# OSSINING PUBLIC LIBRARY 53 CROTON AVE OSSINING, NY 10562 BOILER PLANT AND HVAC UPGRADES

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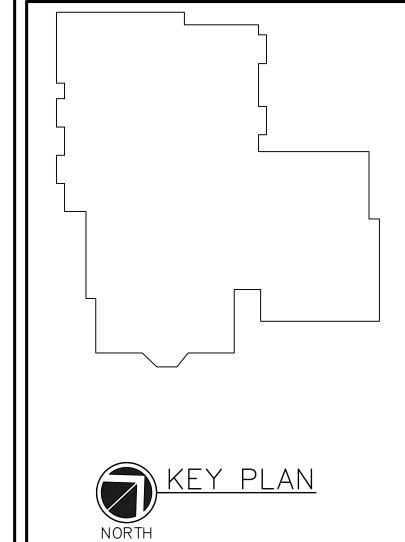


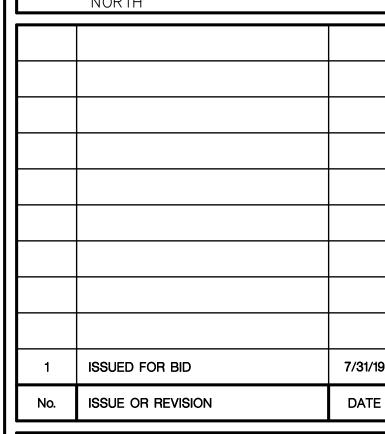
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PROJECT

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DRAWING TITLE

**COVER SHEET** 

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	: ABBREVIATION		0)4155	ADDDE: "	N DECODIDITION	0)417.01	ADDDE: "	DECODIDATION
MBOL ————		DESCRIPTION	SYMBOL	ABBREVIATION	N DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
_	AC-	AIR CONDITIONING UNIT	***************************************	_	3-WAY VALVE	(T)	_	THERMOSTAT
_	ACC-	AIR COOLED CONDENSING UNIT		_	FLEXIBLE CONNECTION	H	_	HUMIDISTAT
_	AD	ACCESS DOOR	A	_	2-WAY VALVE	M	_	MOTORIZED DAMPER
_	AFF	ABOVE FINISHED FLOOR	₹	_	PLUG VALVE	⟨S⟩	_	SMOKE DETECTOR
_	AHC	ABOVE HUNG CEILING	K	_	LOCK SHIELD VALVE	Ψ	_	DOOR UNDER CUT
_	AHU-	AIR HANDLING UNIT	Ā	_	GATE VALVE	+	_	DOOR LOUVER
_	AP	ACCESS PANEL	<b>—</b>	_	GLOBE VALVE	<b>→</b> √-	_	AIR INTO REGISTER
_	BDD	BACKDRAFT DAMPER	<del></del>	_	TEE DOWN	\$	_	SPEED CONTROLLER
	BHP	BRAKE HORSEPOWER	<u> </u>	_		8	_	POINT OF CONNECTION DISCONNECTION
					ELBOW DOWN		P-1	PUMP
_	BTU	BRITISH THERMAL UNIT	<del>-</del>	_	TEE UP		F — I	FOINIF
_	CFM	CUBIC FEET PER MINUTE	<u> </u>	_	ELBOW UP	CECTA		
_	CH-	CABINET HEATER		_	CONCENTRIC REDUCER	SECT# DWG#		SECTION CALLOUT
_	Ę	CENTERLINE		_	ECCENTRIC REDUCER			
_	CP-	CONDENSATE PUMP		_	OS&Y GATE VALVE	AC 1	_	AIR CONDITIONING UNIT
_	DB	DRY BULB TEMPERATURE	=	_	PIPE GUIDE	ACC 1	_	AIR COOLED CONDENER(ING) UNIT
_	DIA. OR Ø	DIAMETER	X	_	PIPE ANCHOR	AHU 1	_	AIR HANDLING UNIT
_	DX	DIRECT EXPANSION	- <del>-</del>	_	STRAINER	(CH A	_	CABINET HEATER
_	EA	EXHAUST AIR	U	_	BASKET STRAINER	CUH A	_	CABINET UNIT HEATER
_	EAT	ENTERING AIR TEMPERATURE		_	PRESSURE REDUCING	CD-A CFM	_	CEILING DIFFUSER
		ELEVATION			FLOW ARROW	CH 1	_	CHILLER
	EL		<u> </u>	_	BUTTERFLY	(CP)		CONDENSATE PUMP
_	ER	EXHAUST REGISTER		_				
<u> </u>	ESP	EXTERNAL STATIC PRESSURE	101	_	BALANCING VALVE	CV-A CFM	_	CONSTANT VOLUME BOX  EXHAUST FAN
	EWT	ENTERING WATER TEMPERATURE	+₹	_	MANUAL AIR VENT	EF 1	_	
_	FPM	FEET PER MINUTE	<u></u>	_	AUTO AIR VENT	ER-A CFM	_	EXHAUST REGISTER
_	FPS	FEET PER SECOND	\$	_	SOLENOID VALVE	FCU 1	_	FAN COIL UNIT
_	FTR	FINNED TUBE RADIATION	<b>M</b> <b>Q</b> 1	_	MOTORIZED VALVE	FTR 1	_	FIN TUBE RADIATION
_	GPM	GALLONS PER MINUTE	×	_	ANGLE GLOBE VALVE	GX 1	_	GENERAL EXHAUST FAN
_	HP	HORSE POWER	A	_	ANGLE GATE VALVE	(HV)	_	HEATING & VENTILATING UNIT
_	HV-	HEATING AND VENTILATING UNIT	<u> </u>	_	T&P RELIEF VALVE	(HVAC)	_	HEATING VENTILATING & AIR CONDITIONING UNIT
_	HVAC-	HEATING, VENTILATING AND AIR		_	FILTER DRYER	(HX)	_	HEAT EXCHANGER
	LAT	CONDITIONING UNIT  LEAVING AIR TEMPERATURE		_	FILTER	(KX)		KITCHEN EXHAUST FAN
			⊗	_	FLOAT AND THERMOSTATIC TRAP	1 (L)	_	LOUVER
_	LF	LINEAR FEET				PTAC 1		
_	LWT	LEAVING WATER TEMPERATURE	F	_	FLOAT TRAP		_	PACKAGED TERMINAL AIR CONDITIONING UNIT
_	MBH		<b>●</b>	_	BALL VALVE	PF 1	_	PUMP
_	MER	MECHANICAL EQUIPMENT ROOM	+	_	PRESSURE GAGE	RF 1	_	RETURN FAN
_	NC	NORMALLY CLOSED		_	THERMOMETER	RH 1	_	REHEAT COIL
_	NIC	NOT IN CONTRACT		_	CHECK VALVE	RR-A CFM	_	RETURN REGISTER
	NO	NORMALLY OPEN	1 1	_	UNION	SR-A CFM	_	SUPPLY REGISTER
_	OAI	OUTSIDE AIR INTAKE		EX.	EXISTING TO REMAIN	TX 1	_	TOILET EXHAUST FAN
_	PSI	POUNDS PER SQUARE INCH		REL.	REMOVE AND RELOCATE	(TR-A) CFM	_	TOP REGISTER
_	RA	RETURN AIR		NEW	NEW WORK	UH A	_	UNIT HEATER
_	RF-			DEM.	EXISTING TO BE REMOVED	UV A	_	UNIT VENTILATOR
_		RETURN FAN	11010			$\rightarrow$		
_	RPM	REVOLUTIONS PER MINUTE	WWS	_	WELL WATER SUPPLY	VAV-A CFM	_	VARIABLE AIR VOLUME BOX
_	SA	SUPPLY AIR	—— WWR ——	_	WELL WATER RETURN	_	_	_
_	SP	STATIC PRESSURE	CW	_	DOMESTIC COLD WATER	_	_	_
_	TDH	TOTAL DYNAMIC HEAD	—— HWS ——	_	HOT WATER SUPPLY	_	_	_
_	TSP	TOTAL STATIC PRESSURE	HWR	_	HOT WATER RETURN	_	_	_
_	TYP.	TYPICAL	—— GAS ——	_	NATURAL GAS	-	_	_
_	U.O.N.	UNLESS OTHERWISE NOTED		_	FUTURE	_	_	_
_	BD	BAROMETRIC DAMPER	4 - 4 -	_	CONTROL TUBING	_	_	_
_	CA	COMBUSTION AIR	_	_	_	_	_	_
_			_	_	_	_	_	
	_	_	_	_	_	_	_	
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#### ERAL NOTES

WORK SHOWN IS NEW UNLESS OTHERWISE NOTED (U.O.N.) EXISTING TO

DRAWINGS ARE TO BE CONSIDERED SCHEMATIC ONLY AND DO NOT ARILY SHOW THE EXACT LOCATIONS AND DETAILS OF THE WORK TO BE

ITRACT DRAWINGS AS FAR AS THEY RELATE TO THE GENERAL GEMENT AND LOCATION OF EQUIPMENT AND SHEETMETAL, SHALL BE STOOD AS DIAGRAMMATIC. ANY CHANGES TO SHEETMETAL AND EQUIPMENT ONS NECESSARY TO AVOID INTERFERENCE WITH OTHER TRADES SHALL BE AT NO EXTRA COST.

CONTRACTOR SHALL SUBMIT FOR REVIEW A COMPOSITE SHOP DRAWING, COORDINATED WITH ALL OTHER TRADES.

ITRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE NG OF WORK AND COORDINATE NEW WORK.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY AND PAYING ALL FEES ASSOCIATED WITH THIS WORK INCLUDING BUT NOT TO FILING WITH THE UTILITY COMPANY (AS REQUIRED), OBTAINING WORK , EQUIPMENT USE PERMITS, RIGGING PERMITS, FROM THE LOCAL AUTHORITY JURISDICTION. INCLUDE ALL EXPEDITOR FEES IF REQUIRED.

DPE OF WORK NOTED ON DRAWINGS INDICATES GENERAL SUMMARY OF RED WORK. CONTRACTOR TO INCLUDE ALL MATERIALS, LABOR, ETC AS RED TO ACHIEVE SCOPE AS INDICATED ON DRAWINGS AND AS PER CATIONS.

CTRONIC FILES OF THE MECHANICAL, ELECTRICAL, PLUMBING AND FIRE CTION DRAWINGS ARE AVAILABLE TO THE CONTRACTOR VIA COMPACT DISK. IGINEER MAY GRANT THE CONTRACTOR A LIMITED LICENSE TO MAKE A TIVE WORK OF THE DATABASE FOR THE PURPOSE OF SHOP DRAWINGS, TALS AND AS-BUILT DRAWINGS. UPON REQUEST, THE ENGINEER SHALL : A RELEASE FORM THAT MUST BE SIGNED AND RETURNED BY THE CTOR ALONG WITH A LUMP SUM FEE OF TWO HUNDRED AND FIFTY 00) DOLLARS PRIOR TO RELEASE OF THE ELECTRONIC FILES. THIS FEE IS IÉ AND MATERIAL COSTS INCURRED IN PREPARING AND TRANSMITTING THE STED DATA.

#### (END OF GENERAL NOTES)

#### INITION OF TERMS

REVER IN THE CONTRACT DOCUMENTS THE WORD "CLIENT" IS USED, IT E UNDERSTOOD THAT OSSINING PUBLIC LIBRARY IS INTENDED.

EREVER IN THE CONTRACT DOCUMENTS THE WORD "ENGINEER" IS USED, IT E UNDERSTOOD THAT "OLA CONSULTING ENGINEERS" IS INTENDED.

DRK" MUST BE DEEMED TO CONSIST OF ALL LABOR AND OPERATIONS, PORTATION, HOISTING, MATERIALS, TOOLS, EQUIPMENT, SERVICES, TONS, INVESTIGATIONS, COORDINATION AND SUPERVISION REQUIRED AND / SONABLY NECESSARY TO PRODUCE THE CONSTRUCTION REQUIRED BY THE ACT DOCUMENTS.

IRNISH" MEANS THE DESIGN, FABRICATION, PURCHASE AND DELIVERY TO THE

STALL OR INSTALLATION" MEANS THE ACT OF PHYSICALLY PLACING, NG, SETTING, ERECTING, ANCHORING, SECURING, ETC., CONSTRUCTION ALS, EQUIPMENT, FURNISHINGS, APPLIANCES, AND SIMILAR ITEMS SPECIFIED JRNISHED AT THE JOB SITE. INSTALLATION OF SPECIFIED ITEMS MUST BE ETE IN ALL RESPECTS.

ROVIDE" MEANS TO FURNISH AND INSTALL CONSTRUCTION MATERIAL, ENT, ETC. AS DEFINED ABOVE.

FOLLOWING ARE DEFINITIONS OF SHOP DRAWING STAMP ACTIONS:

EXCEPTIONS TAKEN" MEANS THAT THE SHOP DRAWING IS CORRECT AS FORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE ACT DRAWINGS AND SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY

AKE CORRECTIONS NOTED" MEANS THAT THE SHOP DRAWING IS CORRECT AS 📘 and the concepts set forth without the prior written consent of FORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE ACT DRAWINGS AND/OR SPECIFICATIONS, SUBJECT TO AND IN COMPLIANCE HE ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING. ATION AND/OR PURCHASE MAY COMMENCE.

END AND RESUBMIT" MEANS THAT THE COMMENTS AND/OR CORRECTION EXTENSIVE AND IMPORTANT THAT THE REVIEWER WANTS TO SEE HOW THE NTS AND/OR CORRECTIONS ARE RESOLVED PRIOR TO RELEASE FOR ATION AND/OR PURCHASE. FABRICATIONS AND/OR PURCHASE MAY <u>NOT</u>

JECTED" MEANS THAT THE SHOP DRAWING DOES NOT COMPLY OR CONFORM CONTRACT DRAWINGS AND/OR SPECIFICATIONS. FABRICATION AND/OR ASE MAY <u>NOT</u> COMMENCE.

#### (END OF DEFINITION OF TERMS)

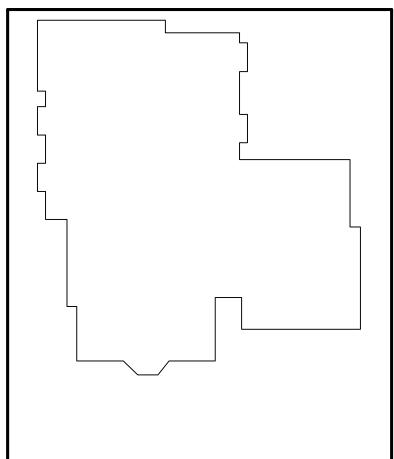


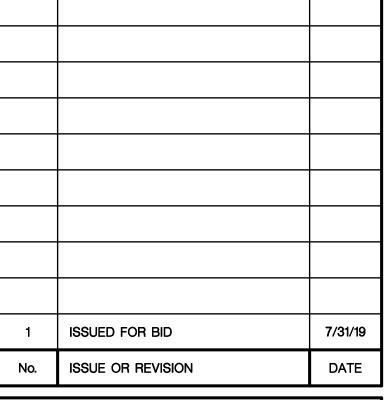
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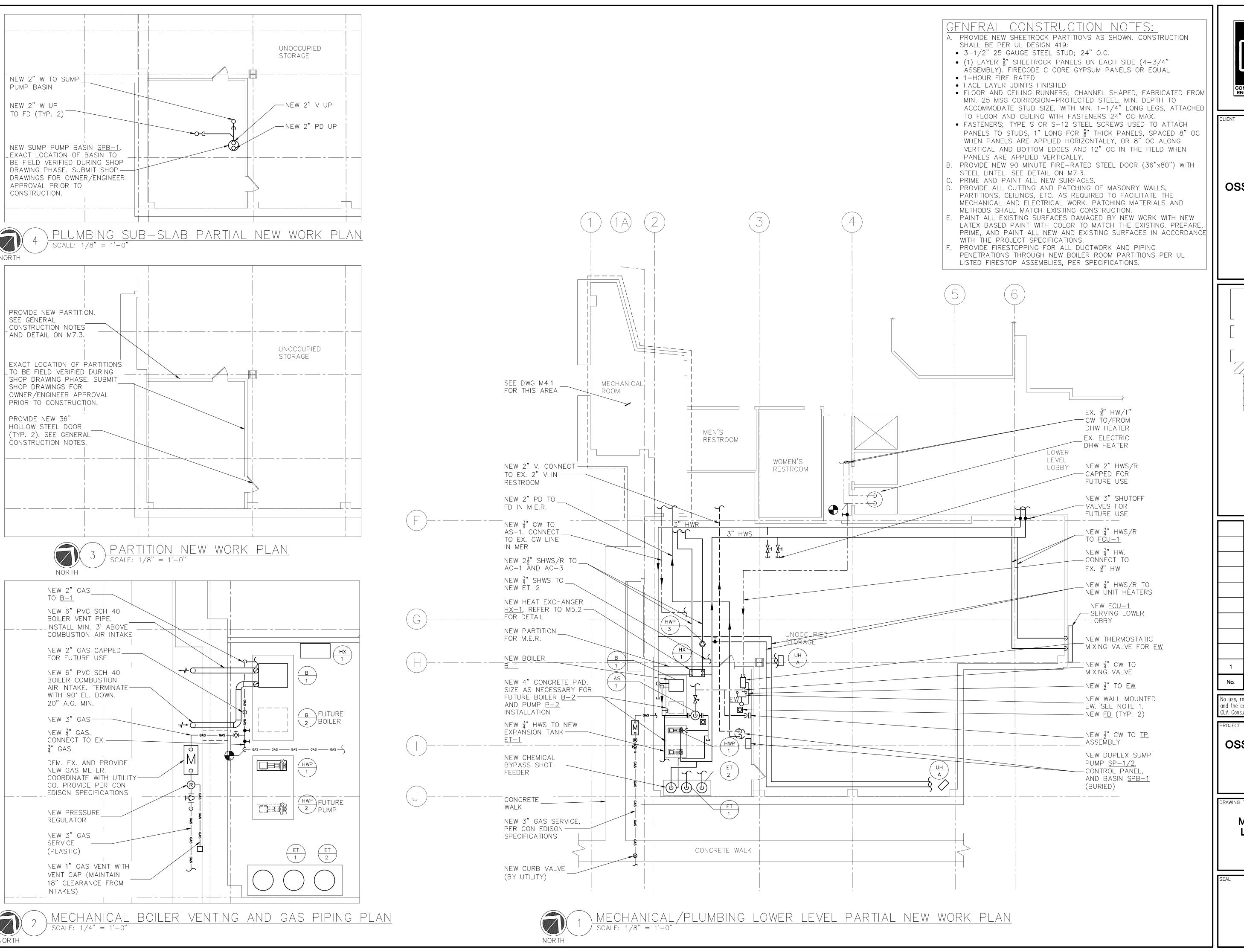
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**MECHANICAL** SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

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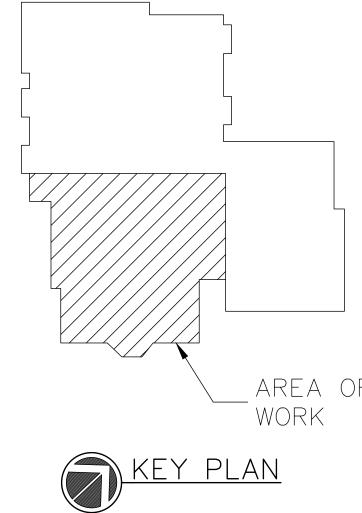
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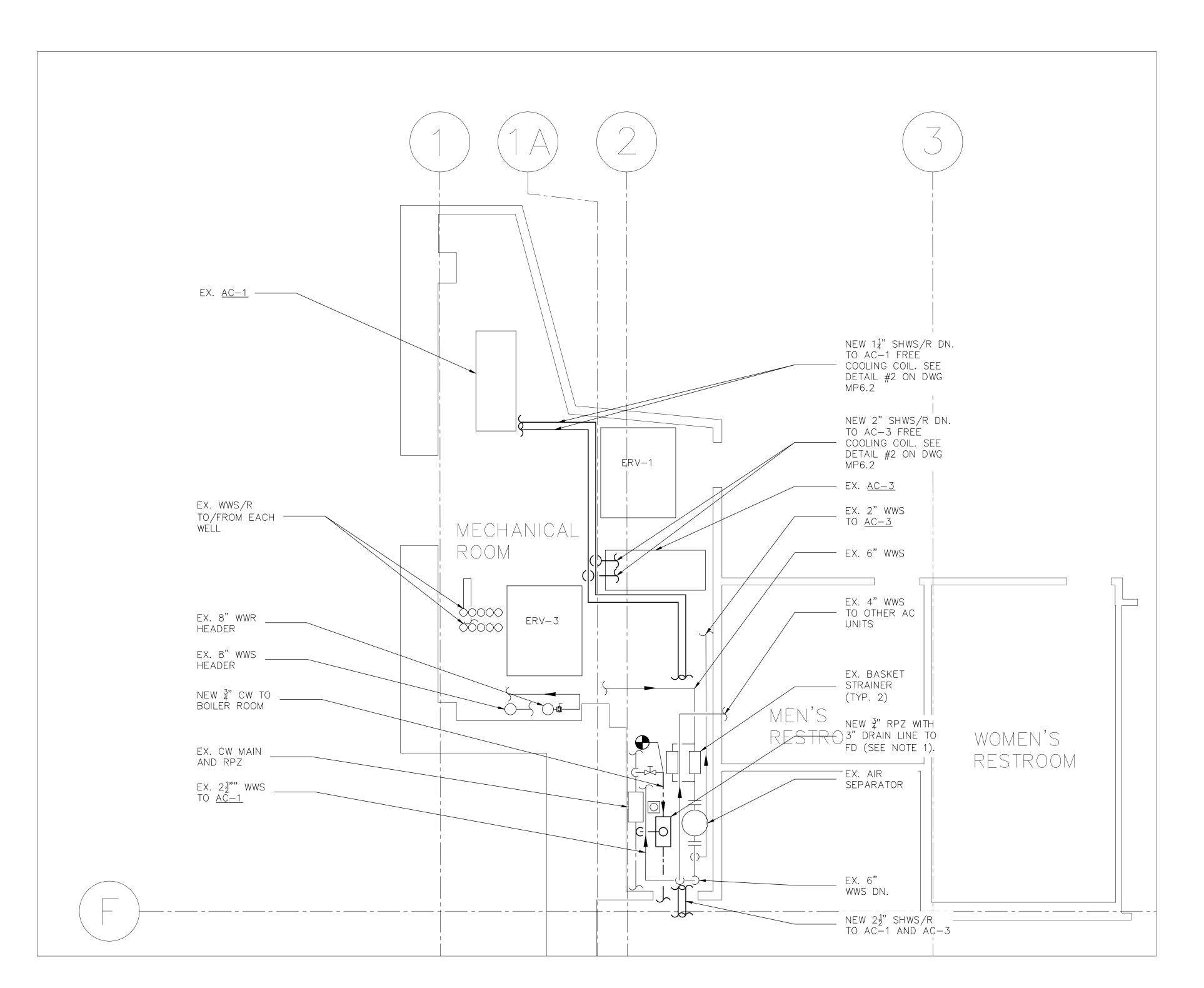
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MECHANICAL/PLUMBING LOWER LEVEL PARTIAL **NEW WORK PLAN** 

AS NOTED RAWN BY DRAWING NO. CHECKED BY **MP2**.<sup>2</sup>





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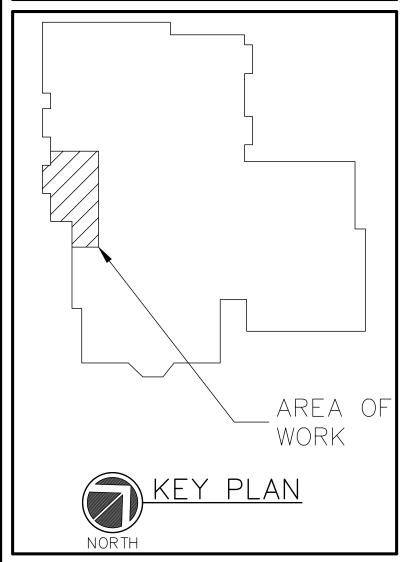
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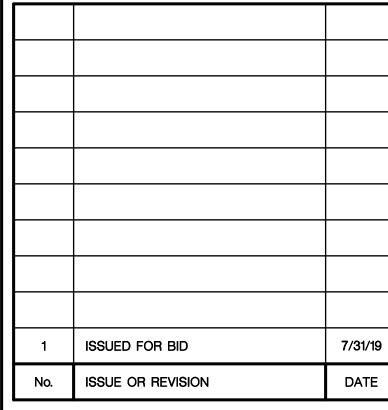
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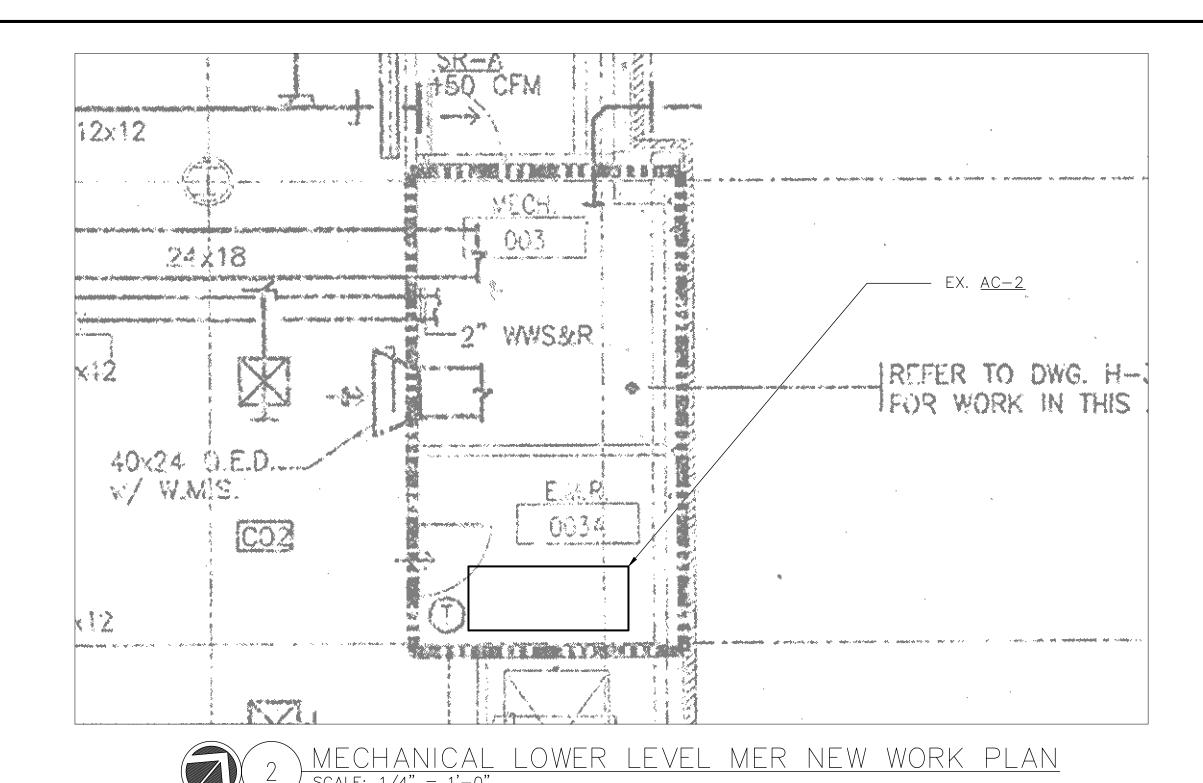
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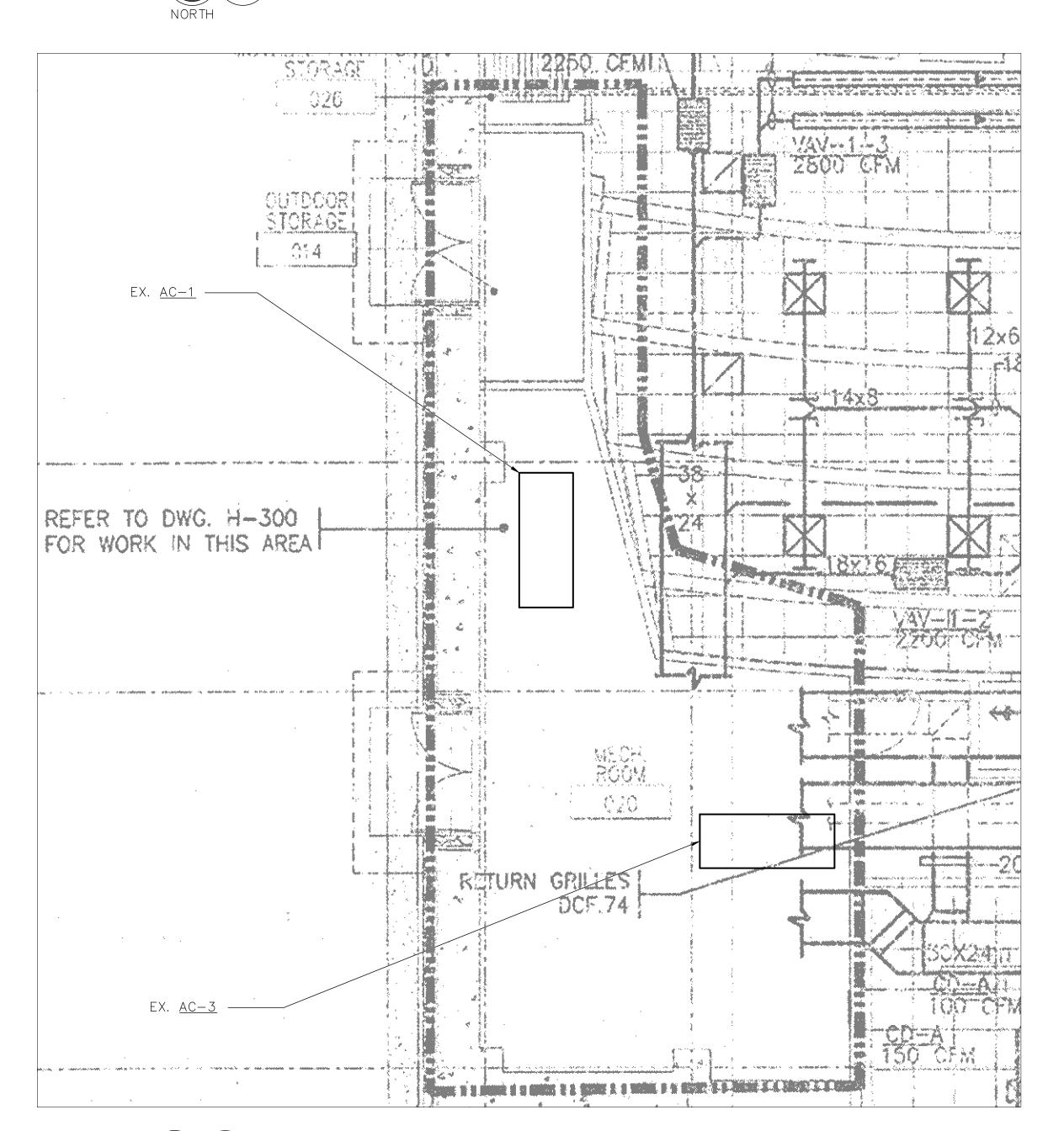
MECHANICAL LOWER LEVEL M.E.R. PARTIAL NEW WORK PIPING PLAN

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NOTES

1. PROVIDE NEW RPZ WATTS MODEL
909 OR EQUAL. PROVIDE AIR GAP
FITTING. PROVIDE 3" PVC DRAIN
LINE ROUTED TO FLOOR DRAIN.





MECHANICAL LOWER LEVEL MER NEW WORK PLAN scale: 1/4" = 1'-0"

#### SCOPE OF WORK NOTES

#### <u>AC-1</u>

#### A. BMS:

- 1. VERIFY CALIBRATION OF SUPPLY AIR STATIC PRESSURE SENSOR.
- 2. ERVF-1'S VFD IS CURRENTLY IN ALARM. PROVIDE SERVICE AND REPAIR AS NECESSARY.
- 3. ENABLE ERVF-1 TO MODULATE ITS SPEED AND EXHAUST DAMPER WHENEVER AC-1'S SUPPLY FAN IS OPERATING IN THE OCCUPIED MODE. COORDINATE WITH THE BALANCER TO OFFSET THE EXHAUST CFM 10% LESS FROM THE SUPPLY CFM.
- 4. PROVIDE SERVICE FOR VFD'S TO RELEASE THE SUPPLY FAN VFD TO ALLOW THE FAN TO RAMP TO 60 HZ. CURRENTLY LIMITED TO 51 HZ.

#### B. BALANCING:

- 1. PERFORM AIR AND WATER BALANCE ON AC-1/ERVF-1, INCLUDE REQUIRED SHEAVE CHANGES TO INCREASE THE SUPPLY AND EXHAUST FANS TO DELIVER THEIR DESIGN CFM WITHOUT EXCEEDING THE MOTORS RLA.
- 2. RE-BALANCE ALL VAV BOXES TO SATISFY THE REVISED VAV BALANCE SCHEDULE WHERE INDICATED ON SCHEDULES.
- 3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.

#### <u>AC-2</u>

#### A. MECHANICAL:

1. REMOVE THE REDUNDANT OUTSIDE AIR INTAKE DAMPER LOCATED IN THE ELECTRICAL SWITCHGEAR ROOM.

#### B. BMS:

- 1. VERIFY PROGRAMMED OCCUPANCY SCHEDULING AND MODIFY AS NECESSARY.
- 2. COORDINATE WITH THE BALANCER TO ESTABLISH TO CORRECT ERVF-2 SPEED NECESSARY TO KEEP THE BUILDING SLIGHTLY POSITIVE WITH RELATIONSHIP TO THE OUTSIDE.

#### C. BALANCING:

- 1. CURRENTLY, THE TWO SUPPLY FANS ARE NOT OPERATING AT THE SAME RPM. REPLACE THE MOTOR SHEAVES' AND DRIVE BELTS ON EACH FAN. ADJUST SHEAVES ON BOTH FANS TO DELIVER DESIGN CFM WITHOUT EXCEEDING RLA OF THE MOTORS. VERIFY NEW RPM'S ON BOTH SUPPLY AIR FANS ARE
- 2. PERFORM AIR AND WATER BALANCE ON AC-2/ERVF-2.
- 3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.

#### <u>AC-3</u>

#### A. BMS:

- 1. VERIFY PROGRAMMED OCCUPANCY SCHEDULING AND MODIFY AS NECESSARY.
- 2. WORK WITH THE BALANCER TO ESTABLISH TO CORRECT ERVF-3 SPEED NECESSARY TO KEEP THE BUILDING SLIGHTLY POSITIVE WITH RELATIONSHIP TO THE OUTSIDE.

#### B. BALANCING:

- 1. REPLACE THE BELTS AND SHEAVES' AND ADJUST TO DELIVER DESIGN CFM WITHOUT EXCEEDING THE MOTOR RLA.
- 2. PERFORM AIR AND WATER BALANCE ON AC-3/ERVF-3
- 3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.



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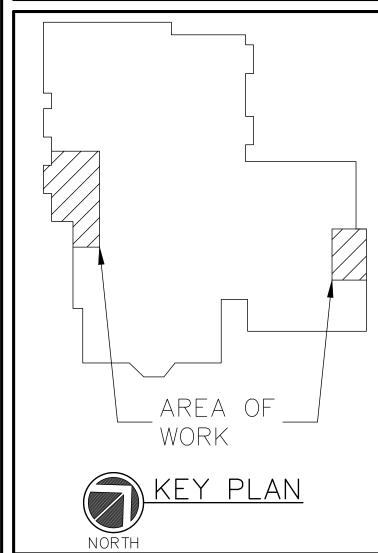
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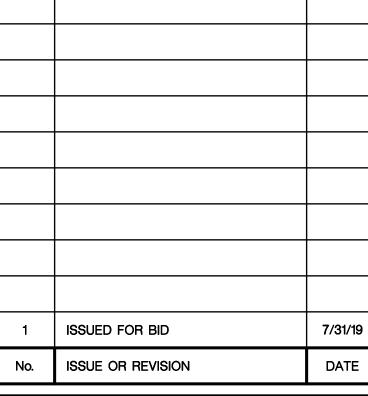
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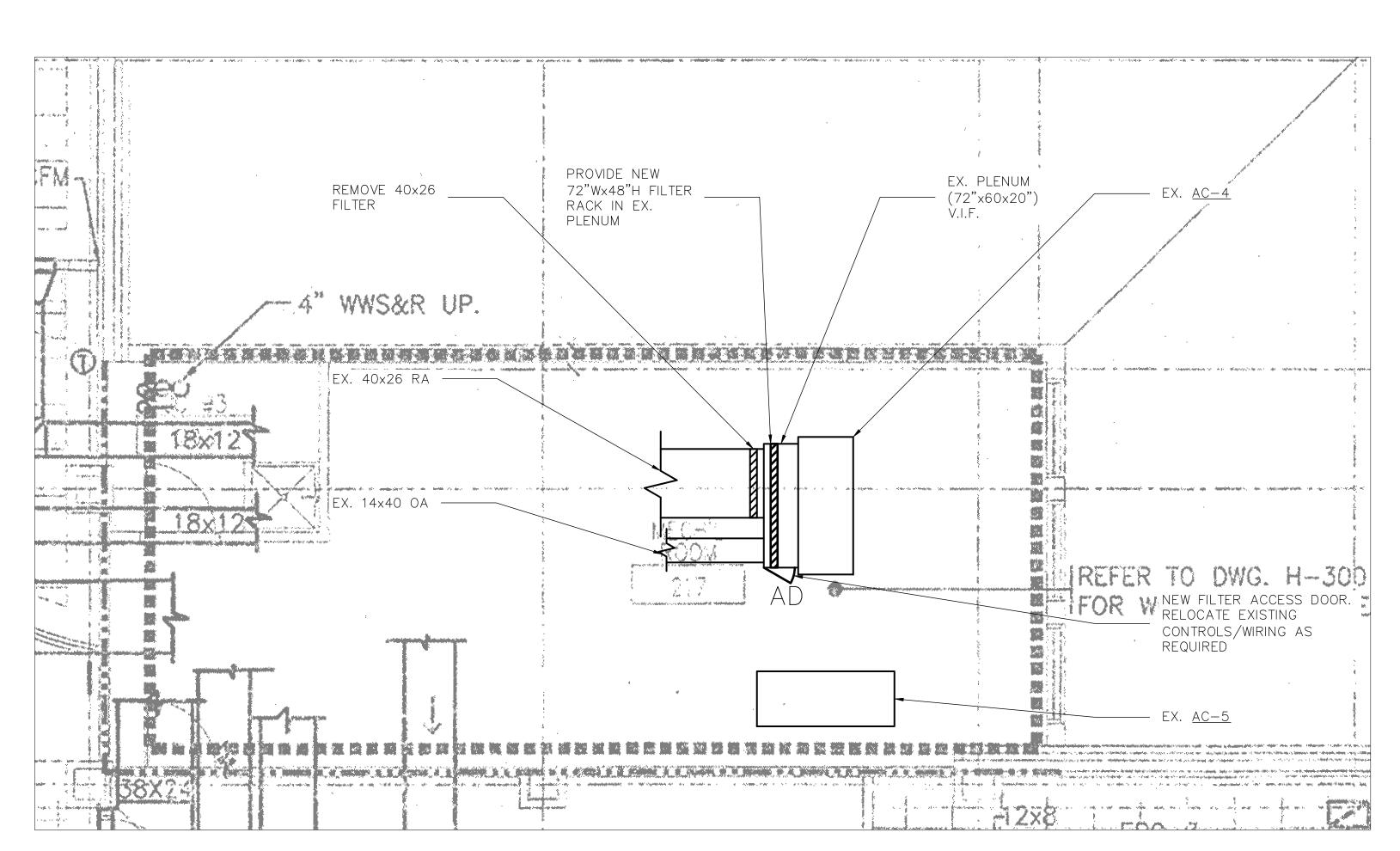


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MECHANICAL LOWER LEVEL M.E.R. NEW WORK PLANS

AS NOTED DRAWING NO.



MECHANICAL UPPER LEVEL MER NEW WORK PLAN scale: 1/4" = 1'-0"

#### SCOPE OF WORK NOTES

#### <u>AC-4</u>

#### A. MECHANICAL:

1. CURRENTLY THERE IS A HIGH STATIC PRESSURE ACROSS THE EXISTING 40X26 RETURN AIR FILTERS (0.9"WC). PROVIDE A NEW FILTER RACK IN THE EXISTING RETURN AIR PLENUM. FILTER RACK SIZE SHALL BE APPROXIMATELY 72"W X 48"H X 2" THICK. BLANK-OFF UNUSED PORTIONS OF THE PLENUM WITH SHEET METAL TO AVOID FILTER RACK BYPASS OF AIR. PROVIDE NEW SIDE ACCESS DOORS TO ALLOW REMOVAL OF NEW FILTERS. PROVIDE NEW MERV 7 PLEATED FILTERS : FOUR (4) AT 36X24X2. RELOCATE EXISTING CONTROLS AND WIRING MOUNTED TO AIR PLENUM TO ACCOMMODATE THE NEW FILTER RACK.

#### B. BMS:

1. VERIFY CALIBRATION OF SUPPLY AIR STATIC PRESSURE SENSOR.

- 2. PROVIDE SERVICE FOR THE VFD'S TO RELEASE THE SUPPLY FAN VFD TO ALLOW IT TO MODULATE UP TO 60 HZ, CURRENTLY LIMITED TO 55 HZ.
- 3. ENABLE ERVF-4 TO MODULATE ITS SPEED WHENEVER AC-4'S SUPPLY FAN IS OPERATING IN THE OCCUPIED MODE. COORDINATE WITH THE BALANCER TO OFFSET THE EXHAUST CFM AN ADJUSTABLE OFFSET VALUE FROM THE SUPPLY CFM TO PROVIDE POSITIVE BUILDING PRESSURE.
- 4. REPROGRAM THE SELECTED VAV BOXES TO OPERATE PER THE REVISED VAV BOX SCHEDULE SHOWN ON DRAWING SCHEDULES.
- 5. PROVIDE AN ADDITIONAL BMS ANALOG OUTPUT POINT AND PROGRAMMING TO ALLOW FOR INDEPENDENT CONTROL OF THE OUTSIDE AIR DAMPER.

#### C. BALANCING:

- 1. PERFORM AIR AND WATER BALANCE ON AC-4/ERVF-4. PROVIDE NEW SHEAVE CHANGES TO ALLOW THE SUPPLY AND EXHAUST FANS TO DELIVER THEIR DESIGN CFM WITHOUT EXCEEDING THE MOTOR RATED RLA OF EACH
- 2. RE-BALANCE THE SELECTED VAV BOXES TO SATISFY THE REVISED VAV BALANCE SCHEDULE SHOWN ON DRAWING SCHEDULES.
- 3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.

#### <u>AC-5</u>

#### A. BMS:

- 1. VERIFY CALIBRATION OF SUPPLY AIR STATIC PRESSURE SENSOR.
- 2. ENABLE ERVF-5 TO MODULATE ITS SPEED WHENEVER AC-5'S SUPPLY FAN IS OPERATING IN THE OCCUPIED MODE. COORDINATE WITH THE BALANCER TO OFFSET THE EXHAUST CFM AN ADJUSTABLE OFFSET VALUE FROM THE
- 3. COORDIANTE WITH THE BALANCER TO ESTABLISH TO CORRECT ERVF-5 SPEED NECESSARY TO KEEP THE BUILDING SLIGHTLY POSITIVE WITH RELATIONSHIP TO THE OUTSIDE.
- 4. PROVIDE AN ADDITIONAL BMS ANALOG OUTPUT POINT AND PROGRAMMING TO ALLOW FOR INDEPENDENT CONTROL OF THE OUTSIDE AIR DAMPER.

#### B. BALANCING:

- 1. CURRENTLY, THE TWO SUPPLY FANS ARE NOT OPERATING AT THE SAME RPM. REPLACE THE MOTOR SHEAVES' AND DRIVE BELTS ON EACH FAN. ADJUST SHEAVES ON BOTH FANS TO DELIVER DESIGN CFM WITHOUT EXCEEDING RLA OF THE MOTORS. VERIFY NEW RPM'S ON BOTH SUPPLY AIR FANS ARE BALANCED.
- 2. PERFORM AIR AND WATER BALANCE ON AC-5/ERVF-5. PROVIDE NEW SHEAVE CHANGES TO ALLOW THE SUPPLY AND EXHAUST FANS TO DELIVER THEIR DESIGN CFM.
- 3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.



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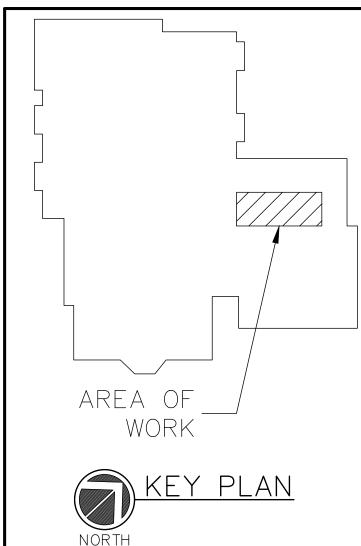
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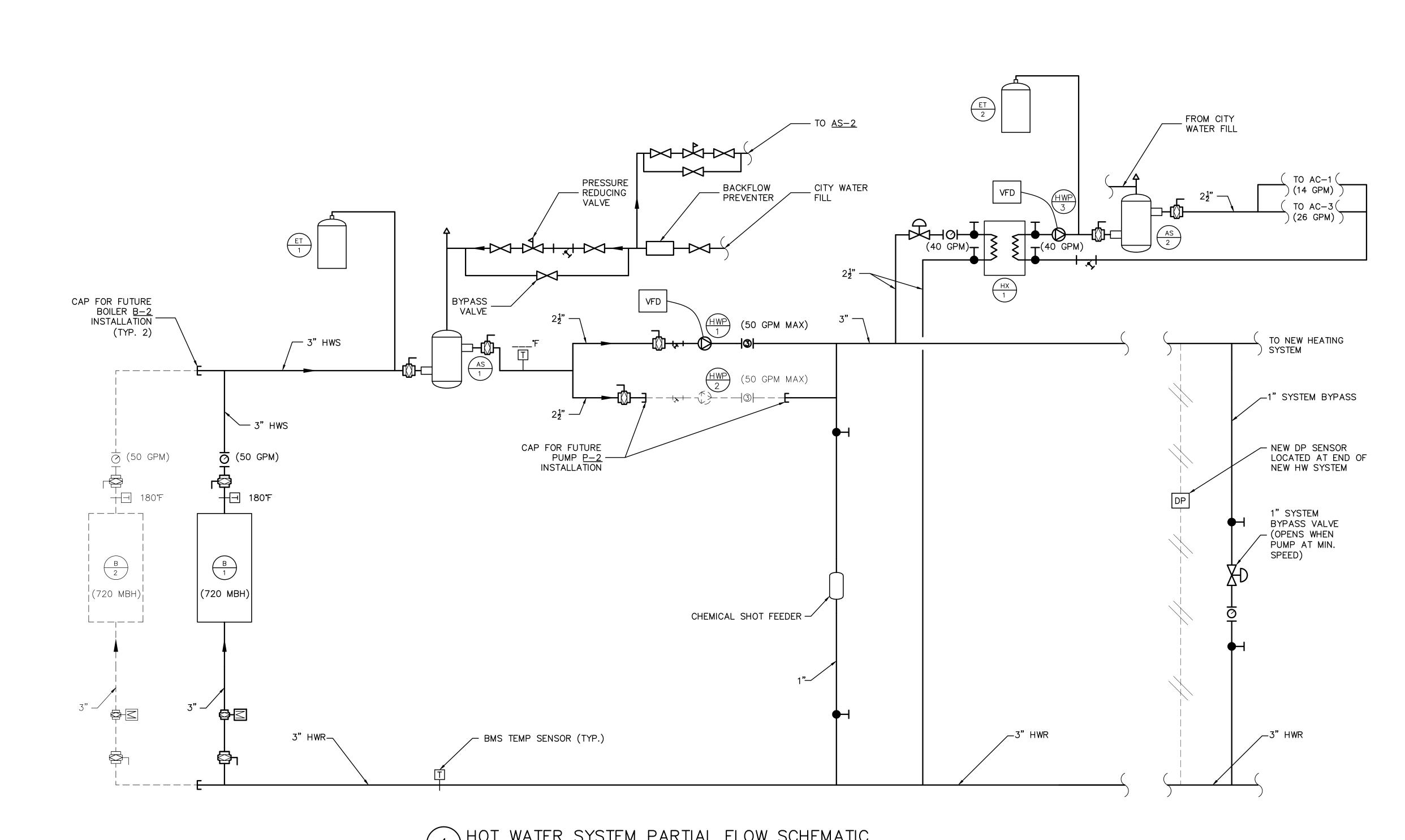
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MECHANICAL UPPER LEVEL M.E.R. NEW WORK PLAN

SEAL	SCALE	PROJECT NO.
	AS NOTED	
	DRAWN BY	DRAWING NO.
11	AC	
	CHECKED BY	
	JK	M4.3
	DATE	
	7/16/19	



1) HOT WATER SYSTEM PARTIAL FLOW SCHEMATIC
SCALE: NONE



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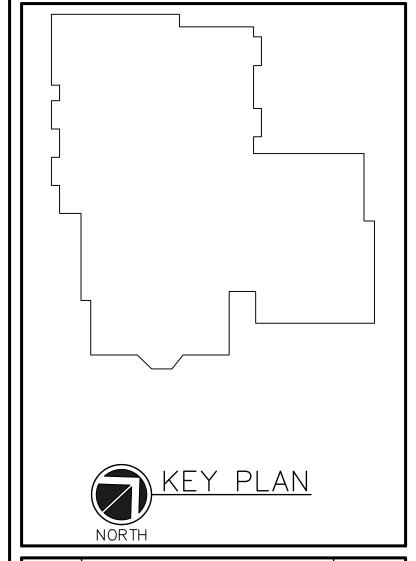
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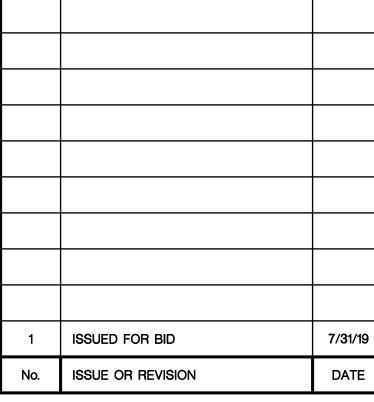
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PROJECT T

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RAWING TITLE

MECHANICAL SCHEMATICS

SEAL

SCALE
AS NOTED

DRAWN BY
AC

CHECKED BY
JK

DATE

7/16/19

FAN COIL UNIT SCHEDULE		
DESIGNATION	FCU-1	
LOCATION	LOWER LOBBY	
AREA SERVED	LOWER LOBBY	
MODEL	FWI-C12	
UNIT SIZE	12	
TYPE	2-PIPE	
STYLE	WALL-MOUNTED	
FAN:		
CFM	933	
BHP/HP	0.25	
RPM	_	
ESP/TSP	_	
HEATING COIL (HOT WATER):	•	
No. OF ROWS/F.P.I.	4	
E.W.T./L.W.T. (°F)	180°/108.5°	
E.A.T./L.A.T. (°F)	70.0°/138.7°	
HEATING CAP. (MBH)	69.9	
GPM	2.0	
WATER P.D. (FT. H₂O)	0.79	
FILTER DATA:	•	
QUANTITY	3	
SIZE	9.25"x21.75"x1"	
ELECTRICAL DATA:		
VOLTS/ø/Hz	115/1/60	
MCA	3.38	
MAX FUSE SIZE		

#### NOTES:

- I. UNITS BASED ON JCI.
- 2. FURNISH THE FOLLOWING OPTIONAL EQUIPMENT FOR EACH: VERTICAL SURFACE MOUNTED WITH SLOPE TOP
- PIPING PACKAGE SHALL BE RIGHT OR LEFT HAND AS
- COORDINATED IN THE FIELD FRONT BOTTOM BAR INLET GRILLE
- TOP BAR GRILLE DISCHARGE
- SUBMIT COLOR CHART FOR REVIEW
- LEVELING FEET AND KEY LOCK ACCESS DOORS
- COIL AIR VENT
- DISCONNECT SWITCH
- 1" THROUGH AWAY FILTERS N.C. 3 WAY MODULATING CONTROL VALVE
- 4" SUB BASE
- DELUXE PIPING PACKAGE WITH BALL VALVE SHUT OFFS AND CIRCUIT SETTER
- UNIT MOUNTED THERMOSTAT WITH FAN ON OFF AUTO SWITCH AND TEMP SETTING

PUMP SCHEDULE			
DESIGNATION	HWP-1/HWP-2	HWP-3	
LOCATION	BOILER ROOM	BOILER ROOM	
SYSTEM SERVED	HOT WATER	SECONDARY HOT WATER	
MODEL	E-1535 1AAC	E-90 1.5AB	
TYPE	BASE MOUNTED	INLINE	
GPM	50.0	40.0	
FLUID	WATER	WATER	
FLUID TEMP. (°F)	180°	180°	
TOTAL DYNAMIC HEAD (FT H <sub>2</sub> O)	60	26.5	
RPM	3,600	1,800	
NPSH (FT. H <sub>2</sub> O)	_	_	
MOTOR:			
BHP/HP	1.18/2.0	0.435/0.75	
VOLTAGE/Ø/Hz	208/3/60	208/3/60	
STARTER:	•		
TYPE	VFD	VFD	
LOCATION	BOILER ROOM	BOILER ROOM	
NOTES:			

PUMPS BASED ON BELL AND GOSSETT. 2. ALL MOTORS SHALL BE PREMIUM EFFICIENCY.

HOT WATER UNIT			
HEATER SCHEDULE			
DESIGNATION	UH-A		
LOCATION	REFER TO PLAN		
MODEL	HSB108SB01SA		
FAN:			
CFM	2,010		
RPM	1,440		
MOTOR HP	1 8		
HOT WATER COIL:			
CAPACITY (MBH)	54.7		
E.A.T./L.A.T. (°F)	60°/85°		
E.W.T./L.W.T. (°F) 180°/140°			
GPM 2.9			
ELECTRICAL DATA:			
WATTS	253		
VOLTS/Ø/Hz	S/ø/Hz 115/1/60		
FLA	2.2		
NOTES:			
1. UNITS BASED ON MODINE.			

#### HOT WATER CONDENSING BOILER SCHEDULE DESIGNATION B-1LOCATION BOILER ROOM MODEL BMK-750 INPUT (MBH) 750 GROSS OUTPUT (MBH) 720 MIN. GAS PRESSURE (W.C.) MAX. GAS PRESSURE (W.C.) 14" MAX. ALLOWED WORKING PRESSURE (PSIG) 160 MIN. FLOW RATE (GPM) 12 MAX. FLOW RATE (GPM) 175 WATER CONNECTIONS 3" EWT/LWT (°F) 153°/180° DIMENSIONS (L $\times$ W $\times$ H) 25 x 28 x 78 GAS BURNER: GAS INPUT (MBH) 750 THERMAL EFFICIENCY (%) 95.5% ELECTRICAL DATA: BURNER BLOWER HP 120/1/60 VOLTS/Ø/Hz 13.0

NOTES:

. BOILERS BASED ON AERCO.

2. PROVIDE ASME CSD-1 COMPLIANT CONTROLS.

LIMIT AQUASTAT, LOW WATER CUT OFF.

3. PROVIDE BOILERS WITH 50 PSI ASME RELIEF VALVES, 3-1/4"

PRESSURE AND TEMPERATURE GAUGES, MANUAL RESET HIGH

4. PROVIDE MANUFACTURER' CONDENSATE NEUTRALZING KIT

# PLATE AND FRAME HEAT **EXCHANGER SCHEDULE**

1 ROOM		
ROOM		
IOT WATE		
-42		
9		
)		
148°/175°		
3.72		
)		
53°		
4.06		

. HEAT EXCHANGERS BASED ON BELL &

AIR SEPARATOR SCHEDULE				
DESIGNATION	AS-1	AS-2		
SERVICE	HW	HW		
MODEL	RL-3F	R-2-1/2N		
FLANGED TANGENTIAL OPENING (IN)	3	2.5		
OPERATING WEIGHT	182	111		
DIAMETER/HEIGHT (IN)	22.75/27.0	8.5/17.5		
CAPACITY (GPM)	190	170		
MAX. TEMP. (°F)	350	350		
MAX. PRESS. (PSI)	125	125		

- 1. AIR SEPARATORS SHALL BE BASED ON BELL AND
- GOSSETT. 2. SHALL HAVE FLANGED TANGENTIAL OPENINGS. 3. THE AIR SEPARATOR SHALL BE DESIGNED, CONSTRUCTED AND STAMPED FOR 125 PSIG AT 350°F IN ACCORDANCE WITH THE ASME BOILER AND PRESSURE

VESSEL CODE.

EXPANSION TANK SCHEDULE			
DESIGNATION	ET-1	ET-2	
SERVICE	HW	SHW	
MODEL	D-80V	D-15V	
OPERATING WEIGHT (LBS)	271	110	
DIAMETER/HEIGHT (IN)	16"/56"	12"/19.5'	
TANK AND ACCEPTANCE VOLUME (GAL)	44.4/22.6	8.0/2.4	
MIN. TEMP. (°F)	60°	60°	
MAX. TEMP. (°F)	200°	200°	
MIN. PRESSURE (PSI)	28	28	
MAX. PRESSURE (PSI)	125	125	
NOTEC	-		

1. TANKS BASED ON BELL AND GOSSETT AND SHALL BE ASME RATED AND STAMPED FOR 125 PSIG.

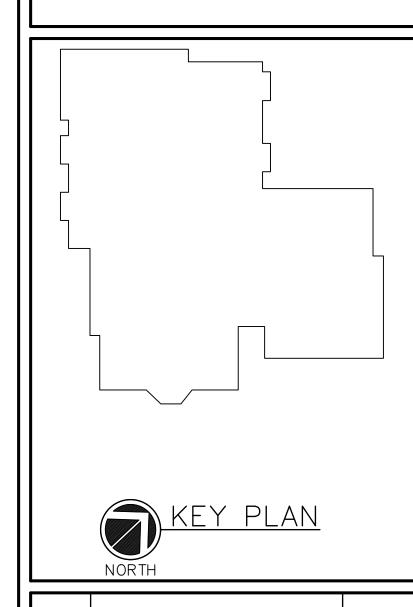
# CONSULTING ENGINEERS

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**MECHANICAL** SCHEDULES

AS NOTED DRAWN BY DRAWING NO. AC

TAO	SYMI	30LS	FIVTURES	PLUMBING CONNECTIONS				
TAG	PLAN	ELEVATION	FIXTURES	WASTE	VENT	COLD WATER	HOT WATER	
FD			FLOOR DRAIN	2"	_	_	_	ZU BC LIC TR PR (-
EW			HAND OPERATED EMERGENCY EYEWASH, WALL MOUNTED	_	_	1/2"	1/2"	BR CH TH

DESCRIPTION

1	URN MODEL Z461, MODULAR NON—ADJUSTABLE FLOOR DRAIN WITH CLAMPING FRAME. DURA—COATED CAST IRON LOW—P	ROFILE BODY WITH
	Star Mobile 2 for, Mobile at 1000 Table 1 Edok Brain The Prairie Botta Governo Gran Table 1	COLLE DOD'T WITH
-	OTTOM OUTLET, COMBINATION NICKEL BRONZE MEMBRANE CLAMP AND FRAME WITH SEEPAGE SLOTS, AND SQUARE HEEL	-PROOF. SLOTTED
- 1	GHT-DUTY SECURED STRAINER.	,, ,

TRAP PRIMERS, <u>TP:</u> PROVIDE TRAP PRIMER ASSEMBLY BASED ON PRECISION PLUMBING PRODUCTS (PPP INC.) MINI-PRIME ELECTRONIC TRAP PRIMING MANIFOLD, MODEL MPB-500-115V. TRAP PRIMER ASSEMBLY INCLUDES NEMA 1 12×12×4 RECESSED MOUNTING BOX, DISTRIBUTION UNIT -DU), CIRCUIT BREAKER, TEST SWITCH, TIMER SOLENOID VALVE, AND ACCESS DOOR (D-814SS). PROVIDE ONE (1) TP ASSEMBLY TO SERVE TLOOR DRAINS.

BRADLEY MODEL S19-220B, WALL-MOUNT EYEWASH WITH STAINLESS STEEL BOWL. HEAVY-GAUGE SAND CAST ALUMINUM WALL BRACKET, CHROME-PLATED BRASS  $\frac{1}{2}$ " BALL VALVE, HAND OPERATED BY SAFETY YELLOW PVC HANDLE. PROVIDE NAVIGATOR S19-2000 EFX8 EMERGENCY THERMOSTATIC MIXING VALVE.

DUPLEX SUMP-PUMP SCHEDULE					
DESIGNATION	SP-1/2				
LOCATION	BOILER ROOM				
SYSTEM SERVED	HOT WATER				
MODEL	SE-50				
QUANTITY	2				
TYPE	SUBMERSIBLE				
GPM	50				
TOTAL DYNAMIC HEAD (FT H₂O)	19				
RPM	3,450				
MOTOR:					
ВНР/НР	-/0.5				
VOLTAGE/ø/Hz	115/1/60				
NOTES:					

#### 1. PUMP BASED ON STANCOR.

PLUMBING FIXTURE SCHEDULE

2. REFER TO SPECIFICATION FOR PUMP CONSTRUCTION.3. PROVIDE DUPLEX PUMP CONTROL PANEL

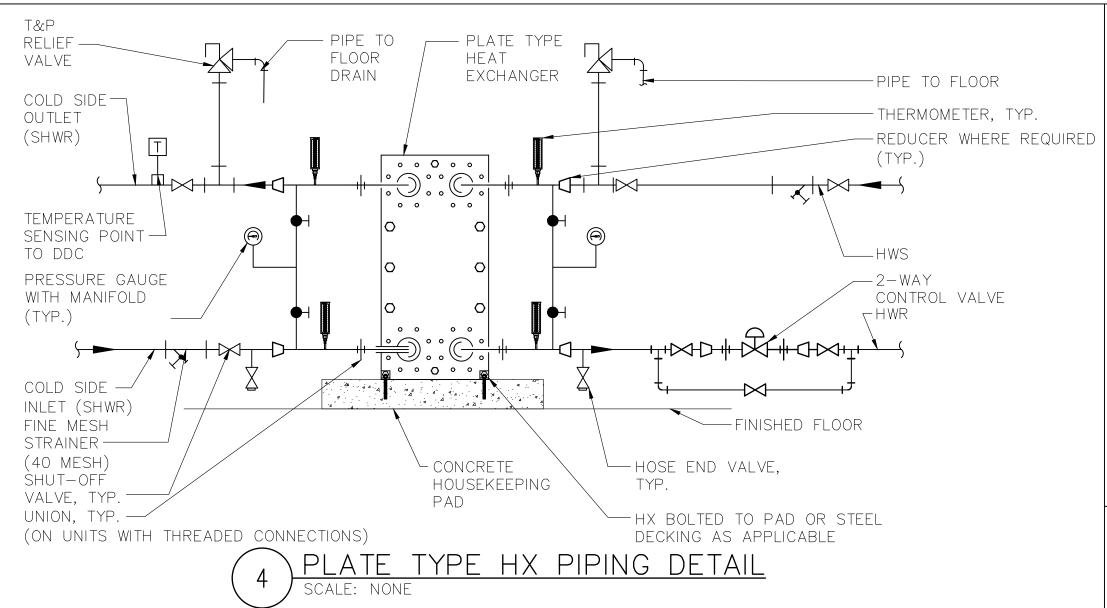
STANCOR MODEL CB1002 OR EQUAL.

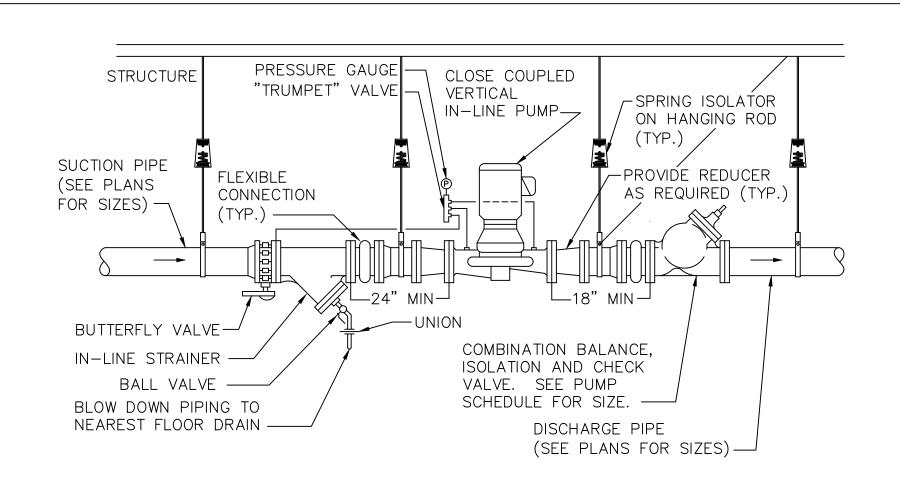
# SUMP-PUMP BASIN SCHEDULE

DESIGNATION	SPB-1
LOCATION	BOILER ROOM
SYSTEM SERVED	HOT WATER
MODEL	GB-24-100
BASIN DIAMETER (ID)	24"
BASIN DEPTH	48"
DISCHARGE SIZE	2"
INLET SIZE	2"
NOTES:	<del>-</del>

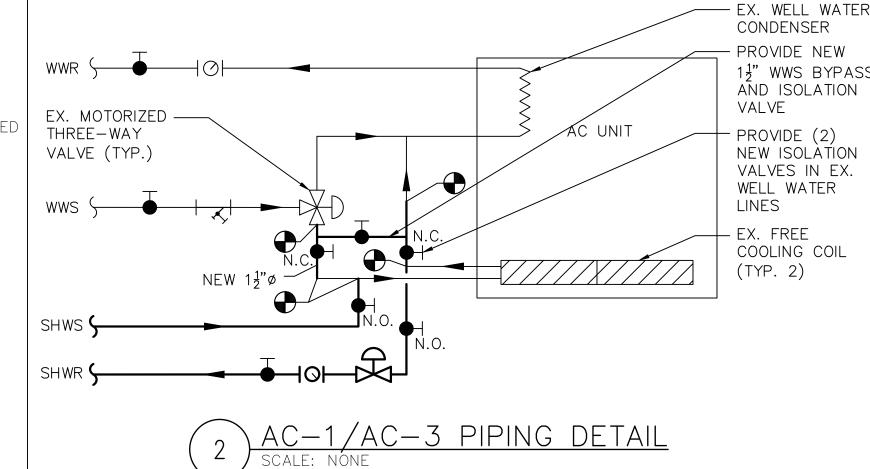
#### 1. BASIN BASED ON AK INDUSTRIES.

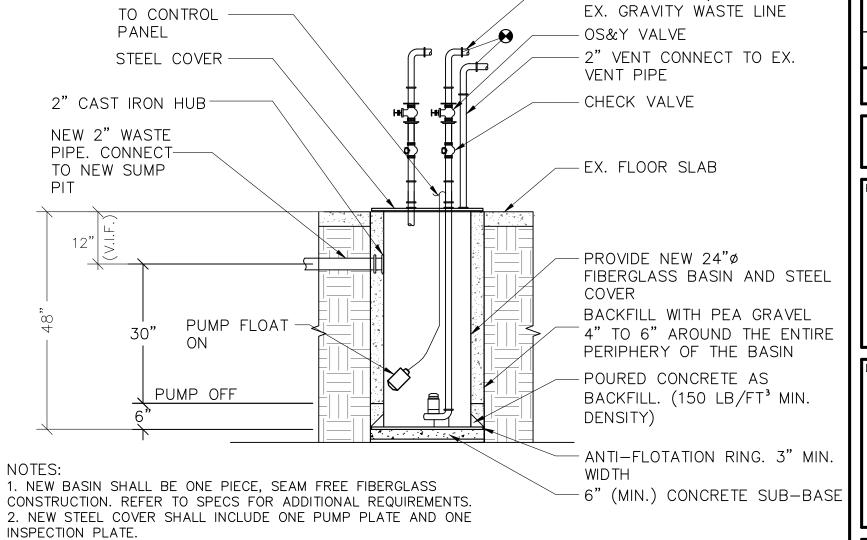
- 2. PROVIDE STEEL COVER.
  3. PROVIDE BASIN WITH ANTI-FLOATATION FLANGE.
- 4. REFER TO SPECIFICATION FOR BASIN CONSTRUCTION.





VERTICAL IN-LINE PUMP PIPING DIAGRAM
CONSTANT SPEED, STRUCTURE SUPPORTED
SCALE: NONE





3. CONTRACTOR SHALL VERIFY IN FIELD ALL DIMENSIONS AND

4. SUPPORT ALL PIPING AND ACCESSORIES SEPARATELY FROM

BASIN. BASIN SHALL NOT BE USED TO SUPPORT PIPING OR

INLET SIZES AND LOCATIONS/ELEVATIONS.



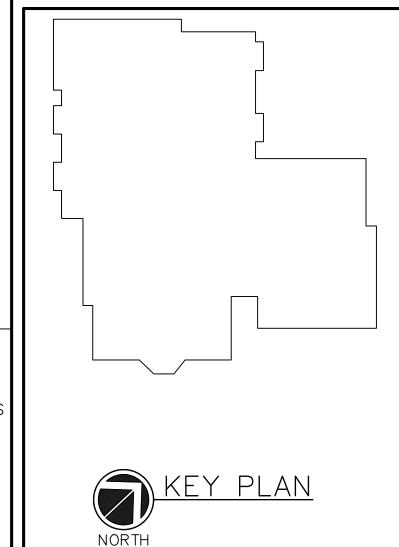
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PROJECT

2" WASTE PIPE, CONNECT TO

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RAWING TITLE

MECHANICAL/PLUMBING SCHEDULES AND DETAILS

SCALE
AS NOTED

DRAWN BY
AC

CHECKED BY
JK

DATE
7/16/19

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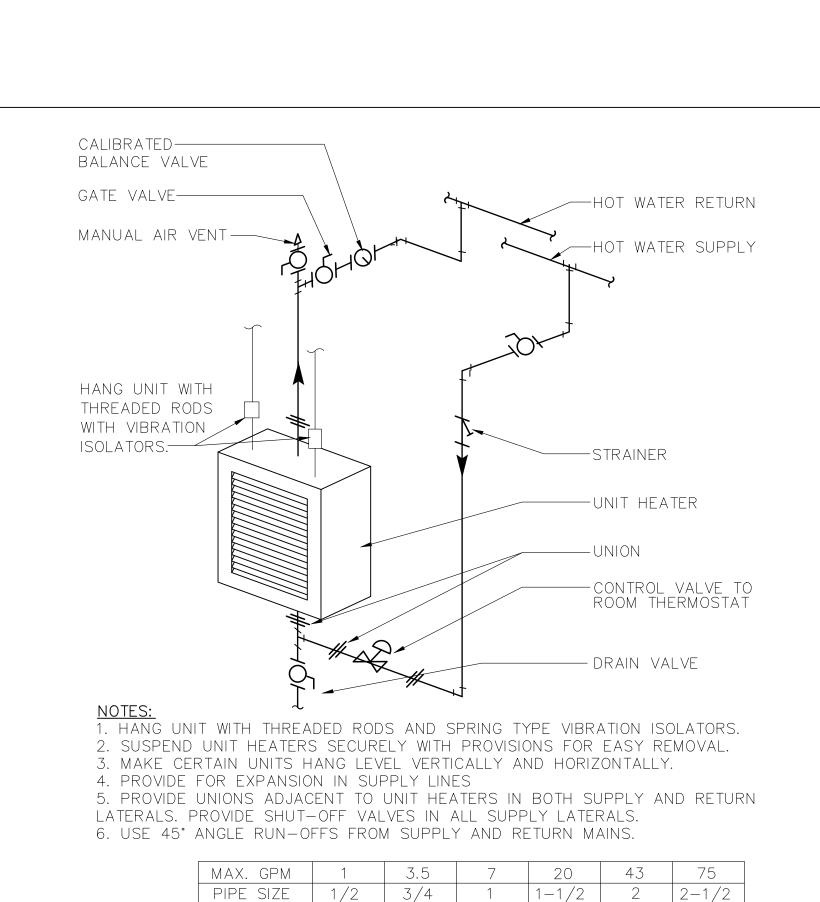
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MAC

DRAWING NO.

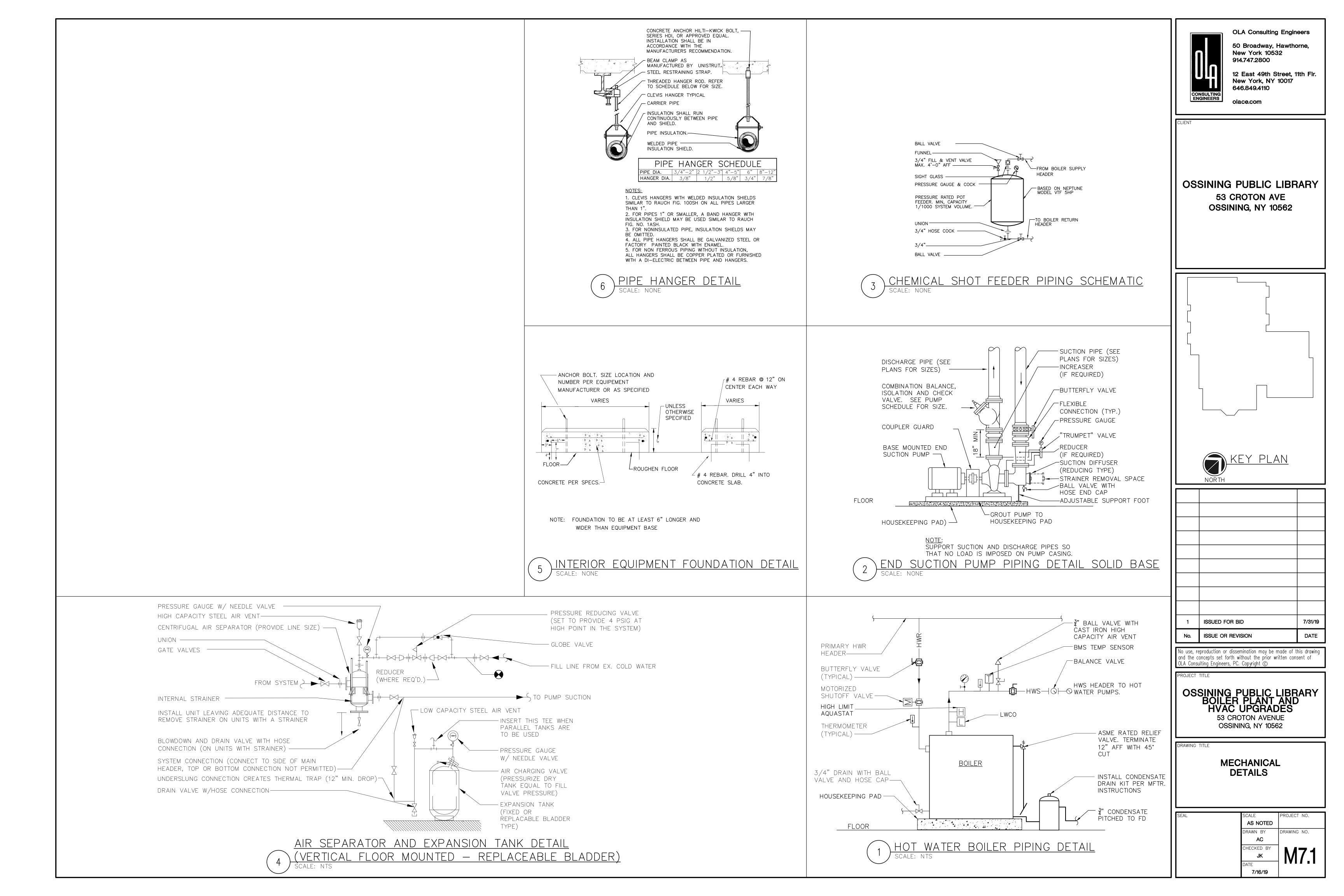
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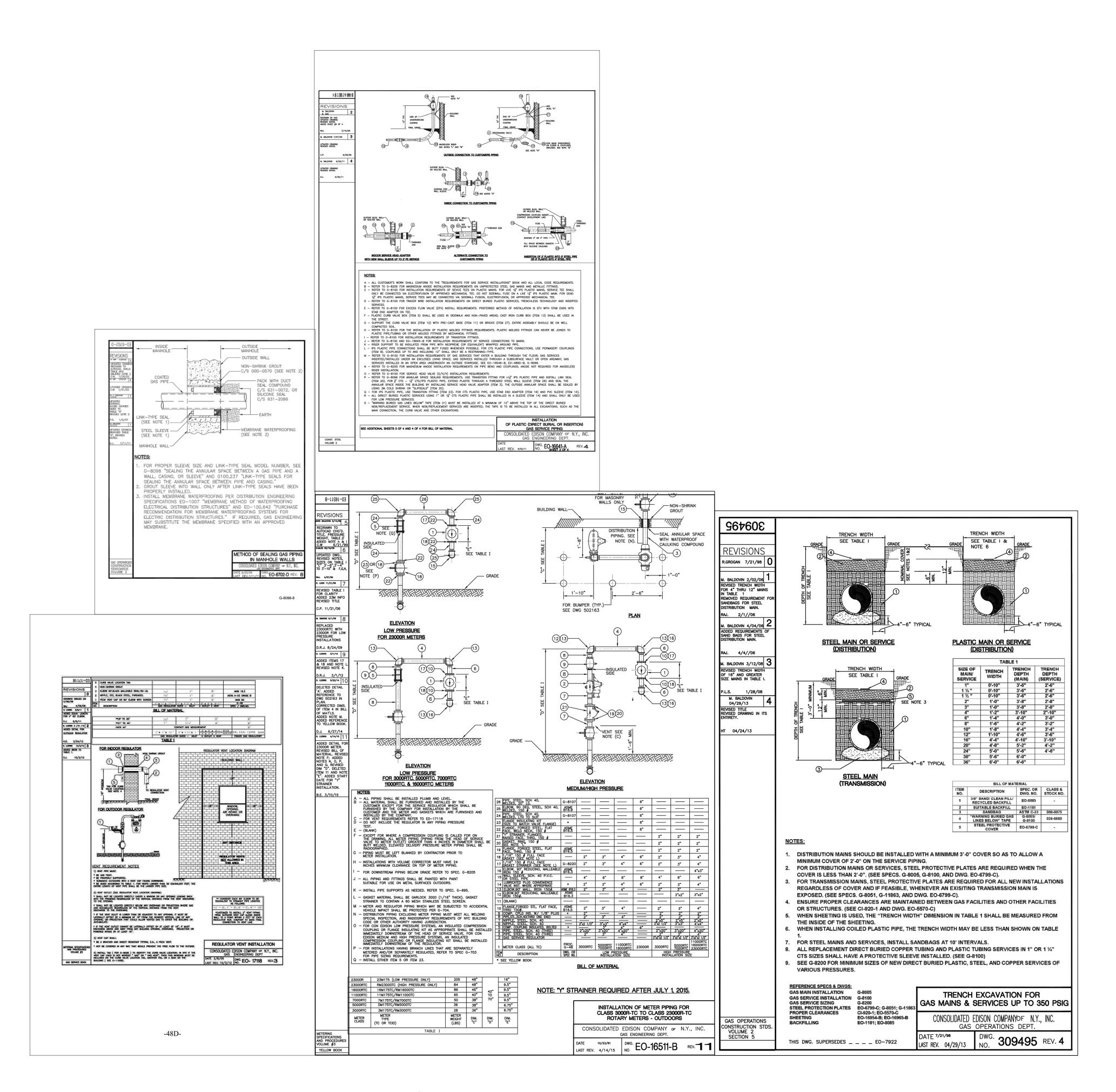
MP6.2



UNIT HEATER PIPING SCHEMATIC

HOT WATER







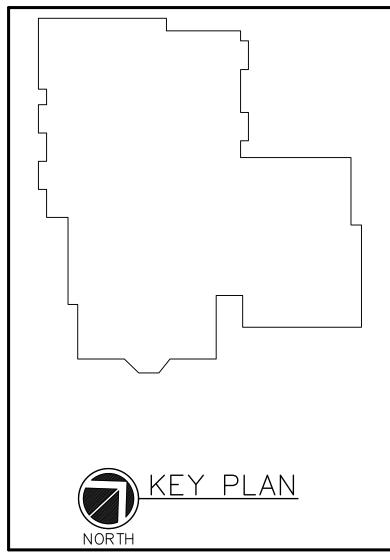
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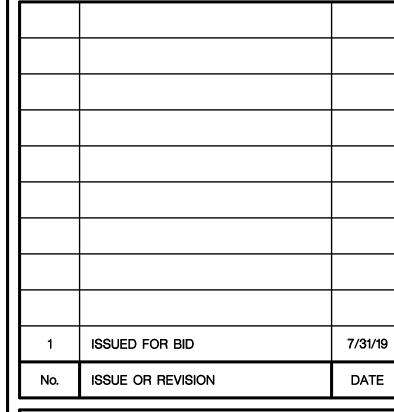
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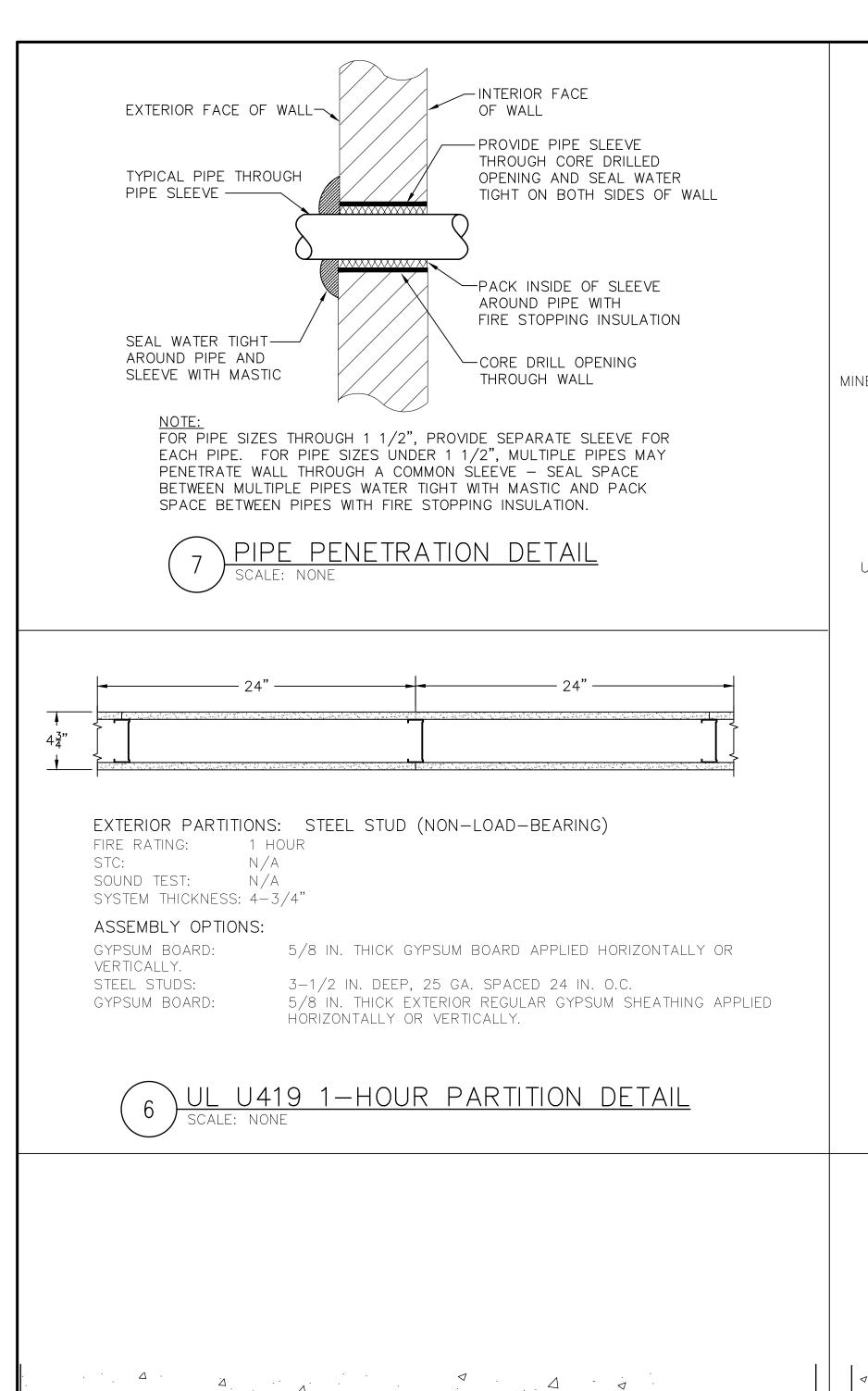


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MECHANICAL/PLUMBING **DETAILS** 

**AS NOTED** RAWING NO. RAWN BY HECKED B 7/16/19



MIN. 1/2" [13] THICK USG SHEETROCK®BRAND

- FASTENERS TO BE SET FLUSH ON DRYWALL SIDE.

USG SHEETROCK®BRAND FIRECODE®X PANELS

OR EQUAL, REFERENCE UL HW-D-0001 FOR

FIRECODE®BRAND OR EQUAL COMPOUND.

RESTRAINING ANGLE LINED WITH GYPSUM

BOARD, MATCHING PARTITION BELOW.

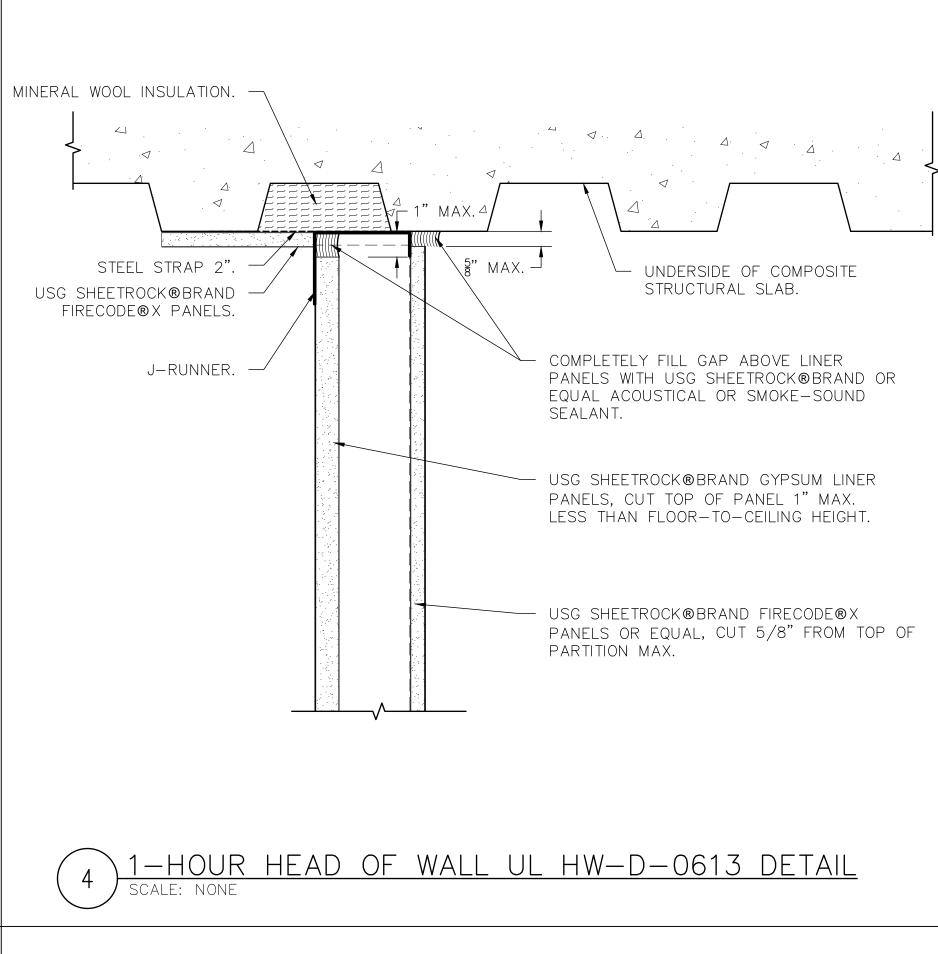
MINERAL WOOL BATT INSULATION.

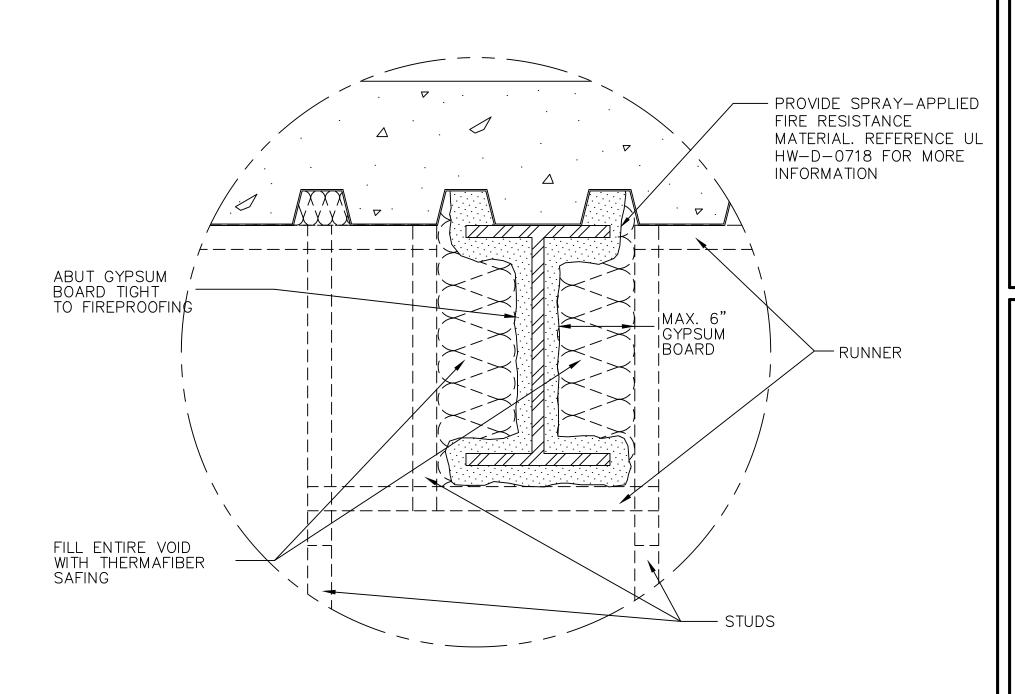
JOINT WIDTH INFORMATION.

1-HOUR HEAD OF WALL PERPENDICULAR

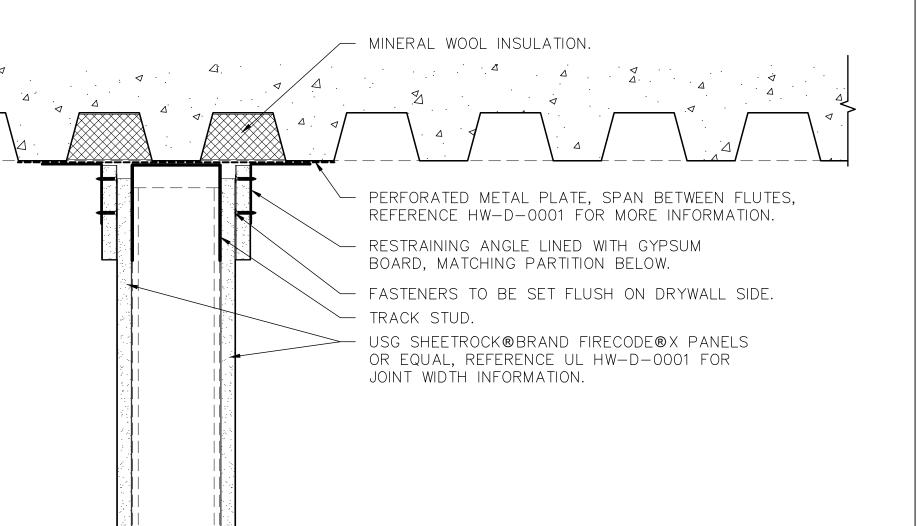
TO DECK FLUTES UL HW-D-0001 DETAIL

- TRACK STUD.

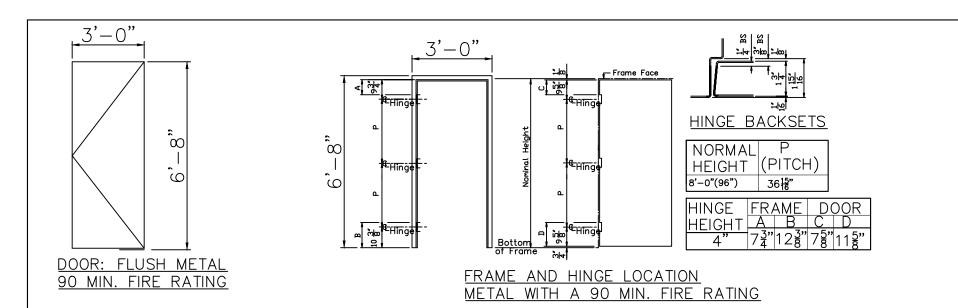




WALL PERPENDICULAR TO BEAM UL HW-D-0718 DETAIL 2 ) WALL PE scale: none



<u>1—HOUR HEAD OF WALL PARALLEL</u> TO DECK FLUTES UL HW-D-0001 DETAIL



HARDWARE SET						
SET#	ITEM & QUANTITY	DESCRIPTION	FINISH	MFR	NOTES	
1	1 1/2 PAIRS MORTISE HINGES 1 EXIT HARDWARE 1 LATCHSET 1 FLOOR DOOR STOP DOOR SILENCER	FBB199 AL10S SC 80 NO. 436 GJ64	SATIN BRONZE (612) SATIN BRONZE BRONZE (US10) SATIN BRONZE GREY	STANLEY SCHLAGE SCHLAGE IVES GLYNN-JOHNSON	BALL BEARING HINGES EXIT DEVICE	

GENERAL HARDWARE NOTES: 1. ALL EGRESS DOORS TO BE OPERABLE FROM THE DIRECTION OF EXIT TRAVEL WITHOUT THE USE OF A KEY

OR SPECIAL KNOWLEDGE OR EFFORT.

- 2. ALL HAND-ACTIVATED DOOR OPENING HARDWARE SHALL BE INSTALLED AT 36"AFF. LATCHING AND LOCKING DOORS SHALL BE OPERATED WITH A SINGLE EFFORT BY LEVER HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT THE ABILITY
- 4. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR INTERIOR DOORS. SUCH EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE FOR SLIDING DOORS.
- COORDINATE FORCE WITH LOCAL OFFICIALS. 5. MATCH BUILDING EXISTING HARDWARE REGARDS TO MANUFACTURER, STYLE, LEVEL OF QUALITY AND FINISH.
- 6. DOOR STOPS TO BE LOCATED IN FIELD.

<u>Door and Hardware Detail</u>



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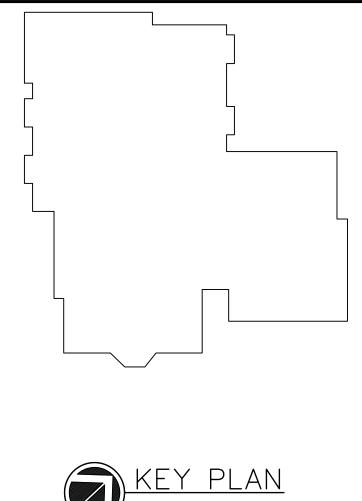
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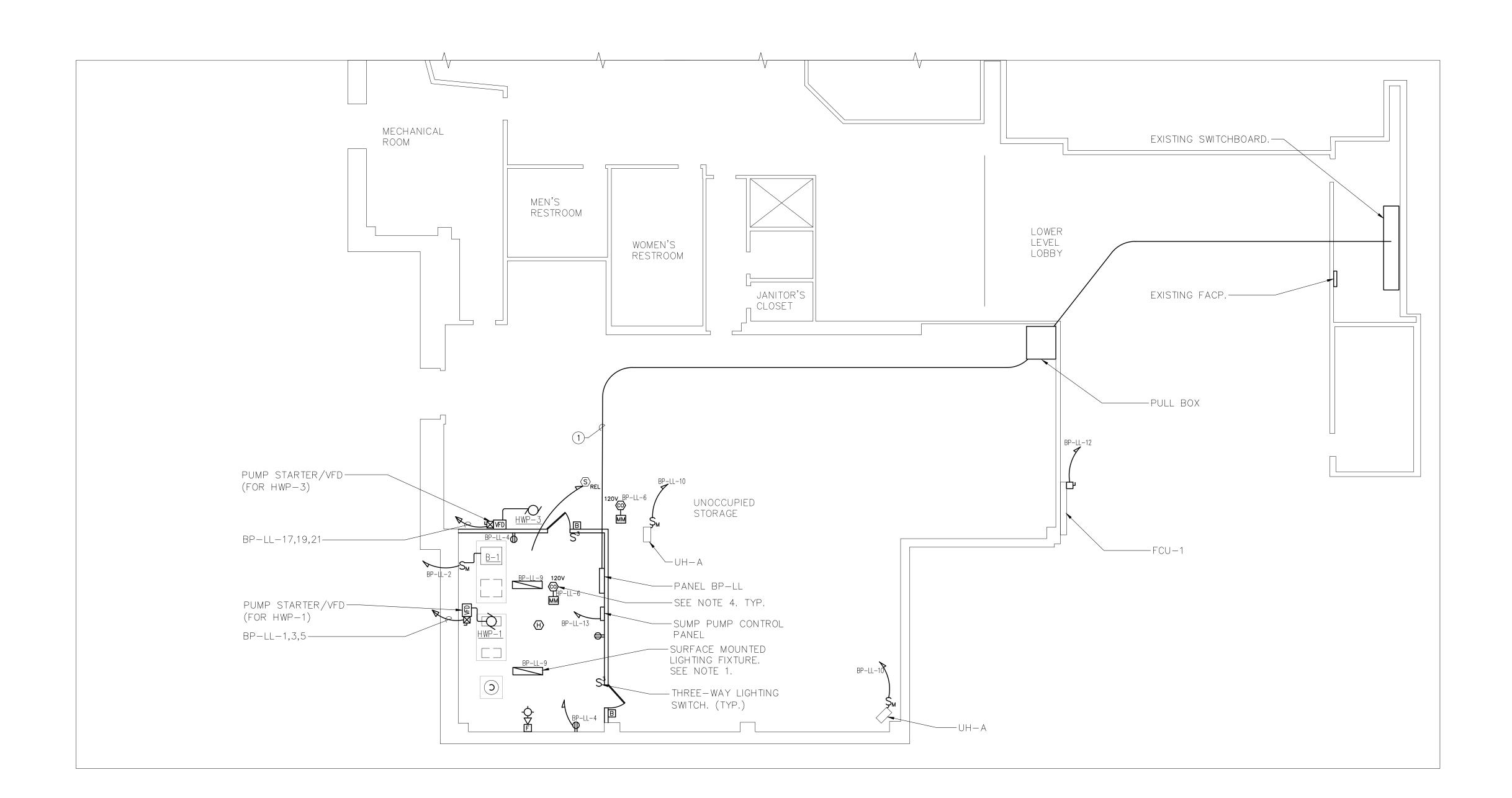
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**GENERAL CONSTRUCTION DETAILS** 

AS NOTED DRAWING NO.

7/16/19

SYMBOLS	S AND ABE	BREVIATIONS		DEFINITION OF TERMS	OLA Consulting Eng
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL ABBREVIATION DESCRIPTION	1.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "CLIENT" IS USED, IT MUST	11   1
	_	CONDUIT AND WIRING	DEM. DEMOLISH AND REMOVE	BE UNDERSTOOD THAT "OSSINING PUBLIC LIBRARY" IS INTENDED.	50 Broadway, Haw New York 10532 914.747.2800 12 East 49th Stree
	_	CONDUIT & WIRING TO BE REMOVED UON	DISC DISCONNECT	2.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ENGINEER" IS USED, IT MUST BE UNDERSTOOD THAT "OLA CONSULTING ENGINEERS" IS INTENDED.	
— — UG— —	_	BURIED CONDUIT	DWG DRAWING	3.) "WORK" MUST BE DEEMED TO CONSIST OF ALL LABOR AND OPERATIONS, TRANSPORTATION, HOISTING, MATERIALS, TOOLS, EQUIPMENT, SERVICES, INSPECTIONS,	646.849.4110
——ОН——	_	OVERHEAD CONDUCTORS	ELEV ELEVATOR	INVESTIGATIONS, COORDINATION AND SUPERVISION REQUIRED AND / OR REASONABLY NECESSARY TO PRODUCE THE CONSTRUCTION REQUIRED BY THE CONTRACT	CONSULTING ENGINEERS olace.com
	_	HOMERUN TO PANEL, ARROWS INDICATE # 1P	EMT ELECTRICAL METALLIC TUBING	DOCUMENTS.	CLIENT
$\triangleleft$	_	MULTI-POLE HOMERUN	EM EMERGENCY	4.) "FURNISH" MEANS THE DESIGN, FABRICATION, PURCHASE AND DELIVERY TO THE JOB SITE.	CELLIVI
	_	ELECTRICAL EQUIPMENT AS INDICATED	EX. EXISTING TO REMAIN	5.) "INSTALL OR INSTALLATION" MEANS THE ACT OF PHYSICALLY PLACING, APPLYING,	
<u> </u>	_	ELECTRICAL EQUIPMENT TO BE REMOVED UON		SÉTTING, ERECTING, ANCHORING, SECURING, ETC., CONSTRUCTION MATERIALS, EQUIPMENT, FURNISHINGS, APPLIANCES, AND SIMILAR ITEMS SPECIFIED AND FURNISHED AT THE JOB SITE. INSTALLATION OF SPECIFIED ITEMS MUST BE COMPLETE IN ALL	
	_	JUNCTION BOX	GFI GROUND FAULT INTERRUPTER	RESPECTS.	
	_	FUSED DISCONNECT SWITCH	HP HORSEPOWER	6.) "PROVIDE" MEANS TO FURNISH AND INSTALL CONSTRUCTION MATERIAL, EQUIPMENT, ETC. AS DEFINED ABOVE.	OSSINING PUBLIC LI 53 CROTON AVE
	_	UNFUSED DISCONNECT SWITCH	MCB MAIN CIRCUIT BREAKER	7.) THE FOLLOWING ARE DEFINITIONS OF SHOP DRAWING STAMP ACTIONS:	OSSINING, NY 105
	_	COMBINATION MOTOR STARTER/FUSED DISC.  MOTOR STARTER	NIC NOT IN CONTRACT  NTS NOT TO SCALE	A.) "NO EXCEPTIONS TAKEN" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO	
	_	MOTOR STARTER  MOTOR		PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY COMMENCE.	
$\bigcirc$		DUPLEX RECEPTACLE	PT PRESSURE TREATED  REL. REMOVE AND RELOCATE	B.) "MAKE CORRECTIONS NOTED" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO	
———		DOUBLE DUPLEX RECEPTACLE	REL. REMOVE AND RELOCATE  RGS RIGID GALVANIZED STEEL	PÉRFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT  DRAWINGS AND/OR SPECIFICATIONS, SUBJECT TO AND IN COMPLIANCE WITH THE ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING FARRICATION	
<u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	_	SINGLE POLE LIGHTNG SWITCH	RTU ROOF TOP UNIT	ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING. FABRICATION AND/OR PURCHASE MAY COMMENCE.	
	_	MOTOR RATED TOGGLE SWITCH	SCH SCHEDULE	C.) "AMEND AND RESUBMIT" MEANS THAT THE COMMENTS AND/OR CORRECTION ARE SO EXTENSIVE AND IMPORTANT THAT THE REVIEWER WANTS TO SEE HOW THE	
		FIRE ALARM COMBINATION AUDIO/VISUAL	SW SWITCH(ES)	COMMENTS AND/OR CORRECTIONS ARE RESOLVED PRIOR TO RELEASE FOR FABRICATION AND/OR PURCHASE. FABRICATIONS AND/OR PURCHASE MAY NOT	
EH	_	DEVICE (15/75 CD - STROBE)	TYP TYPICAL	COMMENCE.	
	_	FIRE ALARM STROBE 15/75 CD	UON UNLESS OTHERWISE NOTED	D.) "REJECTED" MEANS THAT THE SHOP DRAWING DOES NOT COMPLY OR CONFORM TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS. FABRICATION AND/OR PURCHASE	
(S)		SMOKE DETECTOR.	VIF VERIFY IN FIELD	MAY <u>NOT</u> COMMENCE.	
(H)	_	HEAT DETECTOR	V VOLT(S)	TYPICAL BRANCH CIRCUIT WIRING LEGEND	
<b>©</b>	_	CARBON MONOXIDE DETECTOR	VSD VARIABLE SPEED DRIVE	——	
(NG)	_	NATURAL GAS DETECTOR	WP WEATHERPROOF	——→ 3-#12 & 1-#12 GND (3P-20A OR 3P-15A CB)	
o F	_	FIRE ALARM BELL	NOTES:  1.) ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE APPLICABLE FOR THIS PROJECT.		
CM	CM	FIRE ALARM CONTROL MODULE	2.) SEE LIGHTING FIXTURE SCHEDULE FOR LIGHT FIXTURE SYMBOLS.	CIRCUIT # LIGHT FIXTURE TYPE  SWITCH CONTROL	
MM	MM	FIRE ALARM MONITORING MODULE	GENERAL NOTES	-RECEPTACLE LIGHT FIXTURE	
FACP	FACP	FIRE ALARM CONTROL PANEL	1.) ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED (UON) EXISTING TO	NOTES:	KEY PLAN
-W-	EOL	END OF LINE RESISTOR	REMAIN (EX.).	1.) EACH 120V AND 277V CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. SHARED NEUTRAL HOMERUNS ARE NOT PERMITTED.	
/ 200AS	_	ENCLOSED CIRCUIT BREAKER	2.) THE DRAWINGS ARE TO BE CONSIDERED SCHEMATIC ONLY AND DO NOT NECESSARILY SHOW THE EXACT LOCATIONS AND DETAILS OF THE WORK TO BE	2.) CONDUCTORS SHALL BE INCREASED FOR VOLTAGE DROP AND DERATING AS PER APPLICABLE ELECTRICAL CODE. FOR CIRCUITS THAT ARE BETWEEN 100' AND	NORTH
150AF	GND	FUSED SWITCH  GROUND AS PER LOCAL CODE	INSTALLED.  3 ) THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ORTAINING ALL	150' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS SHALL BE #10 AWG. FOR CIRCUITS THAT ARE BETWEEN 150' AND 225' IN LENGTH, PHASE AND NEUTRAL	
OR	GNU	GROUND AS PER LOCAL CODE  GROUND BAR	3.) THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAYING ALL FEES ASSOCIATED WITH THIS WORK	CONDUCTORS SHALL BE #8 AWG. FOR LENGTHS GREATER THAN 225' IN LENGTH, VERIFY CONDUCTOR SIZES WITH ENGINEER.	
		GROUND BAR  GROUND ROD	INCLUDING FILING WITH THE UTILITY COMPANY (AS REQUIRED), AND WITH LOCAL AUTHORITY HAVING JURISDICTION.		1
	СТ	CURRENT TRANSFORMER	6.) ALL CONDUCTORS SHALL BE COPPER UON "ON DRAWINGS".		
<u> </u>	_	UTILITY POLE	8.) CIRCUIT NUMBERS ARE FOR INFORMATION PURPOSES ONLY. ACTUAL CIRCUIT NUMBERS SHALL BE DETERMINED IN THE FIELD.		
B	_	BOILER BREAK GLASS STATION	9.) CORE DRILLING OR TRENCHING THROUGH AN EXISTING FLOOR SLAB, WHEN		
	NC	NORMALLY CLOSED CONTACTS	RÉQUIRED, SHALL BE COORDINATED WITH THE OWNER. FLOOR SLABS SHALL BE RADAR SCANNED PRIOR TO CORE DRILLING OR TRENCHING. ALL WORK, INCLUDING		
<del></del>	NO	NORMALLY OPEN CONTACTS	CORE DRILLING, RADAR SCAN, INSTALLATION OF FIRE STOPPING, & CONDUIT/CABLE INSTALLATION SHALL BE PERFORMED DURING NON-BUSINESS		
M	MD	MOTORIZED DAMPER	HOURS AND INCLUDED IN BASE BID. USE EXTREME CAUTION DURING ANY CUTTING OPERATION TO AVOID DAMAGE TO EXISTING EQUIPMENT/SYSTEMS. ANY		1 ISSUED FOR BID
	SD OR CFSD	SMOKE DAMPER	ITEMS DAMAGED AS A RESULT OF CORE DRILLING SHALL BE REPAIRED AT NO COST TO THE CLIENT. ALL CORES SHALL BE FIRE SEALED.		No. ISSUE OR REVISION
UH UH	UH	UNIT HEATER	14.) CEILING MOUNTED RECEPTACLES SHALL BE MOUNTED FLUSH TO CEILING.		No use, reproduction or dissemination may be ma
	А	AMPERE(S)	15.) UNLESS OTHERWISE NOTED, DISCONNECT SWITCHES, STARTERS, HOAS AND		and the concepts set forth without the prior writt OLA Consulting Engineers, PC. Copyright ©
	AC	AIR CONDITIONER	MOTOR RATED TOGGLE SWITCHES FOR MECHANICAL PUMPS, CABINET AND UNIT HEATERS, RETURN FANS, ROOF FANS, VAV BOXES, COMPRESSORS, FAN COIL UNITS, AIR HANDLERS AND CONDENSERS SHALL BE FURNISHED BY THE		PROJECT TITLE
	ACC	AIR CONDITIONER CONDENSER	MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.  COORDINATE ALL WORK WITH THE MECHANICAL CONTRACTOR.		OSSINING PUBLIC L
	AFF	ABOVE FINISHED FLOOR	21.) ALL CO ALARMS TO BE 120V, MULTI STATION HEADS WITH NON—REMOVABLE,		BÖİLER PLANT A   HVAC UPGRADI
	AF 	AMPERAGE OF FUSE	NON-REPLACEABLE, 10 YEAR MINIMUM BATTERY BACKUP, U.O.N. PROVIDE WIRING AS REQUIRED BETWEEN HEADS.		53 CROTON AVENUI OSSINING, NY 10562
	AGL	ABOVE GRADE LEVEL	24.) THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CUTTING, PATCHING, PAINTING, AND FINAL RESTORATION REQUIRED TO FACILITATE THE DEMOLITION AND		
	AL	ALUMINIUM  ARC FAULT INTERRUPTER	INSTALLATION OF ALL ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO		DRAWING TITLE
	ARC	ARC FAULT INTERRUPTER  AMPERAGE OF SWITCH	PANELBOARDS, CONDUITS, WIRING, DEVICES, FIXTURES, ETC. INCLUDING ABOVE CEILINGS. CONTRACTOR TO REMOVE AND REPLACE CEILINGS, AND OPEN AND		    ELECTRICAL SYMB
	BCW	BARE COPPER WIRE	PATCH WALLS, AS REQUIRED TO EXECUTE THE ELECTRICAL WORK.		ABBREVIATIONS
	BLDG	BUILDING			GENERAL NOTE
		CONDUIT			SEAL SCALE F
	C				SCALE SCALE  AS NOTED
	C CKT	CIRCUIT			
	C CKT CLG				DRAWN BY D
		CIRCUIT			





## <u> WIRING/CONDUIT LEGEND:</u>

1) 4-#2/0 & 1-#6 GND IN 2"C.

### NOTES:

- 1. PROVIDE (2) NEW LIGHTING FIXTURES TYPE ECLIPSE LIGHTING 574-OPL-LED/80W-3K-EBU-BK OR APPROVED EQUAL.
- 2. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION
- 3. EQUIPMENT DENOTED WITH "EX." ARE EXISTING TO REMAIN.
- 4. CARBON MONOXIDE SHALL BE 120V HARDWIRED. CARBON MONOXIDE ALARM SHALL BE SUPERVISED BY THE FACP VIA MONITOR MODULE. PROVIDE ALL PROGRAMMING AS REQUIRED. COORDINATE FINAL LOCATIONS IN FIELD.
- 5. REFER TO DWG E5.1 FOR CIRCUIT OF NEW LIGHTING FIXTURES IN BOILER ROOM.
- 6. COORDINATE EQUIPMENT INSTALLATION WITH THE FIELD CONDITIONS.



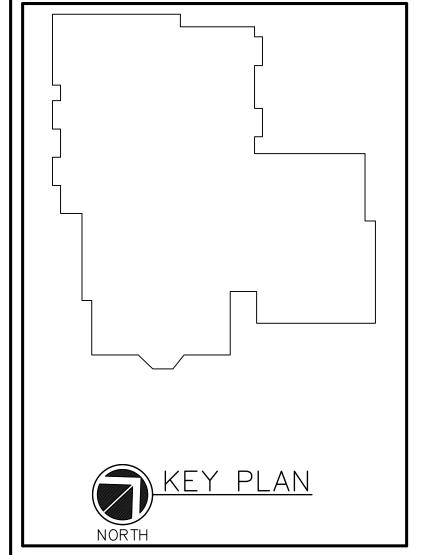
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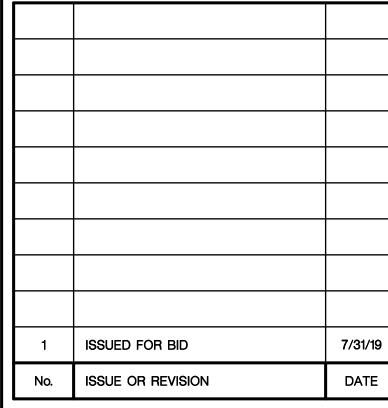
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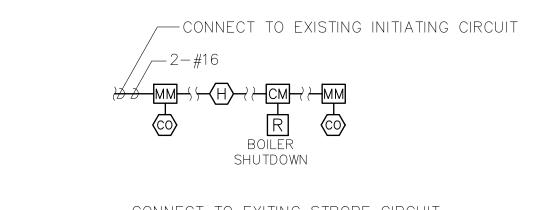
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DRAWING TITLE

ELECTRICAL LOWER LEVEL PARTIAL NEW WORK PLAN

SEAL	SCALE	PROJECT NO.
SEAL		PROJECT NO.
	AS NOTED	
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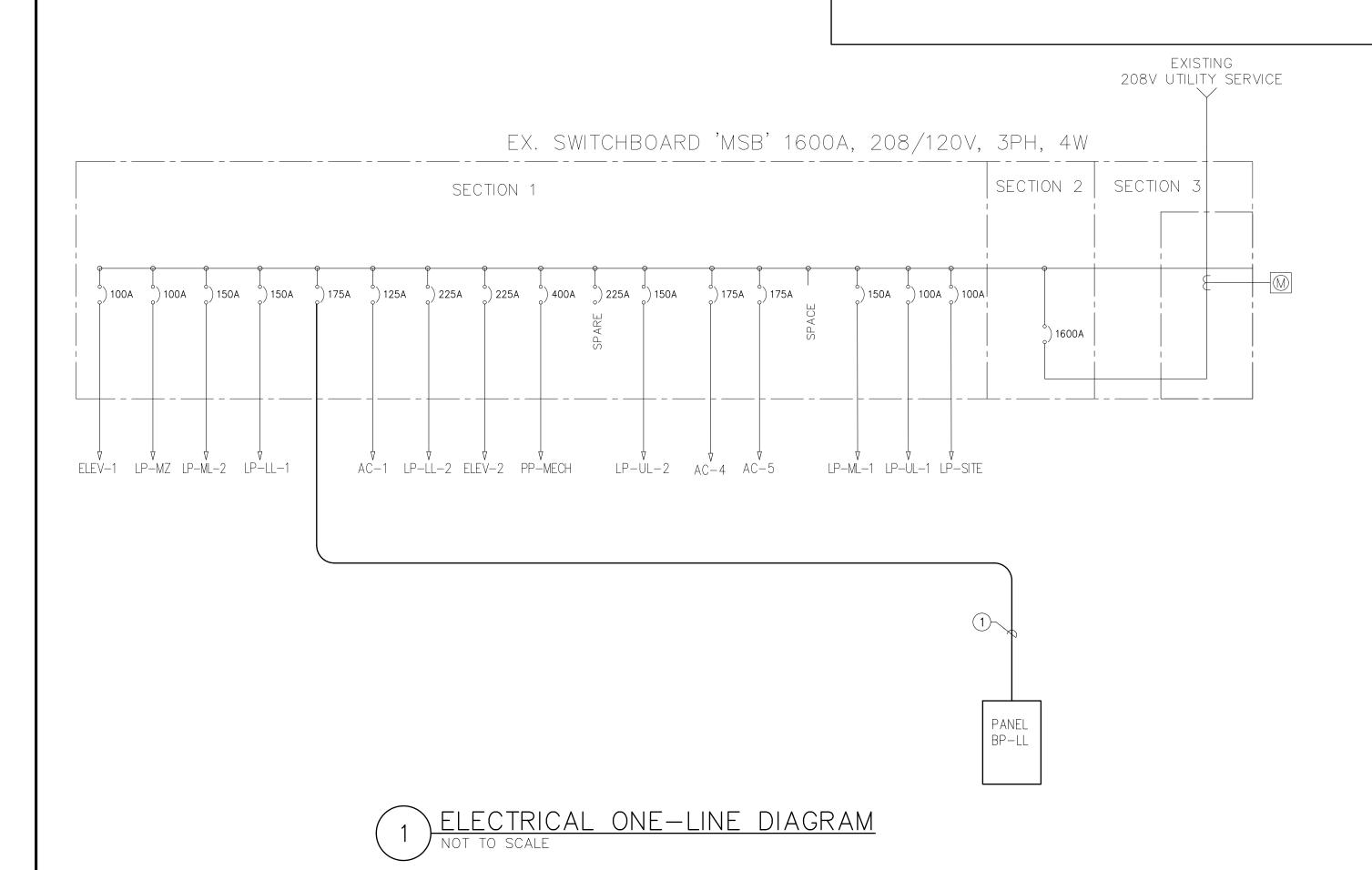


# 2 FIRE ALARM RISER DIAGRAM SCALE: NONE

#### RISER NOTES:

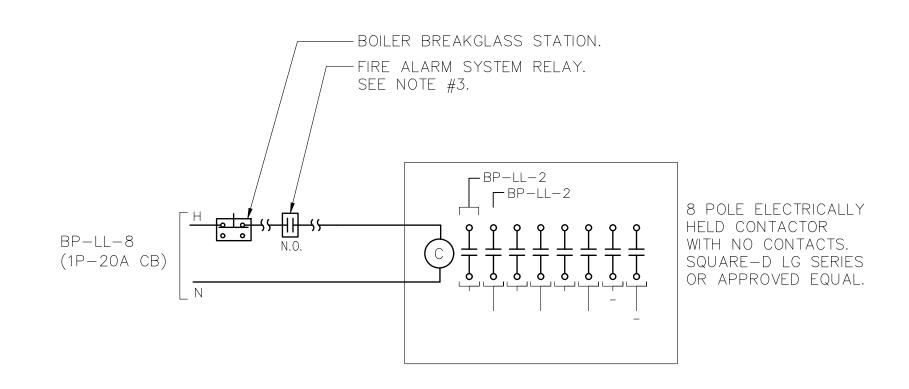
- 1. THIS IS NOT A POINT—TO—POINT WIRING DIAGRAM. PRIOR TO STARTING ANY WORK, A WORKING POINT—TO—POINT WIRING DIAGRAM SHALL BE OBTAINED FROM FIRE ALARM SYSTEM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
- 2. ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BASE BID ALL 120V CIRCUITS THAT ARE REQUIRED TO SUPPORT THE OPERATION OF THE FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS WITH THE FIRE ALARM VENDOR.
- 3. PROVIDE ALL NECESSARY WIRING, MODULES, COMPONENTS AND PROGRAMMING REQUIRED TO CONNECT NEW DEVICES TO EXISTING SYSTEM.
- 4. DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR AND INSTALLED IN DUCT WORK BY MECHANICAL CONTRACTOR.
- 5. ALL VISUAL ALARM DEVICES SHALL BE ADA COMPLIANT.

	main rating: <u>225A</u>	MA	IN C.B.	: <u>150A</u>	-	KAIC RATING: <u>10KAIC</u>	
	VOLTAGE: <u>208Y/120V</u>	PH	ASE: 3	<u>S</u> WIF	RE: <u>4</u>	MOUNTING: <u>SURFACE</u>	
CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC NO.
1				1	20	BOILER B-1	2
3	HWP-1	20	3	1	20	RECEPTACLE	4
5				1	20	CO ALARM	6
7	SPARE	20	1	1	20	CONTACTOR	8
9	BOILER ROOM LIGHTING	20	1	1	20	UH-A	10
11	SPARE	20	1	1	20	FCU-1	12
13	SUMP PUMP	20	1	1	20	SPARE	14
15	SPARE	20	1	1	20	SPARE	16
17				1	20	SPARE	18
19	HWP-3	20	3	1	20	SPARE	20
21				1	20	SPARE	22
23	SPARE	20	1	1	20	SPARE	24
25	SPARE	20	1	1	20	SPARE	26
27	SPARE	20	1	1	20	SPARE	28
29	SPARE	20	1	1	20	SPARE	30
31	SPARE	20	1	1	20	SPARE	32
33	SPACE	20	1	1	20	SPACE	34
35	SPACE	20	1	1	20	SPACE	36
37	SPACE	20	1	1	20	SPACE	38
39	SPACE	20	1	1	20	SPACE	40
41	SPACE	20	1	1	20	SPACE	42



#### WIRING/CONDUIT LEGEND:

1) 4-#2/0 & 1-#6 GND IN 2"C.



# BOILER EMERGENCY SHUTDOWN

WIRING DIAGRAM

#### NOTES:

1.) ALL EQUIPMENT AND WIRING ASSOCIATED WITH THIS DIAGRAM SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UON.

2.) SEE ELECTRICAL PLANS FOR BRANCH CIRCUITRY INFORMATION.

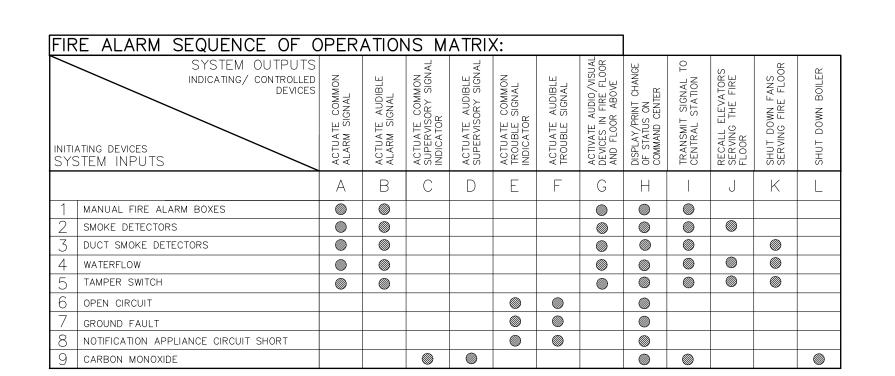
3.) FIRE ALARM PANEL SHALL BE PROGRAMMED SO THAT ACTIVATION OF ANY BOILER ROOM HEAT DETECTOR OR PULL STATION SHALL OPERATE THE CONTROL RELAY CONTACTS TO SHUTDOWN THE BOILERS.

4.) CONTACTOR SHALL BE INSTALLED IN A NEMA—1 ENCLOSURE EQUIPPED WITH A LOCKABLE HINGED COVER.

5.) ALL RELAYS TO BE INSTALLED IN NEMA-1 ENCLOSURES.

6.) BOILER BREAKGLASS STATIONS SHALL BE AS MANUFACTURED BY SQUARE—D, TYPE KYK117 OR APPROVED EQUAL.

7.) INTERCEPT SOURCE OF POWER TO EACH MOTOR CONTROL CIRCUIT AND ROUTE CIRCUIT THRU CONTACTOR. ALL WIRING TO BE 2-#12 UON. COORDINATE WITH MECHANICAL CONTRACTOR.



#### MATRIX NOTES:

1. EXISTING FIRE ALARM SYSTEM SEQUENCE OF OPERATIONS SHALL NOT BE ALTERED WITH EXCEPTION OF ADDITIONAL SEQUENCE FOR CARBON MONOXIDE DETECTORS NOTED IN MATRIX.

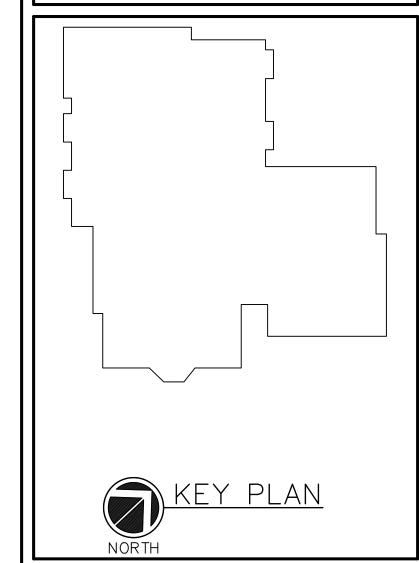


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ELECTRICAL RISER DIAGRAM AND DETAILS

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