LEGEND

SYMBOL	DESCRIPTION
	PIPING UP
	PIPING DOWN
	PIPING RISE OR DROP
	BRANCH-TOP CONNECTION
	BRANCH-BOTTOM CONNECTION
	REDUCER
CO CO	CLEANOUT
	FLOOR CLEANOUT
	CAPPED PIPE
M	METER
	FLOOR DRAIN
	AQUASTAT
	PUMP
	STRAINER
	UNION
	THERMOSTATIC MIXING VALVE
	BALANCING VALVE (BLV)
	GLOBE VALVE (GLV)
	CHECK VALVE (CV)
	GAS COCK, GAS STOP
	BALL VALVE (BV)
	BUTTERFLY VALVE (BFV)
S	SOLENOID VALVE
	PRESSURE-REDUCING VALVE (PRV)
	GATE VALVE (GV)
	PRESSURE-RELIEF VALVE (RV)
	BACKFLOW PREVENTER
	FROST FREE HOSE BIBB
	HOSE BIBB
	RECESSED-BOX HOSE BIBB OR WALL HYDRANT
	EXPANSION JOINT
	WATER HAMMER ARRESTER
	VALVE IN RISER
CO	WALL CLEANOUT (WCO)
	PITCH DOWN OR UP IN DIRECTION OF ARROW
	FLOW IN DIRECTION OF ARROW
	COLD WATER (CW)
	TEMPERED WATER (TW)
	HOT WATER (HW)
	TEMPERED WATER RETURN (TWR)
	HOT WATER RETURN (HWR)
	WASTE PIPING (W,S,OW)
	BELOW SLAB WASTE PIPING
	VENT PIPING (V)
	GAS PIPING (G)
	TO BE REMOVED
	POINT OF CONNECTION
	POINT OF DISCONNECTION

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CLG	CEILING
CO	CLEAN OUT
CODP	CLEAN OUT DECK PLATE
COWP	CLEAN OUT WALL PLATE
CW	COLD WATER
(D)	DEMOLISH
DCV	DOUBLE CHECK VALVE DEVICE
DEG. F	° FAHRENHEIT
DIA	DIAMETER
DN	DOWN
(E)	EXISTING
EA	EACH
FAI	FRESH AIR INTAKE
FD	FLOOR DRAIN
G	GAS
'GC'	GENERAL CONSTRUCTION CONTRACTOR
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
'H'	HVAC CONTRACTOR
HP	HORSEPOWER
HW	HOT WATER
HWR	HOT WATER RETURN
IN.	INCHES
IN. W.C. (W.G.)	INCHES WATER COLUMN (WATER GAUGE)
KW	KILOWATTS
LBS	POUNDS
M	METER
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
OD	OUTER DIAMETER
(P)	PROPOSED
'P'	PLUMBING CONTRACTOR
PD	PRESSURE DROP
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SAN / S	SANITARY
ST	STORM DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
TW	TEMPERED WATER (110°F)
TWR	TEMPERED WATER RETURN
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE

GENERAL PLUMBING NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. THE CONTRACTOR, BY PRESENTING THEIR BID FOR THE WORK, REPRESENTS THAT HE/SHE HAS INSPECTED THE SITE AND IS COMPLETELY FAMILIAR WITH THE SCOPE OF WORK AND ALL FIELD CONDITIONS RELATED TO, AND AFFECTING THE WORK AND ITS PERFORMANCE. EXCEPTIONS AFFECTING THE WORK AND ITS PERFORMANCE, OR CONFLICTS BETWEEN FIELD CONDITIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION OF BIDS.
3. PERFORM ALL WORK IN ACCORDANCE WITH THE 2020 NEW YORK STATE PLUMBING (NYSPC), FIRE (NYSFC), MECHANICAL (NYSMC), ENERGY CONSERVATION CONSTRUCTION (NYSECC), AND FUEL GAS (NYSFGC) CODE AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
4. COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE REQUIREMENTS OF DIVISION 26 FOR ALL ELECTRICAL INSTALLATIONS.
5. APPLY FOR AND SECURE ALL REQUIRED PERMITS AND INSPECTIONS AND PAY ALL COSTS FOR THE SAME.
6. FIRE STOP ALL OPENINGS IN FIRE RATED CONSTRUCTION FOR PIPING, CONDUIT, ETC.
7. DO NOT SCALE DRAWINGS. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE.
8. COORDINATE CONTRACT DOCUMENTS PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS, MANUFACTURERS REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE, CONTRACTORS INTENDED MEANS AND METHODS OF INSTALLATION AND CONTRACTORS FABRICATED ITEMS TO ENSURE A PROPER "FIT" AND INSTALLATION. BRING ANY CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER DURING THE SUBMITTAL PHASE FOR RESOLUTION PRIOR TO PURCHASING ANY EQUIPMENT.
9. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 6'-6" CLEARANCE FROM FINISHED FLOOR TO UNDERSIDE OF PIPES, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
10. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK. OBTAIN THE APPROVAL OF THE ARCHITECT/ENGINEER FOR MODIFICATIONS.
11. PROVIDE PRODUCTS OF ONE MANUFACTURER WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF MATERIAL OR EQUIPMENT IS REQUIRED.
12. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS. REFER TO DETAILS FOR ADDITIONAL PIPING AND EQUIPMENT INSTALLATION REQUIREMENTS.
13. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER TO ENSURE MANUFACTURER CERTIFIED ACCURACY.
14. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL CONNECTIONS TO EQUIPMENT.
15. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.
16. COMPLETE ALL PRESSURE TESTS BEFORE ANY PLUMBING EQUIPMENT, OR PIPING INSULATION IS APPLIED.
17. MAKE ALL ATTACHMENTS TO JOISTS, TRUSSES, OR JOIST GIRDERS AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. THE USE OF C-CLAMPS IS NOT PERMITTED.
18. PROVIDE CONCRETE PADS A MINIMUM OF 4 INCHES HIGH FOR ALL FLOOR MOUNTED EQUIPMENT. EXTEND PAD 4 INCHES BEYOND THE EQUIPMENT ON ALL SIDES.
19. INSTALL PIPING, AND CONDUIT CONCEALED IN AREAS HAVING HUNG CEILINGS AND/OR FURRED SPACES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
20. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL ACCESSIBLE FIXTURES. MOUNT ALL SUCH FIXTURES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
21. PROVIDE ACCESS DOORS IN WALLS, PARTITIONS, AND CEILINGS AS REQUIRED TO MAKE VALVES, WATER HAMMER ARRESTERS, ETC. READILY ACCESSIBLE.
22. ARRANGE FOR, COORDINATE, AND MAKE CONNECTION TO ALL SERVICES PROVIDED BY OTHERS. CONFORM TO ALL REQUIREMENTS APPLICABLE TO CONNECTIONS IMPOSED BY UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION.
23. INSTALL FIXTURES AND EQUIPMENT WITH VALVES, UNIONS, ETC. TO ALLOW FOR EASE OF SERVICE AND/OR REMOVAL.
24. CORE DRILL ALL PENETRATIONS THROUGH CONCRETE FLOORS, WALLS, AND FOOTINGS.
25. INSTALL LINK SEAL TYPE PROTECTION FOR WATER RESISTANT SEALS AT ALL SLAB AND BELOW GROUND WALL FOOTING PENETRATIONS.
26. PROVIDE A CLEANOUT AT THE BASE OF WASTE AND VENT STACKS WITH FINISHED WALL PLATE IN FINISHED WALLS.
27. FURNISH AND INSTALL WATER PRESSURE REDUCING VALVE AND PRESSURE RELIEF VALVE IN ACCORDANCE WITH THE NEW YORK STATE PLUMBING CODE ON ALL INCOMING DOMESTIC WATER SYSTEMS IN EXCESS OF 80 P.S.I.G.
28. COVER ALL COPPER PIPING BELOW SLAB WITH "ARMAFLEX" TYPE INSULATION.
29. SLOPE ALL VENT PIPING TO DRAIN BACK TO THE DRAINAGE SYSTEM.
30. FLUSH AND DISINFECT ALL DOMESTIC POTABLE WATER PIPING AND TEST THE WATER IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. PROVIDE CERTIFICATE OF PERFORMANCE AND LABORATORY TEST REPORT TO LOCAL AUTHORITIES HAVING JURISDICTION AND OBTAIN THEIR APPROVAL.
31. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK CLOSING FIXTURE VALVE LOCATIONS.
32. ALL PIPING, VALVES AND FITTINGS USED FOR POTABLE WATER SHALL BE NSF 61/372 COMPLIANT AND BE TESTED FOR LOW LEAD.
33. ANY PENETRATIONS THROUGH AIR BARRIER SHALL BE SEALED AS PER 2020 NYSECC RESIDENTIAL AND COMMERCIAL PROVISIONS.
34. ALL PIPING IN PLENUM SPACES SHALL BE CAST IRON FOR SANITARY, STORM, VENT SYSTEMS, AND COPPER PIPING FOR DOMESTIC SYSTEMS, AND STEEL PIPING FOR GAS SYSTEMS. NO PLASTIC PIPING ALLOWED.
35. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN DESIGN PLANS, RISER DIAGRAMS, AND/OR SPECIFICATIONS CONCERNING PIPE SIZES, FIXTURES, AND/OR EQUIPMENT, THE MOST STRINGENT REQUIREMENTS SHALL BE APPLIED TO THE PROJECT.

APPLICABLE CODES

- 2020 NEW YORK STATE RESIDENTIAL CODE (NYSRC) 1ST PRINTING (INCLUDES PLUMBING, MECHANICAL, FUEL GAS, AND ENERGY CONSERVATION)
- 2020 NEW YORK STATE BUILDING CODE (NYSBC) 1ST PRINTING
- 2020 NEW YORK STATE FIRE CODE (NYSFC) 1ST PRINTING
- 2020 NEW YORK STATE PLUMBING CODE (NYSPC) 1ST PRINTING
- 2020 NEW YORK STATE FUEL GAS CODE (NYSFGC) 1ST PRINTING
- 2020 NEW YORK STATE MECHANICAL CODE (NYSMC) 1ST PRINTING
- 2020 NEW YORK STATE ENERGY CONSERVATION CODE (NYSECC) 1ST PRINTING

ENERGY NOTES

2020 NEW YORK STATE ENERGY CONSERVATION CODE NOTES: STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK STATE ENERGY CONSERVATION CODE (NYSECC).

1. SERVICE WATER HEATING EQUIPMENT PERFORMANCE EFFICIENCY:
   - 1.1. WATER HEATING EQUIPMENT AND HOT WATER STORAGE TANKS SHALL MEET THE REQUIREMENTS OF TABLE C404.2 IN THE 2020 NYSECC. (NYSECC C404.2)
   - 1.2. SERVICE WATER HEATING SHALL BE COMMISSIONED AND COMPLETED IN ACCORDANCE WITH SECTION C408.2 OF THE 2020 NYSECC.
2. TEMPERATURE CONTROL:
   - 2.1. SERVICE WATER HEATING EQUIPMENT SHALL BE PROVIDED WITH CONTROLS ALLOWING A SETPOINT OF 110°F FOR DWELLING UNITS AND 90 °F FOR OTHER OCCUPANCIES. PUBLIC REST ROOM LAVATORIES SHALL HAVE A MAXIMUM OUTLET TEMPERATURE OF 110°F.
   - 2.2. WHERE WATER HEATING EQUIPMENT SERVING NONCIRCULATING SYSTEMS IS NOT SUPPLIED WITH INTEGRAL HEAT TRAPS, HEAT TRAPS SHALL BE PROVIDED ON THE SUPPLY AND DISCHARGE PIPING. (NYSECC C404.3)
3. PIPE INSULATION:
   - 3.1. AUTOMATIC CIRCULATING HOT WATER SYSTEM PIPING SHALL BE INSULATED WITH 1 INCH OF INSULATION WITH A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H X FT X FT² X °F, OR THE INSULATION REQUIREMENTS OF SPECIFICATIONS, WHICHEVER IS GREATER. THE FIRST 8 FT OF PIPING IN NONCIRCULATING SYSTEMS WITH EQUIPMENT WITHOUT INTEGRAL HEAT TRAPS SHALL BE INSULATED WITH 0.5 INCH OF MATERIAL HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H X FT X FT² X °F, OR THE INSULATION REQUIREMENTS OF SPECIFICATIONS, WHICHEVER IS GREATER. (NYSECC C404.5)
   - 3.2. ALL PIPING TO BE INSULATED WITH 0.21-0.28 CONDUCTIVITY
   - 3.3. COLD WATER PIPING - ALL SIZES - 1-INCH INSULATION, A.S. JACKET.
   - 3.4. STORM DRAINAGE PIPING ALL HORIZONTAL RUNS AND DRAIN BODY - MINIMUM 1-INCH INSULATION, A.S. JACKET.
   - 3.5. HOT WATER PIPING (140°F) AND TEMPERED WATER PIPING (110°F)
     - 3.5.1. PIPE SIZE: < 1" INSULATION: 1"
     - 3.5.2. PIPE SIZE: 1" TO < 1-1/2" INSULATION: 1"
     - 3.5.3. PIPE SIZE: 1-1/2 TO < 4" INSULATION: 1.5"
     - 3.5.4. PIPE SIZE: 4" TO < 8" INSULATION: 1.5"
4. HOT WATER SYSTEM CONTROLS:
   - 4.1. CIRCULATING HOT WATER SYSTEM PUMPS OR HEAT TRACE SHALL BE ARRANGED TO BE TURNED OFF EITHER AUTOMATICALLY OR MANUALLY WHEN THERE IS LIMITED HOT WATER DEMAND. READY ACCESS SHALL BE PROVIDED TO THE OPERATING CONTROLS. (NYSECC C404.6)
5. PIPE VOLUME AND MAXIMUM LENGTHS
   - 5.1. PER SECTION OF C404.5.1 OF THE 2020 NYSECC, ALL MAXIMUM PIPE LENGTHS FROM FIXTURES SHALL COMPLY WITH THE MAXIMUM PIPE LENGTHS ON THE CHART BELOW. CONTRACTOR TO ENSURE HOT WATER RETURN PIPING IS INSTALLED AS PER PLANS AND THAT THESE LENGTHS ARE MAINTAINED.

NOMINAL PIPE SIZE (INCHES)	VOLUME (LIQUID OUNCES PER FOOT LENGTH)	MAXIMUM PIPING LENGTH (FEET)	
		PUBLIC LAVATORY FAUCETS	OTHER FIXTURES AND APPLIANCES
1/4"	0.33	6	50
5/16"	0.5	4	50
3/8"	0.75	3	50
1/2"	1.5	2	43
5/8"	2	1	32
3/4"	3	0.5	21
7/8"	4	0.5	16
1"	5	0.5	13
1-1/4"	8	0.5	8
1-1/2"	11	0.5	6
2" OR LARGER	18	0.5	4

FUEL GAS NOTES

1. PERFORM ALL WORK IN ACCORDANCE WITH NFPA 54 - NATIONAL FUEL GAS CODE, THE 2020 NEW YORK STATE FUEL GAS CODE (NYSFGC), 2015 NATIONAL GRID BLUE BOOK, 2018 CONEDISON YELLOW BOOK, 2017 PSEG NJ BOOK, AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
2. THE DEPTH OF COVER FOR ALL GAS SERVICE PIPING SHALL BE 24 INCHES.
3. THE WATER SERVICE SHALL BE KEPT A MINIMUM OF 10-FEET FROM THE INCOMING GAS SERVICE MEASURED IN ANY DIRECTION.
4. IF ELECTRIC AND GAS SHARE A COMMON TRENCH, THE TRENCH MUST BE WIDE ENOUGH TO MAINTAIN A 6-INCH MINIMUM SEPARATION DISTANCE.
5. LOCATION OF PROPOSED GAS METER ON CONTRACT DOCUMENTS ARE SUBJECT TO CHANGE BY THE LOCAL UTILITY COMPANY.
6. REFER TO THE LOCAL UTILITY COMPANY HANDBOOKS FOR METER RIG CONSTRUCTION DETAILS, RULES AND REGULATIONS. THIS INCLUDES, BUT NOT LIMITED TO LOCATION OF STEP DOWN REGULATORS, METER SIZE AND SET LENGTHS, VENTING OF REGULATORS, BYPASS PIPING, BOLLARD REQUIREMENTS, CONCRETE PAD, SUPPORTS, AND SHUT OFF VALVES.
7. GAS PIPING:
   - 7.1. INDOOR - STEEL PIPE- SCHEDULE 40 WITH WELDED OR THREADED JOINTS. THREADED JOINTS SHALL BE 150 POUND MALLEABLE IRON, FORGED STEEL, BLACK IRON, OR GALVANIZED STEEL.
   - 7.2. OUTDOOR - ABOVE GROUND - GALVANIZED PIPE OR PROPERLY COATED BLACK STEEL PIPE WITH SCREWED OR THREADED JOINTS.
   - 7.3. BELOW GRADE - STEEL PIPE- MILL WRAPPED SCHEDULE 40 WITH WELDED OR THREADED JOINTS
   - 7.4. WELDED JOINTS MUST BE USED FOR GAS PIPING LARGER THAN 4-INCH, OR 3-INCH FOR SCHOOLS.
8. GAS PIPING ENTERING A BUILDING SHALL BE ABOVE GRADE. PENETRATIONS THROUGH BURIED WALLS ARE NOT PERMITTED.
9. WHERE GAS PIPING IS INSTALLED BELOW GRADE INSIDE A BUILDING, THE GAS PIPING MUST BE INSTALLED IN A CONDUIT AND BE VENTED TO THE EXTERIOR.
10. GAS PRESSURE TEST:
    - 10.1. GALVANIZED OR BARE STEEL - UP TO 14" W.C. - AIR AT 3 PSIG FOR 30 MINUTES - AIR AT 15 PSIG FOR 1-HOUR (SED)
    - 10.2. GALVANIZED OR BARE STEEL - GREATER THAN 14" W.C. - AIR AT 50 PSIG FOR 30 MINUTES - AIR AT 1.5 TIMES THE WORKING PRESSURE FOR 1-HOUR (SED)
    - 10.3. COATED OR WRAPPED - LESS THAN 2-INCH - AIR AT 90 PSIG FOR 1-HOUR - ALL SIZES - AIR AT 100 PSIG FOR 1-HOUR (SED)
    - 10.3. COATED OR WRAPPED - 2-INCH TO 12-INCH - AIR AT 90 PSIG FOR 4-HOURS
11. SUPPLY ALL GAS-FIRED EQUIPMENT WITH GAS PIPING AS PER THE NEW YORK STATE FUEL GAS CODE. PROVIDE EACH PIECE OF EQUIPMENT WITH A DIRT LEG, UNION AND GAS COCK. PROVIDE A VENTED REGULATOR IF EQUIPMENT REQUIRES LOWER THAN LINE GAS PRESSURE.
12. PROVIDE VEHICLE IMPACT PROTECTION FOR NEW METER HEADER. BOLLARDS SHALL BE SPACED NO MORE THAN 4-FEET BETWEEN POSTS ON CENTER AND LOCATED NOT LESS THAN 3-FEET FROM THE PROTECTED OBJECT.
13. SHUTOFF VALVES INSTALLED IN TUBING SYSTEMS MUST BE RIGIDLY AND SECURELY SUPPORTED INDEPENDENTLY OF THE TUBING.
14. ALL COOKING APPLIANCE CONNECTIONS MUST BE LISTED AND LABELED.

MANUAL GAS VALVE STANDARDS

VALVE STANDARDS	APPLIANCE SHUTOFF VALVE APPLICATION UP TO 1/2 PSIG PRESSURE	OTHER VALVE APPLICATIONS		
		UP TO 1/2 PSIG PRESSURE	UP TO 2 PSIG PRESSURE	UP TO 5 PSIG PRESSURE
ANSI Z21.15/CGA9.1	X	–	–	–
ASME B16.44	X	X*	X**	–
ASME B16.33	X	X	X	X

NOTES:
1. FOR SI: 1 POUND PER SQUARE INCH GAUGE = 6.895 kPa.
2. X* IF LABELED 2G
3. X** IF LABELED 5G

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

STATE OF NEW YORK · JONATHAN RICHARD KUHR · 098440-1 · LICENSED PROFESSIONAL ENGINEER

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		

PROJECT No.:	DATE:	SCALE:
VGFD2001	JULY 2022	AS SHOWN

CLIENT
VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT
CONTRACT G
GENERAL CONSTRUCTION

STATUS
FINAL BID DOCUMENT

SHEET TITLE
PLUMBING GENERAL NOTES AND LEGENDS

DRAWING No.
P1 001.00

PLUMBING FIXTURE SCHEDULE

FIXTURE TAG	DESCRIPTION	MANUFACTURER	MODEL	TRIM				MINIMUM CONNECTION SIZES (IN)							SPECIFICATION	REMARKS
				MANUFACTURER	MODEL	TYPE	MOTION SENSOR CONTROL	COLD WATER		HOT WATER		DRAIN		VENT		
								SIZE	FU	SIZE	FU	SIZE	DFU			
LAV-1	LAVATORY - WALL MOUNTED - BARRIER FREE - ADA	AMERICAN STANDARD	WHEELCHAIR USERS LAVATORY	KOHLER	K-13462	ELECTRONIC	YES	1/2	1.5	1/2	1.5	1-1/2	1	1-1/2	VITREOUS CHINA, 20" X 27" WALL MOUNT SINK W/ 14" WIDE, 14-3/4" FRONT TO BACK, 4-3/4" DEEP BOWL, FRONT OVERFLOW, CONCEALED ARMS SUPPORT, FAUCET LEDGE. FAUCET CENTER HOLE ONLY. ASME A112.19.2 CERTIFIED.	PROVIDE ZURN Z1231 CONCEALED ARM WALL-MOUNTED LAVATORY SUPPORT SYSTEM.
WC-1	WATER CLOSET - FLUSH VALVE - WALL MOUNTED - BARRIER FREE - ADA	AMERICAN STANDARD	AFWALL MILLENIUM FLOWISE TOILET SYSTEM	AMERICAN STANDARD	SELECTRONIC FLUSH VALVE	ELECTRONIC	YES	1	10	-	-	4	4	2	VITREOUS CHINA, 26" X 14" X 15" WALL-MOUNTED FLUSHOMETER VALVE TOILET, CONVENTIONAL GLAZE, SENSOR OPERATED 1.28/1.1 GPF DUAL FLUSH, 1-1/2" TOP SPUD. ASME A112.19.2 CERTIFIED.	PROVIDE ZURN Z1202-N4 NO-HUB WATER CLOSET CARRIER SYSTEM FOR SINGLE WATER CLOSETS.
SK-1	SERVICE SINK	ADVANCE TABCO	FS-WM-1-ADA-F	AMERICAN STANDARD	8350.235	MANUAL	NO	1/2	2.25	1/2	2.25	3	2	1-1/2	14 GAUGE TYPE "304" STAINLESS STEEL, 1-5/8" TUBULAR "304" STAINLESS STEEL WALL BRACKETS, STAINLESS STEEL GUSSETS. 8" O.C. FAUCET HOLES PUNCHED. ALL TIG WELDED, WELDED AREAS BLENDED TO MATCH ADJACENT SURFACES AND TO A SATIN FINISH. DIE FORMED TUBULAR WALL BRACKETS. 8-1/2" HIGH BACKSPLASH, 5" SINK BOWL DEPTH. NSF 61 STANDARD 9 COMPLIANT.	
HB-1	INTERIOR HOSE BIBB WITH KEY	MURDOCK	8121CP-LF	-	-	MANUAL	-	3/4	-	-	-	-	-	-	HEAVY BRASS BODY, FURNISHED WITH A LOCK SHIELD BONNET AND REMOVABLE LOOSE KEY HANDLE. VACUUM BREAKERS ARE ATMOSPHERIC TYPE AND CONFORM TO THE REQUIREMENTS OF ASSE STANDARD 1011.	
FD-1	FLOOR DRAIN - SEE NOTE 3	ZURN	Z415SL	-	-	-	-	-	-	-	-	3	2	2	FLOOR AND SHOWER DRAIN, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND "TYPE SL" POLISHED, NICKEL BRONZE SQUARE, WIDE FLANGED, LIGHT DUTY STRAINER.	
CB-1	CATCH BASIN	ZURN	Z887-24-HD	-	-	-	-	-	-	-	-	4	-	-	CATCH BASIN SHALL BE 23-1/4" WIDE REVEAL X 24-5/8" LONG AND 24" DEEP. CATCH BASIN SHALL BE MADE OF 0% WATER ABSORBENT HDPE. SHALL MECHANICALLY LOCK INTO THE CONCRETE SURROUND. BASIN SHALL WEIGH LESS THAN 20.0 LBS. CATCH BASIN SHALL HAVE REBAR CLIPS STANDARD TO SECURE BASIN IN ITS FINAL LOCATION. SHALL BE PROVIDED WITH STANDARD DGC GRATES THAT LOCK DOWN TO FRAME. ZURN 22-1/4" WIDE REVEAL DUCTILE IRON SLOTTED GRATE CONFORMING TO ASTM SPECIFICATION A536-84, GRADE 80-55-06. DUCTILE IRON GRATE IS RATED CLASS C PER THE DIN EN 1433 TOP LOAD CLASSIFICATION. SUPPLIED IN 24" NOMINAL LENGTH WITH 11/16 WIDE SLOTS, AND 2-1/2" BEARING DEPTH. GRATE HAS AN OPEN AREA OF 164.00 SQ IN. PER FT. THE 1/4" THICK HEAVY DUTY FRAME ASSEMBLY CONFORMS TO EITHER ASTM SPECIFICATION A36 OR A536-84, WITH 4-4 LONG CONRETE ANCHORS PER BASIN. THE FRAME IS SUPPLIED WITH A PODER COATED FINISH. ALL WELDS MUST BE PERFORMED BY A CERTIFIED WELDER PER ASTM STANDARD AWS D1.1. FRAMES SHALL BE PRODUCED IN USA.	
EW-1	EMERGENCY EYEWASH STATION	HAWS	7360B-7460B	-	-	-	-	1/2	-	1/2	-	-	-	-	WALL MOUNTED EYE/FACE WASH SHALL INCLUDE A STAINLESS STEEL 11" ROUND BOWL, AN AXION MSR EYE/FACE WASH HEAD SUPPLIED BY AN INTEGRAL FLOW CONTROL, CHROME-PLATED BRASS STAY-OPEN BALL VALVE EQUIPPED WITH STAINLESS STEEL BALL AND STEM, AND CHROME-PLATED BRASS IN-LINE 50 X 50 MESH WATER STRAINER. UNIT SHALL ALSO INCLUDE CAST-ALUMINUM CHROMATE PROTECTED WALL BRACKET, YELLOW PLASTIC POP-OFF DUST COVER FOR EYEWASH HEAD, TAILPIECE, UNIVERSAL SIGN, 1/2" IPS INLET AND 1-1/2" IPS WASTE.	PROVIDE THERMOSTATIC MIXING VALVE HAWS MODEL 9201EFE. OUTLET TEMPERATURE SHALL BE SET TO 80 DEGREES F.

NOTES:

1. CHROME PLATE ALL DRAIN PIPE, FITTINGS, P-TRAPS AND SUPPLY LINES THAT ARE EXPOSED, LOCATED WITHIN VANITIES OR ACCESSIBLE CABINETS OR BEHIND WATER CLOSETS
2. MINIMUM CONNECTION SIZES INDICATED ARE EQUIPMENT CONNECTION SIZES OR CODE MINIMUM SIZES, SEE PLANS AND DIAGRAMS FOR ACTUAL SIZES REQUIRED
3. ALL FLOOR DRAINS SHALL HAVE TRAP SEALS. MANUFACTURER: ZURN; Z1072
4. INSULATE EXPOSED DRAIN AND SUPPLY PIPING FOR HANDICAPPED FIXTURES WITH TRUEBRO LAV GUARD.

WATER HEATER [ELECTRIC]

EQUIPMENT NO.	LOCATION	SYSTEM SERVED				EQUIPMENT SPECIFICATIONS						MINIMUM PERFORMANCE OF WATER HEATING (NYSECC TABLE C404.2)					SPECIFICATIONS
			ELECTRIC POWER	RECOVERY GPH AT 100 DEG RISE	WATER CONNECTION	MNF	MODEL NO.	NOMINAL DIMENSION DIA x H	CAPACITY (GAL)	NOMINAL OPERATING WEIGHT (LBS.)	VOLTS / PHASE	EQUIPMENT TYPE	SIZE CATEGORY	SUBCATEGORY	PERFORMANCE REQUIRED 0.97-0.00132V EFFICIENCY	WATER HEATER EFFICIENCY	
WH-1	MEZZANINE	BUILDING	3,000 W	12 GAL.	3/4"	A.O. SMITH	DEL-6	14.25" X 15.5"	6	85	208/1	WATER HEATER, ELECTRIC	< 12 KW	RESISTANCE	-	-	HEATER SHALL HAVE 150 PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE ROD. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUTOFF SWITCH. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH FRONT PANELS AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING. HEATER TANK SHALL SHALL A THREE YEAR LIMITED WARRANTY AS OUTLINED IN THE WRITTEN WARRANTY. FULLY ILLUSTRATED INSTRUCTION MANUAL TO BE INCLUDED.

EXPANSION TANK SCHEDULE

EQUIPMENT NO.	LOCATION	SYSTEM SERVED	PERFORMANCE/CONSTRUCTION REQUIREMENTS			EQUIPMENT SPECIFICATIONS					SPECIFICATION	REMARKS
			ESTIMATED VOLUME (GAL.)	MAX. OPERATING PRESS. RANGE (PSIG)	MAX. OPERATING TEMP. RANGE (DEG. F)	MNF	MODEL NO.	DIMENSION DIA. x H	WATER CONNECTION	OPERATING WEIGHT (LBS.)		
ET-1	MEZZANINE	HOT WATER HEATING	2.0	150	200	AMTROL	ST-5	8" X 13"	3/4"	7	THERMAL EXPANSION TANK WITH STEEL SHELL AND HEAVY DUTY BUTYL DIAPHRAGM. TANK SHALL INCLUDE ANTIMICROBIAL POLYPROPYLENE LINER, STAINLESS STEEL SYSTEM CONNECTION, URETHENE TOPCOAT FINISH, WATER CIRCULATOR, AND PROJECTION WELDED AIR VALVE. EXPANSION TANK TO BE NSF/ANSI 61 CERTIFIED.	CONTRACTOR TO SET PRESSURE OF EXPANSION TANK TO MATCH WATER SUPPLY PRESSURE PRIOR TO INSTALLATION. EXPANSION TANK TO BE MOUNTED VERTICALLY.

MIXING VALVE

EQUIPMENT NO.	LOCATION	BASIS OF DESIGN INFORMATION					
		MAXIMUM PRESSURE RANGE	MINIMUM FLOW	MAXIMUM FLOW	MANUFACTUER	MODEL	NOMINAL DIMENSIONS (W X H)
MV-1	LAVATORY	125 PSI	0.25 GPM	12 GPM	LEONARD	270-LF	5" X 5.5"
MV-2	EMERGENCY EYEWASH STATION	125 PSI	1 GPM	12 GPM	HAWS	9201EFE	4-1/2" X 5-1/4"

INTERCEPTOR SCHEDULE

EQUIPMENT NO.	LOCATION	BASIS OF DESIGN INFORMATION						SPECIFICATION	REMARKS
		FLUID	FLOW (GPM)	INLET AND OUTLET SIZE	MANUFACTUER	MODEL	NOMINAL DIMENSIONS (L X W X H)		
SI-1	OPEN FLOOR	SAND	50	4"	ZURN	Z1187-SI-E	48" X 24" X 26"	ACID RESISTANT COATED INTERIOR STEEL SAND INTERCEPTOR WITH IRON GRATE COVER, INTEGRAL EXTENSION, 4" NO HUB INLET/OUTLET.	INTERCEPTOR TO BE INSTALLED FLUSH WITH F.F. PROVIDE NO-HUB INLET/OUTLETS. PROVIDE EXTRA-HEAVY-DUTY REINFORCED COVER FOR VEHICULAR TRAFFIC.

H2M architects + engineers

538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

"ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		

PROJECT No.:	DATE:	SCALE:
VGFD2001	JULY 2022	AS SHOWN

CLIENT

VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT

CONTRACT G
GENERAL CONSTRUCTION

STATUS

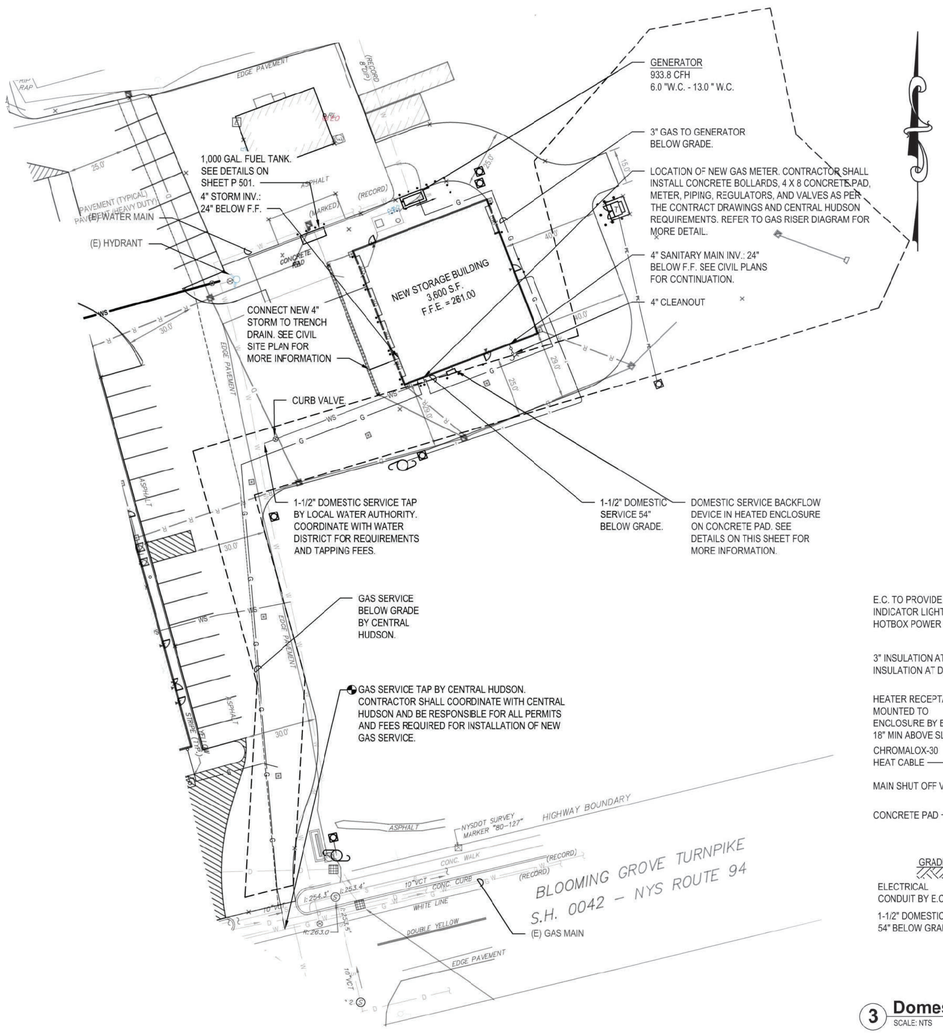
FINAL BID DOCUMENT

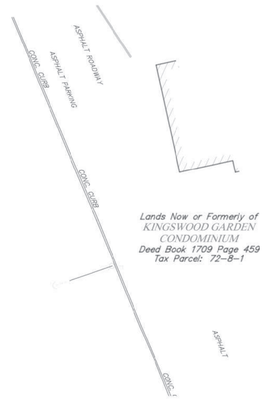
SHEET TITLE

PLUMBING SCHEDULES

DRAWING No.

P1 002.00



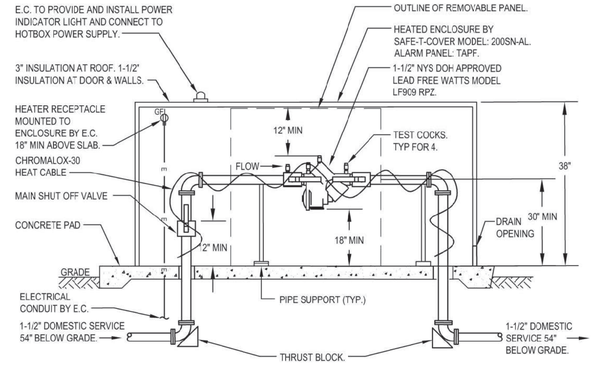


DOMESTIC WATER BACKFLOW PREVENTION DEVICE GENERAL NOTES:

1. INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE COUNTY DEPARTMENT OF HEALTH SERVICES, NEW YORK STATE HEALTH DEPARTMENT REGULATIONS. AND TOWN OF NEW WINDSOR REGULATIONS.
2. ALL CONNECTIONS ON THE WATER SERVICE SHALL BE DOWNSTREAM FROM THE BACKFLOW PREVENTION DEVICE. BYPASSING OF A BACKFLOW PREVENTION DEVICE IS A VIOLATION OF NEW YORK STATE HEALTH DEPARTMENT RULES AND REGULATIONS.
3. THE CONTRACTOR SHALL ENGAGE A CERTIFIED BACKFLOW PREVENTION DEVICE TESTER TO TEST THE BACKFLOW PREVENTION DEVICE AFTER INSTALLATION. IT IS THE OWNER'S RESPONSIBILITY TO HAVE EACH DEVICE CERTIFIED AT LEAST ANNUALLY WITH RESULTS REPORTED TO THE AUTHORITY HAVING JURISDICTION AND TO THE COUNTY DEPARTMENT OF HEALTH ON NY STATE FORM GEN 215. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELATED TESTING AND APPLICATION FEES.
4. SHUT-OFF VALVES ON DOMESTIC WATER SERVICE BFP DEVICE SHALL BE BALL VALVES AND SHALL BE SAME MANUFACTURER AS BFP DEVICE.
5. TEST COCKS ON THE BFP DEVICE SHALL BE POSITIONED TO FACILITATE TESTING WITH 30" MINIMUM CLEARANCE.
6. BACKFLOW DEVICES MAY NOT BE MODIFIED IN ANY WAY DURING INSTALLATION.
7. DOMESTIC WATER SERVICE TO BE COPPER TYPE K AND SHALL HAVE A MINIMUM OF 4'-6" OF COVER.
8. PIPING SHALL BE UN-BRANCHED AND UNRESTRICTED FROM THE SUPPLY MAIN TO THE DEVICE, EXCEPT FOR THE METER ON THE DOMESTIC SERVICE.
9. CONTRACTOR SHALL PROVIDE APPROPRIATE FLOOR/WALL SUPPORTS FOR ALL DEVICES AND PIPING. ALL SUPPORTS/HANGERS/CLAMPS SHALL BE GALVANIZED STEEL.
10. BACKFLOW DEVICES SHALL BE APPROVED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.
11. THE ROOM AND ENCLOSURE WHERE THE DEVICES ARE LOCATED SHALL BE HEATED AND SHALL HAVE LIGHTING.
12. DEVICE MAY NOT BE INSTALLED HIGHER THAN 5'-0" ABOVE THE FLOOR OR A FIXED PLATFORM IS REQUIRED.
13. WATER SERVICE LINES TO MAINTAIN A MINIMUM CLEARANCE OF 10'-0" FROM GAS SERVICE, SEWER LINES, DRAINAGE LINES, UTILITY POLES AND TREES, ETC.

SERVICE FEE NOTE:

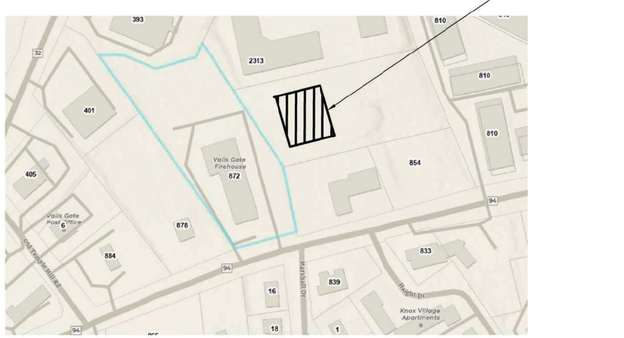
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASSOCIATED TAP. PERMIT AND METER FEES FOR WATER AND GAS SERVICES. CONTRACTOR SHALL PROVIDE A 15,000 DOLLAR ALLOWANCE TO COVER ALL FEES ASSOCIATED WITH CONNECTING NEW WATER AND GAS SERVICES TO EXISTING MAINS, AND INSTALLATION AND FURNISHING OF UTILITY METERS AND METER RIGS.



Domestic Section View

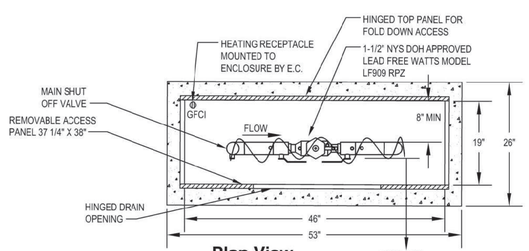
3 Domestic Service BFP Device Section View Detail
SCALE: NTS

1 Plumbing Site Plan
SCALE:1" = 30'-0"



2 Site Map
SCALE: NTS

ORANGE COUNTY TAX NUMBER
SECTION: 65 BLOCK: 2 LOT(S): 28



Plan View

NOTES:
1. ALL DIMENSIONS ARE IN INCHES.
2. RECOMMENDED SLAB SIZE: 53"Lx26"Wx5" THICKNESS (3,500 PSI W/ REINFORCING).
3. "E" INDICATES ELECTRICAL GFI RECEPTACLE. IT SHALL BE MOUNTED A MINIMUM OF 18" ABOVE THE SLAB. CONTRACT 'E' TO PROVIDE ALL POWER WIRING TO RECEPTACLE AND HEATERS.
4. THE ENCLOSURE SHALL USE (1) CHROMALOX-30, 90W, 120V, SINGLE PHASE HEATER.

4 Domestic Service BFP Device Plan View Detail
SCALE: NTS

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

STATE OF NEW YORK
JONATHAN RICHARD MUNK
098440-1
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		
PROJECT No.:	DATE:	SCALE:	
VGFD2001	JULY 2022	AS SHOWN	

CLIENT
VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

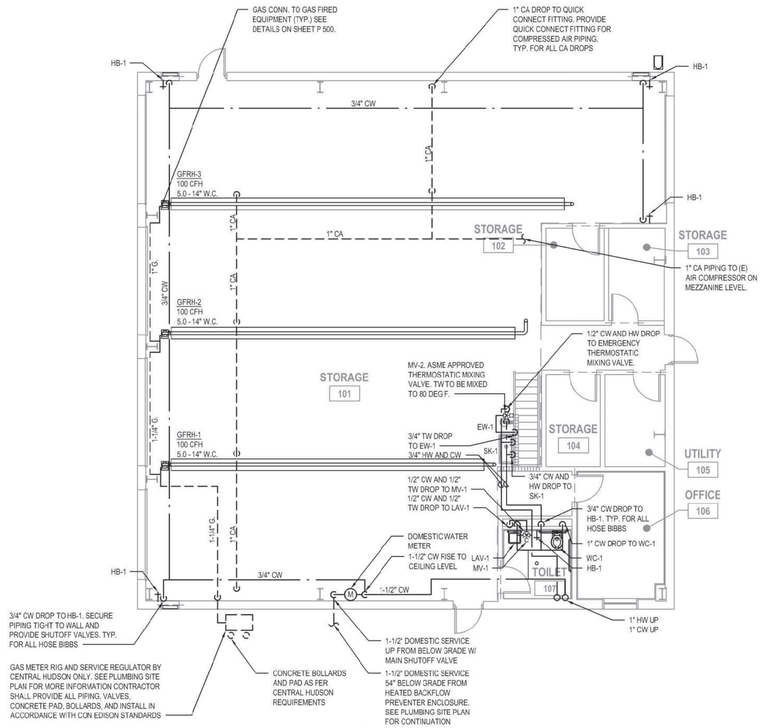
872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT
CONTRACT G
GENERAL CONSTRUCTION

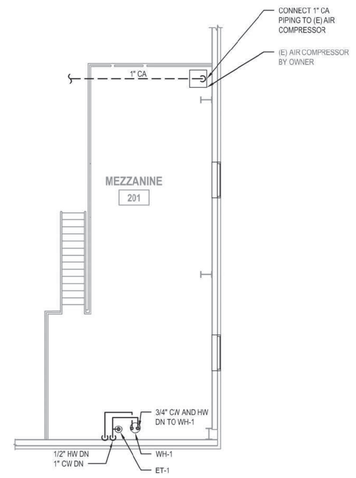
STATUS
FINAL BID DOCUMENT

SHEET TITLE
PLUMBING SITE PLAN - NEW STORAGE BUILDING

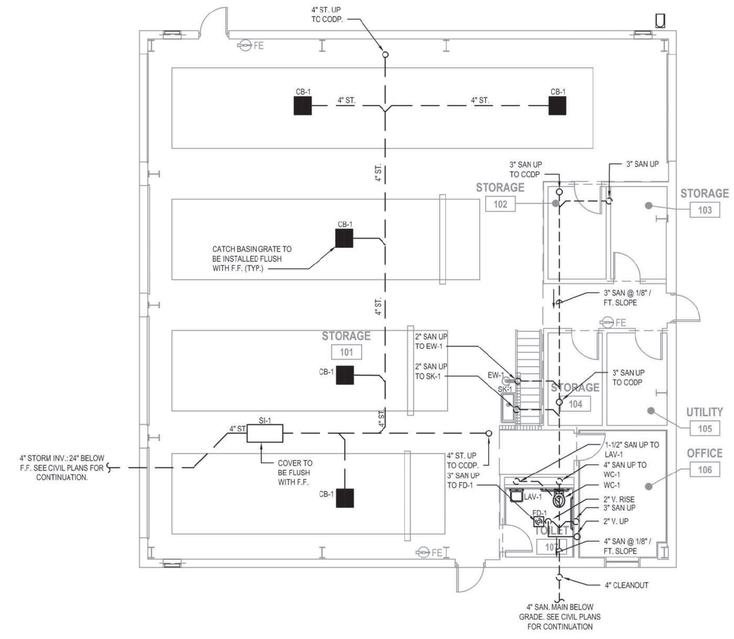
DRAWING No.
PS1 100.00



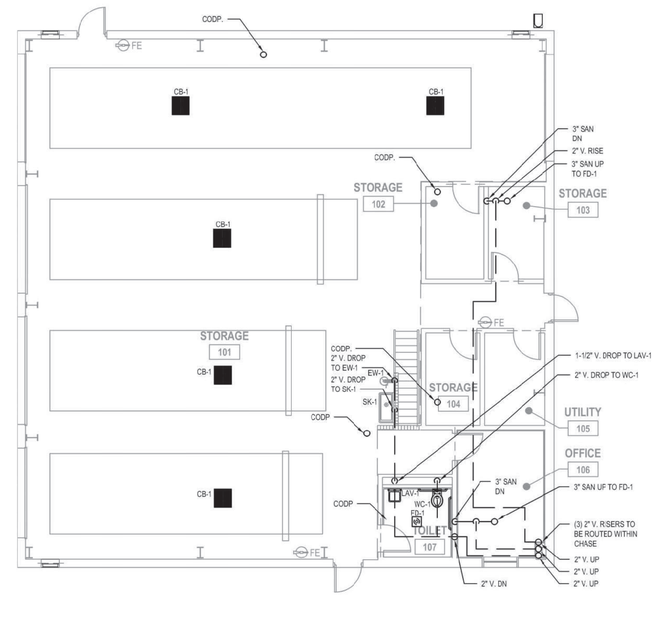
1 First Floor Domestic Water and Gas Plan
SCALE: 1/8" = 1'-0"



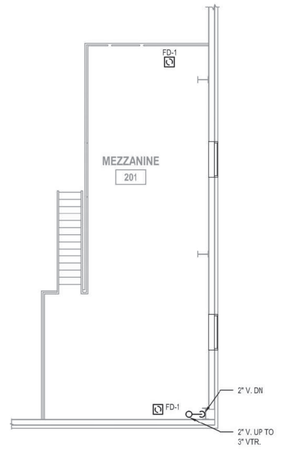
2 Mezzanine Domestic Water and Gas Plan
SCALE: 1/8" = 1'-0"



3 Underslab Sanitary, Storm, and Vent Plan
SCALE: 1/8" = 1'-0"



4 First Floor Sanitary, Storm, and Vent Plan
SCALE: 1/8" = 1'-0"



5 Mezzanine Sanitary, Storm, and Vent Plan
SCALE: 1/8" = 1'-0"

H 2 M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

STATE OF NEW YORK — JONATHAN RICHARD KUHN — 098440-1 — LICENSED PROFESSIONAL ENGINEER

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		

PROJECT No.:	DATE:	SCALE:
VGFD2001	JULY 2022	AS SHOWN

CLIENT
VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT
CONTRACT G
GENERAL CONSTRUCTION

STATUS
FINAL BID DOCUMENT

SHEET TITLE
PLUMBING FLOOR PLAN

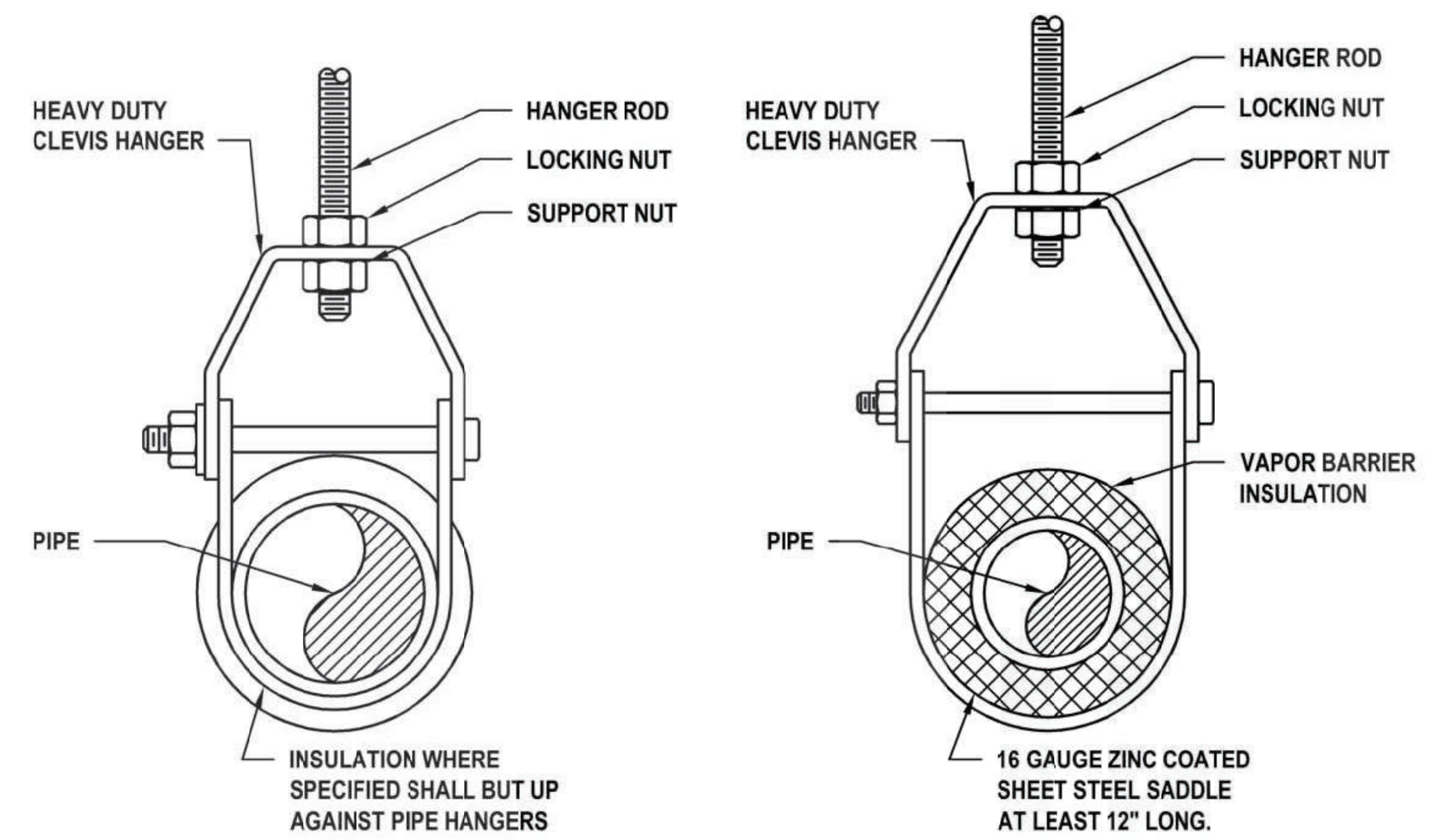
DRAWING No.
P1 110.00

HANGER SPACING

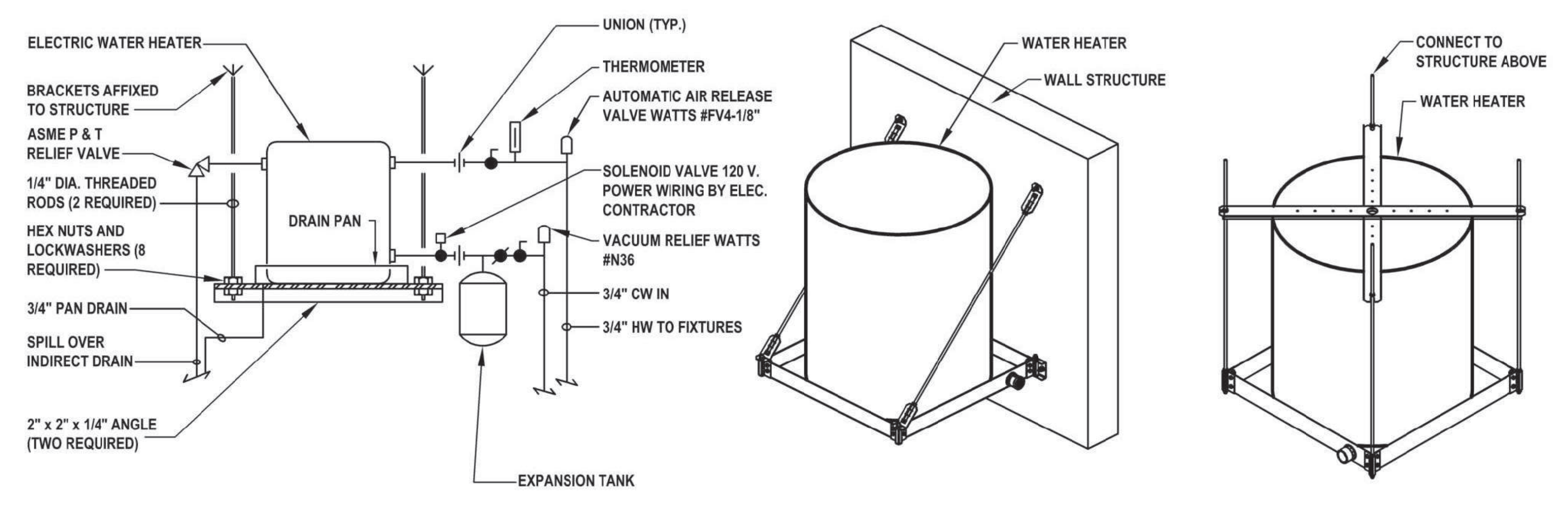
PIPING MATERIAL	MAX. HORIZONTAL (FT)	MAX. VERTICAL (FT)
ABS PIPE	4	10
ALUMINUM TUBING	10	15
BRASS PIPE	10	10
CAST-IRON PIPE	5	15
COPPER OR COPPER ALLOY PIPE	12	10
COPPER OR COPPER ALLOY PIPE 1¼"Ø OR SMALLER	6	10
COPPER OR COPPER ALLOY PIPE 1½"Ø OR LARGER	10	10
PEX	2.67	10
CPVC 1" OR SMALLER	3	10
CPVC 1-1/4" OR LARGER	4	10
STEEL PIPE	12	15
POLYETHYLENE /ALUMINUM/ POLYETHYLENE	2.67	4
PVC PIPE	4	10
STAINLESS STEEL DRAINAGE	10	10

HANGER ROD SCHEDULE

PIPE SIZE	ROD SIZE	PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.	4" THRU 5"	5/8" DIA.
2 1/2" THRU 3"	1/2" DIA		



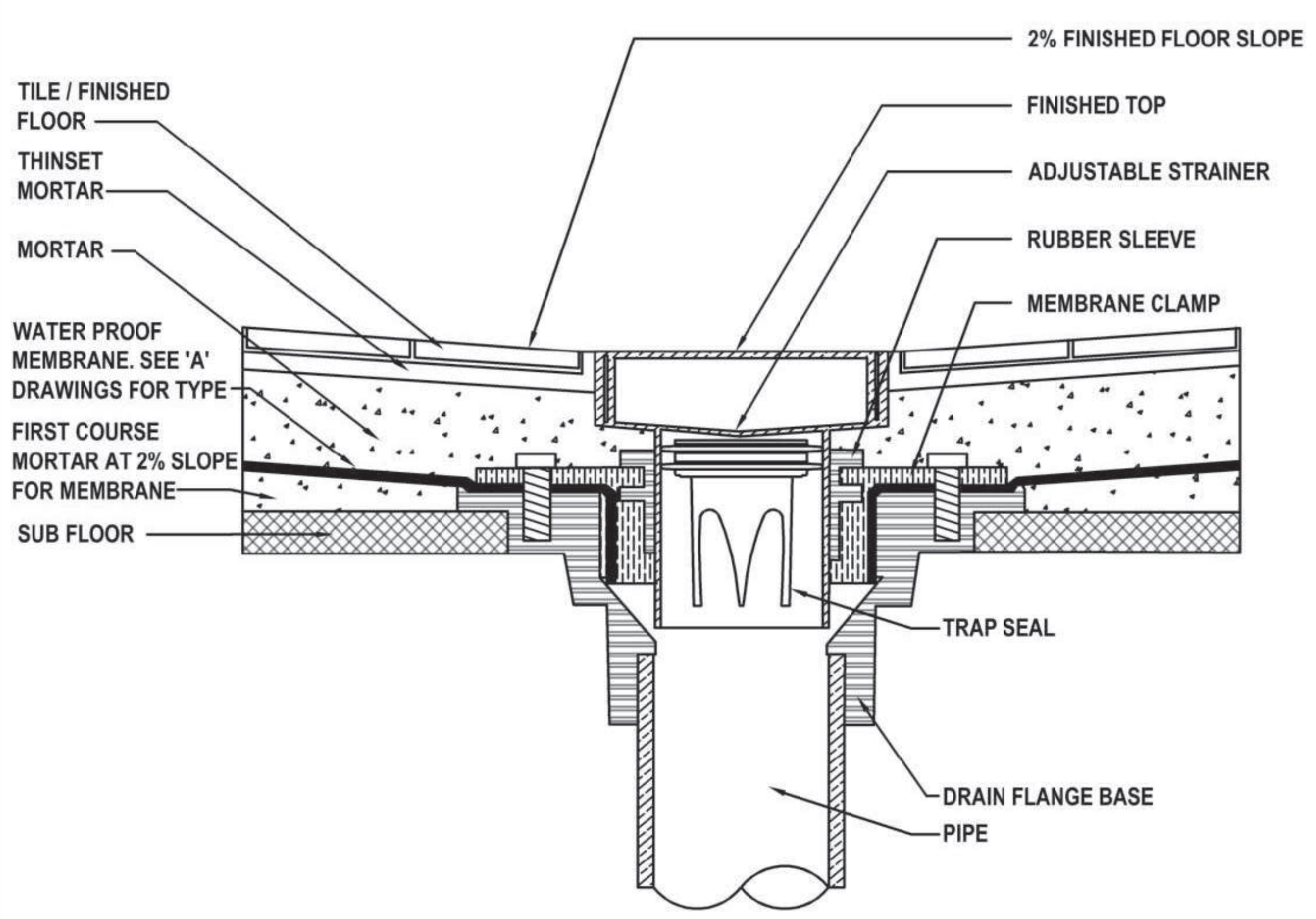
1 Pipe Hanger Detail
SCALE: NTS



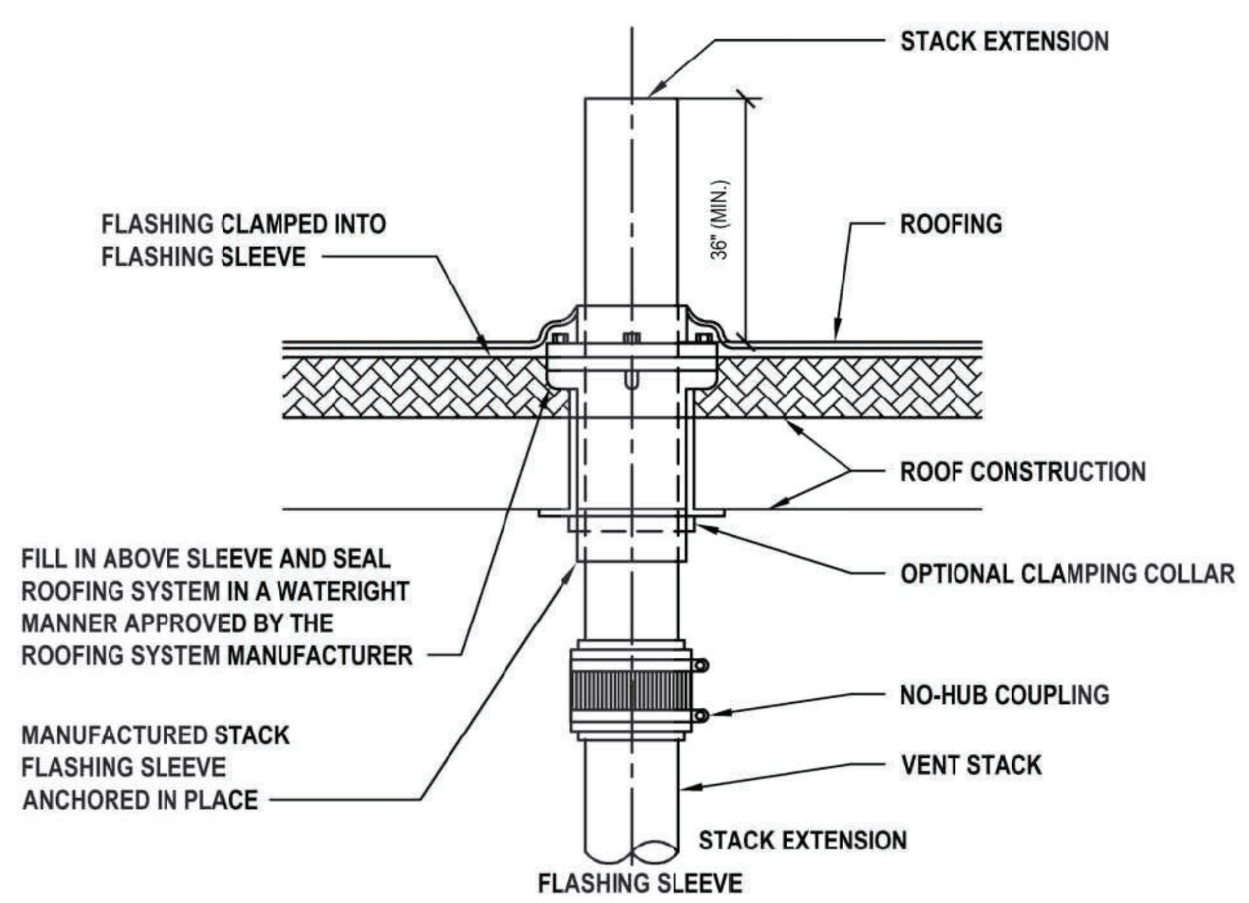
Front View

Suspended Isometric Views

2 Domestic Water Heater Suspended From Wall
SCALE: NTS



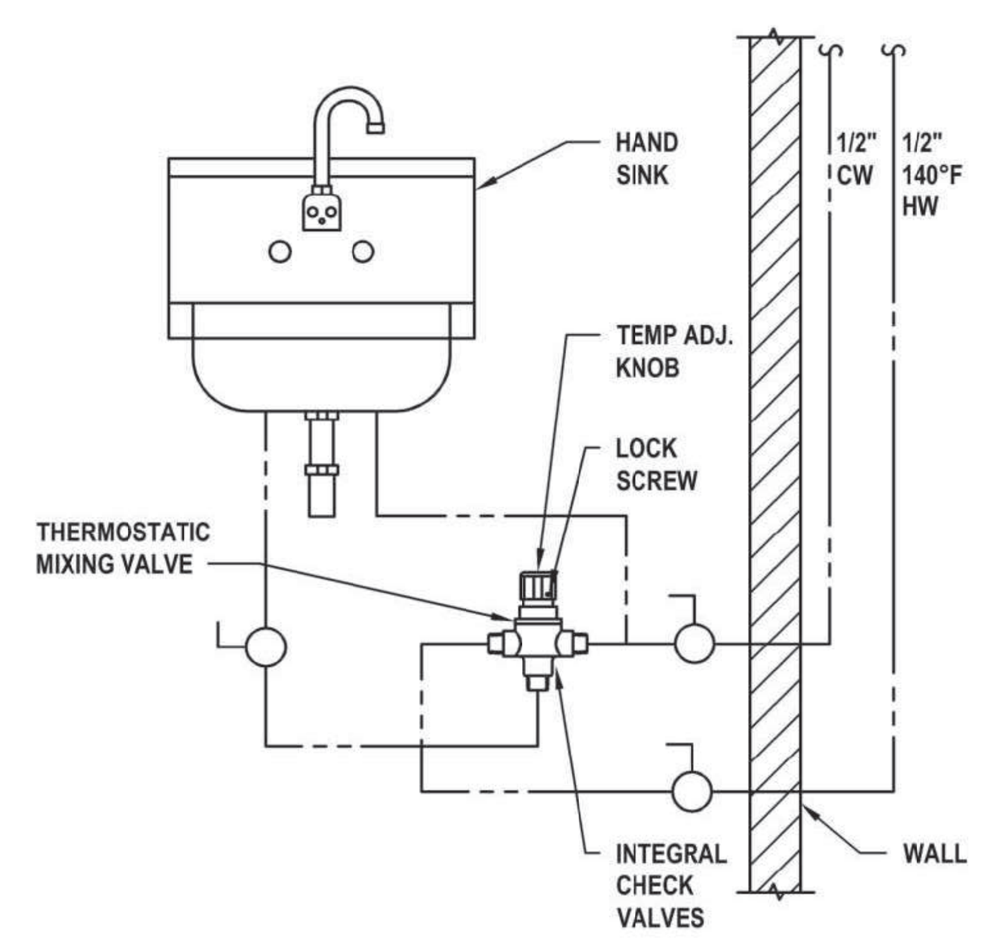
3 Floor Drain Detail
SCALE: NTS



NOTES:

1. FINAL VENT STACK OUTLET LOCATION TO BE 15 FEET (MIN.) AWAY FROM ANY OUTSIDE VENTILATION AIR INTAKE LOCATION, 10 FEET (MIN.) FROM ANY WALL OR STRUCTURE AND 3 (MIN.) FEET ABOVE STRUCTURE.

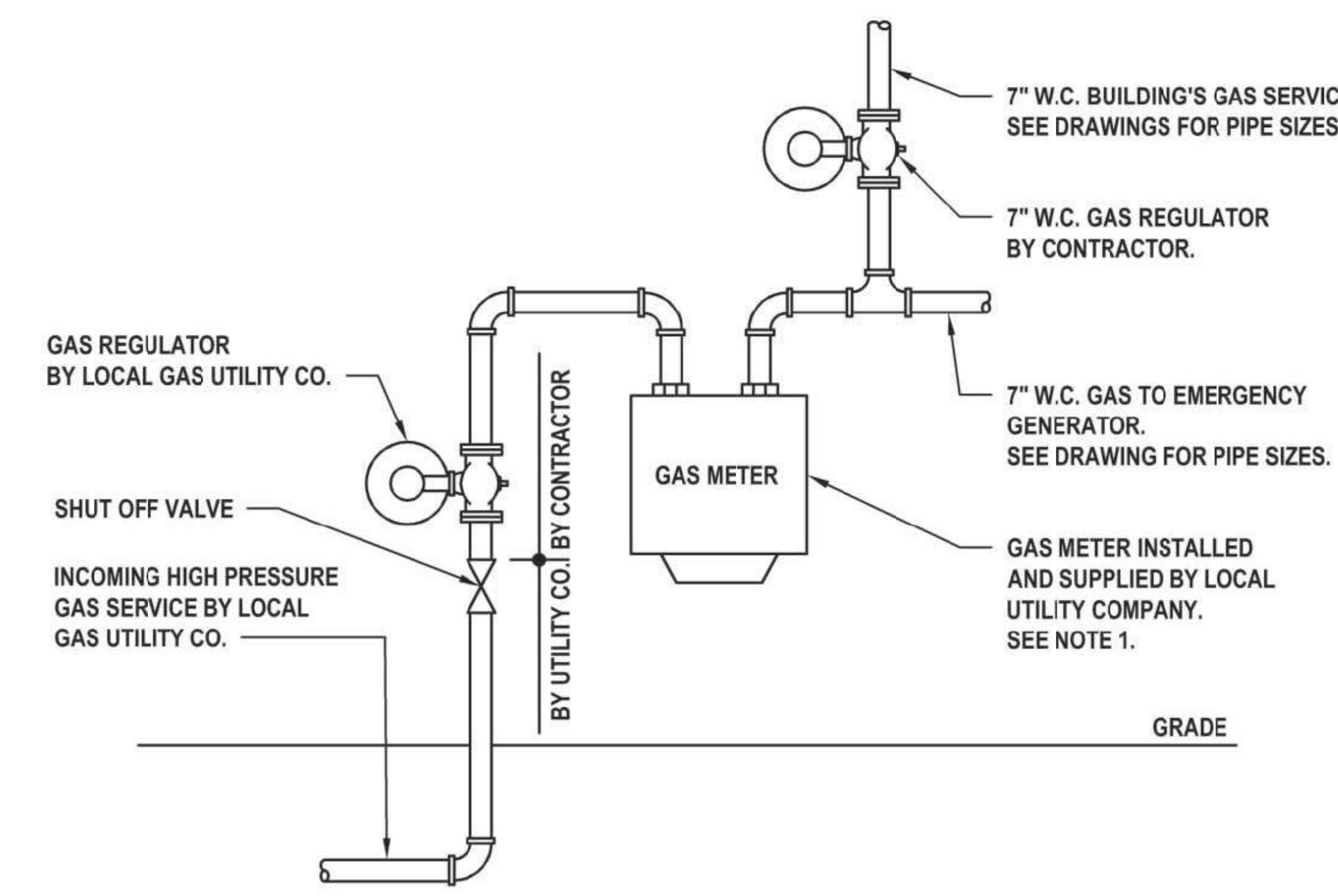
4 Vent Through Roof
SCALE: NTS



NOTE:

ADJUST OUTPUT TEMPERATURE TO A MAXIMUM OF 110°F

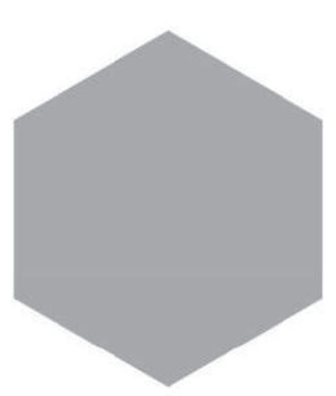
5 Under Sink Thermostatic Mixing Valve Detail
SCALE: NTS



NOTES:

GAS METER RIG SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL REQUIREMENTS OF GAS UTILITY CO. INCLUDING, BUT NOT LIMITING TO; DIMENSIONS, PIPING, FITTINGS, CONNECTIONS, VALVE, CONCRETE PADS, AND BOLLARDS.

6 Gas Meter With Gas Fired Emergency Generator Detail
SCALE: NTS



NOTES:

1. FILL PORT MARKING SYMBOL SHALL BE A SOLID YELLOW HEXAGON.

DIESEL

Tank ID #:	------
This tank conforms with 6 NYCRR Part 613	
This tank is manufactured to UL-1316 Standard	
Manf. Date:	MM-YYYY
Tank Dia.:	X ft. - X in.
Tank Length:	X ft. - X in.
Nominal Capacity:	--- gallons
Design Capacity:	--- gallons
Working Capacity:	--- gallons
Model No.:	---
Manufacturer:	---
Intalled Date/By:	---
Serial No.:	---

NOTES:

1. LABEL SHALL BE OF DURABLE MATERIAL.
2. LABEL SHALL BE PERMANENTLY AFFIXED INSIDE FILL PORT (WITH 18-INCH STAINLESS STEEL CHAIN) AND AT TANK MONITORING PANEL.

NOTES:

1. NFPA DIAMOND SIGN SHALL BE OF DURABLE MATERIAL.
2. SIGN SHALL BE PERMANENTLY AFFIXED TO GASOLINE DISPENSER AT A CLEARLY VISIBLE LOCATION.

7 Diesel Fuel Signage
SCALE: NTS

NOTES:

1. SIGNS SHALL BE OF DURABLE MATERIAL.
2. SIGN 'A' - "DANGER" SHALL BE WHITE LETTERING ON A RED BACKGROUND. ALL LETTERS SHALL NOT BE LESS THAN 3" IN HEIGHT AND 1/2" IN STROKE.
3. SIGN 'B' - "DANGER" AND HAZCOM "FLAMMABLE" SIGNS SHALL BE PERMANENTLY AFFIXED TO OR NEAR TANK AT CLEARLY VISIBLE LOCATIONS.
4. SIGN 'C' - "CAUTION" SIGN SHALL BE PERMANENTLY AFFIXED IN A CLEARLY VISIBLE LOCATION ABOVE OR BELOW THE OVERFILL ALARM PANEL.
5. SIGN 'D' - "EMERGENCY SHUT-OFF" SIGN SHALL BE PERMANENTLY AFFIXED IN A CLEARLY VISIBLE LOCATION AT OR NEAR EMERGENCY KILL SWITCH.

8 HazCom Signage
SCALE: NTS

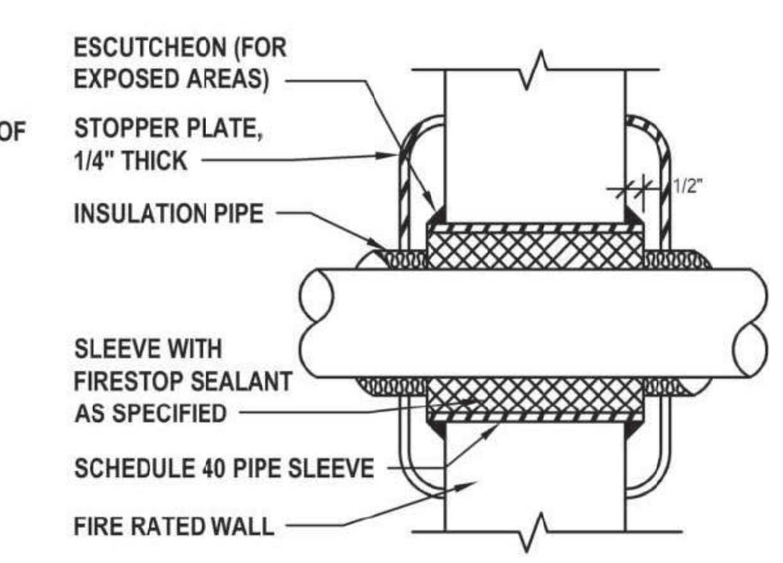
WARNING

1. NO SMOKING.
2. SHUT OFF MOTOR.
3. DISCHARGE YOUR STATIC ELECTRICITY BEFORE FUELING BY TOUCHING A METAL SURFACE AWAY FROM THE NOZZLE.
4. TO PREVENT STATIC CHARGE, DO NOT REENTER YOUR VEHICLE WHILE GASOLINE IS PUMPING.
5. IF A FIRE STARTS, DO NOT REMOVE NOZZLE - BACK AWAY IMMEDIATELY.
6. IT IS UNLAWFUL AND DANGEROUS TO DISPENSE GASOLINE INTO UNAPPROVED CONTAINERS.
7. NO FILLING OF PORTABLE CONTAINERS IN OR ON A MOTOR VEHICLE. PLACE CONTAINER ON GROUND BEFORE FILLING.

NOTES:

1. SIGN SHALL BE OF DURABLE MATERIAL.
2. POST SIGNS AT DISPENSER.

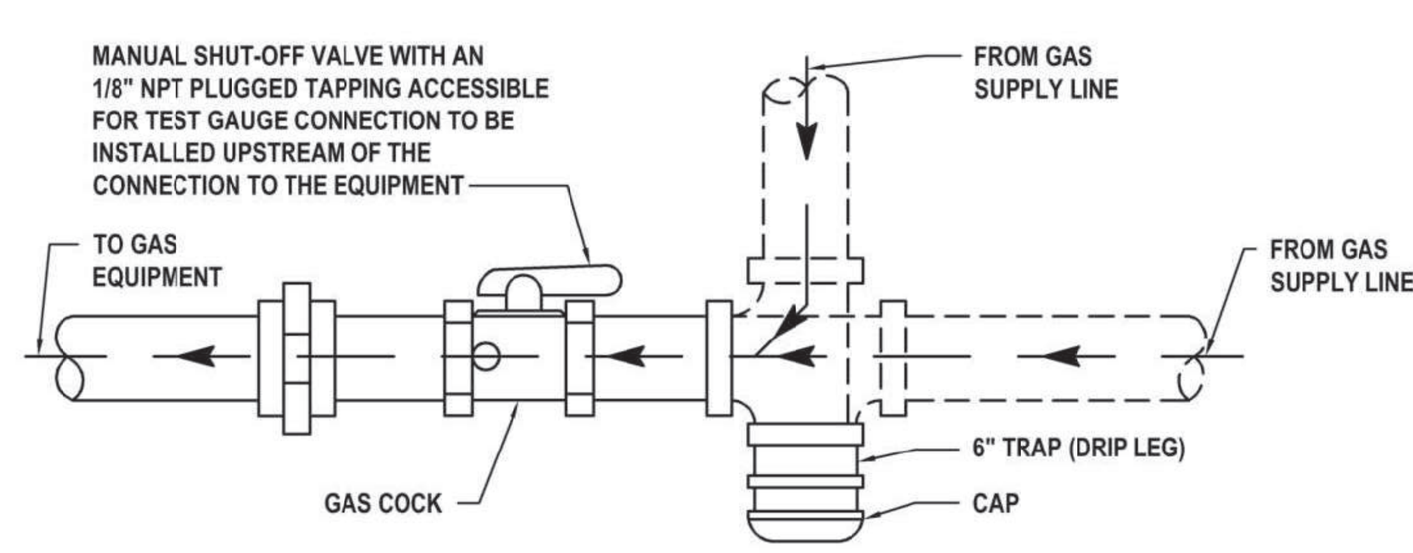
9 NYS Fire Code Signage
SCALE: NTS



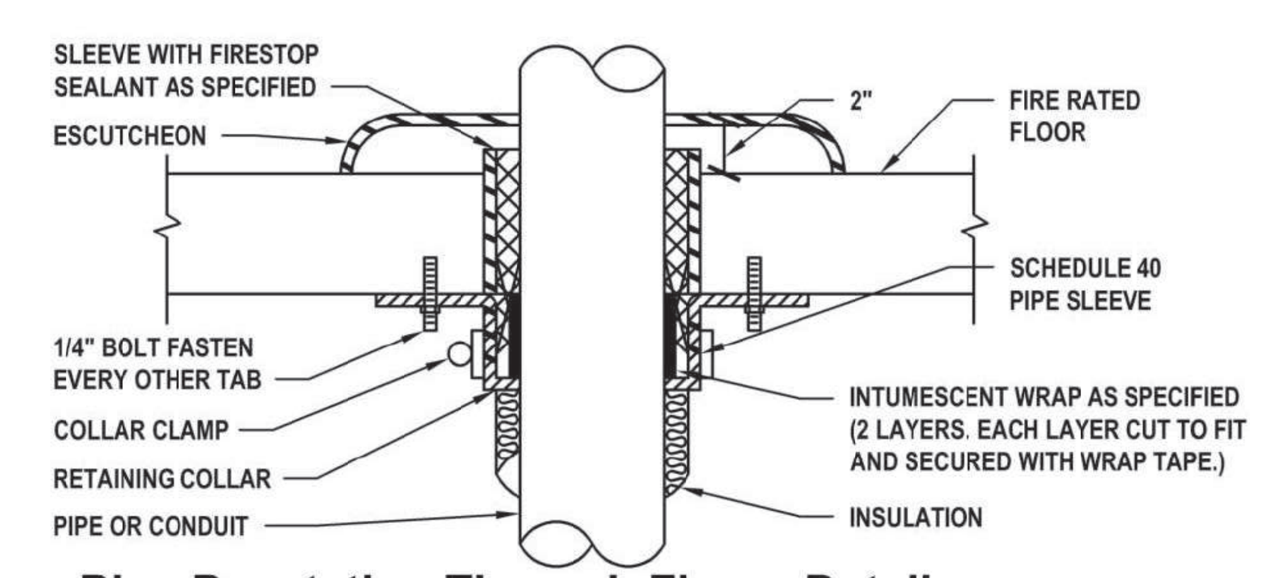
FIRE STOPPING NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT PENETRATIONS ARE PROPERLY FIRE STOPPED WITH THE FOLLOWING:
   - 1.A. THE FIRE STOPPING SYSTEM AND COMPONENTS SHALL BE AS MANUFACTURED BY 3M. NO SUBSTITUTIONS SHALL BE PERMITTED.
   - 1.B. METAL PIPES OR CONDUIT THROUGH BLOCK WALL SHALL USE UL SYSTEM NO. CAJ1044 AND 3M PRODUCT CP25 WB & CAULK
   - 1.C. METAL PIPES THROUGH GYPSUM WALLS SHALL USE UL SYSTEM NO. WL 1001 AND 3M PRODUCT CP 25 WB & CAULK

10 Pipe Penetrations Through Fire Rated Walls
SCALE: NTS



11 Typical Gas Connection Detail
SCALE: NTS



12 Pipe Penetation Through Floors Detail
SCALE: NTS

H2M architects + engineers

538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

"ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		
PROJECT No.: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

CLIENT

VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT

CONTRACT G GENERAL CONSTRUCTION

STATUS

FINAL BID DOCUMENT

SHEET TITLE

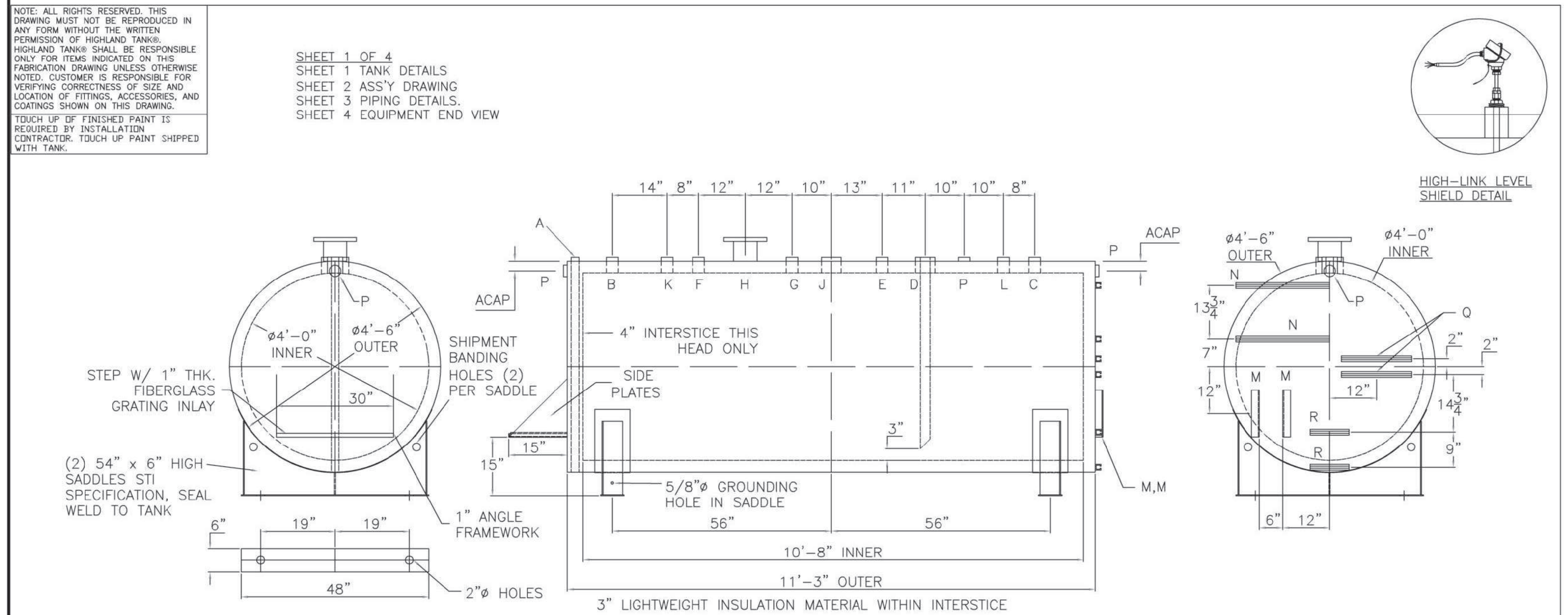
PLUMBING DETAILS

DRAWING No.

P 500.00

TOUCH UP OF FINISHED PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

SHEET 1 OF 4
SHEET 1 TANK DETAILS
SHEET 2 ASS'Y DRAWING
SHEET 3 PIPING DETAILS.
SHEET 4 EQUIPMENT END VIEW



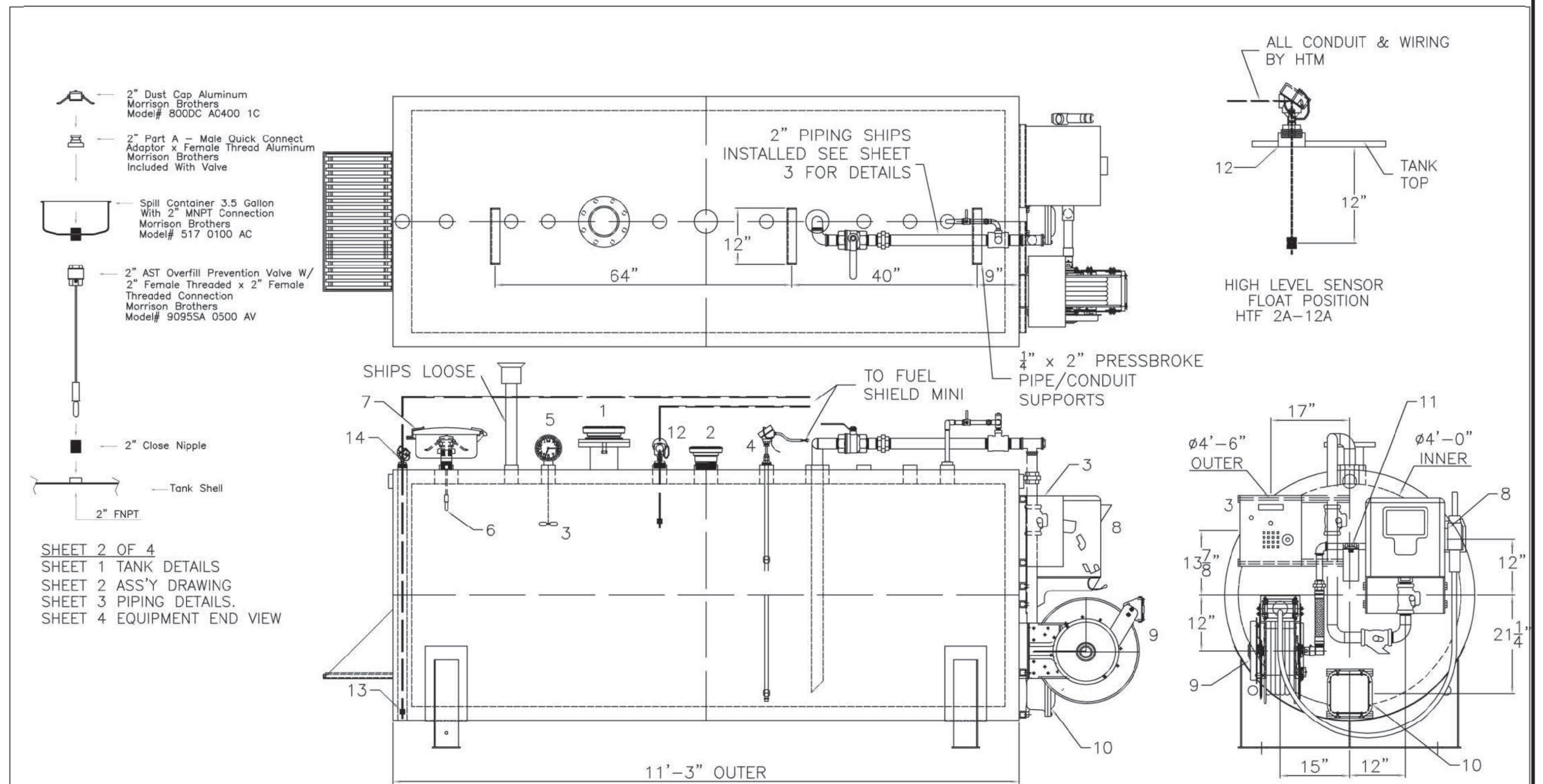
DESIGN DATA
CAPACITY : 1,000 GALLONS
TYPE: FIREGUARD® CYLINDRICAL
FIREGUARD® IS A TRADEMARK OF THE STEEL TANK INSTITUTE
NO. REQ. – (1)
OPERATING PRESSURE – ATMOSPHERIC
SPECIFIC GRAVITY = 1.0
TANK MATERIAL – MILD CARBON STEEL
THICKNESS – INNER – 7 GAUGE THICKNESS – OUTER – 7 GAUGE MIN. GAUGE OR THICKNESS (PER U.L. 2085)
CONSTRUCTION – INNER – LAP WELD OUTSIDE ONLY CONSTRUCTION – OUTER – LAP WELD OUTSIDE ONLY
TANK TEST – INNER – 5 PSIG OUTER – 5 PSIG
INT. FINISH – NONE
EXT. FINISH – SP-6 BLAST, FINISH PAINT WHITE
LABEL– UL 2085 AND FIREGUARD® PER sti

LEGEND

A	2" INTERSTITIAL MONITOR PIPE– MALE NPT END (LEAK SENSOR)	H	6" FFSO 150# FLANGE THROUGH OUTER SHELL ONLY, MARK WITH SPECIAL WARNING LABEL – INTERSTITIAL EMERGENCY VENT USE ONLY	P	2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG– MFG USE ONLY
B	2" FEMALE FIREGUARD CPLG. (FILL)			Q	1.5" X 18" L UNI-STRUT FOR DISPENSER MOUNTING
C	2" FEMALE FIREGUARD CPLG. w/ 2" x ½" BUSHING (RELIEF LINE)			R	1.5" X 10" L UNI-STRUT FOR X-PROOF NEMA 4X JUNCTION BOX
D	4" FEMALE FIREGUARD CPLG. w/ 4" x 2" DT BUSHING & CS DROP PIPE TO 3" OFF TANK BOTTOM. 45° MITER (DISPENSER SUPPLY)	J	4" FEMALE FIREGUARD CPLG. (PRIMARY EMERGENCY VENT)		
		K	2" FEMALE FIREGUARD CPLG. (NORMAL WORKING VENT)		
E	2" FEMALE FIREGUARD CPLG. (HI-LINK MAG PROBE)	L	4" FEMALE FIREGUARD CPLG. (SPARE)		
F	2" FEMALE FIREGUARD CPLG. (CLOCK GAUGE)	M	¼" X 2" X 2" ANGLE FOR HOSE REEL MOUNTING		
G	2" FEMALE FIREGUARD CPLG. (HIGH LEVEL SENSOR)	N	1.5" X 24" L UNI-STRUT FOR FUEL SHIELD MINI MOUNTING		

NOTES:
STRIKER PLATES ARE NOT SUPPLIED ON FIREGUARDS® UNLESS SPECIFIED

Highland Tank
UNLESS NOTED, TOLERANCES ARE +/- 1"
1000 GALLON 48"ø CYL. FIREGUARD®
PATENT: 5,695,089 PATENT: 5,809,650
CUSTOMER: H2M ARCHITECTS EAST MELVILLE, NY.
PROJECT: VAILS GATE FIRE HOUSE VAILS GATE, NY.
QUOTE NO: 510923
SCALE: 1/2" = 1' DATE: 11/9/21 DWG. BY: 002 DWG. NO: 118993–1



SHEET 2 OF 4
SHEET 1 TANK DETAILS
SHEET 2 ASS'Y DRAWING
SHEET 3 PIPING DETAILS.
SHEET 4 EQUIPMENT END VIEW

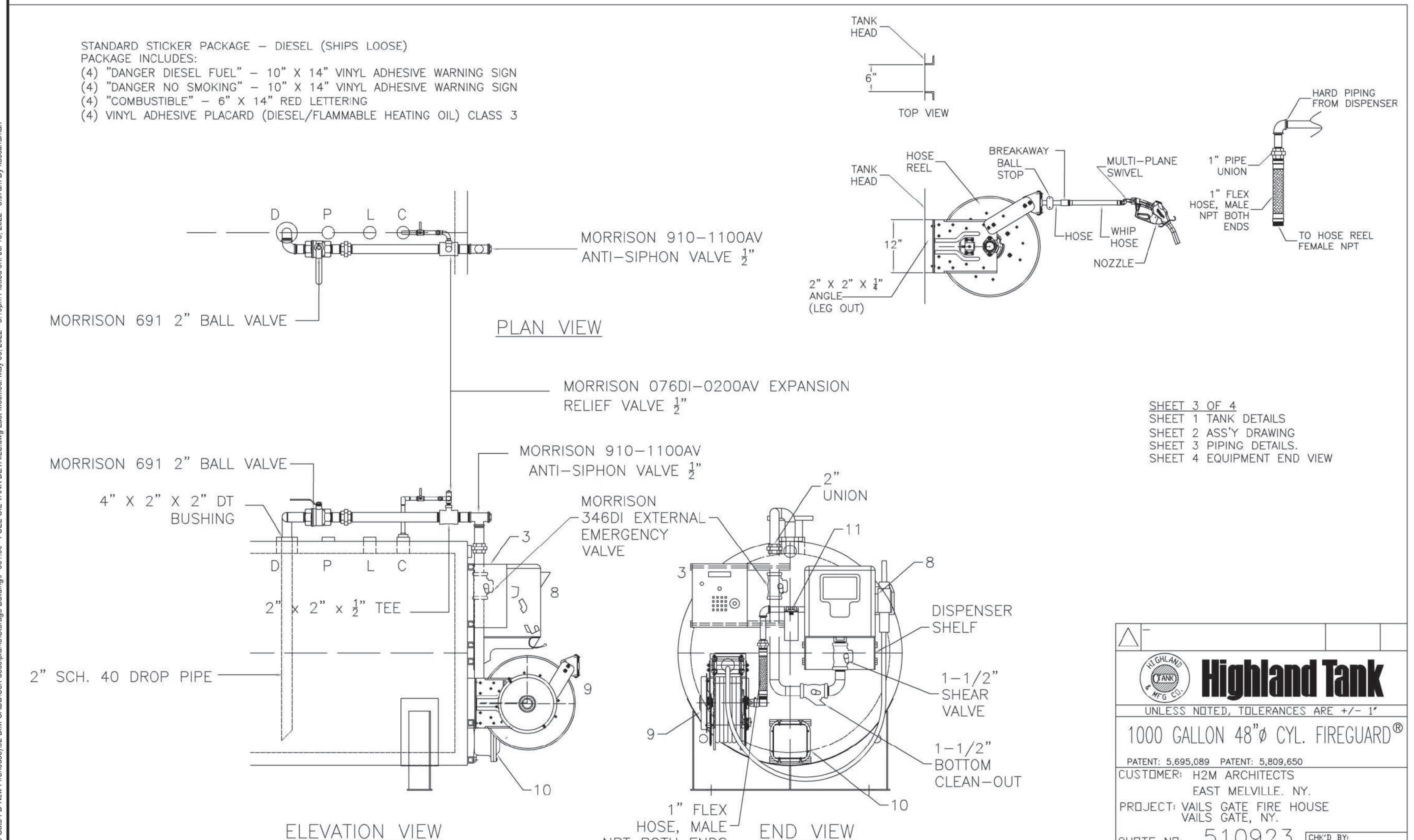
SHIP LOOSE: (INSTALLATION ON SITE BY OTHERS)
2" GALVANIZED NORMAL MUSHROOM VENT & 2" X 8' LONG SCH. 40 GALVANIZED RISER PIPE (TBE), VENT SHOULD BE INSTALLED ON ONE END OF THE PIPE.

LEGEND ALL ITEMS LISTED SHIP INSTALLED

1	6" FLANGED EMERGENCY VENT – 8oz./sq.in.	7	3.5 GALLON POWDER COATED STEEL THREADED SPILL BOWL W/ QUICK CONNECT, DUST CAP & 2" NIPPLE	11	1" ALUMINUM FILTER HEAD W/ 30 MICRON FILTER
2	4" MNPT EMERGENCY VENT – 8oz./sq.in.			12	HTF 1 FLOAT HIGH LEVEL STEM SENSOR W/ 15' OF CABLE (2A-12A)
3	HIGH-LINK FUELSHIELD MINI PLUS PACKAGE – DIESEL (UP TO 2 HOSES)	8	HL-77 PUMP PACKAGE. INCLUDES (4) DIGIT CABINET DISPENSER, SHELF, PULSE OUTPUT & PUMP	13	HTLP 1.5 LIQUID ONLY LEAK SENSOR W/ 15' OF CABLE
4	MAGNETOSTRICTIVE LEVEL SENSOR	9	HOSE REEL W/ 1" x 25' HOSE & 1" AUTOMATIC NOZZLE W/ GREEN COVER (DIESEL)	14	HTSC-2B NEMA 4 CAP FOR LEAK SENSOR
5	CLOCK GAUGE W/ STANDARD FLOAT – 2" (#818) *CALIBRATE BEFORE SHIPPING*				
6	2" AST OVERFILL PREVENTION VALVE – 2" FM THRD x 2" FM THRD CONN (NO DROP TUBE)	10	EXPLOSION PROOF (NEMA 7) JUNCTION BOX W/ TERMINAL STRIP FOR ON SITE CONNECTION		

Highland Tank
UNLESS NOTED, TOLERANCES ARE +/- 1"
1000 GALLON 48"ø CYL. FIREGUARD®
PATENT: 5,695,089 PATENT: 5,809,650
CUSTOMER: H2M ARCHITECTS EAST MELVILLE, NY.
PROJECT: VAILS GATE FIRE HOUSE VAILS GATE, NY.
QUOTE NO: 510923
SCALE: 1/2" = 1' DATE: 11/9/21 DWG. BY: 002 DWG. NO: 118993–2

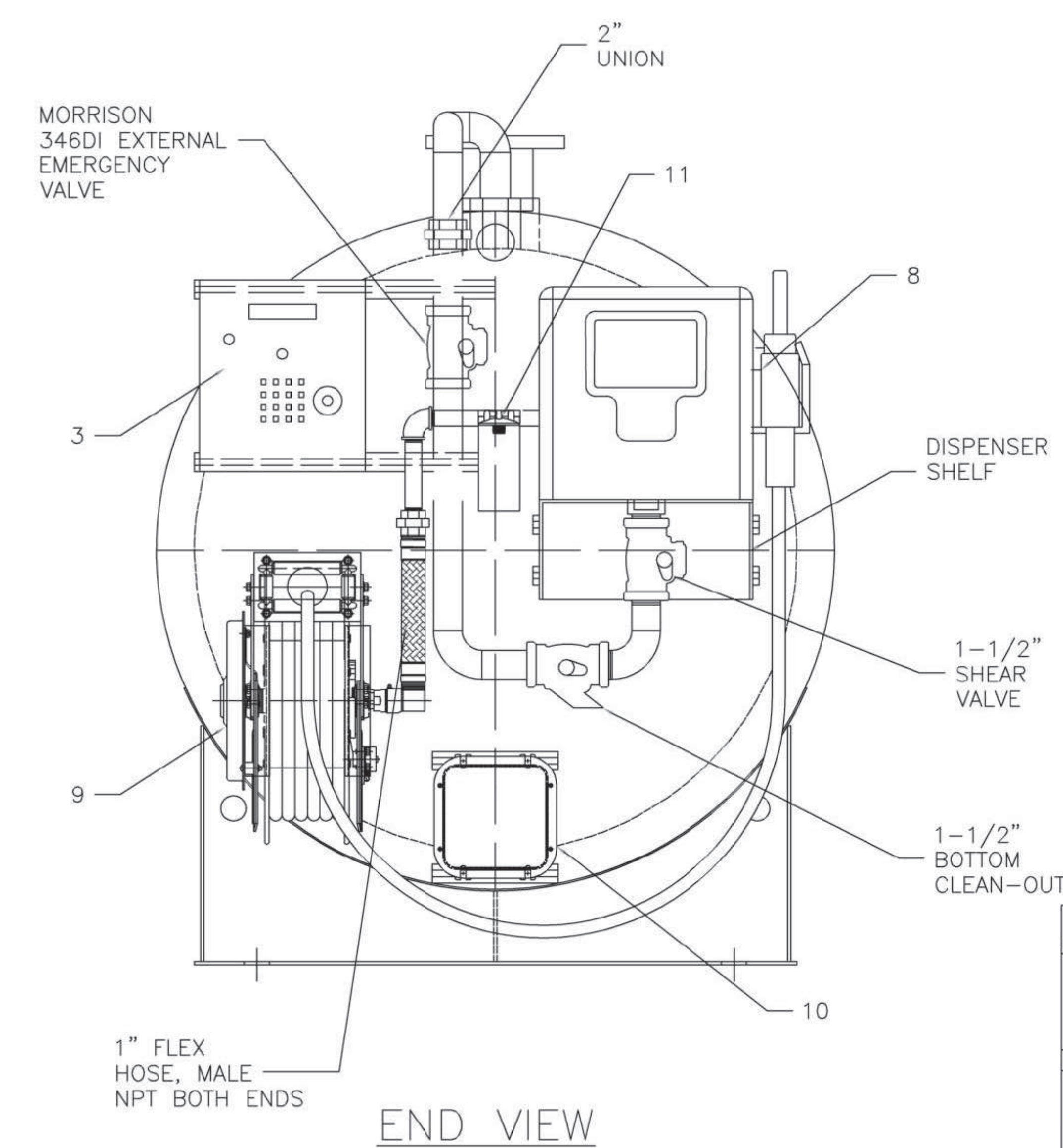
STANDARD STICKER PACKAGE – DIESEL (SHIPS LOOSE)
PACKAGE INCLUDES:
(4) "DANGER DIESEL FUEL" – 10" X 14" VINYL ADHESIVE WARNING SIGN
(4) "DANGER NO SMOKING" – 10" X 14" VINYL ADHESIVE WARNING SIGN
(4) "COMBUSTIBLE" – 6" X 14" RED LETTERING
(4) VINYL ADHESIVE PLACARD (DIESEL/FLAMMABLE HEATING OIL) CLASS 3



SHEET 3 OF 4
SHEET 1 TANK DETAILS
SHEET 2 ASS'Y DRAWING
SHEET 3 PIPING DETAILS.
SHEET 4 EQUIPMENT END VIEW

Highland Tank
UNLESS NOTED, TOLERANCES ARE +/- 1"
1000 GALLON 48"ø CYL. FIREGUARD®
PATENT: 5,695,089 PATENT: 5,809,650
CUSTOMER: H2M ARCHITECTS EAST MELVILLE, NY.
PROJECT: VAILS GATE FIRE HOUSE VAILS GATE, NY.
QUOTE NO: 510923
SCALE: NTS DATE: 11/9/21 DWG. BY: 002 DWG. NO: 118993–3

SHEET 4 OF 4
SHEET 1 TANK DETAILS
SHEET 2 ASS'Y DRAWING
SHEET 3 PIPING DETAILS.
SHEET 4 EQUIPMENT END VIEW



Highland Tank
UNLESS NOTED, TOLERANCES ARE +/- 1"
1000 GALLON 48"ø CYL. FIREGUARD®
PATENT: 5,695,089 PATENT: 5,809,650
CUSTOMER: H2M ARCHITECTS EAST MELVILLE, NY.
PROJECT: VAILS GATE FIRE HOUSE VAILS GATE, NY.
QUOTE NO: 510923
SCALE: 1" = 1' DATE: 11/9/21 DWG. BY: 002 DWG. NO: 118993–4

5 **1,000 GAL. Fuel Tank Details**
SCALE: NTS

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		
PROJECT No.: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

CLIENT
VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

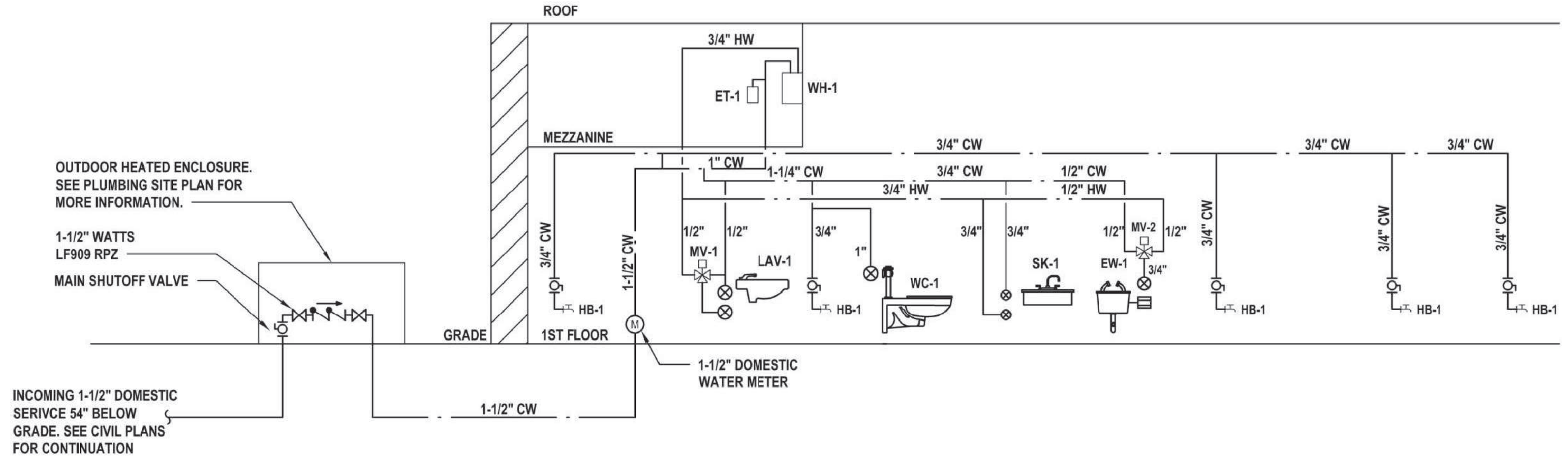
872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT
CONTRACT G
GENERAL CONSTRUCTION

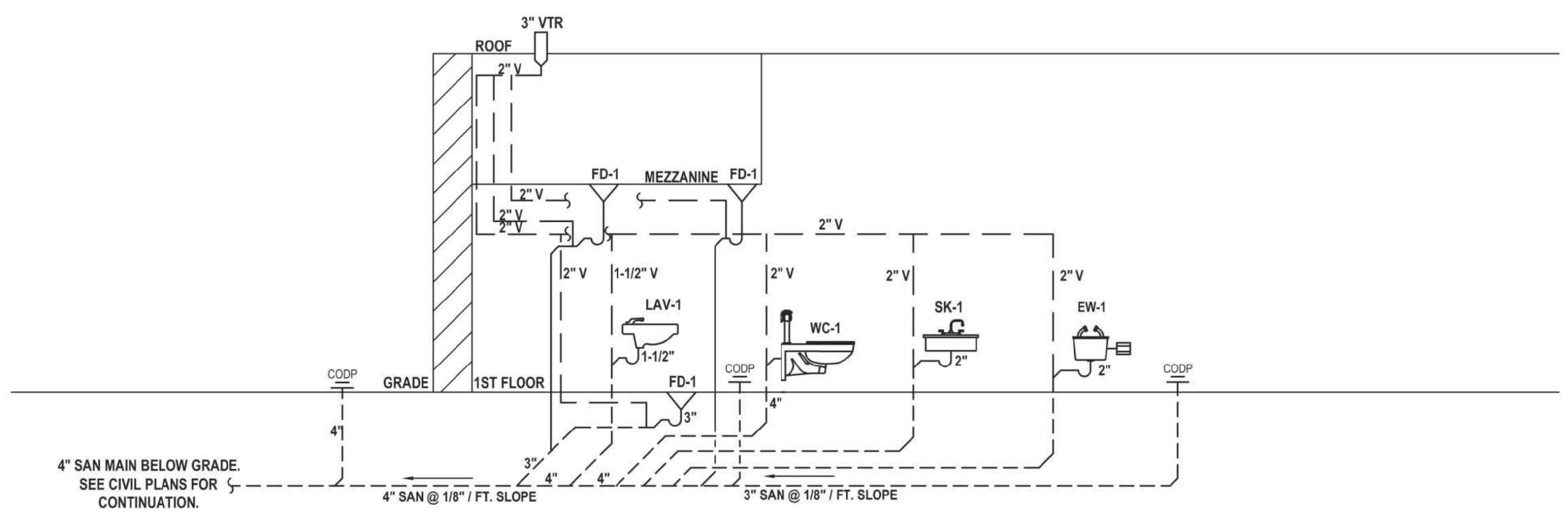
STATUS
FINAL BID DOCUMENT

SHEET TITLE
DIESEL FUEL TANK DETAILS

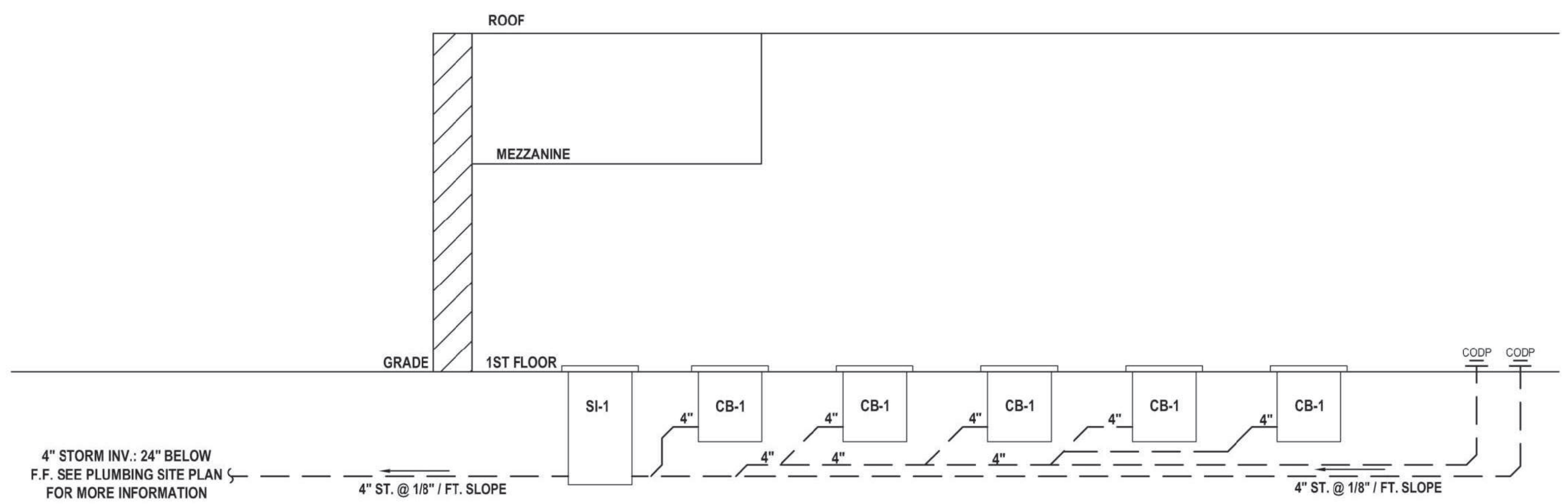
DRAWING No.
P 501.00



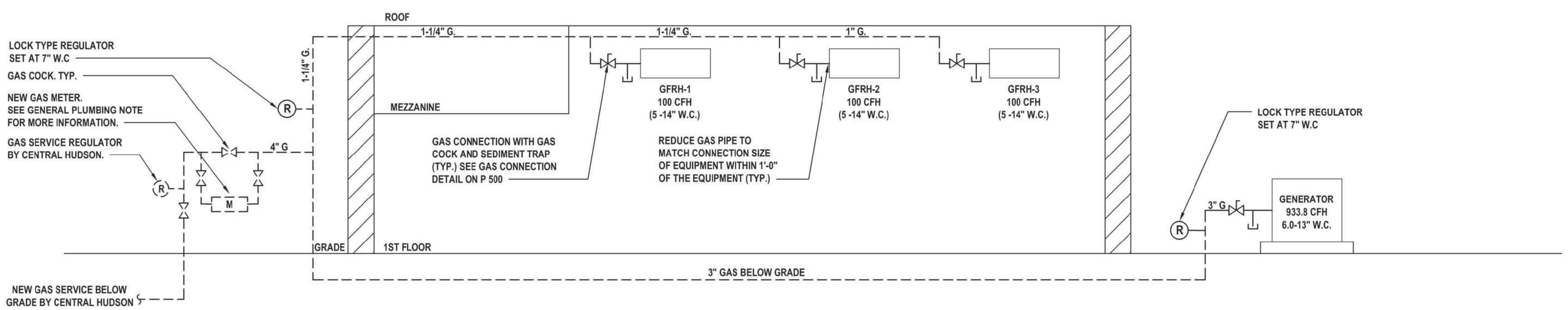
1 **Domestic Water Riser Diagram**
SCALE: NTS



2 **Sanitary and Vent Riser Diagram**
SCALE: NTS



3 **Storm Riser Diagram**
SCALE: NTS



4 **Gas Riser Diagram**
SCALE: NTS

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION

"ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
JRM	KJE		

PROJECT No.:	DATE:	SCALE:
VGFD2001	JULY 2022	AS SHOWN

CLIENT

VAILS GATE FIRE DISTRICT

New Storage Building (Phase I)
New Fire Station (Phase II)

872 Blooming Grove Turnpike
New Windsor, NY 12553

CONTRACT

**CONTRACT G
GENERAL CONSTRUCTION**

STATUS

FINAL BID DOCUMENT

SHEET TITLE

PLUMBING RISER DIAGRAMS

DRAWING No.

P1 600.00