	Ea.	\$75.00	\$75.00	\$225.00	\$225.00	\$300.00
18	Concrete Trush Blocks	30	C.Y.	\$66.25	\$1,987.50	\$198.75	\$5,962.50	\$7,950.00
19	Additional Foundation Material (As ordered by the Owner)	5	C.Y.	\$11.25	\$56.25	\$33.75	\$168.75	\$225.00
20	Additional Concrete Material (As ordered by the Owner)	2	C.Y.	\$75.00	\$150.00	\$225.00	\$450.00	\$600.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System.	1	L.S.				\$5,000.00	\$5,000.00
	Subtotal							\$375,676.94
23	Contingency Allowance	1	L.S.				\$10,000.00	\$10,000.00
	Subtotal							\$385,676.94
-	Surveying Cost	1	L.S.					\$7,000.00
-	Soil Borings & Rock Probes	1	L.S.					\$7,500.00
	Subtotal							\$400,176.94
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$69,421.85
	Total Cost - Base Bid							\$469,598.79
				TOTAL ANNUAL COST (6%, 30 years)				\$34,116.00
				TOTAL PARCELS IN DISTRICT				12
				AVERAGE ANNUAL COST PER PARCEL				\$2,840.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 1 New Water District - Figure 8 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$90,000.00	\$60,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$1,500.00	\$1,500.00
3	As Built Record Drawings	1	L.S.				\$3,500.00	\$3,500.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Palmer Lane (8-inch)	1,535	L.F.	\$67.50	\$103,612.50	\$202.50	\$310,837.50	\$414,450.00
4B	All work required to furnish & install 8-inch diameter D.I. Pipe, including Pipe Fittings, Temporary Watera main Bypassing and Appurtenances.							
	Brook Manor Lane (8-inch)	1,870	L.F.	\$100.00	\$187,000.00	\$300.00	\$561,000.00	\$748,000.00
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	36	Units	\$295.00	\$10,620.00	885.00	\$31,860.00	\$42,480.00
5B	Replacement of existing Water Service Connections.	36	Each	\$468.75	\$16,875.00	1,406.25	\$50,625.00	\$67,500.00
5C	Replacement of Existing Water Meters Only	258	Units	\$500.00	\$129,000.00	0.00	\$0.00	\$129,000.00
6	Installation of Fire Hydrant Assemblies	7	Units	\$2,493.75	\$17,456.25	7,481.25	\$52,368.75	\$69,825.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	5	Each	\$505.00	\$2,525.00	\$1,515.00	\$7,575.00	\$10,100.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	741	Ton	\$35.25	\$26,105.71	\$105.75	\$78,317.13	\$104,422.84
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	54,480	S.F.	\$0.11	\$5,992.80	\$0.33	\$17,978.40	\$23,971.20
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	658	Ton	\$35.25	\$23,205.08	\$105.75	\$69,615.23	\$92,820.30
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$4,500.00	\$4,500.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	946	C.Y.	\$8.38	\$7,926.08	\$25.14	\$23,778.25	\$31,704.33
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	95	C.Y.	\$39.65	\$3,750.23	\$118.95	\$11,250.69	\$15,000.92
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	851	C.Y.	\$8.38	\$7,133.48	\$25.14	\$21,400.43	\$28,533.90
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	189	C.Y.	\$11.25	\$2,128.13	\$33.75	\$6,384.38	\$8,512.50
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	160	L.F.	\$6.00	\$960.00	\$18.00	\$2,880.00	\$3,840.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	160	L.F.	\$8.75	\$1,400.00	\$26.25	\$4,200.00	\$5,600.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$2,500.00	\$2,500.00
12	Rock Excavation (15% of Trench Depth)	312	C.Y.	\$18.75	\$5,852.34	\$56.25	\$17,557.03	\$23,409.38
13	Temporary and Permanent Vegetation Cover - (As Needed)	535	S.F.	\$1.00	\$535.00	\$3.00	\$1,605.00	\$2,140.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	40	Ton	\$31.25	\$1,250.00	\$93.75	\$3,750.00	\$5,000.00
14B	Testing Allowance - Laoratory Analysis of Soil Samples	1	L.S.				\$5,000.00	\$5,000.00
15	Reconstruction of Uncharted and Mismarked Utilities	735	LF/In Dia/VF	\$0.62	\$455.70	\$1.88	\$1,381.80	\$1,837.50
16	Test Pits (As ordered by the Owner)	2	Ea.	\$75.00	\$150.00	\$225.00	\$450.00	\$600.00
17	Meter Pit (Two Bear Ridge Road) & Interconnection Pit	3	Ea.	\$30,000.00	\$90,000.00	\$70,000.00	\$210,000.00	\$300,000.00
18	Concrete Trush Blocks	75	C.Y.	\$66.25	\$4,968.75	\$198.75	\$14,906.25	\$19,875.00
19	Additional Foundation Material (As ordered by the Owner)	3	C.Y.	\$11.25	\$33.75	\$33.75	\$101.25	\$135.00
20	Additional Concrete Material (As ordered by the Owner)	7	C.Y.	\$75.00	\$525.00	\$225.00	\$1,575.00	\$2,100.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	2	Each	\$875.00	\$1,750.00	\$2,625.00	\$5,250.00	\$7,000.00
	Subtotal							\$2,239,857.86
23	Contingency Allowance	1	L.S.				\$30,000.00	\$30,000.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 1 New Water District - Figure 8 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
	Subtotal							\$2,269,857.86
	Surveying Cost	1	L.S.					\$13,620.00
	Soil Borings & Rock Probes	1	L.S.					\$20,000.00
	Subtotal							\$2,303,477.86
	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$408,574.42
	Total Cost - Base Bid							<u>\$2,678,432.28</u>
				TOTAL ANNUAL COST (6%, 30 years)				\$194,585.00
				TOTAL PARCELS IN DISTRICT				258
				AVERAGE ANNUAL COST PER PARCEL				\$750.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 1 New Water District - Figure 9 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$15,000.00	\$15,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$750.00	\$750.00
3	As Built Record Drawings	1	L.S.				\$1,500.00	\$1,500.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	<u>Oak Hill Circle (8-inch)</u>	490	L.F.	\$67.50	\$33,075.00	\$202.50	\$99,225.00	\$132,300.00
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	5	Units	\$295.00	\$1,475.00	885.00	\$4,425.00	\$5,900.00
5B	Replacement of existing Water Service Connections.	5	Each	\$468.75	\$2,343.75	1,406.25	\$7,031.25	\$9,375.00
5C	Replacement of Existing Water Meters Only	5	Units	\$500.00	\$2,500.00	0.00	\$0.00	\$2,500.00
6	Installation of Fire Hydrant Assemblies	1	Units	\$2,493.75	\$2,493.75	7,481.25	\$7,481.25	\$9,975.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	4	Each	\$505.00	\$2,020.00	\$1,515.00	\$6,060.00	\$8,080.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	107	Ton	\$35.25	\$3,756.77	\$105.75	\$11,270.31	\$15,027.08
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	7,840	S.F.	\$0.11	\$862.40	\$0.33	\$2,587.20	\$3,449.60
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	95	Ton	\$35.25	\$3,339.35	\$105.75	\$10,018.05	\$13,357.40
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$1,000.00	\$1,000.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	136	C.Y.	\$8.38	\$1,140.61	\$25.14	\$3,421.83	\$4,562.44
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	14	C.Y.	\$39.65	\$539.68	\$118.95	\$1,619.04	\$2,158.72
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	123	C.Y.	\$8.38	\$1,026.55	\$25.14	\$3,079.65	\$4,106.20
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	27	C.Y.	\$11.25	\$306.25	\$33.75	\$918.75	\$1,225.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	80	L.F.	\$6.00	\$480.00	\$18.00	\$1,440.00	\$1,920.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	80	L.F.	\$8.75	\$700.00	\$26.25	\$2,100.00	\$2,800.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$2,500.00	\$2,500.00
12	Rock Excavation (15% of Trench Depth)	45	C.Y.	\$18.75	\$842.19	\$56.25	\$2,526.56	\$3,368.75
13	Temporary and Permanent Vegetation Cover - (As Needed)	670	S.F.	\$1.00	\$670.00	\$3.00	\$2,010.00	\$2,680.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	50	Ton	\$31.25	\$1,562.50	\$93.75	\$4,687.50	\$6,250.00
14B	Testing Allowance - Laoratory Analysis of Soil Samples	1	L.S.				\$2,500.00	\$2,500.00
15	Reconstruction of Uncharted and Mismarked Utilities	270	LF/In Dia/VF	\$0.62	\$167.40	\$1.88	\$507.60	\$675.00
16	Test Pits (As ordered by the Owner)	2	Ea.	\$75.00	\$150.00	\$225.00	\$450.00	\$600.00
17	Meter Pit (Bear Ridge Road) & Interconnection Pit	1	Ea.	\$30,000.00	\$30,000.00	\$70,000.00	\$70,000.00	\$100,000.00
18	Concrete Trush Blocks	95	C.Y.	\$66.25	\$6,293.75	\$198.75	\$18,881.25	\$25,175.00
19	Additional Foundation Material (As ordered by the Owner)	4	C.Y.	\$11.25	\$45.00	\$33.75	\$135.00	\$180.00
20	Additional Concrete Material (As ordered by the Owner)	9	C.Y.	\$75.00	\$675.00	\$225.00	\$2,025.00	\$2,700.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	2	Each	\$875.00	\$1,750.00	\$2,625.00	\$5,250.00	\$7,000.00
	Subtotal							\$393,615.19
23	Contingency Allowance	1	L.S.				\$20,000.00	\$20,000.00
	Subtotal							\$413,615.19
	Surveying Cost	1	L.S.					\$5,000.00
	Soil Borings & Rock Probes	1	L.S.					\$10,000.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 1 New Water District - Figure 9 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
	Subtotal							\$428,615.19
	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$74,450.73
	Total Cost - Base Bid							\$488,065.93
				TOTAL ANNUAL COST (6%, 30 years)				\$35,457.00
				TOTAL PARCELS IN DISTRICT				5
				AVERAGE ANNUAL COST PER PARCEL				\$7,090.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2 New Water District No. 1 - Figure 10 (Area - I) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$375,000.00	\$375,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$2,500.00	\$2,500.00
3	As Built Record Drawings	1	L.S.				\$5,000.00	\$5,000.00
4A	All work required to furnish & install 12-inch and 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	1,200	L.F.	\$73.75	\$88,500.00	\$221.25	\$265,500.00	\$354,000.00
	Hardscrabble Road (12- inch)	1200	L.F.					
	Refer to Breakdown Below:	17,880	L.F.	\$67.50	\$1,206,900.00	\$202.50	\$3,620,700.00	\$4,827,600.00
	Flag Hill Road (8-inch) & Easement	2,240	L.F.					
	Deborah Lane (8-inch)	585	L.F.					
	Mountain Road (8-inch)	3,325	L.F.					
	Sarles Lane (8-inch)	2,565	L.F.					
	Hillside Avenue (8-inch)	1,625	L.F.					
	Cornell Street (8-inch)	365	L.F.					
	Hays Street (8-inch)	380	L.F.					
	Alpine Terrace (8-inch)	1,710	L.F.					
	Rose Hill Road (8-inch)	1,250	L.F.					
	Gavin Road (8-inch)	465	L.F.					
	Cedar Avenue (8-inch)	1,820	L.F.					
	West End Avenue (8-inch)	1,550	L.F.					
4B	All work required to furnish & install 6-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	1,720	L.F.	\$58.75	\$101,050.00	\$176.25	\$303,150.00	\$404,200.00
	Hillcrest Avenue (6-inch)	1,025	L.F.					
	Congress Street (6-inch)	125	L.F.					
	Reginald Street (6-inch)	570	L.F.					
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	202	Units	\$295.00	\$59,590.00	885.00	\$178,770.00	\$238,360.00
5B	Replacement of existing Water Service Connections.	202	L.F.	\$468.75	\$94,687.50	1,406.25	\$284,062.50	\$378,750.00
5C	Replacement of Existing Water Meters Only	202	Units	\$500.00	\$101,000.00	0.00	\$0.00	\$101,000.00
6	Installation of Fire Hydrant Assemblies	42	Units	\$2,493.75	\$104,737.50	7,481.25	\$314,212.50	\$418,950.00
7A	Installation of 6-inch Diameter Mechanical Joint Gate Valve + Valve Box	12	Each	\$312.50	\$3,750.00	\$937.50	\$11,250.00	\$15,000.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	62	Each	\$505.00	\$31,310.00	\$1,515.00	\$93,930.00	\$125,240.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	4,524	Ton	\$35.25	\$159,471.00	\$105.75	\$478,413.00	\$637,884.00
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	332,800	S.F.	\$0.11	\$36,608.00	\$0.33	\$109,824.00	\$146,432.00
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	4,021	Ton	\$35.25	\$141,752.00	\$105.75	\$425,256.00	\$567,008.00
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$4,500.00	\$4,500.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	5,778	C.Y.	\$8.38	\$48,417.78	\$25.14	\$145,253.33	\$193,671.11
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	578	C.Y.	\$39.65	\$22,908.89	\$118.95	\$68,726.67	\$91,635.56
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	5,200	C.Y.	\$8.38	\$43,576.00	\$25.14	\$130,728.00	\$174,304.00
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	1,156	C.Y.	\$11.25	\$13,000.00	\$33.75	\$39,000.00	\$52,000.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	500	L.F.	\$6.00	\$3,000.00	\$18.00	\$9,000.00	\$12,000.00

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
10B	All work required to replace the existing Concrete Curbs (As-Needed)	500	L.F.	\$8.75	\$4,375.00	\$26.25	\$13,125.00	\$17,500.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$4,500.00	\$4,500.00
12	Rock Excavation (15% of Trench Depth)	1,907	C.Y.	\$18.75	\$35,750.00	\$56.25	\$107,250.00	\$143,000.00
13	Temporary and Permanent Vegetation Cover - (As Needed)	20,000	S.F.	\$1.00	\$20,000.00	\$3.00	\$60,000.00	\$80,000.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	300	Ton	\$31.25	\$9,375.00	\$93.75	\$28,125.00	\$37,500.00
14B	Testing Allowance - Laboratory Analysis of Soil Samples	1	L.S.				\$4,500.00	\$4,500.00
15	Reconstruction of Uncharted and Mismarked Utilities	4,500	LF/ln Dia/VF	\$0.62	\$2,790.00	\$1.88	\$8,460.00	\$11,250.00
16	Test Pits (As ordered by the Owner)	8	Ea.	\$75.00	\$600.00	\$225.00	\$1,800.00	\$2,400.00
17	Meter Pit (Two at Mountain Road & Sarles Lane, Deobrah Lane)	6	Ea.	\$30,000.00	\$180,000.00	\$70,000.00	\$420,000.00	\$600,000.00
18	Concrete Thrust Blocks	550	C.Y.	\$66.25	\$36,437.50	\$198.75	\$109,312.50	\$145,750.00
19	Additional Foundation Material (As ordered by the Owner)	50	C.Y.	\$11.25	\$562.50	\$33.75	\$1,687.50	\$2,250.00
20	Additional Concrete Material (As ordered by the Owner)	25	C.Y.	\$75.00	\$1,875.00	\$225.00	\$5,625.00	\$7,500.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System located on Pleasanville Road.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	8	Each	\$875.00	\$7,000.00	\$2,625.00	\$21,000.00	\$28,000.00
	Subtotal							\$10,186,184.67
23	Contingency Allowance	1	L.S.				\$100,000.00	\$100,000.00
	Subtotal							\$10,286,184.67
-	Surveying Cost	1	L.S.					\$83,200.00
-	Soil Borings & Rock Probes	1	L.S.					\$60,000.00
	Subtotal							\$10,429,384.67
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$1,851,513.24
	Total Cost - Base Bid							\$12,280,897.91
				TOTAL ANNUAL COST (6%, 30 years)				\$892,194.00
				TOTAL PARCELS IN DISTRICT				202
				AVERAGE ANNUAL COST PER PARCEL				\$4,420.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2 New Water District No. 2 - Figure 11 (Area - II) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$346,000.00	\$346,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$3,500.00	\$3,500.00
3	As Built Record Drawings	1	L.S.				\$5,000.00	\$5,000.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	14,815	L.F.	\$67.50	\$1,000,012.50	\$202.50	\$3,000,037.50	\$4,000,050.00
	Choate Lane (8-inch)	2,380	L.F.					
	Woodland Drive (8-inch)	2,350	L.F.					
	Bedford Road (8-inch)	1,620	L.F.					
	Manville Road (8-inch)	570	L.F.					
	Locust Road (8-inch)	2,820	L.F.					
	Ridgewood Drive (8-inch)	965	L.F.					
	Fairview Avenue (8-inch)	720	L.F.					
	Walnut Street (8-inch)	970	L.F.					
	Central Avenue (8-inch)	695	L.F.					
	Foshay Avenue (8-inch)	1,725	L.F.					
4B	All work required to furnish & install 6-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	9,705	L.F.	\$58.75	\$570,168.75	\$176.25	\$1,710,506.25	\$2,280,675.00
	Lake Drive (6-inch)	600	L.F.					
	Polly Wiggle Lane (6-inch)	1,015	L.F.					
	Highland Terrace (6-inch)	525	L.F.					
	Parkview Drive (6-inch)	570	L.F.					
	Birch Drive (6-inch)	630	L.F.					
	Oak Drive (6-inch)	755	L.F.					
	Park Street (6-inch)	1,290	L.F.					
	Elliott Place (6-inch)	375	L.F.					
	Elmwood Street (6-inch)	340	L.F.					
	Sandford Street (6-inch)	345	L.F.					
	Bruce Street (6-inch)	440	L.F.					
	Chestnut Street (6-inch)	785	L.F.					
	Short Street (6-inch)	605	L.F.					
	Leroy Street (6-inch)	755	L.F.					
	Underhill Road (6-inch)	315	L.F.					
	Chestnut Terrace (6-inch)	360	L.F.					
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	336	Units	\$295.00	\$99,120.00	885.00	\$297,360.00	\$396,480.00
5B	Replacement of existing Water Service Connections.	336	EA	\$468.75	\$157,500.00	1,406.25	\$472,500.00	\$630,000.00
5C	Replacement of Existing Water Meters Only	336	Units	\$500.00	\$168,000.00	0.00	\$0.00	\$168,000.00
6	Installation of Fire Hydrant Assemblies	50	Units	\$2,493.75	\$124,687.50	7,481.25	\$374,062.50	\$498,750.00
7A	Installation of 6-inch Diameter Mechanical Joint Gate Valve + Valve Box	40	Each	\$312.50	\$12,500.00	937.50	\$37,500.00	\$50,000.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	80	Each	\$505.00	\$40,400.00	1,515.00	\$121,200.00	\$161,600.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	5,333	Ton	\$35.25	\$187,991.78	105.75	\$563,975.33	\$751,967.10
8B	All work required to Mill 2" off the newly installed Tempoarary Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	392,320	S.F.	\$0.11	\$43,155.20	0.33	\$129,465.60	\$172,620.80
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	4,741	Ton	\$35.25	\$167,103.80	105.75	\$501,311.40	\$668,415.20

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2 New Water District No. 2 - Figure 11 (Area - II) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$5,000.00	\$5,000.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	6,811	C.Y.	\$8.38	\$57,077.11	25.14	\$171,231.33	\$228,308.44
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	681	C.Y.	\$39.65	\$27,006.06	118.95	\$81,018.17	\$108,024.22
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	6,130	C.Y.	\$8.38	\$51,369.40	25.14	\$154,108.20	\$205,477.60
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	1,362	C.Y.	\$11.25	\$15,325.00	33.75	\$45,975.00	\$61,300.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	475	L.F.	\$6.00	\$2,850.00	18.00	\$8,550.00	\$11,400.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	475	L.F.	\$8.75	\$4,156.25	26.25	\$12,468.75	\$16,625.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$5,000.00	\$5,000.00
12	Rock Excavation (15% of Trench Depth)	2,248	C.Y.	\$18.75	\$42,143.75	56.25	\$126,431.25	\$168,575.00
13	Temporary and Permanent Vegetation Cover - (As Needed)	18,000	S.F.	\$1.00	\$18,000.00	3.00	\$54,000.00	\$72,000.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	325	Ton	\$31.25	\$10,156.25	93.75	\$30,468.75	\$40,625.00
14B	Testing Allowance - Laboratory Analysis of Soil Samples	1	L.S.				\$5,000.00	\$5,000.00
15	Reconstruction of Uncharted and Mismarked Utilities	5,500	LF/In Dia/VF	\$0.62	\$3,410.00	1.88	\$10,340.00	\$13,750.00
16	Test Pits (As ordered by the Owner)	8	Ea.	\$75.00	\$600.00	225.00	\$1,800.00	\$2,400.00
17	Meter Pits (Bedford Road & Manville Road)	2	Ea.	\$30,000.00	\$60,000.00	70,000.00	\$140,000.00	\$200,000.00
18	Concrete Trush Blocks	575	C.Y.	\$66.25	\$38,093.75	198.75	\$114,281.25	\$152,375.00
19	Additional Foundation Material (As ordered by the Owner)	45	C.Y.	\$11.25	\$506.25	33.75	\$1,518.75	\$2,025.00
20	Additional Concrete Material (As ordered by the Owner)	22	C.Y.	\$75.00	\$1,650.00	225.00	\$4,950.00	\$6,600.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System located on Pleasanville Road.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	8	Each	\$875.00	\$7,000.00	2,625.00	\$21,000.00	\$28,000.00
	Subtotal							\$11,470,543.37
24	Contingency Allowance	1	L.S.				\$100,000.00	\$100,000.00
	Subtotal							\$11,570,543.37
-	Surveying Cost	1	L.S.					\$98,080.00
-	Soil Borings & Rock Probes	1	L.S.					\$50,000.00
	Subtotal							\$11,718,623.37
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$2,082,697.81
	Total Cost - Base Bid							\$13,801,321.17
							TOTAL ANNUAL COST (6%, 30 years)	\$1,002,651.00
							TOTAL PARCELS IN DISTRICT	336
							AVERAGE ANNUAL COST PER PARCEL	\$2,980.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2A Old Farm Water District - Figure 12 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$45,000.00	\$45,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$2,200.00	\$1,500.00
3	As Built Record Drawings	1	L.S.				\$4,000.00	\$3,000.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	1,245	L.F.	\$67.50	\$84,037.50	\$202.50	\$252,112.50	\$336,150.00
	Munson Road (8-inch)	1,245	L.F.					
4B	All work required to furnish & install 6-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	740	L.F.	\$58.75	\$43,475.00	\$176.25	\$130,425.00	\$173,900.00
	Marling Lane (6-inch)	325	L.F.					
	Munson Pond Road (6-inch)	415	L.F.					
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	22	Units	\$295.00	\$6,490.00	885.00	\$19,470.00	\$25,960.00
5B	Replacement of existing Water Service Connections.	22	Each	\$468.75	\$10,312.50	1,406.25	\$30,937.50	\$41,250.00
5C	Replacement of Existing Water Meters Only	22	Units	\$500.00	\$11,000.00	0.00	\$0.00	\$11,000.00
6	Installation of Fire Hydrant Assemblies	5	Units	\$2,493.75	\$12,468.75	7,481.25	\$37,406.25	\$49,875.00
7	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	14	Each	\$505.00	\$7,070.00	\$1,515.00	\$21,210.00	\$28,280.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	432	Ton	\$35.25	\$15,218.75	\$105.75	\$45,656.24	\$60,874.99
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	31,760	S.F.	\$0.11	\$3,493.60	\$0.33	\$10,480.80	\$13,974.40
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	384	Ton	\$35.25	\$13,527.78	\$105.75	\$40,583.33	\$54,111.10
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$4,500.00	\$4,500.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	551	C.Y.	\$8.38	\$4,620.64	\$25.14	\$13,861.92	\$18,482.56
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	55	C.Y.	\$39.65	\$2,186.26	\$118.95	\$6,558.77	\$8,745.03
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	496	C.Y.	\$8.38	\$4,158.58	\$25.14	\$12,475.73	\$16,634.30
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	110	C.Y.	\$11.25	\$1,240.63	\$33.75	\$3,721.88	\$4,962.50
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	150	L.F.	\$6.00	\$900.00	\$18.00	\$2,700.00	\$3,600.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	150	L.F.	\$8.75	\$1,312.50	\$26.25	\$3,937.50	\$5,250.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$5,500.00	\$5,500.00
12	Rock Excavation (15% of Trench Depth)	182	C.Y.	\$18.75	\$3,411.72	\$56.25	\$10,235.16	\$13,646.88
13	Temporary and Permanent Vegetation Cover - (As Needed)	700	S.F.	\$1.00	\$700.00	\$3.00	\$2,100.00	\$2,800.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	140	Ton	\$31.25	\$4,375.00	\$93.75	\$13,125.00	\$17,500.00
14B	Testing Allowance - Laoratory Analysis of Soil Samples	1	L.S.				\$5,000.00	\$5,000.00
15	Reconstruction of Uncharted and Mismarked Utilities	1,850	LF/In Dia/VF	\$0.62	\$1,147.00	\$1.88	\$3,478.00	\$4,625.00
16	Test Pits (As ordered by the Owner)	2	Ea.	\$75.00	\$150.00	\$225.00	\$450.00	\$600.00
17	Meter Pit	0	Ea.	\$30,000.00	\$0.00	\$70,000.00	\$0.00	\$0.00
18	Concrete Trush Blocks	210	C.Y.	\$66.25	\$13,912.50	\$198.75	\$41,737.50	\$55,650.00
19	Additional Foundation Material (As ordered by the Owner)	14	C.Y.	\$11.25	\$157.50	\$33.75	\$472.50	\$630.00
20	Additional Concrete Material (As ordered by the Owner)	8	C.Y.	\$75.00	\$600.00	\$225.00	\$1,800.00	\$2,400.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System located on Munson Road.	1	L.S.				\$5,000.00	\$5,000.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2A Old Farm Water District - Figure 12 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	2	Each	\$875.00	\$1,750.00	\$2,625.00	\$5,250.00	\$7,000.00
	Subtotal							\$1,027,401.75
23	Contingency Allowance	1	L.S.				\$25,000.00	\$25,000.00
	Subtotal							\$1,052,401.75
-	Surveying Cost	1	L.S.					\$7,940.00
-	Soil Borings & Rock Probes	1	L.S.					\$16,000.00
	Subtotal							\$1,076,341.75
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$189,432.31
	Total Cost - Base Bid							\$1,265,774.06
				TOTAL ANNUAL COST (6%, 30 years)				\$91,957.00
				TOTAL PARCELS IN DISTRICT				22
				AVERAGE ANNUAL COST PER PARCEL				\$4,180.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2B New Water District No. 3 - Figure 12 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$195,000.00	\$195,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$2,200.00	\$2,200.00
3	As Built Record Drawings	1	L.S.				\$4,000.00	\$4,000.00
4B	All work required to furnish & install 8-inch diameter D.I. Pipe, including Pipe Fittings, Temporary Watera main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	7,200	L.F.	\$100.00	\$720,000.00	\$300.00	\$2,160,000.00	\$2,880,000.00
	Brook Manor Lane (8-inch)	1,870	L.F.					
	Bear Ridge Road (8-inch)	5,330	L.F.					
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	241	Units	\$295.00	\$71,095.00	885.00	\$213,285.00	\$284,380.00
5B	Replacement of existing Water Service Connections.	241	Each	\$468.75	\$112,968.75	1,406.25	\$338,906.25	\$451,875.00
5C	Replacement of Existing Water Meters Only	258	Units	\$500.00	\$129,000.00	0.00	\$0.00	\$129,000.00
6	Installation of Fire Hydrant Assemblies	15	Units	\$2,493.75	\$37,406.25	7,481.25	\$112,218.75	\$149,625.00
7	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	40	Each	\$505.00	\$20,200.00	\$1,515.00	\$60,600.00	\$80,800.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	1,566	Ton	\$35.25	\$55,201.50	\$105.75	\$165,604.50	\$220,806.00
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	115,200	S.F.	\$0.11	\$12,672.00	\$0.33	\$38,016.00	\$50,688.00
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	1,392	Ton	\$35.25	\$49,068.00	\$105.75	\$147,204.00	\$196,272.00
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$4,500.00	\$4,500.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	2,000	C.Y.	\$8.38	\$16,760.00	\$25.14	\$50,280.00	\$67,040.00
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	200	C.Y.	\$39.65	\$7,930.00	\$118.95	\$23,790.00	\$31,720.00
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	1,800	C.Y.	\$8.38	\$15,084.00	\$25.14	\$45,252.00	\$60,336.00
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	400	C.Y.	\$11.25	\$4,500.00	\$33.75	\$13,500.00	\$18,000.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	450	L.F.	\$6.00	\$2,700.00	\$18.00	\$8,100.00	\$10,800.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	450	L.F.	\$8.75	\$3,937.50	\$26.25	\$11,812.50	\$15,750.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$5,500.00	\$5,500.00
12	Rock Excavation (15% of Trench Depth)	660	C.Y.	\$18.75	\$12,375.00	\$56.25	\$37,125.00	\$49,500.00
13	Temporary and Permanent Vegetation Cover - (As Needed)	700	S.F.	\$1.00	\$700.00	\$3.00	\$2,100.00	\$2,800.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	140	Ton	\$31.25	\$4,375.00	\$93.75	\$13,125.00	\$17,500.00
14B	Testing Allowance - Laoratory Analysis of Soil Samples	1	L.S.				\$5,000.00	\$5,000.00
15	Reconstruction of Uncharted and Mismarked Utilities	4,200	LF/In Dia/VF	\$0.62	\$2,604.00	\$1.88	\$7,896.00	\$10,500.00
16	Test Pits (As ordered by the Owner)	3	Ea.	\$75.00	\$225.00	\$225.00	\$675.00	\$900.00
17	Meter Pit (Bear Ridge Road) & Interconnection Pit	3	Ea.	\$30,000.00	\$90,000.00	\$70,000.00	\$210,000.00	\$300,000.00
18	Concrete Trush Blocks	210	C.Y.	\$66.25	\$13,912.50	\$198.75	\$41,737.50	\$55,650.00
19	Additional Foundation Material (As ordered by the Owner)	17	C.Y.	\$11.25	\$191.25	\$33.75	\$573.75	\$765.00
20	Additional Concrete Material (As ordered by the Owner)	8	C.Y.	\$75.00	\$600.00	\$225.00	\$1,800.00	\$2,400.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System located on Pleasantville Road.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	6	Each	\$875.00	\$5,250.00	\$2,625.00	\$15,750.00	\$21,000.00
	Subtotal							\$5,329,307.00
23	Contingency Allowance	1	L.S.				\$75,000.00	\$75,000.00
	Subtotal							\$5,404,307.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.2B New Water District No. 3 - Figure 12 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
-	Surveying Cost	1	L.S.					\$28,800.00
-	Soil Borings & Rock Probes	1	L.S.					\$50,000.00
	Subtotal							\$5,483,107.00
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$972,775.26
	Total Cost - Base Bid							\$6,455,882.26
				TOTAL ANNUAL COST (6%, 30 years)				\$469,013.00
				TOTAL PARCELS IN DISTRICT				258
				AVERAGE ANNUAL COST PER PARCEL				\$1,820.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 2 New Water District - Figure 13 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$15,000.00	\$15,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$750.00	\$750.00
3	As Built Record Drawings	1	L.S.				\$1,500.00	\$1,500.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	<u>Oak Hill Circle (8-inch)</u>	490	L.F.	\$67.50	\$33,075.00	\$202.50	\$99,225.00	\$132,300.00
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	5	Units	\$295.00	\$1,475.00	885.00	\$4,425.00	\$5,900.00
5B	Replacement of existing Water Service Connections.	5	Each	\$468.75	\$2,343.75	1,406.25	\$7,031.25	\$9,375.00
5C	Replacement of Existing Water Meters Only	5	Units	\$500.00	\$2,500.00	0.00	\$0.00	\$2,500.00
6	Installation of Fire Hydrant Assemblies	1	Units	\$2,493.75	\$2,493.75	7,481.25	\$7,481.25	\$9,975.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	4	Each	\$505.00	\$2,020.00	\$1,515.00	\$6,060.00	\$8,080.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	107	Ton	\$35.25	\$3,756.77	\$105.75	\$11,270.31	\$15,027.08
8B	All work required to Mill 2" off the newly installed Tempoarary Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	7,840	S.F.	\$0.11	\$862.40	\$0.33	\$2,587.20	\$3,449.60
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	95	Ton	\$35.25	\$3,339.35	\$105.75	\$10,018.05	\$13,357.40
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$1,000.00	\$1,000.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	136	C.Y.	\$8.38	\$1,140.61	\$25.14	\$3,421.83	\$4,562.44
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	14	C.Y.	\$39.65	\$539.68	\$118.95	\$1,619.04	\$2,158.72
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	123	C.Y.	\$8.38	\$1,026.55	\$25.14	\$3,079.65	\$4,106.20
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	27	C.Y.	\$11.25	\$306.25	\$33.75	\$918.75	\$1,225.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	80	L.F.	\$6.00	\$480.00	\$18.00	\$1,440.00	\$1,920.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	80	L.F.	\$8.75	\$700.00	\$26.25	\$2,100.00	\$2,800.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$2,500.00	\$2,500.00
12	Rock Excavation (15% of Trench Depth)	45	C.Y.	\$18.75	\$842.19	\$56.25	\$2,526.56	\$3,368.75
13	Temporary and Permanent Vegetation Cover - (As Needed)	670	S.F.	\$1.00	\$670.00	\$3.00	\$2,010.00	\$2,680.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	50	Ton	\$31.25	\$1,562.50	\$93.75	\$4,687.50	\$6,250.00
14B	Testing Allowance - Laoratory Analysis of Soil Samples	1	L.S.				\$2,500.00	\$2,500.00
15	Reconstruction of Uncharted and Mismarked Utilities	270	LF/In Dia/VF	\$0.62	\$167.40	\$1.88	\$507.60	\$675.00
16	Test Pits (As ordered by the Owner)	2	Ea.	\$75.00	\$150.00	\$225.00	\$450.00	\$600.00
17	Meter Pit (Bear Ridge Road) & Interconnection Pit	1	Ea.	\$30,000.00	\$30,000.00	\$70,000.00	\$70,000.00	\$100,000.00
18	Concrete Trush Blocks	95	C.Y.	\$66.25	\$6,293.75	\$198.75	\$18,881.25	\$25,175.00
19	Additional Foundation Material (As ordered by the Owner)	4	C.Y.	\$11.25	\$45.00	\$33.75	\$135.00	\$180.00
20	Additional Concrete Material (As ordered by the Owner)	9	C.Y.	\$75.00	\$675.00	\$225.00	\$2,025.00	\$2,700.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	2	Each	\$875.00	\$1,750.00	\$2,625.00	\$5,250.00	\$7,000.00
	Subtotal							\$393,615.19
23	Contingency Allowance	1	L.S.				\$20,000.00	\$20,000.00
	Subtotal							\$413,615.19
-	Surveying Cost	1	L.S.					\$5,000.00
-	Soil Borings & Rock Probes	1	L.S.					\$10,000.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 2 New Water District - Figure 13 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
	Subtotal							\$428,615.19
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$74,450.73
	Total Cost - Base Bid							\$488,065.93
				TOTAL ANNUAL COST (6%, 30 years)				\$35,457.00
				TOTAL PARCELS IN DISTRICT				5
				AVERAGE ANNUAL COST PER PARCEL				\$7,090.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.3 New Water Districts (Combined all Districts - Figures 14,15 & 16) (Area - I, II & III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$1,000,000.00	\$1,000,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$3,500.00	\$3,500.00
3	As Built Record Drawings	1	L.S.				\$15,000.00	\$15,000.00
4A	All work required to furnish & install 12-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances (Hardscrabble Road)	1,200	L.F.	\$73.75	\$88,500.00	\$221.25	\$265,500.00	\$354,000.00
4B	All work required to furnish & install 8-inch diameter D.I. Pipe, including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	7,200	L.F.	\$100.00	\$720,000.00	\$300.00	\$2,160,000.00	\$2,880,000.00
	Brook Manor Lane (8-inch)	1,870	L.F.					
	Bear Ridge Road (8-inch)	5,330	L.F.					
4C	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	41,690	L.F.	\$67.50	\$2,814,075.00	\$202.50	\$8,442,225.00	\$11,256,300.00
	Flag Hill Road (8-inch) & Easement	2,240	L.F.					
	Deborah Lane (8-inch)	585	L.F.					
	Mountain Road (8-inch)	3,325	L.F.					
	Sarles Lane (8-inch)	2,565	L.F.					
	Hillside Avenue (8-inch)	1,625	L.F.					
	Cornell Street (8-inch)	365	L.F.					
	Hays Street (8-inch)	380	L.F.					
	Alpine Terrace (8-inch)	1,710	L.F.					
	Rose Hill Road (8-inch)	1,250	L.F.					
	Gavin Road (8-inch)	465	L.F.					
	Cedar Avenue (8-inch)	1,820	L.F.					
	West End Avenue (8-inch)	1,550	L.F.					
	Choate Lane (8-inch)	2,380	L.F.					
	Woodland Drive (8-inch)	2,350	L.F.					
	Bedford Road (8-inch)	1,620	L.F.					
	Manville Road (8-inch)	570	L.F.					
	Locust Road (8-inch)	2,820	L.F.					
	Ridgewood Drive (8-inch)	965	L.F.					
	Fairview Avenue (8-inch)	720	L.F.					
	Walnut Street (8-inch)	970	L.F.					
	Central Avenue (8-inch)	695	L.F.					
	Foshay Avenue (8-inch)	1,725	L.F.					
	Stephen Drive (8-inch)	1,715	L.F.					
	Ridgeview Drive (8-inch)	1,065	L.F.					
	Lake Street (8-inch)	2,565	L.F.					
	Palmer Lane (8-inch)	1,535	L.F.					
	Munson Road (8-inch)	1,245	L.F.					
	Meadowbrook Lane (8-inch)	870	L.F.					
4B	All work required to furnish & install 6-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	Refer to Breakdown Below:	18,630	L.F.	\$58.75	\$1,094,512.50	\$176.25	\$3,283,537.50	\$4,378,050.00
	Hillcrest Avenue (6-inch)	1,025	L.F.					
	Congress Street (6-inch)	125	L.F.					
	Reginald Street (6-inch)	570	L.F.					
	Lake Drive (6-inch)	600	L.F.					
	Polly Wiggle Lane (6-inch)	1,015	L.F.					

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.3 New Water Districts (Combined all Districts - Figures 14,15 & 16) (Area - I, II & III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
	Highland Terrace (6-inch)	525	L.F.					
	Parkview Drive (6-inch)	570	L.F.					
	Birch Drive (6-inch)	630	L.F.					
	Oak Drive (6-inch)	755	L.F.					
	Park Street (6-inch)	1,290	L.F.					
	Elliott Place (6-inch)	375	L.F.					
	Elmwood Street (6-inch)	340	L.F.					
	Sandford Street (6-inch)	345	L.F.					
	Bruce Street (6-inch)	440	L.F.					
	Chestnut Street (6-inch)	785	L.F.					
	Short Street (6-inch)	605	L.F.					
	Leroy Street (6-inch)	755	L.F.					
	Underhill Road (6-inch)	315	L.F.					
	Chestnut Terrace (6-inch)	360	L.F.					
	Foster Place (6-inch)	495	L.F.					
	Virginia Road (6-inch)	880	L.F.					
	High Ridge Court (6-inch)	850	L.F.					
	Munson Pond Road (6-inch)	415	L.F.					
	Marling Lane (6-inch)	325	L.F.					
	Brook Lane (6-inch)	545	L.F.					
	Bryant Park (6-inch)	335	L.F.					
	Ferndale Road (6-inch)	1,260	L.F.					
	Randy Lane (6-inch)	585	L.F.					
	Woodbrook Road (6-inch)	995	L.F.					
	Carrick Circle (6-inch)	190	L.F.					
	Cy Court (6-inch)	330	L.F.					
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	817	Units	\$295.00	\$241,015.00	885.00	\$723,045.00	\$964,060.00
5B	Replacement of existing Water Service Connections.	817	EA	\$468.75	\$382,968.75	1,406.25	\$1,148,906.25	\$1,531,875.00
5C	Replacement of Existing Water Meters Only	834	Units	\$500.00	\$417,000.00	0.00	\$0.00	\$417,000.00
6	Installation of Fire Hydrant Assemblies	105	Units	\$2,493.75	\$261,843.75	7,481.25	\$785,531.25	\$1,047,375.00
7A	Installation of 6-inch Diameter Mechanical Joint Gate Valve + Valve Box	57	Each	\$312.50	\$17,812.50	\$937.50	\$53,437.50	\$71,250.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	157	Each	\$505.00	\$79,285.00	\$1,515.00	\$237,855.00	\$317,140.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	14,947	Ton	\$35.25	\$526,867.65	\$105.75	\$1,580,602.95	\$2,107,470.60
8B	All work required to Mill 2" off the newly installed Tempoarary Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	1,099,520	S.F.	\$0.11	\$120,947.20	\$0.33	\$362,841.60	\$483,788.80
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	13,286	Ton	\$35.25	\$468,326.80	\$105.75	\$1,404,980.40	\$1,873,307.20
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$10,000.00	\$10,000.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	19,089	C.Y.	\$8.38	\$159,964.89	\$25.14	\$479,894.67	\$639,859.56
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	1,909	C.Y.	\$39.65	\$75,687.44	\$118.95	\$227,062.33	\$302,749.78
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	17,180	C.Y.	\$8.38	\$143,968.40	\$25.14	\$431,905.20	\$575,873.60
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	3,818	C.Y.	\$11.25	\$42,950.00	\$33.75	\$128,850.00	\$171,800.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No.3 New Water Districts (Combined all Districts - Figures 14,15 & 16) (Area - I, II & III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	1,125	L.F.	\$6.00	\$6,750.00	\$18.00	\$20,250.00	\$27,000.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	1,125	L.F.	\$8.75	\$9,843.75	\$26.25	\$29,531.25	\$39,375.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$11,000.00	\$11,000.00
12	Rock Excavation (15% of Trench Depth)	6,299	C.Y.	\$18.75	\$118,112.50	\$56.25	\$354,337.50	\$472,450.00
13	Temporary and Permanent Vegetation Cover - (As Needed)	47,700	S.F.	\$1.00	\$47,700.00	\$3.00	\$143,100.00	\$190,800.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	890	Ton	\$31.25	\$27,812.50	\$93.75	\$83,437.50	\$111,250.00
14B	Testing Allowance - Laboratory Analysis of Soil Samples	1	L.S.				\$11,000.00	\$11,000.00
15	Reconstruction of Uncharted and Mismarked Utilities	11,850	LF/In Dia/VF	\$0.62	\$7,347.00	\$1.88	\$22,278.00	\$29,625.00
16	Test Pits (As ordered by the Owner)	19	Ea.	\$75.00	\$1,425.00	\$225.00	\$4,275.00	\$5,700.00
17	Meter Pits	11	Ea.	\$30,000.00	\$330,000.00	\$70,000.00	\$770,000.00	\$1,100,000.00
18	Concrete Thrust Blocks	1,385	C.Y.	\$66.25	\$91,756.25	\$198.75	\$275,268.75	\$367,025.00
19	Additional Foundation Material (As ordered by the Owner)	112	C.Y.	\$11.25	\$1,260.00	\$33.75	\$3,780.00	\$5,040.00
20	Additional Concrete Material (As ordered by the Owner)	55	C.Y.	\$75.00	\$4,125.00	\$225.00	\$12,375.00	\$16,500.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System located on Pleasantville Road.	1	L.S.				\$15,000.00	\$15,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	22	Each	\$875.00	\$19,250.00	\$2,625.00	\$57,750.00	\$77,000.00
	Subtotal							\$32,879,164.53
23	Contingency Allowance	1	L.S.				\$250,000.00	\$250,000.00
	Subtotal							\$33,129,164.53
-	Surveying Cost	1	L.S.					\$274,880.00
-	Soil Borings & Rock Probes	1	L.S.					\$140,000.00
	Subtotal							\$33,544,044.53
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$5,963,249.62
	Total Cost - Base Bid							\$39,507,294.15
							TOTAL ANNUAL COST (6%, 30 years)	\$2,870,162.00
							TOTAL PARCELS IN DISTRICT	834
							AVERAGE ANNUAL COST PER PARCEL	\$3,440.00

Charles A. Manganaro Consulting Engineers, P.C.

Engineer's Opinion of Probable Construction Cost

Alternative No. 3 New Water District - Figure 17 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
1	Mobilization (Price Limited By Section 01505)	1	L.S.				\$15,000.00	\$15,000.00
2	Construction Photographs (Pre, During & Post)	1	L.S.				\$750.00	\$750.00
3	As Built Record Drawings	1	L.S.				\$1,500.00	\$1,500.00
4A	All work required to furnish & install 8-inch diameter PVC Pipe Pressure Class 235 (DR-18), including Pipe Fittings, Temporary Water main Bypassing and Appurtenances.							
	<u>Oak Hill Circle (8-inch)</u>	490	L.F.	\$67.50	\$33,075.00	\$202.50	\$99,225.00	\$132,300.00
5A	Replacement of Existing Water Service Curb Stop and Curb Box Only	5	Units	\$295.00	\$1,475.00	885.00	\$4,425.00	\$5,900.00
5B	Replacement of existing Water Service Connections.	5	Each	\$468.75	\$2,343.75	1,406.25	\$7,031.25	\$9,375.00
5C	Replacement of Existing Water Meters Only	5	Units	\$500.00	\$2,500.00	0.00	\$0.00	\$2,500.00
6	Installation of Fire Hydrant Assemblies	1	Units	\$2,493.75	\$2,493.75	7,481.25	\$7,481.25	\$9,975.00
7B	Installation of 8-inch Diameter Mechanical Joint Gate Valve + Valve Box	4	Each	\$505.00	\$2,020.00	\$1,515.00	\$6,060.00	\$8,080.00
8A	All Work required to furnish & install Temporary Bituminous Concrete Pavement (excavated trench width + 18-inches on each side of the trench)	107	Ton	\$35.25	\$3,756.77	\$105.75	\$11,270.31	\$15,027.08
8B	All work required to Mill 2" off the newly installed Tempoaray Bituminous Concrete Pavement (excavated trench width + remaining portion of the existing roadway surface)	7,840	S.F.	\$0.11	\$862.40	\$0.33	\$2,587.20	\$3,449.60
8C	All work required to furnish & install Permanent Bituminous Concrete Pavement - (excavated trench width + remaining portion of the existing roadway surface)	95	Ton	\$35.25	\$3,339.35	\$105.75	\$10,018.05	\$13,357.40
8D	All work required to install Pavement Stripping as shown	1	L.S.				\$1,000.00	\$1,000.00
9A	All work required to furnish & install Aggregate Foundation Material - Trench Fill Above the Pipe Encasement (100% of the total length of pipe installed)	136	C.Y.	\$8.38	\$1,140.61	\$25.14	\$3,421.83	\$4,562.44
9B	All work required to furnish & install Controlled Low Strength Material - Pipe Encasement (10% of the total length of pipe installed)	14	C.Y.	\$39.65	\$539.68	\$118.95	\$1,619.04	\$2,158.72
9C	All work required to furnish & install Aggregate Foundation Material - Pipe Encasement (90% of the total length of pipe installed)	123	C.Y.	\$8.38	\$1,026.55	\$25.14	\$3,079.65	\$4,106.20
9D	All work required to furnish & install Clean Crushed Stone bedding material 6" thick, 3/4 inch size	27	C.Y.	\$11.25	\$306.25	\$33.75	\$918.75	\$1,225.00
10A	All work required to replace the existing Asphalt Curbs (As-Needed)	80	L.F.	\$6.00	\$480.00	\$18.00	\$1,440.00	\$1,920.00
10B	All work required to replace the existing Concrete Curbs (As-Needed)	80	L.F.	\$8.75	\$700.00	\$26.25	\$2,100.00	\$2,800.00
11	Police Traffic Control Allowance (As Needed)	1	L.S.				\$2,500.00	\$2,500.00
12	Rock Excavation (15% of Trench Depth)	45	C.Y.	\$18.75	\$842.19	\$56.25	\$2,526.56	\$3,368.75
13	Temporary and Permanent Vegetation Cover - (As Needed)	670	S.F.	\$1.00	\$670.00	\$3.00	\$2,010.00	\$2,680.00
14A	Disposal of excavated Hazardous Soil Material as per the New York State Standards - (If Any)	50	Ton	\$31.25	\$1,562.50	\$93.75	\$4,687.50	\$6,250.00
14B	Testing Allowance - Laoratory Analysis of Soil Samples	1	L.S.				\$2,500.00	\$2,500.00
15	Reconstruction of Uncharted and Mismarked Utilities	270	LF/In Dia/VF	\$0.62	\$167.40	\$1.88	\$507.60	\$675.00
16	Test Pits (As ordered by the Owner)	2	Ea.	\$75.00	\$150.00	\$225.00	\$450.00	\$600.00
17	Meter Pit (Bear Ridge Road) & Interconnection Pit	1	Ea.	\$30,000.00	\$30,000.00	\$70,000.00	\$70,000.00	\$100,000.00
18	Concrete Trush Blocks	95	C.Y.	\$66.25	\$6,293.75	\$198.75	\$18,881.25	\$25,175.00
19	Additional Foundation Material (As ordered by the Owner)	4	C.Y.	\$11.25	\$45.00	\$33.75	\$135.00	\$180.00
20	Additional Concrete Material (As ordered by the Owner)	9	C.Y.	\$75.00	\$675.00	\$225.00	\$2,025.00	\$2,700.00
21	All work required to perform Piping Modifications (tie-in) to the existing Water Main System.	1	L.S.				\$5,000.00	\$5,000.00
22	Unknown Stream Crossing/Buried Pipe Crossing/etc.	2	Each	\$875.00	\$1,750.00	\$2,625.00	\$5,250.00	\$7,000.00
	Subtotal							\$393,615.19
23	Contingency Allowance	1	L.S.				\$20,000.00	\$20,000.00
	Subtotal							\$413,615.19
-	Surveying Cost	1	L.S.					\$5,000.00
-	Soil Borings & Rock Probes	1	L.S.					\$10,000.00

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Engineer's Opinion of Probable Construction Cost

Alternative No. 3 New Water District - Figure 17 (Area - III) - Town of Mount Pleasant, New York

Job No. 2000

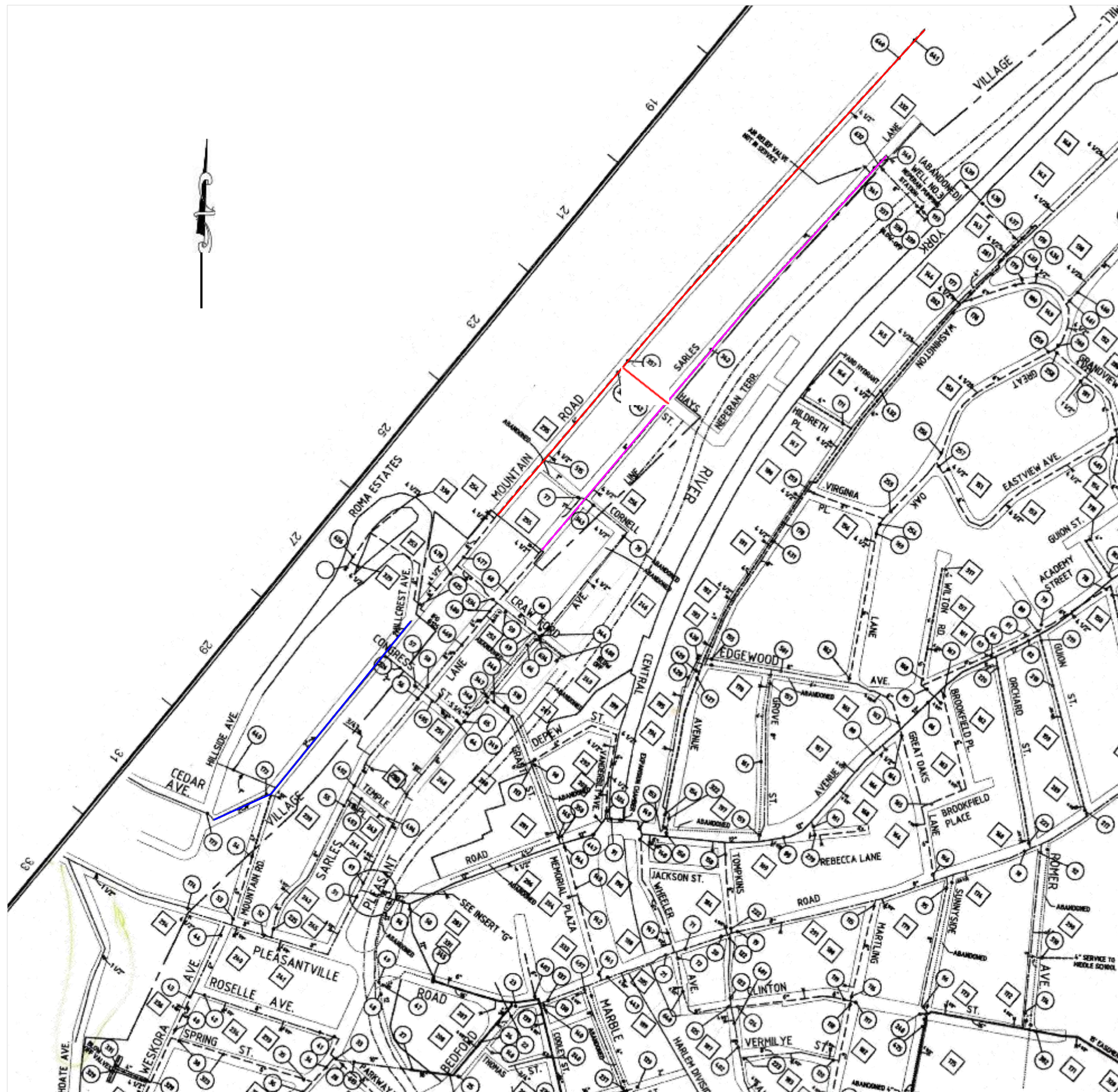
Dated 04/22/2024

Proposal No. P-2308C

Prepared By: SJT Checked By: SK

Item No.	Description:	Quantity	Units	Material/Equipment		Labor		Total Cost
				Unit Cost	Total	Unit Cost	Total	
	Subtotal							\$428,615.19
-	Engineering Fees (Design, Permitting, Bidding, Office & Field)							\$74,450.73
	Total Cost - Base Bid							\$488,065.93
				TOTAL ANNUAL COST (6%, 30 years)				\$35,457.00
				TOTAL PARCELS IN DISTRICT				5
				AVERAGE ANNUAL COST PER PARCEL				\$7,090.00

APPENDIX “B”



AREA I
 FIGURE NO.1 EXISTING WATER MAINS

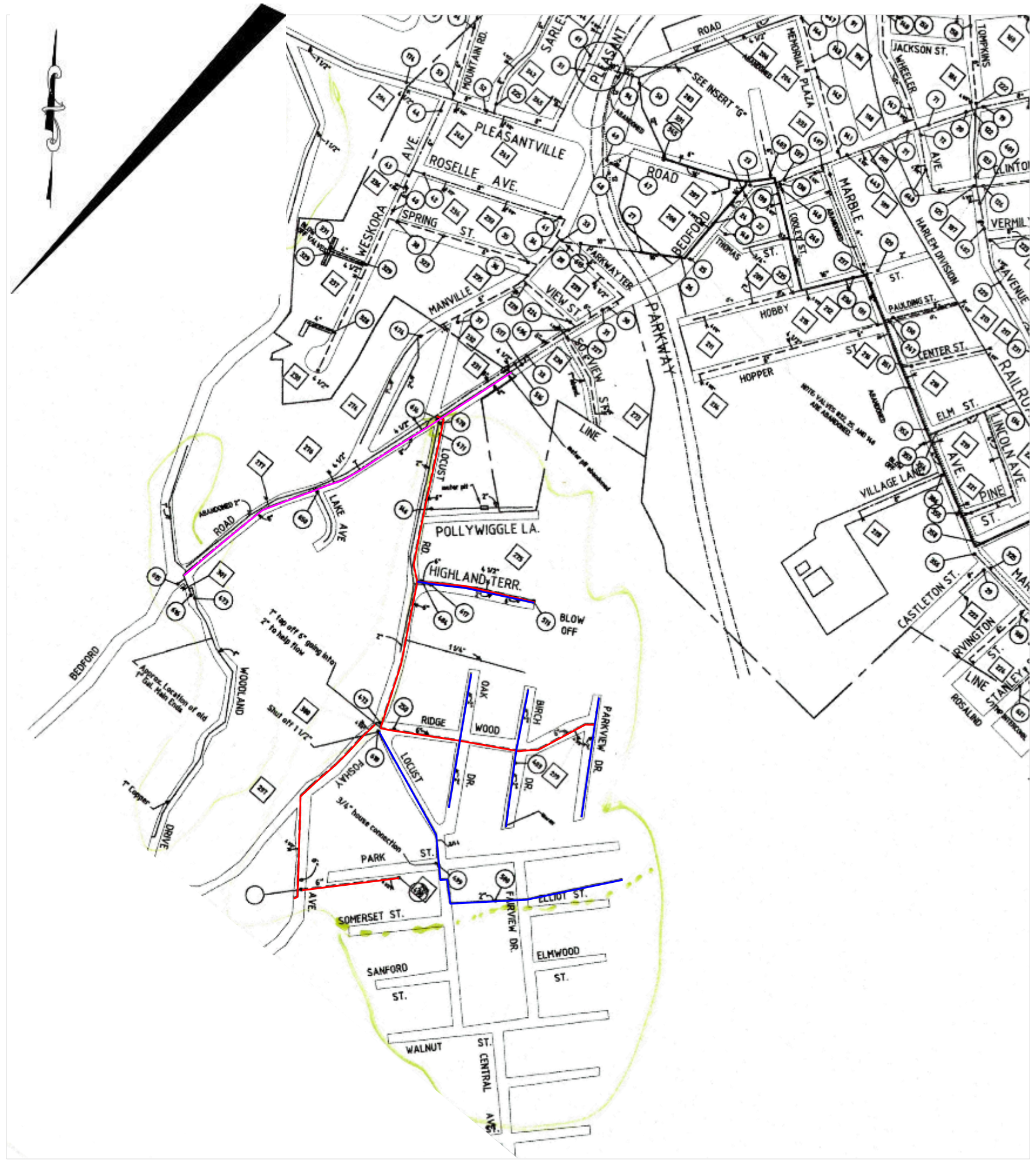
LEGEND

- EXIST. 8 INCHES DIA. WATER MAINS
- EXIST. 6 INCHES DIA. WATER MAINS
- EXIST. 2 INCHES DIA. WATER MAINS

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AREA II
 FIGURE NO.2 EXISTING WATER MAINS

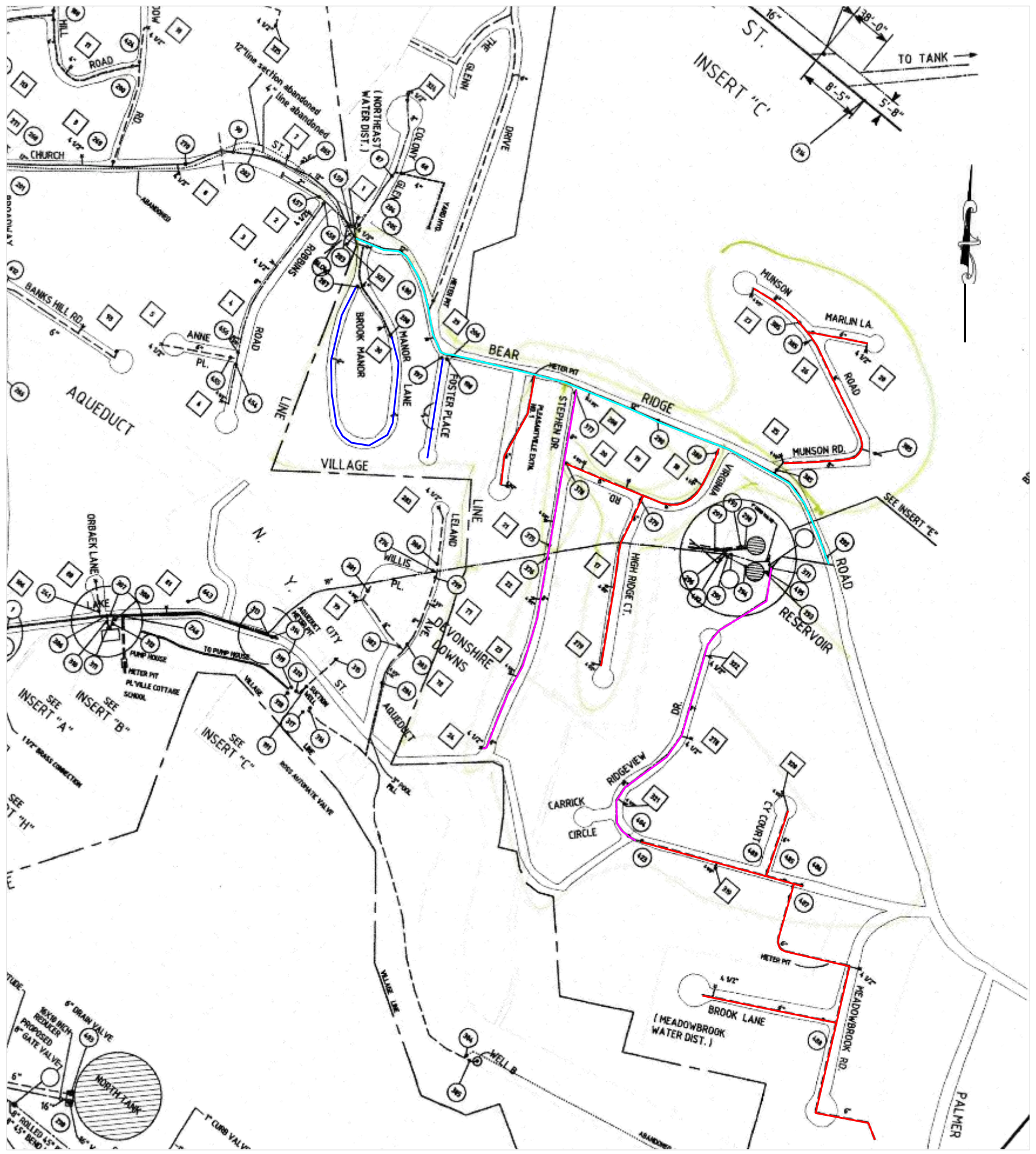
LEGEND

- EXIST. 8 INCHES DIA. WATER MAINS
- EXIST. 6 INCHES DIA. WATER MAINS
- EXIST. 2 INCHES DIA. WATER MAINS

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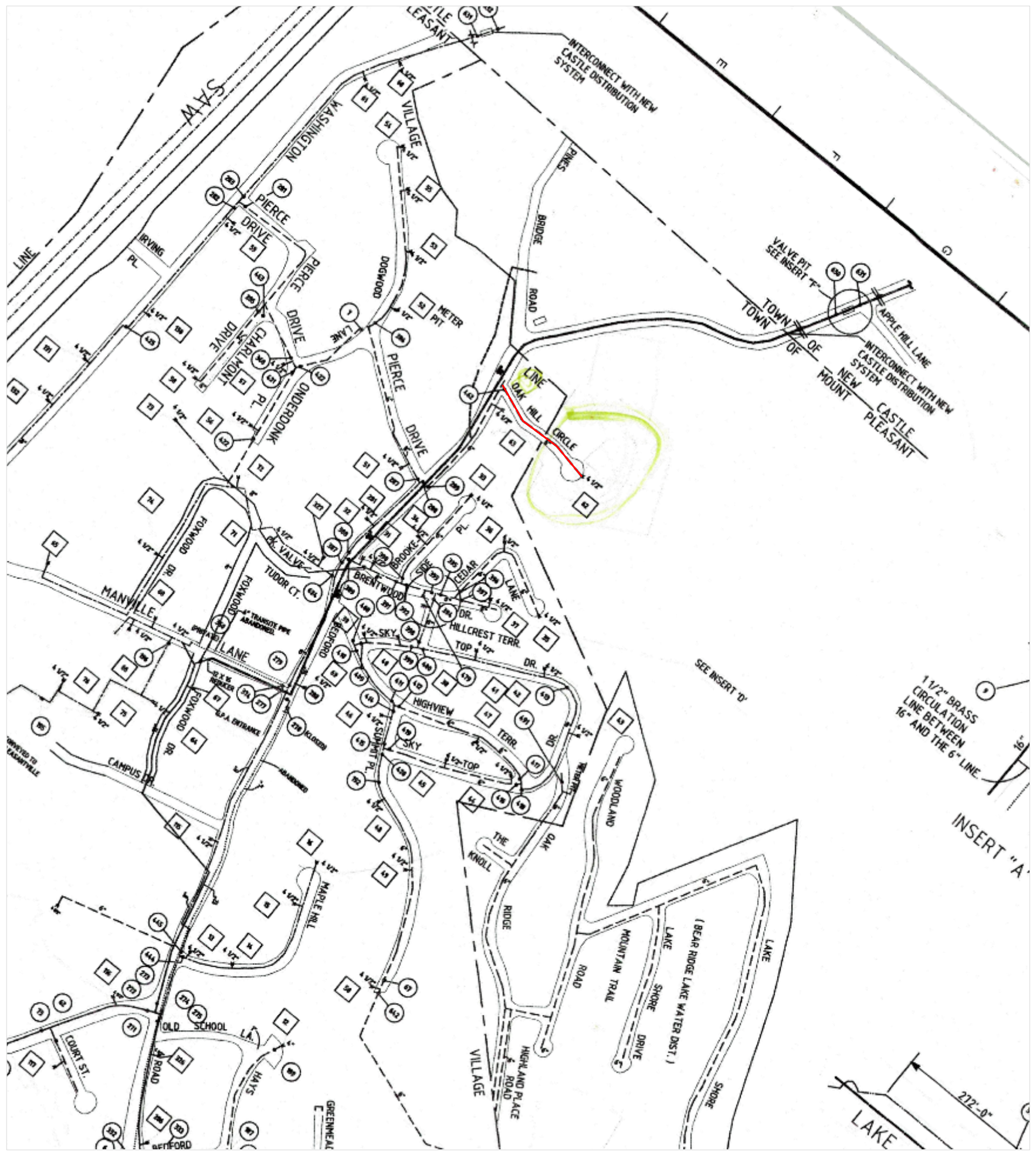
AREA III
 FIGURE NO.3 EXISTING WATER MAINS

LEGEND

- EXIST. 12 INCHES DIA. WATER MAINS
- EXIST. 8 INCHES DIA. WATER MAINS
- EXIST. 6 INCHES DIA. WATER MAINS
- EXIST. 2 INCHES DIA. WATER MAINS

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AREA III
 FIGURE NO.4 EXISTING WATER MAINS

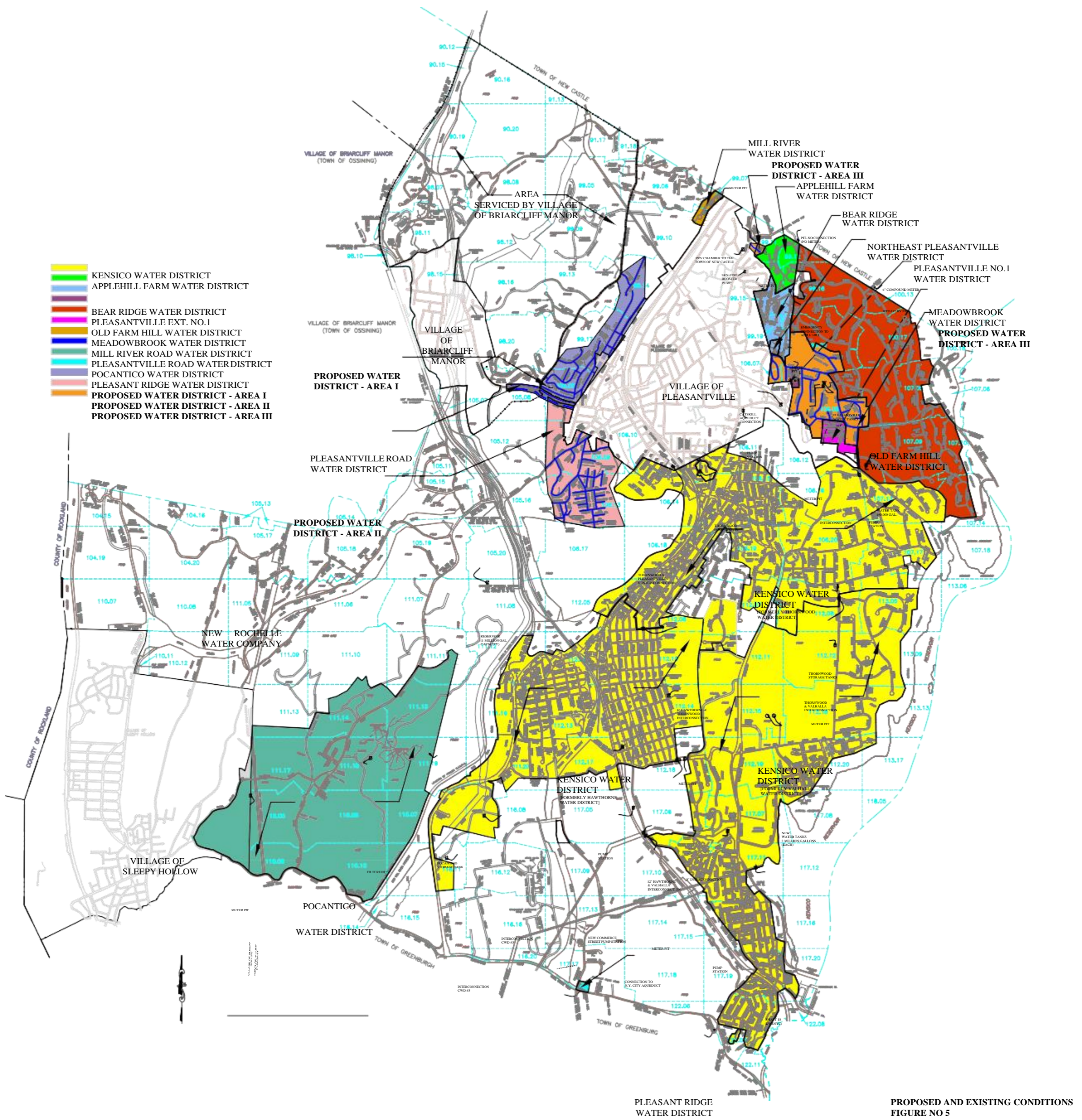
LEGEND

- EXIST. 12 INCHES DIA. WATER MAINS
- EXIST. 8 INCHES DIA. WATER MAINS
- EXIST. 6 INCHES DIA. WATER MAINS
- EXIST. 2 INCHES DIA. WATER MAINS

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TOWN OF MOUNT PLEASANT
SCALE: 1"=1100'



PLEASANT RIDGE WATER DISTRICT

PROPOSED AND EXISTING CONDITIONS
FIGURE NO 5

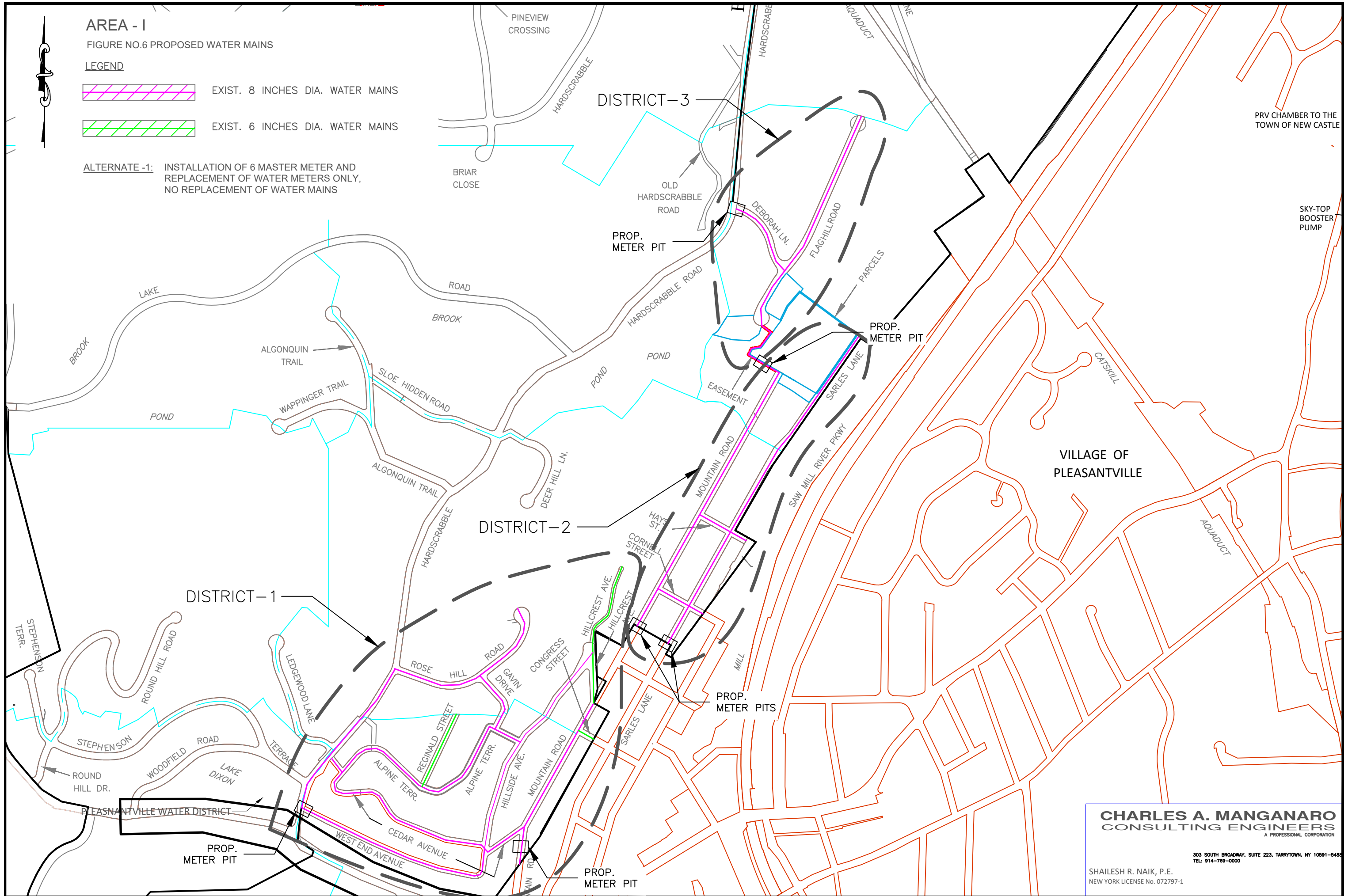
AREA - 1

FIGURE NO.6 PROPOSED WATER MAINS

LEGEND

-  EXIST. 8 INCHES DIA. WATER MAINS
-  EXIST. 6 INCHES DIA. WATER MAINS

ALTERNATE -1: INSTALLATION OF 6 MASTER METER AND REPLACEMENT OF WATER METERS ONLY, NO REPLACEMENT OF WATER MAINS



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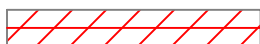
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AREA - II

FIGURE NO.7 PROPOSED WATER MAINS

LEGEND



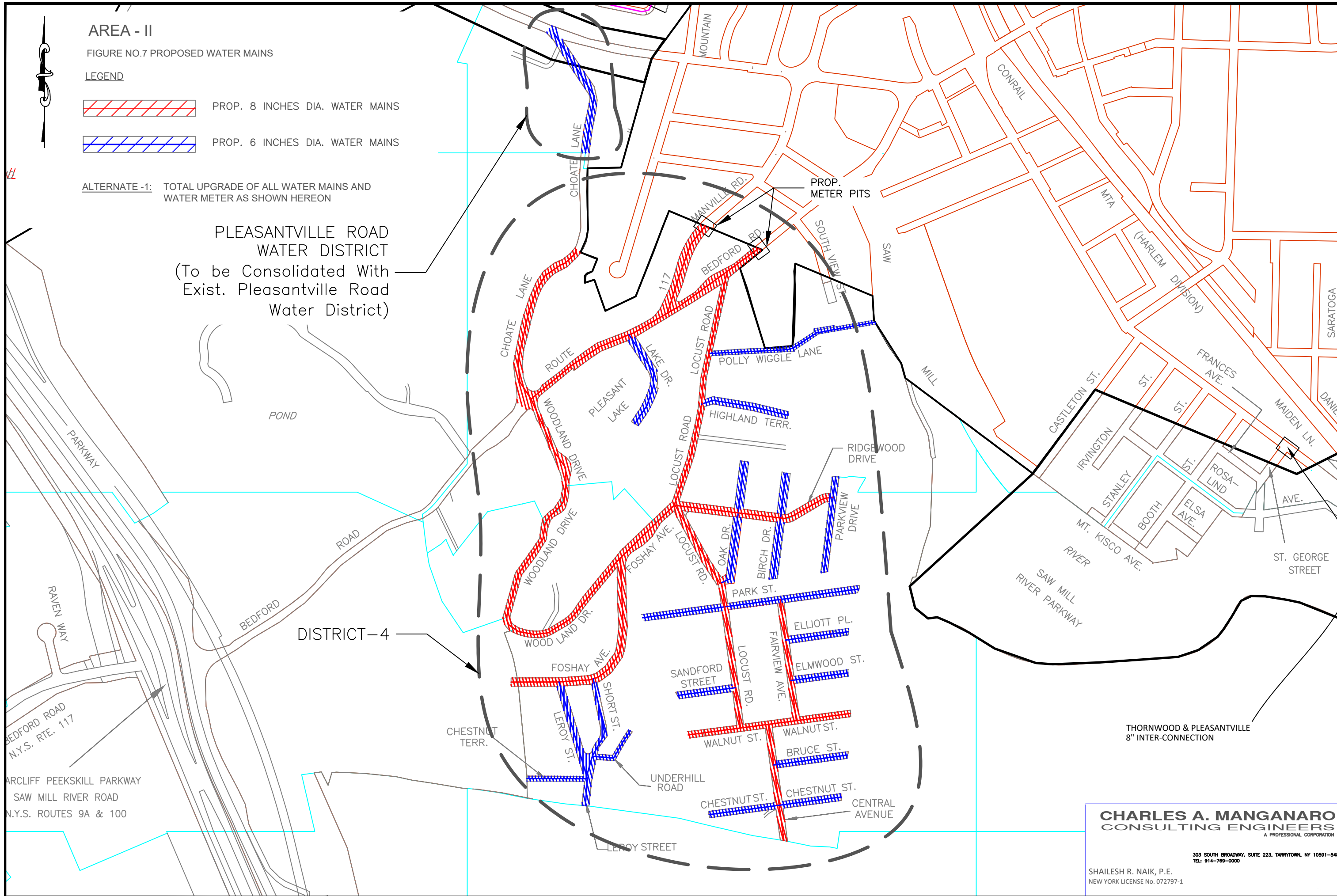
PROP. 8 INCHES DIA. WATER MAINS



PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -1: TOTAL UPGRADE OF ALL WATER MAINS AND WATER METER AS SHOWN HEREON

PLEASANTVILLE ROAD WATER DISTRICT (To be Consolidated With Exist. Pleasantville Road Water District)



THORNWOOD & PLEASANTVILLE 8" INTER-CONNECTION

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AREA - III

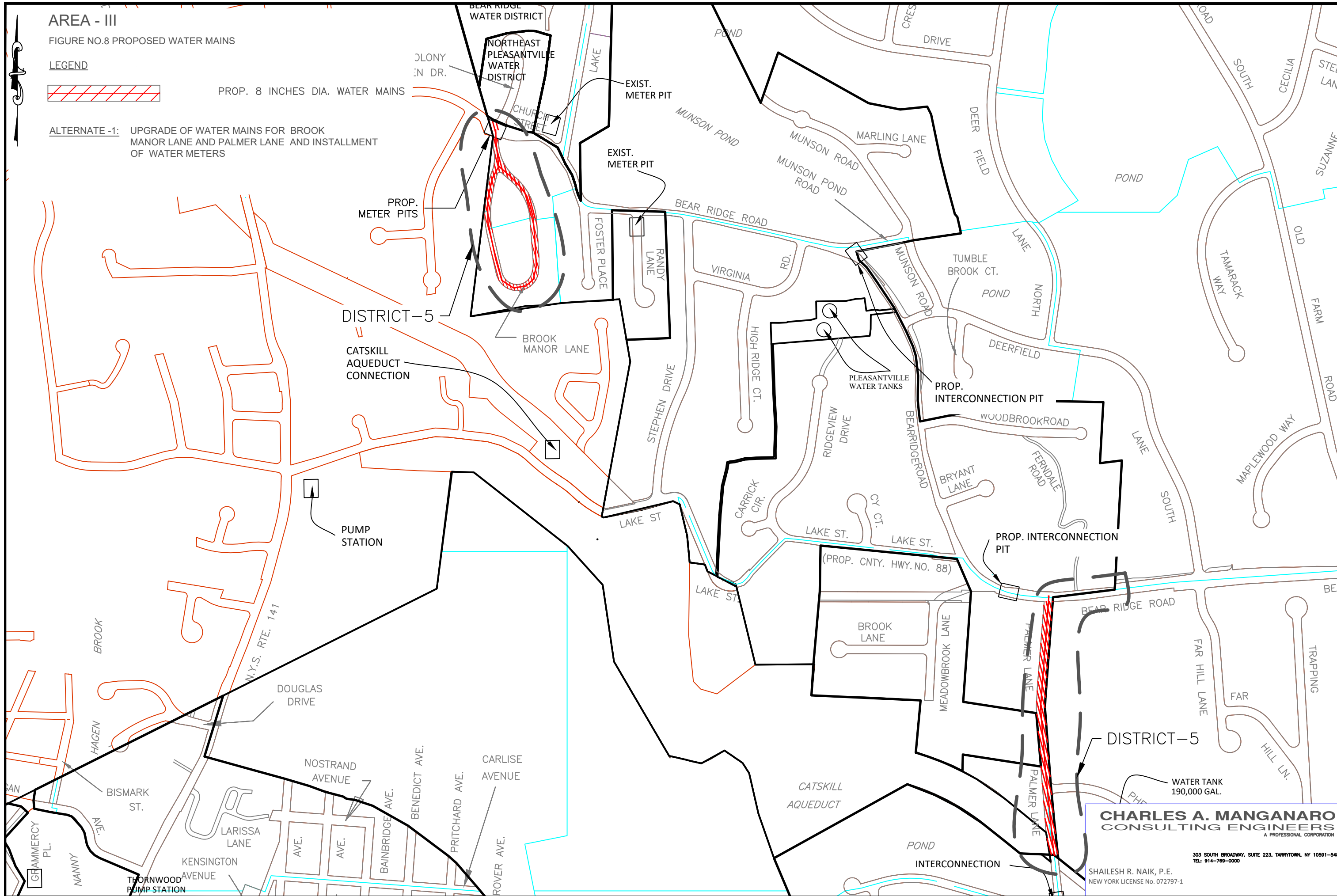
FIGURE NO.8 PROPOSED WATER MAINS

LEGEND



PROP. 8 INCHES DIA. WATER MAINS

ALTERNATE -1: UPGRADE OF WATER MAINS FOR BROOK MANOR LANE AND PALMER LANE AND INSTALLMENT OF WATER METERS



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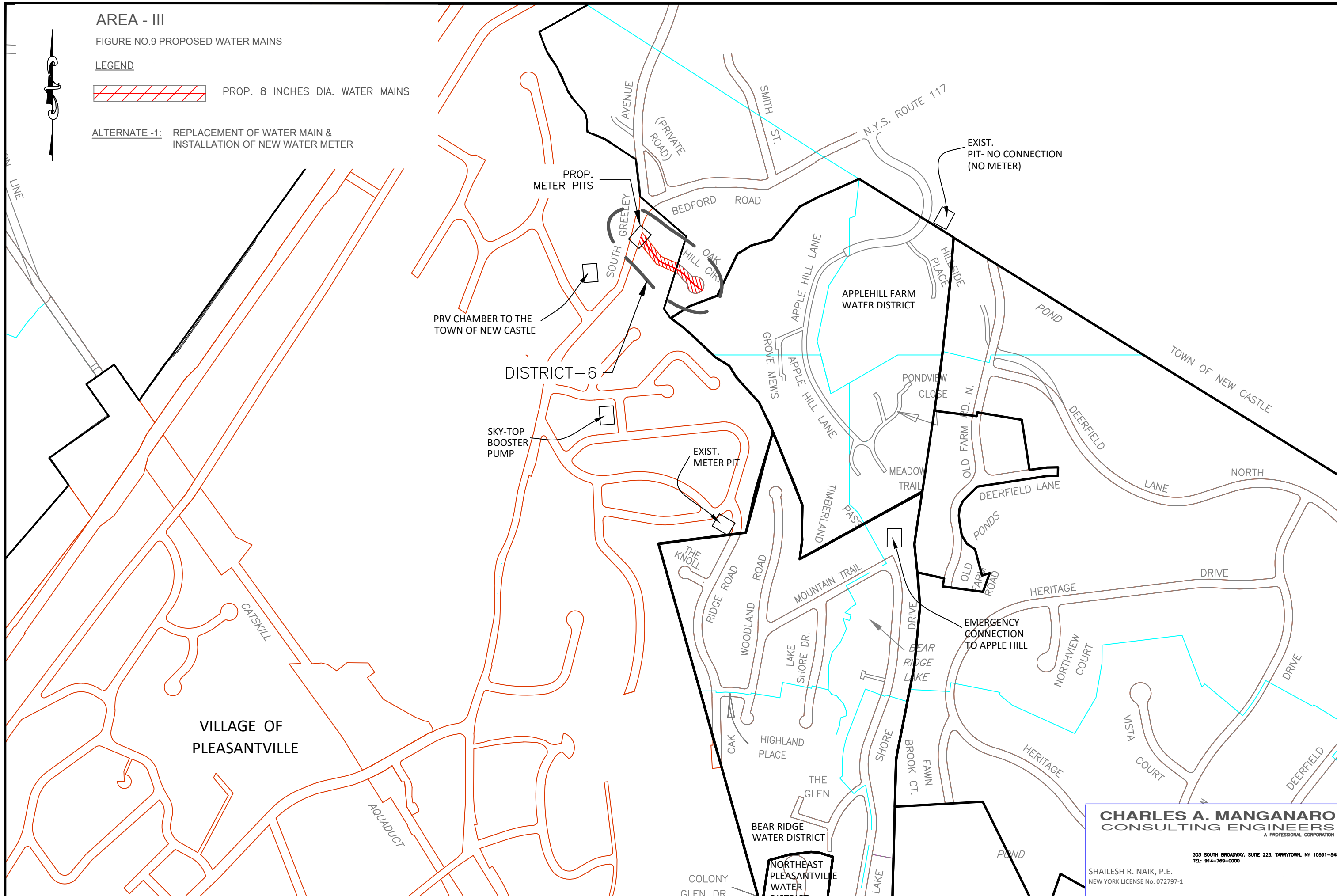
AREA - III

FIGURE NO.9 PROPOSED WATER MAINS

LEGEND

PROF. 8 INCHES DIA. WATER MAINS

ALTERNATE -1: REPLACEMENT OF WATER MAIN & INSTALLATION OF NEW WATER METER



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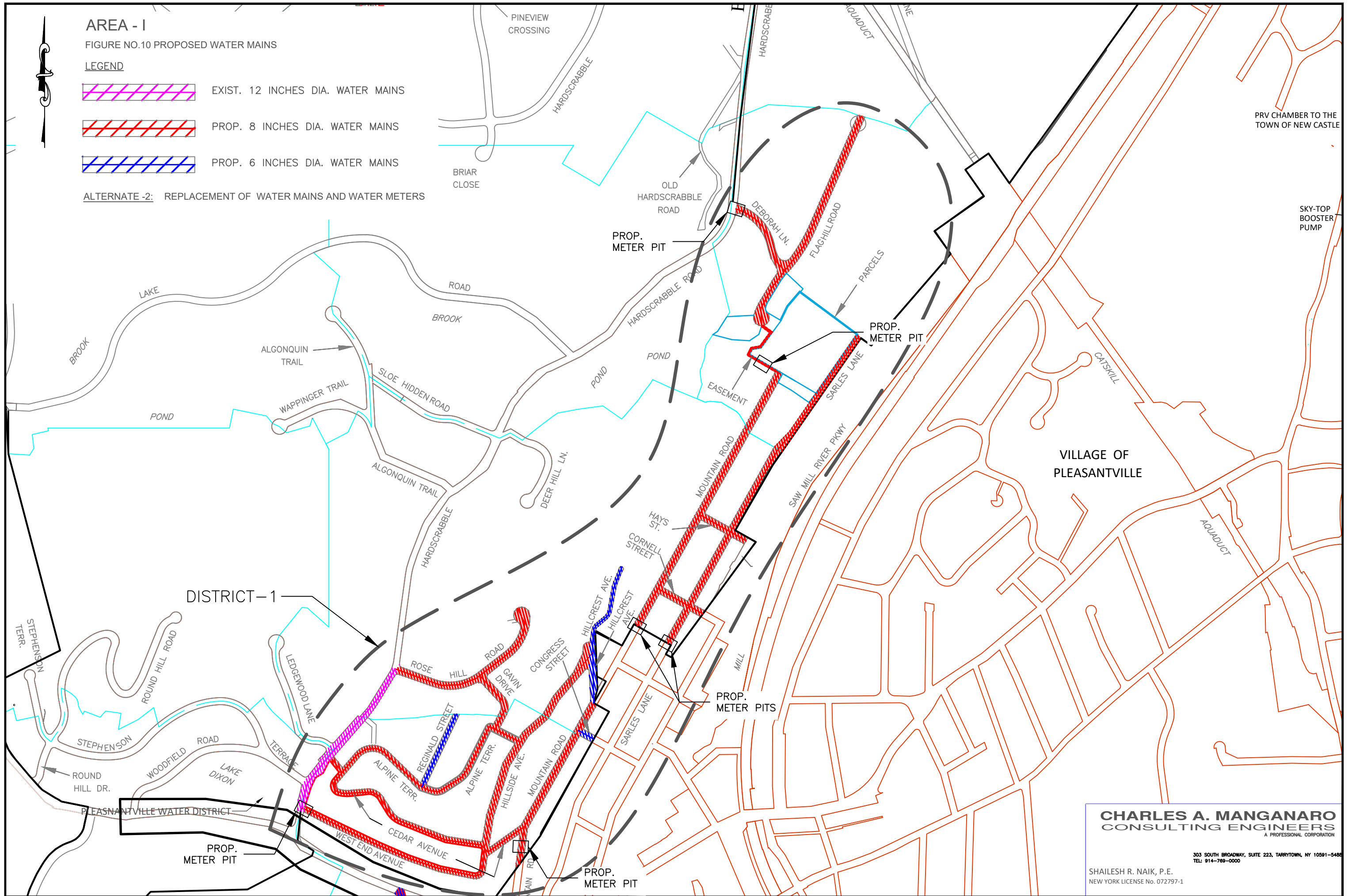
AREA - 1

FIGURE NO.10 PROPOSED WATER MAINS

LEGEND

-  EXIST. 12 INCHES DIA. WATER MAINS
-  PROP. 8 INCHES DIA. WATER MAINS
-  PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -2: REPLACEMENT OF WATER MAINS AND WATER METERS



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AREA - II

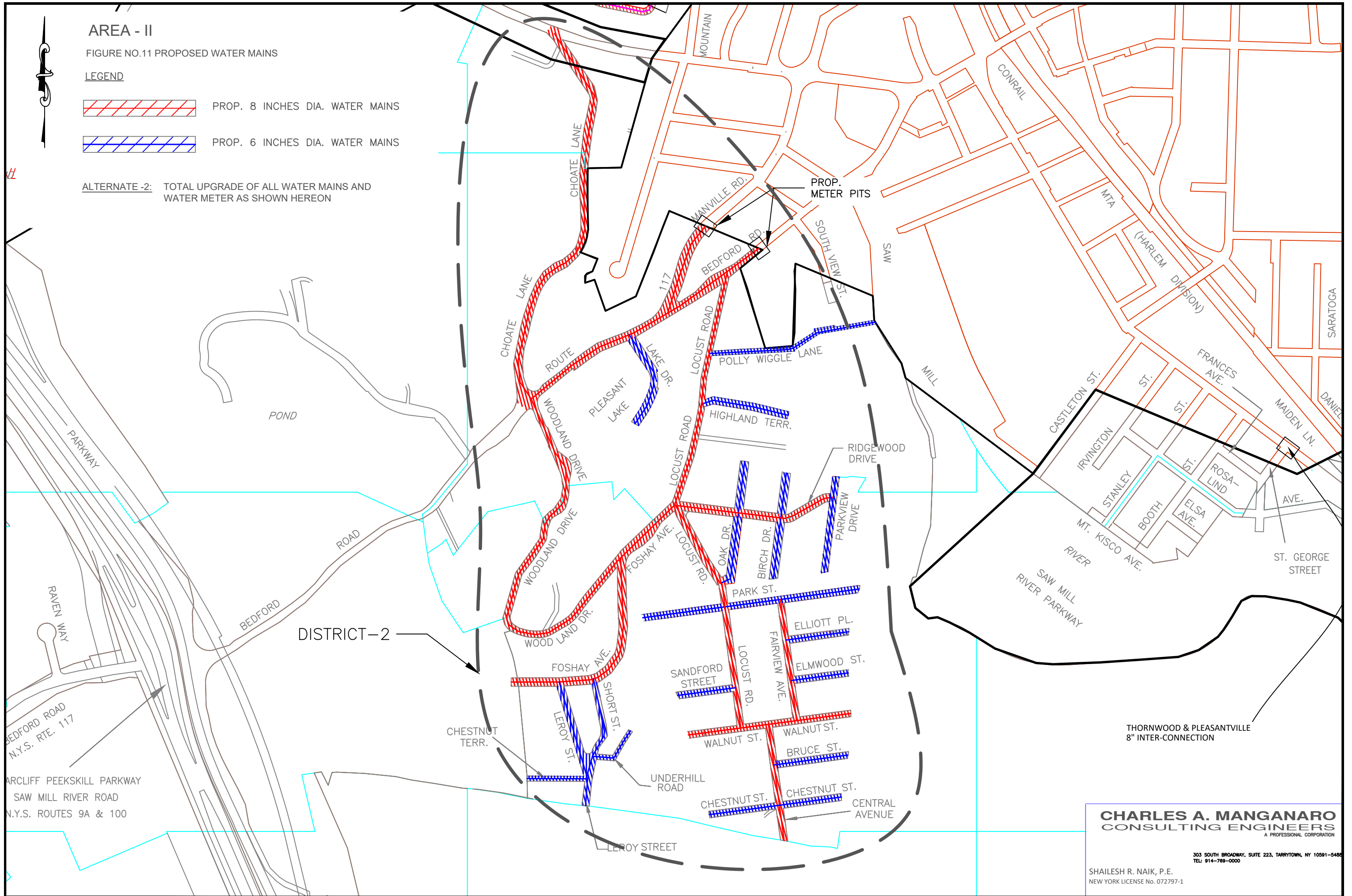
FIGURE NO.11 PROPOSED WATER MAINS

LEGEND

PROP. 8 INCHES DIA. WATER MAINS

PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -2: TOTAL UPGRADE OF ALL WATER MAINS AND WATER METER AS SHOWN HEREON



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AREA - III

FIGURE NO.12 PROPOSED WATER MAINS

LEGEND

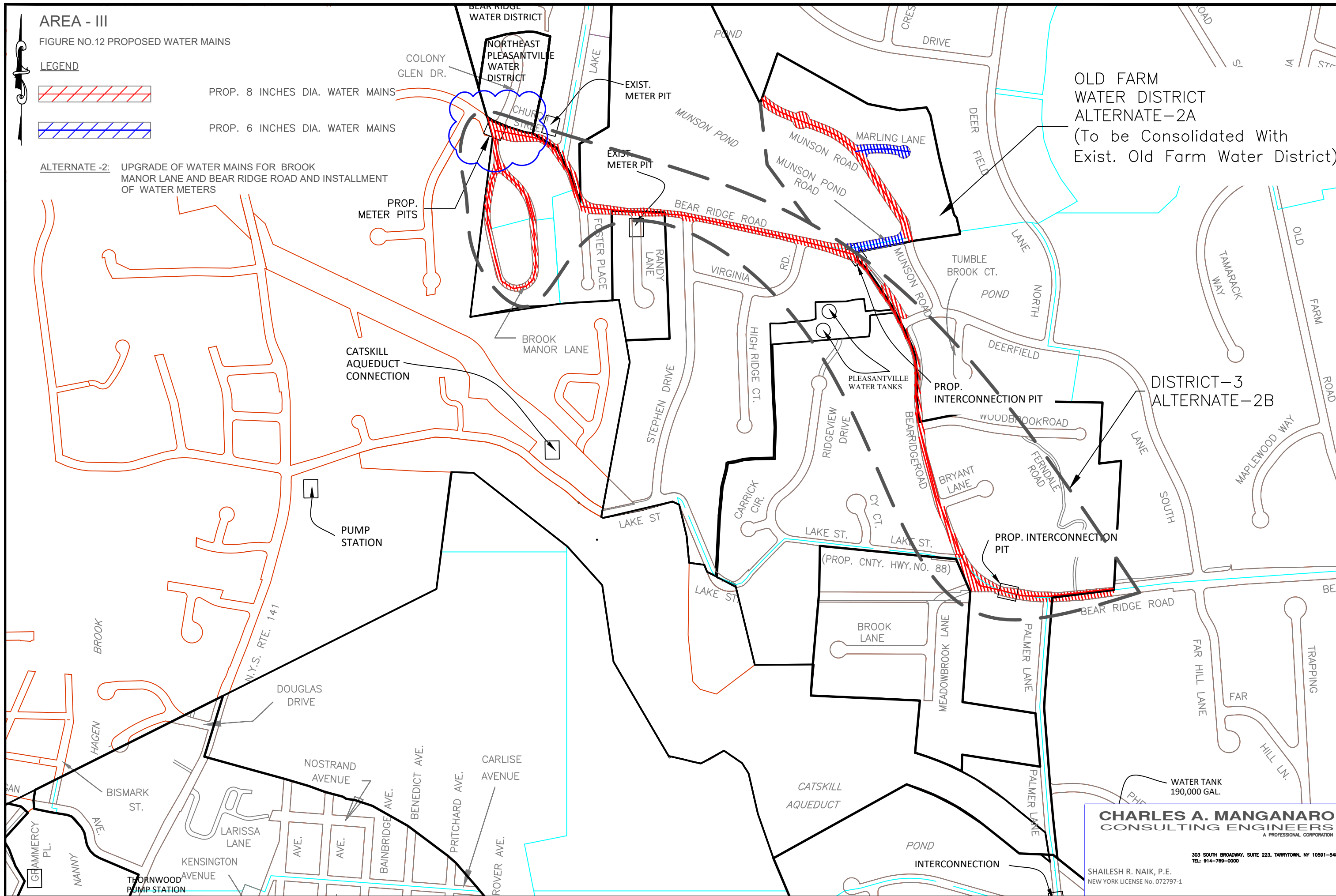


PROP. 8 INCHES DIA. WATER MAINS



PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -2: UPGRADE OF WATER MAINS FOR BROOK MANOR LANE AND BEAR RIDGE ROAD AND INSTALLMENT OF WATER METERS



OLD FARM WATER DISTRICT ALTERNATE-2A (To be Consolidated With Exist. Old Farm Water District)

DISTRICT-3 ALTERNATE-2B

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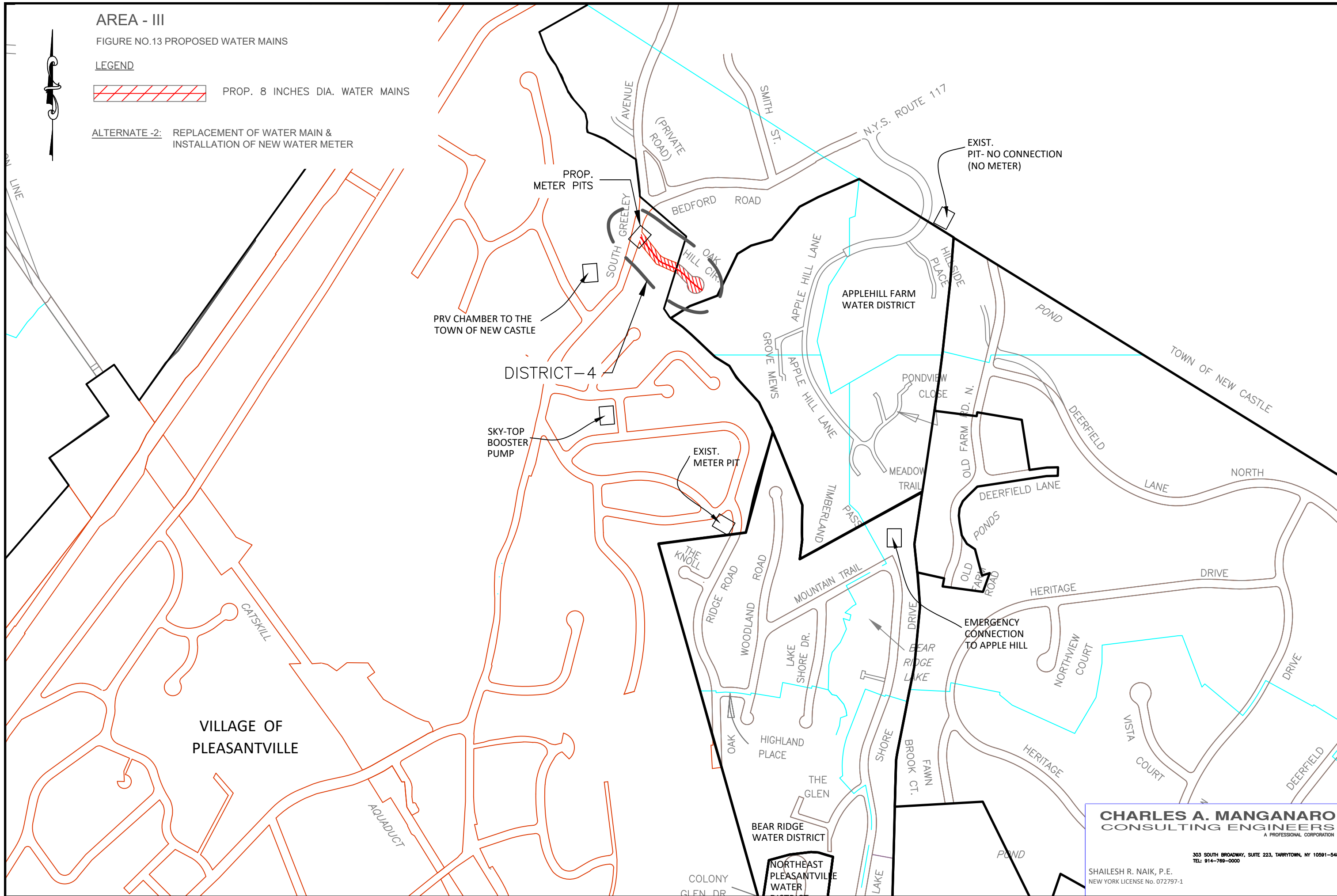
AREA - III

FIGURE NO. 13 PROPOSED WATER MAINS

LEGEND

PROF. 8 INCHES DIA. WATER MAINS

ALTERNATE -2: REPLACEMENT OF WATER MAIN & INSTALLATION OF NEW WATER METER



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AREA - I

FIGURE NO.14 PROPOSED WATER MAINS

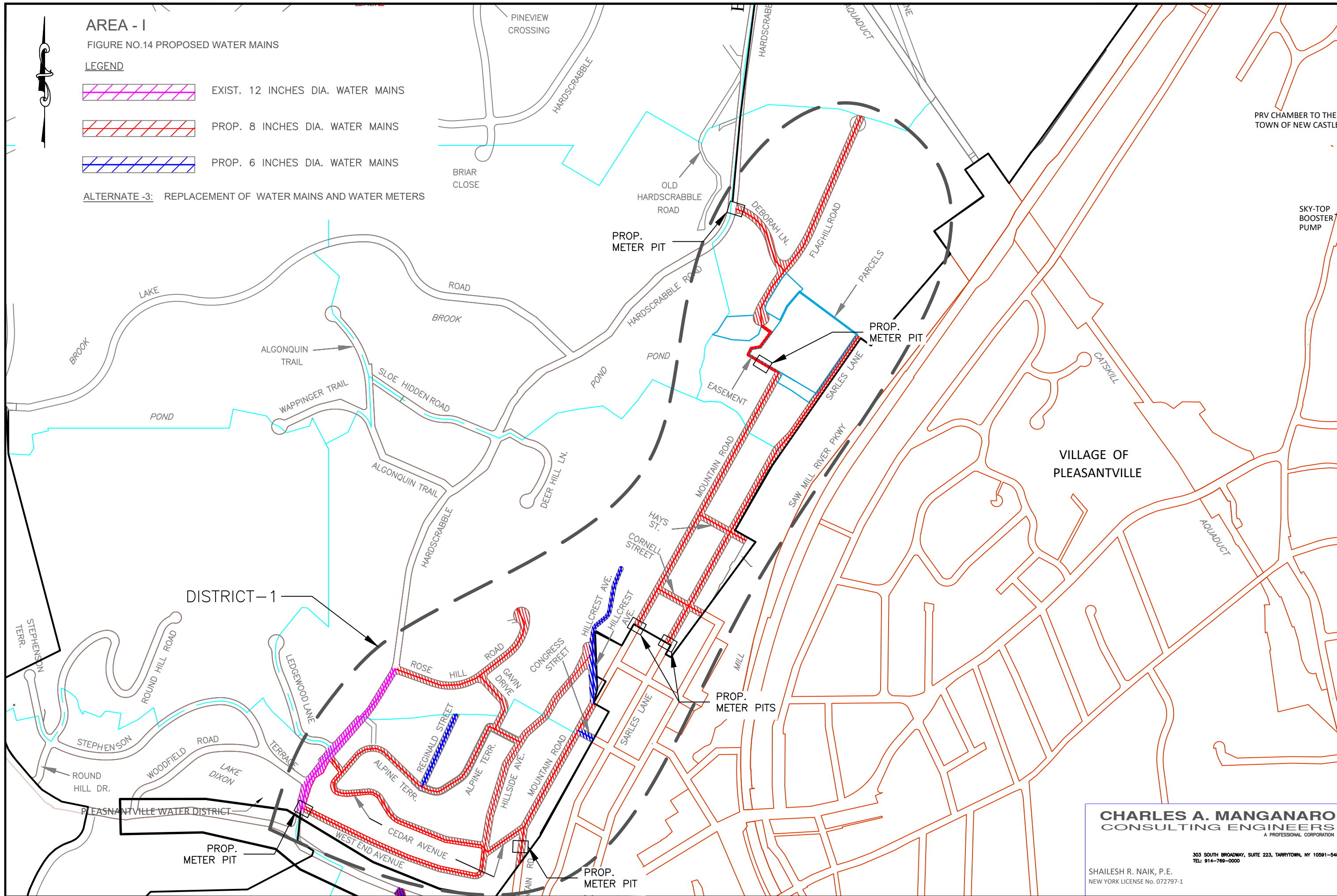
LEGEND

 EXIST. 12 INCHES DIA. WATER MAINS

 PROP. 8 INCHES DIA. WATER MAINS

 PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -3: REPLACEMENT OF WATER MAINS AND WATER METERS



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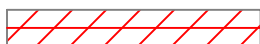
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AREA - II

FIGURE NO.15 PROPOSED WATER MAINS

LEGEND

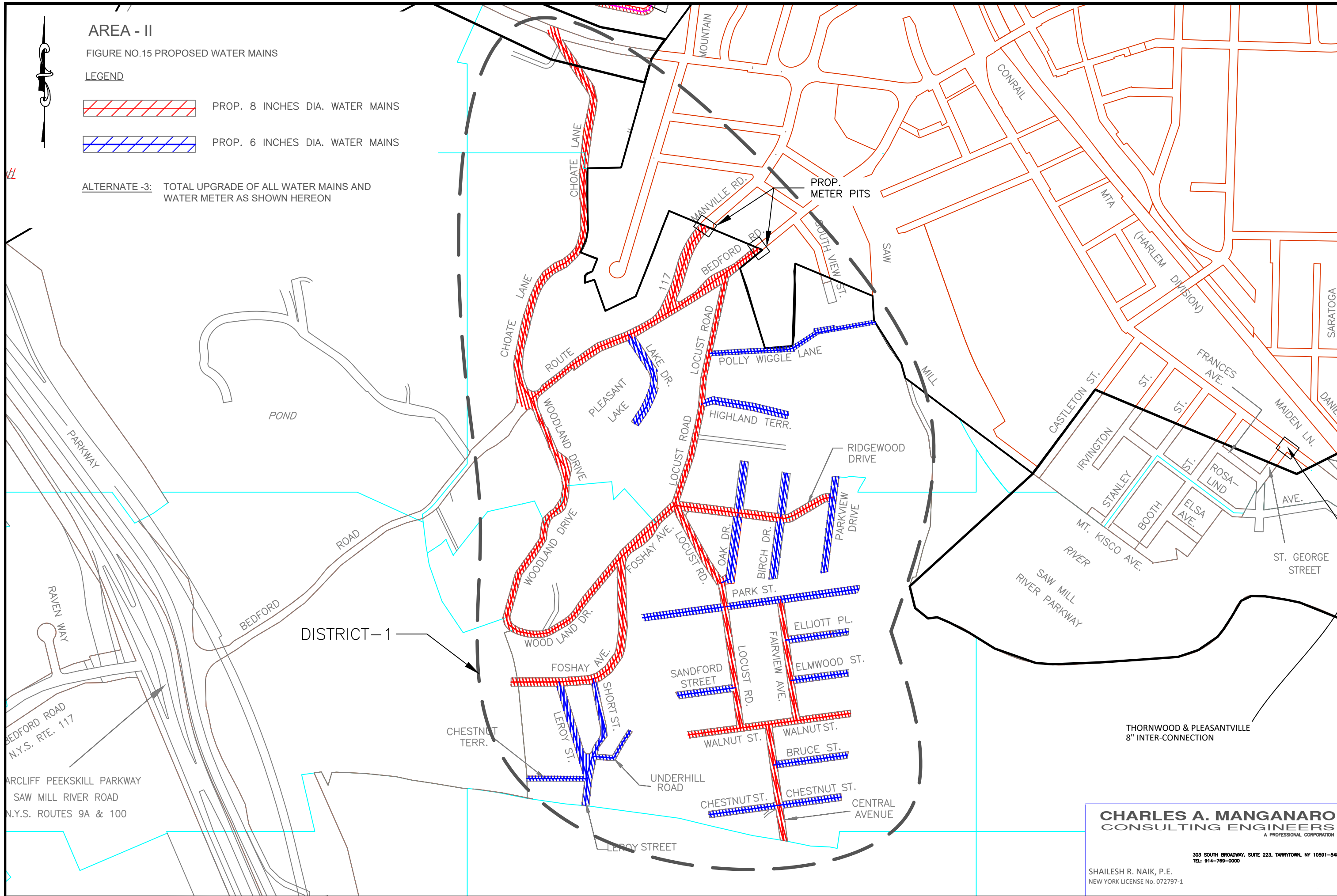


PROP. 8 INCHES DIA. WATER MAINS



PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -3: TOTAL UPGRADE OF ALL WATER MAINS AND WATER METER AS SHOWN HEREON



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AREA - III

FIGURE NO.16 PROPOSED WATER MAINS

LEGEND

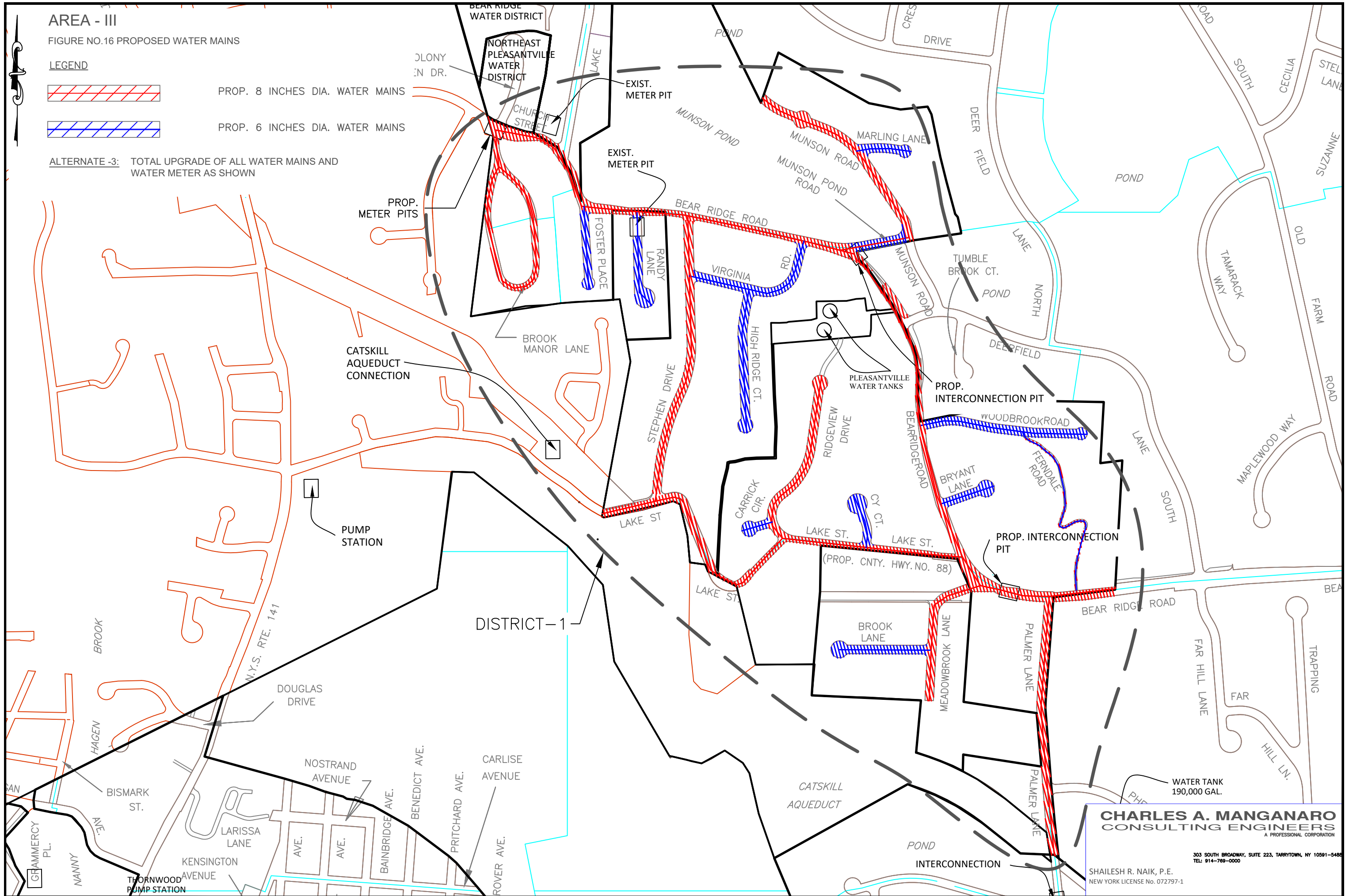


PROP. 8 INCHES DIA. WATER MAINS



PROP. 6 INCHES DIA. WATER MAINS

ALTERNATE -3: TOTAL UPGRADE OF ALL WATER MAINS AND WATER METER AS SHOWN



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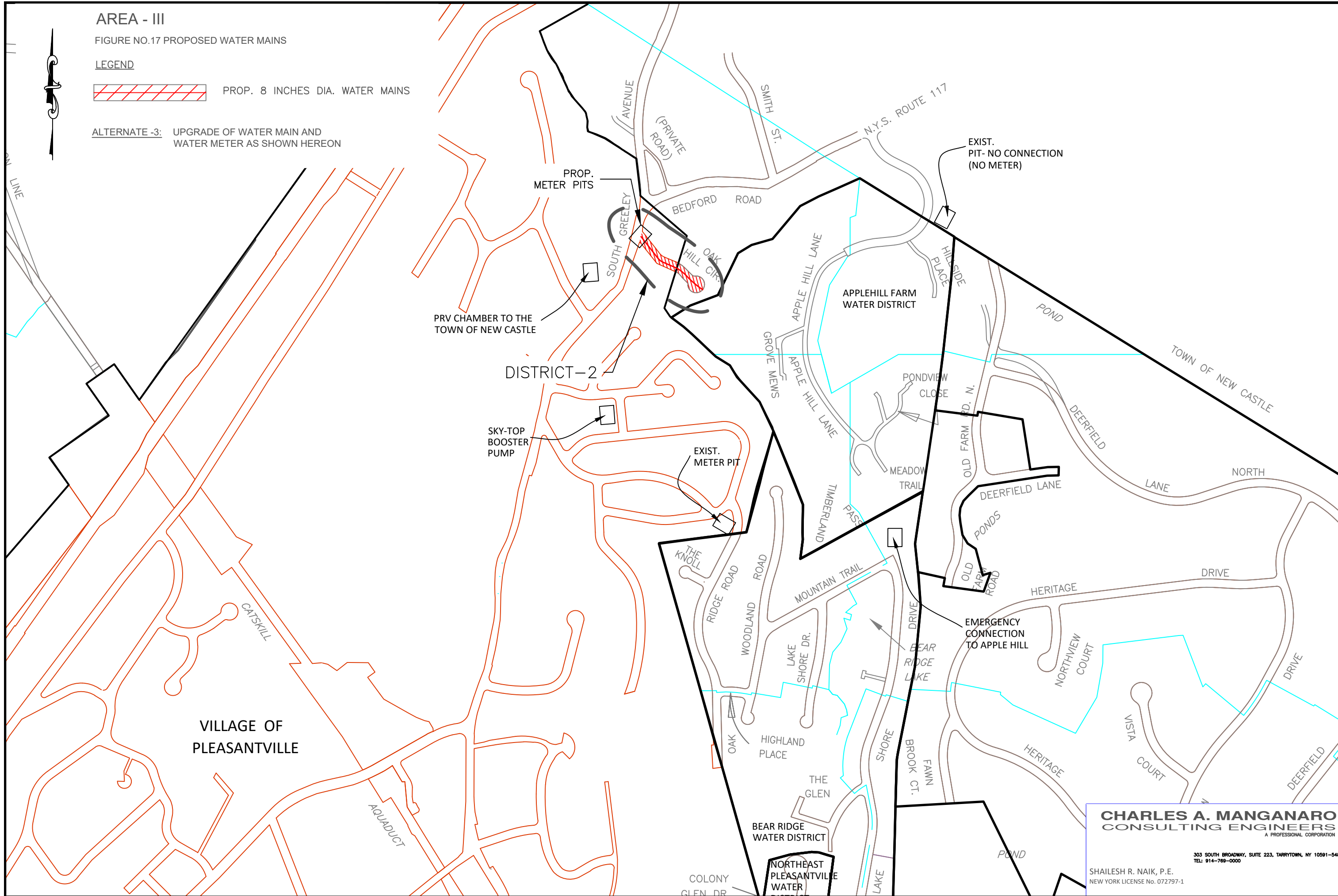
AREA - III

FIGURE NO.17 PROPOSED WATER MAINS

LEGEND

 PROP. 8 INCHES DIA. WATER MAINS

ALTERNATE -3: UPGRADE OF WATER MAIN AND WATER METER AS SHOWN HEREON



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