DUCTWORK	DESIGNATION
	TURNING VANES - SQUARE ELBOW
T	THERMOSTAT/TEMPERATURE SENSOR
	STANDARD BRANCH TAKEOFF
12X6	RECTANGULAR DUCT, FIRST FIGURE IS SIDE SHOWN
24Ø	ROUND DUCT, DIAMETER SHOWN
	TRANSITION - ECCENTRIC
	TRANSITION - CONCENTRIC
	DUCT ACCESS DOOR TOP/SIDE/BOTTOM
	RECTANGULAR/SQUARE TO ROUND DUCT TRANSITION

NOTE: REFER TO FLOOR PLANS AND DETAILS FOR EXTENT OF SYMBOLS AND ABBREVIATION USED.

DUCTWORK	DESIGNATION
	SUPPLY AIR DUCT - SECTION
	RETURN AIR DUCT - SECTION
	EXHAUST AIR DUCT - SECTION
	OUTSIDE AIR DUCT - SECTION
	ELBOW TURNED UP
	ELBOW TURNED DOWN
	TEE TURNED UP
	TEE TURNED DOWN
	MANUAL DAMPER - SINGLE LEAF TYPE
	MANUAL DAMPER - OPPOSED BLADE TYPE (UNLESS NOTED OTHERWISE)
	MOTOR ACTIVATED CONTROL DAMPER
UP	OFFSET IN DUCTWORK - UP
DN	OFFSET IN DUCTWORK - DOWN

HVAC	DESIGNATION
AD	ACCESS DOOR, AIR DRYER, AREA DRAIN
ATC	AUTOMATIC TEMPERATURE CONTROL
AUTO	AUTOMATIC
BDD	BACK DRAFT DAMPER
BC	BUILDING CONTROLLER
CAP	CAPACITY
CENT	CENTRIFUGAL
CONN	CONNECTION
DB	DRY BULB
DC	DIGITAL CONTROLLER
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DW	DOMESTIC WATER (PLUMBING)
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ECD	ELECTRIC CONTROL DAMPER
EF	EXHAUST FAN
EFF	EFFICIENCY
ELEC	ELECTRIC
ELEV	ELEVATION
ENCL	ENCLOSE (ENCLOSURE)
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
FA	FIRE ALARM
FFE	FINISHED FLOOR ELEVATION
FL	FLOOR(ING)
G	GRILLE, GRAMS
HOA	HAND-OFF-AUTOMATIC
HOR	HORIZONTAL
HP	HORSEPOWER, HEAT PUMP
HVAC	HEATING/VENTILATING/AIR CONDITIONING

HVAC	DESIGNATION
HZ	HERTZ (CYCLES PER SECOND)
KW	KILOWATT
LED	LIGHT EMITTING DIODE
M	METER
MAX	MAXIMUM
MD	MANUAL DAMPER
MIN	MINIMUM
NC	NOISE CRITERIA/NORMALLY CLOSED
NO	NORMALLY OPEN/NITROUS OXIDE
NO.	NUMBER
OBD	OPPOSED BLADE DAMPER
OPER	OPERATING
PH	PHASE
PL	PLUMBING
PRESS	PRESSURE
REF	REFERENCE
REG	REGISTER/REGULATING
REQD	REQUIRED
RGH	RADIANT GAS HEATER
RPM	ROTATIONS PER MINUTE
S	SOIL
SP	STATIC PRESSURE, SPRINKLER PIPE
SQ	SQUARE
SST	STAINLESS STEEL
SW	SWITCH, SOFT WATER
T	TANK, THERMOSTAT
TEMP	TEMPERATURE
WB	WET BULB
WWF	WELDED WIRE FABRIC
VD	VOLUME DAMPER

NOTE:
REFER TO FLOOR PLANS AND DETAILS FOR EXTENT OF ABBREVIATIONS USED.

DESIGN CONDITIONS

OUTDOOR:	SUMMER DRY BULB	93° F
	SUMMER WET BULB (MCWB)	78° F
	WINTER DRY BULB	32° F

GENERAL IDENTIFICATION

D — TYPE
100 — AIR QUANTITY
} DIFFUSER, REGISTER, GRILLE MARK

EF — EQUIPMENT TYPE
A1 — SCHEDULE REFERENCE
BUILDING DESIGNATOR
} EQUIPMENT MARK

GENERAL NOTES

1. REFER TO DIVISION 23 SPECIFICATIONS FOR ALL PIPING CONSTRUCTION AND INSTALLATION REQUIREMENTS.
2. REFER TO MECHANICAL FLOOR PLANS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.
3. MOUNT ROOM THERMOSTATS/SENSORS AT 48" AFF.
4. PIPING LOCATIONS SHOWN ARE COORDINATED IN THE DESIGN DRAWINGS, VARIATIONS FROM DESIGN ARE POSSIBLE. REFER TO SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. DO NOT PROCEED WITH INSTALLATION OF PIPING UNTIL APPROVED SHOP DRAWINGS ARE AVAILABLE AT THE SITE.

DX SPLIT AIR CONDITIONING UNIT SCHEDULE

MARK	LOCATION	AIR QUANTITY (CFM)	COOLING CAPACITY					HEATING CAPACITY				MOTOR			REMARKS
			TOTAL (MBH)	SENSIBLE (MBH)	ENT. AIR (°F) DB	ENT. AIR (°F) WB	EER	HEAT PUMP (MBH)	ELEC RESIST (KW)	ENT AIR (°F)	COP	VOLTS	PHASE	FLA	
AC-1.7	P103 SOLAR INV	810	34	24	78	65	10.8	22.4	-	70	2.5	208	1	0.6	-
AC-1.8	P104 ELEC	335	11	8	78	65	12.2	9.2	-	70	3.1	208	1	0.6	-
AC-1.9	P105 SPKLR	335	11	8	78	65	12.2	9.2	-	70	3.1	208	1	0.6	-

GENERAL NOTES:

1. UNIT PERFORMACE IS A COMBINED RATING OF EACH AC UNIT WITH THE CONNECTED CONDENSING UNIT.
2. PROVIDE UNITS WITH INTEGRAL CONDENSATE PUMP.

CONDENSING UNIT SCHEDULE

MARK	LOCATION	COOLING		HEATING CAPACITY	ELECTRICAL					EER RATING	REFRIGERANT	RELATED EQUIPMENT	REMARKS
		TOT CAP (MBH)	AMB TEMP (°F)		VOLTS	PHASE	HERTZ	MCA	MOP				
CU-1.7	GRADE	34	98	22.4	208	1	60	25	30	10.8	R454B	AC-1.7	-
CU-1.8	GRADE	11	98	9.2	208	1	60	11	15	12.2	R454B	AC-1.8	-
CU-1.9	GRADE	11	98	9.2	208	1	60	11	15	12.2	R454B	AC-1.9	-

NOTE:
IF THIS DRAWING IS LESS THAN 34" X 22"
IT IS A REDUCED SIZE DRAWING

STM	DESCRIPTION	DATE	APPR
1	MOD P00005	05/2023	
2	MOD P00006 AND MOD P00007	10/2025	

NAVFAC

JOHN EDWARD BALL LICENSE No. 66893 STATE OF VIRGINIA PROFESSIONAL ENGINEER

BAMFORTH ENGINEERS - ARCHITECTS

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2025

ACTIVITY: Approved by J. Scott Roberts, Asset Management Branch Head & Supervisory Facility Planner, PWD Beaufort, SC via email.

SATISFACTORY TO DATE 12/15/2022

DES MAB	DRW MAB	CHK JEB	
PM/DM	KTB / RLH		
BRANCH MANAGER	ALG		
CHIEF ENG/ARCH	EJA		
FP ENGINEER	DSN		

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NORFOLK, VA
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – MID-ATLANTIC
DEPARTMENT OF THE NAVY
DC CORE
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE - MECHANICAL NOTES, SYMBOLS, AND SCHEDULES

SCALE: NOT TO SCALE
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12860390
SHEET 1169 OF 1412

PMH001

DRAWFORM REVISION: 28 AUGUST 2020

Autodesk Docs://20245_NAFA T-50 F35 Maintenance Hangar/20245 F35 Maint Hangar_Parking Facility_ME-v2024.rvt
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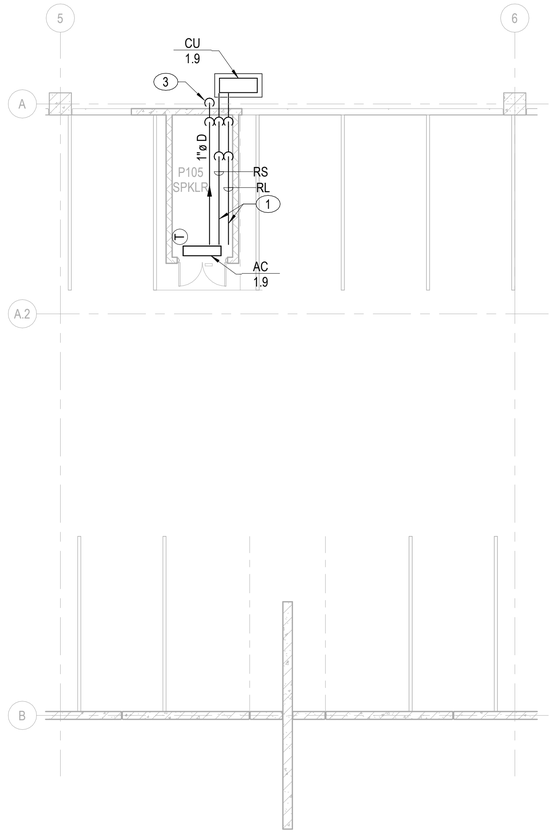
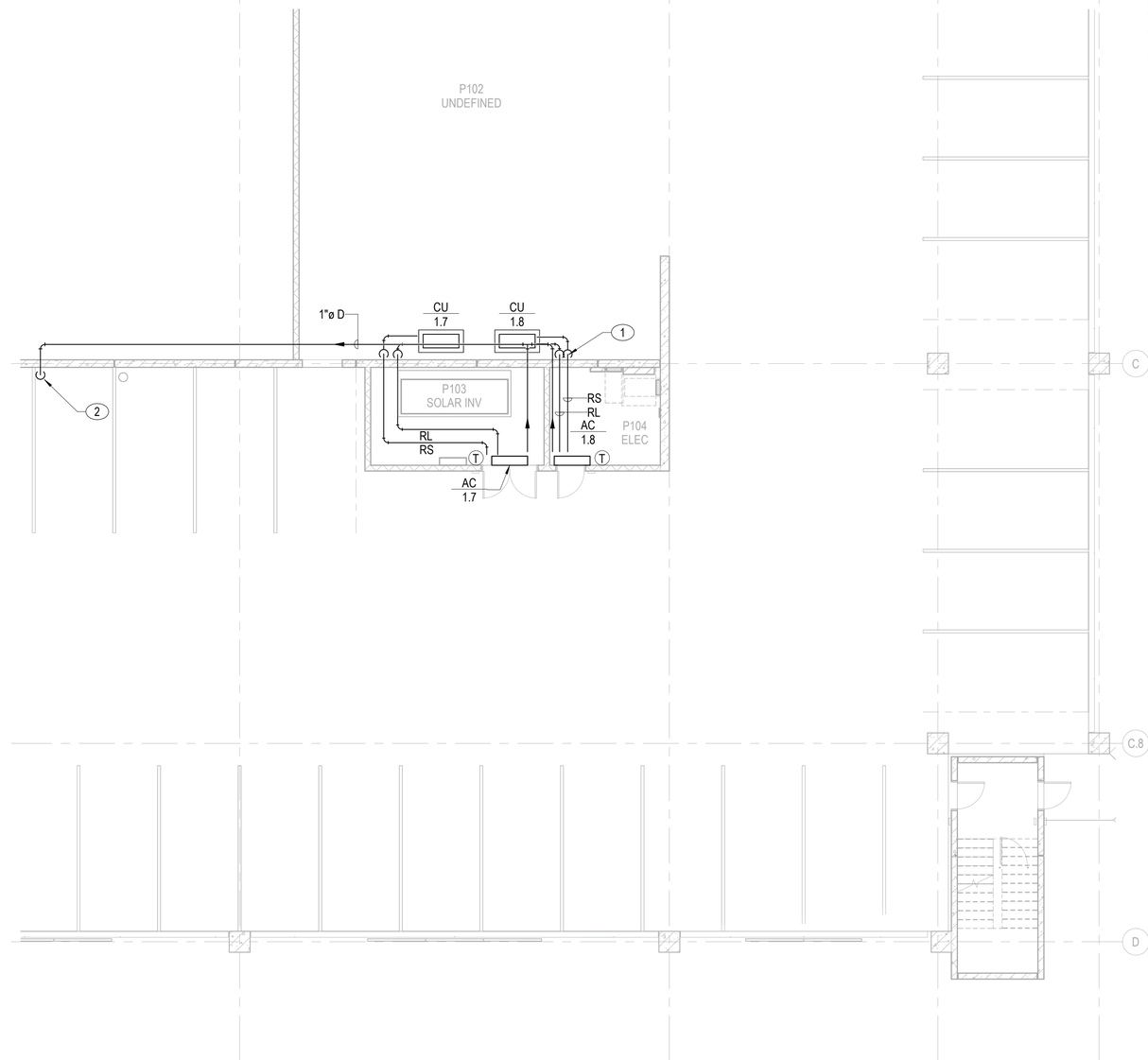


B1 GROUND FLOOR MECHANICAL PLAN, AREA B
1/8" = 1'-0"



A3 GROUND FLOOR MECHANICAL PLAN, AREA B
1/8" = 1'-0"

NOTES:

SHEET NOTES:

A. REFER TO SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES ON SHEETS PMH001.

B. DO NOT ROUTE REFRIGERANT OR DRAIN PIPING OVER ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL DRAWINGS FOR EQUIPMENT LOCATIONS. - TYPICAL.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

KEY NOTES (00)

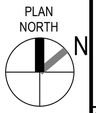
1 SIZE REFRIGERANT LIQUID AND SUCTION PIPING PER APPROVED MANUFACTURER'S REQUIREMENTS. ROUTE PIPING TO AVOID ALL ELECTRICAL PANELS AND EQUIPMENT WITHIN THE ROOM. - TYPICAL.

1 SIZE REFRIGERANT LIQUID AND SUCTION PIPING PER APPROVED MANUFACTURER'S REQUIREMENTS. ROUTE PIPING TO AVOID ALL ELECTRICAL PANELS AND EQUIPMENT WITHIN THE ROOM. - TYPICAL.

2 1" DRAIN PIPING DOWN TO AREA DRAIN. REFER TO PLUMBING DRAWING FOR LOCATION.

3 ROUTE 1" DRAIN PIPING TO EXTERIOR. TERMINATE WITH GOOSENECK.

KEYPLAN



0 5' 10' 20' 30'
1/8" = 1'-0" GRAPHIC SCALE

NOTE:
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NAVFAC

JOHN EDWARD BALL
LICENSE
No. 66893
STATE OF
PROFESSIONAL ENGINEER

SEAL

BAMFORTH
ENGINEERS & CONSULTANTS

AE INFO

APPROVED

FOR COMMANDER NAVFAC 11/21/2022

ACTIVITY
Approved by J. Scott Roberts,
Asset Management Branch Head &
Supervisory Facility Planner, PWD
Beaufort, SC via email.

SATISFACTORY TO DATE 12/15/2022

DES	MAB	DRW	MAB	CHK	JEB

PM/DM	KTB / RLH
BRANCH MANAGER	ALG
CHIEF ENG/ARCH	EJA
FP ENGINEER	DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NORFOLK, VA

DC CORE:
MCAS BEAUFORT
BEAUFORT, SC

P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)

PARKING GARAGE - GROUND FLOOR MECHANICAL PLAN - AREA B

SCALE:	1/8" = 1'-0"
EPROJECT NO.:	1363603
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12860391
SHEET	1170 OF 1412

PMH101B

DRAWFORM REVISION: 25 AUGUST 2020

Autodesk Docs://20042 MF-FY 202 F35 Maintenance Hangar/20042 F35 Maint Hangar_Parking Facility_MEP_v2024.rvt
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DUCTLESS SPLIT SYSTEM SEQUENCE OF OPERATION

THE CONTROL SEQUENCES ARE BY THE EQUIPMENT MANUFACTURER. SETTINGS ARE THROUGH THE SPACE SENSOR.

SAFETIES

THE SYSTEM SHALL RUN SUBJECT TO THE UNIT MANUFACTURER'S SAFETIES.

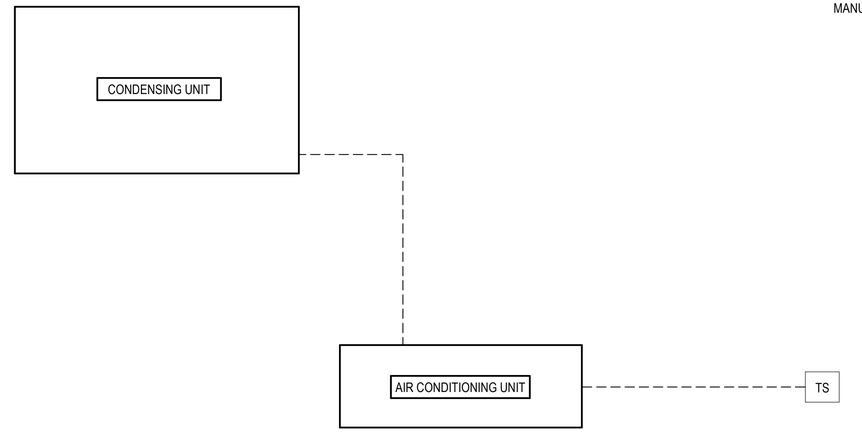
SPACE TEMPERATURE CONTROL

OCCUPIED MODE 24 HOURS / DAY 7 DAYS A WEEK.

WHEN ENABLED THE SYSTEM HARDWARE SHALL MAINTAIN SPACE TEMPERATURE AT THE CONFIGURED SETPOINT.

DUCTLESS SPLIT SPACE SENSOR SCHEDULE

EQUIPMENT IDENTIFIER	SPACES SERVED (ROOM NAME #)	SENSOR LOCATION (ROOM NAME #)	SUMMER ZONE TEMPERATURE (DEGREE F)	WINTER ZONE TEMPERATURE (DEGREE F)
AC-1.7	P103 SOLAR INV	P103 SOLAR INV	80	55
AC-1.8	P104 ELEC	P104 ELEC	80	55
AC-1.9	P105 SPKLR	P105 SPKLR	80	55



A. CONTROLS AND SPACE SENSORS BY DUCTLESS SPLIT MANUFACTURER.

C3 DUCTLESS SPLIT SCHEMATIC
NOT TO SCALE

NOTE:
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RLF SYS #12

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NAVFAC

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AE INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2025

ACTIVITY
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SATISFACTORY TO DATE 12/15/2022

DES MAB | DRW MAB | CHK JEB
PMDM KTB / RLH
BRANCH MANAGER ALG
CHIEF ENG/ARCH EJA
FP ENGINEER DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
DC CORE:
MCAS BEAUFORT

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NORFOLK, VA

BEAUFORT, SC

P-475 AIRCRAFT MAINTENANCE HANGAR -
VOLUME 4 (PARKING GARAGE OPTION)

PARKING GARAGE - CONTROL - DUCTLESS SPLIT SYSTEM

SCALE: NOT TO SCALE
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12860392
SHEET 1171 OF 1412

PMI701

DRAWFORM REVISION: 25 AUGUST 2020

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