# VALLEY CENTRAL SCHOOL DISTRIC VALLEY CENTRAL HIGH SCHOOL 2023 CAPITAL PROJECT - PHASE 1

# **ISSUED FOR BID:** 10/18/24

CSARCH - ARCHITECTS BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:2023 CAPITAL PROJECT - PHASE 144-13-01-06-0-015-033THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE<br/>PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND<br/>THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

## CSArch PROJECT NO. 187-2302.01



VICINITY MAP

Valley Central High School 1175 NY-17K Montgomery, NY 12549

NTS N

DRAWING LIST GENERAL DRAWINGS PLUMBING GENERAL DRAWINGS VCHS G000 COVER & SHEET INDEX VCHS P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS SYMBOLS, ABBREVIATIONS, MISC, & PARTITION TYPES VCHS G001 OVERALL FLOOR PLAN - BASEMENT VCHS G101 PLUMBING DEMOLITION DRAWINGS OVERALL FLOOR PLAN - FIRST FLOOR VCHS G111 VCHS PD301 BOILER ROOM PLUMBING DEMOLITION PLAN VCHS G121 OVERALL FLOOR PLAN - SECOND FLOOR VCHA G401 OVERALL ROOF PLAN PLUMBING DRAWINGS VCHS P301 PLUMBING PLAN LIFE SAFETY DRAWINGS VCHS LS101 BASEMENT LIFE SAFETY PLAN **MECHANICAL GENERAL DRAWINGS** VCHS LS111 FIRST FLOOR LIFE SAFETY PLAN MECHANICAL NOTES, LEGEND, SCHEDULE & DETAILS VCHS M001 VCHS LS112 SMOKE ZONE PLANS VCHS M002 MECHANICAL SCHEDULES MECHANICAL SCHEDULES VCHS M003 ARCHITECTURAL DEMOLITION DRAWINGS VCHS M004 MECHANICAL DETAILS VCHS AD111 FIRST FLOOR REMOVAL PLAN - AREA A VCHS M005 TEMPERATURE CONTROLS NOTES, LEGEND & SCHEMATICS VCHS M006 MECHANICAL PIPING DIAGRAMS VCHS AD112 FIRST FLOOR REMOVAL PLAN - AREA C & D VCHS AD401 ROOF REMOVAL PLAN - AREA C & D VCHS AD802 REFLECTED CEILING REMOVAL PLAN - AREA C & D MECHANICAL DEMOLITION DRAWINGS VCHS MD111 MECHANICAL DEMOLITION PLAN ARCHITECTURAL DRAWINGS VCHS MD211 MECHANICAL DEMOLITON PLAN - PART 1 MECHANICAL DEMOLITON PLAN - PART 2 VCHS A101 BOILER ROOM PLANS AND DETAILS VCHS MD212 VCHS MD301 MECHANICAL DEMOLITION PLAN VCHS A111 ENLARGED VESTIBULE PLAN, SECTION AND DETAILS AREA C & D - FIRST FLOOR NEW WORK PLAN VCHS A112 VCHS A201 EXTERIOR ELEVATIONS **MECHANICAL DRAWINGS** EXTERIOR ELEVATIONS VCHS A202 SECURITY VESTIBULE MECHANICAL PLAN VCHS M111 ROOF PLAN - AREA A, C, & D VCHS M211 MECHANICAL PLAN - PART 1 VCHS A402 REFLECTED CEILING PLAN & CEILING DETAIL - AREA A VCHS M212 MECHANICAL PLAN - PART 2 VCHS A801 FIRST FLOOR REFLECTED CEILING PLAN - AREA C & D VCHS M301 MECHANICAL PLAN VCHS A802 DOOR, WINDOW, & STOREFRONT DETAILS VCHS A901 **ELECTRICAL GENERAL DRAWINGS ARCHITECTURAL FINISH DRAWINGS** VCHS E001 ELECTRICAL NOTES, LEGEND, DETAILS & SCHEDULES ELECTRICAL PANEL SCHEDULES VCHS AF001 MATERIAL SCHEDULE VCHS E002 VCHS AF112 AREA C & D - FLOOR FINISHES PLAN **ELECTRICAL DEMOLITION DRAWINGS** VCHS ED111 ELECTRICAL DEMOLITION PLAN VCHS ED211 ELECTRICAL DEMOLITION PLAN VCHS ED301 ELECTRICAL DEMOLITION PLAN **ELECTRICAL DRAWINGS** ELECTRICAL PLAN VCHS E111 VCHS E211 ELECTRICAL PLAN ELECTRICAL PLAN VCHS E301



EXPIRATION DATE: 02/28/202











- FILL FLUTES IN STEEL DECK WITH

OF RATED PARTITIONS.

1. FIRESAFING, CONTINUOUS ABOVE LINE



 $\vec{\rho}$ 

- FILL FLUTES IN STEEL DECK WITH

LINE OF RATED PARTITIONS.

LINE OF UNRATED PARTITIONS.

- 3 1/2"x3 1/2"x5/16"x6" STEEL

ANGLE @ 48" OC, TYP BOTH

FACES OF PARTITION

1. FIRESAFING, CONTINUOUS ABOVE

2. SOUND BATT INSULATION ABOVE

				PLAN GRAPHICS LEGEND
				EXISTING CONSTRUCT
<u>ABBREV</u>	/IATIONS	ARCHIT	ECTURAL LEGEND	EXISTING CONSTRUCT
ABBREVIATIO	ON DESCRIPTION	MATERIAL IN		
ADA	AMERICANS WITH DISABILITIES ACT		EARTH	NEW BRICK VENEER
ADD ADMIN	ADDENDUM ADMINISTRATIVE			
AFF ALT	ABOVE FINISHED FLOOR ALTERNATE		GRANULAR FILL	
APPROX ARCH	APPROXIMATE ARCHITECT / ARCHITECTURAL		BRICK	
AV			CONCRETE MASONRY UNIT	
BLDG BOT OR B/	BUILDING BOTTOM OF BACEMENT		CONCRETE	
BSMI	BASEMENI		GROUT	INDICATED BELOW UNO. DIMENSIONS SHO
CL CL	CENTROL / CONSTRUCTION JOINT CENTERLINE CENTING		ROUGH WOOD BLOCKING	
CLR CMU	CLEAR CONCRETE MASONRY UNIT		SHIM	
COL	COLUMN CONCRETE	 \////////	FINISH WOOD	
CONF CONT	CONFERENCE CONTINUOUS		PLYWOOD	
CONTR COORD	CONTRACTOR COORDINATE		SHEATHING	
CORR	CORRIDOR			1. DIMENSIONS ARE GIVEN THUS (UNLESS
DEMO DET	DEMOLITION DETAIL		RIGID INSULATION	OTHERWISE) A. TO FACE OF MASONRY WALL
DIA DN	DIAMETER DOWN		BATT INSULATION	B. TO FACE OF METAL STUD C. TO COLUMN CENTERLINES
DWG	DRAWING		SPRAY FOAM INSULATION	D. TO FINISH FACE OF SOFFIT OR ( E. FACE OF EXISTING CONSTRUCT
ED EIFS	EDUCATION EXTERIOR INSULATION FINISH SYSTEM		EPS INSULATION	2. DO NOT SCALE DRAWINGS. IF A DIMEN
ELECT	ELECTRIC / ELECTRICAL ELEVATION ETIME ENE PROPYLENE DIENE MONOMER		STEEL	ARCHITECT FOR VERIFICATION BEFO
	ETHTLENE PROFILENE DIENE MONOMER EQUAL EQUIPMENT	DIMENSIONIN	IG CONVENTIONS	ALLE ON COLUMN LINES ARE CENTE
EXST	EXISTING EXPANSION JOINT			
EXT	EXTERIOR			SHALL BE VERIFIED IN FIELD. CONTRA ARCHITECT OF ANY DISCREPANCIES BEGINNING WORK IN THAT AREA.
FIN FL FIXT	FINISH FLOOR FIXTURE	• •	COLUMN CENTER LINE	5. LAYOUT OF TOILET FIXTURES AND AC
FLR FRT FTG	FLOOR FIRE-RETARDENT-TREATED MATERIAL FOOTING	<u>SYMBOLS</u>		CLEARANCES ARE SHOWN AS CLEAR CONTRACTORS ARE REQUIRED TO C LAYOUTS OF PARTITIONS, UTILITY CO THICKNESS OF FINISHES TO ALLOW TH
G GA	GROUND GAUGE	CLASSROOM -	ROOMNAME	DIMENSIONS.
GAL GALV	GALLON(S) GALVANIZE(D)	100 - 000 S.F.		6. ALL ELEVATIONS (X'-X") ARE REFERE FLOOR ELEVATION
GC GMB GMBS	GENERAL CONTRACTOR GYPSUM WALL BOARD GYPSUM WALL BOARD SOFFIT	(A100)	DOOR NUMBER, REFER TO A900 DRAWINGS	7. ALL WOOD BLOCKING WITHIN 2'-0" OF PRESSURE TREATED
НМ	HOLLOW METAL	$\langle 1 \rangle$	WINDOW TAG, REFER TO A900 DRAWINGS	8. ALL FLOOR PENETRATIONS SHALL BE
HORIZ HR	HORIZONTAL HOUR	(BL11)	BORROWED LIGHT NUMBER, REFER	AND /OR FIRE STOPPED. COORDINAT FOR SMOKE / FIRE DAMPER REQUIR
HTG	HEIGHT HEATING HEATING (A FNTH A TING (A IB C ONDITIONING	51	TO A900 DRAWINGS STORFFRONT / CURTAINWALL	9. FOR INTERIOR PARTITION TYPES, REF
			NUMBER, REFER TO A900 DRAWINGS COLUMN GRID DESIGNATION	
IN INT	INCH		PARTITION TAG REFER TO ATOO DRAWINGS	11 FOR FINISH SCHEDULE, REFER TO DR
JAN	JANITOR	M 1	HOUR RATING OF PARTITION	12. ALL EXPOSED SURFACES OF NEW PA
JC JST	JANITOR'S CLOSET JOIST		ADDITIONAL NOTES FOR PARTITION	SOFFITS ARE TO BE FINISHED.
TL	JOINT		REVISION NUMBER	13. PROVIDE PATCH TO MATCH EXISTING WALL REMOVAL AREAS, COORDINAT
LAB LB	LABORATORY POUND		KEY NOTE, NEW WORK	DEMOLITION DRAWINGS AND SPECIFIC
LIN L∨L	LINEAR LEVEL	$\overline{1}$	KEY NOTE, DEMOLITION WORK	14. ALL CONSTRUCTION SHOWN IS NEW U OTHERWISE
MAN	MANUAL	+ <i>O</i> '- <i>O</i> "	ELEVATION TAG	
MAS MAX		$\sim$		
MECH MEZZ	MEDIUM DENSIT FIBERBOARD MECHANICAL MEZZANINE		HANDICAPPED ACCESSIBLE ELEMENT OR FIXTURE	
MFR		Gro		
MIN	MINIMUM MISCELLANEOUS	ROOM NAME	INTERIOR FINISH TAG,	
MO MTL	MASONRY OPENING METAL	WALL FINISH BASE FINISH	REFER TO AF 100 DRAWINGS	
NA	NOT APPLICABLE			
NIC NOM	NOT IN CONTRACT NOMINAL	<u>DETAIL I</u>	NDICATOR LEGEND	
NTS	NOT TO SCALE			
OC OD	ON CENTER OUTSIDE DIAMETER	<u>se</u> ction indi		
OH OPT	OVERHEAD OPTIONAL			
OVR OZ	OVERALL OUNCE	DRAWING CUEE		
PERIM PLAM PLBG	PERIMETER PLASTIC LAMINATE PLUMBING	SECTION IS DRI	AWN ON DIRECTION OF VIEW	
PLAS	PLASTER			

PLASTER PLYWOOD PANEL PAINT POLYISOCYANURATE PRESSURE PRESERVATIVE TREATED PAIR PREPARATORY PARTITION POLYVINYL CHLORIDE

PLYWD

POLYISO

PNL

PNT

PPT

PREP

PTN

PVC

RAD

RM

RND

SCH

SECT

SIM

SQ

STC

STD

STL

STOR

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SAC

T₿B

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TECH

TEMP

TMPD

TOM

TOS

TYP

UNO

VERT

VEST VIF

M/

W/0

MD

MPT

MGT

YD

55

SPEC

SF

R0

REQD

PR

RADIUS REQUIRED ROOM ROUND ROUGH OPENING SCHEDULED SECTION SQUARE FEET SIMILAR SPECIFICATION SQUARE STAINLESS STEEL

SOUND TRANSMISSION CLASS STANDARD STEEL STORAGE STRUCTURAL / STRUCTURE SUSPENDED SUSPENDED ACOUSTICAL CEILING TOP AND BOTTOM TONGUE AND GROOVE

TECHNOLOGY TEMPORARY TEMPERED TOP OF MASONRY TOP OF STEEL TYPICAL

UNDERWRITERS LABORATORY UNLESS NOTED OTHERWISE VERTICAL VESTIBULE

VERIFY IN FIELD

MITH WITHOUT WOOD WOOD PRESERVED-TREATED MATERIAL WEIGHT YARD

DETAIL INDICATOR (SECTION)	SECTION NUMBER
DRAWING SHEET NUMBER SECTION IS DRAWN ON	DIRECTION OF VIEW

ENLARGED DETAIL INDICATOR

REQUIRING

DETAIL TITLE

DETAIL NUMBER

DRAWING SHEET NUMBER

DETAIL

DRAWING AREA  $\sim$ 

DRAWING SHEET NUMBER DETAIL IS DRAWN ON

DETAIL NUMBER

DETAIL TYPE / NAME FLOOR PLAN

SCALE

- ELEVATION NUMBER

EXTERIOR ELEVATION INDICATOR

DIRECTION OF VIEW-

A100

DRAWING SHEET NUMBER DETAIL IS DRAWN ON

INTERIOR ELEVATION INDICATOR BLANK ARROW INDICATES ELEVATIONS NOT DETAILED

DRAWING SHEET NUMBER DETAIL IS DRAWN ON

DIRECTION OF VIEWS

ELEVATION NUMBER

Α



	GENERAL DESIGN I	OAD REQUIREMENTS	
LOADING TYPE	BUILDING CODE SECTION	OCCUPANCY/USE/LOCATION	REQUIRED
MINIMUM UNIFORM DISTRIBUTED LIVE LOADS	2020 BUILDING CODE OF NEW YORK STATE TABLE 1607.1	SCHOOLS - CLASSROOMS SCHOOLS - FIRST FLOOR CORRIDORS SCHOOLS - CORRIDORS ABOVE FIRST FLOOR OFFICE BUILDINGS - OFFICES	40 PSI 100 PSI 80 PSI 50 PSI
		ROOFS - ORDINARY/FLAT (NON-OCCUPIABLE)	40 PSI
GROUND SNOW LOADS	2020 BUILDING CODE OF NEW YORK STATE FIGURE 1608.2	ORANGE COUNTY MONTGOMERY, NY	40 PSI
FLAT ROOF SNOW LOADS	2020 BUILDING CODE OF NEW YORK STATE FIGURE 1608.2	ORANGE COUNTY MONTGOMERY, NY	28 PSI
DESIGN WIND SPEEDS	2020 BUILDING CODE OF NEW YORK STATE FIGURE 1609.3	RISK CATEGORY III MONTGOMERY, NY	130 VMPH

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D<del>ND</del>-

DN

ART 97

STORAGE 94B

VCTA UNION OFFICE





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	GENERAL DESIGN LO	DAD REQUIREMENTS	
LOADING TYPE	BUILDING CODE SECTION	OCCUPANCY/USE/LOCATION	REQUIRED
MINIMUM UNIFORM DISTRIBUTED LIVE LOADS	2020 BUILDING CODE OF NEW YORK STATE TABLE 1607.1	SCHOOLS - CLASSROOMS SCHOOLS - FIRST FLOOR CORRIDORS SCHOOLS - CORRIDORS ABOVE FIRST FLOOR OFFICE BUILDINGS - OFFICES ROOFS - ORDINARY/FLAT (NON-OCCUPIABLE)	40 PSI 100 PSI 80 PSI 50 PSI 40 PSI
GROUND SNOW LOADS	2020 BUILDING CODE OF NEW YORK STATE FIGURE 1608.2	ORANGE COUNTY MONTGOMERY, NY	40 PSI
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DESIGN WIND SPEEDS	2020 BUILDING CODE OF NEW YORK STATE FIGURE 1609.3	RISK CATEGORY III MONTGOMERY, NY	130 VMPH





AD401 A401





	LIFE SAFETY PL
	P PRIMARY EXIT
	R RESCUE WINDOW (SEC
	## OCCS NUMBER OF OCCUPAN (## OCCS) (ACTUAL NUMBER OF C
	DOOR CAPACITY OCCS - REQUIRED EXIT WIDTH EWR - ON (OCCURANT * 0.2)
	$ \begin{array}{c c} \frac{EWR}{EWP} & - \\ \hline EWP & - \\ \end{array} \end{array} ON (OCCUPANT * 0.3) \\ \hline \\ \hline \\ \hline \\ \end{array} $ EXIT PATH OF TRAVEL
	EXIT SIGN, WALL MOUNT INDICATED BY SHADING
	EXIT SIGN, CEILING MOU INDICATED BY SHADING DIRECTIONAL ARROW
	ABBREVIATIONS
	(5) EMERGENCT ETEMASH 5 (FE) FIRE EXTINGUISHER, WALL
	EC FIRE EXTINGUISHER CABIN
	SMOKE SEPARAT
	SMOKE BARR
	FIRE SEPARATIO
	1 HOUR RATED
	1 HOUR RATED
	2 HOUR RATED
	CODE NARRATIVE:
	1959 : ORIGINAL CONSTRUCTION CONSTRUCTION TYPE:
	BASEMENT AREA: 1253 FIRST FLOOR AREA: 13054 SECOND FLOOR AREA: 8013
	CURRENT USE: 1989 : CONSTRUCTION:
	CONSTRUCTION TYPE: BASEMENT AREA: 1253
	FIRST FLOOR AREA: 180,03 SECOND FLOOR AREA: 8013 CURRENT USE:
	LEVEL 1 ALTE
	xxx SF
	ASSEMBLY W/ FIXED SEATS
	ASSEMBLY W/OUT FIXED SEATS
	UNCONCENTRATED
	BUISNESS AREAS CLASSR <i>OO</i> M AREAS
	VOCATIONAL ROOM AREAS
	LOCKER ROOMS EXERCISE ROOMS
	KITCHENS, COMMERCIAL
	STAGES AND PLATFORMS
	STRUCTURA
DOOR CAPACITY OCCS 4 EW/P 1"	RISK CATAGORY: III DEAD LOADS:
$\frac{U}{C121}$ $\frac{U}{EWP}$ $\frac{1}{34"}$ $\frac{1}{34"}$	CONCRETE SLAB
m 7 SF/OCC DOOR CAPACITY 277 OCC	LIVE LOADS: SLAB
$\frac{1}{4} = \frac{1}{4} = \frac{1}$	RAIN LOADS:
	60-MINUTE RAINFALL INTENSITY
GYM         C130         C131         C122         L         STAIR           60 SE         65 SF         233 SF         40         C129         C129	SNOW LOADS: GROUND SNOW LOAD
B         S00 SF/OCC         S00 SF/OCC         300 SF/OCC         174 SF           1 OCC         2 OCC         1 OCC         1 OCC	FLAT ROOF SNOW LOAD
	SLOPED ROOF SNOW LOAD
405 SF	ULTIMATE WIND SPEED
DOOR CAPACITY	EXPOSURE CATEGORY SEISMIC DESIGN DATA:
METER ROOM OCCS F EWR 2" EWP 142"	SITE CLASS
[C124] 217 SF 300 SF/OCC	SEISMIC DESIGN CATEGORY FIRE AREA MODIFICATIONS
1 OCC     STORAGE     CUSTODIAN LOCKER       C126     C127	A a ALLOWABLE AREA PER FLOOP Δ TABULAR ALLOWABLE AREA FACTO
416 SF     837 SF       300 SF/OCC     300 SF/OCC       2 OCC     3 OCC	IN ACCORDANCE WITH TABLE 506
TRANS VAULT 1243 SF 300 SF/OCC	ACCORDANCE WITH SECTION 506 NS TABULAR ALLOWABLE AREA
C125 215 SF 300 SE/OCC	S a ACTUAL NUMBER OF BUILDIN
1 OCC	V CALCULATED WIDTH OF PUB
	$L_n$ LENGTH OF A PORTION OF THE EX
	With that portion of the extension       WITH THAT PORTION OF THE EXTENDED       F     BUILDING PERIMETER THAT F
	OR OPEN SPACE HAVING A V P PERIMETER OF ENTIRE BUILD
	$I_{f} = [F/P - 0.25]W/30$ $A_{a} =$ $I_{f} = [100/XX - 0.25]XX/30$ $A_{a} =$
	$I_{f} = [0.XX] 1.00$ $A_{a} = $ $I_{f} = [0.XX] 1.00$ $A_{a} = $
	KEY PL
	AREA O WORK
	В
	Е А Г <sup></sup>

















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CORRIDOR C111

	1	
	2. PAT	STRUCTION. CH AND REPLACE EXISTIN
	HOL TON 3. SAL	ES IN WALLS (DUE TO REN 1ATCH EXISTING CONSTRI VAGED ITEMS SHALL BE "
	UNO 4. ALL	KEYED REMOVALS SHAL
	OBJ 5. REF	ECTS EMBEDDED INTO E. ECTS EMBEDDED INTO E. ER TO ASBESTOS AND M
	ADD 6. PRC	VITIONAL REMOVAL INFOR
	7. DRIL	ETRATIONS. L CORNERS OF ALL NEW
	TO S	SAMCUTTING, TO PREVEN EDULED CONSTRUCTION
		DEMOLITION
	#	Desc
	A.27	EXISTING PLAQUES TO E AND STORED FOR FUTU REMOVE EXISTING SUSE
	0.1	ITS ENTIRETY, INCLUDING FASTENERS. REFER TO
		MECHANICAL DRAWINGS REMOVALS.
	0.2	ITS ENTIRETY, INCLUDING FASTENERS. REFER TO
		MECHANICAL DRAWINGS REMOVALS.
	G.2	TO NEAREST CONTROL REMOVE STOREFRONT
	М.З	INCLUDING ALL SILLS, FL MECHANICAL UNIT. REFE
MAIN OFFICE 81		
	<b> </b>	KEA DI
		AREA
		В
DEMOLITION PLAN - VESTIBULE		
AD111 <sup>1/4" = 1'-0"</sup>		
		A
		AREA OF WORK
	1	

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REFLECTED CEILING REMOVAL PLAN - AREA C & D AD802 3/32" = 1'-0"







![](_page_13_Figure_2.jpeg)

![](_page_13_Figure_3.jpeg)

![](_page_13_Picture_4.jpeg)

![](_page_13_Figure_5.jpeg)

![](_page_13_Picture_6.jpeg)

ADDITIONAL GENERAL MINGS FOR DOOR, MINDOW AND LOUVER TES. PARTITION TYPES AND CEYNOTES iption R. RETE EQUIPMENT PAD IN CE IN ITS ENTIRETY FOR TO MECHANICAL NAL INFORMATION. RETE WALKWAY TO	19 Front St. · Newburgh · New York 12550-7601 845 · 561 · 3179 www.csarchpc.com
RETE WALKWAY TO ED TO PROVIDE NG/CONDUIT. ISTING SITE AREA AS ENCING FOR NEW ISTING SITE AREA AS IN CONCRETE EQUIPMENT EYNOTES iption E EQUIPMENT PAD FOR COORDINATE WITH AND PROVIDE SHORING HANICAL WORK. PATCH ICAL WORK IS COMPLETE. FENCING AND GATE. TION FOR AREA DNDUIT TRENCHING WORK. LKWAY PATCHING WHERE BY PIPING/CONDUIT TH INSULATED BLANK M. R FINISH ON CONCRETE DS. REFER TO MEP N DUCT WORK WITH CMU INT WALL. REFER TO MEP	VALLEY CENTRAL SCHOOL DISTRICT VALLEY CENTRAL HIGH SCHOOL 2023 CAPITAL PROJECT - PHASE 1
	Image: Project state st

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CONSTRUCTION DOCUMENTS

![](_page_14_Figure_0.jpeg)

![](_page_14_Figure_2.jpeg)

![](_page_14_Figure_3.jpeg)

![](_page_14_Picture_4.jpeg)

![](_page_14_Figure_5.jpeg)

![](_page_14_Figure_7.jpeg)

![](_page_14_Figure_9.jpeg)

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CONSTRUCTION DOCUMENTS

![](_page_15_Figure_0.jpeg)

![](_page_15_Figure_2.jpeg)

### AREA C & D - FIRST FLOOR NEW WORK PLAN

![](_page_15_Figure_4.jpeg)

	GENERAL N
1. REF	ER TO SHEET GOO 1 FOR A
2. REF	ER TO A900 SERIES DRAM
SCH	EDULES, DETAILS AND NOT
3. REF	ER TO SHEET GOOT FOR P PITIONAL NOTES.
	NEW WORK KE
#	Descri
F4	PROVIDE NEW 12"X12" VC RUBBER WALL BASE WHEN
	PREVIOUSLY REMOVED.
M 1	UNIT VENT. REFER TO MEP
M2	CONDENSING UNIT. REFER
MB	PROVIDE NEW CHAIN LINK
MB	PROVIDE NEW CHAIN LINK MECHANICAL EQUIPMENT."

![](_page_15_Figure_6.jpeg)

![](_page_15_Figure_7.jpeg)

![](_page_16_Figure_0.jpeg)

REMOVE AND REPLACE EXISTI CAULKING AT INSIDE CORNER JOINT (APPROX. 20 LF)	REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 20 LF)	REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 20 LF)		
			لا Aź	<b>4</b> EXT ELEVATION - NORTH 2 201 <sup>3/32" = 1'-0"</sup>
AND REPLACE EXISTING AT INSIDE CORNER PROX. 10 LF)	REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 10 LF)			

		REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 10 LF)	REMOVE AND REPLACE E CAULKING AT INSIDE COR JOINT (APPROX. 10 LF)
REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 10 LF)	REMOVE AND REPLACE REMOVE AND REPLACE EXISTING CAULKING EXISTING CAULKING AT INSIDE CORNER AT INSIDE CORNER JOINT (APPROX. 10 LF) JOINT (APPROX. 10 LF)	REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 10 LF)	

/	r		
		ана на селото на село Посто на селото на сел	1

![](_page_16_Picture_5.jpeg)

![](_page_16_Picture_6.jpeg)

![](_page_16_Picture_7.jpeg)

![](_page_16_Picture_8.jpeg)

![](_page_16_Picture_9.jpeg)

![](_page_16_Figure_10.jpeg)

![](_page_16_Figure_12.jpeg)

REMOVE AND REPLACE EXISTING CAULKING AT INSIDE CORNER JOINT (APPROX. 10 LF)

-																		
	11		11	11	11	11	11					11		11	11	11	11 1	
									11									
1																		
-																		
-																		
-																		
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									1			1		1				
									1			1						

![](_page_17_Figure_3.jpeg)

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11			
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	had a start of the		
	and		
	telephone and the second secon		
	Apply by		
and a stand of the last of the	tylephysical and the second se		
		/*************************************	
	and a second sec		

![](_page_17_Picture_8.jpeg)

![](_page_17_Figure_10.jpeg)

![](_page_18_Figure_0.jpeg)

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AL NOTES PENETRATING DUCT SIZE. TO MECHANICAL TUAL SIZE OF CURBS IN RIPTIONS CONTRUCTION (TYPICAL) ECHANICAL DRAWINGS ER TO PLUMBING MBING DRAWINGS	19 Front St. · Newburgh · New York 12550-7601 845 · 561 · 3179 w w w . c s a r c h p c . c o m
EFER TO MECHANICAL SLOPE AT 1/4" PER	Consultant
C. REFER TO MEP IG AROUND NEW F NEW ROOFING SYSTEM & OF NEW ROOF	HOOL DISTRICT IGH SCHOOL ECT - PHASE 1
	VALLEY CENTRAL SCH VALLEY CENTRAL H 2023 CAPITAL PROJE
	Bojet III
AN DF	Drawn By: Author Checked By: Checker Proj. #: 44-13-01-06-0-015-033 CSArch Proj. #: 187-2302.01 Issued for Bid: 10/18/24 Sheet Title ROOF PLANS - AREA A, C, & D
	sheet No. VCHS A401

CONSTRUCTION DOCUMENTS

![](_page_19_Figure_1.jpeg)

	CEILING AND CONTED SCENTER COMS OTHER THAN RECTAND GRIDS CENTERED ON WALLS OF FEATURES AS INDICATED. INSTALLATION HEIGHTS OF THE SLIGHTLY FROM PLANS IN ROOM WINDOWS, ACTUAL CEILING HEID THE FIELD. FINAL INSTALLED CEILINGS SHA COORDINATED WITH OTHER CO ABOVE CEILING WORK AND VE CONDITIONS, ALL CHANGES IN HEIGHTS ARE TO BE APPROVE CEILING WORK AND VE CONDITIONS, ALL CHANGES IN HEIGHTS ARE TO BE APPROVE SUSPENDED ACOUST SYSTEM +X'-X" CEILING HEIGHT ABO ELECTRICAL EQUIPMENT, REFER DRAWINGS FOR ADDITIONAL INFO 2'X4' LIGHT FIXTU V'- PENDANT LIGHT FIXTU CEILING MOUNTED EXI' OS CEILING MOUNTED SMO SUSPENDED ACOUST SYSTEM CEILING MOUNTED SMO CEILING MOUNTED SMO CEILING MOUNTED SMO CEILING MOUNTED FA CEILING MOUNTED FA
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1 REFLECTED CEILING PLAN - VESTIBULE	KEY PL

![](_page_19_Figure_4.jpeg)

![](_page_20_Figure_0.jpeg)

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![](_page_20_Figure_3.jpeg)

LING NOTES FRIDS CENTERED IN THE ROOM, UNO. IN HAN RECTANGULAR SHAPED, INSTALL ON WALLS OR OTHER BUILT ICATED. IGHTS OF THE CEILINGS MAY VARY PLANS IN ROOMS WITH EXTERIOR L CEILING HEIGHT TO BE VERIFIED IN CEILINGS SHALL HAVE HEIGHTS ITH OTHER CONTRACTORS WITH IORK AND VERIFIED WITH FIELD CHANGES IN CONFIGURATION OR BE APPROVED BY THE ARCHITECT. ING LEGEND R PLASTER CEILING, REFER TO S AND ROOM FINISH SCHEDULE DED ACOUSTICAL PANEL CEILING 1	19 Front St. · Newburgh · New York 12550-7601 845 · 561 · 3179 www.csarchpc.com
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91	PROF LIBRARY	ETR/VCT-1	RB-1	ETR			
112	SOCIAL STUDIES	ETR/VCT-1	RB-1	ETR			
130	ENGLISH	ETR/VCT-1	RB-1	ETR			
131	ENGLISH	ETR/VCT-1	RB-1	ETR			
132	ENGLISH	ETR/VCT-1	RB-1	ETR			
133	ENGLISH	ETR/VCT-1	RB-1	ETR			
134	JROTC OFF.	ETR/VCT-1	RB-1	ETR			
135	ENGLISH	ETR/VCT-1	RB-1	ETR			
136	ENGLISH	ETR/VCT-1	RB-1	ETR			
137	ENGLISH	ETR/VCT-1	RB-1	ETR			
138	ENGLISH	ETR/VCT-1	RB-1	ETR			
139A	JROTC	ETR/VCT-1	RB-1	ETR			
139B	JROTC	ETR/VCT-1	RB-1	ETR			
140A	CLASSROOM	ETR/VCT-1	RB-1	ETR			
140B	CLASSROOM	ETR/VCT-1	RB-1	ETR			
141A	CLASSROOM	ETR/VCT-1	RB-1	ETR			
141B	CLASSROOM	ETR/VCT-1	RB-1	ETR			
142A	CLASSROOM	ETR/VCT-1	RB-1	ETR			
142B	CLASSROOM	ETR/VCT-1	RB-1	ETR			
143	WRITING CENTER	ETR/VCT-1	RB-1	ETR			
144	SOCIAL STUDIES	ETR/VCT-1	RB-1	ETR			
145	SOCIAL STUDIES	ETR/VCT-1	RB-1	ETR			
146	SOCIAL STUDIES	ETR/VCT-1	RB-1	ETR			
284	Room	ETR	RB-1	PNT-1			
285	VEST.	ETR	RB-1	PNT-1			
366	ENGLISH	ETR/VCT-1	RB-1	ETR			

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3BT	BIO-BASED TILE
3RK	BRICK
CFT	CERAMIC FLOOR TILE
CMU	CONCRETE MASONRY UN
CONC	CONCRETE
CPT	CARPET
CTB	CERAMIC TILE BASE
CMT	CERAMIC WALL TILE
ETR	EXISTING TO REMAIN
EXP	EXPOSED
EXST	EXISTING
FAC/FF	FACTORY FINISH
SMB	GYPSUM WALL BOARD
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M55	MUSIC STORAGE STSTEN
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21	RUBBER TILE FLOORING
3CONC	SEALED CONCRETE
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STF	SYNTHETIC TURF FLOOR
STL	STEEL
TERR	TERRAZZO
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CIB CWT ETR EXP EXST FAC/FF GWB LMC MSS MWP PCON PLAM PLAS PNT RAF RB RF RST RT SCONC SS STF STL TERR TP VCT VCTAS VWC WAF WD WOM <b>GE</b> 1. ALL EXPC BE PAINT 2. WHEN ANY WALL, THE CORNER 3. ALL EXPC RECEIVE LOCATIO Wall Finish Base Finish Floor Finish	CERAMIC MALL TILE EXISTING TO REMAIN EXPOSED EXISTING FACTORY FINISH GYPSUM WALL BOARD LINEAR METAL CELING MUSIC STORAGE SYSTEM METAL WALL PANEL POLISHED CONCRETE PLASTIC LAMINATE PLASTER CAMINATE PLASTER CORRETE STAINLESS STELE SYNTHETIC TURF FLOORING RUBBER STAIR TREAD / LANDING RUBBER STAIR STAIN RUBBER STAIN RUBBER STAIN RUBBER STAIR STAIN RUBBER STAIN RUBB	VALLEY CENTRAL SCHOOL DISTRICT VALLEY CENTRAL HIGH SCHOOL 2023 CAPITAL PROJECT - PHASE 1
		Proj. #: 44-13-01-06-0-015-033 CSArch Proj. #: 187-2302.01 Issued for Bid: 10/18/24

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_1.jpeg)

![](_page_22_Figure_2.jpeg)

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![](_page_23_Figure_0.jpeg)

PIPE Ø (IN.)	MAX. S H	MIN. ROD SIZE		
	STEEL PIPE	COPPER PIPE	CPVC	(IN.)
1/2 THRU 1	7	5	5	3/8
1-1/2 THRU 2	9	8	6	3/8
2-1/2	11	9	7.5	1/2
3	12	10	7.5	1/2
4	14	12	8.5	5/8
6	17	14	9	3/4
8	19	16	10	7/8
10	22	18	10.5	7/8

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Pipe Hanger Support

![](_page_23_Figure_5.jpeg)

![](_page_23_Figure_6.jpeg)

Pipe Penetrations Detail

### Plumbing Legend:

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DOMESTIC COLD WATER SUPPLY 110 °F DOMESTIC HOT WATER SUPPLY 140 °F DOMESTIC HOT WATER SUPPLY HOT WATER RETURN SANITARY SEWER, ABOVE GRADE SANITARY SEWER, BELOW GRADE GREASE WASTE, BELOW GRADE PLUMBING VENT STORM WATER, ABOVE GRADE STORM WATER, BELOW GRADE NATURAL GAS PIPING DIRECTION OF PIPE SLOPE (DOWN) CONCENTRIC REDUCER OR INCREASER ECCENTRIC REDUCER TOP CONNECTION, 45° OR 90° BOTTOM CONNECTION, 45° OR 90° SIDE CONNECTION CAPPED OUTLET RISE OR DROP IN PIPE UNION PIPE UP PIPE DOWN POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK STRAINER HOSE BIB

SOLENOID VALVE

GATE VALVE

GLOBE VALVE

CHECK VALVE

BUTTERFLY VALVE FULL PORT BALL VALVE

### PRESSURE GAUGE

PRESSURE REDUCING VALVE (PRV) DRAIN VALVE

FLEXIBLE PIPING CONNECTION

CLEANOUT

WALL CLEANOUT

FLOOR CLEANOUT

CLEANOUT TO GRADE

DOUBLE CLEANOUT TO GRADE

PLUMBING FIXTURE MARK

Plumbing Notes:

- 1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.
- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.
- 4. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
- 5. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
- 6. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2020 BUILDING CODE OF NEW YORK STATE, 2020 PLUMBING CODE OF NEW YORK STATE, 2020 FUEL GAS CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- WHERE THE PROJECT INVOLVES A GAS SERVICE, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL GAS UTILITY COMPANY. ALL WORK INVOLVING THE GAS UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
- 8. ALL DOMESTIC COLD AND HOT WATER PIPING AND FITTINGS ARE TO BE INSULATED WITH 1" THICK RIGID ONE-PIECE MOLDED SECTIONAL FIBERGLASS PIPE COVERING WITH UNIVERSAL JACKET. ALL JOINTS ARE TO BE COMPLETELY SEALED A MINIMUM OF 6" BEYOND JOINT ENDS.
- 9. ALL PIPING SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 10. ALL EXPOSED PIPING, FITTINGS, TRAPS, ESCUTCHEONS, VALVES, ETC. SHALL BE CHROME PLATED.
- 11. SLOPE SANITARY DRAINAGE PIPING 2" DIAMETER AND SMALLER NOT LESS THAN 1/4" PER FOOT. SLOPE SANITARY DRAINAGE PIPING OVER 2" DIAMETER NOT LESS THAN 1/8" PER FOOT.
- 12. INSTALL A CLEANOUT AT THE BASE OF EACH SOIL STACK, AT EACH CHANGE IN DIRECTION, AT INTERVALS NOT OVER 50 FEET AND ELSEWHERE AS SHOWN ON DRAWINGS OR REQUIRED BY CODE.
- 13. PROVIDE EXPOSED PIPING WITH CHROME PLATED CAST BRASS ESCUTCHEON WITH SET SCREW WHERE PENETRATING FLOORS, CEILINGS, WALLS OR PARTITIONS.
- 14. TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND/OR AS SPECIFIED. TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER AND LOCAL INSPECTOR. TEST SHALL BE REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS OBTAINED.
- 14.1. WATER & GAS PIPING TO BE AIR-PRESSURE TESTED TO 1-1/2 TIMES MAXIMUM WORKING PRESSURE.
- 14.2. DRAINAGE, WASTE & VENT PIPING TO BE TESTED BY FILLING THE SYSTEM WITH WATER TO 10-FEET ABOVE HIGHEST POINT.
- 15. SUPPORT HORIZONTAL PIPING UTILIZING A SPACING PER PIPING MANUFACTURER'S REQUIREMENTS.
- 16. INSTALL VALVES ON THE ENTIRE DISTRIBUTION SYSTEM. SO LOCATED AS TO GIVE COMPLETE CONTROL TO ALL FIXTURES AND EQUIPMENT.
- 17. INSTALL DRAIN VALVES AT BASE OF ALL RISERS AND AT LOW POINTS OF PIPING SYSTEM.
- 18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, PIPING, FIXTURES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.
- 20. CONTRACTOR IS RESPONSIBLE TO CREATE AND SUBMIT RED-LINE "AS-BUILT" PLANS TO THE ENGINEER AT THE END OF THE PROJECT. AS-BUILT PLANS SHALL ACCURATELY REPRESENT THE SYSTEMS AS THEY WERE INSTALLED.

![](_page_23_Figure_52.jpeg)

![](_page_24_Figure_0.jpeg)

![](_page_24_Picture_1.jpeg)

### Key Notes:

1	EXISTING STEAM BOILER TO BE REMOVED BY MECHAI CONTRACTOR
2	EXISTING GAS FIRED DOMESTIC WATER HEATER TO B DISCONNECTED, REMOVED & PROPERLY DISPOSED C ANY ASSOCIATED PIPING, VENTING, HANGERS, SUPPO ACCESSORIES, ETC.
3	EXISTING DOMESTIC WATER STORAGE TANK TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED C ANY ASSOCIATED PIPING, HANGERS, SUPPORTS, ACC ETC.
4	EXISTING EYEWASH STATION TO BE DISCONNECTED, PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATE HANGERS, SUPPORTS, ACCESSORIES, ETC.

EXISTING NATURAL GAS PIPING TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED VALVES, REGULATORS, HANGERS, SUPPORTS, ACCESSORIES, ETC. 5

![](_page_24_Figure_7.jpeg)

![](_page_24_Figure_8.jpeg)

- D, REMOVED & TED PIPING,

![](_page_24_Figure_11.jpeg)

![](_page_24_Figure_12.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_2.jpeg)

![](_page_25_Figure_3.jpeg)

![](_page_25_Figure_4.jpeg)

![](_page_26_Figure_0.jpeg)

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### Valve Symbols:

	GATE VALVE - THREADED/FLANGED
	GLOBE VALVE - THREADED/FLANGED
	GATE VALVE WITH 3/4" HOSE ADAPTER
	CHECK VALVE
	WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)
	WYE STRAINER WITH VALVED DRAIN AND QUICK-COUPLE HOSE CONNECTOR
	FLEXIBLE CONNECTION
₹-	ANGLE GLOBE VALVE
/≠/	BUTTERFLY VALVE
<u>       ф        </u>	BALL VALVE
—— <u>A</u> ——	MODULATING CONTROL VALVE
—— <u>Й</u> ——	MODULATING CONTROL BUTTERFLY VALVE
	TWO POSITION CONTROL VALVE
	THREE-WAY MODULATING CONTROL VALVE
	THREE-WAY TWO POSITION CONTROL VALVE
	PRESSURE REGULATING VALVE
¢	PRESSURE SAFETY VALVE
IڬI	AUTOMATIC BALANCING CONTROL VALVE
X	WATER BALANCE DEVICE
( <u> </u>	CIRCUIT SETTER VALVE
	GATE VALVE WITH GLOBE-VALVED BYPASS
	PLUG VALVE

CONTROL VALVE (CV) - FLOAT-OPERATED PRESSURE REDUCING VALVE (PRV)

![](_page_26_Figure_10.jpeg)

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND. 2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED

![](_page_26_Figure_12.jpeg)

### General Symbols:

DIRECTION OF PIPE PITCH (DOWN)

DIRECTION OF FLOW

REDUCER OR INCREASER

TOP CONNECTION, 45° OR 90°

BOTTOM CONNECTION, 45° OR 90°

INVERTED BUCKET TRAP SET INCLUDING

FLOAT & THERMOSTATIC TRAP SET INCLUDING

PIPING ACCESSORIES SEE DETAIL

PIPING ACCESSORIES SEE DETAIL

PIPING ACCESSORIES SEE DETAIL

THERMOSTATIC TRAP SET INCLUDING

ECCENTRIC REDUCER

SIDE CONNECTION

CAPPED OUTLET

UNION

PIPE UP

PIPE DOWN

THERMOMETER

PRESSURE GAGE

VENTURI FLOW METER

AUTOMATIC AIR VENT

MANUAL AIR VENT

AND EXISTING WORK

REFRIGERANT SIGHT GLASS

TEST PLUG (PRESSURE/TEMPERATURE)

QUICK-COUPLE HOSE CONNECTOR

POINT OF CONNECTION BETWEEN NEW

RISE OR DROP IN PIPE

ANCHOR

### Mechanical Legend :

![](_page_26_Figure_15.jpeg)

X"xX"

FSD

![](_page_26_Figure_16.jpeg)

FLEXIBLE DUCTWORK (INSULATED)

MANUAL VOLUME DAMPER

FIRE DAMPER

COMBINATION FIRE SMOKE DAMPER

DUCT SMOKE DETECTOR

X TERMINAL UNIT TAG X AIRFLOW (CUBIC FEET PER MINUTE)

### Mechanical Notes:

AND ENGINEER.

- 1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.
- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES. 4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER
- 5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
- 6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.
- 7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS. AND OBTAIN ALL PERMITS. INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
- 8. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2020 BUILDING CODE OF NEW YORK STATE, 2020 MECHANICAL CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- 9. ALL PIPING SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 10. ALL PIPING SHALL BE PITCHED SUCH THAT AIR IN THE SYSTEM CAN BE VENTED THROUGH MANUAL AIR VENTS. 11. TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS TO TWICE THE SYSTEM
- WORKING PRESSURE. TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER AND LOCAL INSPECTOR. TEST SHALL BE REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS OBTAINED.
- 12. SUPPORT HORIZONTAL PIPING UTILIZING A SPACING PER PIPING MANUFACTURER'S REQUIREMENTS.
- 13. INSTALL VALVES ON THE ENTIRE DISTRIBUTION SYSTEM, SO LOCATED AS TO GIVE COMPLETE CONTROL TO ALL FIXTURES AND EQUIPMENT. 14. INSTALL DRAIN VALVES AT BASE OF ALL RISERS AND AT LOW POINTS OF PIPING SYSTEM. INSTALL MANUAL AIR VENT VALVE FACILITIES AT THE TOP OF ALL RISERS
- AND AT HIGH POINTS OF THE PIPING SYSTEM. 15. INSTALL ALL HYDRONIC PIPING AS HIGH AS POSSIBLE PROVIDING RISERS, DROPS AND OFFSETS TO CLEAR STRUCTURAL MEMBERS, LIGHT FIXTURES, OTHER PIPING, AND OTHER OBSTRUCTIONS. WHERE CONFLICTS ARISE, IT SHALL BE BROUGHT TO THE

ENGINEER'S ATTENTION PRIOR TO PROCEEDING.

- 16. THE ENTIRE HYDRONIC SYSTEM IS TO BE BALANCED TO WITHIN 10% OF THE SPECIFIED WATER FLOWRATE REQUIREMENTS. A CERTIFIED BALANCING REPORT AND VERIFICATION IS TO BE SUBMITTED TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
- 17. ALL DUCTWORK IS TO BE CONSTRUCTED OF GALVANIZED SHEET STEEL (EXCEPT WHERE OTHERWISE SPECIFIED) WITH GAUGES, BRACING AND CONSTRUCTION IN ACCORDANCE WITH THE LATEST SMACNA DUCT MANUAL STANDARDS AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
- 18. PROVIDE MANUAL DAMPERS AT EACH SPLIT OR TAP CONNECTION TO TRUNK DUCTS FOR BALANCING PURPOSES WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS. EACH DAMPER SHALL BE OF THE OPPOSED BLADE DAMPER TYPE INSTALLED WITH AN OPERATOR AND LOCKING DEVICE. ALL DAMPERS LOCATED ABOVE HARD OR INACCESSIBLE CEILINGS SHALL BE INSTALLED WITH REMOTE GEAR OPERATORS.
- 19. FURNISH & INSTALL FUSIBLE LINK FIRE DAMPERS AT ALL LOCATIONS WHERE DUCT PENETRATES FIRE-RATED FLOOR OR CEILING ASSEMBLY WHETHER OR NOT SPECIFICALLY SHOWN. INSTALL DUCTWORK CASING ACCESS DOORS AND FRAMES AHEAD OF EACH FIRE DAMPER FOR INSPECTION AND MAINTENANCE. DOORS SHALL BE A MINIMUM OF 20 GA. DOUBLE PANEL INSULATED TYPE
- 20. INSTALL TURNING VANES ON ALL RECTANGULAR TURNS. TURNING VANES SHALL BE DOUBLE THICKNESS TYPE CONSTRUCTED IN ACCORDANCE WITH SMACNA MANUAL.
- 21. ROUND SHEET STEEL ELBOWS ARE TO BE INSTALLED AT THE DUCT CONNECTION TO ALL SUPPLY AIR DIFFUSERS. SHEET STEEL PLENUM BOXES ARE TO BE INSTALLED AT THE DUCT CONNECTION TO ALL RETURN AND EXHAUST AIR GRILLES. THE CONTRACTOR IS TO PAINT THE INSIDE OF THE SHEET STEEL PLENUM BOXES FLAT BLACK.
- 22. INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE PROVIDING RISERS, DROPS AND OFFSETS TO CLEAR STRUCTURAL MEMBERS, LIGHT FIXTURES, OTHER PIPING, AND OTHER OBSTRUCTIONS. WHERE CONFLICTS ARISE, IT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO PROCEEDING.
- 23. THE ENTIRE AIR DISTRIBUTION SYSTEM IS TO BE BALANCED TO WITHIN 10% OF THE SPECIFIED AIRFLOW REQUIREMENTS.
- 24. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, PIPING, FIXTURES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 25. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.
- 26. CONTRACTOR IS RESPONSIBLE TO CREATE AND SUBMIT RED-LINE "AS-BUILT" PLANS TO THE ENGINEER AT THE END OF THE PROJECT. AS-BUILT PLANS SHALL ACCURATELY REPRESENT THE SYSTEMS AS THEY WERE INSTALLED.

Mechanical Equipment

- $(\overline{})$ WIRED THERMOSTAT COMPATIBLE WITH EXISTING BUILDING AUTOMATION SYSTEM; MOUNT 5'-0" A.F.F. IN LOCATIONS SHOWN ON PLANS
- THERMOSTAT PROVIDED BY OWNER, INSTALLED BY CONTRACTOR; MOUNT 5'-0" A.F.F. IN LOCATIONS SHOWN ON PLANS

![](_page_26_Picture_53.jpeg)

![](_page_26_Figure_54.jpeg)

									U	NIT	VEN	TILA	TOR	SCH	EDUL	E												
			AREA OF	TOTAL	OUTSIDE AIR			HEATING	COIL DATA						COOLING	COIL DATA	ι,					ELEC	TRICA	L DATA	4		TOTAL	
QUIPMENT TAG	(OR ACCEPT. EQUAL)	MODEL	BUILDING SERVED	AIRFLOW (CFM)	SUPPLIED (CFM)	EFT (°F)	LFT (°F)	CAPACITY (MBH)	E.A.T. DB (°F)	L.A.T. DB (°F)	FPD (FT)	FLOW RATE (GPM)	EFT (°F)	LFT (°F)	CAPACITY (MBH)	E.A.T. DB (°F)	L.A.T. DB (°F)	FPD (FT)	FLOW RATE (GPM)	BLOV TYPE	VER MC	RPM	/OLT. I	UNIT PHASE	F POW Hz.	ER MCA MOO	WEIGHT (LB)	NOTES
UV-91	TRANE	VUVE1250	CLASSROOM 91	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-112	TRANE	VUVE1250	CLASSROOM 112	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-130	TRANE	VUVE1250	CLASSROOM 130	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-131	TRANE	VUVE1250	CLASSROOM 131	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-132	TRANE	VUVE1250	CLASSROOM 132	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-133	TRANE	VUVE1250	CLASSROOM 133	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-134A	TRANE	VUVE750	CLASSROOM 134A	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-134B	TRANE	VUVE750	CLASSROOM 134B	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-135	TRANE	VUVE1250	CLASSROOM 135	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-136	TRANE	VUVE1250	CLASSROOM 136	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-137	TRANE	VUVE1250	CLASSROOM 137	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-138	TRANE	VUVE1250	CLASSROOM 138	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-139A	TRANE	VUVE750	CLASSROOM 139A	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-139B	TRANE	VUVE750	CLASSROOM 139B	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-140A	TRANE	VUVE750	CLASSROOM 140A	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-140B	TRANE	VUVE750	CLASSROOM 140B	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-141A	TRANE	VUVE750	CLASSROOM 141A	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-141B	TRANE	VUVE750	CLASSROOM 141B	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-142A	TRANE	VUVE750	CLASSROOM 142A	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-142B	TRANE	VUVE750	CLASSROOM 142B	750	225	180	147.57	44.76	40	95	2.58	2.72	45	54.05	24.19	78	57.51	2.39	4.89	VAR. SPEED ECM	1/4	-	115	1	60	4.5 15	320	1-5
UV-143	TRANE	VUVE1250	CLASSROOM 143	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-144	TRANE	VUVE1250	CLASSROOM 144	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-145	TRANE	VUVE1250	CLASSROOM 145	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-146	TRANE	VUVE1250	CLASSROOM 146	1,250	450	180	141.03	74.61	40	95	6.88	3.78	44	54.05	37.63	78	57.80	4.23	7.9	VAR. SPEED ECM	1/4	-	115	1	60	9 15	450	1-5
UV-158	TRANE	HUVE1500	BOYS LOCKER ROOM	1,500	650	180	140	90.61	40	95.66	10.74	4.53	44	54	55.85	78	55.56	8.49	11.59	VAR. SPEED ECM	1/4	-	115	1	60	9 15	675	1-5
UV-159	TRANE	HUVE1500	GIRLS LOCKER ROOM	1,500	650	180	140	90.61	40	95.66	10.74	4.53	44	54	55.85	78	55.56	8.49	11.59	VAR. SPEED	1/4	-	115	1	60	9 15	675	1-5

<u> </u>	
3.	PROVIDE WITH HOT WATER CONTROL VALVE
4.	FURNISH & INSTALL 2" MERV-13 FILTERS

	CABINET UNIT HEATER SCHEDULE																
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. FQUAL)	MODEL	FLUID TYPE	EWT (°F)	LWT (°F)	FLOW RATE (GPM)	PRESSURE DROP (FT HD)	HEATING CAPACITY (MBH)	AIRFLOW (CFM)		E RE(	LECT POV QUIRI	RICAL VER EMENTS			WEIGHT (LB)	NOTES
	2007(2)						(1112)	(111211)		VOLT.	PHASE	=  н	lz. MC	A M	OCP		
CUH-1	TRANE	FFEB030	HOT WATER	180	160	3.5	0.96	35.3	300	120	1	6	60 0.4	5	15	121	HORIZONTAL RECESSED UNIT; BOTTOM STAMPED LOUVER SUPPLY & RETURN; UNITS FURNISHED W/ DISCONNECT SWITCH, 1" FILTER, SYMBIO 400-B CONTROLLER, DELUXE PIPING PACKAGE, 2-WAY MODULATING CONTROL VALVE
CUH-2	TRANE	FFEB030	HOT WATER	180	160	3.5	0.96	35.3	300	120	1	6	60 0.4	5	15	121	HORIZONTAL RECESSED UNIT; BOTTOM STAMPED LOUVER SUPPLY & RETURN; UNITS FURNISHED W/ DISCONNECT SWITCH, 1" FILTER, SYMBIO 400-B CONTROLLER, DELUXE PIPING PACKAGE, 2-WAY MODULATING CONTROL VALVE

						IN	DOC	OR N	INI-S	PLIT	UN	IT SCI	HEDULE	<b>-</b>							
	MANUFACTURER			AREA OF		CC	DOLING		H	EATING		PAIRED	EXTERNAL		ELECT						
TAG	(OR ACCEPT. EQUAL)	MODEL	TYPE	BUILDING SERVED	(CFM)	CAPACITY (MBH)	EDB (°F)	EWB (°F)	CAPACITY (MBH)	EDB (°F)	EWB (°F)	OUTDOOR UNIT	PRESSURE				B MCA	(LB)	NOTES		
													(	VOLI.	1100	112.	WOA				
FCU-1	TRANE	NTXCKS09A112AA	CEILING CASSETTE	SECURITY OFFICE	300	9.0	80.0	67.0	11.0	70.0	60.0	HP-1	-	208	1	60	0.25	31	PROVIDE W/ BUILT IN CONDENSATE PUMP		

	AIR-COOLED HEAT PUMP SCHEDULE																	
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	INDOOR UNITS SERVED	COMPRESSOR TYPE	NOM. COOL CAPACITY (MBH)	NOM. HEAT CAPACITY (MBH)	OUTI OPERATI RANG	Door Ng temp. Se (°F)	AHR	I EFFICIENCY RATINGS	REFRIGERANT	SOUND PRESSURE LEVEL COOLING/ HEATING		ELE P REQU	CTRIC OWER IREME	AL	WEIG (LB	HT NOTES
					()	()	COOLING	HEATING	EER	SEER COF		(dBA)	VOLT.	PHASE	Hz.	MCA MOCI	2	
HP-1	TRANE	NTXSKH09A112AA	FCU-1	INVERTER SCROLL HERMETIC	9.0	11.0	14 TO 115	-13 TO 75	15.0	20.2 3.9	R410A	50	208	1	60	14 24	129	INSTALL PER MANUFACTURER REQUIREMENTS, FURNISH W/ REQUIRED PIPING ACCESSORIES

А	IR	CC	DO	LE	D	CH	LE	R	SC	]
										_

ŀ		MANUFACTURER		AREA OF							E	EVAPORA	TOR		CONDENSER		ELECT	FRICAL	DATA		
	EQUIPMENT TAG	(OR ACCEPT. EQUAL)	MODEL	BUILDING SERVED	TYPE	(TONS)	# OF COMP.	@ AHRI	IEER	FLOWRATE (GPM)	E.W.T. (°F)	L.W.T. (°F)	WATER PRESS. DROP (FT. H <sub>2</sub> O)	FOULING FACTOR	AMBIENT OA TEMP (°F)	VOLT.	JNIT POV PHASE	VER CON Hz.	INECTIO MCA	N MOCF	NOTES
	CH-1	TRANE	RAUD10	HAGGER WING	AIR COOLED REMOTE EVAP	100	6	10.9	15.7	245	53.88	44.0	10.77	0.0001000	95	208	3	60	451	500	1-6

NOTES: 1. PROVIDE W/ BHPE REMOTE CHILLER EVAPORATOR & INSTALL KIT

\_\_\_\_\_

2. PROVIDE W/ 100 TON BRAZED PLATE HEAT EXCHANGER & REMOTE EVP CONTROL PANEL 3. SEE SHEET M004 FOR INSTALLATION DETAILS

4. INSTALL PER MANUFACTURER REQUIREMENTS W/ ALL REQUIRED ACCESSORIES & CONTROLS

5. R454-B REFRIGERANT 6. FURNISHED W/ NON-FUSED DISCONNECT SWITCH & POWERED 15A CONVENIENCE OUTLET

### CHEDULE

 UNIT VENTILATORS, CABINET HEATERS, SPLIT SYSTEM & CHILLER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR; CONTRACTOR IS RESPONSIBLE TO RECEIVE THE EQUIPMENT DELIVERY AT THE PROJECT SITE, MOVE EQUIPMENT FROM TRUCK(S) TO A DESIGNATED STORAGE LOCATION ON THE SITE & RIG THE UNIT INTO THE FINAL INSTALLATION LOCATION; CONTRACTOR IS TO PROVIDE ALL ASSOCIATED COMPONENTS, I.E., DUCTWORK, PIPING, CONTROLS, ACCESSORIES, ETC. UNLESS OTHERWISE NOTED IN THE PROJECT DOCUMENTS; REFER TO FRONT END DOCUMENTS FOR ADDITIONAL INFORMATION

![](_page_27_Figure_16.jpeg)

FAN SCHEDULE													
EQUIPMENT	MANUFACTURER	MODEL	SERVICE	FAN	R.P.M.	EXTERNAL STATIC PRESSURE		M	OTOR	1		REMARKS	
IAG				C.F.M.		INCH H <sub>2</sub> O	POWER (HP)	FLA	VOLT.	PHASE	HZ.		
EF-91	GREENHECK	G-133-VG	CLASSROOM 91	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-112	GREENHECK	G-090-VG	CLASSROOM 112	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-131	GREENHECK	G-133-VG	CLASSROOM 131	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-132	GREENHECK	G-090-VG	CLASSROOM 132	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-133	GREENHECK	G-143-VG	CLASSROOM 133	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-134A	GREENHECK	G-143-VG	CLASSROOM 134A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-134B	GREENHECK	G-143-VG	CLASSROOM 134B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-135	GREENHECK	G-143-VG	CLASSROOM 135	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-136	GREENHECK	G-143-VG	CLASSROOM 136	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-137	GREENHECK	G-143-VG	CLASSROOM 137	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-138	GREENHECK	G-143-VG	CLASSROOM 138	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-139A	GREENHECK	G-143-VG	CLASSROOM 139A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-139B	GREENHECK	G-143-VG	CLASSROOM 139B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-140A	GREENHECK	G-143-VG	CLASSROOM 140A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-140B	GREENHECK	G-143-VG	CLASSROOM 140B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-141A	GREENHECK	G-143-VG	CLASSROOM 141A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-141B	GREENHECK	G-143-VG	CLASSROOM 141B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-142A	GREENHECK	G-143-VG	CLASSROOM 142A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-142B	GREENHECK	G-143-VG	CLASSROOM 142B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-143	GREENHECK	G-143-VG	CLASSROOM 143	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-144	GREENHECK	G-143-VG	CLASSROOM 144	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-145	GREENHECK	G-143-VG	CLASSROOM 145	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-146	GREENHECK	G-143-VG	CLASSROOM 146	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-158	GREENHECK	G-143-VG	CLASSROOM 158	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	
EF-159	GREENHECK	G-143-VG	CLASSROOM 159	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER	

	CONDENSING BOILER SCHEDULE										
FOUIPMENT			INPUT	(MBH)	THERMAL	GROSS	TURNDOWN				
TAG	MANUFACIURER	MODEL	MIN.	MAX.	EFFICIENCY	OUTPUT (MBH)	RATIO	REMARKS			
B-1	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1			
B-2	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1			
B-3	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1			
B-4	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1			
B-5	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1			
B-6	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1			

	AIR GRILLE/DIFFUSER SCHEDULE												
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	AIR DEVICE TYPE	airflo' Min.	W (CFM) MAX.	MAX AIR PRESS. DROP (IN. W.C.)	MOUNTING	PANEL/FRAME SIZE (IN.)	NECK SIZE (IN.)	MAX NC	DAMPER	FINISH	NOTES
D-1	KRUEGER	PLQ-10-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	301	450	0.10	LAY-IN	24"x24"	10"Ø	20	OBD	WHITE	FURNISH W/ INSULATED BACKPAN
D-2	KRUEGER	880-H-48-24-F22-NONE-00-01-00-44	DOUBLE DEFLECTION SUPPLY GRILLE	0	3500	0.10	WALL MTD.	50"x26"	48"x24"	20	OBD	WHITE	-
D-3	KRUEGER	5DMGDR-H-14-8-20-01-81	DUCT MOUNTED SUPPLY GRILLE	0	200	0.10	DUCT MTD.	16"x10"	14"x8"	20	OBD	CLEAR ANOD.	FURNISH W/ DAMPER/EXTRACTOR
R-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK
R-2	KRUEGER	S80H-36x12-F22-NONE-00-00-00-01	35° DEFLECTION RETURN GRILLE	0	1,300	0.10	DUCT MTD.	38"x14"	36"x12"	25	-	MILL	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK

					VE	NTIL	ATION	SCHED	DULE						
SYSTEM	SPACE SERVED	SPACE TYPE	SPACE AREA (SQ. FT.)	OCCUPANTS PER 1000 SQ. FT.	# OF OCCUPANTS (NOTE 1)	CFM PER PERSON	CFM PER SQ. FT.	CALCULATED VENTILATION RATE (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ADJUSTED VENTILATION RATE (CFM)	PROVIDED VENTILATION RATE (CFM)	EA CFM PER FIXTURE	EA CFM PER SQ. FT.	MIN. EA RATE (CFM)	EA PROVIDED (CFM)
UV-91	CLASSROOM 91	LIBRARY	715	35	30	10	0.12	386	0.9	429	440	-	-	-	450
UV-112	CLASSROOM 112	CLASSROOM	720	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-130	CLASSROOM 130	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-131	CLASSROOM 131	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-132	CLASSROOM 132	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-133	CLASSROOM 133	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-134A	CLASSROOM 134A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-134B	CLASSROOM 134B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-135	CLASSROOM 135	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-136	CLASSROOM 136	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-137	CLASSROOM 137	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-138	CLASSROOM 138	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-139A	CLASSROOM 139A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-139B	CLASSROOM 139B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-140A	CLASSROOM 140A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-140B	CLASSROOM 140B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-141A	CLASSROOM 141A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-141B	CLASSROOM 141B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-142A	CLASSROOM 142A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-142B	CLASSROOM 142B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-143	CLASSROOM 143	CLASSROOM	782	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-144	CLASSROOM 144	CLASSROOM	782	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-145	CLASSROOM 145	CLASSROOM	782	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-146	CLASSROOM 146	CLASSROOM	782	35	30	10	0.18	394	0.9	437	440	-	-	-	450
UV-158	BOYS LOCKER ROOM	LOCKER ROOMS	1303	0	0	0	0	0	0	0	650	-	0.5	650	- 650
	BOYS LOCKER ROOM OFFICE	OFFICE SAPCE	169	5	1	5	0.06	15	0.8	19	650	-	-	-	000
()\/-159	GIRLS LOCKER ROOM	LOCKER ROOMS	1303	0	0	0	0	0	0	0	650	-	0.5	650	650
	GIRLS LOCKER ROOM OFFICE	OFFICE SPACE	169	5	1	5	0.06	15	0.8	19		-	-	-	

NOTES: 1. QUANTITY OF OCCUPANTS FOR STANDARD CLASSROOMS ARE 30 OCCUPANTS BASED ON NYSED STATISTICAL DATA. ALL OTHER OCCUPANCIES ARE BASED UPON OCCUPANT DENSITIES FROM THE 2015 INTERNATIONAL MECHANICAL CODE

	PUMP SCHEDULE															
	MANUFACTURER (OR ACCEPT.	RER     MODEL     LOCATION     AREA SERVED     PUMP TYPE     CIRCULATING FLUID     MOTOR									NOTES					
BP-1	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #1	IN-LINE	HOT WATER	<u>9.</u> г.м. 144	32	180	1.5	208	РНА <u>ЗЕ</u> 3	60	1760	6.7	1-3
BP-2	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #2	IN-LINE	HOT WATER	144	32	180	1.5	208	3	60	1760	6.7	1-3
BP-3	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #3	IN-LINE	HOT WATER	144	32	180	1.5	208	3	60	1760	6.7	1-3
BP-4	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #4	IN-LINE	HOT WATER	144	32	180	1.5	208	3	60	1760	6.7	1-3
BP-5	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #5	IN-LINE	HOT WATER	144	32	180	1.5	208	3	60	1760	6.7	1-3
BP-6	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #6	IN-LINE	HOT WATER	144	32	180	1.5	208	3	60	1760	6.7	1-3
P-1	GRUNDFOS	-	BOILER ROOM	BUILDING	BASE MOUNTED	HOT WATER	980	100	180	20	208	3	60	1760	-	1-3
P-2	GRUNDFOS	-	BOILER ROOM	BUILDING	BASE MOUNTED	HOT WATER	980	100	180	20	208	3	60	1760	-	1-3
P-3	GRUNDFOS	-	BOILER ROOM	HAGGAR WING	BASE MOUNTED	CHILLED WATER	225	110	44	7-1/2	208	3	60	1760	-	1-3
P-4	GRUNDFOS	-	BOILER ROOM	HAGGAR WING	BASE MOUNTED	CHILLED WATER	225	110	44	7-1/2	208	3	60	1760	-	1-3
P-5	GRUNDFOS	TPE3 80-180-S -A-G-A-BQQE	BOILER ROOM	DOMESTIC WATER HEATER	IN-LINE	HOT WATER	225	25	180	3	208	3	60	1760	7.9	1-3
P-6	GRUNDFOS	TPE3 80-180-S -A-G-A-BQQE	BOILER ROOM	DOMESTIC WATER HEATER	IN-LINE	HOT WATER	225	25	180	3	208	3	60	1760	7.9	1-3

NOTES: 2. PROVIDE W/ SUCTION DIFFUSER

3. PROVIDE W/ MULTI-PURPOSE VALVE 4. INSULATE PUMP BODY & ALL ASSOCIATED PIPING, VALVES, ACCESSORIES

1. FURNISH W/ FACTORY VARIABLE FREQUENCY W/ INTEGRAL FUSED DISCONNECT SWITCH; VFD TO BE MOUNTED ON WALL & FIELD WIRED BY EC

![](_page_28_Figure_12.jpeg)

![](_page_28_Figure_13.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_29_Figure_5.jpeg)

![](_page_30_Figure_0.jpeg)

Unit Ventilator with Exhaust Fan Control Schematic í 1 ` M005 N.T.S.

![](_page_30_Figure_2.jpeg)

![](_page_30_Picture_3.jpeg)

Security Office Fan Coil Control Schematic

![](_page_30_Figure_5.jpeg)

DDC Temperature Control Notes:

- 1. CONTRACTOR SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.
- 2. PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.
- 3. PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.
- 4. MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.
- 5. REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE NEW AND EXISTING CONTROL POINTS.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, THIS CONTRACTOR SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, THIS CONTRACTOR SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO THE CONTROL DEVICES.
- 7. FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL SYSTEM.
- 8. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.
- 9. CONTRACTOR TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.

### DDC Temperature Control Legend:

AI	ANALOG INPUT
AO	ANALOG OUTPUT
AQ	AQUASTAT (SPDT)
AMD	AIR FLOW MEASUREMENT DEVICE (ANALOG)
FS	FLOW SWITCH (DIGITAL)
Α	CONTROL ACTUATOR CONTROL DAMPER OR VALVE
DPS	DIFFERENTIAL PRESSIRE SWITCH (SPDT)
DPT	DIFFERENTIAL PRESSIRE TRANSDUCER (ANALOG)
IAQ	INDOOR AIR QUALITY
MS	MAGNETIC STARTER
VFD	VARIABLE FREQUENCY DRIVE
R	CONTROL RELAY (24VAC-SPDT)
СТ	CURRENT TRANSDUCER (ANALOG)
CS	CURRENT SWITCH (DIGITAL)
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
ES	END SWITCH (SPST)
RH	RELATIVE HUMIDITY SENSOR
со	CARBON-MONOXIDE SENSOR
CO2	CARBON-DIOXIDE SENSOR
SW	WALL-MOUNTED SWITCH
TS	TEMPERATURE SENSOR (PROBE/IMMERSION)
TS TS	TEMPERATURE SENSOR (AVERAGING)
LLS	LOW-LIMIT TEMPERATURE SWITCH (SPDT)
SD	SMOKE DETECTOR (DUCT)
ТС	THERMOSTAT SWITCH (SPDT)
	120/24VAC TRANSFORMER

![](_page_30_Picture_29.jpeg)

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![](_page_31_Figure_0.jpeg)

![](_page_31_Picture_1.jpeg)

![](_page_31_Figure_4.jpeg)

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![](_page_32_Figure_0.jpeg)

### Key Notes:

- EXISTING CABINET HEATER TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY PIPING, CONTROLS, LOUVERS, HANGERS, SUPPORTS, ACCESSORIES, ETC.; REMOVE (1)PIPING BACK TO MAINS & CAP
- EXISTING CONVECTOR TO BE DISCONNECTED, REMOVED & 2 PROPERLY DISPOSED OF INCLUDING ANY PIPING, CONTROLS, HANGERS, SUPPORTS, ACCESSORIES, ETC.; REMOVE PIPING BACK TO MAINS & CAP
- EXISTING THERMOSTAT TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED WIRING, TUBING, CONDUIT, ACCESSORIES, ETC.; 3
- (4)EXISTING FINNED TUBE RADIATION TO REMAIN

![](_page_32_Picture_7.jpeg)

![](_page_32_Figure_9.jpeg)

![](_page_32_Figure_10.jpeg)

![](_page_33_Figure_0.jpeg)

### Sheet Notes:

EXISTING PNEUMATIC HVAC CONTROL SYSTEMS SERVING THIS AREA OF THE BUILDING. OWNER TO PROVIDE ALL MATERIALS & WIRING INCLUDING DEVICES, ACTUATORS, SENSORS, WIRING, CONDUIT, ETC. TO CONVERT ALL EQUIPMENT OVER TO REPLACEMENT DDC SYSTEM. MECHANICAL CONTRACTOR TO DEMOLISH & INSTALL ALL CONTROL VALVES AND ANY PIPING RELATED ACCESSORIES I.E. PORTS FOR SENSORS, ETC.; FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF WORK.

Key	Notes:
1)	DISCONNECT, REMOVE & PROPERLY DISPOSE OI UNIT VENTILATOR AND ALL ASSOCIATED PIPING, ACCESSORIES, CONTROLS, ETC.
2)	DISCONNECT, REMOVE & PROPERLY DISPOSE OF HOT WATER & CHILLED WATER PIPING AND ALL ASSOCIATED VALVES, INSULATION, HANGERS, SU ETC.
3	DISCONNECT, REMOVE & PROPERLY DISPOSE OI THERMOSTAT AND ASSOCIATED WIRING OR PNE TUBING; MAINTAIN EXISTING BOX AND CONDUIT REPLACEMENT UNIT WHERE COMPATIBLE.
4	EXISTING OUTSIDE AIR LOUVER AND WALL SLEEV REMAIN
5	EXISTING DRAFT STOP TO BE DISCONNECTED, R & PROPERLY DISPOSED OF;
6)	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING RELIEF AIR TRANSFER GRILLE & DUCT
7)	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING ROOFTOP MOUNTED RELIEF AIR HOOD ASSOCIATED DUCTWORK
8	DISCONNECT, REMOVE & PROPERLY DISPOSE OI EXISTING DUCTED HORIZONTAL UNIT VENTILATC ALL ASSOCIATED PIPING, ACCESSORIES, CONTR ETC.
9	EXISTING SUPPLY AIR GRILLE/DIFFUSER & DUCT REMAIN
10)	EXISTING RETURN AIR GRILLE & DUCT TO REMAIL
11	EXISTING OUTSIDE AIR LOUVER & DUCT TO REM/
12)	EXISTING EXHAUST AIR GRILLES & DUCT TO REM
13)	EXISTING CABINET HEATER TO REMAIN; DISCONI REMOVE & PROPERLY DISPOSE OF ALL ASSOCIA PNEUMATIC CONTROLS; PROVIDE ELECTRONICA CONTROLLED VALVE(S) & DAMPER(S) CONNECTE BUILDING AUTOMATION SYSTEM
14)	EXISTING EXHAUST FAN ON ROOF TO REMAIN
15)	EXISTING FINNED TUBE RADIATION TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OI ASSOCIATE PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) CONN TO BUILDING AUTOMATION SYSTEM
16)	REMOVE 3/4" HWS & HWR PIPING DN. THRU FLOC CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UN
17)	REMOVE 1-1/4" CHWS & CHWR PIPING DN. THRU I INTO CRAWL SPACE & CAP AT MAIN; PIPING WILL EXTENDED & CONNECTED TO REPLACEMENT UN
18)	EXISTING FLOOR MOUNTED VERTICAL UNIT VENT HEATING & CHW COOLING) TO REMAIN; DISCONN PROPERLY DISPOSE OF EXISTING CONTROLS & A PNEUMATIC CONTROLS, TUBING, ETC.
19)	EXISTING DUCTED FAN COIL (HW HEATING & CHV REMAIN; DISCONNECT, REMOVE & PROPERLY DIS EXISTING CONTROLS & ASSOCIATED PNEUMATIC TUBING, ETC.
20)	EXISTING FLOOR MOUNTED FAN COIL (HW HEATI COOLING) TO REMAIN; DISCONNECT, REMOVE & DISPOSE OF EXISTING CONTROLS & ASSOCIATED CONTROLS, TUBING, ETC.

(21

![](_page_33_Figure_6.jpeg)

![](_page_34_Picture_0.jpeg)

Sheet Notes:

1. TEMPERATURE CONTROLS SCOPE - REMOVE & REPLACE ALL EXISTING PNEUMATIC HVAC CONTROL SYSTEMS SERVING THIS AREA OF THE BUILDING. OWNER TO PROVIDE ALL MATERIALS & WIRING INCLUDING DEVICES, ACTUATORS, SENSORS, WIRING, CONDUIT, ETC. TO CONVERT ALL EQUIPMENT OVER TO REPLACEMENT DDC SYSTEM. MECHANICAL CONTRACTOR TO DEMOLISH & INSTALL ALL CONTROL VALVES AND ANY PIPING RELATED ACCESSORIES I.E. PORTS FOR SENSORS, ETC.; FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF WORK.

VERIF	Y EXISTING CONDITIONS PRIOR TO THE START OF W
Key l	Notes:
1	DISCONNECT, REMOVE & PROPERLY DISPOSE OF E UNIT VENTILATOR AND ALL ASSOCIATED PIPING, ACCESSORIES, CONTROLS, ETC.
2	DISCONNECT, REMOVE & PROPERLY DISPOSE OF E HOT WATER & CHILLED WATER PIPING AND ALL ASSOCIATED VALVES, INSULATION, HANGERS, SUPI ETC.
3	DISCONNECT, REMOVE & PROPERLY DISPOSE OF E THERMOSTAT AND ASSOCIATED WIRING OR PNEUM TUBING; MAINTAIN EXISTING BOX AND CONDUIT FO REPLACEMENT UNIT WHERE COMPATIBLE.
4	EXISTING OUTSIDE AIR LOUVER AND WALL SLEEVE REMAIN
5	EXISTING DRAFT STOP TO BE DISCONNECTED, REM & PROPERLY DISPOSED OF;
6	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING RELIEF AIR TRANSFER GRILLE & DUCTWO
7	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING ROOFTOP MOUNTED RELIEF AIR HOOD & ASSOCIATED DUCTWORK
8	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING DUCTED HORIZONTAL UNIT VENTILATOR / ALL ASSOCIATED PIPING, ACCESSORIES, CONTROL ETC.
9	EXISTING SUPPLY AIR GRILLE/DIFFUSER & DUCT TO REMAIN
(10)	EXISTING RETURN AIR GRILLE & DUCT TO REMAIN
(11)	EXISTING OUTSIDE AIR LOUVER & DUCT TO REMAIN
(12)	EXISTING EXHAUST AIR GRILLES & DUCT TO REMAIN
(13)	EXISTING CABINET HEATER TO REMAIN; DISCONNEC REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATE PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) & DAMPER(S) CONNECTED BUILDING AUTOMATION SYSTEM
(14)	EXISTING EXHAUST FAN ON ROOF TO REMAIN
(15)	EXISTING FINNED TUBE RADIATION TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF A ASSOCIATE PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) CONNEC TO BUILDING AUTOMATION SYSTEM
(16)	REMOVE 3/4" HWS & HWR PIPING DN. THRU FLOOR I CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UNIT
(17)	REMOVE 1-1/4" CHWS & CHWR PIPING DN. THRU FLC INTO CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UNIT
(18)	EXISTING FLOOR MOUNTED VERTICAL UNIT VENTIL/ HEATING & CHW COOLING) TO REMAIN; DISCONNEC PROPERLY DISPOSE OF EXISTING CONTROLS & ASS PNEUMATIC CONTROLS, TUBING, ETC.
(19)	EXISTING DUCTED FAN COIL (HW HEATING & CHW C REMAIN; DISCONNECT, REMOVE & PROPERLY DISPO EXISTING CONTROLS & ASSOCIATED PNEUMATIC C TUBING, ETC.
20	EXISTING FLOOR MOUNTED FAN COIL (HW HEATING COOLING) TO REMAIN; DISCONNECT, REMOVE & PR DISPOSE OF EXISTING CONTROLS & ASSOCIATED P CONTROLS, TUBING, ETC.
	DISCONNECT, REMOVE & PROPERLY DISPOSE OF

EXISTING FINNED TUBE RADIATION AND ALL ASSOCIATED PIPING, ENCLOSURE, ACCESSORIES, CONTROLS, ETC. 21

![](_page_34_Figure_6.jpeg)

![](_page_34_Picture_7.jpeg)

![](_page_35_Figure_0.jpeg)

Key l	Notes:
1	EXISTING STEAM BOILER TO BE DISCONNECTED, REM PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATE HANGERS, SUPPORTS, ACCESSORIES, ETC.
2	EXISTING PNEUMATIC CONTROLS AIR COMPRESSOR, STORAGE TANK TO BE DISCONNECTED, REMOVED & F DISPOSED OF INCLUDING ALL ASSOCIATED TUBING, C CABINETS, VALVES, ETC.
3	EXISTING CHILLER TO BE DISCONNECTED, REMOVED DISPOSED OF INCLUDING ANY ASSOCIATED REFRIGER WATER PIPING, HANGERS, SUPPORTS, ACCESSORIES SEPARATOR, EXP TANK, ETC. RECOVER & DISPOSE OF REFRIGERANT PER EPA & DEC GUIDELINES
4	EXISTING BOILER & WATER HEATER BREECHING TO B DISCONNECTED, REMOVED & PROPERLY DISPOSED O ANY ASSOCIATED INSULATION, HANGERS, ACCESSOR REMOVE TO CHIMNEY
5	EXISTING CHILLED WATER PUMP TO BE DISCONNECTE & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIAT HANGERS, SUPPORTS, ACCESSORIES, STEEL FRAME
6	EXISTING FEEDWATER SYSTEM TO BE DISCONNECTED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIAT HANGERS, INSULATION, ACCESSORIES, ETC.
7	EXISTING DOMESTIC WATER HEATERS & STORAGE TA REMOVED; SEE DRAWING PD301 FOR ADDITIONAL INF
8	EXISTING HOT WATER PUMP TO BE DISCONNECTED, F PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATE HANGERS, SUPPORTS, ACCESSORIES, STEEL FRAME
9	EXISTING SHELL & TUBE HEAT EXCHANGER TO BE DIS REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED PIPING, HANGERS, SUPPORTS, ACCESSO FRAME BASES, ETC.
(10)	EXISTING PNEUMATIC CONTROLS BOARD, VALVES & T DISCONNECTED, REMOVED & PROPERLY DISPOSED C ALL ASSOCIATED TUBING, CONTROL CABINETS, VALVI
(11)	EXISTING COMBUSTION AIR LOUVER TO DISCONNECT & PROPERLY DISPOSED OF INCLUDING ALL ASSOCIAT DUCTWORK, CONTROLS, ETC.
(12)	ABANDONED FUEL OIL PIPING TO DISCONNECTED, RE PROPERLY DISPOSED OF INCLUDING ALL ASSOCIATED VALVES, ETC.; VERIFY EXACT LAYOUT IN FIELD

![](_page_35_Figure_6.jpeg)

### MOVED & ED PIPING,

, AIR DRYER & PROPERLY CONTROL

0 & PROPERLY ERANT & ES, AIR

BE OF INCLUDING DRIES, ETC.;

CTED, REMOVED ATED PIPING, E BASES, ETC. ED, REMOVED ATED PIPING,

ANKS TO BE FORMATION REMOVED & ED PIPING, E BASES, ETC. ISCONNECTED, SORIES, STEEL

TUBING TO BE OF INCLUDING LVES, ETC. CTED, REMOVED TED

REMOVED & ED HANGERS,

![](_page_35_Figure_15.jpeg)

![](_page_36_Figure_0.jpeg)

### Key Notes:

- PROVIDE PIPE CURB ASSEMBLY TYPICAL OF PATE (OR EQUAL). FLASH IN ACCORDANCE W/ ROOFING MANUFACTURER'S REQUIREMENTS TO MAINTAIN EXISTING WARRANTY. SIZE PIPE CURB TO ACCOMMODATE ALL REFRIGERANT PIPING, CONTROL AND POWER WIRING/CONDUIT (1)
- PROVIDE ROOF EQUIPMENT SUPPORTS TYPICAL OF NVENT CADDY PYRAMID OR EQUAL FOR MOUNTING HEAT PUMP ON ROOF 2

![](_page_36_Figure_6.jpeg)

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 187-2302.01

 Issued for Bid:
 10/18/24
 Sheet Title SECURITY VESTIBULE MECHANICAL PLAN Sheet No. VCHS **CONSTRUCTION DOCUMENTS** 

![](_page_37_Figure_0.jpeg)

### Key Notes:

<u>1 x y 1</u>	102001
1	NEW UNIT VENTILATOR
2	3/4" HWS/HWR & 1-1/4" CHWS/CHWR TO UV IN STOP; CONNECT TO EXISTING PIPING AT WAL
3	NEW THERMOSTAT
4	EXISTING OUTSIDE AIR LOUVER AND WALL SI REMAIN
5	NEW DRAFT STOP INSTALLED ON BOTH SIDE
8	NEW DUCTED HORIZONTAL UNIT VENTILATOR CONNECT TO EXISTING HW & CHW PIPING AN RETURN & OUTSIDE AIR DUCTWORK; VERIFY ROUTING & SIZES IN FIELD
9	EXISTING SUPPLY AIR GRILLE/DIFFUSER & DU REMAIN
(10)	EXISTING RETURN AIR GRILLE & DUCT TO RE
(11)	EXISTING OUTSIDE AIR LOUVER & DUCT TO R
(12)	EXISTING EXHAUST AIR GRILLES & DUCT TO I
(13)	EXISTING CABINET HEATER TO REMAIN; DISC REMOVE & PROPERLY DISPOSE OF ALL ASSO PNEUMATIC CONTROLS; PROVIDE ELECTRON CONTROLLED VALVE(S) & DAMPER(S) CONNE BUILDING AUTOMATION SYSTEM
(14)	EXISTING EXHAUST FAN ON ROOF TO REMAIN
(15)	EXISTING FINNED TUBE RADIATION TO REMA DISCONNECT, REMOVE & PROPERLY DISPOS ASSOCIATE PNEUMATIC CONTROLS; PROVID ELECTRONICALLY CONTROLLED VALVE(S) CO TO BUILDING AUTOMATION SYSTEM
(16)	PROVIDE 3/4" HWS & HWR PIPING UP THRU FI CRAWL SPACE TO NEW UV
(17)	PROVIDE 1-1/4" CHWS & CHWR PIPING UP THE FROM CRAWL SPACE TO NEW UV

![](_page_37_Figure_5.jpeg)

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Key N	Notes:
	NEW UNIT VENTILATOR
2	3/4" HWS/HWR & 1-1/4" CHWS/CHWR TO UV IN STOP; CONNECT TO EXISTING PIPING AT WA
3	NEW THERMOSTAT
4	EXISTING OUTSIDE AIR LOUVER AND WALL S REMAIN
5	NEW DRAFT STOP INSTALLED ON BOTH SIDE
8	NEW DUCTED HORIZONTAL UNIT VENTILATO CONNECT TO EXISTING HW & CHW PIPING AI RETURN & OUTSIDE AIR DUCTWORK; VERIFY ROUTING & SIZES IN FIELD
9	EXISTING SUPPLY AIR GRILLE/DIFFUSER & D REMAIN
(10)	EXISTING RETURN AIR GRILLE & DUCT TO RE
(11)	EXISTING OUTSIDE AIR LOUVER & DUCT TO F
(12)	EXISTING EXHAUST AIR GRILLES & DUCT TO
(13)	EXISTING CABINET HEATER TO REMAIN; DISC REMOVE & PROPERLY DISPOSE OF ALL ASSO PNEUMATIC CONTROLS; PROVIDE ELECTRON CONTROLLED VALVE(S) & DAMPER(S) CONNE BUILDING AUTOMATION SYSTEM
(14)	EXISTING EXHAUST FAN ON ROOF TO REMAI
(15)	EXISTING FINNED TUBE RADIATION TO REMA DISCONNECT, REMOVE & PROPERLY DISPOS ASSOCIATE PNEUMATIC CONTROLS; PROVID ELECTRONICALLY CONTROLLED VALVE(S) CO TO BUILDING AUTOMATION SYSTEM
(16)	PROVIDE 3/4" HWS & HWR PIPING UP THRU F CRAWL SPACE TO NEW UV
(17)	PROVIDE 1-1/4" CHWS & CHWR PIPING UP TH FROM CRAWL SPACE TO NEW UV

![](_page_38_Picture_2.jpeg)

### INSIDE DRAFT /ALL

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![](_page_39_Figure_0.jpeg)

![](_page_39_Picture_1.jpeg)

Mechanical Plan M301 Scale: 1/4" = 1'-0"

### Key Notes:

- EXPANSION TANK TYPICAL OF JOHN WOODS JOER-22-019 OR (1)ACCEPTABLE EQUAL; 793 GALLON, ASME, BLADDER TYPE; INSTALL ON 4" TALL CONCRETE PAD (2)CHEMICAL TREATMENT FEEDER
- 3 MAGNETIC AIR SEPARATOR / DIRT ELIMINATOR TYP. OF SPIROTHERM VDT1000FAM OR EQUAL
- 3/4" MAKEUP WATER W/ WATER METER W/ BYPASS, PRESSURE (4)REDUCING VALVE W/ BYPASS & RPZ; CONNECT TO CWS MAIN INSIDE BOILER ROOM
- PROVIDE 10"Ø COMBUSTION AIR DUCTWORK FOR EACH BOILER; INSTALL PER MANUFACTURER REQUIREMENTS; CONNECT TO TOP OF BOILER AT DESIGNATED LOCATION; COORDINATE EXACT 5 ROUTING IN FIELD W/ ADJACENT INFRASTRUCTURE; EXTEND THRU EXTERIOR WALL TO 90° ELBOW TURNED DOWN W/ INSECT SCREEN
- PROTECTING OPEN OF TERMINATION PROVIDE 28"Ø GAS VENT UP INSIDE OF EXISTING MASONRY 6 CHIMNEY; SEE KEYNOTE 7 FOR ADDITIONAL INFORMATION DOUBLE WALL SPECIAL GAS VENT TYPICAL OF HEAT-FAB MODEL CI
- PLUS OR ACCEPTABLE EQUAL; UL-1738 LISTED; SEE PLAN FOR SIZES; PROVIDE MOTORIZED DAMPER AT EACH BOILER W/ INLINE (7)DRAIN INSTALLED DIRECTLY ABOVE DAMPER; AL29-4C STAINLESS STEEL; PROVIDE TEE AT BASE OF STACK AT EACH BOILER W/ DRAIN TO FLOOR DRAIN; MAINTAIN CLEARANCE ABOVE BOILER FOR CLEANING AND MAINTENANCE
- PROVIDE TEE FITTINGS AT THE BASE OF BREECHING WITH 8 CONDENSATE DRAINS; PROVIDE CONDENSATE PIPING FROM FITTING TO NEAREST FLOOR DRAIN; RUN CONDENSATE THROUGH ACID NEUTRALIZER BEFORE SPILLING TO DRAIN
- PROVIDE GAS DETECTION SYSTEM TYPICAL OF HONEYWELL E3POINT OR ACCEPTABLE EQUAL; PROVIDE WITH HORN STROBE 9 FOR LOCAL ALARMING WITHIN BOILER ROOM; CONNECT DETECTION SYSTEM TO BAS FOR MONITORING OF ALARMS; PROVIDE 24VAC POWER SOURCE TO DETECTION SYSTEM; SHUT DOWN BOILERS UPON DETECTION OF CARBON MONOXIDE
- BRAZED PLATE HEAT EXCHANGER; CONNECT TO REFRIGERANT & CHILLED WATER PIPING; SEE PIPING DETAILS ON M004, PROVIDE (10) ALL ACCESSORIES AND SENSORS FOR A COMPLETE INSTALLATION; FULLY INSULATE HEAT EXCHANGER, ALL PIPING, PUMPS, VALVES & ACCESSORIES; MAINTAIN CONTINUOUS VAPOR BARRIER
- (11) MAGNETIC AIR SEPARATOR / DIRT ELIMINATOR TYP. OF SPIROTHERM VDT400FAM OR EQUAL
- BUFFER TANK HYDRAULIC SEPARATOR TYPICAL OF LOCHINVAR (12) BVU120 OR ACCEPTABLE EQUAL; 120 GALLON, 3" NPT CONNECTION; JACKETED & INSULATED
- INDIRECT PLATE & FRAME WATER HEATER TYPICAL OF LOCHINVAR (13) IPW120DW OR ACCEPTABLE EQUAL; ASME DOUBLE WALL 316L STAINLESS STEEL HEAT EXCHANGER
- (14) EXPANSION TANK TYPICAL OF JOHN WOODS JOER-22-080 OR ACCEPTABLE EQUAL; 80 GALLON, ASME, BLADDER TYPE; INSTALL ON 4" TALL CONCRETE PAD

![](_page_39_Figure_17.jpeg)

![](_page_39_Figure_29.jpeg)

	LIGHTING FIXTURE SCHEDULE									
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES
A	A	HE WILLIAMS RECESSED DIRECT/INDIRECT DIG-S22-L32/840-AD-DIM-UNV	LED	120	1	25.8	25.8	RECESSED	2'x2'	4000K COLOR TEMPERATURE
B-EM	D <sub>B-EM</sub>	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE
с	C	HE WILLIAMS SURFACE/PENDANT MOUNT WRAP 39-4-L52/840-A	LED	120	1	37	37	PENDANT	4'x10-3/16"	4000K COLOR TEMPERATURE PROVIDE W/ ADJ. Y AIRCRAFT CABLE WITH CANOPIES
D		HE WILLIAMS LIGHTING LED VOLTAIRE ARCH SURFACE/GARAGE VG1-L30/740-T5-SM-BLK-WS-FSP-3111-L120/277	LED	120	1	36	36	SURFACE MTD.	13"x13"	PROVIDE W/ INTEGRATED MOTION & DAYLIGHT SENSOR; IP66 WET LOCATION RATED
-	$\square$	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP
-	$\partial \mathbf{E}$	HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP

### FIRE ALARM LEGEND:

$\boxtimes$	HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F. OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWIS
$\boxtimes$	STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE CANDELA UNLESS OTHERWISE NOTED
$\langle \rangle$	MANUAL PULL STATION; MTD. 48" A.F.F.
	WATER FLOW SWITCH
\$	VALVE TAMPER SWITCH
Øx	DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM D = PHOTOELECTRIC DUCT SMOKE DETECTOR FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAM
$   H_{R} $	RATE OF RISE HEAT DETECTOR, 135°F
CO	CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
RTS	REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETE
R	FIRE ALARM RELAY
SEC	URITY LEGEND:
РВ	PANIC BUTTON - 18/4 SHIELDED
IC	INTERCOM
DR	DOOR RELEASE BUTTON - 16/2 SHIELDED
WS	WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM
CR	CARD READER - 22/6 SHIELDED
REX	REQUEST TO EXIT - 18/4 SHIELDED
DC	MAGNETIC DOOR CONTACT - 16/2 SHIELDED
EL	ELECTRIC LOCK - 16/2 SHIELDED

	ELEC	CTRICAL LEGEND:					
). 80" A.F.F. UNLESS	Ø	MOTOR					
THERWISE NOTED	Ţ	EARTH GROUND					
HERWISE NOTED; 15	ē	JUNCTION BOX					
	©	EMERGENCY POWER OFF BUTTON					
		FUSE WITH RATING					
	$\bigcirc$	MOLDED CASE CIRCUIT BREAKER					
	42	DISCONNECT SWITCH, FUSED					
:	4	DISCONNECT SWITCH, UNFUSED					
	4	STARTER, COMBINATION WITH DISCONNECT SWITCH					
R		STARTER OR MOTOR CONTROLLER					
IOKE DAMPER	M	METER					
	⊜	20A 120V DUPLEX CEILING MOUNTED RECEPTACLE					
F.F.	÷	20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLES OTHERWISE NOTED	SS				
-	-	20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER					
	#	20A 120V QUADRAPLEX RECEPTACLE					
OKE DETECTORS	Ф	WALL MOUNTED SPECIAL PURPOSE RECEPTACLE					
	€ <sub>USB</sub>	20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL					
	[€F	FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTE	.D				
	\$ ₽	FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHER OUTLET; FLUSH MOUNTED	NET				
	₩₹	FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNE OUTLET; FLUSH MOUNTED	ΞT				
SYSTEM	$\nabla^{W}$	WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROV (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET	IDE				
	$\diamond$	WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WAL TO ABOVE CEILING W/ PULL CORD	LL				
	¥	TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLA PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET	TE;				
	ŧ	BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCU NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH HOMERUN; NOT SHOWN	JITS,				
	\$2	SWITCHBLANK = SINGLE POLE2 = DOUBLE POLE3 = THREE-WAY4 = FOUR-WAYD = DIMMERK = KEY OPERATEDP = WITH PILOT LIGHTPB= PUSH BUTTONT = TIMER OPERATEDWP= WEATHER PROOFX = EXPLOSION PROOFOC= OCCUPANCY SENSOF	R				
	OS	DUAL TECHNOLOGY OCCUPANCY SENSOR					
	DS	DAYLIGHT SENSOR					
	MM	MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH DUPLEX RECEPTACLE & (2) CAT6E PORTS. PROVIDE	<u>.</u>				

FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING, (1)

W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD

FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD

FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT

BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND

WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING

WALLS.

### ELECTRICAL NOTES:

- 1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.
- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.
- 4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
- 6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.
- 7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
- 8. EQUIPMENT AND MATERIALS FOR WHICH UNDERWRITERS LABORATORIES INC. (UL) PROVIDES PRODUCT LISTING SERVICE SHALL BE LISTED AND BEAR THE LISTING MARK.
- 9. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2015 NATIONAL ELECTRIC CODE, 2020 BUILDING CODE OF NEW YORK STATE, 2020 FIRE CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- 10. ALL NEW LIGHTING FIXTURES SHALL BE INSTALLED FULLY LAMPED AND OPERABLE. THE CONTRACTOR SHALL TURN OVER TO THE OWNER SPARE LAMPS OF EVERY TYPE ON THE PROJECT IN AN AMOUNT NOT LESS THAN 20% OF THE TOTAL NUMBER OF EACH TYPE (MINIMUM 1 PER TYPE).
- 11. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL UTILITY COMPANY AND/OR THE TELEPHONE COMPANY. ALL WORK INVOLVING THE UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
- 12. ALL CONDUCTORS SHALL BE COPPER, SHALL NOT BE LESS THAN #12 AWG, AND SHALL NOT EXCEED 70 FEET FROM PANEL BOARD TO FURTHEST CONNECTION UNLESS OTHERWISE NOTED ON PLANS.
- 13. LIGHTING LOADS SHALL NOT BE COMBINED ON THE SAME CIRCUIT AS ANY OTHER ELECTRICAL LOADS.
- 14. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH & INSTALL ALL SMALL DETAILS AND INCIDENTAL WORK NOT SHOWN OR SPECIFIED, BUT WHICH CAN BE REASONABLY INFERRED AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM OF HIGH QUALITY MEETING ALL APPLICABLE CODES AND REGULATIONS.
- 15. FOR EACH NEW OR MODIFIED ELECTRICAL PANEL, THE CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD TO REFLECT ALL CIRCUITING. ADDITIONALLY, THE CONTRACTOR SHALL LABEL (WITH A PERMANENT MARKER OR LABEL) EACH RECEPTACLE ON THE INSIDE OF EACH FACE PLATE WITH PANEL AND CIRCUIT NUMBER DESIGNATION.
- 16. MINIMUM REQUIREMENT FOR EQUIPMENT GROUNDING SHALL BE GOVERNED BY THE NEC. ALL GROUNDS, BONDING, ETC. SHALL MEET THESE REQUIREMENTS. THE CONTRACTOR SHALL FURNISH AND INSTALL ANY AND ALL ITEMS NECESSARY TO MEET THESE REQUIREMENTS AT NO EXTRA COST, EVEN IF SUCH ITEMS ARE NOT DETAILED ON THE DRAWINGS.
- 17. ALL CONDUIT AND CABLE SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, WIRING, DEVICES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

	WI	RE CO	LOR	COD	ING	TABL	F
PHASE	WIRES	VOLTAGE	L1	L2	L3	NEUTRAL	
1	2 (1)	120	BLACK	-	-	WHITE	
1	2 (1)	208	BLACK	RED	-	-	
1	3	120	BLACK	-	-	WHITE	(
1	3	208	BLACK	RED	-	-	(
3	4	208	BLACK	RED	BLUE	-	(
3	5	208	BLACK	RED	BLUE	WHITE	(
1	3	277	BROWN	-	-	GRAY	(
1	3	480	BROWN	ORANGE	-	-	(
3	4	480	BROWN	ORANGE	YELLOW	-	(
3	5	480	BROWN	ORANGE	YELLOW	GRAY	(

NOTES: FOR DOUBLE INSULATED EQUIPMENT ONLY. GREEN/YELLOW MAY BE USED:

- GREEN/YELLOW SHALL BE GREEN WITH ONE OR MORE YELLOW STRIPES.

- GREEN = 50 TO 70%, YELLOW = 50 TO 30%. - GREEN/YELLOW IS THE ONLY COLOR INTERNATIONALLY ACCEPTED FOR USE AS AN EQUIPMENT GROUNDING CONDUCTOR. - GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING CONDUCTORS.

DEVICE MOUNTING	G HEIGHTS
POWER RECEPTACLES (INTERIOR)	18" A.F.F.
POWER RECEPTACLES (EXTERIOR)	36" A.F.G.
POWER RECEPTACLES (@ COUNTER)	44" A.F.F.
LIGHT SWITCHES	44" A.F.F. TO TOP OF DEVICE
DISCONNECT SWITCHES	SEE NEC 404.8(A)
TELEPHONE/DATA RECEPTACLES	18" A.F.F.
TELEPHONE/DATA RECEPTACLES (@ COUNTER)	44" A.F.F.
WALL TELEPHONE RECEPTACLES	48" A.F.F. TO TOP OF DEVICE
FIRE ALARM PULL STATIONS	42" A.F.F. MIN./44" A.F.F. MAX.
FIRE ALARM AUDIO/VISUAL DEVICES	80" A.F.F. MIN./96" A.F.F. MAX.
EXIT LIGHTS (WALL MOUNTED)	12" ABOVE DOOR
EMERGENCY LIGHTS (WALL MOUNTED)	90" A.F.F.
TV & A/V OUTLETS	18" A.F.F.
NOTE: ALL DIMENSIONS ARE TO CENTER OF DEVIC	E UNLESS OTHERWISE NOTED

![](_page_40_Figure_30.jpeg)

120/208V 3Ø 4W+G			BUS	S RATIN	G: 200A	-		MI			
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD	
CHILLER	EXISTING WIRING	20	1				2	20	-	SPARE	
PUMP # 1 & 2	EXISTING WIRING	60	3	·			4	60	EXISTING WIRING	PUMP # 3 & 4	
ACC	EXISTING WIRING	50	5	•			6	30	EXISTING WIRING	TANK MONITOR PANEL	
				• / •	- /						
				-		· / .					
		1			- /-	- /					
				- /-		<u> </u>					
EXISTING PANEL		-		-	-	-	-	kVA T	OTAL		

CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING • PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

1 \

### Existing Panelboard BP E002 Scale: None

Existing Panelboard HA1

( 4 )

E002 Scale: None

120/208V 3Ø 4W+G				BU	S RATIN	G: 225A				
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LO
FAN ROOM 210	EXISTING WIRING	15	1	·			2	15	EXISTING WIRING	LAB TABLE RECP., & RM
SPARE TO CEILING BELOW	210 EXISTING WIRING	15	3	r	•		4	15	EXISTING WIRING	LAB TABLE RECP. RM 21
GYM SOUND BOARD	EXISTING WIRING	20	5		ſ	•	6	20	EXISTING WIRING	SPARE CEILING BELOW
FUME HOOD TO RM 210	EXISTING WIRING	20	7	· /			8	20	EXISTING WIRING	KITCHEN HW HEAT
FUME HOOD UNDER RM 210	EXISTING WIRING	20	9	ſ			10	20	EXISTING WIRING	TANK LEVER CONTROL
FIRE ALARM PANEL PL	EXISTING WIRING	20	11			•	12	20	EXISTING WIRING	HW HEATER ALT
FUME HOOD FAN	EXISTING WIRING	20	13	•	1		14	20	-	SPARE
FUME HOOD FAN	EXISTING WIRING	20	15		•		16	15	EXISTING WIRING	HWRC PUMP 1
FUME HOOD FAN	EXISTING WIRING	20	17			•	18	15	EXISTING WIRING	HWRC PUMP 2
SPARE	EXISTING WIRING	15	19	•			20	15	EXISTING WIRING	HWRC PUMP 3
SPARE	EXISTING WIRING	15	21		•		22	15	-	SPARE
HVAC CONT. PANEL	EXISTING WIRING	20	23			•	24	15	-	SPARE
GYM HALLWAY	EXISTING WIRING	20	25	•			26	15	-	SPARE
GYM HALLWAY	EXISTING WIRING	20	27		•		28	15	-	SPARE
BOOSTER PUMP, CONTROL PANEL	EXISTING WIRING	50	29 31 33				30 32 34	50	EXISTING WIRING	TEMP SHED
SPACE	-		35			•	36		-	SPACE
SPACE	-		37	•	1	ſ	38		-	SPACE
SPACE	-		39		•		40		-	SPACE
SPACE	-		41			•	42		-	SPACE
EXISTING PANEL				-	-	-	-	kVA T	OTAL	
							• F		DE NEW CIRCUIT BREAKERS	S FOR ALL NEW OR MODIF

CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING • PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

20/208V 3Ø 4W+G				BU	S RATIN	G: 400A				N
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOA
SUB-FEED-PANEL D	EXISTING WIRING	150	1				2	200	EXISTING WIRING	SUB-FEED-PANEL E
SUB-FEED-PANEL C	EXISTING WIRING	150	3	· /.			4	150	EXISTING WIRING	SUB-FEED-PANEL B
SUB-FEED-PANEL H	EXISTING WIRING	100	5				6	100	-	SPARE
EXIT LIGHTS - WEST	EXISTING WIRING	20	7	•			8	20	-	SPARE
EXIT LIGHTS - EAST	EXISTING WIRING	20	9		•		10	20	EXISTING WIRING	HWRC PUMP 1
				·		· / ·				
						•				
		_		• / •						
		_								
						<u>·</u>	_	kVA T	ΟΤΑΙ	
7 Exist	ting Panelboard A	A			I	I	• F ( F • F ( L	PROVI CIRCU RATINO PANEL CONTE AYOU	DE NEW CIRCUIT BREAKERS ITS; BREAKERS SHALL MAT G SCHEDULE SHOWN BASED RACTOR SHALL VERIFY IN F IT AS NEEDED BASED ON AV	J S FOR ALL NEW OR MODIFI CH EXISTING TYPE AND ON EXISTING DIRECTORY, IELD & ADJUST CIRCUIT VAILABLE POSITIONS

)ΑΓ

FIED

MLO

MLO \_\_\_\_ AD

120/208V 3Ø 4W+G BUS RATING: 225A MLO CONNECTED LOAD CONDUCTORS CONDUCTORS CONNECTED LOAD VACUUM PUMPS EXISTING WIRING EXISTING WIRING AC RTO AD OFFICE PARE SUMP PUMPS EXISTING WIRING EXISTING WIRING SHED CIRCULATOR PUMPS EXISTING WIRING EXISTING WIRING EXISTING LOAD SEWER PUMPS EXISTING WIRING EXISTING WIRING NEW COMPRESSOR PARE PUMP 2 PARE EXISTING WIRING PARE BOILER ROOM LIGHTS EXISTING WIRING PUMP 1 BOILER ROOM LIGHTS EXISTING WIRING EXISTING WIRING XISTING LOAD EXISTING WIRING EXISTING WIRING WELL PUMP EXISTING WIRING SPACE - kVA TOTAL EXISTING PANEL

RATING

Existing Panelboard C 2 E002 Scale: None

BUS RATING: 225A MLO 120/208V 3Ø 4W+G CONNECTED LOAD CONDUCTORS CONDUCTORS CONNECTED LOAD HTS RMS. 104, 105, 1 GHTS RM. 128, 145 EXISTING WIRING EXISTING WIRING S RM. 127 EXISTING WIRING S RM. 129 GHTS RM. 130 EXISTING WIRING HTS CORR. 131 EXISTING WIRING GHTS CORR. 131 EXISTING WIRING HTS COURTYARD HTS RM156, 157&COR GHTS CORR. 132 ECP. 104,105,112,129 EXISTING WIRING EXISTING WIRING ECP. 127, 128 EXISTING WIRING ECP. 128, 129 ECP. 127, 128 EXISTING WIRING ECP. 129, 130 ECP. 129, 130 EXISTING WIRING OOL LOBBY, CORR. 131 PARF EXISTING WIRING V 129, 130 V 127, 128 EXISTING WIRING EXISTING WIRING ECP. 156, 157 & CH#10 F. #1 EXISTING WIRING EXISTING WIRING EXISTING WIRING EXISTING WIRING H#2 & 11, 12 CH# 1&7 FIRE ALARM SYSTEM-15 EXISTING WIRING EXISTING WIRING ARE RECP. CORR. 131, 132 RECP. CORR. 132, 133 EXISTING WIRING PARF ROOM 143 PACE PACE PACE PACF PACE - kVA TOTAL EXISTING PANEL - -PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED

CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING • PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY,

CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

5 \

Existing Panelboard H E002 Scale: None

120/208V 3Ø 4W+G BUS RATING: 225A CONNECTED LOAD CONDUCTORS CONDUCTORS 2 ROOM 140A RECP. ROOM 146 RECPS. EXISTING WIRING EXISTING WIRING ROOM 146 RECPS. ROOM 140B RECP. EXISTING WIRING 4 EXISTING WIRING ROOM 145 RECPS. EXISTING WIRING EXISTING WIRING ROOM 141A RECP. POOL CUSTODIAN ROOM 142A RECP. EXISTING WIRING EXISTING WIRING POOL CUSTODIAN ROOM 141B RECP. EXISTING WIRING EXISTING WIRING POOL OFFICE EXISTING WIRING EXISTING WIRING ROOM 142B RECP. PARE 14 EXISTING WIRING ROOM 143 RECP. 16 ROOM 144 RECP. SPARE EXISTING WIRING 18 HALL RECEPTACLE EXISTING WIRING SPARE PARE PANEL HHC2 NEAR 22 EXISTING WIRING SPARE LANGUAGE OFFICE 24 PARE 26 PARE SPARE 28 PARE SPARE 30 SPARE SPARE ROOM 143 OUT EXISTING WIRING 32 SPARE 34 ROOM 143 EXISTING WIRING SPARE 36 EXISTING WIRING ROOM 143 SPARE 38 SPACE SPACE SPACE 40 SPACE 42 SPACE 41 SPACE - kVA TOTAL - | -

EXISTING PANEL

![](_page_41_Picture_23.jpeg)

Existing Panelboard HHC1 E002 Scale: None

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING • PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND • PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

		BO	SRATIN	G: 225A	_			
CKT. BREAKER	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	
3 20	1	•			2	20	EXISTING WIRING	PAR
3 20	3	ľ	•		4	20	-	PAR
20	5		r	•	6	20	-	PAF
3 20	7	•		ſ	8	20	EXISTING WIRING	PAR
20	9	ľ	•		10	20	-	EXI
3 20	11		ſ	•	12	20	EXISTING WIRING	PAF
	13	•	1	ſ	14	20	-	PAF
20	15	ſ	•		16	20	EXISTING WIRING	PAF
	17		ſ	•	18	20	EXISTING WIRING	PAF
3 20	19	• /.	, 	<b></b>	20	20	EXISTING WIRING	EXI
20	21	ſ	•		22	20	EXISTING WIRING	EXI
20	23			•	24	20	EXISTING WIRING	EXI
20	25	•			26	20	-	SPA
20	27	ſ	•		28	20	-	SPA
20	29			•	30	20	-	SPA
20	31	•		Í	32	20	-	SPA
20	33		•	1	34	20	-	SPA
20	35			•	36	20	-	SPA
20	37	•		ſ	38	20	-	SPA
20	39	ſ	•		40		-	SPA
	41			•	42		-	SPA
		-	-	-	-	kVA T		
	20	41	41	41	41	40 41 42 42 	40 41 42 • • • • • • • • • • • • • • • • • • •	40 - 40 - 40 - 40 - 41 - 42 - 42 - 42 - 42 - 42 - 42 - 42

![](_page_41_Picture_29.jpeg)

3

Existing Panelboard T E002 Scale: None

MLO CONNECTED LOAD

20/208V 3Ø 4W+G										
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONN
LIGHTS ROOM 128	EXISTING WIRING	20	1	•			2	20	EXISTING WIRING	OUTLETS ROO
LIGHTS ROOM 129	EXISTING WIRING	20	3		•		4	20	EXISTING WIRING	OUTLETS ROO
LIGHTS ROOM 127	EXISTING WIRING	20	5			•	6	20	EXISTING WIRING	OUTLETS ROO
LIGHTS ROOM 126	EXISTING WIRING	20	7	•		ſ	8	20	EXISTING WIRING	OUTLETS ROO
SPARE	-	20	9		•	1	10	20	-	SPARE
ELEVATOR PIT LIGHTS	EXISTING WIRING	20	11			•	12	20	EXISTING WIRING	MACHINE ROO
ELEVATOR PIT OUTLETS	EXISTING WIRING	20	13	• /.			14	20	EXISTING WIRING	CUV RM 129 1
ELEVATOR CONTROLS	EXISTING WIRING	20	15		•		16	20		
ELEVATOR CONTROLS	EXISTING WIRING	20	17			•	18	30		COVELEVATO
TECH LAB	EXISTING WIRING	20	19	•			20			
HEAT PUMPS AREA J	EXISTING WIRING	20	21 23				22 24	20	EXISTING WIRING	A/C ROOM 143 PUMPS AREA
			25	•		ļ	26	20	EXISTING WIRING	A/C ROOM 143
TWO WATER COOLERS	EXISTING WIRING	20	27		·		28			
			29				30			
			31	·/.			32			
			33		·/.		34			
			35			·/·	36			
			37				38			
		_	39		·/.		40			
			41				42			
EXISTING PANEL				-	-	-	-	kVA T	OTAL	

PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Existing Panelboard HH1 6 ` E002 Scale: None

![](_page_41_Figure_37.jpeg)

![](_page_42_Figure_0.jpeg)

### Key Notes:

1	EXISTING CABINET UNIT HEATER TO BE REMOVED; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, WIRING, DISCONNECTS, ETC.; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
2	DISCONNECT, REMOVE & PROPERLY DISPOSE OF LIGHT FIXTURE & ASSOCIATED WIRING & CONDUIT; MAINTAIN EXISTING CIRCUIT AS NEEDED FOR ANY ADJACENT LIGHTING THAT REMAINS IN PLACE, OTHERWISE TERMINATE AT SOURCE
3	EXISTING DOOR OPERATOR & ADA PADDLE SWITCH TO BE REMOVED; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, WIRING, DISCONNECTS, ETC.; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
4	DISCONNECT, REMOVE & PROPERLY DISPOSE OF PA ZONE PANEL & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE; MAINTAIN CONTINUITY OF EXISTING FIRE ALARM CIRCUITS
5	DISCONNECT, REMOVE & PROPERLY DISPOSE OF FIRE ALARM DEVICE & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE; MAINTAIN CONTINUITY OF EXISTING FIRE ALARM CIRCUITS
6	EXISTING FIRE ALARM ANNUNCIATOR PANEL TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
7	EXISTING POWER POLE TO BE REMOVED; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, WIRING, ETC.; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
8	DISCONNECT, REMOVE & PROPERLY DISPOSE OF RECEPTACLE & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
9	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXIT/ EMERGENCY LIGHT & ASSOCIATED WIRING & CONDUIT; MAINTAIN EXISTING CIRCUIT AS NEEDED FOR ANY ADJACENT LIGHTING THAT REMAINS IN PLACE, OTHERWISE TERMINATE AT SOURCE
(10)	DISCONNECT, REMOVE & PROPERLY DISPOSE OF LIGHT SWITCHES & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
(11)	DISCONNECT, REMOVE & PROPERLY DISPOSE OF DATA OUTLET & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE

![](_page_42_Figure_4.jpeg)

![](_page_42_Figure_11.jpeg)

 $\bigcirc$ 

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![](_page_43_Figure_0.jpeg)

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![](_page_44_Figure_0.jpeg)

ED301 Scale: 1/4" = 1'-0"

### Key Notes:

1	EXISTING BOILER TO BE REMOVED; DISCONNECT, REM PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, DISCONNECTS, ETC.; REMOVE ALL CONDUITS AND WII SOURCE
2	EXISTING AIR COMPRESSOR TO BE REMOVED; DISCOUREMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED OF WIRING, DISCONNECTS, MOTOR STARTERS, ETC.; REMISCONDUITS AND WIRING BACK TO SOURCE
3	EXISTING CHILLER TO BE REMOVED; DISCONNECT, RE PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, DISCONNECTS, MOTOR STARTERS, ETC.; REMOVE ALL AND WIRING BACK TO SOURCE
4	DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL WITHIN BOILER ROOM; MAINTAIN EXISTING CIRCUIT AI FOR RECONNECTION TO REPLACEMENT LIGHTING
5	EXISTING PUMP TO BE REMOVED; DISCONNECT, REMO PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, DISCONNECTS, MOTOR STARTERS, ETC.; REMOVE ALL AND WIRING BACK TO SOURCE
6	EXISTING FEEDWATER SYSTEM TO BE REMOVED; DISC REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED O WIRING, DISCONNECTS, MOTOR STARTERS, ETC.; REM CONDUITS AND WIRING BACK TO SOURCE

EXISTING WATER HEATER TO BE REMOVED; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, WIRING, DISCONNECTS, ETC.; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE  $\overline{7}$ 

![](_page_44_Figure_5.jpeg)

EMOVE & 5, WIRING, /IRING BACK TO DNNECT, D CONDUITS, EMOVE ALL REMOVE & 6, WIRING, L CONDUITS LL LIGHTING AND SWITCHES MOVE & 3, WIRING, LL CONDUITS

ISCONNECT, D CONDUITS, EMOVE ALL

![](_page_44_Figure_10.jpeg)

![](_page_44_Figure_11.jpeg)

![](_page_45_Figure_0.jpeg)

### Key Notes:

- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR DOOR (1)HARDWARE, INCLUDING MAGNETIC DOOR HOLDERS 2 PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION 3 OF FIRE ALARM ELECTRIC STRIKE TO BE CONTROLLED BY DOOR RELEASE BUTTON 4 IN SECURITY BOOTH EXISTING LIGHT FIXTURE TO REMAIN; PROVIDE NEW SWITCH(ES) 5 AS SHOWN; CONNECT TO EXISTING CIRCUIT EXISTING FIRE ALARM ANNUNCIATOR PANEL & GRAPHIC DISPLAY
- 6 TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
- EXISTING INTERCOM & CARD ACCESS CONTROL TO REMAIN; 7 TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC 8

EXISTING BUILDING FIRE ALARM SYSTEM

![](_page_45_Figure_8.jpeg)

![](_page_45_Figure_9.jpeg)

![](_page_45_Figure_10.jpeg)

![](_page_45_Figure_11.jpeg)

CONSTRUCTION DOCUMENTS

![](_page_46_Figure_0.jpeg)

### Key Notes:

![](_page_46_Figure_7.jpeg)

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E21 CONSTRUCTION DOCUMENTS

![](_page_47_Figure_0.jpeg)

 1
 Electrical Pla

 E301
 Scale: 1/4" = 1'-0"

Key Notes:

NEW LIGHT FIXTURE; CONNECT TO EXISTING LIGHTING CIRCUIT & SWITCHING SERVING BOILER ROOM; FIELD VERIFY EXACT LAYOUT BASED ON EXISTING INFRASTRUCTURE & LAYOUT OF NEW PIPING

2 VFD FURNISHED BY MECHANICAL CONTRACTOR W/ PUMP; ELECTRICAL CONTRACTOR TO MOUNT & WIRE VFD

& EQUIPMENT WITHIN SPACE

![](_page_47_Figure_5.jpeg)

![](_page_47_Figure_6.jpeg)