



NYACK UFSD UPPER NYACK ELEMENTARY SCHOOL BOILER REPLACEMENT PROJECT

336 N BROADWAY, NYACK, NY 10960
ISSUED FOR BID: 12/16/2024



CSARCH - ARCHITECTS

GREENMAN - PEDERSEN, INC. - MEP ENGINEER

QuES&T ASBESTOS ABATEMENT DESIGNER

DRAWING LIST - VOLUME 3

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STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:
BOILER REPLACEMENT PROJECT 50-03-04-03-0-007-024

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 226-2302.00



UPPER NYACK ELEMENTARY SCHOOL,
336 N BROADWAY, NYACK, NY 10960

VICINITY MAP

NTS



VOLUME 3 OF 3

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ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ADA	AMERICANS WITH DISABILITIES ACT
ADD	ADDENDUM
ADMIN	ADMINISTRATIVE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT / ARCHITECTURAL
AV	AUDIO VISUAL
BLDG	BUILDING
BOT OR B/	BOTTOM OF
BSMT	BASEMENT
CJ	CONTROL / CONSTRUCTION JOINT
CL	CENTERLINE
CLS	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONG	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
ED	EDUCATION
EIPS	EXTERIOR INSULATION FINISH SYSTEM
ELECT	ELECTRIC / ELECTRICAL
ELEV	ELEVATION
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUIPMENT
EXIST	EXISTING
EJ	EXPANSION JOINT
EXT	EXTERIOR
FIN	FINISH
FIN FL	FINISH FLOOR
FIXT	FIXTURE
FLR	FLOOR
FRT	FIRE-RETARDANT-TREATED MATERIAL
FTG	FOOTING
G	GROUND
GA	GAUGE
GAL	GALLON(S)
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GWB	GYPSUM WALL BOARD
GWB5	GYPSUM WALL BOARD SOFFIT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVS	HEATING
HVAC	HEATING/VENTILATING/AIR CONDITIONING
ID	INSIDE DIMENSION
IN	INCH
INT	INTERIOR
JAN	JANITOR
JC	JANITOR'S CLOSET
JST	JOIST
JT	JOINT
LAB	LABORATORY
LB	POUND
LN	LINEAR
LVL	LEVEL
MAN	MANUAL
MAS	MASONRY
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
NA	NOT APPLICABLE
NC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OPT	OPTIONAL
OVR	OVERALL
OZ	OUNCE
PERIM	PERIMETER
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLAS	PLASTER
PLYMD	PLYWOOD
PNL	PANEL
PNT	PAINT
POLYISO	POLYISOCYANURATE
PPT	PRESSURE PRESERVATIVE TREATED
PR	PAIR
PREP	PREPARATORY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
RAD	RADIUS
REQD	REQUIRED
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
SCH	SCHEDULED
SECT	SECTION
SF	SQUARE FEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL / STRUCTURE
SUSP	SUSPENDED
SAC	SUSPENDED ACOUSTICAL CELINGS
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TECH	TECHNOLOGY
TEMP	TEMPORARY
TMFD	TEMPERED
TM	TOP OF MASONRY
TOS	TOP OF STEEL
TYF	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WOOD
WPT	WOOD PRESERVED-TREATED MATERIAL
WST	WEIGHT
YD	YARD

ARCHITECTURAL LEGEND

MATERIAL INDICATIONS	
	EARTH
	GRANULAR FILL
	BRICK
	CONCRETE MASONRY UNIT
	CONCRETE
	GROUT
	ROUGH WOOD BLOCKING
	SHIM
	FINISH WOOD
	PLYWOOD
	SHEATHING
	RIGID INSULATION
	BATT INSULATION
	SPRAY FOAM INSULATION
	EPS INSULATION
	STEEL

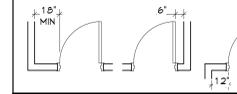
DIMENSIONING CONVENTIONS	
	FACE OF STUD OR CMU
	COLUMN CENTER LINE

SYMBOLS	
	ROOM NAME
	ROOM NUMBER
	AREA OF ROOM
	DOOR NUMBER, REFER TO A100 DRAWINGS
	WINDOW TAG, REFER TO A100 DRAWINGS
	BORROWED LIGHT NUMBER, REFER TO A100 DRAWINGS
	STOREFRONT / CURTAIN WALL NUMBER, REFER TO A100 DRAWINGS
	COLUMN GRID DESIGNATION
	PARTITION TAG, REFER TO A100 DRAWINGS
	HOUR RATING OF PARTITION
	ADDITIONAL NOTES FOR PARTITION
	REVISION NUMBER
	KEY NOTE, NEW WORK
	KEY NOTE, DEMOLITION WORK
	ELEVATION TAG
	HANDICAPPED ACCESSIBLE ELEMENT OR FIXTURE

PLAN GRAPHICS LEGEND

	EXISTING CONSTRUCTION TO REMAIN
	EXISTING CONSTRUCTION TO BE REMOVED
	NEW CONCRETE MASONRY WALL
	NEW METAL STUD WALL
	NEW BRICK VENEER
	EXISTING DOOR TO REMAIN
	EXISTING DOOR TO BE REMOVED
	NEW DOOR

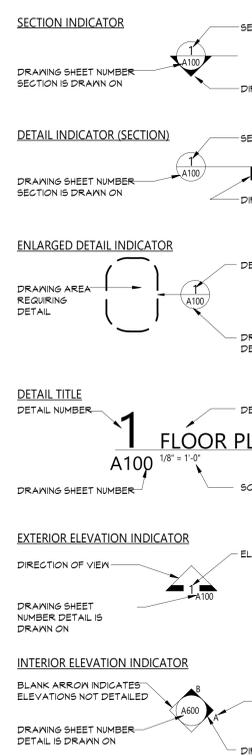
FINISHED DOOR OPENINGS SHALL BE LOCATED AS INDICATED BELOW UNO. DIMENSIONS SHOWN ARE CLEAR DIMENSIONS FROM INSIDE OF FRAME TO WALL FINISH.



GENERAL NOTES

- DIMENSIONS ARE GIVEN THIS (UNLESS NOTED OTHERWISE)
 - TO FACE OF MASONRY WALL
 - TO FACE OF METAL STUD
 - TO COLUMN CENTERLINES
 - TO FINISH FACE OF SOFFIT OR CEILING
 - FACE OF EXISTING CONSTRUCTION
- DO NOT SCALE DRAWINGS. IF A DIMENSION IS NOT SHOWN, BRING IT TO THE ATTENTION OF THE ARCHITECT FOR VERIFICATION BEFORE PROCEEDING WITH THE ASSOCIATED WORK.
- WALLS ON COLUMN LINES ARE CENTERED, UNO.
- ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE VERIFIED IN FIELD. CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK IN THAT AREA.
- LAYOUT OF TOILET FIXTURES AND ACCESSIBILITY CLEARANCES ARE SHOWN AS CLEAR DIMENSION. CONTRACTORS ARE REQUIRED TO COORDINATE LAYOUTS OF PARTITIONS, UTILITY CONNECTIONS AND THICKNESS OF FINISHES TO ALLOW THESE CLEAR DIMENSIONS.
- ALL ELEVATIONS (X-X') ARE REFERENCE FROM FIRST FLOOR ELEVATION.
- ALL WOOD BLOCKING WITHIN 2'-0" OF GRADE SHALL BE PRESSURE TREATED.
- ALL FLOOR PENETRATIONS SHALL BE SMOKE-SEALED AND/OR FIRE STOPPED. COORDINATE WITH H' DWGS FOR SMOKE / FIRE DAMPER REQUIREMENTS.
- FOR INTERIOR PARTITION TYPES, REFER TO DRAWING A101.
- FOR DOOR SCHEDULE, REFER TO DRAWING AF101.
- FOR FINISH SCHEDULE, REFER TO DRAWING AF101.
- ALL EXPOSED SURFACES OF NEW PARTITIONS AND SOFFITS ARE TO BE FINISHED.
- PROVIDE PATCH TO MATCH EXISTING FINISHES AT ALL WALL REMOVAL AREAS, COORDINATE WITH DEMOLITION DRAWINGS AND SPECIFICATIONS.
- FOR ALL MATERIAL TESTING REFER TO SPECIFICATION DIVISION 000220.
- ALL CONSTRUCTION SHOWN IS NEW UNLESS NOTED OTHERWISE.

DETAIL INDICATOR LEGEND



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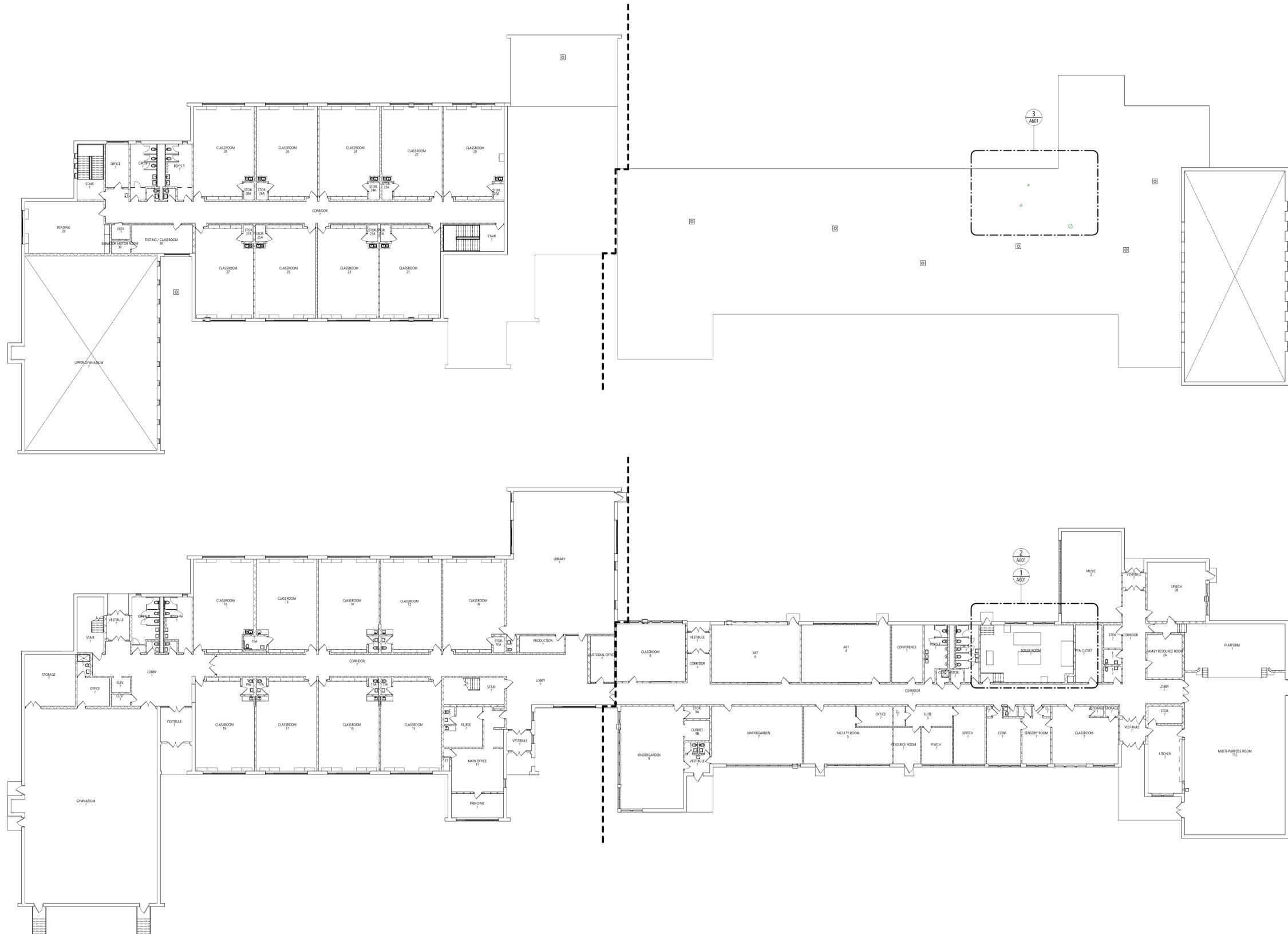
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Sheet Title
SYMBOLS,
ABBREVIATIONS,
AND MISC

Sheet No.
UNES
G001
CONSTRUCTION DOCUMENTS

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GENERAL NOTES

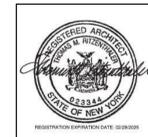
- 1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
- 2. REFER TO A600 SERIES DRAWINGS FOR ENLARGED FLOOR AND ROOF PLANS, DETAILS, ADDITIONAL DIMENSIONS AND DETAILED INFORMATION.

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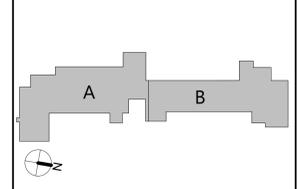
OVERALL FLOOR PLANS

Sheet No.

UNES
G101

CONSTRUCTION DOCUMENTS

KEY PLAN



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PRE-ABATEMENT WORK NOTES:

1. THESE DRAWINGS HAVE BEEN PREPARED UTILIZING THE OWNERS' ORIGINAL CONSTRUCTION DOCUMENTS IN ORDER TO ILLUSTRATE THE EXISTING CONDITIONS OF THE SITE AND STRUCTURES THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL VERIFICATION OF ALL EXISTING CONDITIONS IN THE FIELD.
2. THE CONTRACTOR SHALL DETERMINE EXACT FINAL LOCATIONS OF PERSONNEL AND WASTE DECONTAMINATION ENCLOSURES, PICK UP AREA FOR REFUSE AND ASBESTOS DEBRIS. THESE LOCATIONS SHALL BE REVIEWED AND PROPERLY APPROVED BY THE OWNER PRIOR TO COMMENCEMENT OF WORK. THIS CONTRACTOR SHALL ESTABLISH, LABEL AND MAINTAIN PROPER EXITS AND WAYS OF EGRESS WITHIN EACH WORK AREA FOR NORMAL AND EMERGENCY USE BY WORKERS DURING ALL ABATEMENT ACTIVITIES.
3. THE CONTRACTOR, PRIOR TO BIDDING SHALL BE RESPONSIBLE TO BECOME COMPLETELY FAMILIAR WITH ALL ASPECTS OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO, ALL DEMOLITION AND CONSTRUCTION WORK AS SHOWN IN THE COMPLETE SET OF DRAWINGS AND IN THE PROJECT MANUAL / SPECIFICATIONS AND ASBESTOS SURVEY REPORTS IN ORDER THAT THE FULL SCOPE OF WORK WHICH MAY ENCOUNTER ASBESTOS CONTAINING MATERIALS IS UNDERSTOOD AND ACCOUNTED FOR BY THE CONTRACTOR IN UNDERTAKING THIS PROJECT. A COPY OF THE ASBESTOS SURVEY REPORT CAN BE REQUESTED FROM THE OWNERS' ENVIRONMENTAL CONSULTANT AND WILL BE AVAILABLE AT THE PRE-BID MEETING. ADDITIONAL REPORT REQUESTS MUST BE SUBMITTED IN WRITING SEVEN CALENDAR DAYS IN ADVANCE OF THE BID OPENING.
4. PRIOR TO ABATEMENT ALL CONTRACTORS WILL SURVEY EXISTING CONDITIONS IN THE ABATEMENT AND GENERAL WORK AREAS. ITEMS / MATERIALS, ETC., DAMAGED OR NON-FUNCTIONAL SHALL BE LISTED, NOTED, PHOTOGRAPHED AND REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS SHALL BE REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS SHALL BE ASSUMED TO BE IN GOOD CONDITION AND WORKING ORDER. IT SHALL BE THE RESPONSIBILITY OF THE ABATEMENT CONTRACTOR TO MAINTAIN ALL MATERIALS, ITEMS, EQUIPMENT, SYSTEMS, ETC., IN THEIR ORIGINAL CONDITION AND RETURN TO OWNER/GENERAL CONTRACTOR, ETC., IN SAME CONDITION AT THE END OF THIS CONTRACT.

ASBESTOS ABATEMENT NOTES

ASBESTOS REMOVAL GENERAL NOTES:

1. ASBESTOS ABATEMENT INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY A NYS DEPARTMENT OF LABOR LICENSED ASBESTOS ABATEMENT CONTRACTOR, WHO SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND QUANTITIES PRIOR TO BID.
2. THE CONTRACTOR SHALL PERFORM ALL CONTRACT WORK IN ACCORDANCE WITH CONTRACT SPECIFICATIONS, NEW YORK STATE DEPARTMENT OF LABOR (NYSDDL) INDUSTRIAL HEALTH CODE RULE 56, OSHA, NESHAPS, AHERA, NYSDEC AND ALL OTHER APPLICABLE CODES.
3. THE CONTRACTOR SHALL MAINTAIN THE SITE AS NEAT AS POSSIBLE AND ORDERLY DURING (THE COURSE OF)THE WORK. ALL LOOSE DEBRIS WHICH MAY (BECOME WINDBORNE) BLOW OFF THE SITE. SHALL BE COLLECTED AND DISPOSED OF PROPERLY BY THE CONTRACTOR ON A DAILY BASIS AS PART OF THE PROJECT WORK.
4. THE CONTRACTOR SHALL PROVIDE BARRIERS AROUND THE WORK AREAS IN ORDER TO ENSURE SAFE PASSAGE BY ANY PERSON. THESE BARRIERS SHALL ALSO SERVE TO KEEP ALL UNAUTHORIZED PERSONS OUT OF THE PROJECT AREA FOR THE DURATION OF THE WORK.
5. VARIANCES: CONTRACTOR SHALL PAY FOR AND OBTAIN ANY NECESSARY SITE SPECIFIC VARIANCES.
6. THE CONTRACTOR SHALL MAINTAIN SECURITY IN THE BUILDING AND THE WORK AREAS AT ALL TIMES.
7. PROJECT STAGING, STORAGE, SCHEDULING AND ACCESS SHALL BE COORDINATED WITH AND APPROVED BY THE ARCHITECT, CONSTRUCTION MANAGER AND OWNER PRIOR TO PROCEEDING WITH WORK.
8. SHOULD IT BECOME NECESSARY, THE CONTRACTOR SHALL COORDINATE SHUT DOWN AND LOCK OUT / TAG OUT OF THE ELECTRICAL POWER FROM THE OWNERS' POWER, WITH OWNERS' REPRESENTATIVE, PRIOR TO THE COMMENCEMENT OF WORK.
9. ALL TEMPORARY POWER TO THE WORK AREA SHALL BE BROUGHT IN FROM OUTSIDE THE WORK AREA BY ABATEMENT CONTRACTOR / GC THROUGH A GROUND-FAULT CIRCUIT INTERRUPTER AT THE SOURCE.
10. CONTRACTOR SHALL COORDINATE CONNECTION OF WATER SERVICE FOR DECONTAMINATION PURPOSES WITH OWNERS' REPRESENTATIVE. WATER FOR DECONTAMINATION UNITS IS AVAILABLE FROM THE OWNER.
11. THE OWNER OR OWNERS' REPRESENTATIVE IS RESPONSIBLE TO CONTRACT FOR NYSDOL PROJECTS MONITORING / AIR SAMPLING TECHNICIAN SERVICES AS REQUIRED.
12. CONTRACTOR TO PROVIDE A COPY OF SAFETY DATA SHEETS (SDS'S) FOR ANY CHEMICAL AGENTS TO BE USED DURING THE ASBESTOS ABATEMENT TO THE PROJECT MONITOR AND THE OWNERS'S REPRESENTATIVE.
13. CONTRACTOR SHALL REQUEST AND RECEIVE PROJECT MONITOR AND OWNERS' REPRESENTATIVES APPROVAL OF ALL WORK BEFORE ANY ABATEMENT IS UNDERTAKEN.
14. UNDER NO CIRCUMSTANCES SHALL CONTAMINATED WASTE WATER BE DISCHARGED THROUGH A SYSTEM WITHOUT FILTERING. THE MAXIMUM FILTER SIZE OPENING SHALL BE CAPABLE OF RETAINING A 5.0 MICRON PARTICLE SIZE COLLECTION CAPABILITY.
15. DRAWINGS ATTEMPT TO INDICATE THE GENERAL SCOPE OF EXISTING CONDITIONS AND ITEMS AFFECTED BY THE ABATEMENT WORK. CONTRACTOR SHALL EXAMINE THE WORK AREA PRIOR TO FORMULATING HIS BID SHALL INCLUDE FIELD VARIATIONS FROM THOSE SHOWN WITHIN THE GENERAL INTENT OF THE WORK.
16. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASBESTOS CONTAINING MATERIALS CONTAINED WITHIN AND GENERATED FROM THE ABATEMENT PROJECT AND ASSOCIATED WITH ALL PROJECT WORK, IN COMPLIANCE WITH ALL APPLICABLE LAWS, RULES REGULATIONS AND ALL REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.
17. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASBESTOS CONTAINING MATERIALS CONTAINED WITHIN AND GENERATED FROM THE PROJECT AND ASSOCIATED WITH ALL PROJECT WORK, IN THE MOST EFFICIENT AND COST EFFECTIVE METHOD POSSIBLE, WHICH ALSO COMPLIES WITH THE REQUIREMENTS LISTED ABOVE.

POST ABATEMENT WORK NOTES:

1. PROVIDE ALL APPLICABLE CODE RULE 56 PROCEDURES, CLEAN UP AND ADDITIONAL TESTING AS REQUIRED.
2. AFTER FINAL CLEARANCE HAS BEEN ATTAINED, THE ABATEMENT CONTRACTOR, TOGETHER WITH THE PROJECT INSPECTOR AND OWNERS REPRESENTATIVE WILL SURVEY FINAL CONDITIONS IN THE ABATEMENT AND GENERAL WORK AREAS. ITEMS / MATERIALS, ETC., DAMAGED OR NON-FUNCTIONAL SHALL BE LISTED, NOTED, PHOTOGRAPHED AND REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS SHALL BE REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS NOT NOTED, SHALL BE ASSUMED TO BE IN GOOD CONDITION AND WORKING ORDER. IT SHALL BE THE RESPONSIBILITY OF THE ABATEMENT CONTRACTOR TO MAINTAIN ALL MATERIALS, ITEMS, EQUIPMENT, SYSTEMS, ETC. IN THEIR ORIGINAL CONDITION AND RETURN TO OWNER/GENERAL CONTRACTOR, ETC., IN SAME CONDITION AT THE END OF THIS CONTRACT. ANY NEW DAMAGE OR MISSING EQUIPMENT SHALL BE NOTED AND THE COST OFFSET FROM THE CONTRACT.
3. REMOVE ALL TEMPORARY ENCLOSURES, BARRIERS, ETC. REINSTALL ITEMS/WORK PREVIOUSLY REMOVED. ALL TAPE AND ADHESIVE RESIDUALS TO BE REMOVED.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE AGAINST DAMAGE TO THE EXISTING WORK TO REMAIN IN PLACE. ANY DAMAGE TO SUCH WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ARCHITECT AND OWNER AT NO ADDITIONAL COST TO THE CONTRACT.
5. AT COMPLETION OF THE ABATEMENT WORK, A CONDITION SURVEY SHALL BE DONE BY ALL CONTRACTORS AND PROJECT INSPECTOR (SEE NOTE 2.) ANY VARIATION (I.E. DAMAGE BY THE CONTRACTOR) SHALL BE REPAIRED / RESTORED BY THE ABATEMENT CONTRACTOR.
6. THE CONTRACTOR SHALL, UPON COMPLETION OF THE REMOVAL, PROVIDE WRITTEN DOCUMENTATION (INCLUDING ALL APPROPRIATE THIRD PARTY TESTING RESULTS) THAT THE PROJECT WORK AREAS ARE COMPLETELY FREE OF ALL ASBESTOS CONTAINING MATERIALS (CONTEMPLATED FOR REMOVAL UNDER THIS PROJECT, OR PHASE) AT FINAL CLEARANCE.
7. THE CONTRACTOR SHALL PROVIDE RECORDS OF ALL ASBESTOS CONTAINING MATERIALS REMOVED FROM THE SITE, INCLUDING THE COMPOSITION AND VOLUMES OF DISPOSED MATERIALS AND THE FINAL DISPOSAL SITE(S).

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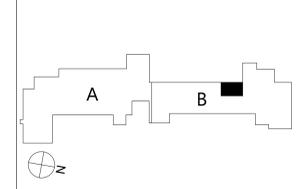
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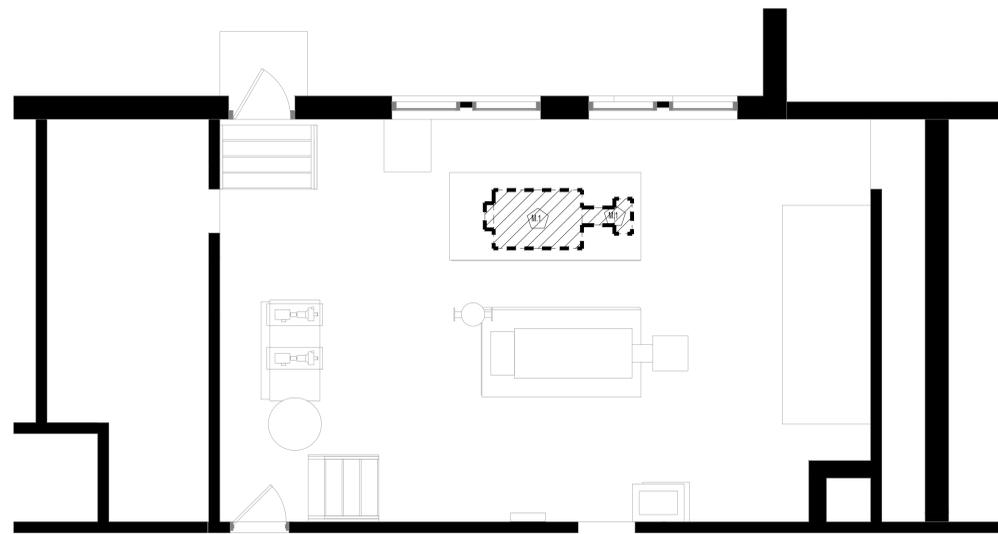
Sheet Title
ASBESTOS ABATEMENT NOTES

Sheet No.
UNES AA000

CONSTRUCTION DOCUMENTS

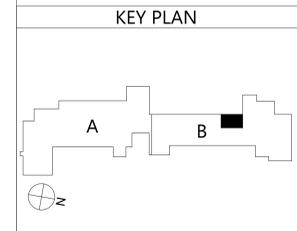
KEY PLAN





ASBESTOS ABATEMENT LEGEND	
	PRESUMED ASBESTOS CONTAINING (PACM) BOILER INTERIORS TO BE REMOVED AND DISPOSED BY ASBESTOS CONTRACTOR.
REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS.	

1 BOILER ROOM ENLARGED ABATEMENT PLAN
 A601 1/4" = 1'-0"



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Sheet Title
 ENLARGED
 BOILER ROOM
 ABATEMENT
 PLAN

Sheet No.
UNES
AA101
 CONSTRUCTION DOCUMENTS

CSARCH



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Sheet Title

ENLARGED PLANS

Sheet No.
**UNES
 A601**

GENERAL NOTES

- REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
- REFER TO A600 SERIES DRAWINGS FOR ENLARGED FLOOR AND ROOF PLANS, DETAILS, ADDITIONAL DIMENSIONS AND DETAILED INFORMATION.

ROOF GENERAL NOTES

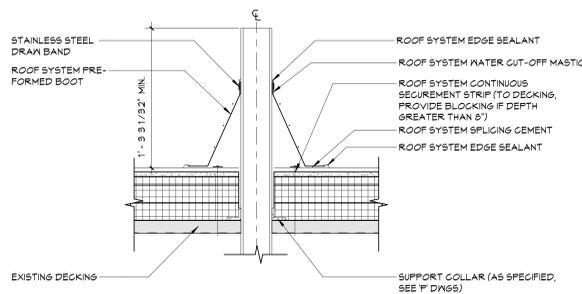
- ALL EXISTING ROOF DRAINS TO REMAIN, UNO.
- REFER TO ROOF SCAN REPORT FOR LOCATION OF WET INSULATION / ROOFING. REMOVE ALL WET INSULATION / ROOFING AND PATCH WITH NEW ROOFING IN KIND TO MATCH EXISTING THICKNESS IN THAT AREA.
- REFER TO ROOF SCAN REPORT FOR CORES TAKEN IN EXISTING ROOFING.
- CURB SIZES SHOWN REFLECT PENETRATING DUCT SIZE. CURB SIZE MAY VARY. REFER TO MECHANICAL DRAWINGS, COORDINATE ACTUAL SIZE OF CURBS IN APPROVED SUBMITTALS.
- NEW ROOF AND ROOF INSULATION FASTENERS TO ENGAGE HIGH POINT OF STEEL DECK FLUTES.
- PROVIDE MINIMUM 1 1/2" RIGID INSULATION AT NEW FLAT ROOF AREAS. TAPER INSULATION TO HEIGHTS INDICATED.

ROOF LEGEND

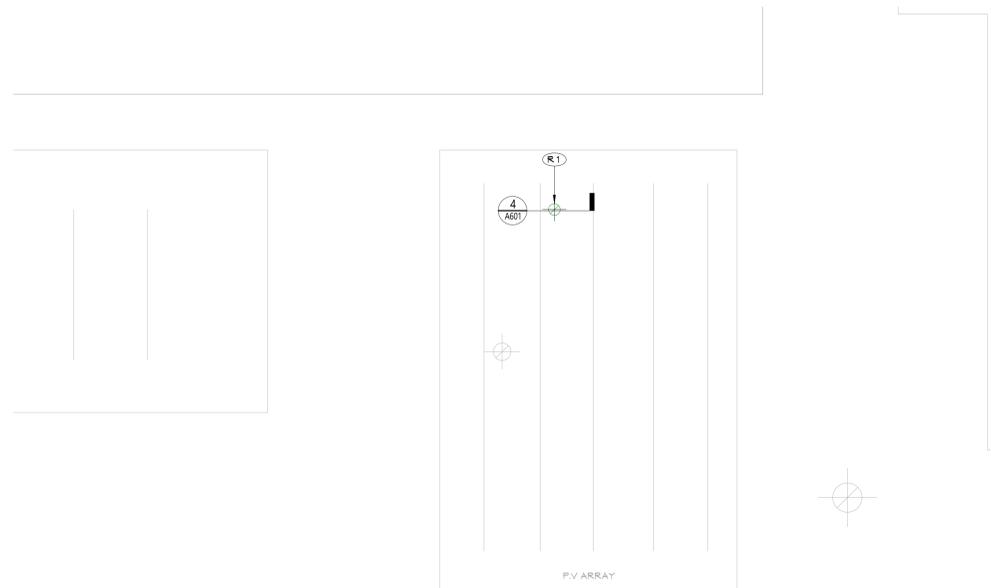
- ROOF DRAIN, REFER TO PLUMBING DRAWINGS
- SECONDARY DRAIN, REFER TO PLUMBING DRAWINGS
- ROOF SCUPPER
- VENT PIPE, REFER TO PLUMBING DRAWINGS
- ROOF PENETRATIONS, REFER TO MECHANICAL DRAWINGS
- ROOF ACCESS HATCH
- INDICATES DIRECTION OF SLOPE AT 1/4" PER FOOT MINIMUM, UNO
- ROOF LADDER
- EXPANSION JOINT

KEYNOTES

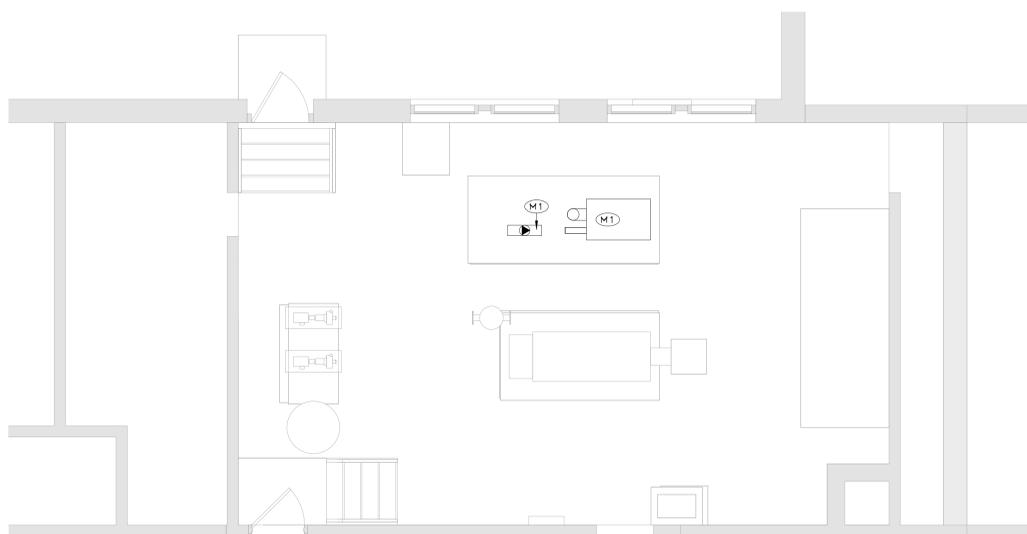
#	Description
M.1	MECHANICAL INSTALLATION, REFER TO 'M' DRAWINGS.
M.1	MECHANICAL REMOVAL, REFER TO 'M' DRAWINGS.
R.1	PROVIDE A NEW CUT OUT OF THE EXISTING ROOF SYSTEM AND DECK TO SUPPORT A NEW BOILER VENT PIPE PENETRATION, REFER TO DETAIL FOR MORE INFORMATION.



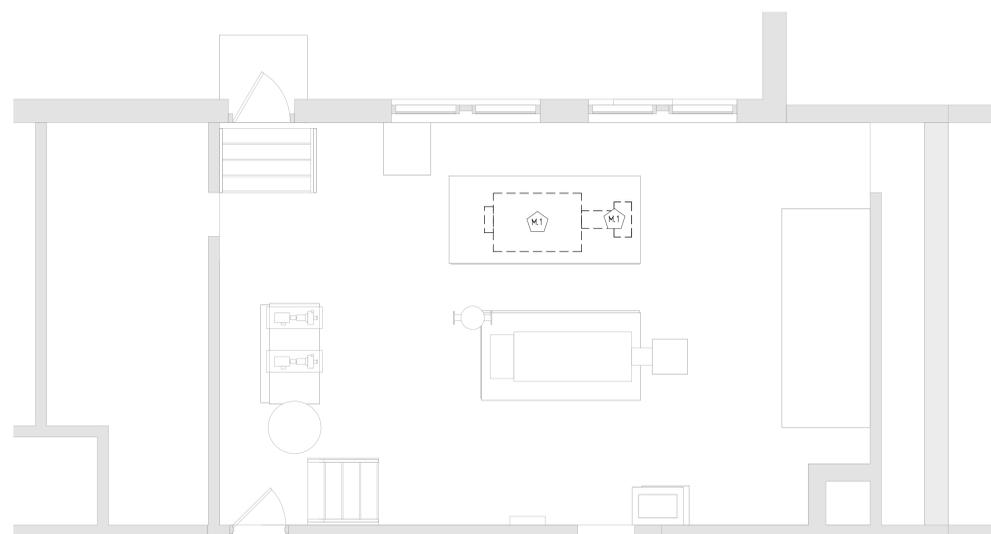
4 VENT PIPE DETAIL
 A601 1/2" = 1'-0"



3 BOILER ROOM ROOF PLAN
 A601 1/4" = 1'-0"

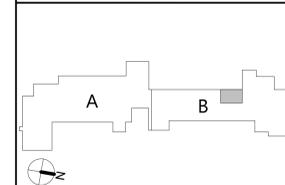


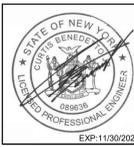
2 ENLARGED BOILER ROOM NEW WORK PLAN
 A601 1/4" = 1'-0"



1 ENLARGED BOILER ROOM DEMOLITION PLAN
 A601 1/4" = 1'-0"

KEY PLAN



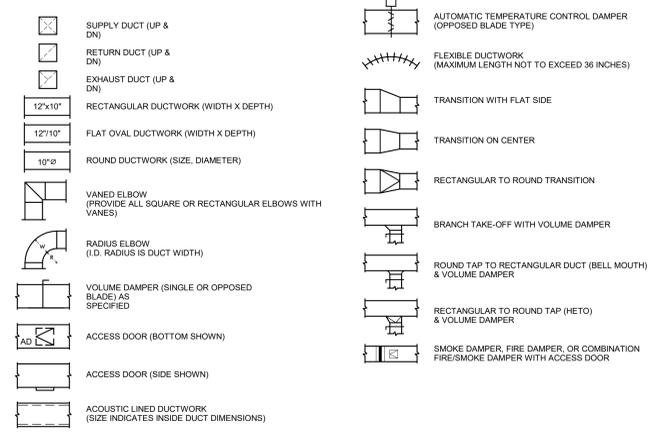


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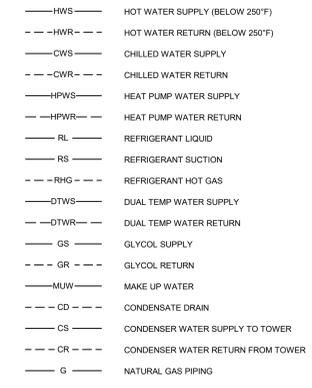
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Sheet Title
MECHANICAL LEGENDS AND ABBREVIATIONS
 Sheet No.
UNES M001
 CONSTRUCTION DOCUMENTS

SHEETMETAL LEGEND



PIPING LEGEND



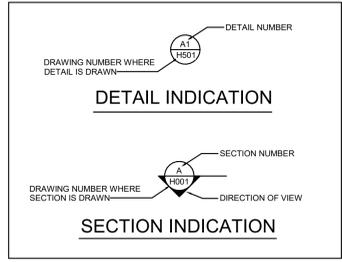
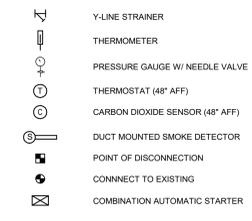
VALVE LEGEND



ABBREVIATION LEGEND

ABBREVIATION	DESCRIPTION
AD	ACCESS DOOR
AF	AIR FILTER
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
AV	AUTOMATIC AIR VENT
BTUH	BRITISH THERMAL UNITS PER HOUR
CD	CEILING DIFFUSER
CEF	CEILING EXHAUST FAN
CFM	CUBIC FEET PER MINUTE
CMS	COMBINATION MOTOR STARTER
CO	CLEAN OUT
CONT	CONTINUED
CR	CEILING RETURN CABINET UNIT HEATER
CUH	CUBIC FEET PER HOUR
D	DECIBELS
DBT	DRY BULB TEMPERATURE
DIA	DIAMETER
DX	DIRECT EXPANSION
E	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EFT	ENTERING FLUID TEMPERATURE
EG	EXHAUST GRILLE
EHC	ELECTRIC HEATING COIL
ER	EXHAUST REGISTER
ET	EXPANSION TANK
EWI	ENTERING WATER TEMPERATURE
EX	EXISTING
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD/SD	COMBINATION FIRE/SMOKE DAMPER
FF	FINAL FILTER
FL	FLOOR
FT	FEET PER MINUTE
FT	FEET
G	GALLONS
GAL	GALLONS PER MINUTE
GR	GLYCOL SUPPLY
GRV	GRAVITY ROOF VENTILATION
GS	GLYCOL SUPPLY
H	HEIGHT
HC	HEATING COIL
HGT	HEIGHT
HP	HORSEPOWER OR HEAT PUMP
HX	HEAT EXCHANGER
IN	INCH
KW	KILOWATT
L	LEAVING AIR TEMPERATURE
LAT	LEAVING AIR TEMPERATURE
LB/HR	POUNDS PER HOUR
LD	LINEAR DIFFUSER
LFT	LEAVING FLUID TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	MAXIMUM
MBH	ONE THOUSAND BRITISH THERMAL UNITS PER HOUR
MC	MECHANICAL CONTRACTOR
MD	MOTORIZED DAMPER
MN	MINIMUM
N	NOT IN CONTRACT
NOM	NOMINAL
OA	OUTSIDE AIR
P	PUMP
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE OR POWER ROOF VENTILATOR
PSIG	POUND PER SQUARE INCH - GAUGE
R	ROOM
RA	RETURN AIR
RF	RETURN FAN
RG	RETURN GRILLE
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RTU	ROOF-TOP UNIT
S	SUPPLY AIR
SA	SUPPLY AIR
SD	SMOKE DAMPER
SF	SUPPLY FAN
SP	STATIC PRESSURE
SR	SUPPLY REGISTER
T	TRANSFER OPENING
TO	TRANSFER OPENING
U	UNIT VENTILATOR
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
V	VENTILATION AIR
VA	VENTILATION AIR
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W	WET BULB TEMPERATURE
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WPD	WATER PRESSURE DROP

SPECIALTY LEGEND

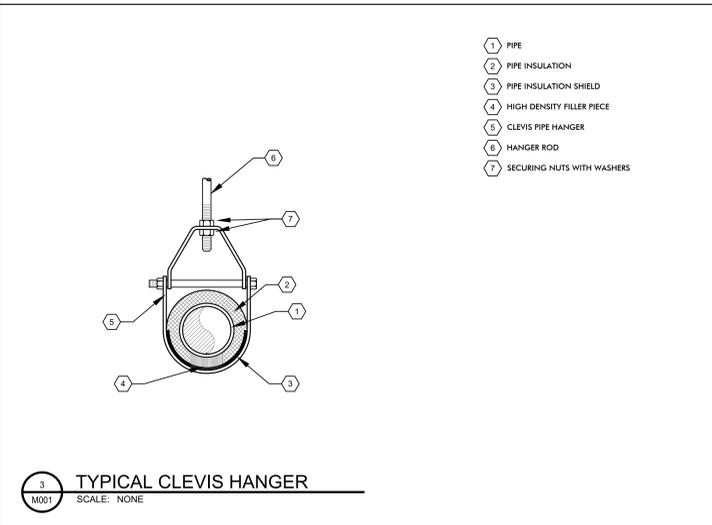
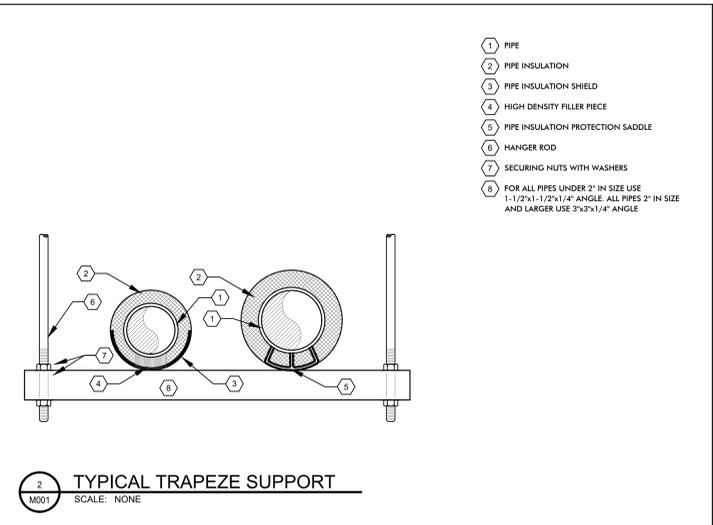
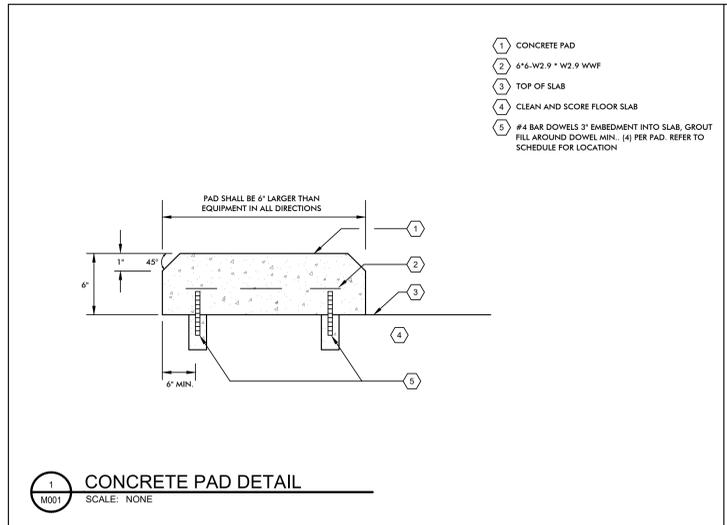


ENERGY CONSERVATION CODE COMPLIANCE STATEMENT:
 TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT THE PLANS AND SPECIFICATIONS COMPLY WITH THE LATEST EDITION OF THE ENERGY CONSERVATION CODE OF NEW YORK STATE.
 THE HVAC SYSTEM WAS DESIGNED IN ACCORDANCE WITH THE 2020 NEW YORK STATE ENERGY CONSERVATION CODE CHAPTER 4 (COMMERCIAL ENERGY EFFICIENCY), ACCEPTABLE PRACTICE FOR COMMERCIAL BUILDINGS METHOD. THE HEAT AND COOLING LOAD CALCULATIONS WERE PERFORMED IN ACCORDANCE WITH ASHRAE HANDBOOK OF FUNDAMENTALS CHAPTER 17 AND 18, AND APPROPRIATE EXTERIOR DESIGN ZONE CONDITIONS.

BOILER SCHEDULE																
TAG	LOCATION	SERVICE	FUEL	GAS PRESSURE MAX. / MIN. (IN. WC)	INPUT (MBH)	NET OUTPUT (MBH)	THERMAL EFFICIENCY	MAX PRESSURE RATING (PSIG)	RELIEF VALVE SETTING (PSIG)	ELECTRICAL			MANUFACTURER			REMARKS
										VOLTS	PHASE	FLA	AERCO	LOCHINVAR	PATTERSON KELLY	
B-2-UNES	BOILER ROOM	BUILDING HEAT	NAT. GAS	14 / 4	2000	1860	94.6	160	60	120	1	16	BMK-2000	ACC. MFG.	ACC. MFG.	1,2,3,4,5,6,7,8,9

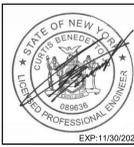
REMARKS: 1) PROVIDE CONDENSATE NEUTRALIZATION KIT; JUM ALKALINE TECHNOLOGIES NBT-610. EACH BOILER TO BE PIPE INDEPENDENTLY TO FLOOR DRAIN.
 2) PROVIDE EXTERNAL GAS REGULATOR APPROVED FOR VENTLESS INSTALLATION; PIETRO FIORENTINI GOVERNOR.
 3) PROVIDE SAFETY RELIEF VALVE.
 4) PROVIDE WITH TWO (2) MANUAL RESET LOW-WATER CUTOFFS, MAIN AND AUXILIARY.
 5) BOILER CERTIFIED FOR ASME CSD-1.
 6) VENTING SUPPLIER TO PROVIDE CALCULATIONS VERIFYING VENTING SYSTEM DESIGN IS COMPATIBLE WITH BOILERS.
 7) BOILER PUMPS TO BE STARTED/STOPPED AND SPEED MODULATED TO MATCH BOILER FIRING RATE TO CONTROL BOILER TEMPERATURE RISE ACROSS OPERATING RANGE.
 8) PROVIDE BACnet BMS INTERFACE.
 9) BOILER TO BE PROVIDED TO FIT WITHIN A 28" OPENING.

PUMP SCHEDULE														
TAG	LOCATION	SERVICE	TYPE	GPM	HEAD (FT)	FLUID	ELECTRICAL			STARTER	MANUFACTURERS			REMARKS
							H.P.	RPM	PH.		TACO	BELL & GOSSETT	AURORA	
BP-2-UNES	BOILER ROOM	BOILER B-2-UNES	INLINE	185	30	WATER	3	1760	208	3	'B'	KV3007D	ACC. MFG.	ACC. MFG.
BP-1-UNES	BOILER ROOM	BOILER EXB-1-UNES	INLINE	300	30	WATER	3	1760	208	3	'B'	KV4007D	ACC. MFG.	ACC. MFG.





**NYACK UFSD
UPPER NYACK ELEMENTARY SCHOOL
BOILER REPLACEMENT PROJECT**



DATE	DESCRIPTION

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Checked By: CB
Proj. #: 50-03-04-03-07-024
CSArch Proj. #: 226-2302.00
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Sheet Title
**MECHANICAL
NEW WORK
PLAN**

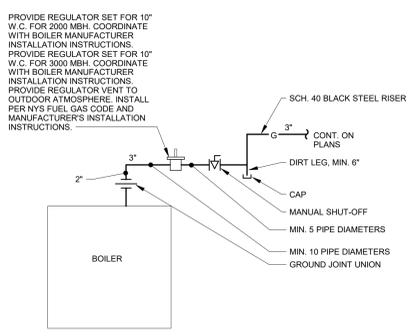
Sheet No.
**UNES
M101**
CONSTRUCTION DOCUMENTS

GENERAL NOTES

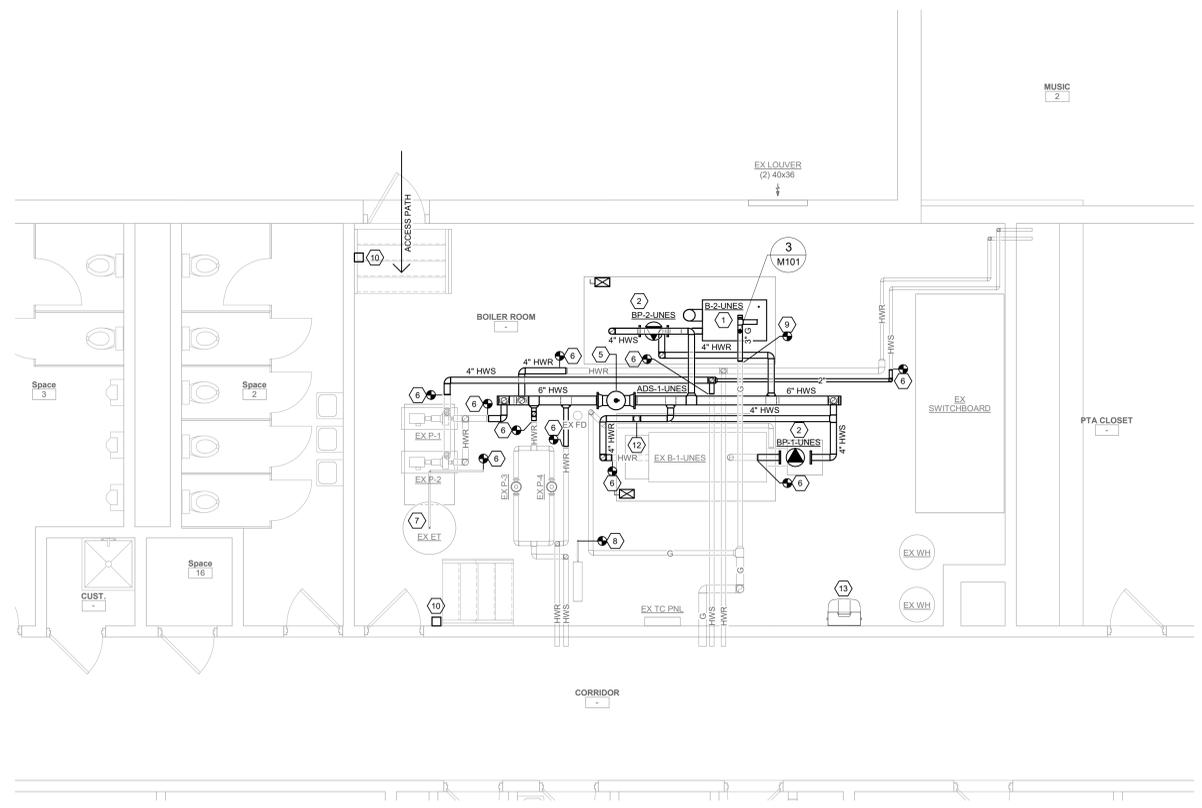
- A. CONTRACTOR IS TO INSPECT EQUIPMENT THAT IS TO BE REUSED AND DETERMINE THAT IT IS COMPLETE AND IN GOOD WORKING ORDER. IF NOT, REPORT FINDINGS TO THE ARCHITECT/ENGINEER.
- B. EVERY EFFORT HAS BEEN MADE TO VERIFY CLEARANCE OF NEW INSTALLATIONS THROUGH FIELD OBSERVATIONS. HOWEVER, THE CONTRACTOR IS TO VERIFY ALL JOB INSTALLATIONS PRIOR TO PROVIDING NEW WORK.
- C. ALL ITEMS BEING REMOVED AND NOT REUSED SHALL BE TURNED OVER TO THE OWNER FOR FUTURE USE. IF OWNER DECIDES THE FIXTURES ARE NOT REUSABLE, THE MECHANICAL CONTRACTOR SHALL DISPOSE OF THEM.
- D. IF THERE IS A QUESTION REGARDING EXISTING MECHANICAL SYSTEMS THE CONTRACTOR IS TO VERIFY WITH THE OWNER OR THE OWNER'S REPRESENTATIVE AS TO THE STATUS BEFORE PROCEEDING.
- E. ALL INTERRUPTIONS OF SERVICE SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER. MECHANICAL SYSTEMS FEEDING FROM OR THROUGH THE CONTRACT AREA SHALL BE MAINTAINED.
- F. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
- G. COORDINATE THIS DRAWING WITH ARCHITECTURAL DRAWINGS FOR EXTENT OF NEW WALL AND CEILING WORK.
- H. COORDINATE THIS PLAN WITH REMOVAL PLAN.
- I. ALL EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS, AND PIPING SHOWN WITH LIGHT LINE WEIGHT IS EXISTING TO REMAIN.

CODED NOTES

- 1 PROVIDE BOILER AS SCHEDULED INCLUDING ALL ASSOCIATED HYDRONIC AND GAS PIPING, VALVES, INSULATION, CONTROLS, HANGERS AND SUPPORTS. LOCATE BOILER ON EXISTING CONCRETE PAD; MODIFY AS NECESSARY.
- 2 PROVIDE BOILER CIRC. PUMP AS SCHEDULED INCLUDING ALL ASSOCIATED PIPING, VALVES, INSULATION, CONTROLS, HANGERS AND SUPPORTS.
- 3 PROVIDE 8" DIA. FLUE FROM BOILER UP THROUGH ROOF. TERMINATE MINIMUM 10'-0" ABOVE ROOF.
- 4 PROVIDE 8" DIA. INTAKE DUCT FROM BOILER TO EXTERIOR OF BUILDING. CORE-DRILL EXISTING EXTERIOR WALL FOR NEW PENETRATION. TERMINATE OPEN END WITH S.S. WMS. PROVIDE 2" RIGID INSULATION PER SPECIFICATION.
- 5 PROVIDE 6" COMBINATION HYDRAULIC SEPARATOR, AIR ELIMINATOR, DIRT SEPARATOR WITH MAGNET INCLUDING ALL ASSOCIATED PIPING, VALVES, INSULATION, HANGERS AND SUPPORTS.
- 6 PROVIDE COMPLETE HYDRONIC PIPING SYSTEM AS INDICATED INCLUDING ALL ASSOCIATED VALVES, INSULATION, HANGERS AND SUPPORTS. CONNECT TO EXISTING PIPING AT POINT-OF-RECONNECTIONS.
- 7 EXISTING EXPANSION TANK TO BE REUSED. CONNECT TO SYSTEM PER PIPING SCHEMATIC.
- 8 EXISTING BACKFLOW PREVENTER AND PRESSURE REDUCING VALVE (PRZ & PRV) TO BE REUSED. CONNECT TO SYSTEM PER PIPING SCHEMATIC. SET PRESSURE AS INDICATED.
- 9 PROVIDE GAS PIPING FROM POINT-OF-CONNECT TO EACH BOILER PER PIPING DETAIL.
- 10 BOILER EMERGENCY SHUTDOWN SWITCH; REFER TO ELECTRICAL DOCUMENTS.
- 11 PROVIDE SHEETMETAL CAP OVER EXISTING CHIMNEY OPENING AND SEAL WITH FIRE CALK.
- 12 PROVIDE 3-WAY CONTROL VALVE PER PIPING SCHEMATIC.
- 13 PROVIDE WALL MOUNTED GRAVITY-FED EYEWASH STATION: BRADLEY MODEL: S19-921. STATION SHALL MEET ANSI Z358.1 STANDARD. MOUNT STATION 40" AFF.



3 GAS PIPING CONNECTION SCHEMATIC
N.T.S.

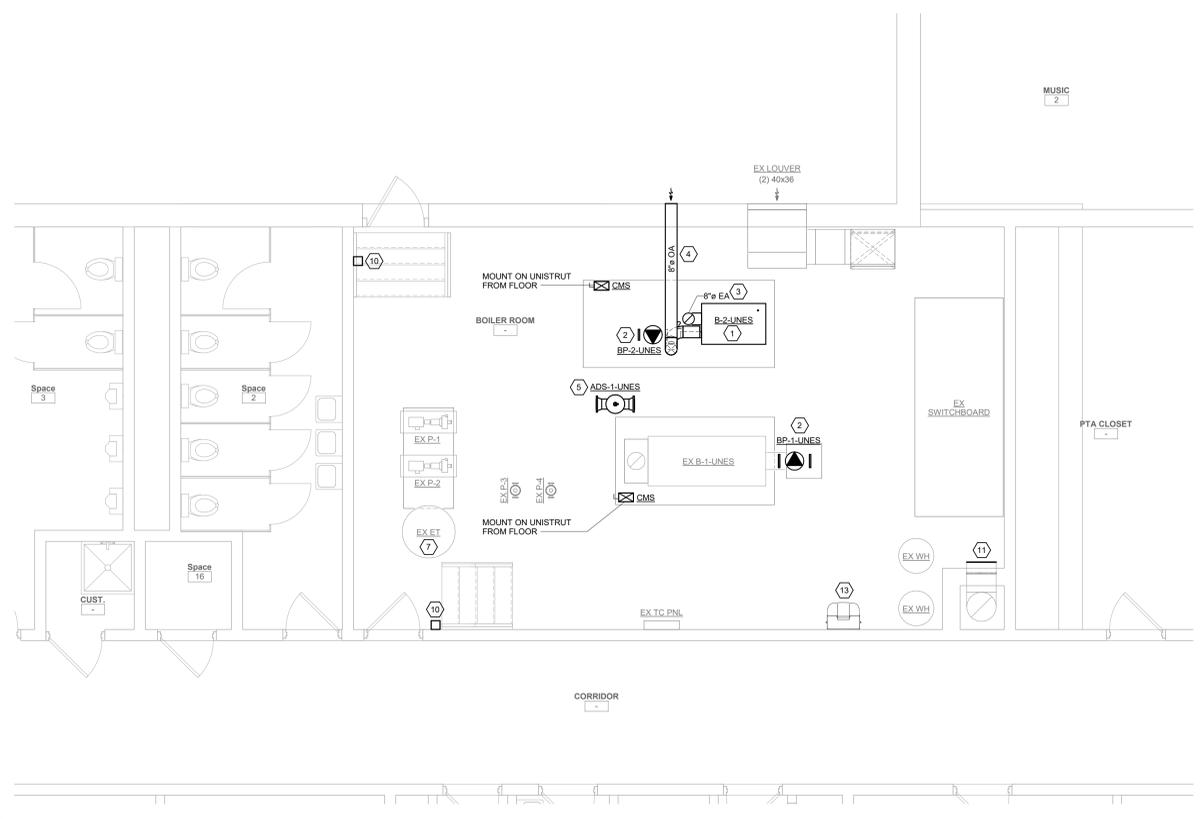


1 NEW WORK - BOILER ROOM PIPING
1/4" = 1'-0"

COMBUSTION AIR SCHEDULE

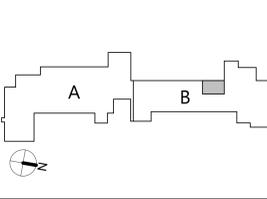
EQUIPMENT	TOTAL INPUT (BTUH)	REQ'D FREE AREA PER CODE (SQ. IN.)	FREE AREA PROVIDED (SQ. IN.)	REMARKS
NEW BOILER (B-2-LINES)	2,000,000	DIRECT VENT	DIRECT VENT	1
EXIST. BOILER (B-1-LINES)	3,620,000	905	1080	1
EXIST. WATER HEATER (EX WH)	40,000	10	40	1
EXIST. WATER HEATER (EX WH)	40,000	10	40	1

REMARKS:
1) FOR CONTROL OF COMBUSTION AIR DAMPERS, REFER TO SPECIFICATION SECTION 230993 - SEQUENCE OF OPERATIONS FOR HVAC CONTROL.

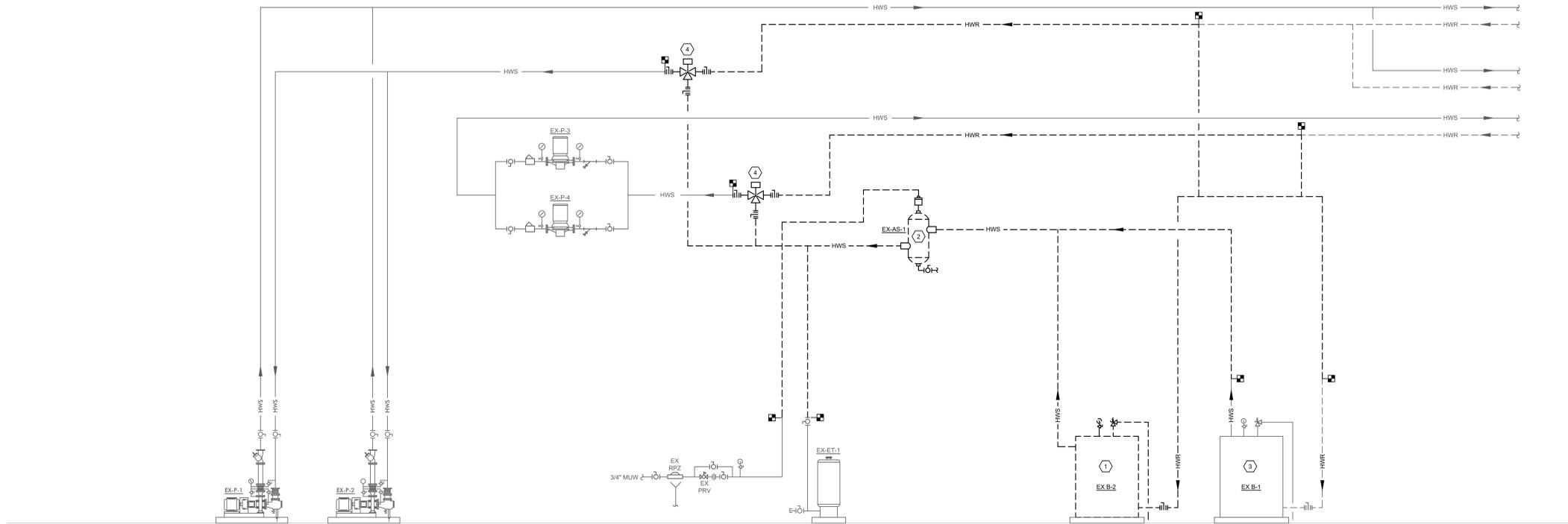


2 NEW WORK - BOILER ROOM EQUIPMENT & DUCT
1/4" = 1'-0"

KEY PLAN



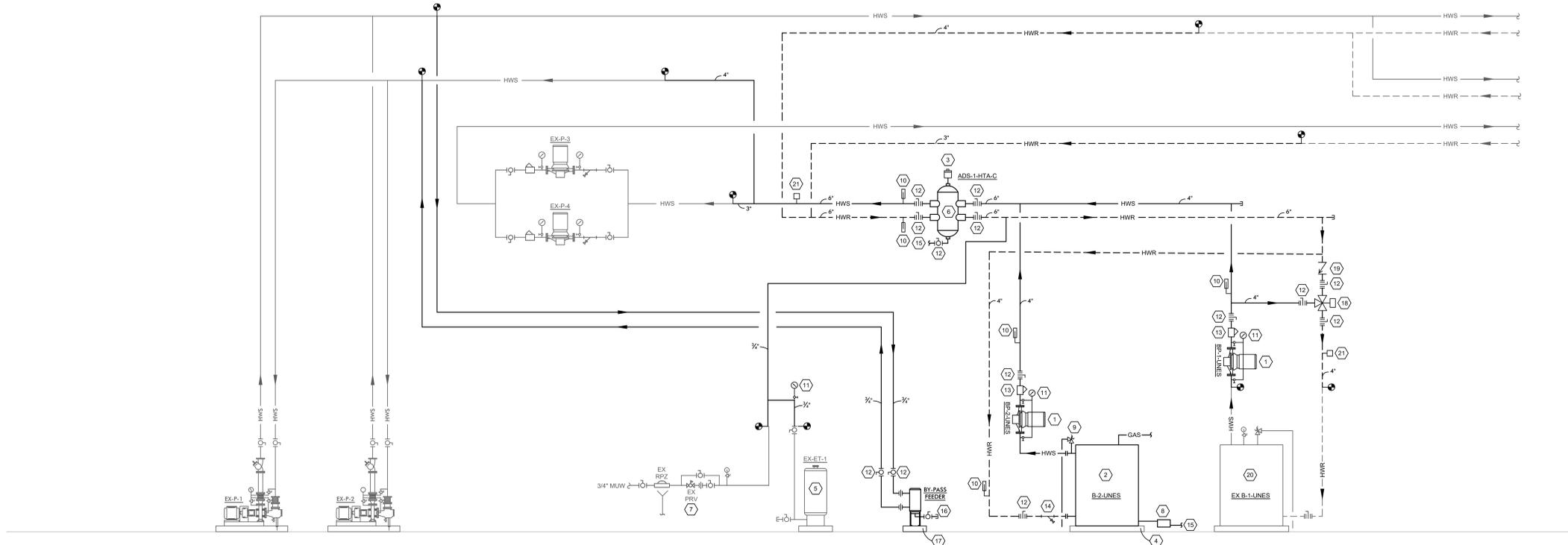
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1 BOILER PIPING SCHEMATIC - REMOVAL
M301 SCALE: NONE

KEYED REMOVAL NOTES:

- 1 DISCONNECT AND REMOVE EXISTING BOILER AND BURNER COMPLETE INCLUDING ASSOCIATED HEATING HOT WATER PIPING, VALVES, INSULATION, CONTROLS AND WIRING, GAS TRAIN, FUEL OIL PIPING, HANGERS AND SUPPORTS. REMOVE EXISTING CONCRETE PAD COMPLETE.
- 2 DISCONNECT AND REMOVE EXISTING AIR & DIRT SEPARATOR INCLUDING ASSOCIATED PIPING, INSULATION, VALVES, AIR VENT, DRAIN, HANGERS AND SUPPORTS.
- 3 EXISTING BOILER TO REMAIN AND BE REPIPE.
- 4 DISCONNECT AND REMOVE EXISTING 3-WAY VALVE INCLUDING ALL ASSOCIATED LOCAL PIPING TO POINT-OF-DISCONNECTION. VALVE, INSULATION, CONTROL, HANGERS AND SUPPORTS.



1 BOILER PIPING SCHEMATIC - NEW
M301 SCALE: NONE

KEYED NOTES:

- 1 PUMP
- 2 BOILER
- 3 AUTOMATIC AIR VENT
- 4 CONCRETE HOUSEKEEPING PAD. MODIFY AS REQUIRED TO ACCOMMODATE CONDENSATE TRAP AND NEUTRALIZATION KIT
- 5 EXISTING EXPANSION TANK (SET PRECHARGE TO 20 PSI)
- 6 HYDRONIC SEPARATOR, AIR ELIMINATOR, DIRT SEPARATOR WITH MAGNET
- 7 EXISTING PRESSURE REDUCING VALVE (SET TO 15 PSI)
- 8 CONDENSATE DRAIN TRAP AND NEUTRALIZATION KIT
- 9 SAFETY RELIEF VALVE
- 10 THERMOMETER
- 11 PRESSURE GAUGE
- 12 SHUT-OFF VALVE
- 13 TRIPLE DUTY VALVE
- 14 STRAINER W/ BLOWDOWN
- 15 PIPE FULL SIZE TO FLOOR DRAIN
- 16 DRAIN VALVE
- 17 CONCRETE PAD
- 18 3-WAY CONTROL VALVE
- 19 CHECK VALVE
- 20 EXISTING BOILER
- 21 EMS WATER TEMPERATURE SENSOR



NYACK UFSD
UPPER NYACK ELEMENTARY SCHOOL
BOILER REPLACEMENT PROJECT



DATE	DISCUSSION

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Sheet Title

PIPING SCHEMATIC

Sheet No.

UNES M301

CONSTRUCTION DOCUMENTS

ABBREVIATIONS				RACEWAY SYSTEMS		DEVICES AND OUTLETS		POWER DISTRIBUTION EQUIPMENT		NOTES TO ELECTRICAL SYMBOLS	
A	AMPERE(S)	J	JUNCTION	UC	UNDER CABINET	⊖	DUPLEX RECEPTACLE - (18" AFF)	□	DISTRIBUTION PANELBOARD (VOLTAGE/PHASES AS INDICATED)	1.	ALL ABBREVIATIONS AND SYMBOLS MAY OR MAY NOT BE USED.
AC	ABOVE COUNTER/ALTERNATING CURRENT	JCB	JUNCTION BOX	UG	UNDERGROUND	⊖	DUPLEX RECEPTACLE (EMERGENCY) - (18" AFF)	□	BRANCH CIRCUIT PANELBOARD (VOLTAGE/PHASES AS INDICATED)	2.	MOUNTING HEIGHTS: FOR ALL WALL MOUNTED DEVICES: LOCATE CENTERLINE OF DEVICE VERTICALLY AT INDICATED MOUNTING HEIGHT (E.G. 18" AFF) AND IN ACCORDANCE WITH THE NOTES BELOW, UNLESS INDICATED OTHERWISE. MOUNTING HEIGHTS SHOWN ON ELEVATIONS R DETAILS OR BY NOTES TAKE PRECEDENCE OVER STANDARD MOUNTING HEIGHTS.
ACC	AIR COOLED CONDENSING UNIT	KCMIL	THOUSAND CIRCULAR MILS	UJ	UNIT HEATER	⊖	DUPLEX RECEPTACLE, GFCI TYPE - (18" AFF)	□	NON-FUSED SAFETY SWITCH (VOLTAGE/PHASES AS INDICATED)	3.	ELECTRICAL DEVICE PLACEMENT: WHERE MULTIPLE ELECTRICAL DEVICES (E.G. SWITCHES, RECEPTACLES, CLOCKS, FIRE ALARM DEVICES, EXIT SIGNS, TELECOMMUNICATION OUTLETS, ETC.) ARE SHOWN NEAR EACH OTHER, ORGANIZE EXACT LOCATIONS IN GROUPS WHICH ALIGN ON COMMON HORIZONTAL AND VERTICAL CENTER LINES.
AF	ABOVE FINISHED FLOOR	KVA	KILOVOLT-AMPERE	UV	UNIT VENTILATOR	⊖	DUPLEX RECEPTACLE (FLOOR)	⊖	FUSED SAFETY SWITCH (AMP/NO. OF POLES)	4.	WIRING DEVICE GANGING: WHERE ADJACENT WIRING DEVICES ARE INDICATED, GROUP ALL SUCH DEVICES WITH A COMMON MULTI-GANG COVERPLATE UNLESS INDICATED OTHERWISE.
AFG	ABOVE FINISHED GRADE	KW	KILOWATT(S)	W	WATT, WEST, WIRE	⊖	DUPLEX RECEPTACLE (CEILING)	⊖	CIRCUIT BREAKER	5.	INDIVIDUAL CIRCUIT BREAKERS, SAFETY SWITCHES, STARTERS, AND TIME RELAYS: WHERE PRACTICABLE, MOUNT WITH CENTER LINE OF ENCLOSURE AT 60" AFF, BUT ADJUST AS NECESSARY SO THAT TOP OF ENCLOSURE IS AT MAXIMUM 72" AFF.
AG	AMPERE INTERRUPTING CAPACITY	LTC	LIGHTING	VA	VOLT-AMPERE(S)	⊖	SPECIAL PURPOSE RECEPTACLE - (18" AFF) (NEMA CONFIGURATION INDICATED)	⊖	SURGE SUPPRESSOR	6.	EXIT SIGNS: WHERE LOCATED ABOVE DOOR, CENTER EXIT SIGN VERTICALLY BETWEEN TOP OF DOOR FRAME AND CEILING LINE, BUT AT MAXIMUM 96" AFF TO CENTER LINE. USE SAME MOUNTING HEIGHT FOR EXIT SIGNS IN VICINITY BUT NOT LOCATED ABOVE DOOR.
ASD	ADJUSTABLE SPEED DRIVE	LTS	LIGHT(S)	W	WITH	⊖	6-20R	⊖	TRANSFORMER	7.	FIRE ALARM NOTIFICATION APPLIANCES: (E.G. HORN/SPEAKERS, STROBES, ETC.) MOUNT AT 80" AFF TO CENTER LINE OF UNIT, OR WITH TOP OF DEVICE AT 4" BELOW CEILING LINE, WHICHEVER IS LESS.
ATS	AUTOMATIC TRANSFER SWITCH	MAX	MAXIMUM	WCR	WITHSTAND CURRENT RATING	⊖	ABOVE SYMBOLS MAY BE COMBINED FOR VARIOUS APPLICATIONS	⊖	METER SOCKET	8.	SOLID DARK/BLACK LINES: INDICATE NEW ELECTRICAL WORK, UNLESS INDICATED OTHERWISE.
AUX	AUXILIARY	MC	METAL CLAD	WH	WATER HEATER	⊖	PH1,2,3	⊖	GROUND BAR	9.	SHADED SYMBOLS: GENERALLY INDICATE CONNECTION TO THE EMERGENCY BRANCH ELECTRICAL DISTRIBUTION SYSTEM.
AUTO	AUTOMATIC	MCE	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF	⊖	UGC	⊖	METER SOCKET		
AWG	AMERICAN WIRE GAUGE	MCM	THOUSAND CIRCULAR MILS	WV	WITH	⊖	UGFO				
B	BOILER	MFR	MANUFACTURER	WV	WITH	⊖	UGL				
BKR	BREAKER	MIN	MINIMUM	WV	WITH	⊖	UGP				
BLDG	BUILDING	MLO	MAIN LUGS ONLY	WV	WITH	⊖	UGS				
CB	CIRCUIT BREAKER	MT	MOUNT	WV	WITH	⊖	UGT				
CCT	CIRCUIT	MTD	MOUNTED	N	NORTH, NEUTRAL	⊖	UG				
CCT	CIRCUIT	NAC	NOTIFICATION APPLIANCE CIRCUIT	NAC	NOTIFICATION APPLIANCE CIRCUIT	⊖	UG				
CLG	CEILING	NC	NORMALLY CLOSED, NURSE CALL	NEC	NATIONAL ELECTRICAL CODE	⊖	UG				
COL	COLUMN	NF	NON-FUSED	NEC	NATIONAL ELECTRICAL CODE	⊖	UG				
COMB	COMBINATION	NIC	NOT IN CONTRACT	NF	NON-FUSED	⊖	UG				
CU	CONDENSING UNIT	NO	NORMALLY OPEN	NF	NON-FUSED	⊖	UG				
Δ	DELTA CONNECTION	N.T.S	NOT TO SCALE	NIC	NOT IN CONTRACT	⊖	UG				
D	DEEP	OH	OVERHEAD	NO	NORMALLY OPEN	⊖	UG				
DN	DOWN	OHD	OVERHEAD DOOR OPERATOR	NTS	NOT TO SCALE	⊖	UG				
DP	DISTRIBUTION PANEL	OL	OVERLOAD	OD	ON-OFF	⊖	UG				
DWG	DRAWING	OO	ON-OFF	P	PANEL, POLE(S)	⊖	UG				
E	EAST	OP	OVERHEAD DOOR OPERATOR	PB	PULL BOX, PUSHBUTTON	⊖	UG				
EA	EACH	OL	OVERLOAD	PF	POWER FACTOR	⊖	UG				
EC	ELECTRICAL CONTRACTOR	ON	ON-OFF	PH	PHASE	⊖	UG				
EF	EXHAUST FAN	OD	ON-OFF	PL	PILOT LIGHT	⊖	UG				
ELEC	ELECTRICAL	OH	OVERHEAD	PP	POWER POLE	⊖	UG				
ELU	EMERGENCY LIGHTING UNIT	OHD	OVERHEAD DOOR OPERATOR	PP	POWER POLE	⊖	UG				
EM	EMERGENCY	OL	OVERLOAD	PVC	POLYVINYL CHLORIDE	⊖	UG				
EMT	ELECTRICAL METALLIC TUBING	OO	ON-OFF	R	REFRIGERATOR	⊖	UG				
ETR	EXISTING TO REMAIN	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
EQUIP	EQUIPMENT	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
EWC	ELECTRIC WATER COOLER	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
EWH	ELECTRIC WALL HEATER	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
EXIST	EXISTING	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
F	FUSE(S)	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
FA	FIRE ALARM	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
FACP	FIRE ALARM CONTROL PANEL	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
FC	FAN COIL UNIT	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
FIXT	FIXTURE	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
FLEX	FLEXIBLE	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
FLR	FLOOR	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
FLUOR	FLUORESCENT	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
FS	FOOD SERVICE	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
FURN	FURNISHED	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
FUT	FUTURE	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
G	GROUND	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
GC	GENERAL CONTRACTOR	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
GEC	GROUNDING ELECTRODE CONDUCTOR	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
GFI	GROUND FAULT INTERRUPTER	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
GND	GROUND	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
H	HIGH	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
HID	HIGH INTENSITY DISCHARGE	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
HO	HIGH OUTPUT	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
HQA	HAND-AUTO-OFF	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
HP	HORSEPOWER	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
HPS	HIGH PRESSURE SODIUM HEATER	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
HTR	HEATER	OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
IG	ISOLATED GROUND	OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
IL	INTERLOCK	OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
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		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
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		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
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		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
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		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
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		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
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		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				
		OD	ON-OFF	REC	RECEPTACLE	⊖	UG				
		OP	OVERHEAD DOOR OPERATOR	REC	RECEPTACLE	⊖	UG				
		OL	OVERLOAD	REC	RECEPTACLE	⊖	UG				

