PROJECT:

BOILER & HOT WATER HEATER UPGRADES

NORWALK & ENFIELD ARMORIES
NORWALK & ENFIELD, CONNECTICUT

PROJECT NO: 11MIL217-2401
AGENCY TRACKING NO: ZZ1101

STATE OF CONNECTICUT

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CIVIL, STRUCTURAL, MECHANICAL,
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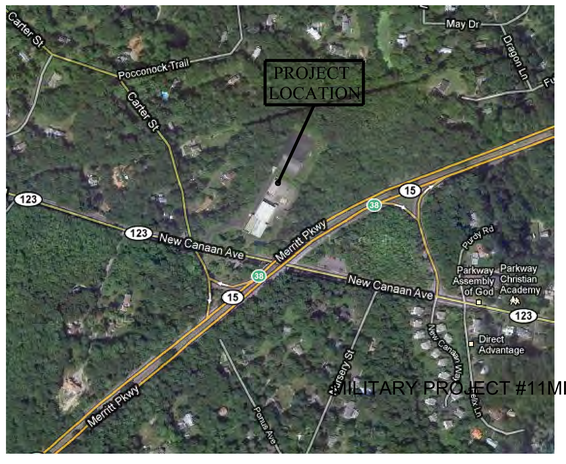
BVH PROJECT #21-10-155

ISSUED FOR CONSTRUCTION
02-28-2011

ENFIELD ARMORY

NORWALK ARMORY



MILITARY PROJECT #11MIL217-2401

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REVISION

Mark	Date	Description

Drawn by:	MGK
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Scale:	AS NOTED
File as:	

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Project
BOILER AND HOT WATER HEATER UPGRADES
CT. ARMY NATIONAL GUARD ENFIELD/NORWALK, CT

Drawing Title
COVERSHEET

Date
28 FEBURARY 2011

Drawing No.
C–1

Tracking No
ZZ1101

ABBREVIATIONS

a	48" ABOVE FINISHED FLOOR	FD	FIRE DAMPER	OD	OUTSIDE DIAMETER
A	GENERAL SERVICE COMPRESSED AIR	FD/SB	FIRE DAMPER WITH INTEGRAL SECURITY BARS	ORD	OVERFLOW ROOF DRAIN
A/AMP	AMPERE	FD	FLOOR DRAIN	ORWL	OVERFLOW RAIN WATER LEADER
AC	AIR COMPRESSOR	FDC	FIRE DEPARTMENT CONNECTION	P	POLE
AC	ALTERNATING CURRENT	FDV	FIRE DEPARTMENT VALVE	PCD	PUMPED CONDENSATE DRAIN (COOLING)
ACD	AUTOMATIC COOLING CONDENSATE PUMP	FHC	FIRE HOSE CABINET	PCR	PUMPED CONDENSATE RETURN (STEAM)
ACF	AIRFLOW CENTRIFUGAL FAN	FM	FLOW METER	PD	PRESSURE DROP
ACU	AIR CONDITIONING UNIT(S)	FMC	FLEXIBLE METALLIC TUBING	PE	PRIMARY ELECTRIC SERVICE
AD	ACCESS DOOR	FOB	FLAT ON BOTTOM	PF	POWER FACTOR
AD	AREA DRAIN	FOF	FUEL OIL FILL	PF	PROPELLER FAN
AF	ARC FAULT	FOR	FUEL OIL RETURN	PH / ø	PHASE
AFF	ABOVE FINISHED FLOOR	FOS	FUEL OIL SUPPLY	PIV	POST INDICATOR VALVE
AFG	ABOVE FINISHED GRADE	FOT	FLAT ON TOP	PLEF	PLENUM FAN
AHU	AIR HANDLING UNIT	FOV	FUEL OIL VENT	PLUF	PLUG FAN
AIC	AMPS INTERRUPTING CURRENT	FP	FIRE PUMP	PNL	PANELBOARD
AMB	AMBIENT	FPM	FEET PER MINUTE	PRESS	PRESSURE
ANN	ANNUNCIATOR	FPS	FEET PER SECOND	PRV	PRESSURE REDUCING VALVE
APD	AIR PRESSURE DROP	FS	FLOOR SINK	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	FT	FOOT OR FEET	PT	POTENTIAL TRANSFORMER
ARV	AXIAL ROOF VENTILATOR	FVC	FIRE VALVE CABINET	PVC	POLYVINYL CHLORIDE
AS	AIR SEPARATOR	G	GAS	RA	RETURN AIR
ATC	AUTOMATIC TEMPERATURE CONTROL	GA	GAUGE	RAF	RETURN AIR FAN
ATS	AUTOMATIC TRANSFER SWITCH	GAL	GALLONS	RD	ROOF DRAIN
AV	ACID VENT (CHEMICAL)	GCC	GRAVITY COOLING CONDENSATE	REF	REFRIGERANT PIPING (MULTIPLE PIPES)
AVG	AVERAGE	GF	GROUND FAULT	REF	ROOF EXHAUST FAN
AVTR	ACID VENT THRU ROOF	GND	GROUND	REG	REGISTER
AW	ACID WASTE	GPH	GALLONS PER HOUR	RF	RELIEF FAN
AWG	AMERICAN WIRE GAUGE	GPM	GALLONS PER MINUTE	RGS	RIGID GALVANIZED STEEL CONDUIT
AWT	AVERAGE WATER TEMPERATURE	GR	GRAINS	RH	RELATIVE HUMIDITY
b	42" ABOVE FINISHED FLOOR	GRU	GREASE RECOVERY UNIT	RHC	REHEAT COIL
BDD	BACK DRAFT DAMPER	GW	GREASE WASTE	RHG	REFRIGERANT HOT GAS
BFW	BOILER FEED WATER	GWA	GREASE WASTE ABOVE GRADE	RM	ROOM
BHP	BRAKE HORSEPOWER	GWB	GREASE WASTE BURIED	RMS	ROOT MEAN SQUARED
BICF	BACKWARD INCLINED CENTRIFUGAL FAN	GWH	GAS WATER HEATER	RO	REVERSE OSMOSIS WATER
BSMT	BASEMENT	H	HEIGHT	RPD	REDUCED PRESSURE DEVICE
BTUH	BRITISH THERMAL UNITS/HOUR	HC	HEATING COIL	RPM	REVOLUTIONS PER MINUTE
C	CONDUIT	H/C	HEATING/COOLING	RTU	ROOF TOP UNIT
C/B	CIRCUIT BREAKER	HD	HEAD	RV	RADON VENT
CV	COEFFICIENT, VALVE FLOW	HDCP	HANDICAP	RWL	RAIN WATER LEADER
CC	COOLING COIL	HP	HORSEPOWER	S	SOIL
CER/CEG	CEILING EXHAUST REG./GRILLE	HPC	HIGH PRESSURE CONDENSATE	S&R	SUPPLY AND RETURN
CFM	CUBIC FEET PER MINUTE	HPG	HIGH PRESSURE GAS	SA	SUPPLY AIR
CFP	CHEMICAL FEED PUMPS	HPS	HIGH PRESSURE SODIUM	SAC	SHOP AIR COMPRESSOR
CHWR	CHILLED WATER RETURN	HPS	HIGH PRESSURE STEAM	SCC	SPRINKLER CONTROL CABINET
CHWS	CHILLED WATER SUPPLY	HR	HOUR(S)	SCP	STEAM CONDENSATE PUMP
CHP	CONSOLE HEAT PUMP	HT	HEAT	SD	SMOKE DAMPER
CI	CAST IRON	HTHW	HIGH TEMPERATURE HOT WATER	SE	SECONDARY ELECTRIC SERVICE
CKT	CIRCUIT	HTHWR	HIGH TEMPERATURE HOT WATER RETURN	SEP	SEWAGE EJECTOR PUMP
CLGWTR	COOLING WATER	HTHWS	HIGH TEMPERATURE HOT WATER SUPPLY	SG	STEAM GENERATOR
CLPS	CLEAN LOW PRESSURE STEAM	HTR	HEATER	SP	STANDPIPE
CLG	CEILING	HUM	HUMIDIFIER	SP	STATIC PRESSURE
CMPS	CLEAN MEDIUM PRESSURE STEAM	HV	HEATING/VENTILATION UNIT	SP	SUMP PUMP
CMV	CEILING MOUNTED VENTILATOR	HW	HOT WATER	SPDT	SINGLE POLE DOUBLE THROW
CO	CLEANOUT	HWR	HOT WATER RETURN	SPEC	SPECIFICATION
CO2	CARBON DIOXIDE	HWRP	HOT WATER RETURN PUMP	SPK	SPRINKLER
COMP	COMPRESSOR	HWRR	HOT WATER REVERSE RETURN	SPK/SP	COMBINED SPRINKLER/ STANDPIPE
COND	CONDENSER	HWS	HOT WATER SUPPLY	SPST	SINGLE POLE SINGLE THROW
CONV	CONVECTOR	HX	HEAT EXCHANGER	SQ	SQUARE
CP	CONDENSATE PUMP	HZ	FREQUENCY (CYC, PER SEC.)	SS	STAINLESS STEEL
CPU	CENTRAL PROCESSING UNIT	ICF	IN-LINE CENTRIFUGAL FAN	ST	STORM
CRU	COMPUTER ROOM UNIT	ID	INSIDE DIAMETER	STD	STANDARD
CRV	CENTRIFUGAL ROOF VENTILATOR	IEF	IN-LINE EXHAUST FAN	SUCT	SUCTION
CWR	CONDENSER WATER RETURN	IG	ISOLATED GROUND	SWBD	SWITCHBOARD
CWS	CONDENSER WATER SUPPLY	IN	INCHES	SW	SWITCH
CWV	CENTRIFUGAL WALL VENTILATOR	IN WG	INCHES OF WATER, GAUGE (PRESS.)	SWH	STEAM WATER HEATER
CT	COOLING TOWER	IW	INDIRECT WASTE	TAF	TUBEAXIAL FAN
CT	CURRENT TRANSFORMER	JB	JUNCTION BOX	TAG	IDENTIFICATION OF EQUIPMENT
CU	CONDENSING UNIT	JP	JOCKEY PUMP	TD	TEMPERATURE DIFFERENCE
CU FT	CUBIC FEET	KEF	KITCHEN EXHAUST FAN	TEL	TELECOMMUNICATIONS SERVICE
CUH	CABINET UNIT HEATER	KHWST	KITCHEN HOT WATER STORAGE TANK	TEMP	TEMPERATURE
CV	CONSTANT VOLUME	KVA	KILOVOLT AMPERE	TMV	THERMOSTATIC MIXING VALVE
CW	COLD WATER	KW	KILOWATT	TP	TAMPERPROOF
dB	DECIBEL	KWH	KITCHEN WATER HEATER	TP	TRAP PRIMER
D	DEPTH	L	LENGTH	TS	TELEPHONE SERVICE
DB	DRY BULB TEMPERATURE	LA	LABORATORY COMPRESSED AIR	TSP	TOTAL STATIC PRESSURE
DC	DIRECT CURRENT	LAT	LEAVING AIR TEMPERATURE	T'STAT	THERMOSTAT
DCV	DOUBLE CHECK VALVE	LAV	LAVATORY	TV	TELEVISION
DE	DEIONIZED PROCESS WATER	LBS/HR	POUNDS PER HOUR	TVS	TRANSIENT VOLTAGE SUPPRESSOR
DEG or °	DEGREE	LF	LINEAR FEET	TW	TEMPERED WATER
DET	DOMESTIC EXPANSION TANK (PLUMBING)	LG	LABORATORY GAS	TWR	TEMPERED WATER RETURN
DI	DISTILLED WATER	LIQ	LIQUID	TX	TRANSFORMER
DIA or ø	DIAMETER	LPC	LOW PRESSURE CONDENSATE	TYP	TYPICAL
DN	DOWN	LPS	LOW PRESSURE STEAM	UF	UNFUSED
DP	DIFFERENTIAL PRESSURE	LV	LABORATORY VACUUM	UH	UNIT HEATER
DSA	DUCT SOUND ATTENUATORS	LWT	LEAVING WATER TEMPERATURE	UPF	UPBLAST PROPELLER ROOF EXHAUST FAN
DWBP	DOMESTIC WATER BOOSTER PUMP	MA	MEDICAL COMPRESSED AIR	UR	URINAL
DWG	DRAWING	MA	MILLIAMPERE	USF	UTILITY SET FAN
DX	DIRECT EXPANSION	MA	MIXED AIR	V	VENT
EA	EXHAUST AIR	MAGP	MASTER ALARM GAS PANEL	V	VOLTAGE
EAT	ENTERING AIR TEMPERATURE	MAX	MAXIMUM	VA	VOLT AMPERE
EBR	ELECTRIC BASEBOARD RADIATION	MBH	BTU PER HOUR (THOUSAND)	VAC	VACUUM
EDR	EQUIVALENT DIRECT RADIATION	MC	METAL CLAD CABLE	VAF	VANEAXIAL FAN
EF	EXHAUST FAN	MCC	MOTOR CONTROL CENTER	VAV	VARIABLE AIR VOLUME
EFF	EFFICIENCY	MD	MOTORIZED DAMPER	VD	VOLUME DAMPER
EHC	ELECTRICAL HEATING CABLES	MECH	MECHANICAL	VEL	VELOCITY
ELEC	ELECTRICAL	MFF	MIXED FLOW FAN	VFC	VARIABLE FREQUENCY CONTROLLER
ELEV	ELEVATOR	MFR	MANUFACTURER	VIF	VERIFY IN FIELD
EM	EMERGENCY	MH	METAL HALIDE	VOL	VOLUME
EM/NL	EMERGENCY/NIGHT LIGHT WALK-THRU	MIN	MINIMUM	VTR	VENT THRU ROOF
EMT	ELECTRIC METALLIC TUBING	MLO	MAIN LUGS ONLY	W	WASTE
ESP	EXTERNAL STATIC PRESSURE	MPC	MEDIUM PRESSURE CONDENSATE	W	WATT
ET	EXPANSION TANK (HVAC)	MPS	MEDIUM PRESSURE STEAM	WB	WET BULB TEMPERATURE
ETP	ELECTRIC TRAP PRIMER	MUAU	MAKE UP AIR UNIT	WC	WATER CLOSET
EUH	ELECTRIC UNIT HEATER	MV	MEDICAL VACUUM	WEF	WALL EXHAUST FAN
EVAP	EVAPORATOR	N2	NITROGEN	WG	WIREGUARD
EWB	ENTERING WET BULB TEMPERATURE	N2O	NITROUS OXIDE	WH	WALL HYDRANT (HOSE BIBB)
EWC	ELECTRIC WATER COOLER	N/A	NOT APPLICABLE	WHA	WATER HAMMER ARRESTER
EWH	ELECTRIC WATER HEATER	N.C.	NORMALLY CLOSED	WI	WIDTH
EWT	ENTERING WATER TEMPERATURE	NEC	NATIONAL ELECTRICAL CODE	WP	WEATHERPROOF
EXH	EXHAUST	NIC	NOT IN CONTRACT	WPD	WATER PRESSURE DROP
EXP	EXPANSION	NL	NIGHT LIGHT WALK-THRU	WTG	WALL TRANSFER GRILLE
F	FAHRENHEIT	N.O.	NORMALLY OPEN	WTR	WATER
FA	FIRE ALARM	NTS	NOT TO SCALE	WV	WASTE AND VENT COMBINATION
FC	FOOT CANDLE	O	OXYGEN	WWM	WELDED WIRE MESH
FCCF	FORWARD CURVE CENTRIFUGAL FAN	OA	OUTSIDE AIR	ZVB	MEDICAL GAS ZONE VALVE BOX
FCU	FAN COIL UNIT				

CODES LISTED BELOW APPLY TO ALL DRAWINGS AND SPECIFICATIONS ON THIS PROJECT

- 2003 INTERNATIONAL BUILDING CODE
- 2005 SUPPLEMENT TO THE 2003 INTERNATIONAL BUILDING CODE
- 2009 AMMENDMENT TO THE 2005 SUPPLEMENT TO THE 2003 INTERNATIONAL BUILDING CODE
- 2005 CONNECTICUT STATE FIRE SAFETY CODE
- 2009 AMMENDMENT TO THE 2005 CONNECTICUT STATE FIRE SAFETY CODE
  - PART I – ADMINISTRATION
  - PART II – GENERAL
  - PART III – NEW CONSTRUCTION, RENOVATIONS & CHANGE OF USE
  - PART IV – EXISTING BUILDINGS/OCCUPANCIES
  - PART V – MAINTENANCE AND OPERATIONAL ISSUES
- THE FOLLOWING AS REFERENCED BY THE ABOVE SUPPLEMENT, AMENDMENT, AND CODES:
  - 2003 INTERNATIONAL BUILDING CODE (IBC)
  - 2003 INTERNATIONAL MECHANICAL CODE (IMC)
  - 2003 INTERNATIONAL PLUMBING CODE (IPC)
  - 2006 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
  - 2003 ICC/ANSI A117.1 – ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
  - 2005 NFPA 70 – NATIONAL ELECTRICAL CODE (NEC)
  - 2004 ANSI/ASHRAE/IESNA STANDARD 90.1 – ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS
  - 1996 NFPA 54 – CONNECTICUT GAS FUEL CODE
  - 2003 INTERNATIONAL ELECTRICAL CODE (ICC EC)
  - 2003 INTERNATIONAL FIRE CODE (IFC)
  - 2002 NFPA 72 – NATIONAL FIRE ALARM CODE
- 2002 CT PUBLIC HEALTH CODE
- GENERAL STATUTES OF CONNECTICUT WITH SUPPLEMENTS
- 2002 ASCE/SEI 7

GENERAL NOTES

GENERAL

1. THE PROJECT DRAWINGS AND SPECIFICATIONS ARE BASED ON THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI) DOCUMENTATION FORMAT. SPECIFICATION AND DRAWING CONTENTS ARE ARRANGED BY TOPIC AND CATEGORY AND ARE NOT INTENDED TO AWARD DIVISION OF WORK.
2. THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THE SPECIFIED FIRE PROTECTION, PLUMBING, HVAC, ELECTRICAL AND SPECIAL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, CALIBRATED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
3. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
4. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST.
5. PERFORM ALL WORK IN COMPLIANCE WITH THE SPECIFICATIONS APPLICABLE CODES, ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION; THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE; IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
6. INSTALL ALL EQUIPMENT IN ACCESSIBLE LOCATIONS.
7. COORDINATE PIPING AND CONDUITS ENTERING OR LEAVING THE BUILDING WITH THE SITE CONTRACTOR(S) BEFORE INSTALLATION. COORDINATE WITH THE STRUCTURE AND SYSTEM REQUIREMENTS, PRIOR TO INSTALLATION.
8. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT; CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
9. PROVIDE THE REQUIRED/SPECIFIED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING INTERIOR AND EXTERIOR WALLS OR FLOOR SLABS.
10. INSTALL FLOOR-MOUNTED EQUIPMENT ON A CONCRETE HOUSEKEEPING PAD.
11. SEISMICALLY SUPPORT EQUIPMENT AS REQUIRED BY CODE, THE AUTHORITY HAVING JURISDICTION, AND/OR AS SPECIFIED. SUBMIT ENGINEERED INSTALLATION DETAILS PER THE SPECIFICATIONS. THE CONTRACTORS SEISMIC ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT ON THE FINDINGS.
12. PROVIDE MEP COORDINATION DRAWINGS AS REQUIRED IN THE SPECIFICATIONS.
13. ENCLOSED CONTROLLERS SHALL BE PROVIDED BY THE CONTRACTOR PROVIDING THE EQUIPMENT REQUIRING AN ENCLOSED CONTROLLER REQUIREMENTS ARE SPECIFIED UNDER DIVISION 26: "ENCLOSED CONTROLLERS". MOTOR EFFICIENCIES SHALL BE AS INDICATED IN THE SPECIFICATIONS.
14. PROVIDE PIPING, CONDUIT, AND ALL OTHER ACCESSORIES AS REQUIRED FOR PROPER AND PROFESSIONAL SYSTEMS INSTALLATION.
15. TEST AND BALANCE MECHANICAL AND ELECTRICAL SYSTEMS. AS REQUIRED BY THE SPECIFICATIONS.
16. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS OR TRANSFORMERS.
17. PROVIDE PIPE EXPANSION COMPENSATION FOR THE VARIOUS PIPING SYSTEMS. SUBMIT ENGINEERED DETAILS FOR APPROVAL AND VERIFY INSTALLATION IS IN ACCORDANCE WITH CODE. THE CONTRACTOR'S CONSULTING ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT ON THE FINDINGS.
18. PROVIDE ADDITIONAL TRANSITIONS AND OFFSETS IN ALL PIPING OR CONDUIT FOR COORDINATION WITH BUILDING STRUCTURE AND CONSTRUCTION.

RENOVATION

1. THIS PROJECT INVOLVES THE RENOVATION OF AN EXISTING FACILITY; BEFORE SUBMITTING THE BID, CONTRACTORS SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH THE PROJECT IS TO BE COMPLETED.
2. CONTRACTORS SHALL BE HELD RESPONSIBLE FOR ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS.
3. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW EVERY DEVICE, APPURTENANCE, PIPE, WIRE OR CONDUIT TO BE REMOVED. MEP EQUIPMENT, UNITS, AND SYSTEMS NOT BEING REUSED, SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ASSOCIATED HANGERS, SUPPORTS, BASES, PADS, PIPES, DUCTS, CONDUITS, WIRES, INSULATION, AND CONTROLS BACK TO THE POINT OF ORIGIN.
4. EQUIPMENT, PIPING, OR CONDUIT SHALL NOT BE ABANDONED IN-PLACE UNLESS SPECIFICALLY SO NOTED.
5. PROPERLY DISPOSE OF DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES, REGULATIONS, AND DEP STANDARDS; TURN OVER TO THE OWNER, EQUIPMENT SO INDICATED.

ROOF

1. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL ROOF WORK WITH BOTH; THE ROOF WARRANTY HOLDER AND THE MILITARY DEPARTMENT'S CONSTRUCTION COORDINATOR. ALL WORK IS AT THE CONTRACTOR'S EXPENSE.

PLUMBING

1. INCLUDE NECESSARY PIPING OFFSETS AND TRANSITIONS AS REQUIRED TO INSTALL THE PLUMBING EQUIPMENT. PIPING, DRAINS AND VENTS SHALL BE THOROUGHLY CLEANED AND FLUSHED IMMEDIATELY BEFORE PROJECT COMPLETION. PROVIDE CERTIFICATION ON CONTRACTOR'S LETTER HEAD THAT THIS WORK HAS BEEN COMPLETED.
2. COORDINATE EXACT LOCATION OF UNDERGROUND UTILITIES (WATER, GAS, SANITARY, ETC.) EXITING OR ENTERING THE BUILDING, WITH THE SITE CONTRACTOR, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.

HVAC

1. PROVIDE THROTTLING VALVES AND SHUT-OFF VALVES AS SPECIFIED IN ADDITION TO THOSE INDICATED ON THE DOCUMENTS.
2. PIPING SHALL BE SUPPORTED FROM STRUCTURE ABOVE. TO MAXIMIZE HEAD ROOM, INSTALL PIPING TIGHT TO BOTTOM OF BEAMS WHEN RUNNING PERPENDICULAR TO BEAM; INSTALL PIPING TIGHT TO FLOOR SLAB WHEN RUNNING PARALLEL TO BEAM; PROVIDE ALL NECESSARY FITTINGS AND TRANSITIONS.
3. PROVIDE AIR VENTS AT ALL HIGH POINTS AND DRAINS AT ALL LOW POINTS.

ELECTRICAL

1. IT IS NOT THE INTENTION TO SHOW EVERY FITTING, WIRE, OR DEVICE. ALL SUCH ITEMS SHALL BE FURNISHED AND INSTALLED AS NECESSARY FOR A COMPLETE SYSTEM.
2. CONCEAL RACEWAYS IN FINISHED AREAS. RACEWAYS WITHIN MECHANICAL AND ELECTRICAL ROOMS MAY BE SURFACE-MOUNTED.
3. DO NOT INSTALL CONDUIT IN CONCRETE SLABS, UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER.
4. PROVIDE POWER TO MECHANICAL EQUIPMENT SHOWN ON MECHANICAL PLANS, RISERS, SCHEDULES, OR IN SPECIFICATIONS. MECHANICAL EQUIPMENT IS NOT NECESSARILY SHOWN ON ELECTRICAL PLANS. REFER TO MECHANICAL PLANS AND SCHEDULES ON MEP DRAWINGS FOR LOCATIONS AND SPECIFIC ELECTRICAL REQUIREMENTS. COORDINATE EXACT LOCATION AND ORIENTATION OF EQUIPMENT WITH OTHER TRADES.

MILITARY PROJECT #11MIL217-2401

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SEAL

21-10-155

drawing title: MEP GENERAL NOTES AND ABBREVIATIONS

REVISIONS

mark	date	description

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STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

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drawn by: GSK, MEL, JCK
approved by: CVD

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

project no.: 81-Q-644

drawing no.: MEP-1.0

GENERAL SYMBOLS

- THICK, DARK SOLID LINES INDICATE NEW OR RELOCATED ITEMS OR NEW RACEWAY AND WIRING
- THIN, LIGHT LINES INDICATE EXISTING ITEMS OR RACEWAY TO REMAIN IN PLACE AND BE REUSED
- THICK, DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED
- POINT OF NEW TO EXISTING CONNECTION, INCLUDING TRANSITIONS

PLUMBING SYMBOLS

- COLD WATER
- HOT WATER
- HOT WATER RECIRCULATING
- VENT
- RV — RADON VENT
- S — SOIL OR WASTE ABOVE GRADE
- S — SOIL OR WASTE BURIED
- WV — WASTE & VENT COMBINATION ABOVE GRADE
- WV — WASTE & VENT COMBINATION BURIED
- GW — GREASE WASTE ABOVE GRADE
- GW — GREASE WASTE BURIED
- IW — INDIRECT WASTE
- ORWL — OVERFLOW RAIN WATER LEADER
- RWL — RAIN WATER LEADER
- ST — STORM BURIED
- C — CONDENSATE DRAIN
- PCD — PUMPED CONDENSATE DRAIN
- XXX — ELECTRICAL HEATING CABLE. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
- G — GAS ABOVE GRADE
- A — GENERAL SERVICE COMPRESSED AIR
- TW — TEMPERED WATER
- TWR — TEMPERED WATER RETURN
- AIR OUTLET
- WATER METER ASSEMBLY
- M — GAS METER ASSEMBLY
- DRAIN
- ROOF DRAIN
- TP — TRAP PRIMER
- PANEL/CABINET
- T & P RELIEF VALVE
- SHOWER HEAD – LOCATION
- EMERGENCY EYEWASH/DELUGE SHOWER
- SE — EMERGENCY OFF SWITCH

HVAC SYMBOLS

- DIRECTION OF OUTDOOR AIRFLOW
- DIRECTION OF EXHAUST AIRFLOW
- XXX — SUPPLY PIPING. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
- XXX — RETURN PIPING. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
- VFC — VARIABLE FREQUENCY CONTROLLER
- SE — EMERGENCY OFF SWITCH

FITTINGS AND VALVES

- PIPE ANCHOR
- BACKFLOW PREVENTOR
- STRAINER OR STRAINER WITH BLOW–DOWN VALVE HOSE END, CAP AND CHAIN
- WALL CLEANOUT OR BLIND FLANGE
- "P" TRAP
- PIPE TEE DOWN
- IN–LINE EXPANSION COMPENSATOR
- FLOOR CLEANOUT
- STEEL PENETRATION/PIPE SLEEVE
- PIPE ELBOW UP OR PIPE TEE UP
- PIPE ELBOW DOWN
- COMPANION FLANGE
- PIPE CAP OR CAPPED END OF PIPE
- UNION
- PIPE GUIDES
- PUMP
- WATER HAMMER ARRESTOR
- TAKEOFF FROM TOP OF MAIN PIPE
- TAKEOFF FROM BOTTOM OF MAIN PIPE
- DIRECTION OF FLUID FLOW
- VALVE ON RISER
- VALVE ON DROP
- METERING ORIFICE
- AIR VENT
- FLOW SENSOR
- PIPE DROP WITH VALVE
- 2–WAY CONTROL VALVE
- 3–WAY CONTROL VALVE
- BALL VALVE
- CALIBRATED BALANCING VALVE
- SHUT–OFF VALVE (SEE SPECIFICATIONS FOR APPLICATION TYPE)
- BUTTERFLY VALVE
- CHECK VALVE
- THERMOSTATIC MIXING VALVE
- GLOBE VALVE
- GATE VALVE
- PRESSURE REDUCING VALVE
- GAS COCK
- TRIPLE DUTY VALVE
- OS&Y VALVE
- DRAIN VALVE WITH HOSE END, CAP & CHAIN OR WALL HYDRANT / HOSE BIBB
- M — MOTORIZED BUTTERFLY VALVE
- PRESSURE RELIEF SAFETY VALVE
- A — AQUASTAT
- SOLENOID VALVE
- T — TEMPERATURE SENSOR WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
- T — TEMPERATURE GAUGE WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
- T — THERMOMETER WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
- P — PRESSURE GAUGE
- FLEXIBLE CONNECTOR

ELECTRICAL SYMBOLS

- X — DOUBLE DUPLEX RECEPTACLE REFER TO ABBREVIATION LIST (X)
- POWER WIRING
- SWITCH LEG WIRING
- CONTROL WIRING
- XXX — WIRING – REFER TO ABBREVIATION LIST (XXX)
- CIRCUIT BREAKER SIZE
- XXA–XP / XX–X — HOME RUN / PANEL DESIGNATION
- FEEDER TAG
- SURFACE ELECTRICAL PANEL, 208Y/120 OR 208 VOLT
- FLUSH ELECTRICAL PANEL, 208Y/120 VOLT
- TX — TRANSFORMER
- ENCLOSED CONTROLLER
- ENCLOSED SWITCH
- ELECTRIC MOTOR
- J — JUNCTION BOX
- TB — TERMINAL BOX
- C — CONTACTOR IN ENCLOSURE
- EX — SUBLETTERS "EX" INDICATES EXISTING EQUIPMENT TO REMAIN INTACT
- RE — SUBLETTERS "RE" INDICATES EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED
- RL — SUBLETTERS "RL" INDICATES EXISTING EQUIPMENT TO BE DISCONNECTED, REMOVED, AND RELOCATED

MILITARY PROJECT #11MIL217-2401

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STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

drawing title: MEP SYMBOL LISTS

REVISIONS

mark	date	description

SEAL

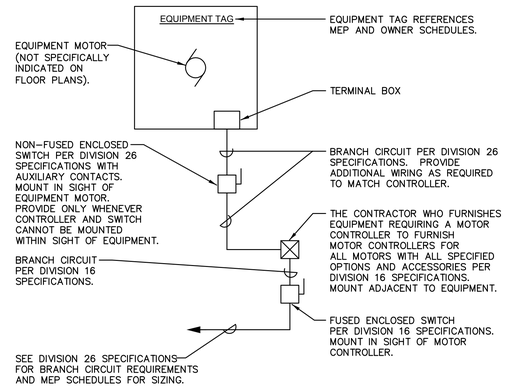
drawings prepared by: BVH INTEGRATED SERVICES, 50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

date: 02/28/2011
scale: NONE
drawn by: GSK, MEL, JCK
approved by: GVD
drawing no.: MEP-1.1
CAD no.:
project no.: 81-Q-644

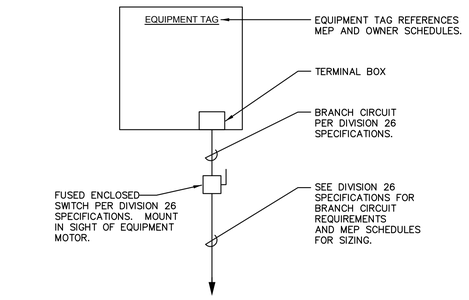
21-10-155

3/1/11 3:03:59 PM W:\2010\2110155 – Norwalk And Enfield Armories Boiler And Water Heater Replacement\DWGS\Mep\MEP-1.dwg



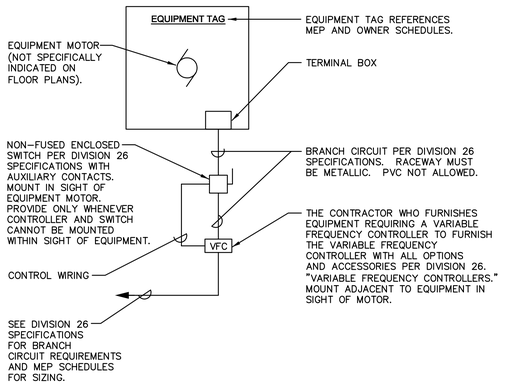
NOTE:
THIS DETAIL IS FOR ALL EQUIPMENT MOTORS. CONTRACTOR TO PROVIDE WIRING BETWEEN REMOTE DISCONNECTS, STARTERS AND MOTORS. SEE EQUIPMENT SCHEDULES AND SPECIFICATIONS. IF NOT NOTED OTHERWISE IN EQUIPMENT SCHEDULES, CONTRACTOR SHALL PROVIDE A COMBINATION MOTOR CONTROLLER/DISC. SWITCH.

TYPICAL MOTOR, SWITCH AND CONTROLLER DETAIL - ENFIELD & NORWALK
NOT TO SCALE



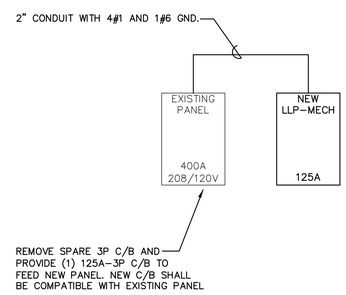
NOTE:
THIS DETAIL IS FOR ALL EQUIPMENT WHERE EQUIPMENT REQUIRES POWER AND WHERE THERE ARE NO MOTORS INVOLVED OR WHERE SPECIFICATIONS OR SCHEDULES FOR MULTIPLE MOTOR EQUIPMENT SPECIFICALLY INDICATE ONE POINT POWER CONNECTION. CONTRACTOR TO PROVIDE WIRING BETWEEN REMOTE DISCONNECTS, STARTERS AND MOTORS. SEE EQUIPMENT SCHEDULES AND SPECIFICATIONS.

TYPICAL EQUIPMENT CONNECTION DETAIL - ENFIELD & NORWALK
NOT TO SCALE

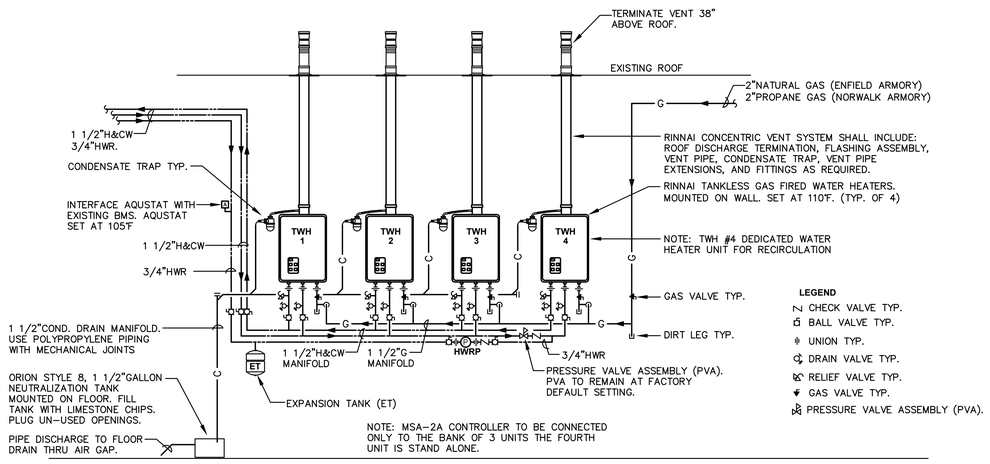


NOTE:
THIS DETAIL IS FOR ALL EQUIPMENT SPECIFIED WITH VARIABLE FREQUENCY CONTROLLERS, CONTRACTOR TO PROVIDE WIRING BETWEEN REMOTE DISCONNECTS, STARTERS AND MOTORS. SEE EQUIPMENT SCHEDULES AND SPECIFICATIONS.

TYPICAL MOTOR CONTROLLER AND VFC DETAIL - ENFIELD
NOT TO SCALE

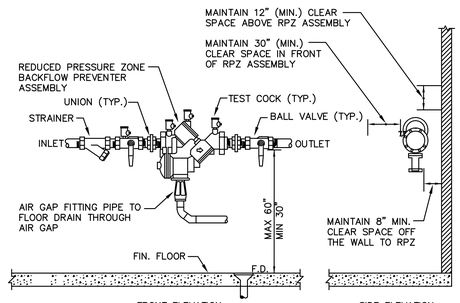


PARTIAL POWER RISER DETAIL - ENFIELD
NOT TO SCALE



NOTE: MSA-2A CONTROLLER TO BE CONNECTED ONLY TO THE BANK OF 3 UNITS THE FOURTH UNIT IS STAND ALONE.

DOMESTIC HOT WATER SYSTEM SCHEMATIC PIPING DETAIL
NOT TO SCALE



NOTES:
1. THE RPZ MOUNTING HEIGHT AND CLEARANCES INDICATED ABOVE SHALL BE MAINTAINED FOR PROPER ACCESS TO UNIT FOR TESTING, MAINTENANCE, AND INSPECTION PURPOSES.
2. THE ASSEMBLY SHALL BE ADEQUATELY SUPPORTED AND/OR RESTRAINED TO PREVENT LATERAL MOVEMENT. PIPE HANGERS, BRACES, SADDLES, STANCHIONS, PIERS, ETC., SHALL BE USED TO SUPPORT THE DEVICE AND SHOULD BE PLACED IN A MANNER THAT WILL NOT OBSTRUCT ACCESS TO THE TESTING PORTS OR VALVES.

TYPICAL BACKFLOW PREVENTER INSTALLATION DETAIL
NOT TO SCALE

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drawing title: **MEP DETAILS**

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

drawings prepared by: BVH INTEGRATED SERVICES
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date: 02/28/2011
scale: NONE
drawn by: GSK, MEL, JCK
approved by: CVD
drawing no.: **MEP-2.0**

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

CAD no.
project no.: B1-Q-644

STATE OF CONNECTICUT REGISTERED PROFESSIONAL ENGINEER NO. 17909
SEAL

21-10-155

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ENFIELD ARMORY - PANELBOARD SCHEDULE

GENERAL NOTES:

1. SEE SPECIFICATION SECTION "PANELBOARDS" FOR FEATURES OF PANELBOARDS.
2. VERIFY SIZE, QUANTITY AND TYPES OF CIRCUIT BREAKERS IN PANELBOARDS WITH PLANS, RISERS, SCHEDULES AND SPECIFICATION.
3. ALL PANELBOARDS ARE LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARDS UNLESS LISTED OTHERWISE.

PANELBOARD DESIGNATION	VOLTAGE	MAIN BUS SIZE	MAIN OCPD SIZE	MOUNTING	POLE CAPACITY	MIN. AISC RATING	NOTES	CIRCUITS					
								AMPS	POLES	BRANCH	FEEDER	SPARE	NOTES
LLP–MECH	208Y/120	225A	125A	SURFACE	42	10,000		20	1	10	–	5	
								20	3	–	2		
								40	3	–	2		

NOTES:

A. TVSS PANELBOARD.
B. DISTRIBUTION PANELBOARD.
C. PROVIDE PANELBOARD WITH ISOLATED EQUIPMENT GROUND BUS BAR.
D. PROVIDE PANELBOARD WITH STAINLESS STEEL TRIM AND DOOR.
E. PROVIDE PANELBOARD WITH INTEGRAL LIGHTING CONTACTOR.
F. PROVIDE PANELBOARD WITH AUXILIARY GUTTER.
G. PROVIDE 30 MA GROUND FAULT CIRCUIT INTERRUPTER CIRCUIT BREAKERS.
H. PROVIDE 5 MA GROUND FAULT CIRCUIT INTERRUPTER CIRCUIT BREAKERS.

ENFIELD ARMORY- ELECTRICAL REQUIREMENTS FOR PLUMBING EQUIPMENT

TAG	VOLTAGE–ø	WATTS	AMPS	HOMERUN	BRANCH CIRCUIT SIZE	SWITCH SIZE	NOTES
TWH	120/1	80		20A–1P LLP–MECH	2#12+1#12GND,3/4"C	(1)	(2)
HWRP	120/1		.80	20A–1P LLP–MECH	2#12+1#12GND,3/4"C	(1)	

SCHEDULE NOTES

(1) PROVIDE MOTOR RATED TOGGLE SWITCH
(2) ALL FOUR (4) TANKLESS WATER HEATERS (TWH) SHALL BE WIRED TO A SINGLE 20A–1P POWER CIRCUIT

NORWALK ARMORY- ELECTRICAL REQUIREMENTS FOR PLUMBING EQUIPMENT

TAG	VOLTAGE–ø	WATTS	AMPS	HOMERUN	BRANCH CIRCUIT SIZE	SWITCH SIZE	NOTES
TWH	120/1	80		20A–1P EXISTING PANEL	2#12+1#12GND,3/4"C	(1)	(2)
HWRP	120/1		.80	20A–1P EXISTING PANEL	2#12+1#12GND,3/4"C	(1)	

SCHEDULE NOTES

(1) PROVIDE MOTOR RATED TOGGLE SWITCH
(2) ALL FOUR (4) TANKLESS WATER HEATERS (TWH) SHALL BE WIRED TO A SINGLE 20A–1P POWER CIRCUIT

FUEL-FIRED WATER HEATERS

TYPE	EQUIPMENT	DESCRIPTION	REMARKS
"TWH"	TANKLESS GAS WATER HEATER	ENFIELD ARMORY – RENNAI #R98HPI–NG, (TYPICAL OF 4 HEATERS) NORWALK ARMORY – RENNAI #R98HPI–LP, (TYPICAL OF 4 HEATERS) TANKLESS WATER HEATER(S) SHALL BE INTERNALLY MOUNTED, CONDENSING, INSTANTANEOUS, MULTIPLE POINT–OF–USE, GAS FIRED, DIRECT VENT, WATER HEATER(S) DESIGN CERTIFIED TO THE ANSI Z21.10.3 STANDARD FOR GAS FIRED WATER HEATERS. HEATERS SHALL INCLUDE MANIFOLD CONTROL PACKPANEL, MANIFOLD WIRING HARNESSES, RINNAI POLYPROPYLENE VENT SYSTEM, PRESSURE VALVE ASSEMBLY, CONDENSATE TRAP, PLUMBING INSTALLATION KIT, ETC. EACH WATER HEATER SHALL PRODUCE NO MORE THAN 55 PPM NOX EMISSIONS WHEN TESTED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD). WATER HEATER(S) SHALL BE CONFIGURED TO OPERATE WITH NATURAL GAS FOR "ENFIELD ARMORY" AND PROPANE GAS FOR "NORWALK ARMORY". WATER HEATER(S) SHALL HAVE A BTU INPUT RANGE OF AS FOLLOWS: 9,500 BTU/HR TO 199,000 BTU/HR NATURAL GAS, (ENFIELD ARMORY) 10,300 BTU/HR TO 199,000 BTU/HR PROPANE, (NORWALK ARMORY) A MINIMUM THERMAL EFFICIENCY RATING OF 96%, AND A MINIMUM HOT WATER OUTLET CAPACITY OF 9.8 GALLONS PER MINUTE (WITH A 30 °F TEMPERATURE RISE). AND A 120 VOLT/60 HZ AC POWER SOURCE. WATER HEATER(S) SHALL BE MICROPROCESSOR CONTROLLED AND UTILIZE A DIRECT ELECTRONIC IGNITION SYSTEM (WITH NO STANDING PILOT), FULLY MODULATING GAS CONTROL VALVE, TURBINE FLOW METER, AUTOMATIC ELECTRO–MECHANICAL WATER FLOW CONTROL VALVE, AND WATER TEMPERATURE THERMISTORS TO MAINTAIN OUTLET WATER TEMPERATURE BETWEEN ± 2 °F OF SETPOINT TEMPERATURE. WATER HEATER(S) SHALL INCORPORATE THE FOLLOWING INTERNAL SAFETY DEVICES: FLAME FAILURE LOCKOUT, BOILING PROTECTION LOCKOUT, THERMAL OVERHEAT PROTECTION, INTERNAL FREEZE PROTECTION FOR AMBIENT TEMPERATURES AS LOW AS –22 °F, AND LOCKOUT PROTECTION IN THE EVENT OF A BLOCKED FLUE. WATER HEATER(S) SHALL BE PROVIDED WITH A TEMPERATURE THERMOSTAT WITH AN ADJUSTABLE SETPOINT RANGE OF 98 °F TO 140 °F. FOR COMMERCIAL AND RADIANT HEATING APPLICATIONS, AN MCC–91 CONTROLLER SHALL BE AVAILABLE WHICH SHALL BE CAPABLE OF PROVIDING AN ADJUSTABLE SETPOINT RANGE OF 98 °F TO 185 °F. WATER HEATER(S) SHALL ALSO BE CAPABLE OF STORING AND DISPLAYING A HISTORY OF UP TO 9 DIAGNOSTIC MAINTENANCE CODES, VIA THE DISPLAY ON THE EMPERATURE THERMOSTAT CONTROLLER. WATER HEATER(S) SHALL HAVE STAINLESS STEEL BURNERS, SOLID BRASS WATER FLOW CONTROL VALVE, AND SOLID BRASS INLET AND OUTLET WATER CONNECTIONS. WATER HEATER(S) SHALL HAVE A COPPER HEAT EXCHANGER WARRANTED AGAINST MATERIAL DEFECTS OR WORKMANSHIP FOR A PERIOD OF 12 YEARS FROM THE DATE OF PURCHASE, OR 5 YEARS FROM DATE OF PURCHASE WHEN USED IN A COMMERCIAL APPLICATION OR WITH THE MCC–91 CONTROLLER, OR 3 YEARS FROM DATE OF PURCHASE WHEN USED AS A CIRCULATING WATER HEATER WITHIN A HOT WATER CIRCULATION LOOP. ALL OTHER PARTS SHALL BE WARRANTED AGAINST MATERIAL DEFECTS OR WORKMANSHIP FOR A PERIOD OF 5 YEARS FROM THE DATE OF PURCHASE OR 3 YEARS FROM DATE OF PURCHASE WHEN USED AS A CIRCULATING WATER HEATER WITHIN A HOT WATER CIRCULATION LOOP. WATER HEATERS SYSTEM SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS AND INCLUDE FACTORY AUTHORIZED START UP. NOTE: IF CONTRACTOR SUBMITS ON ALTERNATE MANUFACTURER TO BASIS OF DESIGN: PIPING, PUMPING AND CONTROL SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AT NO EXTRA COST TO THE OWNER.	

WATER DISTRIBUTION PUMPS SCHEDULE

TYPE	EQUIPMENT	DESCRIPTION	REMARKS
"HWRP"	HOT WATER RETURN PUMP	BELL & GOSSETT #NBF–22, BRONZE BODY, HORIZONTAL LUBRICATED TYPE IN–LINE PUMP, SUITABLE FOR POTABLE WATER SERVICE, 225F OPERATION AT 150 PSIG WORKING PRESSURE AND SHALL BE UL LISTED. MOTOR SHALL HAVE BUILT–IN OVERLOAD PROTECTION. PUMP SHALL HAVE CAPACITY OF 5 GPM AT 12 FEET OF HEAD. RATED FOR .80 AMPS, 120V–1ø	

EXPANSION TANKS SCHEDULE

TYPE	EQUIPMENT	DESCRIPTION	REMARKS
"ET"	EXPANSION TANK	AMTROL "THERM–X–TROL" ST–12–C, 8 GALLON, 12" DIA X 16" HIGH, ASME PRECHARGED THERMAL EXPANSION TANK, WITH A HEAVY DUTY BUTYL BLADDER SUITABLE FOR DOMESTIC POTABLE WATER SYSTEM, ALL INTERNAL WETTED PARTS MUST COMPLY WITH FDA REGULATIONS.THE TANK SHALL HAVE A SYSTEM CONNECTION AND CHARGING VALVE TO FACILITATE THE ON–SITE CHARGING OF THE TANK TO MEET SYSTEM REQUIREMENTS. THE TANK MUST BE CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF THE ASME BOILER AND PRESSURE VESSEL CODE. RATED FOR 150 PSI WORKING PRESSURE AND 210°F TEMPERATURE.	

PLUMBING WATER SPECIALTIES SCHEDULE

ITEM	SPECIALTY ITEM	DESCRIPTION	REMARKS/ELECTRICAL
"RPZ"	BACKFLOW PREVENTER	WATTS #909QT–S, REDUCED PRESSURE BACKFLOW PREVENTER, ALL BRONZE BODY CONSTRUCTION WITH STRAINER & QUATER TURN BALL VALVES. #909AG FIXED AIR GAP.	PIPE RELIEF VALVE TO FLOOR DRAIN.

ENFIELD ARMORY - CONDENSING BOILER SCHEDULE

TAG	MFR	MODEL	I–B–R NET	THERMAL EFFICIENCY	NATURAL GAS			
					INPUT MIN. MBH	INPUT MAX. MBH	OUTPUT MBH	MINIMUM PRESSURE
B–1	LOCHINVAR	SBN1000	818	94.1%	100	999	941	5 IN. WC
B–2	LOCHINVAR	SBN1000	818	94.1%	100	999	941	5 IN. WC

TAG	DESIGN PRESSURE (PSIG)	RELIEF VALVE SETTING (PSIG)	EWT (°F)	LWT (°F)	MAXIMUM WPD (FT)	AIR INLET (IN)	VENT OUTLET (IN)
B–1	40	50	160	180	---	6	6
B–2	40	50	160	180	---	6	6

TAG	VOLTS/ PHASE	HOMERUN	BRANCH CIRCUIT SIZE	SW/FUSE SIZE	REMARKS
B–1	120/1	(2) 20A–1P LLP–MECH	3/4"C. – 2#12 & 1#12 GND.	TOGGLE	
B–2	120/1	(2) 20A–1P LLP–MECH	3/4"C. – 2#12 & 1#12 GND.	TOGGLE	

GENERAL NOTES

PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.

PROVIDE WITH DIRECT VENT HORIZONTAL SIDEWALL.

IF CONTRACTOR SUBMITS ON ALTERNATE MANUFACTURER TO BASIS OF DESIGN: PIPING, PUMPING AND CONTROL SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AT NO EXTRA COST TO THE OWNER.

ENFIELD ARMORY - EXPANSION TANK SCHEDULE

TAG	MFR	MODEL	MINIMUM ACCEPTANCE (GALLONS)	DIAMETER	HEIGHT	SERVES	REMARKS
XT–1	B&G	B–300	80	24	50	HW SYSTEM	

ENFIELD ARMORY - PUMP SCHEDULE

TAG	MFR	TYPE	SERIES/SIZE MODEL NUMBER	MINIMUM EFFICIENCY	GPM	FT OF HEAD (TDH)
P–1A	B&G	IN–LINE	60 1–1/2x6–1/4	63%	55	31
P–1B	B&G	IN–LINE	60 1–1/2x6–1/4	63%	55	31
P–2A	B&G	IN–LINE	60 1–1/2x6–1/4	63%	55	31
P–2B	B&G	IN–LINE	60 1–1/2x6–1/4	63%	55	31
P–3	B&G	BASE MOUNTED	1510 2–1/2AB	70%	130	45
P–4	B&G	BASE MOUNTED	1510 2–1/2AB	70%	130	45

TAG	RPM	MOTOR HP	VFC	SERVES	OPERATION
P–1A	1750	1	NO	BOILER B–1	PRIMARY
P–1B	1750	1	NO	BOILER B–1	PRIMARY
P–2A	1750	1	NO	BOILER B–2	PRIMARY
P–2B	1750	1	NO	BOILER B–2	PRIMARY
P–3	1750	5	YES	HOT WATER HEATING SYSTEM	SECONDARY – RUN
P–4	1750	5	YES	HOT WATER HEATING SYSTEM	SECONDARY – STANDBY

TAG	VOLTS/ PHASE	HOMERUN	BRANCH CIRCUIT SIZE	SW/FUSE SIZE	REMARKS
P–1A	208/3	20A–3P LLP–MECH	3/4"C. – 3#12 & 1#12 GND.	30/10	
P–1B	208/3	WIRE ON SAME CIRCUIT	3/4"C. – 3#12 & 1#12 GND.	30/10	
P–2A	208/3	20A–3P LLP–MECH	3/4"C. – 3#12 & 1#12 GND.	30/10	
P–2B	208/3	WIRE ON SAME CIRCUIT	3/4"C. – 3#12 & 1#12 GND.	30/10	
P–3	208/3	40A–3P LLP–MECH	3/4"C. – 3#12 & 1#12 GND.	60/40	
P–4	208/3	40A–3P LLP–MECH	3/4"C. – 3#12 & 1#12 GND.	60/40	

GENERAL NOTES

PROVIDE MAXIMUM IMPELLER DIAMETER FOR NON–OVERLOADING PERFORMANCE FOR SPECIFIED HORSEPOWER.

ENFIELD ARMORY - UNIT HEATER SCHEDULE - HOT WATER

TAG	MFR	MODEL	ARRANGE–MENT	MBH	EWT (°F)	LWT (°F)	GPM	PIPE RUNOUT SIZE (IN)	MAX WPD (FT)	FAN		
										CFM	HP	RPM
UH–1	TRANE	UHSA–090–S	HORIZONTAL	45.3	180	160	4.7	1	.47	1214	1/8	1550

TAG	VOLTS/ PHASE	HOMERUN	BRANCH CIRCUIT SIZE	SW/FUSE SIZE	REMARKS
UH–1	120/1	20A–1P LLP–MECH	3/4"C. – 2#12 & 1#12 GND.	TOGGLE	

GENERAL NOTES

PROVIDE UNIT w/ FACTORY MOUNTED T'STAT.

MILITARY PROJECT #11MIL217-2401

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drawing title: MEP SCHEDULES

REVISIONS

mark	date	description

CAD no.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

drawings prepared by: BVH INTEGRATED SERVICES, 50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

project no.: B1–Q–644

date: 02/28/2011
scale: NONE
drawn by: CSK, MEL, JCK
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drawing no.: MEP–3.0

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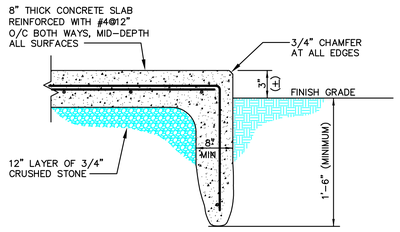
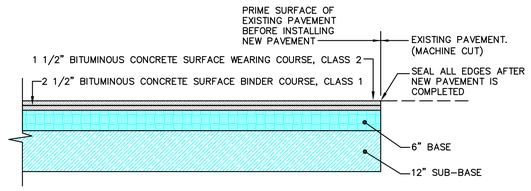


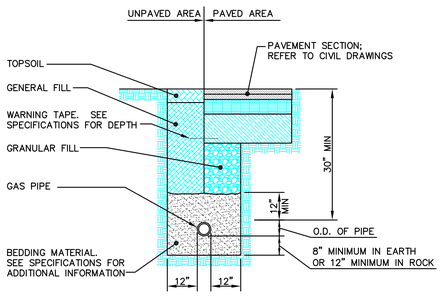
1 SU-1.0 **TYPICAL EQUIPMENT PAD DETAIL**
NOT TO SCALE



NOTE:

CLASS 1 AND CLASS 2 BITUMINOUS CONCRETE MIXTURES SHALL COMPLY WITH CT FORM 816, LATEST EDITION.

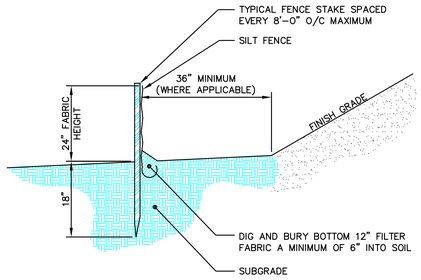
2 SU-1.0 **TYPICAL NEW PAVEMENT SECTION**
NOT TO SCALE



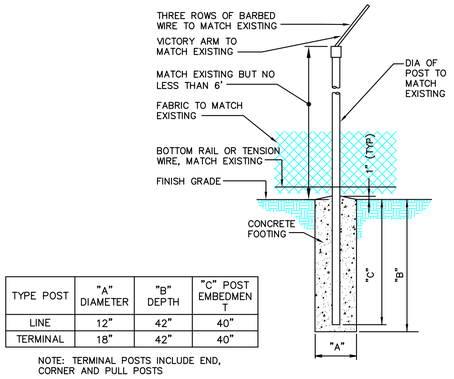
NOTE:

1. SEE SPECIFICATION FOR BACKFILL, COMPACTION, AND SHORING REQUIREMENTS.

3 SU-1.0 **TYPICAL PIPE TRENCH SECTION**
NOT TO SCALE



4 SU-1.0 **TYPICAL SILT FENCE**
NOT TO SCALE



TYPE POST	"A" DIAMETER	"B" DEPTH	"C" POST EMBEDMENT
LINE	12"	42"	40"
TERMINAL	18"	42"	40"

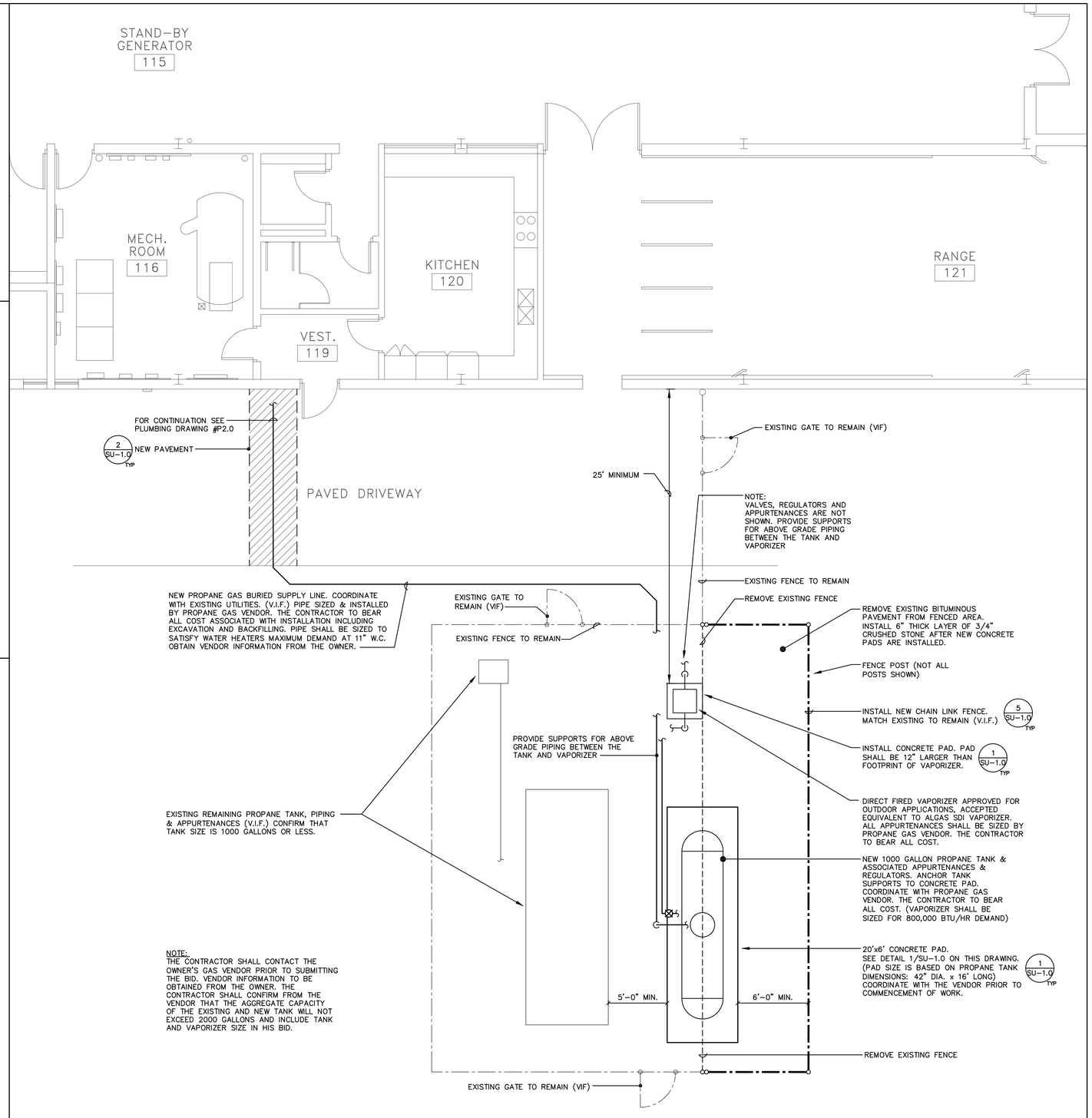
NOTE: TERMINAL POSTS INCLUDE END, CORNER AND PULL POSTS

5 SU-1.0 **CHAIN LINK FENCE FOUNDATION DETAIL**
NOT TO SCALE

CIVIL GENERAL NOTES

1. SURVEY IS NOT AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF NEW WORK. BVH INTEGRATED SERVICES ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE EXISTING CONDITIONS SHOWN NOR CHANGES TO THE WORK DUE TO ERROR IN THE EXISTING CONDITIONS SHOWN.
2. PRIOR TO COMMENCING CONSTRUCTION NOTIFY "CALL BEFORE YOU DIG" (1-800-922-4455) FOR FIELD LOCATION AND MARKING OF SUBSURFACE UTILITIES AT LEAST 72 HOURS IN ADVANCE BUT NO MORE THAN 30 DAYS. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A QUALIFIED UNDERGROUND UTILITY LOCATION FIRM, AT NO COST TO THE OWNER, TO VERIFY LOCATIONS OF UNDERGROUND UTILITIES.
3. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS AND ANY REFERENCED STANDARDS SUCH AS BUT NOT LIMITED TO THE FOLLOWING:
   A. THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION (FORM 816, AS AMENDED).
   B. MATERIAL AND INSTALLATION SPECIFICATIONS OF EACH UTILITY COMPANY.
   C. SPECIFIC CITY OF NORWALK REQUIREMENTS.
   D. 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

   ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND SPECIFICATIONS AND REFERENCED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. PROVIDE ALL NECESSARY SURVEY WORK REQUIRED FOR THE CONSTRUCTION STAKE-OUT AND PRODUCTION OF AS-BUILT PLANS. AS-BUILT PLANS SHALL SHOW LOCATION AND ELEVATION OF CONSTRUCTED BUILDINGS, STRUCTURES, EQUIPMENT, PIPING AND CONDUITS. CONTRACTOR TO PROVIDE RECORD DRAWINGS TO THE OWNER AT THE END OF THE PROJECT. REFER TO GENERAL CONDITIONS OF SPECIFICATIONS FOR REQUIREMENTS.
5. OBTAIN ALL NECESSARY PERMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP THE CONSTRUCTION SCHEDULE AND PHASING, COORDINATE ALL ACTIVITIES WITH THE STATE OF CONNECTICUT AND THE CITY OF NORWALK AND NOTIFY ADJACENT PROPERTY OWNERS, AS REQUIRED. NOTIFY NECESSARY PARTIES AT LEAST 5 DAYS IN ADVANCE.
7. ALL EXISTING SITE UTILITIES WHICH ARE NOT INDICATED ON PLANS SHALL NOT BE INTERRUPTED FROM CONTINUOUS SERVICE. CONTRACTOR TO NOTIFY ENGINEER OF ANY CONFLICTS OR CONCERNS. EXISTING UTILITIES TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION.
8. ESTABLISH AND MAINTAIN AT LEAST ONE BENCHMARKS ON SITE FOR VERTICAL AND HORIZONTAL CONTROL.
9. SAFETY ISSUES & HOURS OF OPERATION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE COORDINATED & APPROVED BY THE OWNER.



NORWALK ARMORY - SITE PLAN
SCALE: 1/4"=1'-0"

MILITARY PROJECT #11MIL217-2401

NOTE:
REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

BVH integrated services
50 Griffin Road South
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CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, COMMISSIONING AND TECHNOLOGY

SEAL

21-10-155

drawing title: NORWALK ARMORY - SITE PLAN

REVISIONS

mark	date	description

CAD no.

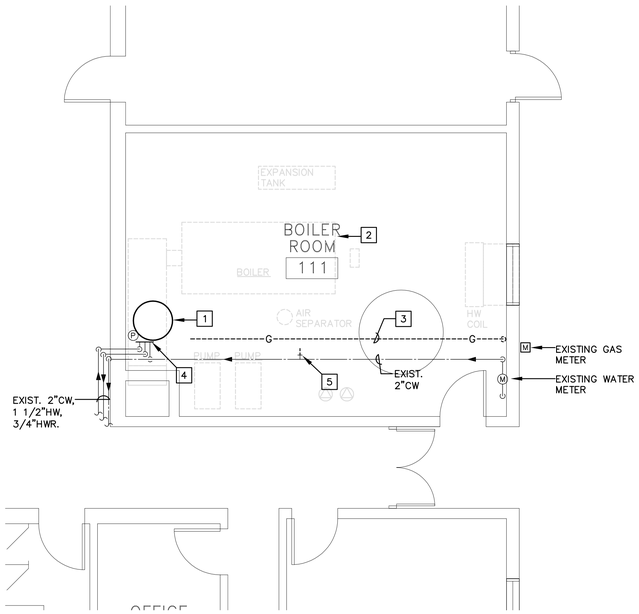
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

drawings prepared by: BVH INTEGRATED SERVICES, 50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

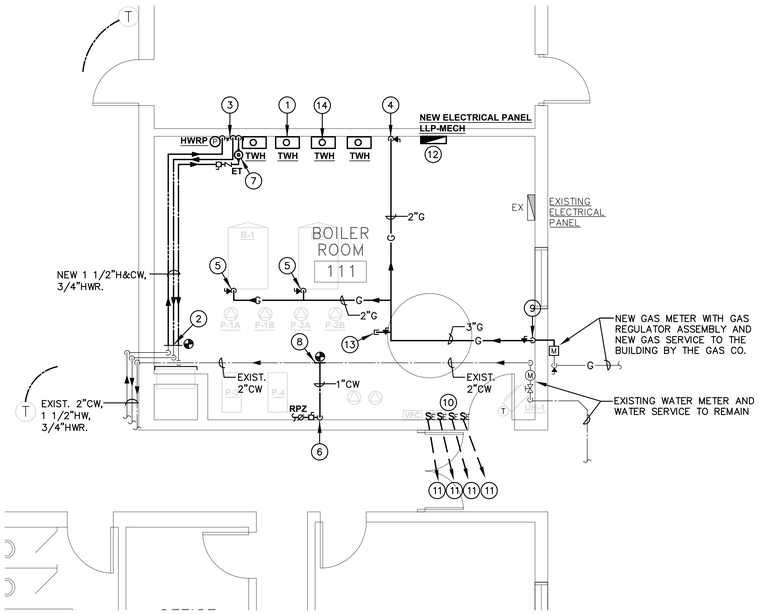
date: 02/28/2011
scale: 1/4"=1'-0"
drawn by: CA
approved by: CVD
drawing no.: SU-1.0

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

project no.: B1-Q-644



ENFIELD ARMORY - PLUMBING DEMOLITION BOILER ROOM PART PLAN
SCALE: 1/4"=1'-0"



ENFIELD ARMORY - PLUMBING BOILER ROOM PART PLAN
SCALE: 1/4"=1'-0"

DEMOLITION NOTES

1. REMOVE EXISTING GAS STORAGE TYPE WATER HEATER AND ASSOCIATED FLUE, PUMP, PIPING AND CONTROLS. PROVIDE ROOF DECK TO COVER FLUE OPENING. PATCH AND REPAIR ROOF TO MATCH EXISTING.
2. EXISTING BOILER TO BE REMOVED. DISCONNECT GAS AND COLD WATER MAKE-UP.
3. REMOVE EXISTING GAS PIPING UP TO GAS METER.
4. REMOVE EXISTING 1 1/2"H&CW, 3/4"HWR UP TO THIS POINT.
5. REMOVE EXISTING BACKFLOW PREVENTER AND COLD WATER MAKE-UP PIPING UP TO THIS POINT.

DRAWING NOTES

1. RINNAI (4) NEW TANKLESS GAS FIRED CONDENSING WATER HEATERS MOUNTED ON WALL. SEE RISER DIAGRAM ON DWG. #MEP-2.0 AND WATER HEATER SCHEDULE ON DWG. #MEP-3.0
2. CONNECT NEW 1 1/2"H&CW, 3/4"HWR TO EXISTING PIPING AND EXTEND TO NEW WATER HEATERS.
3. 1 1/2"H&CW, 3/4"HWR DROP ON WALL TO TANKLESS WATER HEATERS. CONNECT 3/4" H&CW TO EACH WATER HEATER. SEE RISER DIAGRAM ON DWG. #MEP-2.0
4. 2"GAS DROP DROP ON WALL WITH GAS VALVE TO TANKLESS WATER HEATERS. CONNECT 3/4" GAS TO EACH WATER HEATER. SEE RISER DIAGRAM ON DWG. #MEP-2.0
5. 2"GAS DROP DROP WITH GAS VALVE TO EACH BOILER. (999 MBH INPUT EACH)
6. 1"COLD WATER MAKE-UP ON WALL TO BACKFLOW PREVENTER RPZ FOR HVAC SYSTEM. COORDINATE LOCATION IN THE FIELD. SEE INSTALLATION DETAIL ON DWG. #MEP-2.0
7. EXPANSION TANK MOUNTED INLINE ON COLD WATER LINE.
8. CONNECT NEW COLD WATER MAKE-UP TO EXISTING IN THIS AREA. COORDINATE LOCATION IN THE FIELD.
9. CONNECT NEW 2"GAS TO GAS METER ASSEMBLY AND EXTEND TO NEW BOILER AND WATER HEATERS. CORE DRILL BRICK/BLOCK WALL FOR NEW GAS LINE. PATCH AND REPAIR SURFACES TO MATCH EXISTING.
10. WATER HEATER EMERGENCY SHUT-OFF SWITCHES. EACH SHALL BE PROPERLY IDENTIFIED WITH LABEL OF EQUIPMENT IT SERVES.
11. INTERFACE WITH WATER HEATER CONTROLS TO TURN-OFF POWER TO CONTROLS.
12. NEW PANEL COORDINATE EXACT LOCATION WITH ATC PANEL IN FIELD. REFER TO MEP DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.
13. NEW 1 1/2"GAS TO GAS WITH GAS VALVE CAPPED FOR FUTURE USE.
14. RINNAI CONCENTRIC VENT SYSTEM SHALL INCLUDE: ROOF DISCHARGE TERMINATION, FLASHING ASSEMBLY, VENT PIPE, CONDENSATE TRAP, VENT PIPE, EXTENSIONS AND FITTINGS AS REQUIRED. TERMINATE 38" ABOVE ROOF.

MILITARY PROJECT #11MIL217-2401

NOTE:
REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

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SEAL

21-10-155

drawing title: **ENFIELD ARMORY – PLUMBING BOILER ROOM PART PLANS**

REVISIONS

mark	date	description

CAD no.

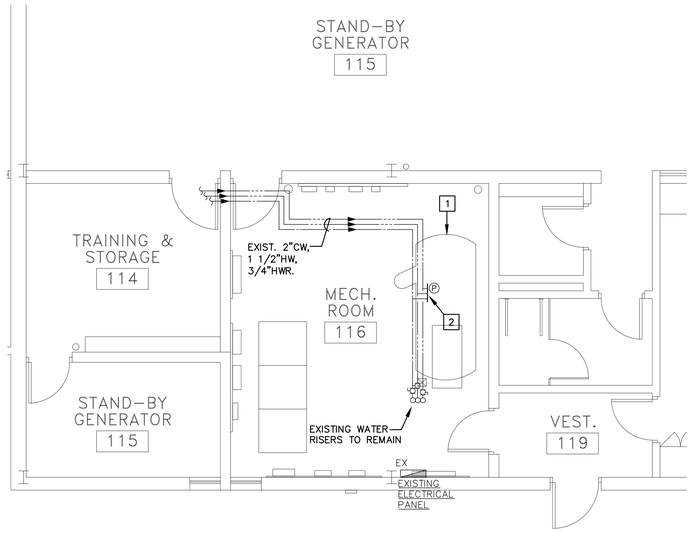
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

drawings prepared by: BVH INTEGRATED SERVICES, 50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

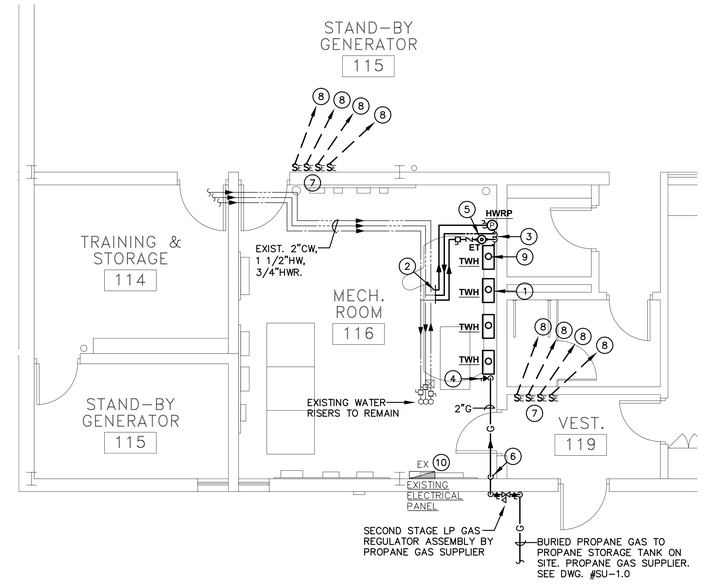
project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

project no.: 81-Q-644

date: 02/28/2011
scale: 1/4"=1'-0"
drawn by: GSK
approved by: GVD
drawing no.: **P-1.0**



NORWALK ARMORY - PLUMBING DEMOLITION BOILER ROOM PART PLAN
SCALE: 1/4"=1'–0"



NORWALK ARMORY - PLUMBING BOILER ROOM PART PLAN
SCALE: 1/4"=1'–0"

DEMOLITION NOTES

1. REMOVE EXISTING ELECTRIC STORAGE TYPE WATER HEATER AND ASSOCIATED PUMP, PIPING AND CONTROLS.
2. REMOVE EXISTING 1 1/2"H&CW, 3/4"HWR UP TO THIS POINT.

DRAWING NOTES

1. (4) NEW TANKLESS GAS FIRED (PROPANE) CONDENSING WATER HEATERS MOUNTED ON WALL. SEE RISER DIAGRAM ON DWG. #MEP–2.0 AND WATER HEATER SCHEDULE ON DWG. #MEP–3.0
2. CONNECT NEW 1 1/2"H&CW, 3/4"HWR TO EXISTING PIPING AND EXTEND TO NEW WATER HEATERS.
3. 1 1/2"H&CW, 3/4"HWR DROP ON WALL TO TANKLESS WATER HEATERS. CONNECT 3/4" H&CW TO EACH WATER HEATER. SEE RISER DIAGRAM ON DWG. #MEP–2.0
4. 2"GAS DROP DROP ON WALL WITH GAS VALVE TO TANKLESS WATER HEATERS. CONNECT 3/4" GAS TO EACH WATER HEATER. SEE RISER DIAGRAM ON DWG. #MEP–2.0
5. EXPANSION TANK MOUNTED INLINE ON COLD WATER LINE.
6. CONNECT NEW 2"GAS TO GAS REGULATOR ASSEMBLY AND EXTEND TO WATER HEATERS.
   CORE DRILL BRICK/BLOCK WALL FOR NEW GAS LINE. PATCH AND REPAIR SURFACES TO MATCH EXISTING.
7. WATER HEATER EMERGENCY SHUT–OFF SWITCHES. EACH SHALL BE PROPERLY IDENTIFIED WITH LABEL OF EQUIPMENT IT SERVES.
8. INTERFACE WITH WATER HEATER CONTROLS TO TURN–OFF POWER TO CONTROLS.
9. RINNAI CONCENTRIC VENT SYSTEM SHALL INCLUDE: ROOF DISCHARGE TERMINATION, FLASHING ASSEMBLY, VENT PIPE, CONDENSATE TRAP, VENT PIPE, EXTENSIONS AND FITTINGS AS REQUIRED. TERMINATE 38" ABOVE ROOF.
10. FURNISH AND INSTALL TWO (2) 20A–1P CIRCUIT BREAKERS TO FEED NEW MECHANICAL EQUIPMENT. NEW CIRCUIT BREAKERS SHALL BE COMPATIBLE WITH EXISTING PANEL.

MILITARY PROJECT #11MIL217-2401

NOTE:
REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

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SEAL

drawing title: **NORWALK ARMORY – PLUMBING BOILER ROOM PART PLANS**

REVISIONS

mark	date	description

CAD no.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

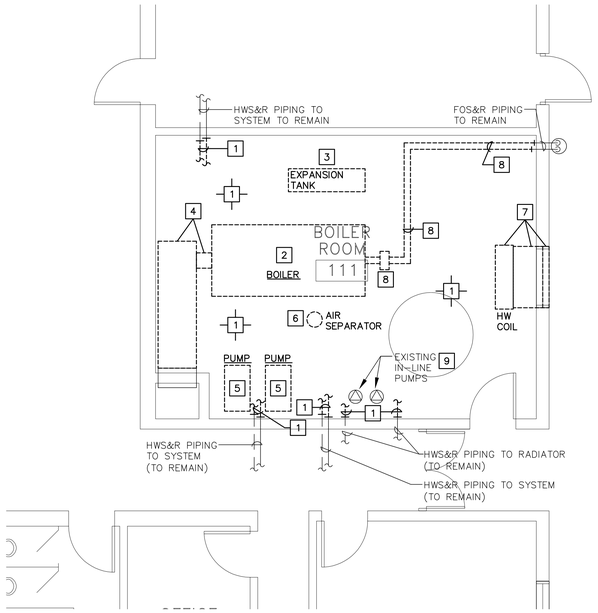
drawings prepared by: BVH INTEGRATED SERVICES
50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

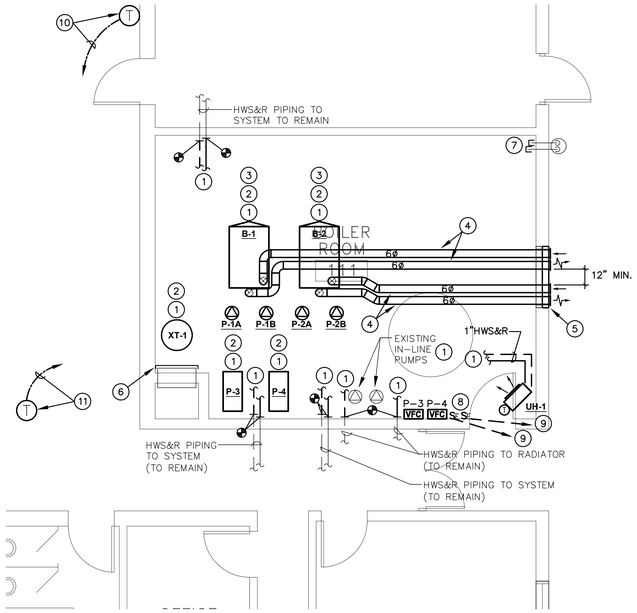
project no.: 81–Q–644

date: 02/28/2011
scale: 1/4"=1'–0"
drawn by: CSK
approved by: GVD
drawing no.: **P–2.0**

21–10–155



ENFIELD ARMORY - HVAC DEMOLITION BOILER ROOM PART PLAN
SCALE: 1/4"=1'-0"



ENFIELD ARMORY - HVAC BOILER ROOM PART PLAN
SCALE: 1/4"=1'-0"

DEMOLITION NOTES

1. REMOVE HWS&R PIPING AND VALVING TO LIMITS SHOWN. SEE DWG. #H-2.0 FOR SCHEMATIC DEMOLITION HOT WATER FLOW DIAGRAM.
2. REMOVE BOILER, PIPING, BRICK BASE AND ASSOCIATED CONTROLS.
3. REMOVE EXPANSION TANK AND PIPING.
4. REMOVE BOILER BREECHING TO LIMITS SHOWN.
5. REMOVE BASE MOUNTED PUMPS, PIPING, CONCRETE BASE AND ASSOCIATED CONTROLS.
6. REMOVE AIR SEPARATOR AND PIPING.
7. REMOVE COMBUSTION AIR LOUVER, DUCTWORK, HW COIL, PIPING, DAMPER AND ASSOCIATED CONTROLS.
8. REMOVE OIL BURNER, FOS&R PIPING AND VALVING TO LIMITS SHOWN.
9. REMOVE IN-LINE PUMPS AND RETAIN FOR RE-USE.

DRAWING NOTES

1. SEE DWG. #H-2.0 FOR SCHEMATIC PRIMARY/SECONDARY HOT WATER FLOW DIAGRAM FOR CONTINUATION OF PIPING.
2. PROVIDE 6" HIGH CONCRETE HOUSE KEEPING PAD, 6" LARGER THAN EQUIPMENT ON ALL SIDES.
3. PIPE CONDENSATE FROM NEUTRALIZATION KIT INDIRECT TO EXISTING FLOOR DRAIN.
4. 6"ø CPVC AIR INTAKE AND FLUE PIPE. TERMINATE AT SIDEWALL WITH VENT TERMINATION PLATE AND VENT TERMINATION CAP. TERMINATE A MINIMUM OF 7'-0" ABOVE WALKWAY.
5. PROVIDE INSULATED SHEETMETAL PANEL AT WALL OPENING.
6. CAP BOILING BREECHING AT CHIMNEY.
7. CAP FUEL OIL PIPING AT WALL PENETRATION.
8. BOILER EMERGENCY SHUT-OFF SWITCHES. EACH SWITCH SHALL BE PROPERLY IDENTIFIED WITH LABEL OF EQUIPMENT IT SERVES.
9. INTERFACE WITH BOILER CONTROLS TO TURN OFF POWER TO CONTROLS.
10. NEW "DDC" SENSOR LOCATED IN DRILL HALL w/WIRE GUARD TO CONTROL PUMPS P-3 & P-4. REFER TO SPECIFICATIONS FOR SEQUENCE OF OPERATIONS.
11. NEW "DDC" SENSOR LOCATED IN OFFICE AREA (LOCATION TBD BY ARMORY) TO CONTROL EXISTING IN-LINE PUMPS. REFER TO SPECIFICATIONS FOR SEQUENCE OF OPERATIONS.

MILITARY PROJECT #11MIL217-2401

NOTE:
REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

BVH integrated services
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CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, COMMISSIONING AND TECHNOLOGY

SEAL

drawing title
ENFIELD ARMORY - HVAC BOILER ROOM PART PLANS

REVISIONS

mark	date	description

CAD no.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

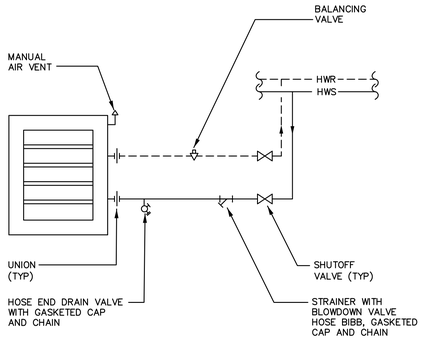
drawings prepared by
BVH INTEGRATED SERVICES
50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

project
BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

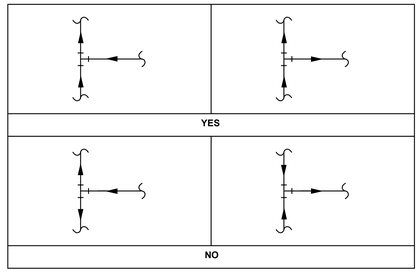
project no. B1-Q-644

date 02/28/2011
scale 1/4"=1'-0"
drawn by MEL
approved by GVD
drawing no. **H-1.0**

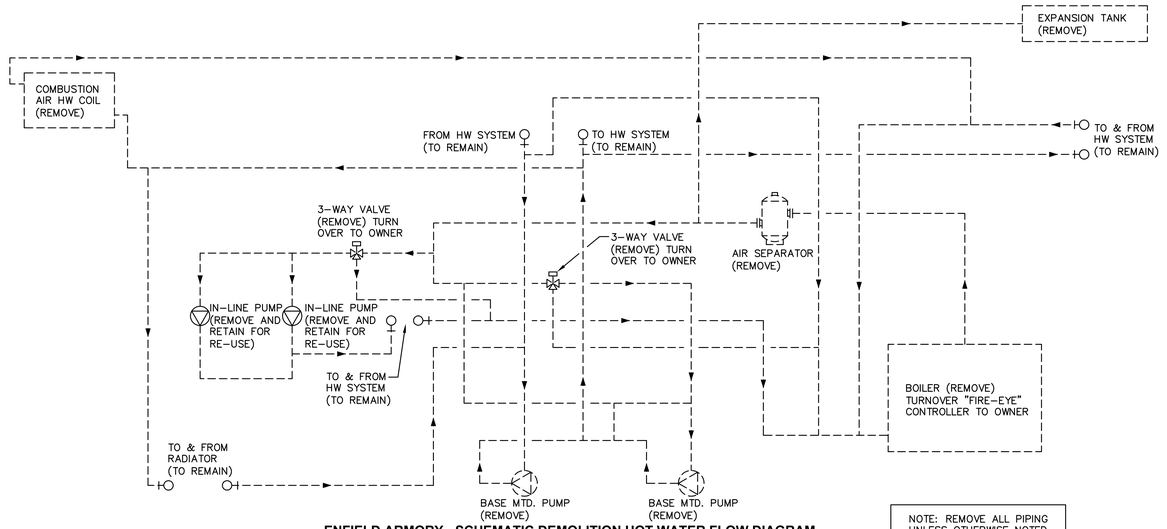
21-10-155



HOT WATER UNIT HEATER PIPING DETAIL
NOT TO SCALE

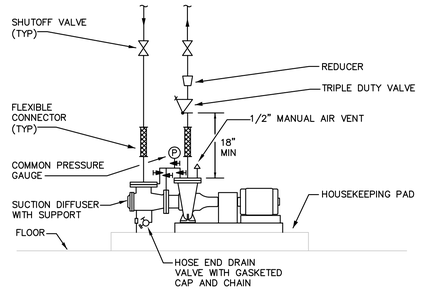


ALLOWABLE FLOW CONFIGURATIONS IN PIPING TEES - HVAC SYSTEMS
NOT TO SCALE

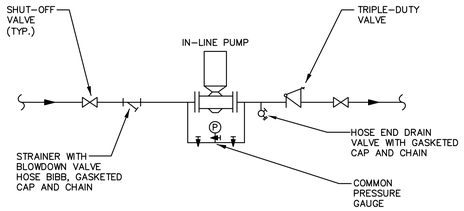


ENFIELD ARMORY - SCHEMATIC DEMOLITION HOT WATER FLOW DIAGRAM
NOT TO SCALE

NOTE: REMOVE ALL PIPING UNLESS OTHERWISE NOTED.



BASE MOUNTED PUMP DETAIL
NOT TO SCALE



IN-LINE PUMP DETAIL
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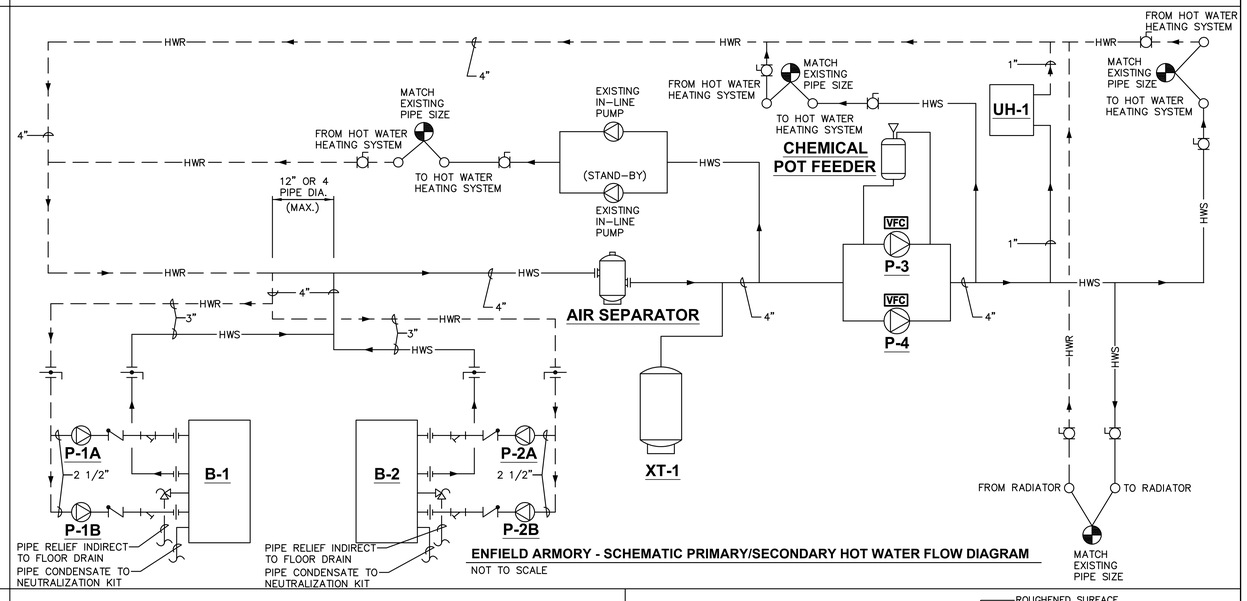
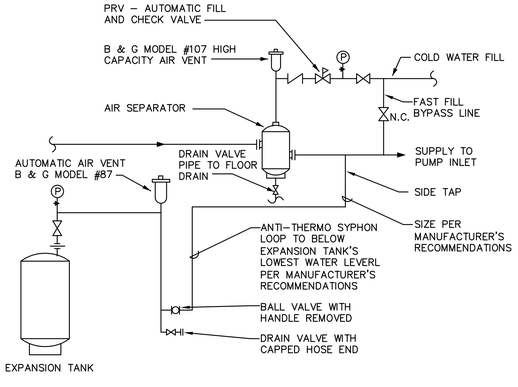
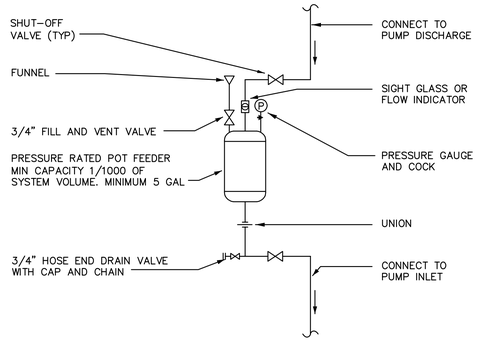


ENFIELD ARMORY - SCHEMATIC PRIMARY/SECONDARY HOT WATER FLOW DIAGRAM
NOT TO SCALE



AIR SEPARATOR AND EXPANSION TANK DETAIL
NOT TO SCALE



CHEMICAL POT FEEDER DETAIL
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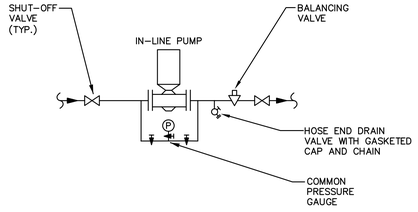
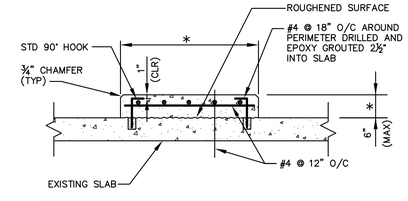


BOILER IN-LINE PUMP DETAIL
NOT TO SCALE



* INDICATES CONTRACTOR TO COORDINATE QUANTITY, SIZE, AND LOCATION OF ALL MECHANICAL HOUSEKEEPING PADS WITH MECHANICAL DRAWINGS AND MECHANICAL EQUIPMENT SUPPLIERS.

TYPICAL HOUSEKEEPING PAD DETAIL
NOT TO SCALE

MILITARY PROJECT #11MIL217-2401

NOTE: REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION.

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CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, COMMISSIONING AND TECHNOLOGY

drawing title: HVAC DETAILS

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

drawings prepared by: BVH INTEGRATED SERVICES, 50 GRIFFIN ROAD SOUTH, BLOOMFIELD, CT 06002

project: BOILER & HOT WATER HEATER UPGRADES
ENFIELD & NORWALK ARMORIES
ENFIELD & NORWALK, CT

CAD no.

project no. B1-Q-644

date: 02/28/2011
scale: NTS
drawn by: MEL
approved by: GVD
drawing no. H-2.0

STATE OF CONNECTICUT DEPARTMENT OF PUBLIC WORKS NO. 17908 LICENSED PROFESSIONAL ENGINEER
SEAL

21-10-155

3/1/11 3:03:29 PM W:\2010\2110155 - Norwalk And Enfield Armories Boiler And Water Heater Replacement\DWGS\H\H-2-0.dwg