ACCOMACK COUNTY CIRCUIT COURTHOUSE

EXTERIOR RENOVATION & HVAC REPLACEMENT

ARCHITECT

HBA ARCHITECTURE & INTERIOR DESIGN One Columbus Center, Suite 1000 Virginia Beach, Virginia 23462 Phone: (757) 490-9048 Fax: (757) 490-7081

STRUCTURAL ENGINEER

SPEIGHT MARSHALL & FRANCIS, P.C. 2125 McComas Way, Suite 103 Virginia Beach, VA 23456 Phone: (757) 427-1020 Fax: (757) 427-5919

MECHANICAL - ELECTRICAL ENGINEER

PACE COLLABORATIVE 1277 Perimeter Parkway Virginia Beach, VA 23454 Phone: (757) 499-7223 Fax: (757) 671-8712

SCHEDUL GENERAL G-001 G-002	E OF DRAWINGS COVER SHEET LEGENDS AND ABBREVIATIONS
STRUCTURAL S-101	STRUCTURAL DETAILS
ARCHITECTURAL A-101 A-102 A-201 A-202 A-501 A-502 A-602 A-601 MECHANICAL MD-101 MD-102 MD-103 M-101 M-102 M-103	FLOOR AND CEILING PLANS ROOF PLANS ELEVATIONS ELEVATIONS DETAILS DETAILS EXISTING CONDITION IMAGES EXISTING CONDITION IMAGES EXISTING CONDITION IMAGES EXISTING CONDITION IMAGES EXISTING CONDITION IMAGES
M-501 M-502	DETAILS DETAILS
M-601 ELECTRICAL E-001 ED-101 ED-102 E-101 E-102 E-401 E-501	LEGENDS, NOTES AND ABBREVATIONS FIRST FLOOR DEMOLITION PLAN ATTIC DEMOLITION PLAN FIRST FLOOR NEW WORK POWER AND LIGHTING PLAN ATTIC NEW WORK POWER PLAN ENLARGED PLANS RISER DIAGRAMS
	MICHAEL J. WINNER LIC. NO. 012518 4.19.19
PROJECT	NUMBER: 17070.01
DATE:	APRIL 19, 2019
SET NUM	BER:



BUILDING CO	DE DATA	JOB CONDITIONS											
APPLICABLE CODES AND REGU	JLATIONS	1. THE EXISTING FACILITIES SHALL REMAIN C	OPEN FOR BUSINESS										
VIRGINIA UNIFORM STATEW	IDE BUILDING CODE, 2009 EDITION	CONDUCT HIS OPERATIONS SO AS TO CAL	JSE THE LEAST POSSIBLE										
USE GROUP CLASSIFICATION:	NONSEPARATED MIXED USE, NO CHANGE BUSINESS GROUP B ASSEMBLY GROUP A	EXACT SEQUENCE AND TIMING OF THE VA WORK SHALL BE THE CONTRACTOR'S RES SHALL TAKE ADEQUATE MEASURES TO MA	RIOUS OF THE FACILITIES. RIOUS PORTIONS OF THE PONSIBILITY, AND HE/SHE AINTAIN APPROPRIATE AND										
CONSTRUCTION TYPE:	IIIB, NO CHANGE	OF THE FACILITY AT ALL TIMES.	ND TO MAINTAIN THE SECORT										
AREA:	8810 SF, NO CHANGE	2. THE CONTRACTOR SHALL ERECT TEMPOR AND DOORS OR OTHER MEANS OF PROTECT	ARY BARRICADES, PARTITIONS,										
HEIGHT:	2 STORIES, NO CHANGE	PROTECT THE CONSTRUCTION AREA, PRE UNAUTHORIZED PERSONS AND TO MAINTA	EVENT ACCESS BY										
ROOF LOAD:	20 PSF	PARTITIONS AND DOORS WILL ALSO BE SUFFICIENT TO PREVENT THE PASSAGE OF DUST AND DIRT FROM CONSTRUCTION AREAS TO AREAS OF											
WIND SPEED:	130 MPH (ULT)	ONGOING BUSINESS. TEMPORARY BARRICADES OR PARTITIONS SHALL BE CONSTRUCTED SO AS NOT TO RESTRICT THE MEANS OF EGRESS AS REQUIRED BY CODE											
WIND EXPOSURE CATEGORY:	С	REQUIRED BY CODE.											
GENERAL NO	TES	3. THE CONTRACTOR SHALL NOT INTERRUPT PORTION OF THE BUILDING NOT WITHIN TH CONSTRUCTION AT ANY TIME. ANY OPERA WHICH MIGHT INTERRUPT ANY UTILITY SE	TANY UTILITY SERVICE TO ANY HE AREA UNDER ATION OF CONSTRUCTION RVICE TO THE BUILDING										
 THE CONTRACTOR SHALL VI PRIOR TO BEGINNING CONS OF ALL TRADES. ALL DISCRE IMMEDIATE ATTENTION OF T CONTINUING WORK. UNLESS OTHERWISE INDICA 	ERIFY ALL FIELD CONDITIONS AND DIMENSIONS TRUCTION AND SHALL COORDINATE THE WORK EPANCIES SHALL BE BROUGHT TO THE THE ARCHITECT, IN WRITING, BEFORE	 SHALL BE PERFORMED AT A TIME AGREED THE APPROPRIATE TRADES ON SITE TO RE INTERRUPTION. 4. THE CONTRACTOR SHALL CONFORM TO THE HEALTH DEPARTMENT INCLUDING, BUT NO REGULATION OF HOURS OF WORK, PARKIN OPENATION OF HOURS OF WORK, PARKIN 	TO BY THE OWNER, AND WITH ESTORE ANY INADVERTENT HE REQUIREMENTS OF THE DT LIMITED TO, THE NG AREAS, AND NOISY										
FACE OF FOUNDATION WALL	L AND CENTERLINE OF STRUCTURAL COLUMNS. TO FACE OF FINISHED WALL.												
3. ALL CONSTRUCTION SHALL VIRGINIA UNIFORM STATEW AMENDMENTS AND THE AME AND USABLE BUILDINGS ANI	CONFORM WITH THE REQUIREMENTS OF THE IDE BUILDING CODE 2009 EDITION WITH 2009 ERICAN NATIONAL STANDARD FOR ACCESSIBLE D FACILITIES (ICC-ANSI A117.1, 2003 EDITION).	ABBREVIATIONS	P GYPSUM B GYPSUM WALL BOARD										
4. ALL INTERIOR AND EXTERIO WHILE PERFORMING WORK AND/OR REPLACED AND FIN	R FINISHED SURFACES WHICH ARE DAMAGED UNDER THIS CONTRACT SHALL BE PATCHED ISHED TO MATCH ADJACENT AREAS.	ACOUS ACOUSTICAL INSU ACT ACOUSTICAL CEILING TILE H ALUM ALUMINUM HOF APPROXAPPROXIMATELY MAN	UL INSULATION HEIGHT R HORIZONTAL NUF MANUFACTURER										
5. THE CONTRACTOR SHALL TO EXISTING CONDITIONS AND WHICH AFFECT THIS CONTR	OTALLY FAMILIARIZE HIMSELF WITH THE VERIFY ALL CONDITIONS AND DIMENSIONS RACT.	BDBOARDMECBEJBUILDING EXPANSION JOINTMINBTMBOTTOMMOCLRCLEARMTL	CH MECHANICAL MINIMUM MASONRY OPENING METAL										
6. THE CONTRACTOR SHALL BI ELEVATIONS, AND SEQUENC CONSTRUCTION OF AND ALI TO THE EXISTING PORTIONS MAKE ALL MEASUREMENTS FABRICATION AND ERECTIO	E RESPONSIBLE FOR THE DIMENSIONS, CES OF WORK NECESSARY FOR THE PROPER IGNMENT OF THE NEW PORTIONS OF THE WORK S OF THE PROJECT. THE CONTRACTOR SHALL NECESSARY FOR THE PROPER EXECUTION, ON OF ALL NEW WORK. AREFULLY STUDY AND COMPARE THE THER, AND AT ONCE REPORT TO THE ND INCONSISTENCIES OR OMISSIONS RACTOR PERFORMS ANY CONSTRUCTION DLVES A RECOGNIZED ERROR, INCONSISTENCY RACT DOCUMENTS WITHOUT SUCH NOTICE TO RACTOR SHALL ASSUME APPROPRIATE PERFORMANCE AND SHALL BEAR THE AMOUNT CTION	COCLEAN OUTNICCONCCONCRETENTSCOORDCOORDINATEOCCMUCONCRETE MASONRY UNITOHCONTCONTINUOUSPLACJCONTROL JOINTPNTD OR DIADIAMETERPRE	NOT IN CONTRACT NOT TO SCALE ON CENTER OPPOSITE HAND M PLASTIC LAMINATE PAINT										
7. THE CONTRACTOR SHALL CA DOCUMENTS WITH EACH OT ARCHITECT ANY ERRORS AN DISCOVERED. IF THE CONTR ACTIVITY KNOWING IT INVO OR OMISSION OF THE CONT THE ARCHITECT, THE CONTR RESPONSIBILITY FOR SUCH OF COST OF THE CONSTRUCT		DNDOWNREINDNDOWNSPOUTRDEAEACHROEWCELECTRIC WATER COOLERSIMEJEXPANSION JOINTSQEFSEXTERIOR FINISH SYSTEMSSEIFSEXTERIOR INSULATIONSTRFINISH SYSTEMTEREQUIPEQUIPMENTTOS	NF REINFORCED ROOF DRAIN ROUGH OPENING SIMILAR SQUARE STAINLESS STEEL RUCT STRUCTURAL RM TERMINATE S TOP OF STEEL										
8. ALL MATERIALS CALLED OU	T ARE NEW UNLESS OTHERWISE INDICATED.	EXT EXTERIOR TOM FD FLOOR DRAIN TYP	A TOP OF MASONRY P TYPICAL										
9. CONTRACTOR SHALL SUBMI COMMENCEMENT OF WORK	T A SCHEDULE TO THE COUNTY PRIOR TO THE	FRF FIBERGLASS REINFORCED 00N POLYESTER VER FRT FIRE RETARDENT TREATED VCT FEC FIRE EXTINGUISHER CABINET W	T VERTICAL VINYL COMPOSITION TILE WIDTH										
10.MAINTAIN THE EXISTING BUI THROUGHOUT THE CONSTR	ILDING IN A WEATHER TIGHT CONDITION SUCTION PERIOD.	GA GAUGE WH GC GENERAL CONTRACTOR	WATER HEATER										
11.PROTECT ADJACENT SURFA	CES SCHEDULED TO REMAIN.												
12.REPAIR DAMAGE CAUSED B PRECAUTIONS NECESSARY AND THE OWNER'S EQUIPME	Y CONSTRUCTION OPERATIONS. TAKE ALL TO PROTECT THE BUILDING, ITS OCCUPANTS ENT DURING THE CONSTRUCTION PERIOD.												
13.PROVIDE LOOSE JOIST HAN APPROPRIATE TO THE SITU/ FABRICATING AND SECURIN	GERS, ANCHORAGE DECIVES, AND FASTENERS ATION AND WHERE NECESSARY FOR IG ITEMS INTO PLACE.												
14.PAINT ALL LOOSE JOIST HAN TO MATCH ADJACENT CONS	NGERS, ANCHORAGE DEVICES, AND FASTENERS STRUCTION IF PAINTED.												







WWW.SMANDE







- METAL CORNICE, CORNICE RETURNS, AND RAKES: REMOVE EXISTING PAINT AND SEALANT, REMOVE RUST, REPAIR JOINTS AS NEEDED TO MAKE SOUND, AND REPAINT AT ALL LOCATIONS. SEE ELEVATIONS FOR ADDITIONAL REPAIRS NOTED AT SPECIFIC LOCATIONS. SEE IMAGES 14-17/SHEET A-601/602 FOR EXAMPLES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- WINDOWS: REGLAZE AND REPAINT ALL WINDOWS. REMOVE AND REPLACE SEALANT BETWEEN WINDOW FRAMES AND MASONRY. RESET PROTRUDING DOWELS, REPLACE IF DETERIORATED. REPAIR SASH JOINTS THAT HAVE SEPARATED. SEE ELEVATIONS FOR ADDITIONAL WINDOW REPAIRS NOTED AT SPECIFIC LOCATIONS. SEE IMAGES 18-22/SHEET A-602 FOR EXAMPLES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- LOUVERS: REPAINT ALL LOUVERS. REPAIR BLADES AND FRAMES AS REQUIRED. REMOVE AND REPLACE SEALANT BETWEEN LOUVER FRAMES AND MASONRY. SEE ELEVATIONS FOR ADDITIONAL LOUVER REPAIRS NOTED AT SPECIFIC LOCATIONS. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

- 10 REMOVE CONDUIT THROUGH WALL AND REPLACE BRICK TO
- 11 REPLACE DETERIORATED PORTION OF SASH STOP.
- 12 REMOVE EXISTING BASEMENT ACCESS DOOR AND PROVIDE DOOR. SEE IMAGE 24/SHEET A-602
- 13 PROVIDE MISSING ALUMINUM INFILL PANEL AT STOREFRON EXISTING STOREFRONT.
- 14 REPLACE MISSING OR BROKEN BRICKS TO MATCH EXISTING 15 REMOVE MISMATCHED BRICKS/MORTAR AND REPLACE WITH MATCH EXISTING.
- 16 STRIP AND REPAINT IRON RAILINGS. SEE IMAGE 23/SHEET A
- 17 REMOVE EXISTING CHIMNEY CAP AND REPLACE WITH NEW CONCRETE CAP.
- 18 REBUILD TOP OF CHIMNEY (APPROXIMATELY 4 COURSES), P ARCHITECTURAL PRECAST CONCRETE CAP.
- 19 PROVIDE AND INSTALL NEW METAL RAKE AND COPING CAP WHERE CHIMNEY WAS REMOVED.

ES #			
TCH EXISTING	20 21 22	3" DIA PREFINISHED ALUMINUM DOWNSPOUT. PRECAST CONCRETE SPLASH BLOCK. SECURE UPPER SASH IN FRAME.	
	23 24 25 26 27	SECURITY CAMERA, EXISTING TO REMAIN LIGHT FIXTURE, EXISTING TO REMAIN ELECTRICAL EQUIPMENT TO BE DEMOLISHED, SEE ELECTRICAL RESTORE BRICK BAND AS REQUIRED AFTER CHIMNEY IS DEMOLISHED REMOVE HVAC LINES AND REPAIR HOLES IN BRICK. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.	
MATCH EXISTING.	28	REMOVE MORTAR AND PROVIDE BACKER ROD AND SEALANT AT EACH JOINT IN STONE CAP.	
E NEW BASEMENT ACCESS	29 30	NO WORK THIS AREA. REBUILD PARAPET CAP AT CHIMNEY TO CORRECT PONDING WATER.	
T HEAD. MATCH FINISH TO G H BRICKS/MORTAR TO	31	TROFFER BOX FOR ELECTRICAL CONDUITS, INSTALLED OVER EXISTING FLUE PENETRATION THROUGH WALL. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. REPAIR BRICK AT OPENING AS REQUIRED TO MAKE SOUND. REPLACE ANY MISMATCHED BRICKS AROUND OPENING TO MATCH ADJACENT.	
A-602. ARCHITECTURAL PRECAST			
PROVIDE AND INSTALL			
TO MATCH EXISTING			

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REPAIRS NOTED AT SPECIFIC LOCATIONS. REFER TO SPECIFICATIONS

FOR MORE INFORMATION.



ES 🕢	NEW WORK ELEVATION KEYNOTES #		
	 REPAIR DAMAGED CORNICE. REMOVE PIPE THROUGH WALL AND REPLACE BRICK TO MATCH EXISTING REPAIR FAILING CORNER JOINTS IN WINDOW SASH. REPAIR DAMAGED SOFFIT AROUND DOWNSPOUT. TREAT SOFT WOOD ON WINDOW/LOUVER. REPAIR CRACKED STONE SILL. REPAIR CRACKED STONE SILL. REPLACE CRACKED WINDOW PANE. FILL CRACKS IN WOOD. REMOVE CONDUIT THROUGH WALL AND REPLACE BRICK TO MATCH EXISTING. REPLACE DETERIORATED PORTION OF SASH STOP. REMOVE EXISTING BASEMENT ACCESS DOOR AND PROVIDE NEW BASEMENT ACCESS DOOR. SEE IMAGE 24/SHEET A-602 PROVIDE MISSING ALUMINUM INFILL PANEL AT STOREFRONT HEAD. MATCH FINISH TO EXISTING STOREFRONT. REPLACE MISSING OR BROKEN BRICKS TO MATCH EXISTING REMOVE EXISTING CHIMNEY CAP AND REPLACE WITH BRICKS/MORTAR TO MATCH EXISTING. REMOVE EXISTING CHIMNEY CAP AND REPLACE WITH NEW ARCHITECTURAL PRECAST CONCRETE CAP. REBUILD TOP OF CHIMNEY (APPROXIMATELY 4 COURSES), PROVIDE AND INSTALL ARCHITECTURAL PRECAST CONCRETE CAP. PROVIDE AND INSTALL NEW METAL RAKE AND COPING CAP TO MATCH EXISTING WHERE CHIMNEY WAS REMOVED. 	20 21 22 23 24 25 26 27 28 29 30 31	3" DIA PREFINISHED ALUMINUM DOWNSPOUT. PRECAST CONCRETE SPLASH BLOCK. SECURE UPPER SASH IN FRAME. SECURITY CAMERA, EXISTING TO REMAIN LIGHT FIXTURE, EXISTING TO REMAIN ELECTRICAL EQUIPMENT TO BE DEMOLISHED, SE RESTORE BRICK BAND AS REQUIRED AFTER CHIN REMOVE HVAC LINES AND REPAIR HOLES IN BRIC MORE INFORMATION. REMOVE MORTAR AND PROVIDE BACKER ROD AN CAP. NO WORK THIS AREA. REBUILD PARAPET CAP AT CHIMNEY TO CORREC TROFFER BOX FOR ELECTRICAL CONDUITS, INST PENETRATION THROUGH WALL. SEE ELECTRICAL REPAIR BRICK AT OPENING AS REQUIRED TO MA MISMATCHED BRICKS AROUND OPENING TO MAT





















12



16



TALL CHIMNEY TO BE REMOVED COMPLETE. METAL COPING CAP TO BE REMOVED AND REPLACED AFTER CHIMNEY DEMOLITION.



TYPICAL DAMAGE FROM PREVIOUSLY REMOVED FASTENER TO BE REPAIRED, AND ABANDONED FASTENERS TO BE REMOVED AND HOLES REPAIRED.



TYPICAL DOWNSPOUT TO BE REMOVED AND SOFFIT REPAIRED PRIOR TO INSTALLATION OF NEW DOWNSPOUT.









TYPICAL PROTRUDING DOWEL TO BE REPAIRED. COAT DOWEL WITH WATER PROOF ADHESIVE AND RESET FLUSH WITH ADJACENT SURFACE. REPLACE DOWEL IF DETERIORATED





IRON WORK TO BE REPAINTED.





TYPICAL CRACKS IN WOOD SILL TO BE REPAIRED.

(20)

(24)



BASEMENT HATCH TO BE REPLACED.



GENERAL NOTES

DEMOLITION

EXISTING HVAC PIPING, DUCTWORK, AND EQUIPMENT SHOWN IS BASED ON EXISTING PLANS AND FIELD OBSERVATION WITHOUT DEMOLITION. AFTER DEMOLITION, ANY CLARIFICATION REQUIRED TO DETERMINE SCOPE OF WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS.

DRAWINGS DO NOT SHOW EVERY EXISTING PIPE, CONDUIT, DUCT, ETC. CONTRACTOR SHALL TAKE CARE TO REMOVE ONLY ITEMS REQUIRED TO BE REMOVED AND VERIFY PIPES, DUCTS, ETC. BEFORE REMOVAL.

REMOVAL OF ITEMS SHALL INCLUDE ASSOCIATED HANGERS, ANCHOR BOLTS AND OTHER APPURTENANCES. WHERE SUCH REMOVAL RESULTS IN OPEN HOLES, VOIDS OR EXPOSURE OF DAMAGED SURFACES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND FINISHING THE SURFACE TO MATCH ADJACENT CONDITIONS. THIS WORK SHALL BE COORDINATED WITH ARCHITECTURAL FINISH SCHEDULES WHERE APPLICABLE.

BUILDING IS TO REMAIN OCCUPIED DURING CONSTRUCTION. REMOVAL OR SHUT-DOWN OF EQUIPMENT THAT AFFECTS ANY OCCUPIED AREA'S AIR CONDITIONING OR HEATING SHALL ONLY BE DONE AS APPROVED OR TEMPORARY AIR CONDITIONING OR HEATING SHALL BE PROVIDED AT CONTRACTOR'S EXPENSE. THIS MAY REQUIRE NIGHT AND WEEKEND WORK TO KEEP BUILDING IN OPERATION.

REMOVE EXISTING DUCTWORK AND PIPING NOT TO BE REUSED.

ALL MATERIALS REMOVED UNDER DEMOLITION, NOT TO BE RELOCATED OR DESIGNATED TO BE TURNED OVER TO THE OWNER, SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND SHALL BE REMOVED COMPLETELY FROM THE SITE.

<u>GENERAL ITEMS</u>

GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH HVAC DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC NOTES APPLICABLE TO THAT DRAWING.

OVERHEAD DUCTWORK IN SPACES WITH CEILINGS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.

PROVIDE PIPE SLEEVES LARGE ENOUGH TO ALLOW FOR REQUIRED LATERAL MOVEMENT OF PIPING.

COORDINATE LOCATION OF GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC ACCESSORIES WITH REFLECTED CEILING PLAN, LIGHTING FIXTURE LAYOUT AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT THE ENTIRE BUILDING. IT IS THE INTENT FOR GRILLES, REGISTERS AND DIFFUSERS TO BE INSTALLED IN THE CENTER OF CEILING PANELS

ARRANGE PIPING AND DUCTWORK, PARTICULARLY ABOVE CEILING AS REQUIRED TO CLEAR STRUCTURE, DUCTS, CONDUITS, ETC. ALLOWING SPACE FOR PIPE HANGERS, EXPANSION LOOPS AND ACCESS TO VALVES, FILTERS, AND MAINTENANCE OF EQUIPMENT.

CONTRACTOR SHALL VERIFY REFRIGERANT PIPE SIZES WITH EQUIPMENT MANUFACTURER FOR THE INDICATED INSTALLATION.

COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.

DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DOORS, WINDOWS, ETC.

THERMOSTATS SHALL BE LOCATED IN THE ROOMS INDICATED. INSTALL AT APPROX. 46" ABOVE FINISH FLOOR TO MATCH THE HEIGHT OF WALL SWITCHES OR OTHER WALL MOUNTED DEVICES.

PIPING, DUCTWORK, VENTS, ETC., EXTENDING THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WEATHERPROOF MANNER.

EXTEND DRAIN LINES TO NEAREST FLOOR DRAIN OR AS INDICATED. ROUTING SHALL NOT INTERFERE WITH PASSAGEWAYS AND MAINTENANCE. DRAINS FROM AIR CONDITIONING CONDENSATE DRAIN PANS SHALL BE TRAPPED. SLOPE CONDENSATE DRAIN PIPING AT 1/4" PER FOOT. VERIFY INVERT IS ESTABLISHED AFTER AIR HANDLING UNIT IS INSTALLED BUT PRIOR TO DUCTWORK INSTALLATION.

EQUIPMENT CONTAINING AIR CONDITIONING COILS WHICH DO NOT HAVE A SECONDARY DRAIN OR AUXILIARY DRAIN PAN SHALL BE FITTED WITH A WATER LEVEL SENSOR IN THE PRIMARY DRAIN PAN. THE SENSOR SHALL BE WIRED TO DE-ENERGIZE THE EQUIPMENT IF WATER RISES ABOVE THE DRAIN OUTLET.

PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH NON-RATED FLOORS, WALLS, ROOF AND PARTITIONS, UNLESS OTHERWISE INDICATED.

NO PIPING SHALL BE SMALLER THAN 3/4" UNLESS OTHERWISE NOTED.

PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS. ADDITIONAL SUPPORTS OR HANGERS SHALL BE ADJACENT TO ELBOWS, TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT.

LOCATE AND SIZE CONCRETE PADS PER ARCHITECTURAL DRAWINGS FOR MECHANICAL EQUIPMENT IN ACCORDANCE WITH ACTUAL EQUIPMENT PURCHASED.

FOR LOCATION OF MOTOR STARTERS, SEE ELECTRICAL DRAWINGS.

SHEET METAL

SPACE ABOVE CEILING IS TO BE USED AS A RETURN AIR PLENUM WHERE DUCTWORK IS NOT INDICATED ABOVE RETURN AIR GRILLES.

PROVIDE A MINIMUM OF THREE TIMES THE FAN DIAMETER OF STRAIGHT DUCTWORK OFF THE SUPPLY AIR FAN DISCHARGE BEFORE ANY TAKEOFFS OR ELBOWS.

DUCTWORK SHALL BE CONSTRUCTED TO THE SMACNA STATIC PRESSURE CLASSIFICATION OF 2 IN. WG AND SEAL CLASS "A".

PROVIDE EXTENDED VOLUME DAMPER CONTROL RODS SO THAT HANDLES ARE WELL CLEAR OF DUCT INSULATION.

MAINTENANCE

EQUIPMENT WITH FILTERS SHALL BE INSTALLED SO THAT FILTERS CAN BE EASILY REMOVED AND REPLACED.

PROVIDE ACCESS TO ANY INSPECTION OR MAINTAINABLE DEVICE, EQUIPMENT, ETC. -ACCESS OR ACCESS DOOR SHALL BE OF ADEQUATE SIZE TO WORK ON DEVICE.

EXAMINE MANUFACTURER'S LITERATURE TO DETERMINE RECOMMENDED CLEARANCES. THESE CLEARANCES, IN ADDITION TO MINIMUM CLEARANCES REQUIRED BY THE NATIONAL ELECTRICAL CODE. SHALL BE ESTABLISHED AND MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE REQUIREMENTS WITH ALL OTHER TRADES.

INTERDISCIPLINARY COORDINATION

IF THIS CONTRACTOR SHOULD ELECT TO PROPOSE ANY EQUIPMENT THAT HAS DIFFERENT PHYSICAL OR ELECTRICAL CHARACTERISTICS, ETC. WHEN COMPARED TO THE BASIS OF DESIGN EQUIPMENT, THIS CONTRACTOR IS RESPONSIBLE FOR COORDINATING THESE CHANGES WITH THE OTHER TRADES PRIOR TO ORDERING OF EQUIPMENT. IF THERE SHOULD BE ANY ADDITIONAL WORK INCURRED BY THE OTHER TRADES AS A RESULT OF THIS CONTRACTOR'S EQUIPMENT SELECTION, ALL COSTS ASSOCIATED WITH THE ADDITIONAL WORK SHALL BE BORNE BY THIS CONTRACTOR.

PRE-TAB NOTE:

ON THE BELOW EXISTING EQUIPMENT IN WORK AREA PRIOR TO ANY DEMOLITION WORK. SUBMIT PRE-BALANCE DATA TO ARCHITECT.

MULTIZONE AHU IN ATTIC

• 5 ZONES AND ASSOCIATED DIFFUSERS 2 SPLIT SYSTEM HEAT PUMPS IN ATTIC

ENERGY CODE COMPLIANCE PATH:

ASHRAE 90.1

VECC CHAPTER 4 - PRESCRIPTIVE

VECC CHAPTER 4 - PERFORMANCE

APPLICABLE CODE:

- VIRGINIA MECHANICAL CODE 2012

LEGENDS & ABBREVIATIONS



SUPPLY AIR/OUTSIDE AIR DUCT SECTION THROUGH FLOOR

RETURN AIR DUCT SECTION THROUGH FLOOR

EXHAUST AIR DUCT SECTION THROUGH FLOOR

 \searrow

PERFORM AN AIRSIDE PRE-BALANCE (AIRFLOW AND TOTAL STATIC PRESSURE)

APD	AIR PRESSURE DROP
CFM	CUBIC FEET PER MINUTE
COP	COEFFICENT OF PERFORMANCE
DB	DRY BULB TEMPERATURE
E.A.	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATING
ETR	EXISTING TO REMAIN
ESP	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPS
HP	HORSEPOWER
IN	INCH
KW	KILOWATT
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NOISE CRITERIA
O.A.	OUTSIDE AIR
R.A.	RETURN AIR
S.A.	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATING
SENS.	SENSIBLE
(TYP.)	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
°F	DEGREE FAHRENHEIT









- REMOVE DUCTWORK, INSULATION, HANGERS AND SUPPORTS COMPLETE OR TO LIMITS INDICATED.
- 2 REMOVE AIR COOLED CONDENSER UINT AND SUPPORTS COMPLETE.
- 3 REMOVE BOILER AND ASSOCIATED HOT WATER PIPING IN MECHANICAL BASEMENT. HOT WATER PIPING IN CRAWL SPACE TO CAPPED AT ENDS AND ABANDONED.
- A REMOVE HOT WATER PIPING, INSULATION AND SUPPORTS COMPLETE FROM BASEMENT TO ATTIC SPACE. RS/RL PIPING TO ROUTED IN HWS/R PIPING LOCATION.
- 5 REMOVE THERMOSTAT, CONTROL WIRING AND SUPPORTS COMPLETE.



A

COLLABORATIVE

BEACH. VA - 757-499

GRAPHIC SCALE:

3/16" = 1'-0"





1 REMOVE DUCTWORK, INSULATION, HANGERS AND SUPPORTS COMPLETE OR TO LIMITS INDICATED.

2 PROVIDE INSULATED AIRTIGHT CAP.

3 REMOVE THERMOSTAT, CONTROL WIRING AND SUPPORTS COMPLETE.



A

GRAPHIC SCALE:

3/16" = 1'-0"

COLLABORATIVE

ECHANICAL ELECTRICAL ENGINEE A BEACH, VA - 757-499-72.

HI



- 1 REMOVE DUCTWORK, INSULATION, HANGERS AND SUPPORTS COMPLETE OR TO LIMITS INDICATED.
- 2 REMOVE AIR HANDLING UNIT, AND SUPPORTS COMPLETE.
- 3 REMOVE HOT WATER SUPPLY/RETURN PIPING, HANGERS AND SUPPORTS COMPLETE OR TO LIMITS INDICATED.
- AND SUPPORTS COMPLETE.
- 5 EXHAUST FAN LOCATION. PREPARE FOR INSTALLATION OF NEW EXHAUST FAN.

GRAPHIC SCALE:

3/16" = 1'-0" 5'



AH

COLLABORATIVE

ECHANICAL ELECTRICAL ENGIN A BEACH, VA - 757-499-7





- 1 PROVIDE DUCTWORK, INSULATION, HANGERS AND SUPPORTS COMPLETE OR TO LIMITS INDICATED.
- 2 PROVIDE OUTDOOR HEAT PUMPS AND SECURE TO CONCRETE PAD. SEE ARCH DRAWINGS FOR CONCRETE PAD WORK.
- 3 PROVIDE RS/RL PIPING, INSULATION AND SUPPORTS FROM OUTDOOR HEAT PUMPS, THRU BASEMENT AND UP TO ATTIC SPACE. ROUTE THRU BUILDING SIMILAR TO REMOVED HWS/R PIPING TO ATTIC.
- 4 PROVIDE NEW WIFI ACCESSABLE, 7-DAY PROGRAMMABLE THERMOSTAT, CONTROL WIRING AND MOUNTS COMPLETE.
- 5 PROVIDE CSI PIPETITE STANDARD PIPE BOOT SEAL OR APPROVED EQUAL AT WALL PENETRATION. CONTRACTOR TO CORE DRILL EXTERIOR FOR PIPE PENETRATIONS.

GRAPHIC SCALE:

3/16" = 1'-0"



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COLLABORATIVE





- 1 PROVIDE DUCTWORK, INSULATION, HANGERS AND SUPPORTS COMPLETE OR TO LIMITS INDICATED.
- 2 PROVIDE NEW WIFI ACCESSABLE, 7-DAY PROGRAMMABLE THERMOSTAT, CONTROL WIRING AND MOUNTS COMPLETE.



F

GRAPHIC SCALE:

3/16" = 1'-0"

COLLABORATIVE

BEACH, VA - 757-499-72,



NO SCALE

-SPACED TO CLEAR BEAM

	SPLIT SYSTEM HEAT PUMP SCHEDULE - AIR TO AIR																						
SUPPLEMENTAL ELECTRIC																							
		FAN	DATA			COOLING DA	ATA	HEATING DATA HEATER															
																INDOOR						OUTDOOR	
	TOTAL	O.A.	E.S.P.	MOTOR	TOTAL	SENS.	MIN.	TOTAL	MIN	SIZE						MODEL						MODEL	
TAG	C.F.M.	CFM	IN. W.G.	H.P.	M.B.H.	M.B.H.	EFFICIENCY	M.B.H.	EFFICIENCY	KW	STAGES	M.C.A.	M.O.C.P.	VOLTS	PHASE	NUMBER	TAG	M.C.A.	M.O.C.P.	VOLTS	PHASE	NUMBER	REMARKS
AHU-1	1045	120	0.7	0.5	34.2	27.7	17.5 SEER	20.2	9.0 HSPF	7.5	1	37.5	40	208	1	BVA	HP-1	24.2	40	208	1	BOVA	SEE NOTES
AHU-2	1000	75	0.7	0.5	30.1	27.1	17.5 SEER	13.4	9.0 HSPF	7.5	1	37.5	40	208	1	BVA	HP-2	24.2	40	208	1	BOVA	SEE NOTES
AHU-3	1150	160	0.7	0.75	42.0	33.6	18.5 SEER	20.8	9.5 HSPF	7.5	1	41.1	45	208	1	BVA	HP-3	36.5	60	208	1	BOVA	SEE NOTES
AHU-4	1280	175	0.7	0.75	42.0	33.6	18.5 SEER	20.8	9.5 HSPF	7.5	1	41.1	45	208	1	BVA	HP-4	36.5	60	208	1	BOVA	SEE NOTES
AHU-5	970	140	0.7	0.5	30.1	27.1	17.5 SEER	13.4	9.0 HSPF	7.5	1	37.5	40	208	1	BVA	HP-5	24.2	40	208	1	BOVA	SEE NOTES
AHU-6	1080	90	0.7	0.5	28.5	22.9	17.5 SEER	12.6	9.0 HSPF	7.5	1	37.5	40	208	1	BVA	HP-6	24.2	40	208	1	BOVA	SEE NOTES
AHU-7	1080	75	0.7	0.5	27.5	25.1	17.5 SEER	13.6	9.0 HSPF	7.5	1	37.5	40	208	1	BVA	HP-7	24.2	40	208	1	BOVA	SEE NOTES
AHU-8	1290	175	0.7	0.75	42.0	33.6	18.5 SEER	20.8	9.5 HSPF	7.5	1	41.1	45	208	1	BVA	HP-8	36.5	60	208	1	BOVA	SEE NOTES
AHU-9	930	175	0.7	0.5	30.1	27.1	17.5 SEER	13.4	9.0 HSPF	7.5	1	37.5	40	208	1	BVA	HP-9	24.2	40	208	1	BOVA	SEE NOTES
NOTES:																							

1. PROVIDE AHU/HP WITH BOSCH INVERTER DUCTED SPLIT SYSTEM HEAT PUMP.

2. COOLING CAPACITY BASED ON E.A.T. = 80 F DB / 67 F WB AND 95 F AMBIENT AIR TEMPERATURE.

6. LEAVING AIR TEMPERATURE IS TO BE PROVIDED AT THE UNIT DISCHARGE, TOTAL AND SENSIBLE CAPACITIES ARE "NET" VALUES TO BE PROVIDED DOWNSTREAM OF THE SUPPLY AIR FAN.

3. HEATING CAPACITY BASED ON E.A.T. = 70 F DB AND 22 F AMBIENT AIR TEMPERATURE.

4. SUPPLEMENTAL ELECTRIC HEATER F.L.A. INCLUDED. ONE DISCONNECT SWITCH FOR EACH INDOOR UNIT.

5. EXTERNAL STATIC PRESSURE INCLUDES SUPPLY, RETURN AND OUTSIDE AIR DISTRIBUTION SYSTEMS.

	FAN SCHEDULE														
				E.S.P.	MAX		El	ECTRICAL DA	TA						
TAG	LOCATION	FAN TYPE	C.F.M.	(IN. WG.)	SONES	DRIVE	H.P.	VOLTS	PHASE	REMARKS					
EF-1	ATTIC	INLINE	270	0.50	8	DIRECT	1/8	120	1	SEE NOTES BELOW					

NOTES:

1. SELECTIONS BASED ON GREENHECK.

2. PROVIDE DIRECT DRIVE FANS WITH ELECTRONIC SPEED CONTROLLER.

3. PROVIDE INLINE FANS WITH CHATTERPROOF BDD, INTEGRAL ELECTRIC DISCONNECT, DUCT FLANGES, AND 4 POINT VIBRATION HANGER SYSTEM.

AIR HANDLING UNIT CONTROL (AHU/HP-1 THRU AHU/HP-9):

THE UNIT SHALL BE CONTROLLED BY A 7-DAY PROGRAMMABLE THERMOSTAT CONTROLLER WHICH WILL INITIATE "OCCUPIED" AND "UNOCCUPIED" MODE. PROVIDE HUMIDISTAT CAPABLE OF DEHUMIDIFICATION OPERATION.

COOLING OCCUPIED: WHEN THE UNIT IS INDEXED TO COOLING THE SUPPLY AIR FAN SHALL ENERGIZE AND RUN CONTINUOUSLY FOR THE DURATION OF OCCUPIED HOURS. THE SPACE THERMOSTAT SHALL STAGE COOLING COMPRESSORS TO MAINTAIN "OCCUPIED" SPACE TEMPERATURE SETPOINT (75°F ADJUSTABLE). THE MOTORIZED DAMPER FOR THE OUTSIDE AIR SHALL OPEN TO MINIMUM OA POSITION.

<u>COOLING UNOCCUPIED:</u> THE THERMOSTAT SHALL CYCLE SUPPLY AIR FAN AND STAGE THE COMPRESSORS TO MAINTAIN SPACE SETBACK SETPOINT (80°F ADJUSTABLE). THE MOTORIZED OUTSIDE AIR DAMPER SHALL FULLY CLOSE.

HEATING OCCUPIED: WHEN THE UNIT IS INDEXED TO HEATING THE SUPPLY AIR FAN SHALL ENERGIZE AND RUN CONTINUOUSLY FOR DURATION OF OCCUPIED HOURS. THERMOSTAT AND STAGE THE COMPRESSORS TO MAINTAIN SPACE TEMPERATURE SETPOINT (70°F ADJUSTABLE). SUPPLEMENTAL HEAT TO ENERGIZE IF IN FULL HEATING MODE AND SPACE TEMPERATURE CONTINUES TO FALL. THE MOTORIZED DAMPER FOR THE OUTSIDE AIR SHALL OPEN TO MINIMUM OA POSITION.

HEATING UNOCCUPIED: WHEN THE THERMOSTAT HAS BEEN INDEXED TO UNOCCUPIED, THE THERMOSTAT SHALL CYCLE THE SUPPLY AIR FAN AND STAGE COMPRESSORS TO MAINTAIN SPACE SETBACK SETPOINT (67°F ADJUSTABLE). THE MOTORIZED OUTSIDE AIR DAMPER SHALL FULLY CLOSE.

OPERATION.

AHU/HP SEQUENCE OF CONTROLS

DEHUMIDIFICATION CONTROL: IF SPACE RELATIVE HUMIDITY RISES TO ABOVE 60% (ADJ.), ALL STAGES OF DX COOLING SHALL BE ENABLED AND THE SUPPLEMENTARY ELECTRIC HEATER SHALL BE STAGED ON/OFF AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ONCE THE RELATIVE HUMIDITY DROPS BELOW 50% (ADJ.), THE UNIT SHALL BE PLACED BACK IN NORMAL

GENERAL ELECTRICAL NOTES

<u>GENERAL</u>: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

<u>COORDINATION:</u> COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS INCLUDING ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE AND ADJUST ACCORDINGLY AS DIRECTED BY THE ENGINEER.

AS-BUILT DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE ENGINEER AT PROJECT CLOSE-OUT.

TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING #6 OR LARGER TO INSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE OWNER

<u>GROUNDING:</u> PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ELECTRICAL SYSTEM INCLUDING EQUIPMENT FRAMES CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS, AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL POWER CONDUITS.

LABELS: PROVIDE LABELS FOR ALL PANELBOARDS, CABINETS, SAFETY SWITCHES, MOTOR-DISCONNECT SWITCHES, AND MOTOR CONTROLLERS. LABELS SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC, PERMANENTLY ATTACHED WITH SELF-TAPPING SCREWS OR RIVETS. DO NOT USE SELF-ADHESIVE LABELS. LABEL SHALL INDICATE EQUIPMENT DESIGNATION AND ASSOCIATED PANEL AND CIRCUIT THAT SERVES IT.

J-BOX LABELING: LABEL ALL JUNCTION BOXES WITH PERMANENT MARKER IDENTIFYING CIRCUIT NUMBER AND PANELBOARD OF **CIRCUITS WITHIN.**

PANEL DIRECTORY: PROVIDE UPDATED TYPEWRITTEN PANELBOARD DIRECTORY CARD IN EACH PANELBOARD WITH CIRCUIT LOAD INFORMATION AND ROOM NUMBER CLEARLY IDENTIFIED. USE ACTUAL ROOM NUMBERS IN THE BUILDING, NOT THE ROOM NUMBERS SHOWN ON THE CONTRACT DRAWINGS, AS THEY ARE OFTEN DIFFERENT.

MOTOR COORDINATION: MOTORS, MOTOR STARTERS, CONTROLLERS, INTEGRAL DISCONNECT SWITCHES, AND CONTACTORS SHALL BE PROVIDED WITH THEIR RESPECTIVE PIECES OF EQUIPMENT BY THE EQUIPMENT SUPPLIER. COMMUNICATE WITH THE TRADES PROVIDING THE EQUIPMENT, VERIFYING ALL REQUIREMENTS, PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED THEREIN, AND INSTALL MOTOR STARTERS.

FIRE STOPPING NOTE:

CONTRACTOR SHALL PROVIDE AN APPROPRIATE LISTED THROUGH-PENETRATION FIRE STOPPING ASSEMBLY AT EACH PENETRATION OF FIRE RATED CONSTRUCTION (I.E. WALLS AND SLABS, ETC.). SLEEVES SHALL ONLY BE PERMITTED WHERE INDICATED IN THE CONTRACTOR SELECTED THROUGH-PENETRATION FIRE STOPPING ASSEMBLY. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL RATED ASSEMBLIES AND ASSOCIATED UL DESIGNATIONS. DEVICES INSTALLED RECESSED WITHIN FIRE RATED CONSTRUCTION (I.E. LIGHT SWITCHES, RECEPTACLES, ETC.) ARE ONLY PERMITTED WHEN AN APPROVED LISTED FIRE STOPPING SYSTEM EXISTS FOR THE APPLICATION. IF AN APPROVED LISTED FIRE STOPPING SYSTEM IS UNAVAILABLE, THE CONTRACTOR SHALL BRING THE CONDITION TO THE ATTENTION OF THE A/E FOR RESOLUTION PRIOR TO PROCEEDING WITH WORK.

APPLICABLE CODE:

NATIONAL ELECTRICAL CODE 2011

MEANS.

MOTOR CONTROLLERS: ALL 3-PHASE MOTORS SHALL HAVE MAGNETIC MOTOR CONTROLLERS WITH SOLID STATE OVERLOAD RELAY PROTECTION. THE SOLID STATE OVERLOAD RELAY SHALL HAVE PHASE LOSS AND PHASE OVERCURRENT PROTECTION WITH AUTOMATIC RESET UPON RETURN OF NORMAL POWER.

MOTOR FUSE PROTECTION: WHERE FUSE PROTECTION IS SPECIFICALLY REQUIRED BY THE EQUIPMENT MANUFACTURER PROVIDE FUSED SWITCHES IN LIEU OF NON-FUSED SWITCHES OR IN LIEU OF ENCLOSED CIRCUIT BREAKERS, OR OTHER DEVICES INDICATED.

CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FROM OTHER INVOLVED CONTRACTORS FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

COORDINATION DETAILS: MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT AND DETERMINE THE EXACT ROUGH-IN AND CONNECTION REQUIREMENTS.

WORKING CLEARANCE: COORDINATE FINAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH MECHANICAL DUCTWORK, PIPING ETC. AND ASSURE WORKING CLEARANCE REQUIRED BY NEC WILL BE MET SUFFICIENT ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF EQUIPMENT PROVIDED AND INSTALLED BY OTHER TRADES.

STARTER MOUNTING: WHERE AN INDIVIDUALLY MOUNTED SAFETY SWITCH, STARTER OR CIRCUIT BREAKER IS SHOWN ADJACENT TO ITS RESPECTIVE LOAD AND NOT MOUNTED ON A WALL, PROVIDE ALL SUPPORTS, BRACKETS, ANCHORING, ETC. NECESSARY TO PROPERLY SUPPORT THE DEVICE.

MOUNTING HEIGHTS: MOUNTING HEIGHTS INDICATED ARE FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE WIRING DEVICE UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS OF LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURE UNLESS OTHERWISE NOTED.

FIRE STOPPING: FOR ANY WALL OR FLOOR PENETRATIONS THROUGH FIRE-RATED STRUCTURES PROVIDE FIRE-STOPPING TO SEAL ALL THE PENETRATIONS AFTER THE CONDUIT HAS BEEN INSTALLED. FIRE STOPPING FOR PENETRATIONS SHALL BE UL APPROVED PER THE PENETRATION MADE IN ORDER TO MAINTAIN FIRE-RATED INTEGRITY OF THE STRUCTURE.

CLEAN UP: ON PROJECT CLOSE-OUT CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, LAMPS AND LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES AND PLATES. REPLACE ALL INOPERATIVE LAMPS.

MOTOR DISCONNECTS: ALL MOTORS SHALL HAVE DISCONNECTING

ELECTRICAL LEGEND

IGHTING	
0	LIGHTING FIXTURE
0	DOWNLIGHT OR PENDANT MOUNTED FIXTURE
9 8;	EXIT LIGHTING FIXTURE, WITH DIRECTIONAL ARROWS AS INDICATED WITH BATTERY PACK - CONNECT AHEAD OF LOCAL SWITCH.
S	SINGLE POLE SWITCH, 20A, 120/277V, 46" AFF UON
S 3	THREE-WAY SWITCH, 20A, 120/277V, 46" AFF UON
THE FOLLOV	VING SUBSCRIPTS SHALL APPLY TO RECEPTACLES WHERE USED: WEATHER RESISTANT GFI RECEPTACLE WITH WEATHERPROOF WHILE-IN-USE COVER.
Ф	DUPLEX CONVENIENCE RECEPTACLE 20A, 120V, 18" AFF, UON
Ē	EQUIPMENT CONNECTION
Ň	MOTOR CONNECTION
С	SAFETY SWITCH, 60A-3P, FU @ 30A, 3R
	SWITCH RATING NUMBER OF POLES FUSE RATING (NF INDICATES NON-FUSED) NEMA ENCLOSURE IF OTHER THAN NEMA 1
	ELECTRICAL PANELBOARD
AND	ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR AND 1 #12 GROUNDING CONDUCTOR IN 1/2" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE NEUTRAL CONDUCTOR TO ALL WALL SWITCH OUTLET BOXES WHETHER REQUIRED OR NOT. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS MAY BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. GROUNDING CONDUCTORS MAY BE SHARED AS ALLOWED BY THE NEC. NEUTRAL CONDUCTORS SHALL NOT BE SHARED. MULTI-POLE BREAKERS SHALL BE PROVIDED IN ACCORDANCE WITH THE NEC WHERE MULTI-WIRE BRANCH CIRCUITS ARE REQUIRED. CONDUIT LARGER THAN 1/2" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.
IRE ALARM	
	FIRE ALARM CONTROL PANEL
\bigcirc	DUCT MOUNTED SMOKE DETECTOR
GENERAL	
°	DETAIL OR SECTION NOTATION — ENUMERATION: A = DETAIL, 1 = SECTION — SHEET WHERE SECTION IS SHOWN
	NEW WORK NOTE SYMBOL

NEW WORK NOTE SYMBOL

 $\langle \rangle$

DEMOLITION NOTE SYMBOL

ABBREVIATIONS

Α	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINISHED GRADE
С	CONDUIT
EF	EXHAUST FAN
ETR	EXISTING TO REMAIN
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HP	HORSE POWER/HEAT PUMP
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILO-VOLT-AMPERES
KW	KILO-WATTS
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
Р	POLE
Ø	PHASE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATTS/WIRE
WP	WEATHERPROOF

(1) GENERATOR REMOVED BY OTHERS.

- 2 REMOVE EXISTING LIGHT FIXTURES. RETAIN EXISTING LIGHTING CIRCUIT FOR REUSE IN NEW WORK.
- 3 REMOVE EXISTING AIR COOLED CONDENSER UNIT CONNECTION AND ASSOCIATED 400A DISCONNECT COMPLETE BACK TO SOURCE. PATCH EXTERIOR WALL PENETRATION.
- A REMOVE EXISTING HEAT PUMP CONNECTION AND ASSOCIATED 30A DISCONNECT COMPLETE BACK TO SOURCE.
- 5 REMOVE AND RETAIN EXISTING CEILING MOUNTED DEVICES (FIRE ALARM DEVICES, SENSORS, ETC.). RETAIN EXISTING ASSOCIATED CIRCUITS FOR REUSE IN NEW WORK.

F

COLLABORATIVE

BEACH, VA - 757-499-

GRAPHIC SCALE:

3/16" = 1'-0"

1 REMOVE EXISTING PANELBOARD AND ASSOCIATED FEEDER CONDUIT AND CONDUCTORS COMPLETE BACK TO SOURCE. RETAIN ALL ETR BRANCH CIRCUITS FOR REUSE IN NEW WORK.

2 REMOVE EXISTING AIR HANDLER AND ASSOCIATED DISCONNECT COMPLETE BACK TO SOURCE.

F

GRAPHIC SCALE:

3/16" = 1'-0"

COLLABORATIVE

BEACH, VA - 757-499-72

- 1 RECONNECT TO EXISTING CIRCUIT RETAINED DURING DEMOLITION. 2 HP-1; 24.2MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@40A, 3R DISCONNECT. 3 LOCATION OF EXISTING PENETRATION FROM EXTERIOR INTO THE BASEMENT. ALL EXTERIOR CIRCUITS SERVED FROM PANEL LOCATED IN THE BASEMENT SHALL BE ROUTED THROUGH EXISTING PENETRATION. SEE ELEVATION DETAILS ON SHEET E501. 4 HP-2; 24.2MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@40A, 3R DISCONNECT. 5 HP-3; 36.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@60A, 3R DISCONNECT. 6 HP-4; 36.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@60A, 3R DISCONNECT. 7 HP-5; 24.2MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@40A, 3R DISCONNECT. 8 HP-6; 24.2MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@40A, 3R DISCONNECT. 9 HP-7; 22MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@ 35A, 3R DISCONNECT. 10 2 #8, 1 #10 GND - 1"C 11 HP-9; 24.2MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, FU@40A, 3R DISCONNECT.
- 12 REINSTALL EXISTING CEILING MOUNTED DEVICES (FIRE ALARM DEVICES, SENSORS, ETC.) RETAINED DURING DEMOLITION AND RECONNECT TO EXISTING CIRCUIT RETAINED DURING DEMOLITION.
- 13 2 #6, 1 #8 GND 1"C
- 14 HP-8; 36.5MCA, 208V 1Ø. PROVIDE WITH 60A-2P, FU@ 60A, 3R DISCONNECT.

GRAPHIC SCALE: 3/16" = 1'-0"

F

- PROVIDE PANELBOARD AS INDICATED. RECONNECT EXISTING BRANCH CIRCUITS RETAINED DURING DEMOLITION. EXTEND AND REWORK CIRCUITS AS REQUIRED.
 AHU-1; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-2; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-3; 41.1MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-4; 41.1MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-4; 41.1MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-5; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-6; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-6; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-7; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
 AHU-7; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF
 DISCONNECT.
 AHU-7; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF
 DISCONNECT.
 AHU-7; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF
 DISCONNECT.
 AHU-7; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF
 DISCONNECT.
 AHU-7; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF
 DISCONNECT.
- 12 AHU-8; 41.1MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.
- 13 AHU-9; 37.5MCA, 208V, 1Ø. PROVIDE WITH 60A-2P, NF DISCONNECT.

GRAPHIC SCALE: 3/16" = 1'-0" **B**

COLLABORATIVE

1-21/32"	 	► - - - - - - - - - - - - -	7-13/16"
LUMIN	IAIRE DE	SCRIPTION:	
1. H	HOUSING	SHALL BE ONE-PIE	ECE COL
2. F	INISH SH	HALL BE WHITE POL	YESTER
3. L	ENS SHA	ALL BE CLEAR ACR	YLIC.
4. [F	ORIVER S FULLY AC	HALL BE HIGH PER CESSIBLE FROM B	rformai Elow t
		DETAIL BA	ASED ON
TYPE	LUMENS	LAMP TYPE	INPUT
	4100	4000K LED	4
	2'	X 4' RECE	ESSE

1 REMOVE EXISTING ATS COMPLETE AND TURN OVER TO OWNER. REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS COMPLETE BACK TO SOURCE. ALL UNDERGROUND CONDUIT CAN BE CAPPED AND ABANDONED IN PLACE.

2 REMOVE EXISTING BOILER CONNECTION COMPLETE BACK TO SOURCE.

AHI

COLLABORATIVE

	PANELBOARD PB SCHEDULE						D۸N				SCHEI				EXISTING PANELBOARD PA SCHEDUILE								
	<u>I Al</u>					SEE POWER RISER DIAGRAM FOR RATINGS																	
						30		20/1P			20/1P									2 225/3			
SPARE	4.0	20/1P 3 4 20/1P	3.0	FF-1		0.0		20/1P	3		20/1P			SPARE							172.7	168.6	
SPARE		20/1P 5 6 20/1P	0.0	SPARE	SPARE			20/1P	5	$-\frac{1}{6}$	20/1P			SPARE					5		L	158.8	-
SPARE		20/1P 7 8 20/1P		SPARE	SPARE			20/1P	7		20/1P			SPARE		232.0		400/3P		8		100.0	
SPARE		20/1P 9 10 20/1P		SPARE	SPARE			20/1P	9	10	20/1P			SPARE		232.3	258.8			Ŭ			
SPARE		20/1P 11 - 12 20/1P		SPARE	SPARE			20/1P		12	20/1P			SPARE	-		288 7	,					-
SPARE		20/1P 13 - 14 20/1P		SPARE	SPARE			20/1P		1 <u>1</u>	20/1P			SPARE	SPACE ONLY		200.1		13	14 20/1F) *		RECEPTACLES
	30.0	40/2P 15 - 16 80/3P		SPARE	SPARE			20/1P		16	20/1P			SPARE			*	20/1P		16 20/1F)	*	
	30.0				SPARE	-		20/1P	17	18	20/1P			SPARE			*	20/1P		18 20/3F	, L	*	PLIMP
AHU-1	30.0	40/2P 19 T 20 50/2P		SPARE	SPARE			20/1P	19	20	20/1P			SPARE	SPARE (OFF)			20/1P			*		
	30.0				SPARE			20/1P	21	20	40/2P		19.4		SPARE (OFF)			20/1P	$\frac{10}{21}$			*	
	30.0	40/2P 23	30	0 AHU-7	SPARE			20/1P	$\frac{21}{23}$		10/21		19.4		PANEL EM		*	125/3P	23	24 100/3	L	*	PANEL I B
	30.0		30.0		HP-1	19.4		40/2P	25	26	60/2P	29.2	10.4	HP-8		*		- 120/01			*		
AHU-3	32.9	45/2P 27 - 28 40/2P	30.0	AHU-6		10.1	19.4				00/21	20.2	29.2				*					*	
	32.9		30	0	HP-2	-	10.1	40/2P	29	n 30	40/2P		19.4	HP-7	PANEL CP		*	100/3P	29 1	30 150/3	L	*	CLERK'S OFFICE
WATER HEATER *	22.0	30/3P 31	30.0	AHU-5		19.4	10.1				10/21	19.4	10.1			*					*		
	22.0		30.0		HP-3	10.1	29.2	60/2P	33	<u>34</u>	40/2P	10.1	194	HP-6	-		*					*	
	22.0		32	9 AHU-4			29.2				10/21		19.1		NOTES								I
PANELLA *	48.0	70/3P 37	32.9		HP-4	24.8	20.2	60/2P	37	38	40/2P	27.2	10.1	HP-5	PANELBOARD IS A CU	TI FR HAMME		NF C					
	48.0		32.9	AHU-8		21.0	24.8				10/21		272		* INDICATES EXISTING								
	48.0		32	9		_	21.0 24.8	20/1P	41	42	20/1P		27.2		BOI D INDICATES NEW								
TOTAL	134.0 162.9 162.9		98.9 95.9 125	.8 TOTAL	TOTAL	66.6	73.4 73.4		<u> </u>			75.8	95.2 85.4	TOTAL	+ INDICATES EXISTING		OVED DURIN	IG DEMOLIT	ION				
	TOTAL COL	NECTED AMPS A: 232.9 B: 258.8	C: 288.7				TOTAL CON		MPS A: 14	42.4	B: 168.6	C: 15	8.8										
NOTEO										_													

NOTES:

* INDICATES EXISTING LOAD RETAINED DURING DEMOLITION THAT SHALL BE RECONNECTED. LOADS ARE ESTIMATED

2 REMOVE GENERATOR, ATS, AND ALL ASSOCIATED CONDUCTORS AND CONDUIT COMPLETE.

EXISTING INCOMING FEED-

NO SCALE

PARTIAL POWER RISER DIAGRAM - NEW WORK

NEW WORK NOTES THIS SHEET

1 RECONNECT EXISTING FEEDER SERVING PANEL "LA" AND ALL EXISTING BRANCH CIRCUITS RETAINED DURING DEMOLITION.

