ADDENDUM NO. 1

TO

BIDDING AND CONTRACT REQUIREMENTS AND SPECIFICATIONS

FOR THE

ROUTE 202A WATER MAIN EXTENSION AND WATER STORAGE TANK

WP PROJECT NO. 14206

8/18/2021



PREPARED BY:

WRIGHT-PIERCE

230 COMMERCE WAY, SUITE 302 PORTSMOUTH, NH 03801 603.430.3728 | WWW.WRIGHT-PIERCE.COM

ROUTE 202A WATER MAIN EXTENSION AND WATER STORAGE TANK

ADDENDUM NO. 1

WP PROJECT NO. 14206

As a point of clarification, it should be understood that the Contract Documents govern all aspects of the project. Discussions held during the Pre-Bid Conference or over phone or email are informal and informational only. All official changes to the Contract Documents are made only by addenda. The following changes and additional information are hereby made a part of the Contract Documents:

GENERAL

- 1. For clarification, only General Bidders that have been pre-qualified by the City of Rochester under RFQ 21-36 titled "2021 Infrastructure Improvement Projects" are allowed to submit bids for the Route 202A Water Main Extension and Water Storage Tank project. Bids submitted by General Bidders which have not pre-qualified under RFQ 21-36 will not be opened. Submission of a Bid or qualifications package under RFQ 21-36 does not indicate that a Contractor was successfully pre-qualified. General Bidders which were successfully pre-qualified were notified by the City of Rochester. If you are uncertain if you were successfully pre-qualified, and are therefore eligible to submit a bid for this project, please contact the City of Rochester, NH.
- 2. A mandatory pre-bid conference was held on August 11, 2021 at 1:00 PM at the Rochester City Hall Annex Building at 33 Wakefield Street Rochester, NH 03867. The sign-in sheet from that conference is attached to this addendum (**Attachment 1**). A site visit to the tank site followed the pre-bid conference.
- 3. An attachment titled "Site Plan Alteration of Terrain" is attached to this addendum (Attachment 2). This attachment is for Contractor's use as reference only and is not part of the Contract Documents for the Route 202A Water Main Extension and Water Storage Tank project. Attachment 2 generally shows the anticipated access road and water main from Fillmore Boulevard to the tank site when completed. Part of the access road and water main in Attachment 2 is shown as existing in the Contract Drawings, but noted in the Contract Documents as not anticipated to be completely constructed until January 1st, 2022. The work shown in Attachment 2 is outside of this Contract and is provided only as a reference of the anticipated existing conditions for the access road and water main to the site after January 1st, 2022.
- 4. Attachment 9 has been provided for the Contractor's reference to location and contents of the Dustin Homestead sprinkler building where service connection is to be made. The complete contents of the sprinkler building may not be shown. An existing 2 inch connection to the condominium complex's distribution system, which is to be connected to with the new service, is not shown on plan, but is accessible from the sprinkler room.

SPECIFICATIONS

- 1. Specification Section 00020, Advertisement for Bid, 8. Bid Results, <u>**REPLACE**</u> "The project will involve installation of a 256,000 gallon composite elevated water storage tank, an automatic flushing system, an elevated bridge/stream crossing, and a meter vault." with "The project will involve installation of a 256,000 gallon composite elevated water storage tank, an automatic flushing system, and elevated bridge/stream crossing."
- 2. Specification Section 00310, Bid Form, **<u>REPLACE</u>** Pages 19 through 21 with those as attached to this addendum (**Attachment 3**).
- 3. Specification Section 00310, Bid Form, <u>ADD</u> asterisk denoting indeterminate quantities assumed for comparison of bids to the estimated quantities for the following Bid items:
 - a. Item No. 45 Homeowner Option- Well Decommissioning Removal of Pumping Equipment
 - b. Item No. 48 Homeowner Option- Well Decommissioning Casing Cut off and Backfill to Grade
 - c. Item No. 49 Furnish and Install Homeowner Option Internal Plumbing Modifications.
- 4. Specification Section 00800, Supplementary Conditions, SC-5.03.C.1. <u>**REPLACE**</u> "42" with "37".
- 5. Specification Section 00800, Supplementary Conditions, SC-5.03.D.2, <u>**REPLACE**</u> "prepared by Wright-Pierce or Portsmouth, NH" with "prepared by Wright-Pierce of Portsmouth, NH".
- 6. Specification Section 01010B, Summary of Work, Paragraph 3.2.D.4, <u>**REPLACE**</u> "Pre-drilling on private property is to occur in the beginning of the project following authorization by the Engineer." with "Pre-drilling on private property is to occur within 90 days following authorization by the Engineer, but not later than 90 days prior to anticipated service installation as indicated by the Contractor's schedule."
- 7. Specification Section 01010B, Summary of Work, Paragraph 1.1.B.1.i., <u>**REPLACE**</u> "Meter Vault" with "Water Service".
- 8. Specification Section 01010B, Summary of Work, Paragraph 1.1.B.13, <u>**REPLACE**</u> "Meter Vault" with "Water Service".
- 9. Specification Section 01010B, Summary of Work, Paragraph 1.1.B.13.a, <u>DELETE</u> in its entirety.
- 10. Specification Section 01010B, Summary of Work, Paragraph 1.1.B.13.b, **<u>REPLACE</u>** "for meter vault" with "in the sprinkler building".
- 11. Specification Section 01050, Coordination, <u>ADD</u> the following directly after Paragraph 1.2.E:
 - NHDOT District 6 271 Main Street P.O. Box 740 Durham, NH 03824 Lucas Miller Utilities Engineer 603-868-03824 Lucas.j.miller@dot.nh.gov

- 12. Specification Section 01100, Alternates, Paragraph 2.3, <u>**REPLACE**</u> "METER VAULT" with "WATER SERVICE".
- 13. Specification Section 01100, Alternates, <u>**REPLACE**</u> Paragraph 2.3.A in its entirety with "The work of this ALTERNATE shall consist of furnishing and installing the 4-inch ductile iron water service for Dustin Homestead Condominiums including 12"x6" tee, meter, equipment, pipe, fittings, valves, and all associated work, complete in all respects. Refer to Specifications and DRAWINGS for further details. The work included in this ALTERNATE effects nearly every Section of these specifications and alternates. The work of this ALTERNATE shall include making all necessary modifications to Work described in the Base Bid."
- 14. Specification Section 011050B, Measurement and Payment, General, 1.8 INCIDENTAL WORK, <u>ADD</u> "51. Location and construction of turnarounds and staging areas."
- 15. Specification Section 01150B, Measurement and Payment, BASE BID, Item No. 59-Furnish and Install Pavement for Driveways due to Service Installation (inside and outside ROW), A. Method of measurement ADD at the end of Item No.59.A.1.a the following sentence: "For service trenches within driveways, outside right of way, refer to "W" as described in the "PAVEMENT PAY LIMITS" table on Sheet C-26 for City maintained roads for payment limits."
- 16. Specification Section 01150B, Measurement and Payment, Paragraph 1.8.A.50, <u>**REPLACE**</u> "meter vault" with "water service".
- 17. Specification Section 01150B, Measurement and Payment, Paragraph 1.9.BID ALTERNATE B.A, **REPLACE** "Meter Vault" with "Water Service".
- 18. Specification Section 01150B, Measurement and Payment, Paragraph 1.9.BID ALTERNATE B, **<u>REPLACE</u>** Item No. 1B and Item No. 2B in their entirety with the following:

Item No. 1B – Furnish and Install 4-inch Ductile Iron Water Service

- A. Method of Measurement: The quantity of service pipe to be paid for under this item shall be the actual length in feet of 4-inch service pipe as measured along the center line of the pipe as laid from the main tee to the edge of Dustin Homestead's sprinkler building foundation at the point intended for connection at building, as determined in the field and approved by the Engineer.
- B. Basis of Payment:
 - 1. Pipe shall be paid for at the unit price per linear foot stated in the Bid Schedule.
 - 2. Said unit price shall be full compensation for all service pipe, labor, equipment, tools, and other materials required for the installation of service pipes; field location of services with Owner, utility crossings and relocations, laying, setting, and jointing all pipes; for tree and stump removal, for clearing and grubbing, for cleaning, testing, and disinfecting; for backfilling; pipe and buried utility markings and location tape, loaming and seeding, landscaping in kind, pipe insulation, PVC sleeves, for replacing or rebuilding shrubs, fences, lawns, trees, stone walls, or other materials, except other such items specifically

included in the Bid Schedule; and for all other work and expenses incidental thereto for which payment is not provided under other items.

Item No. 2B – Furnish and Install 6-inch Ductile Iron Water Service

- A. Method of Measurement: The quantity of service pipe to be paid for under this item shall be the actual length in feet of 6-inch service pipe as measured along the center line of the pipe as laid from the main tee to the edge of Dustin Homestead's sprinkler building foundation at the point intended for connection at building, as determined in the field and approved by the Engineer.
- B. Basis of Payment:
 - 1. Pipe shall be paid for at the unit price per linear foot stated in the Bid Schedule.
 - 2. Said unit price shall be full compensation for all service pipe, labor, equipment, tools, and other materials required for the installation of service pipes; field location of services with Owner, utility crossings and relocations, laying, setting, and jointing all pipes; for tree and stump removal, for clearing and grubbing, for cleaning, testing, and location tape, loaming and seeding, landscaping in kind, pipe insulation, PVC sleeves, for replacing or rebuilding shrubs, fences, lawns, trees, stone walls, or other materials, except other such items specifically included in the Bid Schedule; and for all other work and expenses incidental thereto for which payment is not provided under other items.

Item No. 3B - Furnish and Install 4, 6, and 12-inch Ductile Iron Fittings

- A. Method of Measurement: The quantity of ductile iron fittings to be paid for under this item shall be the actual weight of ductile iron fittings furnished and installed complete in place.
- B. Basis of Payment: Ductile iron fittings shall be paid for at the unit price per pound stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment, and tools; for installing, setting, and jointing fittings; restraining joints; for thrust blocks and supports; for protective polywrap and installation; for stump removal as needed for installation; for 12 inch by 6 inch main tee installation, and for all other work and expenses incidental thereto. Mechanical joint restraints and thrust blocks shall not be included in the fitting weight for payment and are considered incidental to this item.

Item No. 4B - Furnish and Install 6-Inch Gate Valves

- A. Method of Measurement: The quantity of gate valves to be paid for under this item shall be the actual number of valves and valve boxes installed complete in place.
- B. Basis of Payment: Gate valves shall be paid for at the unit price per each stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment, polywrap, and tools; for installing, setting, and jointing the valve and valve box; for restraining

joints; for thrust blocks and supports; for valve box extensions; for testing all valves and valve boxes; for stump removal as needed for installation, and for all other work and expenses incidental thereto for which payment is not provided under other items.

Item No. 5B – Ledge Excavation

- A. Method of Measurement:
 - 1. Ledge excavation measured for payment shall be the number of cubic yards of ledge removed during construction. This quantity shall be determined by:
 - a. Exposing the ledge profile for measurement. Excavation and backfill of the earth overburden shall be considered incidental, and no separate payment shall be made, therefore.
 - b. Should the Contractor elect to pre-drill and blast ledge without exposing the ledge surface for measurement, ledge depths shall be determined by the Resident Project Representative at the time of drilling or, when direct drilling observation is not conducted, the ledge profile shall be measured after excavation, and 20% of the ledge volume thus measured shall be deducted due to ledge expansion caused by the blasting operation.
 - 2. The payment limit for trench width shall be between vertical planes which are a distance apart equal to the sum of 18 inches plus 1-1/3 times the nominal outside diameter of pipe which is to be installed in the trench (min. of 3 feet) and extending from the top of the ledge surface to a depth of 6 inches below the invert grade of the pipe. Where two pipes are installed in the same trench, trench ledge excavation shall be measured as the actual volume of ledge removed between vertical planes which are a distance apart equal to the sum of 3 feet plus the sum of the pipe's nominal outside diameter. Where three pipes are installed in the same trench, trench ledge excavation shall be measured as the actual volume of ledge removed between vertical planes which are a distance apart equal to the sum of 3 feet plus the sum of the pipe's nominal outside diameter.
 - 3. Ledge excavation for structures (including manholes) shall be measured as 18 inches outside the structure and extending to a depth of 6 inches below the base of the structure indicated on the Drawings.
 - 4. Rocks or boulders greater than two cubic yards volume shall be considered as ledge excavation. Volume of rocks shall be determined from their average length, width, and depth as measured by the Engineer.
 - 5. Ledge cannot be removed by blasting on private property unless authorized by Engineer and Owner.
- B. Basis of Payment:
 - 1. The contract unit price per cubic yard for ledge excavation shall be full compensation for all labor, materials, tools and equipment necessary to complete the excavation including conducting the pre-blast and post blast surveys, drilling, blasting, excavating, loading and disposing the excess or unusable material outside the work limits, suitable replacement backfill,

and all else incidental thereto for which payment is not provided under other items.

2. Not all the potential ledge locations are identified on the Drawings and ledge could be encountered anywhere within the limits of work. Such ledge, if encountered, is not considered a Differing Subsurface or Physical Condition. The unit price in the bid form shall apply to all ledge encountered and removed.

<u>Item No. 6B – Furnish and Install Homeowner Option Internal Plumbing Modifications</u> <u>at Dustin Homestead Condominiums Sprinkler Building</u>

- A. Method of Measurement: Payment for internal plumbing modifications shall be made at the unit price per lump sum stated in the Bid Schedule.
- B. Basis of Payment: This shall be paid for at the unit price per lump sum stated in the Bid Schedule. Said unit price shall be full compensation for all labor. materials, and equipment required for modification of internal plumbing for connection of existing Condominium complex water distribution system and sprinkler system to a new City water service, including pipe and fittings, sleeves, restraint, extension of water service line through building foundation and slab, bypass, demolition of existing equipment within the sprinkler building as needed, Sensus Omni T2 flow meters, external radio read sensor with conduit wiring and mounting, strainers, backflow preventers, pressure reducing valves, valves, couplings, supports, meter voke/connection points, tools, concrete, saw cutting concrete, coring through existing foundation wall and slab, disinfection, testing, cleaning of work area; services of a plumber licensed to practice in the State of New Hampshire, and for all other work and expenses incidental thereto for which payment is not provided under other items. Contractor is responsible for layout of the new piping and equipment inside the sprinkler building, including a metered bypass with backflow prevention, and shall submit proposed layout for approval from the Owner and Engineer prior to making any modifications.

Item No. 7B – Furnish and Install Pavement for Driveways for service installation (Outside ROW)

- A. Method of Measurement:
 - 1. The quantity of bituminous concrete pavement to be paid for under this item includes:
 - a. Driveway Pavement The number of square yards of driveway pavement placed at the direction of the Engineer, calculated as described below, within the payment limits shown on the Drawings and as measured in the field. For service trenches within driveways, outside right of way, refer to "W" as described in the "PAVEMENT PAY LIMITS" table on Sheet C-26 for City maintained roads for payment limits.
 - 2. Actual widths will be used in computing area wherever the width of pavement removed and replaced is less than the limits indicated on the Drawings.

- B. Basis of Payment:
 - 1. Pavement shall be paid for at the Contract unit price per square yard stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment and tools necessary for the placement and removal of pavement by hand or machine laid at a minimum of 2 inches thickness, base pavement at transitions, preparation of base material, subbase gravel, application of tack coat, placement and grading of gravel shoulder material to back up overlay pavement, and installation of temporary pavement markings. No additional payment will be made to the contractor for repair work done by him in maintaining bituminous concrete pavement.
- 19. Specification Section 01340, Submittals, Paragraph 1.1.A, **<u>REVISE</u>** second paragraph from "1." to "2."
- 20. Specification Section 01590, Temporary Field Office, Paragraph 2.1.A.1., **REVISE** "Windows arranged for cross ventilation with screens and adequate window coverings to minimize glare on computer screens" to be Paragraph 2.1.A.2.
- Specification Section 01590, Temporary Field Office, Paragraph 2.1.A.7, <u>REVISE</u> "Closet with closet rod and upper shelf." to be Paragraph 2.1.A.8 and "Furnish the following furniture and supplies:" to be Paragraph 2.1.B.
- 22. Specification Section 01590, Temporary Field Office, Paragraph 2.1.D.1, **<u>REPLACE</u>** "15 mbps download" with "50 mbps download".
- Specification Section 02200, Earthwork, Paragraphs 3.3.B.8 and 9, <u>REPLACE</u> "screened stone or select fill" with "screened stone, select fill, or sand" for DI or Concrete Pipe and <u>REPLACE</u> "screened stone" with "screened stone or sand" for PVC or PE Pipe.
- 24. Specification Section 02615, Ductile Iron Pipe & Fittings (Buried Applications), Paragraph 1.3.B, <u>ADD</u> "American" as an acceptable manufacturer.
- 25. Specification Section 02626, Copper Service Pipe & Fittings (Buried Applications), Paragraph 2.1.B.2, **<u>REPLACE</u>** "Mueller Streamline Co., Collierville, TN. Or Equal" with "Mueller Streamline Co., Collierville, TN. Wieland Copper Products, LLC, Pine Hill, NC. Or Equal".
- 26. Specification Section 02644, Hydrant Assemblies, <u>DELETE</u> Paragraph 1.2.C.1 "1. American Darling Model B84. No equal." and <u>ADD</u> the following directly after Paragraph 1.2.C:
 - "1. American Darling Model B84 B-5
 - 2. Kennedy Guardian K-81D
 - 3. Eddy Fire Hydrant Model F-2641"
- 27. Specification Section 02649, Tracer Wire, <u>**DELETE**</u> Paragraph 3.1.C. in its entirety.
- 28. <u>ADD</u> Specification Section 09900, Painting, as attached to this addendum (Attachment 4).
- 29. <u>ADD</u> Specification Section 09905, Shop Coatings, as attached to this addendum (Attachment 5).
- 30. Specification Section 15062, Ductile Iron Pipe & Fittings (Interior/Exposed Applications), Paragraph 1.2.B, <u>ADD</u> "American" as an acceptable manufacturer.

- 31. <u>ADD</u> Specification Section 15180, Rigid Board Pipe Insulation, as attached to this addendum (Attachment 6).
- 32. Specification Section 15400, Plumbing General, Paragraph 1.1.B.5, <u>**REPLACE**</u> "Meter vault plumbing" with "Dustin Homestead sprinkler building plumbing for water service".
- 33. Specification Section 15185 Heat Tracing, Part 1.2 <u>ADD</u> "Urecon" as an Acceptable Manufacturer.

DRAWINGS

- 1. Drawing C-1, General Notes 2, under "Sewer/Storm Drain:", **<u>REPLACE</u>** "JOHN ENGLAND" with "SCOTT MCGLYNN".
- 2. Drawing C-5, <u>ADD</u> note "CULVERT CROSSING ANTICIPATED FOR SERVICE INSTALLATION" as shown on Figure 1, attached to this addendum (Attachment 10).
- 3. Drawing C-12, <u>**REPLACE**</u> Drawing C-12 in its entirety with Drawing C-12, attached to this addendum (Attachment 7).
- 4. Drawing C-25, <u>**DELETE</u>** detail titled "DUSTIN HOMESTAD METER VAULT" and "SECTION" view.</u>
- 5. Drawing C-25 **DELETE** detail titled "TYPICAL CLEANOUT DETAIL".
- 6. Drawing C-25 **DELETE** meter vault notes 1 through 4.
- 7. Drawing C-25 <u>ADD</u> detail titled "DUSTIN HOMESTEAD SPRINKLER ROOM CONNECTION SCHEMATIC" attached to this addendum as Figure 3 (Attachment 13).
- 8. Drawing C-26, <u>**REPLACE**</u> detail titled "PAVED DRIVE APRON" with the detail in Figure 2, attached to this addendum (**Attachment 11**).
- 9. Drawing C-28, Note 2 under "STORAGE TANK NOTES", DELETE "MANUFACTURER'S STRUCTURAL ENGINEER IS RESPONSIBLE FOR COORDINATION WITH **OWNER'S GEOTECHNICAL** ENGINEER ON APPLICABLE ELEMENTS OF STRUCTURAL DESIGN UTILIZING INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT.", and REPLACE with "MANUFACTURER'S STRUCTURAL ENGINEER IS **RESPONSIBLE FOR** COORDINATION OF ALL APPLICABLE ELEMENTS OF THE STRUCTURAL DESIGN UTILIZING INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT."
- Drawing E-4, <u>ADD</u> detail titled "ANTENNA SUPPORT ASSEMBLY" attached to this addendum, as an alternative for radio antenna mounting on the water storage tank as shown in the detail titled "CONDUIT MOUNTING DETAIL FOR RADIO ANTENNA" (Attachment 8). Wiring, grounding, and applicable mounting as shown in "CONDUIT MOUNTING DETAIL FOR RADIO ANTENNA" will still apply as practical for use with alternative radio antenna mount.

QUESTIONS AND ANSWERS

Questions from the Contractors received during the pre-bid meeting held on August 11, 2021:

- 1. Q: Has the Engineer accounted for turn around areas in the limits of clearing established for the cross-country section from the storage tank site to Bickford Road on Drawings C-13 and C-14
 - A: Limits of clearing as shown on the Drawings on sheets C-13 and C-14 establish the pay limits of clearing in this area for the Contract. The limits of clearing currently shown are approximately 20 feet wide. The City has obtained a 100 foot wide easement in this area along the path of water main installation, not centered on the pipeline. The easement plan and deed have been attached to this addendum for Contractor's reference (**Attachment 12**). Means and methods for performance of the work, including locating and constructing turn arounds and staging areas, will be the responsibility of the Contractor. Additional area can be cleared within the 100 foot wide easement as necessary for performance of the work, excluding clearing which may impact wetlands, vernal pools, private property, and permit conditions, but payment for clearing outside the Limits of Clearing shown on Drawings C-13 and C-14 will be considered incidental.

ATTACHMENTS FOLLOW:

Attachment 1 – Pre-Bid Meeting Sign-In Sheet Attachment 2 – Eisenhower Drive Access Road and Water Main Site Plan Attachment 3 – Revised Pages from Specification Section 00310, Bid Form Attachment 4 – Specification Section 09900, Painting Attachment 5 – Specification Section 09905, Shop Coatings Attachment 6 – Specification Section 15180, Rigid Board Pipe Insulation Attachment 7 – Drawing C-12 Attachment 8 – Antenna Support Assembly Detail Attachment 9 – Dustin Homestead's Sprinkler Building- Existing Conditions Attachment 10 – Figure 1 Attachment 11 – Figure 2 Attachment 12 – Easement Plan and Deed Attachment 13 – Dustin Homestead Sprinkler Room Connection Schematic Detail

END OF ADDENDUM NO. 1

Attachment 1- Pre-Bid Meeting Sign-In Sheet

Name	Organization Name	Phone Number	Email
Dylan This se	Wright-Diene	518 3090795	dylan. Thissele willyht-piecce. com
heelin berger	Wright - Pierce	603 2035341	hedin berge Owngut - piere . co.n
RENE PERPON	DEC CONSTRUCTION	207-247-6023	thare to tis en Vancos Corn
Fred Mc Gaury	NHDES	603-848-4149	Fredericic. Mc Carry @ des. nh.gov
James Potter	Defelice corp.	2452-512-27P	Cnyineering@ Defetice corp.com
Jirry Lock	NE Earth Arach.	5. hth. h2P. 509	Jirry & Neecrith.con
BebBurns	FUMenroll	2285558	BBURNS OF KNeufill. com
Annie uneller	Starte under Agrical tore	315 247 9344	Anneller @ Bestank. com
Imolly Ar- Scott Bonneau	Statewide Newarture S.U.R. Construction Inc	518-1124-6066	time bestlonk.com sbonneauesurconstruction.com

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(-		 			
					Dana Webber	MICHARL BEZANSON	Name
					City of Rechester DPW 603.332.4096	CITY OF KOUKSRE NW 603-332-4096	Organization Name
					603.332.4096	603-332-4096	Phone Number
	-				dana.webber @ rachesternh.net	Michael. bezanson @ rochesternh. net	Email

Route 202A Water Main Extension and Water Storage Tank BIDS DUE DATE/ TIME: <u>September 1st, 2021</u>, AT: <u>5:00 PM</u>

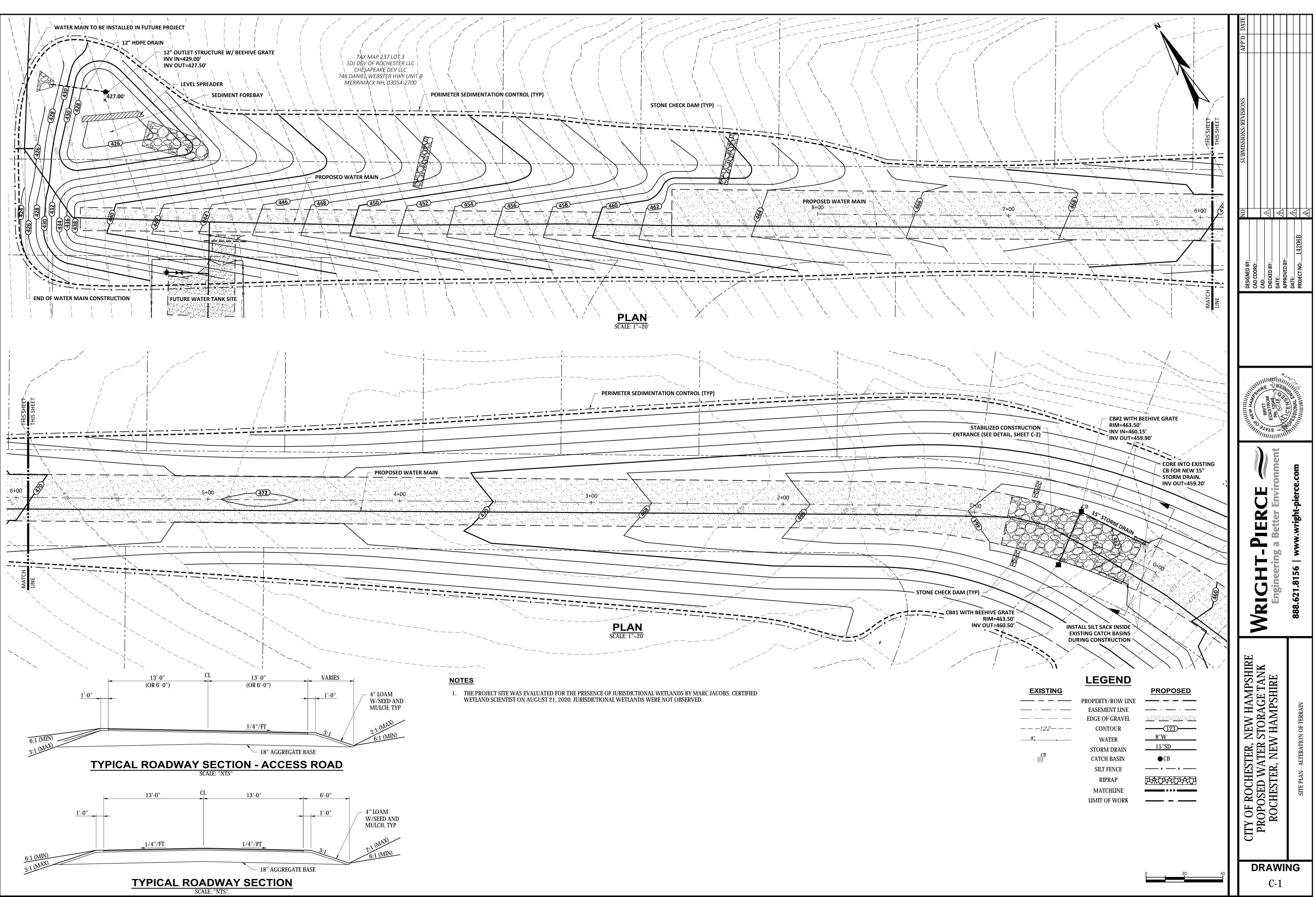
PRE-BID CONFERENCE SIGN-IN-SHEET

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Attachment 2 – Eisenhower Drive Access Road and Water Main Site Plan





Attachment 3 – Revised Pages from Specification Section 00310, Bid Form

Item	Estimated	Brief Description of Item	Unit Bid In	Amount
No.	Quantity	with Unit Bid Price in Words	Figures	In Figures
1B	240 LF	Furnish and Install 4-inch Ductile Iron Water Service		
		The sum of \$		
			\$	\$
			Ψ	Ψ
		Per Linear Foot		
2B	30 LF	Furnish and Install 6-inch Ductile Iron Water Service		
		The sum of \$	\$	\$
		Per Linear Foot		
3B	600 LB*	Furnish and Install 4, 6, and 12-inch Ductile Iron Fittings		
		The sum of \$		
			\$	\$
		Per Pound		
4B	1 EA	Furnish and Install 6-inch Gate Valves		
		The sum of \$		
			\$	\$
		Per Each		
5B	70 CY*	Ledge Excavation		
		The sum of \$		
			\$	\$
		Per Cubic Yard		
6B	1 LS	Furnish and Install Homeowner Option Internal Plumbing Modifications at Dustin Homestead Condominiums Sprinkler Building	l	
		The sum of \$		
			\$	\$
		Per Lump Sum		
7B	1,150 SY*	Furnish and Install Pavement for Driveways (outside ROW)		
		The sum of \$		
			\$	\$
		Per Square Yard		

BID ALTERNATE B- DUSTIN HOMESTEAD WATER SERVICE

ItemEstimatedNo.Quantity	Brief Description of Item with Unit Bid Price in Words	Unit Bid In Figures	Amount In Figures
Tio. Quality	TOTAL BID ALTERNATE B		in rigues
		\$	\$
	Amount in Words		
FOTAL BASE BID	: Total of Items 1 through 74 above.		
		(\$)
		(use fig	gures)
	(use words)		
FOTAL BASE BID hrough 27A above.	PLUS ALTERNATE A: Total of Items 1	through 74 above ar	nd Items 1A
		(\$)
		(use fig	gures)
	(use words)		
FOTAL BID PLUS above.	ALTERNATE B: Total of Items 1 through	74 and Items 1B thr	ough 7B
		(\$)
		(use fig	gures)
			, ,
	(use words)		
	ALTERNATE A and B: Total of Items 1		
	ALTERNATE A and B: Total of Items 1		
FOTAL BID PLUS 27A, and Items 1B th	ALTERNATE A and B: Total of Items 1	through 74, Items 1.	A through

TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. List of Project References;
 - E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
 - F. Contractor's License No.: ______ or Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - G. Required Bidder Qualification Statement with supporting data; and
 - H. Signed Compliance Statement (Section 00406).
 - I. Signed Certification of Non-Segregated Facilities (SC-40).
 - J. Signed Labor Union Notice (SC-41).
 - K.—If Bid amount exceeds \$10,000, Signed Certification of Bidder Regarding Equal Employment Opportunity (Section 00406)

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: [Indicate correct name of bidding entity]

By: [Signature]

[Printed name]

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: [Signature]	
[Printed name]	
Title:	
Submittal Date:	
Address for giving notices	5:
Telephone Number:	
Fax Number:	
Contact Name and e-mai	l address:
Bidder's License No.:	
	(where applicable)

Attachment 4 – Specification Section 09900, Painting

SECTION 09900

PAINTING

PART 1 - GENERAL

1.1 <u>SUMMARY</u>

- A. This Section includes surface preparation and field painting of the following surfaces of new items unless specified elsewhere to be prefinished. This includes pre-primed surfaces.
 - 1. Painting of all submerged surfaces or surfaces that have potential for being submerged.
 - 2. Painting of all exposed interior surfaces.
 - 3. Painting of all exposed exterior surfaces.
 - 4. Staining of exterior and interior exposed wood surfaces.
 - 5. Staining of concrete surfaces.
- B. This Section also includes:
 - 1. Piping runs above finished ceilings shall be considered exposed and shall be painted.
 - 2. Back prime, with specified interior first coat, all surfaces of wood finish and trim which will be concealed after installation.
 - 3. All surfaces of ferrous metal fabrications built into concrete and masonry shall be shop primed or receive a primer coat in accordance with this section. All surfaces exposed to view shall receive intermediate and finish coats.
- C. Definitions:
 - 1. Submerged surfaces are defined as:
 - a. Those surfaces which are below the maximum water surface level as indicated on the drawings.
 - b. All surfaces contained within covered tanks.
 - c. The full height of all partially submerged items such as sluice, slide and weir gates, piping, etc.
 - d. All surfaces contained within underground vaults, structures and maintenance holes such as valve pits, dry wells, etc.
 - 2. Exposed interior surfaces shall be non-submerged surfaces exposed to view that are enclosed and/or protected in such a manner that they cannot be exposed to UV light or weather conditions.
 - 3. Exposed exterior items shall be all other surfaces which don't fall under the definition of "submerged" or "exposed interior surfaces".
- D. Items not requiring surface preparation and field painting:
 - 1. Factory coated bolted steel storage tank interior and exterior walls do not require field painting.
 - 2. Items and equipment that are specifically specified to receive the manufacturer's standard primer and finish coats in the factory, except as noted for color and touch-up painting.
 - 3. Copper, bronze, brass, chromium plate, nickel, stainless steel, aluminum or monel metals (unless otherwise noted).

- 4. Unprimed galvanized metals not indicated to be painted shall remain unfinished.
- 5. Face brick, decorative CMU and tile.
- 6. Concrete slabs and walls unless indicated in the finish schedule on the drawings to be painted or receive secondary containment coatings.
- 1.2 <u>REFERENCES</u>
 - A. ASTM D2247 Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity.
 - B. ASTM D 2794 Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
 - C. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials.
 - D. D ASTM D6386 Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Products for Painting
 - E. Federal Test Method No. 141 Method 6141, Stain Removal.
 - F. ANSI A13.1 Scheme for the Identification of Piping Systems.
 - G. SSPC Steel Structures Painting Council.
 - H. SSPC-PA1, "Standard for Shop, Field, and Maintenance Painting."
 - I. SSPC-PA2, "Measurement of Dry Paint Thickness with Magnetic Gauges."
 - J. SSPC-SP1, "Solvent Cleaning."
 - K. SSPC-SP2, "Hand Tool Cleaning."
 - L. SSPC-SP3, "Power Tool Cleaning."
 - M. SSPC-SP6, "Commercial Blast Cleaning."
 - N. SSPC-SP7, "Brush Off Blast."
 - O. SSPC-SP10, "Near-White Blast Cleaning."
 - P. SSPC-SP16, "Brush Blast Cleaning of Non Ferrous Metals"
 - Q. SSPC-PA Guide 3, Standard "A Guide to Safety in Paint Application," latest revision.
 - R. VOC Standards All coatings shall be in accordance with all applicable State and Federal VOC Standards.
 - 1. OSHA 29 CFR 1925.55 Gases, Vapors, Fumes, Dusts and Mists.
 - 2. Ozone Transportation Commission (OTC) 2005 VOC Regulation.
 - 3. Title X NH RSA: Section 125-C; Air Pollution Control.

1.3 <u>SUBMITTALS</u>

- A. Submit product data under provisions of Section 01340 including tested performance characteristics.
- B. Submit manufacturer's color chips showing the full range of colors available for each type of finish coat material specified.
- C. Submit schedule on manufactures letter head with list of items to be coated, type and manufacturer of shop coating and type of field coating, including primers, details on surface preparation methods, application procedures and dry mil thickness.
- D. Submit a letter from the manufacturer certifying that the products submitted are applicable for the applications indicated.
- E. Submit coating manufacturer's certification that the proposed coatings meet all state and federal VOC regulations.

1.4 QUALITY ASSURANCE

- A. The Contractor shall obtain the services of a painting contractor with 5 years experience on similar projects.
- B. All materials used on work shall be exactly as specified in brand and quality. No claim by the Contractor as to unsuitability or unavailability of any material specified, or their unwillingness to use same, or their inability to produce first class work with same, will be entertained unless such claims are made in writing and submitted to the Engineer at least seven (7) days prior to the date established for receipt of General Bids.
- C. Before purchasing materials for the work, the Contractor shall submit to the Engineer a list of the products they propose to use, and the list shall be reviewed by the Engineer and no exceptions taken before commitment for materials is made.
- D. Materials selected for coating systems for each type of surface shall be the products of a single manufacturer.
- E. Include on label of all containers:
 - 1. Manufacturer's name
 - 2. Type of paint
 - 3. Manufacturer's stock number
 - 4. Color
 - 5. Instructions for reducing, where applicable
 - 6. Label analysis
 - 7. Shelf life dates
- F. Field Quality Control:
 - 1. Contractor shall request review by the Engineer, of first finished room, space or item of each color, texture and method of applications, prior to proceeding with additional painting.
 - 2. Use first acceptable room, space or item as the project standard for each color scheme.
 - 3. For spray application, when applicable, paint a surface not smaller than 100 square feet as the project standard.
 - 4. Repainting of materials failing to meet the requirements of the Specifications or Drawings, shall be performed by the Contractor, at no additional cost to the Owner.
 - 5. The number of coats and total mil thickness specified in the paint schedule are minimums. If the specified minimum film thickness is not achieved, additional coats shall be applied to achieve the total film thickness specified.
- G. Paints submitted shall meet all Federal and State regulations pertaining to Volatile Organic Compounds (VOC) compliance, and be in accordance with OTC 2005 Standards.
- H. All coating systems used for potable water applications shall be previously approved by the National Sanitation Foundation (NSF) in accordance with Standard 61. Evidence of compliance shall be an approval letter from NSF listing the submitted material.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver coating materials in sealed containers with labels legible and intact.
- B. Store only acceptable project materials on the project site.
- C. All painting materials shall be stored and mixed in a single location coordinated with the Engineer. The Contractor shall not use any plumbing fixture or pipe for mixing or for disposal of any refuse. The Contractor shall carry all necessary water to the mixing room, and shall dispose of all waste outside of the building in a suitable receptacle.
- D. Restrict storage location to paint materials and related equipment and supplies.
- E. Keep storage location neat and clean.
- F. Remove all soiled and used rags, waste and trash from the storage location and tank at the end of each work day.
- G. Repair all damage to the storage location, caused by painting materials and equipment at no additional cost to the Owner.
- H. Comply with all applicable health and fire codes and regulations including safety precautions recommended by the manufacturer. Storage space shall be provided with a suitable fire extinguisher fully charged at all times.
- I. Heat shall be provided in the storage area if paints are to be stored during winter months. The temperature shall be maintained above 40 degrees F at all times.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems shall be applied.
- B. Do not apply coatings in areas where dust is being generated.
- C. Do not apply coatings when the air or material surface temperature is below 50 degrees Fahrenheit and unless the temperature is at least 5 degrees Fahrenheit above the dew point.
- D. Do not apply exterior coatings in frosty, damp or rainy weather or while surfaces are exposed to hot sunlight.

1.7 EXTRA MATERIALS

A. For all materials with a shelf life of greater than 12 months, provide one gallon of each type and each color of touch-up paint shall be provided to the Owner by the Contractor in unopened containers.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Tnemec Company, Inc.
- B. Sherwin Williams
- C. PPG

2.2 <u>MATERIALS</u>

A. Refer to the paint schedule for specific products and application.

2.3 <u>COMPONENTS</u>

- A. All finish coats shall be compatible with shop prime coats.
- B. Turpentine shall be pure spirits of turpentine.
- C. Shellac shall be four pounds and shall meet the U.S. Government specifications as issued by the Bureau of Commerce.
- D. When wood and metal are primed in the mill or shop as part of painting contract, use the materials specified in every case for such surfaces and use in accordance with manufacturer's directions for first or priming coat.

2.4 MIXING AND TINTING

- A. Deliver paints and enamels ready-mixed to project site.
- B. Accomplish job mixing and job tinting only when required.
- C. Mix only in mixing pails placed in suitably sized nonferrous or oxide resistant metal pans.
- D. Use only tinting colors recommended by the manufacturer for the specific type of finish.
- E. Fungicidal agents, when applicable, shall be incorporated into the paints and stains by the manufacturer.
- F. Mix and prepare paints in strict accordance with Manufacturer's recommendations.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence or quality of work and which cannot be put into an acceptable condition through preparatory work as included in Part 3.2, Surface Preparation.
- B. Immediately notify the Engineer in writing when a surface to be finished cannot be put into an acceptable condition.
- C. Do not proceed with surface preparation or coating application until conditions are suitable.
- D. The Contractor shall be responsible for and shall rectify, at no additional cost to the Owner any unsatisfactory finish resulting from the application of coatings on surfaces not in acceptable condition.

3.2 SURFACE PREPARATION

- A. At a minimum, all surfaces must be prepared and cleaned in accordance with the manufacture's written specifications and pertaining to the intended substrate to be coated. The Contractor must fully read and understand all of these requirements and all other required product recommendations prior to commencing any work.
- B. Wood and Plywood to be Painted or Finished Natural:
 - 1. Clean soiled surfaces.
 - 2. Except when rough surface is specified, sand to smooth and even surface, then dust off.

- 3. Apply shellac to all knots, pitch and resinous sapwood after washing with mineral spirits and, before priming coat is applied.
- 4. Fill nail holes, cracks, open joints and other defects with paste wood filler before priming coat surface and color to match finish color. When wood filler is applied on open grain wood, allow the grain to secure a smooth, clean surface.
- 5. Tint filler to match finished wood to be stained.
- C. Concrete and Masonry:
 - 1. Clean all dust, dirt, oil and efflorescence from surfaces.
 - 2. Fill cracks and irregularities with Portland cement grout to provide uniform surface texture.
 - 3. Etch dense and smooth concrete, or concrete that has had a hardener applied, with a five percent solution (by weight) of muriatic acid.
 - 4. Fill concrete masonry unit surfaces with block filler in sufficient thickness to produce a final result which shall fill all voids and pin holes.
 - 5. Allow surfaces to thoroughly dry prior to application of first coat.
- D. Ferrous Metal Surfaces (Items not shop primed):
 - 1. All submerged ferrous metals shall be sandblast cleaned in accordance with SSPC-SP10 immediately prior to priming.
 - 2. All other ferrous metals shall be sandblast cleaned in accordance with SSPC-SP6 immediately prior to priming.
 - 3. Remove dirt, oil and grease by washing surfaces with mineral spirits.
 - 4. Surfaces shall be dry and free of dust, oil, grease and other foreign material before priming.
 - 5. Feather edges of sound existing paint by grinding, if necessary.
 - 6. Clean and touch up weathered, worn or damaged shop coats of paint with the specified primer.
 - 7. Restore shop coats of paint with identical materials if removed for welding and fabrication.
- E. Galvanized metals indicated to be painted (nonferrous metals):
 - 1. Solvent clean in accordance with ASTM D6386.
 - 2. Surfaces shall receive SSPC-SP-16 and shall be surfaced prepared in accordance with ASTM D6386.
 - 3. Surfaces shall be dry and free of dust, oil, grease and other foreign material before priming.
 - 4. Restore shop coats of paint with identical materials if removed for welding and fabrication.
- F. Previously Coated Surfaces (including existing items and new items that are shop primed):
 - 1. The areas of the coated surface that are blistered, eroded, brittle or otherwise failed shall be completely removed before beginning the specified surface preparation.
 - 2. The areas where the existing coating is intact shall be sanded to dull the finish.
 - 3. Before applying the new coating over an existing coating, a test section must be done to ensure compatibility of the new and old coatings.
 - 4. All other existing coatings shall be prepared as recommended by the manufacturer and as specified in this section.

- 5. Ferrous metals arriving at the job site with shop primers other than the polyamide epoxy or rust inhibitive primers specified shall be provided with an intermediate coat as necessary for compatibility with specified topcoats.
- 6. Special attention shall be paid to the potential for epoxy shop and intermediate coats to chalk upon exposure to sunlight. The Contractor shall follow the manufacturer's required surface protection/covering and surface preparation recommendations before any intermediate or top coats can be applied over chalked surface. Epoxy primers and intermediate coats shall be top coated no later than 45 days after the application of the epoxy coating. If topcoats are to be applied later than 45 days, the following surface preparation shall be provided:
 - a. The existing finish shall be etched by sanding with 80 grit paper or cloth.
 - b. Surfaces shall be pressure washed with 3000 to 5000 pounds of pressure.c. The Engineer, at their discretion, can require the Contractor to conduct
 - c. The Engineer, at their discretion, can require the Contractor to conduct adhesion tests of the topcoats.

3.3 <u>APPLICATION</u>

- A. Quality of Work:
 - 1. Employ skilled workers to ensure work of the highest quality.
 - 2. Materials shall be applied only by craftspeople experienced in the use of the specific products involved.
- B. General Requirements:
 - 1. Apply all coatings under adequate illumination.
 - 2. Perform no work in the rain, dew, or fog, when the temperature is below 50 degrees Fahrenheit and at least 5 degrees Fahrenheit above the dew point, or before the other coats have thoroughly dried.
 - 3. Do not apply coatings until the material surfaces are thoroughly dry.
 - 4. Apply paints and varnishes with suitable brushes, rollers or spraying equipment.
 - a. The rate of application shall not exceed that as recommended by the paint manufacturer for the surface involved.
 - b. Keep brushes, rollers and spraying equipment clean, dry and free from contaminates and suitable for the finish required.
 - c. Make each coat a different tint from that of the preceding coat, with final coat tinted to the exact shade selected by the Engineer. Lightly sand surfaces between each coat of gloss and semi-gloss finishes, and wipe clean.
 - d. Apply stain by brush. Cover surfaces with a uniform coat and wipe off if required.
 - 5. Comply with the recommendation of the product manufacturer for drying time between succeeding coats. Contractor shall follow the manufacturer's specific curing requirements for rust inhibitive primer shop coats prior to allowing topcoating.
 - 6. Sand and dust between each coat to remove defects visible from a distance of five feet.
 - 7. Finish coats shall be smooth, free of brush marks, streaks, laps or pile up of paints and skipped or missed areas.
 - 8. Inspection:

- a. Do not apply additional coats until the completed coat has been inspected by the Engineer.
- b. Only inspected and reviewed coats will be considered in determining the number of coats applied.
- 9. Leave all parts of moldings and ornaments clean and true to details with no undue amount of paint in corners and depressions.
- 10. Make edges of paint adjoining other materials or colors clean and sharp with no overlapping.
- 11. Apply primer on all work before glazing.
- 12. Refinish entire wall where portion of finish has been damaged or is not acceptable.
- 13. Runs on face are not permitted.
- 14. Apply one coat of metal primer, of the types specified hereunder, and one coat of flat black metal enamel, to the surfaces of all ductwork behind grilles, for a distance of 18 inches.
- 15. Back prime all exterior and interior wood finish and trim.
- 16. Adjust natural finishes as necessary to obtain identical appearance on veneers and solid stock.

3.4 **PROTECTION**

- A. Furnish and lay drop cloths in all rooms and areas where painting and finishing is being done to adequately protect flooring and other work from damage during the prosecution of the painting work.
- B. Remove all canopies of lighting fixtures, all electric switch plates, and similar equipment, set them carefully away, and cover adequately, protect the fixtures, etc.; replace the canopies, plate, etc. in as good condition as when found.
- C. Do not paint over any code-required labels, such as Underwriter's Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.
- D. Correct and refinish all interior and exterior surfaces in the existing facility affected by the new work. Materials and their application shall be as required to most closely match the existing finishes and as specified in this Section.

3.5 <u>CLEANING</u>

A. At the completion of the work of this Section, remove all paint spots and oil or grease stains, caused by this work from floors, walls, fixtures, hardware and equipment, leaving their finishes in a satisfactory condition. Remove all materials and debris and leave the site of the work in a clean condition so far as this work is concerned.

3.6 FINAL INSPECTION

A. Protect all painted and finished surfaces against damage until the date of final acceptance of the work. The Engineer will conduct a final inspection of all painters' work. As part of the final inspection the Contractor shall demonstrate compliance with the specified film thickness with appropriate paint gauges. The Contractor shall

be required to repaint, refinish, or retouch any areas found which do not comply with the requirements of this Section.

3.7 LOAD RATING IDENTIFICATIONS

- A. Provide markings indicating the load rating of all hoists, monorails and lifting hooks.
- B. Markings shall be 3-inches high stenciled letters painted adjacent to the item in a color contrasting the background color.

3.8 PAINT SCHEDULE

- A. The following product model and coatings system numbers are listed below to establish the standard of quality. Equivalent products from other manufactures will be accepted provided they meet or exceed the performance of the listed products.
- B. The primer coat is not required on shop primed items. Installer to verify that proposed field coatings are compatible with shop coatings.

SURFACE/ITEM	SURFACE PREPARATION	PRIMER	INTERMEDIATE	FINISH
METALS				
Weather Exposed Ferrous Metal Piping and Equipment	Per Manufacturer's Specifications	Tnemec Series N69 Tnemec- Epoxoline 11 at 3 to 5 mils OR SW Macropoxy 646 at 5 to 6 mils	Tnemec Series 73 Endura-shield at 3 to 4 mils OR SW Acrolon 218 HS Acrylic Polyurethane at 3 to 4 mils	Tnemec Series 73 Endura-shield at 3 to 4 mils OR SW Acrolon 218 HS Acrylic Polyurethane at 3 to 4 mils
Enclosed Ferrous Metal Piping and Equipment	Per Manufacturer's Specifications	Tnemec Series N69 Tnemec- Epoxoline 11 at 3 to 5 mils OR	Tnemec Series N69 Tnemec-Epoxoline 11 at 3 to 5 mils OR	Tnemec Series N69 Tnemec- Epoxoline 11 at 3 to 5 mils OR
		SW Macropoxy 646 at 5 to 6 mils	SW Macropoxy 646 at 5 to 6 mils	SW Macropoxy 646 at 5 to 6 mils
		Tnemec Series 1 Omnithane Gray	Tnemec Series	Tnemec Series
All Other Weather Exposed and Enclosed Ferrous Metals	Per	at 2.5 to 3 mils OR	1028/1029 Enduratone at 2 to 3 mils	1028/1029 Enduratone at 2 to 3 mils
	Manufacturer's Specifications	SW-Kem-Bond HS Universal Primer at 3 mils	OR	OR
			SW Pro Industrial Acrylic Coating	SW Pro Industrial Acrylic Coating
			at 3 to 4 mils	at 3 to 4 mils

Ferrous Metals concealed within wood or metal stud framing and not exposed to view	SSPC-SP3	Tnemec Series 1 Omnithane Gray at 2.5 to 3 mils OR SW-Kem-Bond HS Universal Primer at 3 mils	N/A	N/A
Galvanized metal fabrications built into concrete and masonry including lintels.	ASTM D6386 Solvent Cleaning Followed by SSPC-SP16	Tnemec Series 1 Omnithane Gray at 2.5 to 3 mils OR SW Recoatable Epoxy Primer at 4 to 6 mils	Top coats as noted herein for the surfaces exposed to view	Top coats as noted herein for the surfaces exposed to view
Exposed electrical conduit, conduit fittings and outlet boxes mounted on painted or finished surfaces or exposed in painted rooms		Same color and finish as background surface and/or equipment	Same color and finish as background surface and/or equipment	Same color and finish as background surface and/or equipment

NOTES:

- 1. Surface preparation shall be as specified within this section and as noted in the table above.
- 2. All dry film thickness indicated are the minimum required.
- 3. All ferrous metals, piping and equipment delivered to the site with shop primers other than the specified primer shall receive an intermediate coat as necessary for compatibility with the indicated top coats.
- 4. If the polyurethane top coats are <u>not</u> compatible with the manufacturer's alkyd primer apply a polyamide epoxy as the intermediate coat.
- 5. The hollow metal doors and frames shall receive the primer indicated above, applied over the manufacturer's shop coatings.
- 6. Painting of the piping system shall include all ferrous valves, levers, valve handles, fittings, stands, supports, hangers, pumps and appurtenances.
- 7. Epoxy primers and intermediate coats that have been in place for more than 45 days shall be prepared as indicated under the "Surface Preparation" Section of this Specification.

3.9 PIPING IDENTIFICATION SCHEDULE

A. Pipe Coating

- 1. All pipes, whether concealed or exposed to view shall be painted a separate color as scheduled in the PIPE IDENTIFICATION SCHEDULE below or as otherwise directed by the Engineer.For insulated pipes, only the insulation shall be painted.
- 2. Pipe supports consisting of pipe rings, clamps, clevises, U bolts, pipe rollers, saddles, etc., shall be painted with the same color as that of the pipe.
- 3. Wall supported pipe hangers consisting of brackets, standoffs, etc., shall be painted with the same color as that of the wall.

- 4. Ceiling/roof supported pipe hangers consisting of thread rods, beam clamps, etc., shall be painted with the same color as that of the ceiling.
- 5. Floor supported pipes consisting of stanchions shall be painted with same color as that of the pipe.
- B. Pipe Markers
 - 1. Markers shall be corrosion resistant laminated plastic bound to the pipes with nylon fasteners or shall be "coil-fit." Stickers are not acceptable. Markers and flow direction indicators shall be manufactured by Seton, Brimar Industries, or equivalent.
 - 2. Pipes with diameters less than 1-1/4 inch shall have marker hung from pipe with nylon fasteners.

SIZE		
Outside Diameter of	Minimum Length of	Size of Letters
Pipe or Covering	Marker	Size of Letters
In	In	In
Up to 1-1/4	8	1/2
1-1/2 to 2	8	3/4
2-1/2 to 6	12	1-1/4
8 to 10	24	2-1/2
Over 10	32	3-1/2

3. Lettering size shall be in accordance with the following:

4. Adjacent to each marker there shall be an arrow indicating flow direction.

- 5. Marker location shall be in accordance with the American National Standard Institute Scheme for Identification of Piping Systems (ANSI A13.1). Markers shall be placed adjacent to all valves and/or flanges; adjacent to all changes in direction on all pipe branches; and where all pipes pass through walls or floors on each side of wall/floor. On straight runs of piping, markers shall be placed at no less than 10 foot intervals. Where pipes are located above or below the normal line of vision, the lettering shall be placed below or above (as appropriate) the horizontal centerline of the pipe.
- C. Valve Status Indication Arrows
 - 1. Valve status indicator alignment arrows shall be provided on the indicator and scale sides of all interior hand wheel, chain and lever operated valves. Arrow heads shall appear aligned when the valve is in the full-open position. Arrow heads shall be painted on with stencils, or a color contrasting with the color of the valve. Arrow heads shall be minimum of 3/4-inch in smallest dimension. Valve position indicators shall be aligned to be visible from normal working levels.

PIPE IDENTIFICATION SCHEDULE

SYSTEM NAME/ MARKING	TAG	PIPE COLOR ⁽¹⁾	PIPE MARKERS ⁽²⁾
Water			
Cold Potable Water	CW	Lt. Blue	White on Green
Drains			
Drains	D	Lt. Gray ANSI No. 70	White on Green
Dewatering (Tanks)	DEW	Lt. Gray ANSI No. 70	White on Green
Gases			
Natural Gas	NG	Safety Orange w/ Black Bands	White on Brown

NOTES:

(1) Stainless steel piping shall not be painted, but shall receive the pipe markings indicated.

Pipe markers colors notations are defined as follows (ANSI/ASME A13.1-2015):
 White on Brown = White lettering on Brown background (combustible fluids)
 White on Green = White lettering on Green background (potable, cooling, boiler and other waters)

END OF SECTION

Attachment 5 – Specification Section 09905, Shop Coatings

SECTION 09905

SHOP COATINGS

PART 1 - GENERAL

1.1 <u>SECTION INCLUDES</u>

- A. Surface preparation and application of shop coatings on materials, equipment, and piping indicated in the various specification sections relating thereto, and as specified herein, including primers and topcoats for materials, equipment and piping that are finished at the point of manufacture or fabrication.
- B. Examine the various Sections of the Specifications and be thoroughly familiar with all provisions regarding shop coatings.

1.2 PREFINISHED ITEMS NOT REQUIRING PAINT OR FINISH

A. Copper, bronze, brass, chromium plate, nickel, stainless steel, aluminum or monel metals, except surfaces in contact with or embedded within concrete or masonry, unless otherwise specified elsewhere.

1.3 <u>REFERENCES</u>

- A. ASTM D2247 Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity.
- B. ASTM D 2794 Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- C. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials.
- D. Federal Test Method No. 141 Method 6141, Stain Removal.
- E. SSPC Steel Structures Painting Council.
- F. SSPC-PA1, "Standard for Shop, Field, and Maintenance Painting".
- G. SSPC-PA2, "Measurement of Dry Paint Thickness with Magnetic Gauges".
- H. SSPC-SP1, "Solvent Cleaning".
- I. SSPC-SP6, "Commercial Blast Cleaning".
- J. SSPC-SP10, "Near-White Blast Cleaning".
- K. SSPC-SP16, "Brush Blast Cleaning of Non Ferrous Metals"
- L. SSPC-PA Guide 3, Standard "A Guide to Safety in Paint Application", latest revision.

1.4 <u>SUBMITTALS</u>

- A. Submit product data under provisions of Section 01340.
- B. As a minimum, the following shall be included in the submittal package for all items, products, material or equipment, as specified.
 - 1. Submit data on the proposed shop coatings, details on surface preparation methods, application procedures and dry mil thickness.
 - 2. Submit a minimum of three (3) color charts for all factory top coats for color selection by Engineer.
 - 3. Submit coating manufacturer's certification that proposed shop coatings are compatible with field coatings, as specified in Section 09900.

1.5 **QUALITY ASSURANCE**

- A. All Shop Coatings shall meet the requirements of the materials section, and shall be guaranteed by the manufacturer to be compatible with the field coatings, as specified in Section 09900. The Contractor shall coordinate this requirement during the Shop Drawing Phase.
- B. All Shop Coatings shall meet all Federal and State regulations pertaining to Volatile Organic Compounds (VOC) compliance.
- C. All Shop coatings used for potable water applications shall be certified by the National Sanitation Foundation (NSF) in accordance with Standard 61. Evidence of compliance shall be a letter from NSF listing the submitted material.

PART 2 - PRODUCTS

2.1 <u>MATERIALS</u>

A. Refer to Part 3 - EXECUTION for specific products and applications.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Definitions

- 1. Submerged surfaces are defined as:
 - a. Those surfaces which are below the maximum water surface level as indicated on the drawings.
 - b. All surfaces contained within covered tanks.
 - c. The full height of all partially submerged items such as sluice gates, slide gates, weir gates, piping, etc.
 - d. All surfaces contained within underground structures, vaults and maintenance holes such as valve pits, drywells, etc.
- 2. Enclosed surfaces are those non-submerged surfaces enclosed and/or protected within a building in such a manner that it can not be exposed to UV light or weather conditions.
- 3. Weather exposed surfaces are all other conditions including buried items which do not fall into the definition of submerged or enclosed surfaces, as noted above.
- B. Ferrous Metal
 - 1. All submerged ferrous metals shall be sandblast cleaned in accordance to SSPC-SP10, near white, immediately prior to priming.
 - 2. All other ferrous metals, Enclosed and Weather exposed surfaces, shall be sandblast cleaned in accordance to SSPC-SP6, commercial grade, immediately prior to priming.
 - 3. Remove dirt, oil and grease by washing surfaces with mineral spirits.
 - 4. Surfaces shall be dry and free of dust, oil, grease and other foreign material before priming.
- C. Galvanized Metal (nonferrous metals indicated to be painted):
 - 1. Solvent clean in accordance with ASTM D6386.
 - 2. Surfaces shall receive SSPC-SP-16 and shall be surfaced prepared in accordance with ASTM D6386.
 - 3. Surfaces shall be dry and free of dust, oil, grease and other foreign material

before priming.

4. Restore shop coats of paint with identical materials if removed for welding and fabrication.

3.2 <u>APPLICATION</u>

- A. Equipment
 - 1. Motors, speed reducers and similar parts shall have a surface preparation in accordance with the manufacturer standard coating requirements and suitable for weather exposed use. The minimum coating system shall be 3 coats of polyamide epoxy at a minimum of 3 mils per coat. Other coatings must be approved by the Engineer.
 - 2. Items finished at the point of manufacture (shop primed and painted), such as submersible pumps and other similar surfaces, shall receive manufacturer's standard coating of baked, powder epoxy enamel, suitable for the intended service.
 - 3. All equipment casing openings requiring protection shall have a water repellent tape and vapor phase inhibitor treated paper.
 - 4. All other ferrous surfaces shall be factory primed in accordance with Section 3.2.C, except ferrous surfaces obviously not to be painted (such as gears, exposed machined or bearing surfaces, enclosed machined or bearing surfaces, lubricated contact surfaces moving under load, thread connections to be field connected and other similar items) which shall be given a heavy shop coat of grease or other suitable rust resistant coating per manufacturer's recommendations.
 - 5. These coatings shall be maintained as necessary to prevent corrosion during all periods of storage and erection, until final acceptance by the Owner.
- B. Pipe, Fittings and Valves
 - 1. The following surfaces shall be prepared in accordance with the manufacturer's recommendations and shall receive a shop coat of asphaltum varnish meeting Federal Specifications TT-C-494A or fusion bonded epoxy coating.
 - a) Interior surfaces of all hydrants, ductile iron pipe, fittings and valves except for air piping lines and air valves which shall be completely unlined.
 - b) The exterior surfaces of buried valves and miscellaneous piping appurtenances.
 - 2. The exterior surfaces of all ductile iron pipe and fittings buried shall receive the standard factory applied asphaltic coating (in accordance with AWWA C151).
 - 3. The exterior surfaces of ductile iron pipe, fittings and valves submerged, enclosed or weather exposed shall receive a factory applied shop primer in accordance with Section 3.2.C
 - 4. Machined surfaces shall be cleaned and coated immediately after being machined, with a suitable rust resistant coating per manufacturer's recommendations.
 - 5. All other ferrous surfaces shall be factory primed in accordance with Section 3.2.C, except ferrous surfaces obviously not to be painted shall receive a heavy shop coat of grease or other suitable rust resistant coating per manufacturer's recommendations.

- 6. These coatings shall be maintained as necessary to prevent corrosion during all periods of storage and erection until final acceptance by the owner.
- C. Schedule: The product model and coatings system numbers listed below are based on products by the Tnemec Company Inc. to establish the standard of quality. Equivalent products from other manufactures will be accepted provided they meet or exceed the performance of the listed products.

SURFACE / ITEM	SURFACE PREPARATION	Tnemec SHOP PRIME
METALS		
Submerged Ferrous Metals, Piping, Fittings, Valves and Equipment specified to be shop primed in their respective sections in contact with potable water .	SSPC-SP10 Near White Metal Blast Cleaning	Series 1 Omnithane 2 to 3 mils
Submerged Ferrous Metals, Piping, Fittings, Valves and Equipment specified to be shop primed in their respective sections.	SSPC-SP10 Near White Metal Blast Cleaning	Series 1 Omnithane 2 to 3 mils
Enclosed Ferrous Metals, Piping, Fittings, Valves and Equipment specified to be shop primed in their respective sections.	SSPC-SP10 White Metal +Blast Cleaning	Series 1 Omnithane 2 to 3 mils
Weather Exposed Ferrous Metals, Piping, Fittings, Valves and Equipment specified to be shop primed in their respective sections.	SSPC-SP6 Commercial Blast Cleaning	Series 1 Omnithane 2 to 3 mils
Enclosed Ferrous Metals.	SSPC-SP6 Commercial Blast Cleaning	Series 1 Omnithane 2 to 3 mils
Galvanized Metal Lintels and Galvanized Metals built into the masonry and concrete	SSPC-SP1 Solvent Wiping followed by SSPC-SP16 Brush Blast Cleaning	Series 66HS Epoxolime 11 3 to 5 mils
Ferrous Metals in contact with or embedded in concrete or masonry	SSPC-SP6 Commercial Blast Cleaning	Series 66HS Epoxolime 11 3 to 5 mils
All Ferrous metals concealed in wood	SSPC-SP3 Power	Series 1 Omnithane
framing and not exposed to view	Tool Cleaning	2 to 3 mils
All Other Weather Exposed and Enclosed Ferrous Metals, including steel frames, overhead door, steel lintels and bollards	SSPC-SP6 Commercial Blast Cleaning	Series 1 Omnithane 2 to 3 mils

NOTES:

- 1. Surface preparation shall be as specified within this section and as noted in the table above are minimums. Surface preparation shall be in accordance with the manufacturer's written recommendations.
- 2. All dry film thickness indicated are the minimum required.
- 3. All ferrous metals and equipment delivered to the site with shop primers other than polyamide epoxy or alkyd primer indicated above, shall receive an intermediate coat as necessary for compatibility with epoxy top coats.

- 4. All ferrous, nonferrous in contact with concrete or masonry and galvanized metal lintels shall receive a polyamide epoxy primer with a minimum dry film thickness of 4 mils applied to the contact area.
- 5. Galvanized surfaces to be painted shall be treated as required by manufacturer to be compatible with the primer and top coats specified.

END OF SECTION

Attachment 6 – Specification Section 15180, Rigid Board Pipe Insulation

SECTION 15180

RIGID BOARD PIPE INSULATION

PART 1 - GENERAL

1.1 <u>DESCRIPTION</u>

A. Work Included: Provide and apply insulation to buried water piping as shown in the contract Drawings and specified herein.

1.2 <u>RELATED SECTIONS</u>

- A. Section 01340 Submittals
- B. Section 02200 Earthwork

1.3 <u>REFERENCES</u>

- A. ASTM C272 Standard Test Method for Water Absorption of Core Materials for Sandwich Constructions.
- B. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
- C. ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
- D. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials.

1.4 <u>SUBMITTALS</u>

- A. Submit product data under provision of Section 01340.
- B. Submit manufacturer's installation instructions.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to project site in manufacturer's original unopened packaging.
- B. Identify contents, manufacture, brand name, thermal values, and applicable standards.
- C. Store materials in area protected from weather and moisture.
- D. Remove damaged materials from site.

PART 2 - PRODUCTS

2.1 <u>MANUFACTURERS</u>

A. Rigid Pipe Insulation

- 1. DuPont Styrofoam Highload 40
- 2. Owens Corning Foamular 400
- 3. DiversiFoam Products CertiFoam 40
- 3. Or equivalent

2.2 <u>RIGID PIPE INSULATION</u>

- A. Insulation: Closed cell polystyrene foam board
 - 1. Standard Two Foot Width.
 - 2. Aged "R" Value "R" = 5.0 per inch, ASTM C518.
 - 3. Water Absorption 0.1 percent, ASTM C272.
 - 4. Water Vapor Permeance 1.0 perm (max) ASTM E96
 - 5. Compressive Strength 40 pounds per square inch, ASTM D1621.

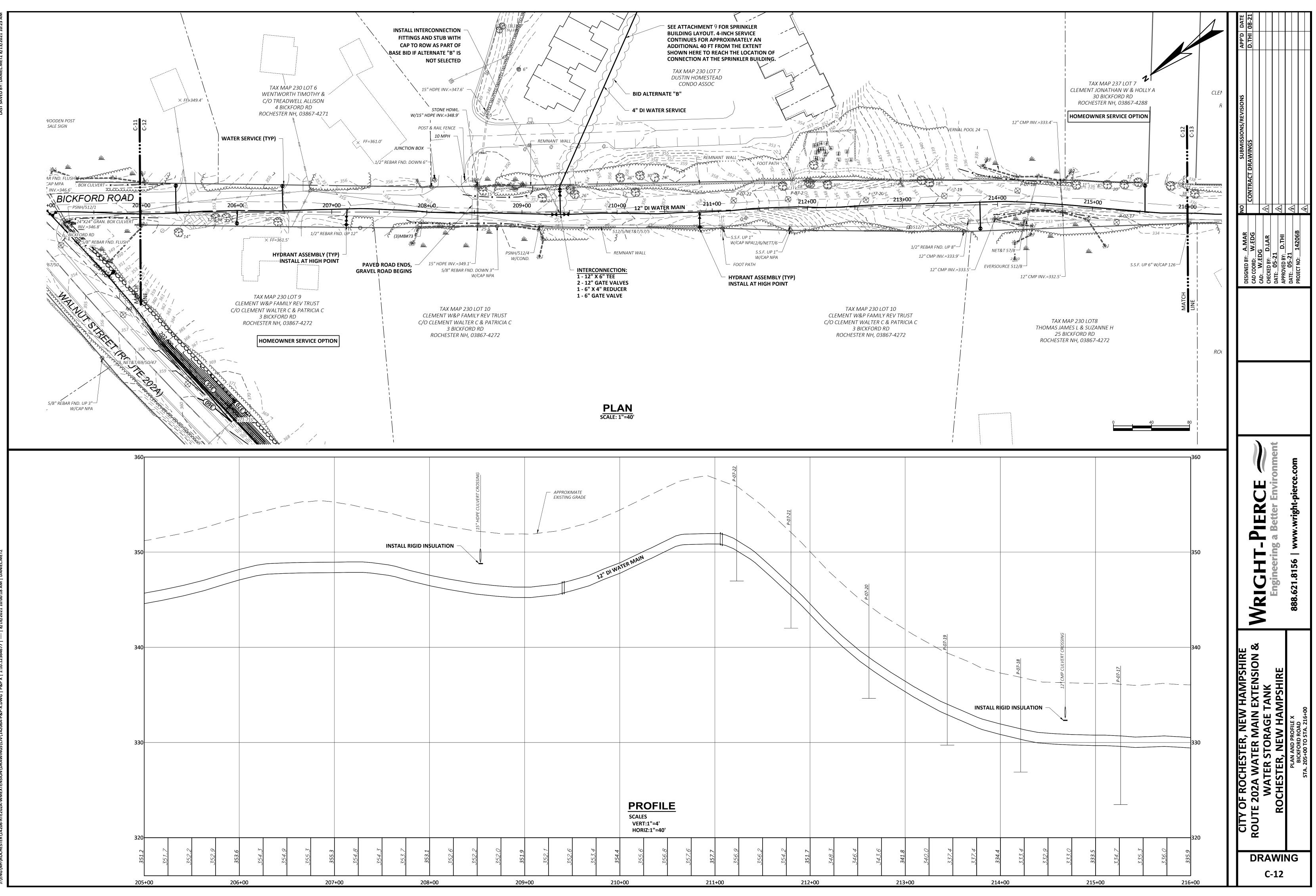
PART 3 - EXECUTION

3.1 INSTALLATION

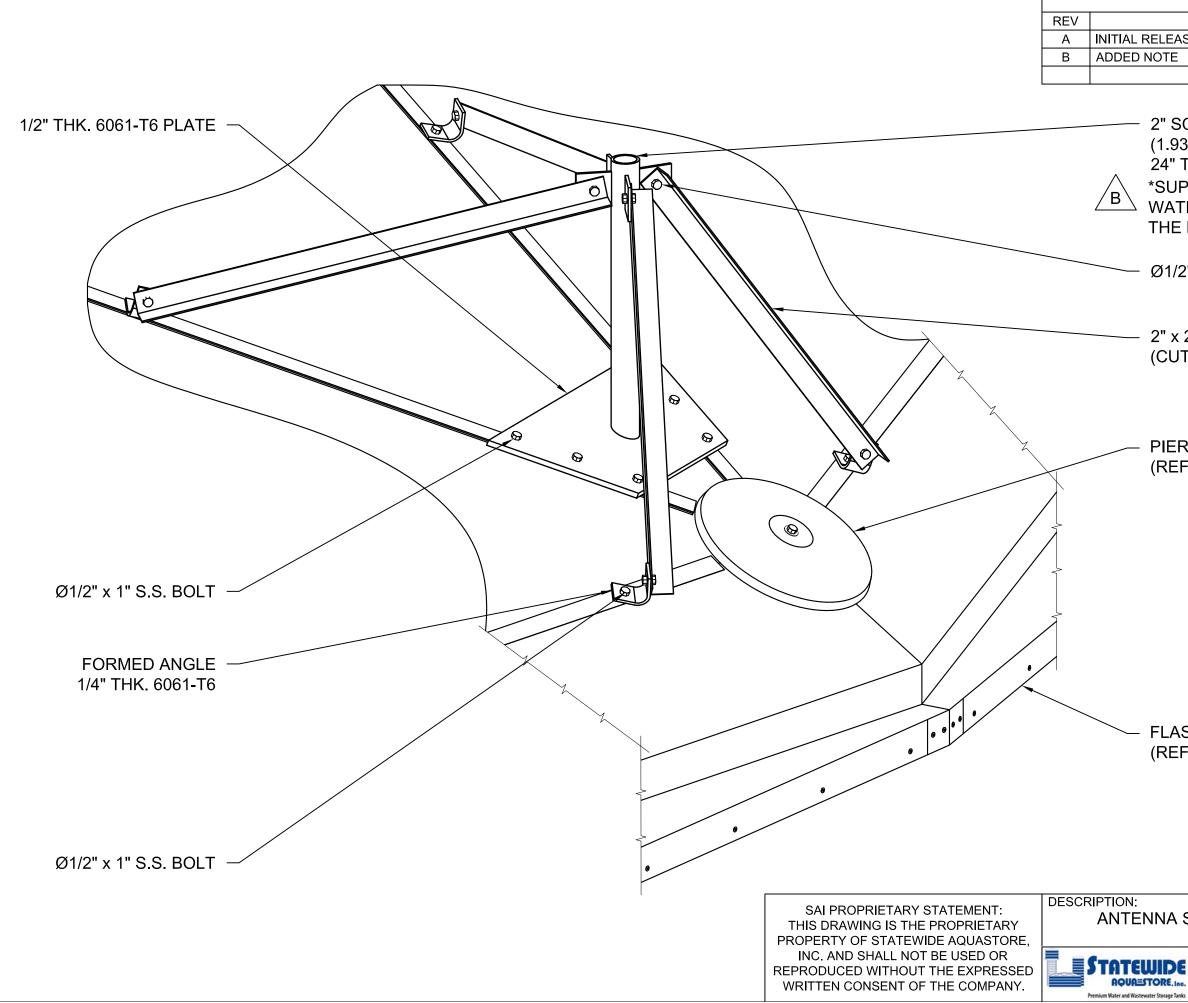
- A. Apply insulation only after all pipes have been tested and approved.
- B. Lay rigid pipe insulation where depth of mainline cover is less than 5 feet, where vertical separation to culvert or storm drain is 24 inches or less, or where indicated on plans, directly on sand, tightly butting each sheet of insulation against adjacent sheet.
- C. Lay rigid pipe insulation where depth of service line is less than 4 feet 6 inches in unplowed areas and 5 feet in plowed areas, or where vertical separation to culvert or storm drain is 24 inches or less, directly on sand, tightly butting each sheet of insulation against adjacent sheet.

END OF SECTION

Attachment 7 – Drawing C-12



Attachment 8 – Antenna Support Assembly Detail



REVISIONS	
DESCRIPTION	DATE
AL RELEASE	8/23/2019
ED NOTE	8/17/2020
 — 2" SCH. 80 PIPE 6061-T6 (1.939" I.D. x 2.375" O.D.) 24" TALL *SUPPORT ENDS SHALL BE CAPP WATERTIGHT WITH A DRAIN HOLE THE BOTTOM — Ø1/2" x 1" S.S. BOLT 	
— 2" x 2" x 1/8" 6061-T6 ANGLE (CUT LENGTH TO FIT)	
- PIER GUSSET (REF.)	
- FLASHING (REF.)	
TENNA SUPPORT ASSEMBLY	BY: MK DATE:
	8/23/2019 REVISION:

В

Attachment 9 – Dustin Homestead's Sprinkler Building- Existing Conditions

DLC2 SETTLED IR29.	Major B	Building	Permit	Issue Date: 12516 Permit #: 17.56
S AND STATES	٨٣	nlication	n	(This area for office use only
ROGHESTER		oplication		Map # 230
BELLA RADA		Rochester, New Hamps iilding, Zoning & Licer		Lot #
	31 Wakefi	ield St. Rochester NH (3867	Block # 27
H.C. and		phone: (603) 332-3508 Fax: (603) 509-1912		Zoning An
TCHARTER IBC	L			Loning 121
Location of Construction (Addre	27 Dus	tin Hama	stand	
Property Owner: $Du sti$	n Homes	C C	Phone:	
Mailing Address: City: <u>Rochester</u>	Statas N/4 Tim C	ada 128 20	Cell #	
Email	State Zip C	ode. <u>038 9</u>		
Contractor: <u>TSSUFC</u> Mailing Address: <u>3510</u> City: <u>Forts mouths</u> Email ic' I & comca	State: NH Zip C	Road Sente ode: 03801	4Cell #: 603	-235-6023
Preferred Contact Method:	Telephone	X Cell	5	Email
Proposed Construction is for:	New Single-	Family Dwelling	New Comme	rcial Structure
(check only one)		amily Home		Addition
		Family Dwelling		
		t / New Mobile Home		11
Is property within the following?	Historic District (Ye		Approved Site	Plan (Yes) No)
(You must respond to all)		division (Yes / No)		ection Zone(Yes / No)
(104 must respond to any				
T		- per the Flood Insuration - per the Flood Insuration		
is proposed work to	cated within 50 feet of	a jurisdictional Wetla	nd Area (Yes / No)	-if so please document.
Land Information:	City Water (Yes /	Corne	r Lot (Yes/No)	
	City Sewer (Yes /	To		
Description of work to be perform Storage for	ed: Build Sprink	a new b Cler sy	uilding stem	for water
				A
	2			H H
1-1-7		~	9-	18-15
YC &			Date	
Property Owner Signature			Date	ė
Property Owner Signature				÷

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	230-7-27
Page 2 - Section A EXISTING (or PREVIOUS) CONDITIONS Existing Use: (land only - if so skip to "B")	Page 2 - Section B PROPOSED CONDITIONS Proposed Use: Pump Hous &
Residential Commercial Mixed Use (both)	Residential Commercial Mixed Use (both) Setbacks: Front Setback: Left Setbacks:
Existing Structures: (Existing Conditions) Existing # of Buildings on site: 9 Total Sq Ft of existing building(s): 9 Garage Parking: Exterior Parking: $Y_{e.5}$ Electrical Service: $Electrical$ $V_{e.5}$ Type of Heat: $Forced$ Hoth Fuel Type: $Ga.c.$ # of Fireplaces: G # of Kitchens: C Foundation Type: $Cource f_e$ Building Height: $Z4^{-1}$ # of Full Baths: ψ # of Partial Baths: b	Rear Setback Right Setbacks: Proposed Structures: (Total of existing + proposed) Proposed # of Buildings on site: Pump House Total Sq Ft of proposed building(s): Image Parking: O Electrical Service: Image Parking: I
For Residential Units: (Existing Conditions) # of Units: # of Bathrooms: # of Bedrooms:	Proposed # of Bathrooms: Proposed # of Bedrooms:
For Commercial Units: (Existing Conditions) # of Units: Office Area (sq ft): Office Area (sq ft):	For Commercial Units: (Total of existing + proposed) Proposed # of units: Proposed Office Area:

		230-7-	2-
ATTACHMENTS AND SUBMITTAI	LS RE	QUIRED AT THE TIME OF APPLICATION	
For Residential 1 and 2 Family	For Commercial or Multi-unit Residential		
Site Plan		Site Plan – Approved Site Plans Must be Certified Prior to Issuance of Building Permits.	
Driveway Permit [Contact DPW (603) 332-4096]		Driveway Permit [If Required] [Contact DPW (603) 332-4096]	
N.H. Approved Septic Design [If Required]		N.H. Approved Septic Design	
Approved Storm Water Management Plan [Contact DPW (603) 332-4096]		Approved Storm Water Management Plan [Contact DPW (603) 332-4096]	
Two (2) full sets of building plans		Three (3) full sets of plans [Stamped When Required by RSA 310 -A]	
P.U. C. Prescriptive Compliance Application, Res Check Compliance Application, or		Letter of Energy Compliance From Design Prof. [May Use Residential Compliance Options to a Maximum building size of 4000 Square Feet]	
Have you filled out page two Section A and B completely?		Have you filled out page two Section A and B completely?	
Footing Certification – This is Due Prior to Foundation Inspection or Issuance of Building Permit.		Footing Certification – This Is Due Prior to Foundation Inspection or Issuance of Building Permit.	
All Precedent Conditions of the Notice of Decision that was Approved by the Planning Board are met.		Statement of Special Inspection [IBC Section 1705] [If Applicable]	
Fire Department – Fire Protection Plans and Review Fee Submitted In Addition to Building Permit/Fee [If Applicable]		Fire Department – Fire Protection Plans and Review Fee Submitted In Addition to Building Permit/Fee.	

Please be advised, the order of inspections, for the Building Inspector Only, are as follows:

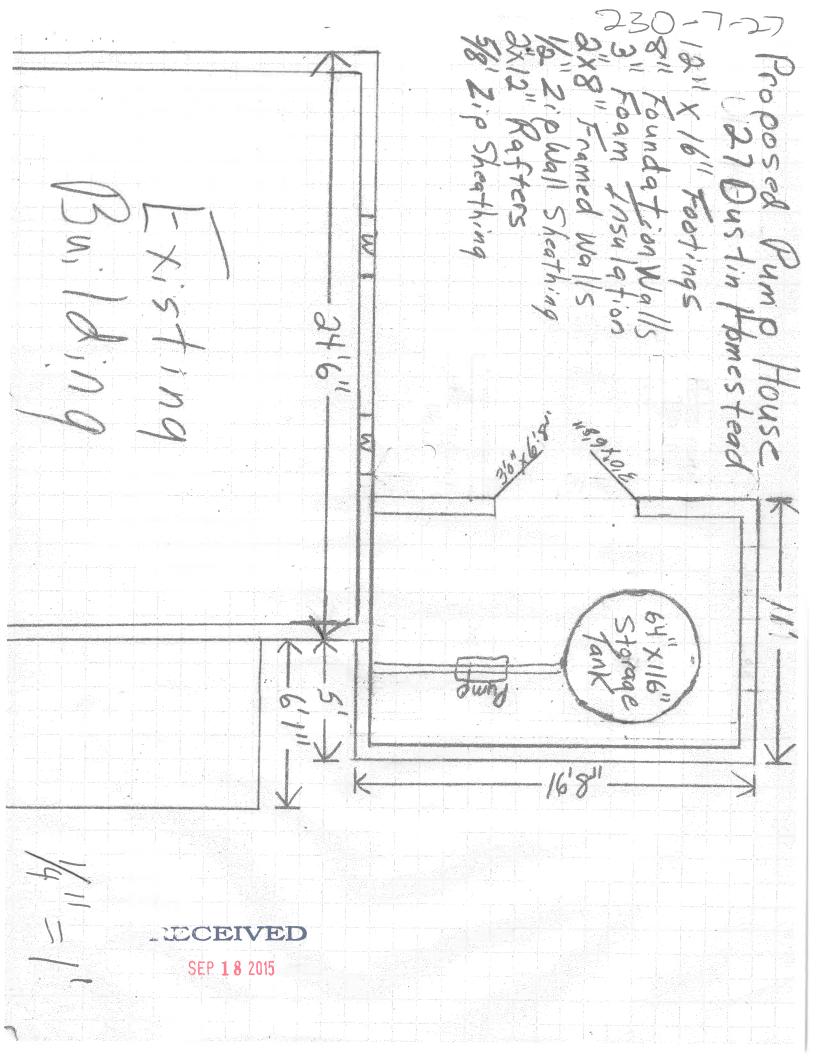
- 1. Reinforcing Steel Prior to Placement of Concrete.
- 2. Foundation / Pier Depth
- 3. Rough Framing (After Sub's have passed)
- 4. Insulation

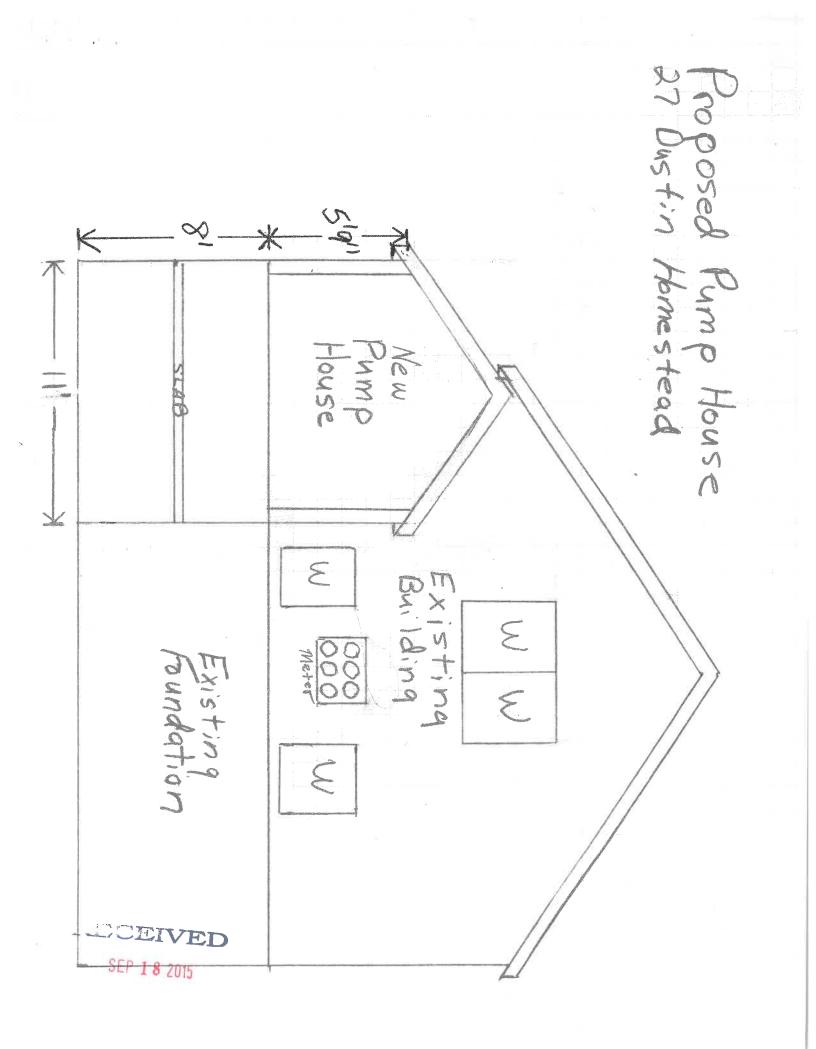
- 5. Drywall Installation(Prior to Mud & Tape)
- 6. Penetration Firestop
- 7. Final Inspection

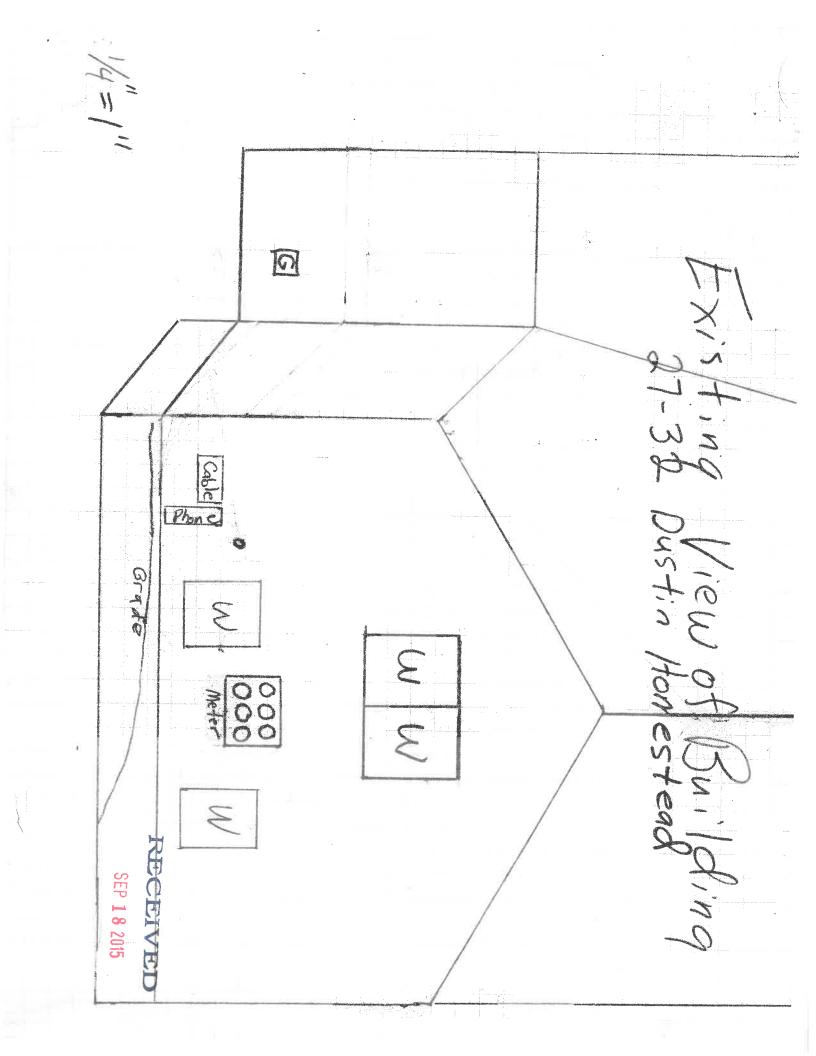
Note: Not all inspections may apply to every situation and additional inspections may be required as needed. Electrical, Plumbing and Mechanical Work all require additional inspections. Check with Fire Department for their required Inspections.

2307-27
Certification of Accuracy: As the owner/owners agent of record, I certify that all information contained within this application is true and accurate to the best of my knowledge and belief. Certification of Compliance: I hereby certify that I am familiar with all pertinent codes relating to the above specified work, and that all work shall be performed in compliance with these codes, also that I am familiar with the City of Rochester Ordinance, Chapter 42 and all use and dimensional Regulations. Inspections: This signed application constitutes consent on the applicant's part to allow for inspections at the property by the department of Building, Zoning & Licensing Services, Assessing Office and any other required City Staff. Any work that is covered prior to the inspection may be required to be removed for inspection. Certificate of Occupancy (C/O): A C/O must be issued PRIOR to any occupancy of residential and/or commercial structures. A Certificate of Occupancy shall be clearly displayed in all structures of non-residential uses. For Commercial Projects: As-Built Drawings must be submitted prior to issuance of a C/O. Permits are non – transferable. If this is an "After the Fact" permit, it will be subject to a fee two times the normal permit fee.
Applicants are advised that the making of a false statement on this form is a criminal offense. Cost of Construction: $120,000$ Permit Fee: $180+10=190$ Paid: Cash \$ Excheck # 110055 Permit fee is based on \$9.00 per \$1,000.00 of Construction Cost (Rounded Up Nearest \$1,000.00) plus a \$10.00 application fee Minimum Permit Fee is \$20.00 Minimum Permit Fee is \$20.00 $9/18/15$ $9/18/15$

Approved By: Date:









Dustin Homestead Proposed Pump House Schedule Of Materials

12" x 16" Footings	
	#4 Rebar
	3000 Mix Concrete
8" x 8' Foundation	
	#4 Rebar
	3000 Mix Concrete
	Waterproofing
	3" Foam Insulation
	Foundation Coating
	8" J - Bolts
8" Walls	
	2" x 8" PT Plate Stock
	2" x 8" Plate Stock
	2" x 8" Studs
	1/2" Zip Wall Sheathing
	Typar House Wrap
	Vinyl Siding to Match Existing
	8" Fiberglass Insulation
	Plastic Vapor Barrior
Roofing	
	2" x 12" Rafters
	5/8" Zip Roof Sheathing
	Underlayment
	Ice and Water Shield
	Architectual Shingles To Match Existing
	Ridge Vent
	R - 38 Insulation
	Proper Vent
	Match Existing Roof Pitch

SEP 18 2015

Issurcomm Construction 3510 Lafayette Road Suite # 4 Portsmouth NH 03801 603-430-7701

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Pump
House

														and the second se									Framing												Foundation	2 		Excavation	
											Roof	i i i i i i i i i i i i i i i i i i i											Walls			Foundation Insulation				Slab	Waterproofing	Foundation	Drainage	Footings	P	Dig For Water Line And Electrical	Dig For Foundation		
Fasteners	Cobra Ridge Vent	Shingles	Grace TriFlex	Grace Ice & Water Shield	Step Flashing	F - 8 8" White Aluminum Dripedge	5/8" Zip Sheathing	2" x 4" x 12' Rake Ladders	2" x 6" x 12' Collar Ties	2" x 12" x 12' Rafters		Fasteners	8" J - Bolts	2" x 8" x 8' PT for Door Frame	2" x 8" x 8' Header	Typar	1/2" Zip Wall	2" x 12" x 16' Fascia	2" x 8" x 16' Plate Stock	2" x 8" x 10' Studs	2" x 8" x 16' PT Plate Stock	Sill Seal			Foundation Coating	3" Dow Foam Board	Concrete 3000 Mix	6" x 6" Mesh Wire	3" Dow Foam Board										
	ч	IJ	-	1		7	14	œ	14	26	And a		12	4	4	ч	9	2	9	24	ω	н				11		U)	IJ										Quy
\$50.00	\$39.50		\$135.00	\$134.75	\$22.76	\$7.99			_		\$437.94	\$50.00								Note your get			\$50.00															LOST	
\$50.00	\$39.50	\$0.00	\$135.00	\$134.75	\$22.76	\$55.93	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	COST	iviateriai
											\$500.00												\$1,500.00	er an Hell ^e to a service and				فسيار بين در مرد محمد محمد										Cost	Labor

Dustin Hon_;tead Pump House

9/21/2015

Total Cost	Outlets	Lights	Electric Baseboard Heaters	Panel Box	Electrical	Hookup Water For Sprinklers	Water Line	Plumbing	Fire Pump	Tank	Sprinklers						Insulation			Door									
						Sprinklers							<	q	70	77		G	D		T	A	<	V	<	<	<	<	<
		And a second secon	Oil Filled							A mediately			Vapor Barrior 4 Mil 10' x 200'	Proper Vent	R - 38 Unfaced 15" 384 sq ft	R - 30 Unfaced 15" 282 sq ft		Geocel Caulking, Clear	Dbl 3'0" x 6'8" Steel Flat Panel Doors	****** 1.	Fasteners	Aluminum Trim	Vinyl Vented Soffit	Vinyl F - Channel	Vinyl Undersill Trim	Vinyl 5/8" J - Channel	Vinyl Inside Corners	Vinyl Outside Corner Boards	Vinyl Siding 2 sq units
	2	2	2						щ	щ			دىر	36	œ	9		2	щ		<u>حر</u>	2	6	4	4	Z	N	ω	ω
															\$45.67	\$18.67	\$533.39	\$6,82		\$13.64	\$20.00	\$84.67	\$14.95	\$12.62	\$6.20	\$9.92	\$13.74	\$19.50	\$83.12
\$1,794.07	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$365,36	\$168.03	\$0.00	\$13.64	\$0.00	\$0.00	\$20.00	\$169.34	\$89.70	\$50.48	\$24.80	\$69.44	\$27.48	\$58.50	\$249.36
\$2,600.00																				\$100.00			-						
\$4,394.07																						- Bro Anno			Alberture				

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Susan Morris

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From:Tim WilderSent:Friday, September 25, 2015 12:42 PMTo:Susan MorrisSubject:Dustin Homestead

Susan,

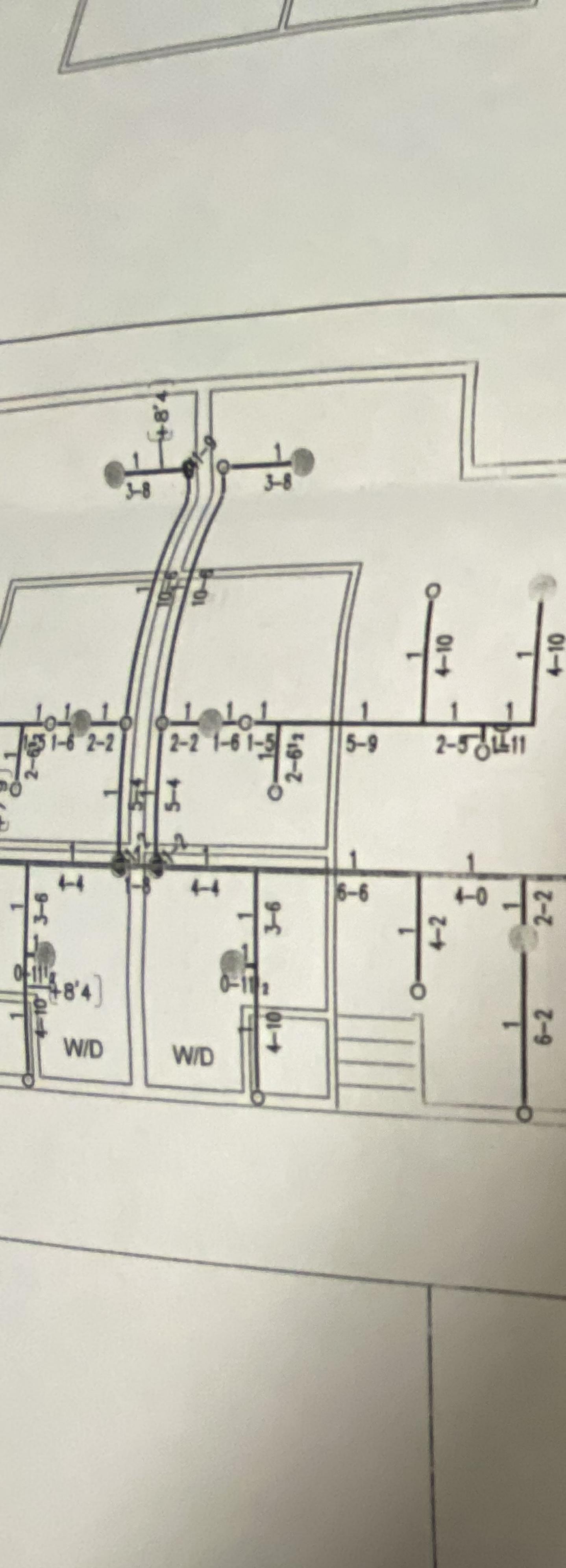
I have no concerns regarding the addition of the sprinkler room for the tank. They can move forward. Will you please call the contractor today and let him know I'm all set.

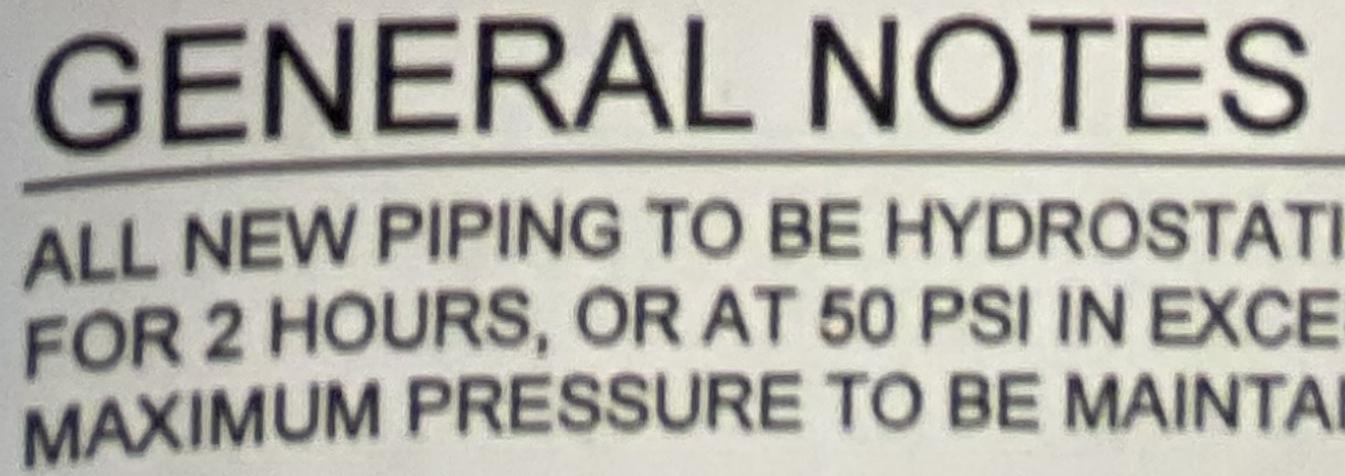
Thanks,

Tim Wilder Deputy Chief - Fire Prevention Rochester Fire Dept 37 Wakefield Street Rochester, NH 03867 p <u>603-330-7184</u> f <u>603-332-9711</u>

×	Rochester FD NH -
	new patch1

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8-112

WHETHER OR NOT INDICATED ON THE DRAWINGS, THE FOLLOWING ITEMS ARE TO BE PROVIDED:

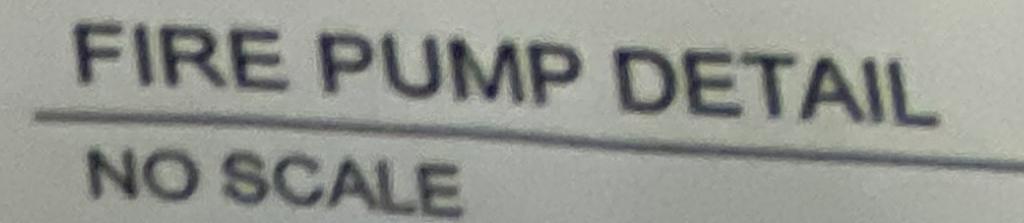
ALL NEW PIPING TO BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI FOR 2 HOURS, OR AT 50 PSI IN EXCESS OF THE MAXIMUM PRESSURE, WHEN THE MAXIMUM PRESSURE TO BE MAINTAINED IS IN EXCESS OF 150 PSI, PER N.F.P.A. 13R.

27" FIRE PUMP TESTHEADER

22" FDC MAINTAIN 36" CLEARANCE

-1500 GALLON TANK

FIRE AND JOCKEY PUMP CONTROLLERS JOCKEY PUMP WITH 2 CONTROL VALVES

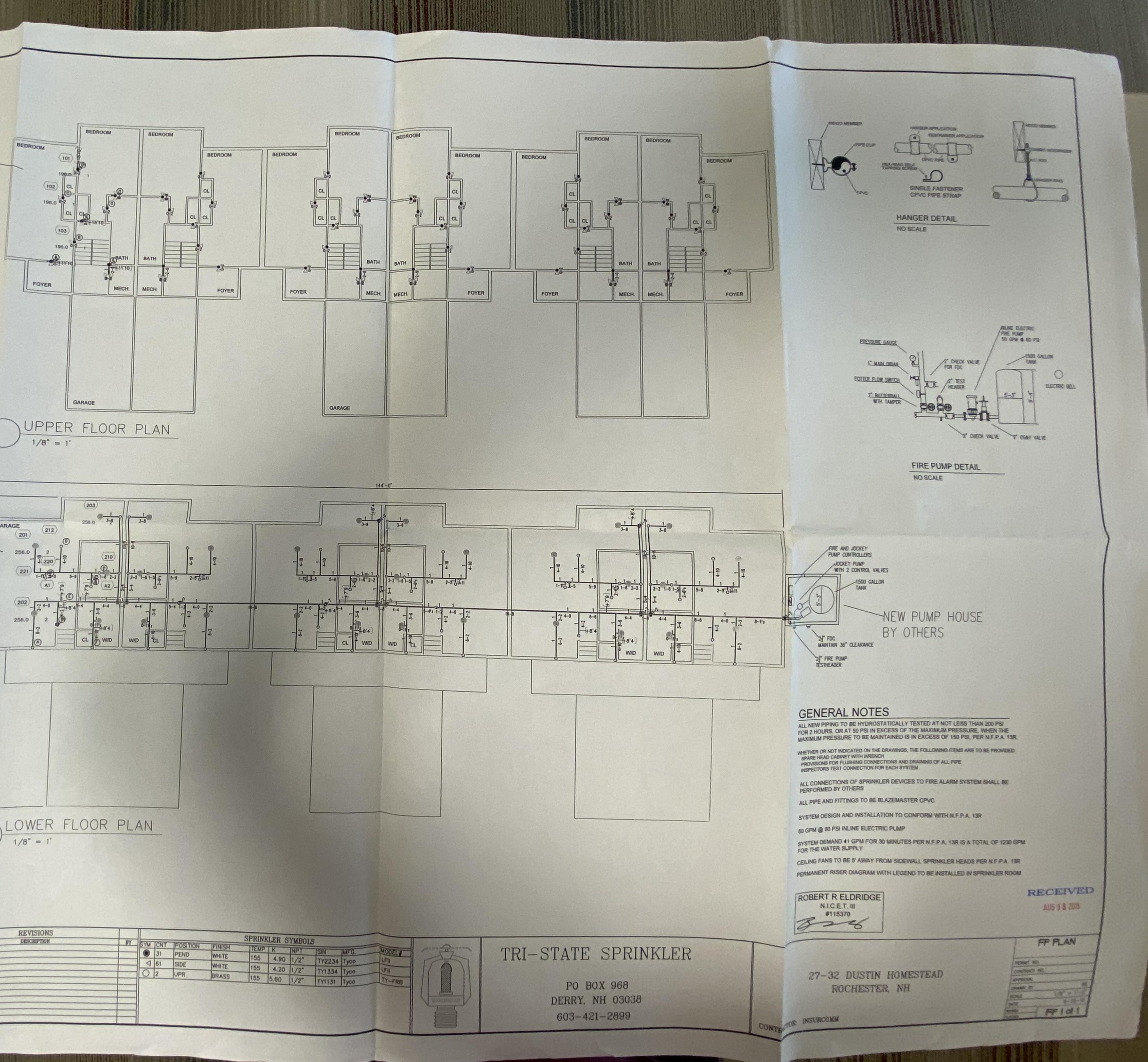


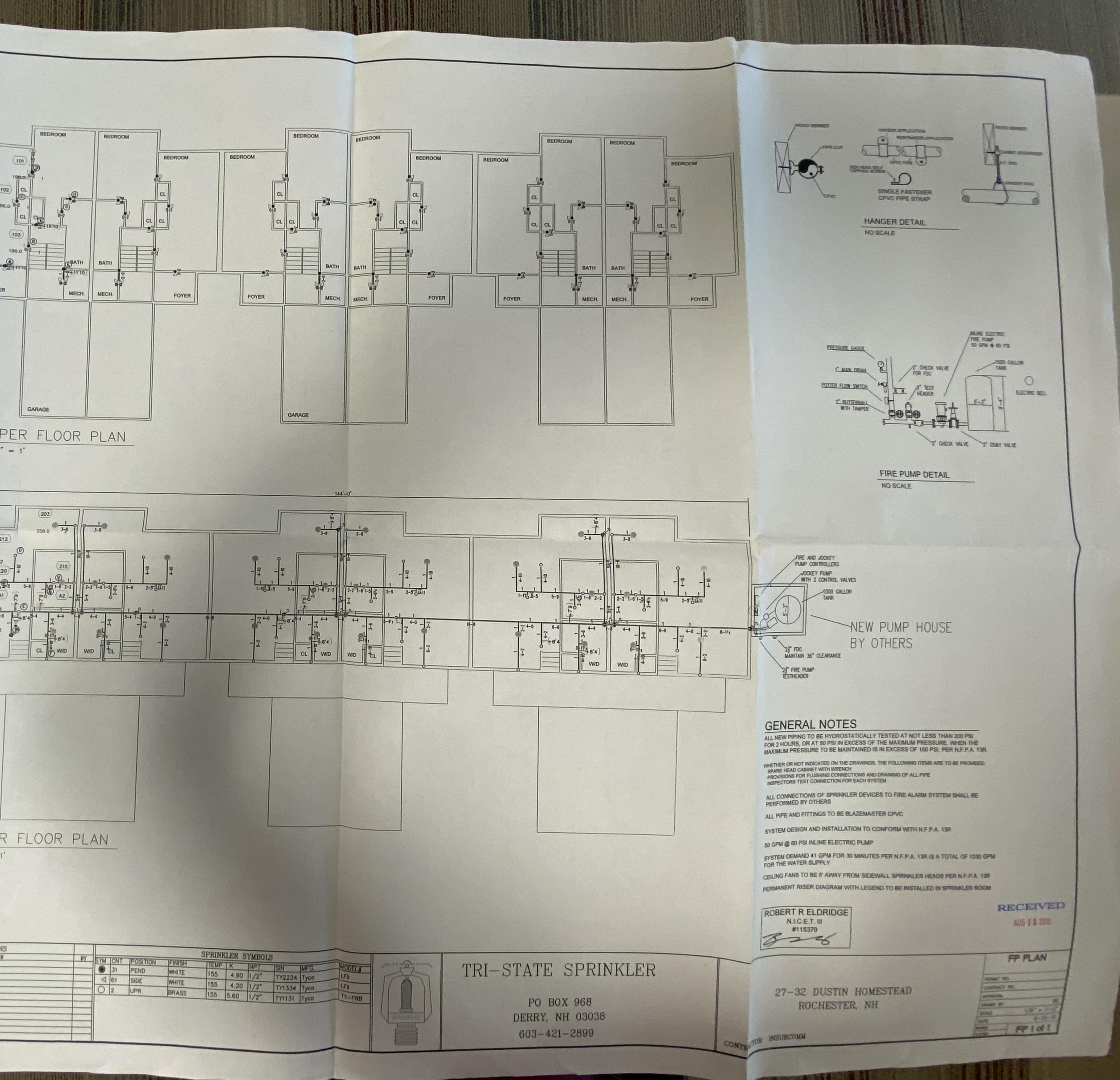
NEW PUMP HOUSE

"2" CHECK VALVE

2° OSSEY VALVE

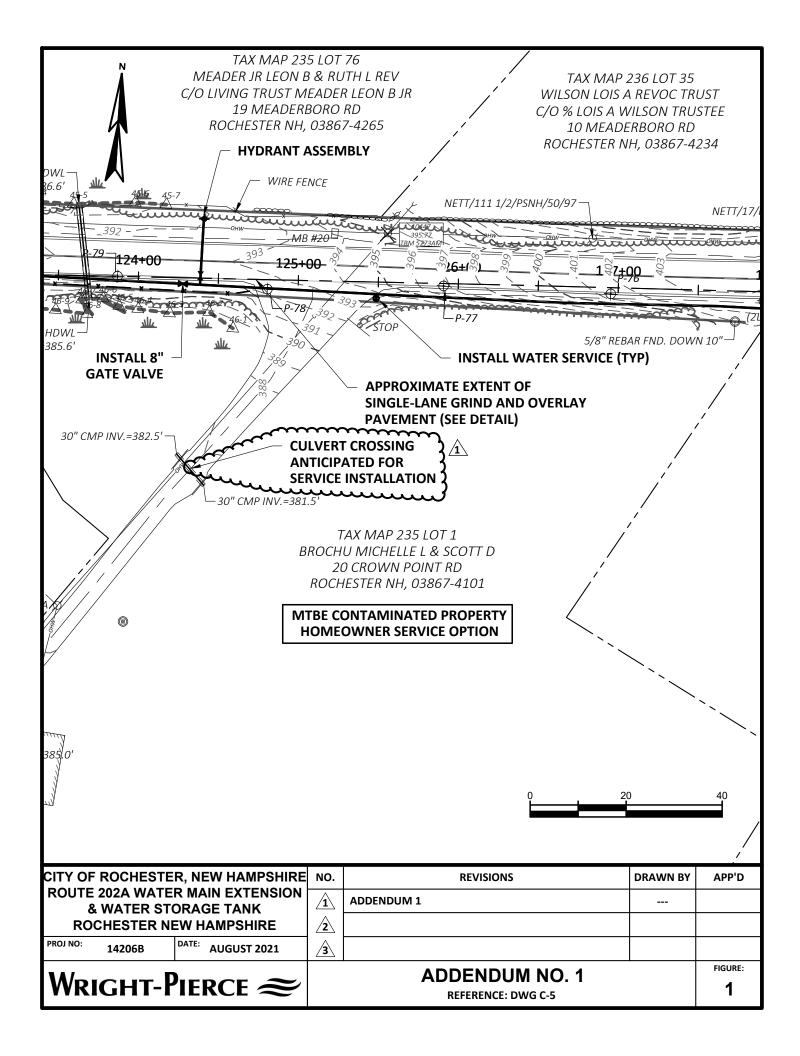
BEDROOM SEDEWALLS IN A COMPARTMENT Start Hand PS 7.40 Figuing Heatin 3. ELLOTE ALES Start Head Of 12.0 0.050 Density Areas 0.000 SOFT per Head 198 Les/Mill Ratio 1.20 Den-Hill to River (*) 1.33 Marx Velocity 13.0 P3 -Hill to River 4.80 AUTOR LIST Dearer Rome or Location States 173 Anal et States 61.5 (D'V Regit et States 35.3 (auto Hone 6.000 173 Regit et States 50.1 (burdler of States 6.000 (butaits Hone 6.000 bately FS 13.5 (Regit States 6.000) Pressure Australia Pressure of 63.5 pel Docente Repuber Pressure of 55.1 pel Dammary Tols is a safety reargh of 53.6 pel or 22 K of Samply Anexand Man Density Auclation 0.005 79 Inter - 108 to Source 2.34 Density (FW of Max Auclatio Density 43.1 Reck Denset 0.000) FOYER UPPER LEVEL GARAGE MECH GRADE LEVEL LOWER LEVEL BUILDING SECTION NO SCALE J PENDANTS IN A COMPARIMENT GARAGE 256.0 (221) BFFA LIN Lan/Mid Ratio 1.20 Den-Hid to River (*) 411 Has Materity 13.0 PS -Hid to River 1.55 All the second Salaron Name or Location Searce PER Augt at Searce 65.5 (SPM Ragid at Searce 40.8 (adde Hans 5000) PER Ragid at Searce 45.1 (Durption of Searce 6.000 (Dutate Hans 500) Ealery PD 55.0 (Ragid Searce Votume 0.000) 202/ Pressure Assisting Pressure of 62.1 per Exceeds Required Pressure of 62.1 per Summery Ris & a safety resign of 55.0 pel or 24 % of Supply Advenced Man Density Audiatia 0.057 PS Inco - 108 to Source 2.35 Domanory DNA of Man Audiatia Density 45.9 Reck Densed 0.000 258.0 1/8° = 1' 1 Section APRIL REVISIO Flow Text Dote residual President Firm Test Location 0-75-15 Pendont Figur | Texted by PLAD HOLD Distant Days A (Relative to Source Electrics) 0.07 Topic Villance Topic Villance Topic Electrics Party Mondathers General



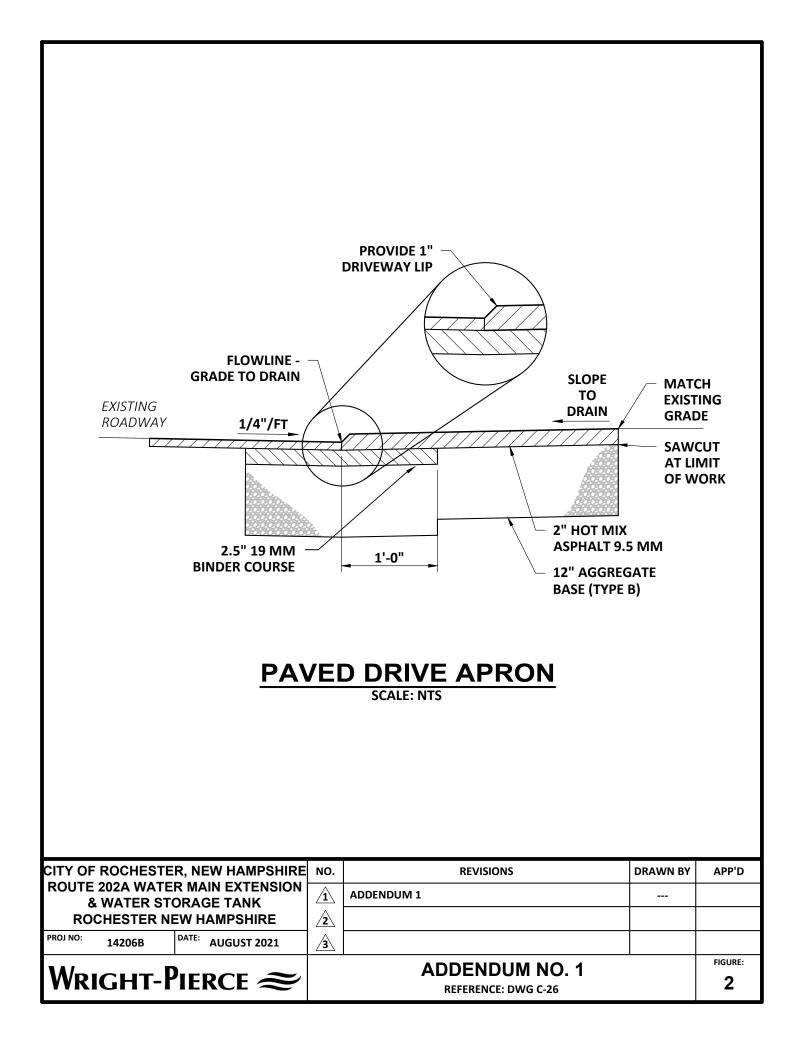


ON	BY	SPRINKLER SYMBOLS									
		SYM	CNT	POSITION	FINISH	TEMP	IK	INPT	The second division in which the second division is not the second division of the second d	IMFG.	MODEL
			31	PEND	WHITE	155	4.90	1/2"	In a long to the second	Company of the Owner	LFII
		0	61	SIDE	WHITE	155	Design of the second se			Tyco	14
		0	2	UPR	BRASS	Contra Contra Contra	The state of the s	1/2"	TY1334	Tyco	- UII
		13.77				155	5.60	1/2"	TY1131	Тусо	TY-FRB

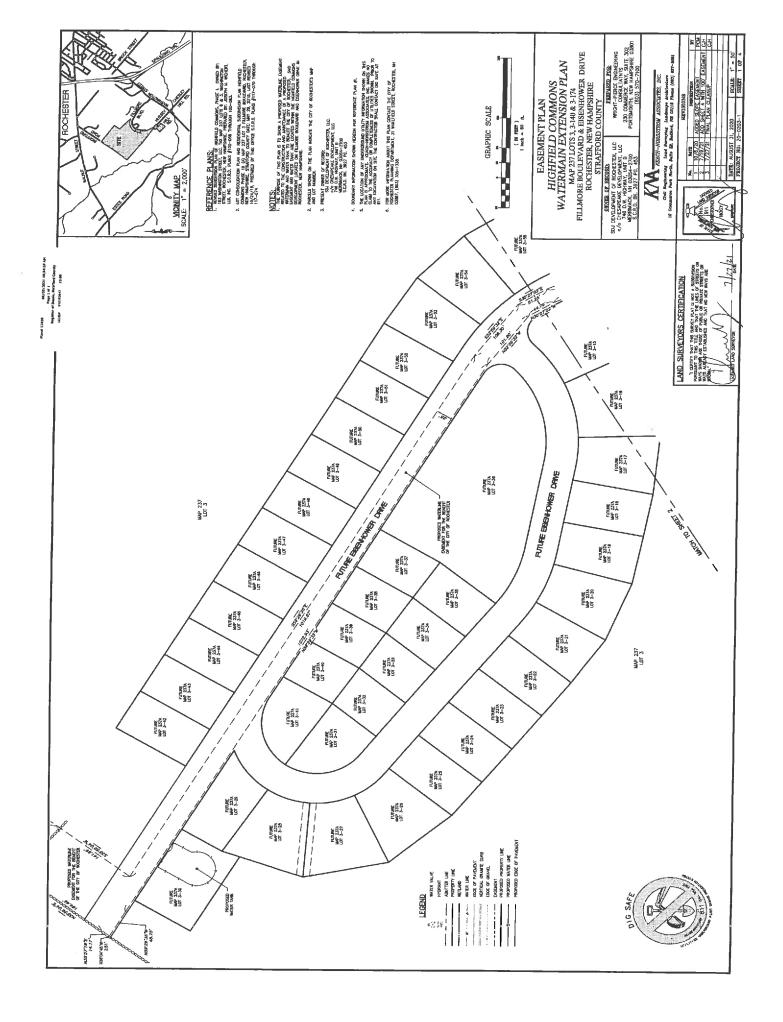
Attachment 10 – Figure 1

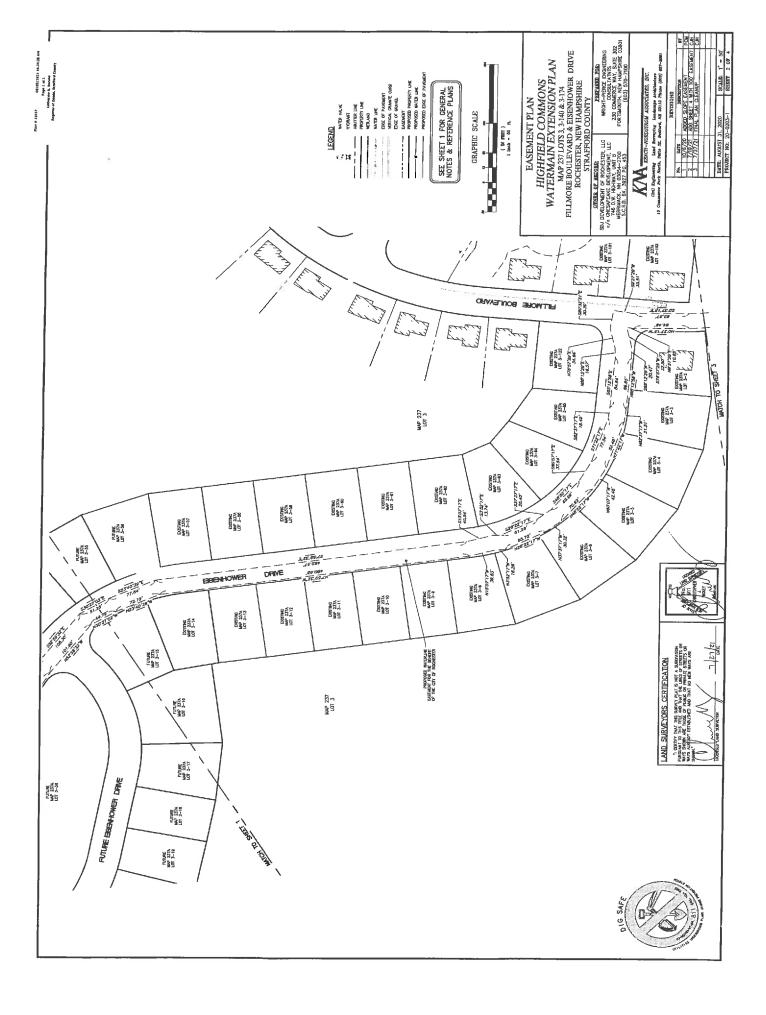


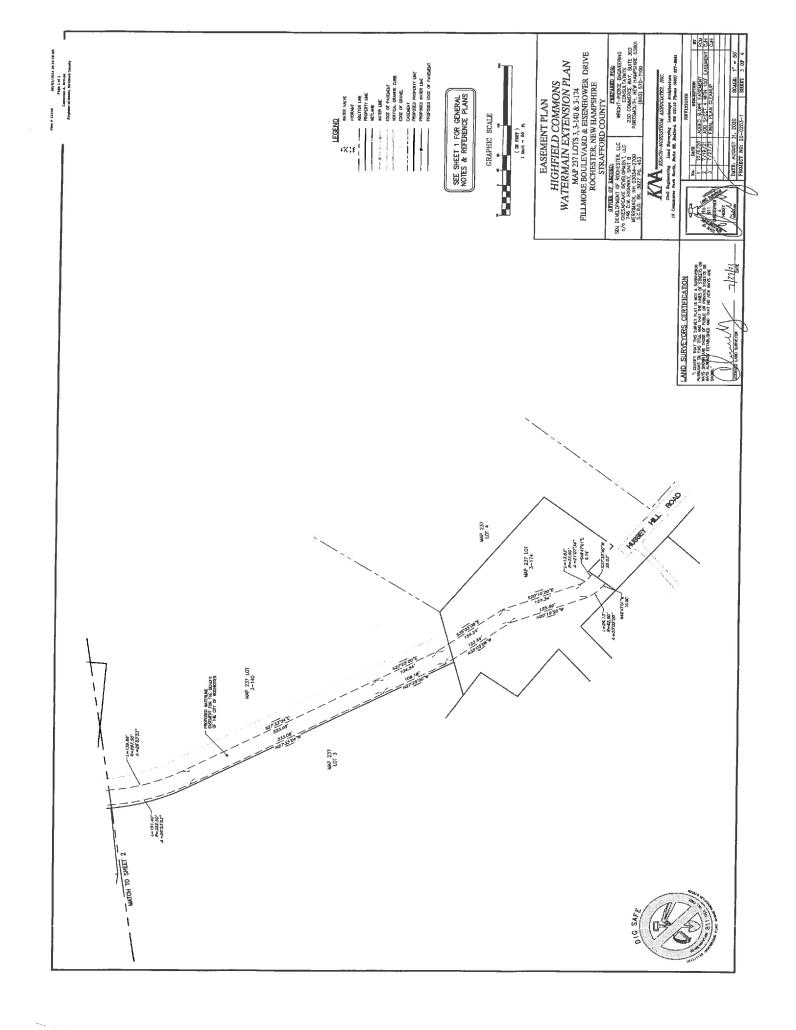
Attachment 11 – Figure 2

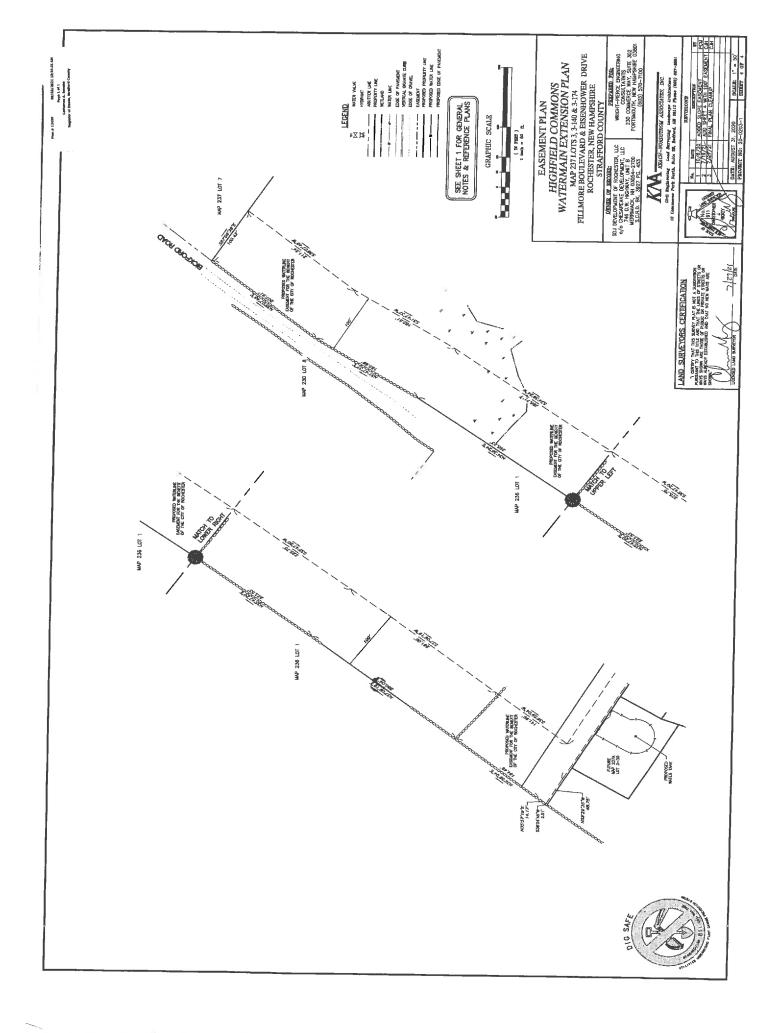


Attachment 12 – Easement Plan and Deed









Book:4940 Page:938

RETURN TO: Terence O'Rourke, City Attorney City of Rochester 31 Wakefield Street Rochester, NH 03867

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Catherine A. Berube Register of Deeds, Strafford County

This conveyance is exempt from the NH Real Estate Transfer Tax pursuant to RSA 78-B:2 I. This transfer is also exempt from the LCHIP surcharge pursuant to RSA 478:17-g II (a).

WARRANTY EASEMENT DEED

KNOW ALL MEN BY THESE PRESENTS THAT **SDJ Development of Rochester, LLC**, a limited liability company formed under the laws of the State of New Hampshire with a business address of 746 D.W. Highway, Unit B, Merrimack, New Hampshire 03054 ("GRANTOR") does hereby GRANT, for valuable consideration, to the **City of Rochester**, a municipal corporation with a business address of 31 Wakefield Road, Rochester, New Hampshire 03867, its grantees, successors, and assigns ("GRANTEE") an exclusive easement for construction, repair, maintenance and replacement of a waterline and the right to enter and re-enter for the same across the land of the Grantor depicted on a plan entitled "Easement Plan, Highfield Commons Watermain Extension Plan, Dated August 31, 2020" and recorded in the Strafford County Registry of Deeds on August 3, 2021 as Plan # 12456-12459 within the following described lot or parcel of land owned by the Grantor herein and situated in said Rochester, NH:

Land described in a deed recorded in Strafford County Registry of Deeds in Book 3927, Page 453.

Said lot is further described in the Tax Records and on the Tax Maps of the City of Rochester as Map 237, Lots 3, 3-140 & 3-174.

IN WITNESS WHEREOF, the above said Grantor have hereunto set its hand and seal this $\frac{5}{1000}$ day of $\frac{1}{1000}$, 2021.

Grantor:

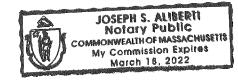
SDJ DEVELOPMENT OF ROCHESTER, LLC, by its sole member, Highfield Commons Development, Inc.

By: Johnson, Vice President, Duly Authorized

STATE/COMMONWEALTH OF MASSACh miles COUNTY OF <u>BA, SUL</u>

On this $\underline{5+9}$ day of \underline{August} , 2021, before me personally appeared the above named Kyle Johnson, Vice President, Duly Authorized, known to me or satisfactorily proven to be the person whose name is subscribed to the foregoing instrument and acknowledged the same to be his free act and deed on behalf of the limited liability company for the purposes contained therein.

Notary Public / Justice of the Peace My Commission Expires:



ACCEPTANCE

CITY OF ROCHESTER, NEW HAMPSHIRE

Accepted by: K Blaine Cox, City Manager

Date: 8-11-2021

STATE OF NEW HAMPSHIRE COUNTY OF STRAFFORD

On this the $\coprod H$ day of \cancel{M} 2021, before me personally appeared the above named Blaine Cox, known to me or satisfactorily proven to be the person whose name is subscribed to the foregoing instrument and acknowledged the same to be his free act and deed for the purposes contained therein on behalf of the City of Rochester.

MUTOLD MUTOLD

My Commission Expires: 118/22



Attachment 13 – Figure 3

