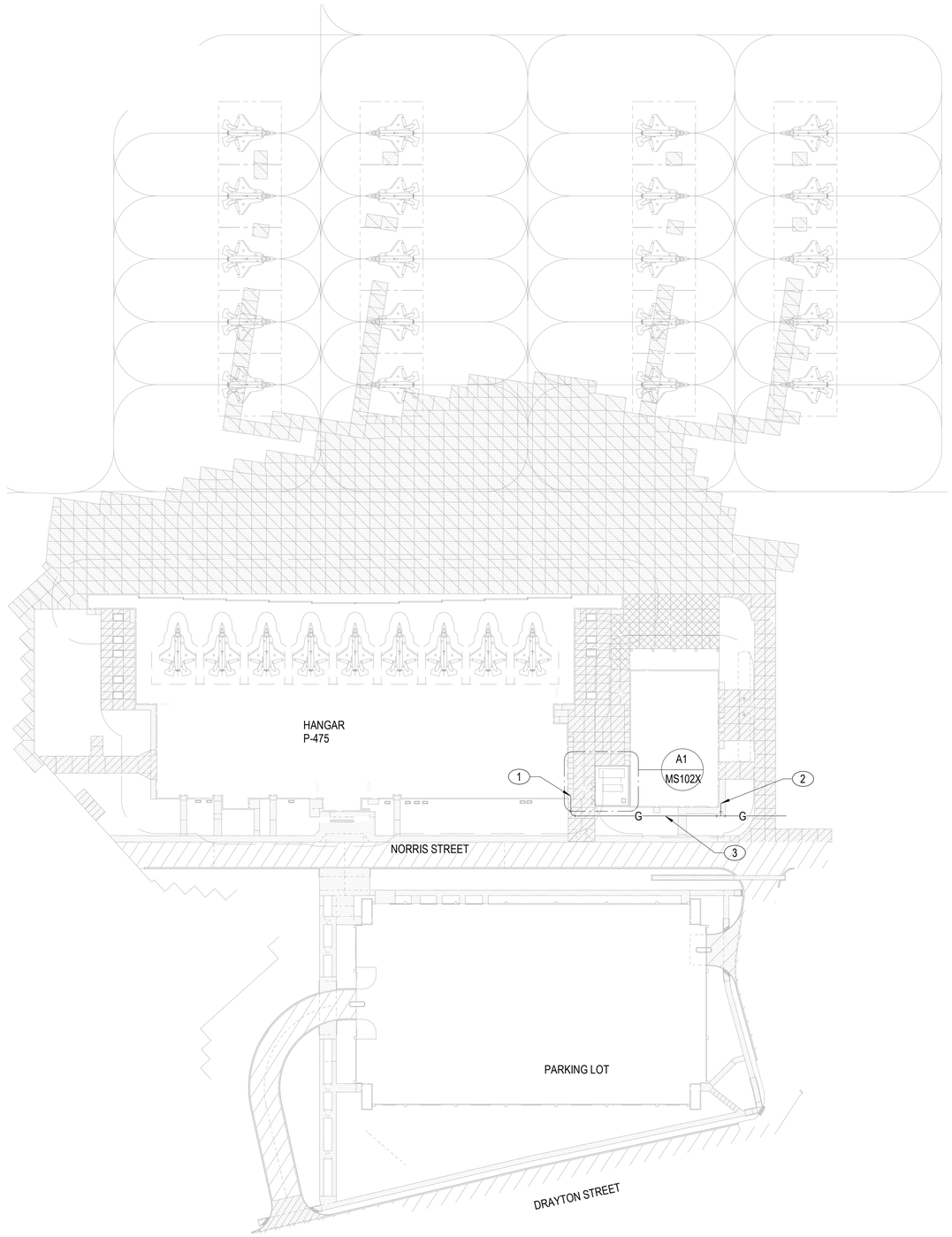

A1 MECHANICAL SITE PLAN
1/64" = 1'-0"

NOTES:

SHEET NOTES:

A. REFER TO SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES ON VOLUME 1 SHEET MS001

KEY NOTES (00)

1. REFER TO VOLUME 2B A1/PP406 FOR CONTINUATION. GAS LOAD: 5,098 MBH
2. CAP GAS PIPE FIVE FEET FROM BUILDING CONNECTION POINT. GAS LOAD: 275.1 MBH
3. CONTRACTOR TO COORDINATE WITH THE GAS COMPANY, DOMINION ENERGY, FOR THE ACTUAL SIZE, PRESSURE, AND ROUTING AS WELL AS THE METER UP TO THE BUILDING CONNECTION. INCOMING NATURAL GAS PIPING TO BE POLYETHYLENE.

PLAN NORTH

0 50' 100' 150' 200' 250'
1/64" = 1'-0" GRAPHIC SCALE

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

SYM	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 FLORIDA
PROFESSIONAL ENGINEER
11/13/2025
SEAL

BAMFORTH
ENGINEERS + SURVEYORS

AE 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

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 6
SITE BASE BID WITH ADDITIONAL OPTIONS
MECHANICAL SITE PLAN

SCALE:	1/64" = 1'-0"
EPROJECT NO.:	1363603
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12871496
SHEET	1401 OF 1412

MS101X

DRAWFORM REVISION: 25 AUGUST 2020

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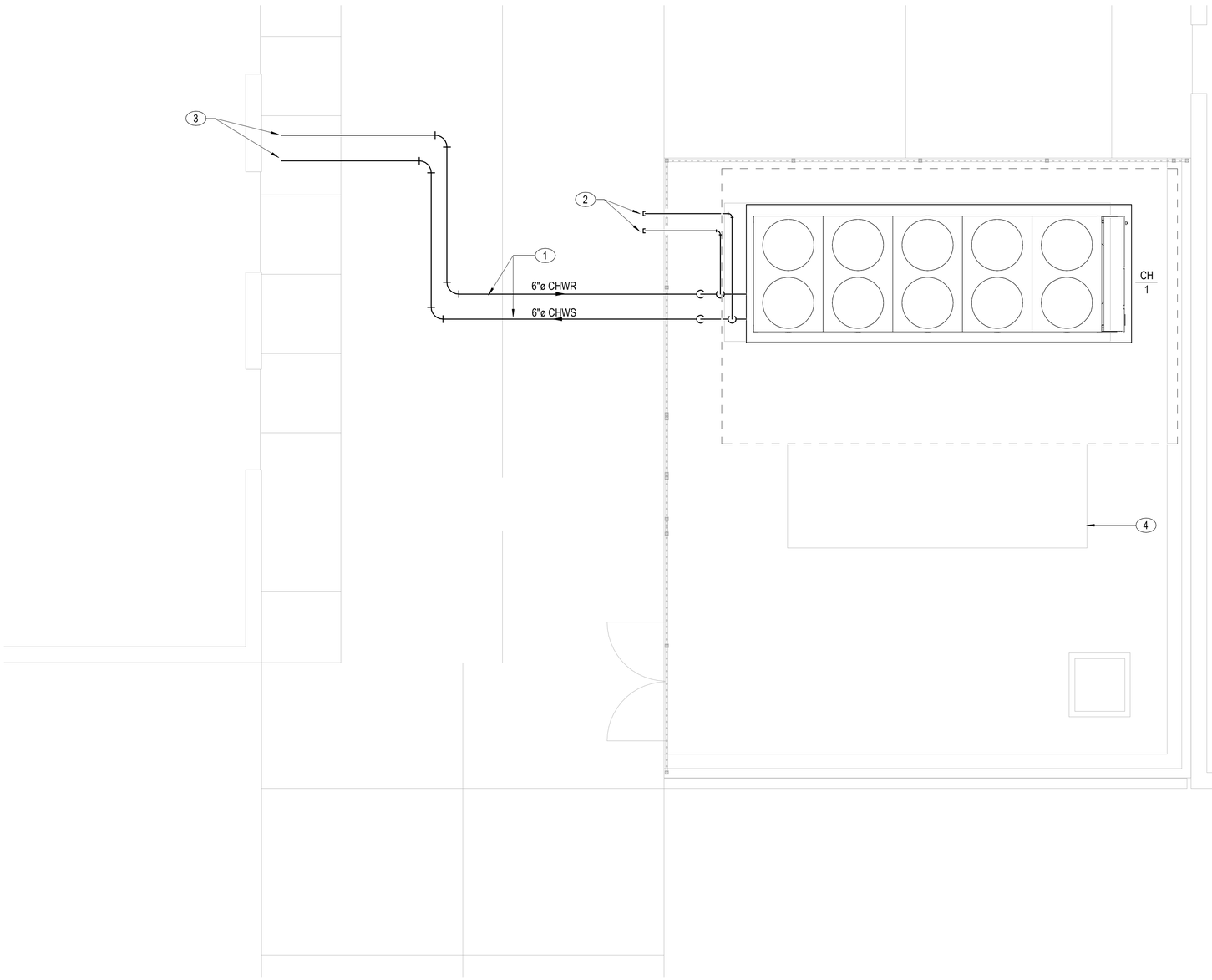

A1 CHILLER YARD ENLARGED PLAN
1/4" = 1'-0"

NOTES:

SHEET NOTES:

A. REFER TO SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES ON VOLUME 1 SHEET MS001

KEY NOTES (00)

1 PRE-INSULATED UNDERGROUND PIPING INSTALL AT -5'-0" INV. ELEVATION.
2 6" EMERGENCY CONNECTIONS WITH BLIND FLANGE AND SHUTOFF VALVES.
3 REFER TO SHEET MH401 IN VOLUME 2B FOR CONTINUATION OF PIPING.
4 EMERGENCY GENERATOR

PLAN NORTH

N

0 1' 5' 10' 15'
1/4" = 1'-0" GRAPHIC SCALE

NOTE:
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SYM	DESCRIPTION	DATE	APPR
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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 ~ MID-ATLANTIC
NORFOLK, VA
DC CORE
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 6
SITE BASE BID WITH ADDITIONAL OPTIONS
CHILLER YARD ENLARGED PLAN

SCALE: 1/4" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12871497
SHEET 1402 OF 1412
MS102X

DRAWFORM REVISION: 25 AUGUST 2020

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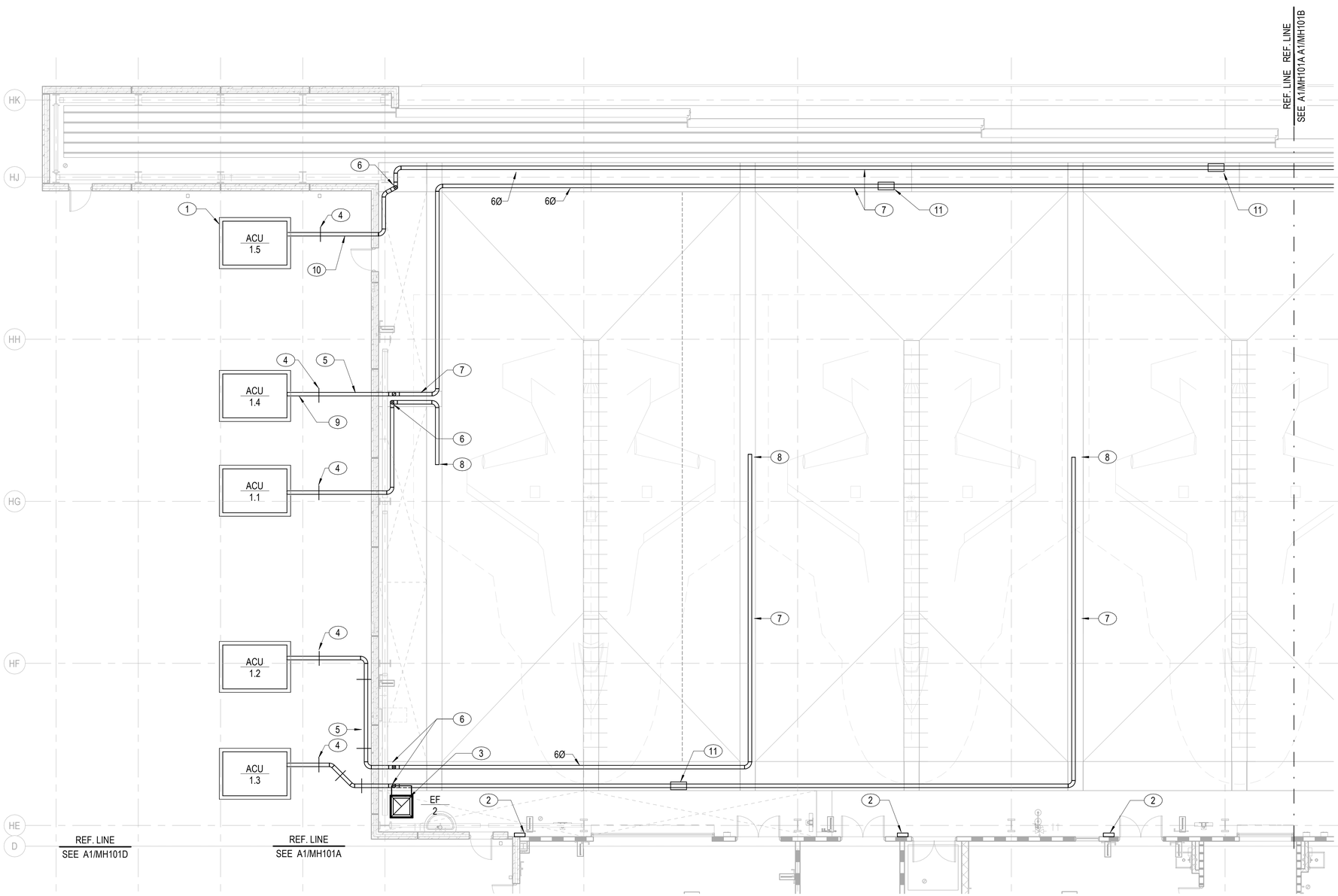


A1 DUCTWORK PLAN, GROUND FLOOR, AREA A
1/8" = 1'-0"

NOTES:

SHEET NOTES:

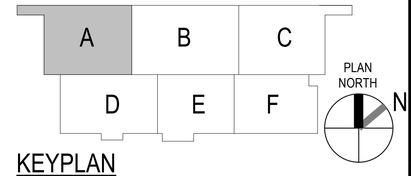
A. REFER TO SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES ON SHEETS MH001 AND MH002.

B. REFER TO DETAILS ON SHEET MH506 FOR PCA SYSTEM.

C. PROVIDE EXTERIOR CORROSSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: 100 HANGAR, 120 GSE STORAGE, 124 COMPRESS, 135B ELEC, 153 MECH, 153A WATER RM, 154 FP CL, 1S02 STAIR 2, AND 1S03 STAIR 3.

KEY NOTES (00)

1 6" HIGH CONCRETE HOUSEKEEPING PAD. REFER TO STRUCTURAL DETAIL - TYPICAL.
2 ACU REMOTE CONTROL PANEL - TYPICAL
3 28x28 DUCT UP TO EXHAUST LOUVER. EXHAUST DUCT DOWN FROM EF TO 12" A.F.F. WITH 26x26 SIDE OPENING WITH W.W.F. TYPICAL THREE SIDES.
4 PIPE SUPPORT - TYPICAL
5 WELD JOINTS AND FITTINGS FOR PCA PIPE INSTALLED ABOVE FLOOR AND INSTALL WITH A CONTINUOUS SLOPE OF 1/16" PER FOOT FROM THE HIGH POINT TO THE VERTICAL DROP DOWN TO THE FLOOR TRENCHES - TYPICAL
6 6" PCA PIPING DOWN TO TRENCH THROUGH FIELD COORDINATED AND SIZED OPENING IN TRENCH GRATING. REFER TO STRUCTURAL DRAWINGS FOR TRENCH DETAILS.
7 PROVIDE BOLTED FLANGED JOINTS FOR 6" PCA PIPING INSTALLED IN THE TRENCHES AND INSTALL AT A CONTINUOUS SLOPE OF 1/16" PER FOOT TOWARDS THE END CONNECTION FOR THE AIRCRAFT. FLANGED JOINTS SHALL BE A MAXIMUM OF 20' SPACING.
8 PROVIDE INDUSTRIAL, STAINLESS STEEL DIAL THERMOMETER AND PRESSURE GAUGE IN 6" PCA PIPING JUST PRIOR TO 6"X4" TRANSITION FITTING. SEE DETAIL A1/MH506 FOR TERMINATION OF PCA PIPING INCLUDING FLEX DUCT CONNECTION ADAPTER.
9 PROVIDE FLEXIBLE EXPANSION JOINT AND PRESSURE/TEMPERATURE TEST PLUG AT DISCHARGE OF PCA UNITS FOR MANUAL MEASUREMENT OF PRESSURE AND TEMPERATURE WITH INSERTION GAUGES. - TYPICAL
10 PROVIDE STUCCO EMBOSSED ALUMINUM JACKET OVER HDPE JACKET ON EXPOSED PCA PIPE. - TYPICAL
11 6" FLANGED, STAINLESS STEEL BELLOWS TYPE EXPANSION JOINT WITH INTERNAL LINER FOR SMOOTH AIRFLOW PATH AND UP TO 2" EXPANSION/CONTRACTION CAPABILITY. SEE DETAIL C4/MH506 FOR INSULATION INSTALLATION REQUIREMENTS.



KEYPLAN

0 ½" 1" 2" 3" 4"
1'-0" = 1'-0" GRAPHIC SCALE

NOTE:
IF THIS DRAWING IS LESS THAN 34" X 22"
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NO	DESCRIPTION	DATE	APPR
1	MOD P00005	05/2023	
2	MOD P00006 AND MOD P00007	10/2025	

NAVFAC

JOHN EDWARD BAMFORTH License No 90893 STATE OF FLORIDA PROFESSIONAL ENGINEER

BAMFORTH ENGINEERS - CONSULTANTS

AE 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	
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 6
SITE BASE BID WITH ADDITIONAL OPTIONS
HANGAR - DUCTWORK PLAN - GROUND FLOOR - SECTOR A

SCALE:	1/8" = 1'-0"
EPROJECT NO.:	1363603
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12871498
SHEET	1403 OF 1412

MH101ZA

DRAWFORM REVISION: 25 AUGUST 2020

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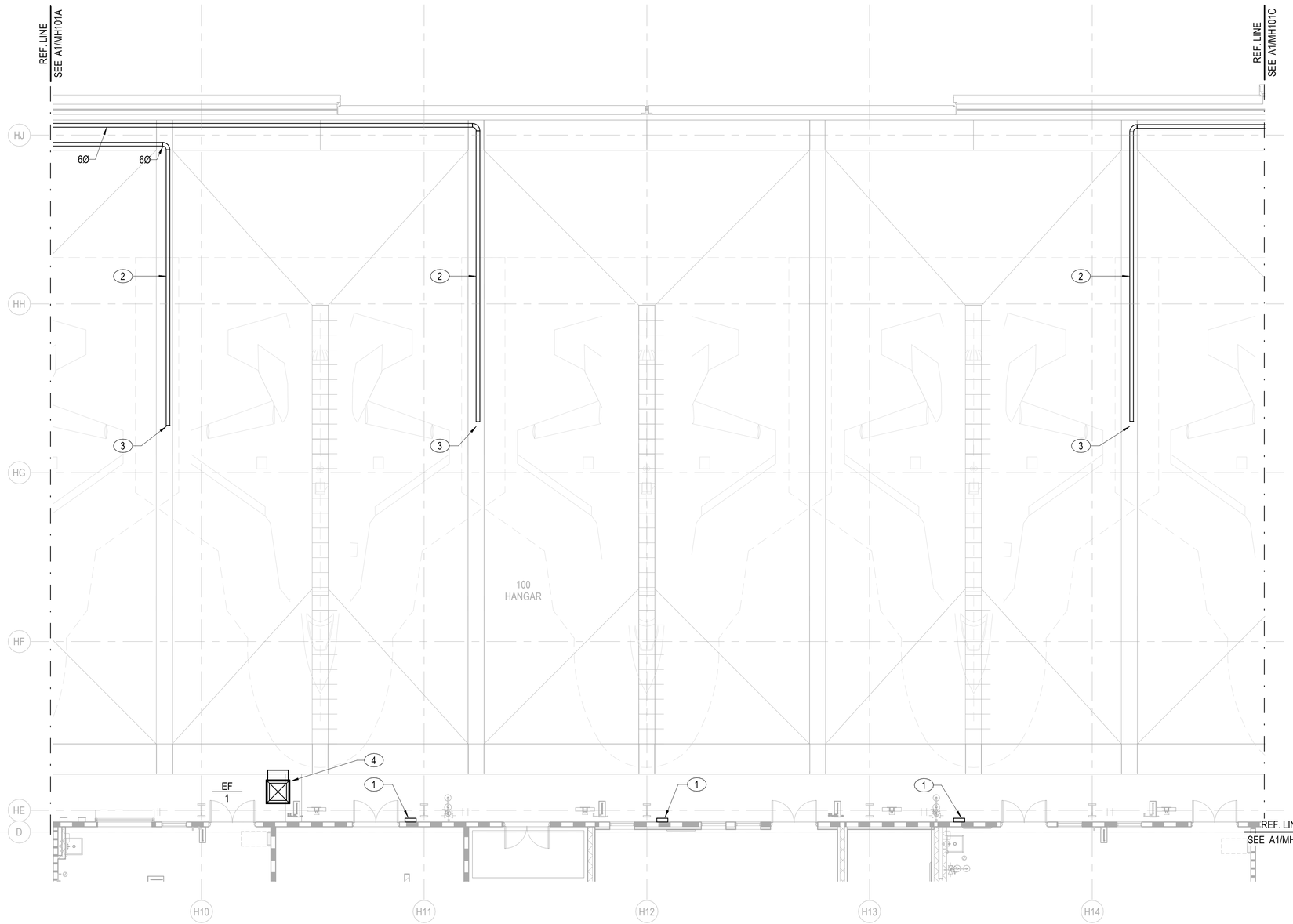


A1 DUCTWORK PLAN, GROUND FLOOR, AREA B
1/8" = 1'-0"

NOTES:

SHEET NOTES:

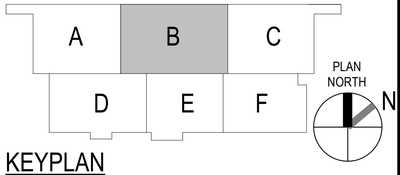
A. REFER TO SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES ON SHEETS MH001 AND MH002.

B. REFER TO DETAILS ON SHEET MH506 FOR PCA SYSTEM.

C. PROVIDE EXTERIOR CORROSSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: 100 HANGAR, 120 GSE STORAGE, 124 COMPRESS, 135B ELEC, 153 MECH, 153A WATER RM, 154 FP CL, 1S02 STAIR 2, AND 1S03 STAIR 3.

KEY NOTES (00)

1 ACU REMOTE CONTROL PANEL - TYPICAL
2 PROVIDE BOLTED FLANGED JOINTS FOR 6" PCA PIPING INSTALLED IN THE TRENCHES AND INSTALL AT A CONTINUOUS SLOPE OF 1/16" PER FOOT TOWARDS THE END CONNECTION FOR THE AIRCRAFT. FLANGED JOINTS SHALL BE A MAXIMUM OF 20' SPACING.
3 PROVIDE INDUSTRIAL, STAINLESS STEEL DIAL THERMOMETER AND PRESSURE GAUGE IN 6" PCA PIPING JUST PRIOR TO 6"X4" TRANSITION FITTING. SEE DETAIL A1/MH506 FOR TERMINATION OF PCA PIPING INCLUDING FLEX DUCT CONNECTION ADAPTER.
4 28x28 EXHAUST DUCT UP. EXHAUST DUCT DOWN TO 12" A.F.F. WITH 26x26 SIDE OPENINGS - TYPICAL THREE SIDES.



KEYPLAN

0 ½" 1" 2" 3" 4"
1'-0" = 1'-0" GRAPHIC SCALE

NOTE:
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NAVFAC

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LICENSE No 66893
STATE OF FLORIDA
PROFESSIONAL ENGINEER
11/13/25
SEAL

BAMFORTH
ENGINEERS + SURVEYORS
A/E INFO

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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 ~ MID-ATLANTIC
NORFOLK, VA
DC CORE
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 6
SITE BASE BID WITH ADDITIONAL OPTIONS
HANGAR - DUCTWORK PLAN - GROUND FLOOR - SECTOR B

SCALE:	1/8" = 1'-0"
EPROJECT NO.:	1363603
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12871499
SHEET	1404 OF 1412

MH101ZB

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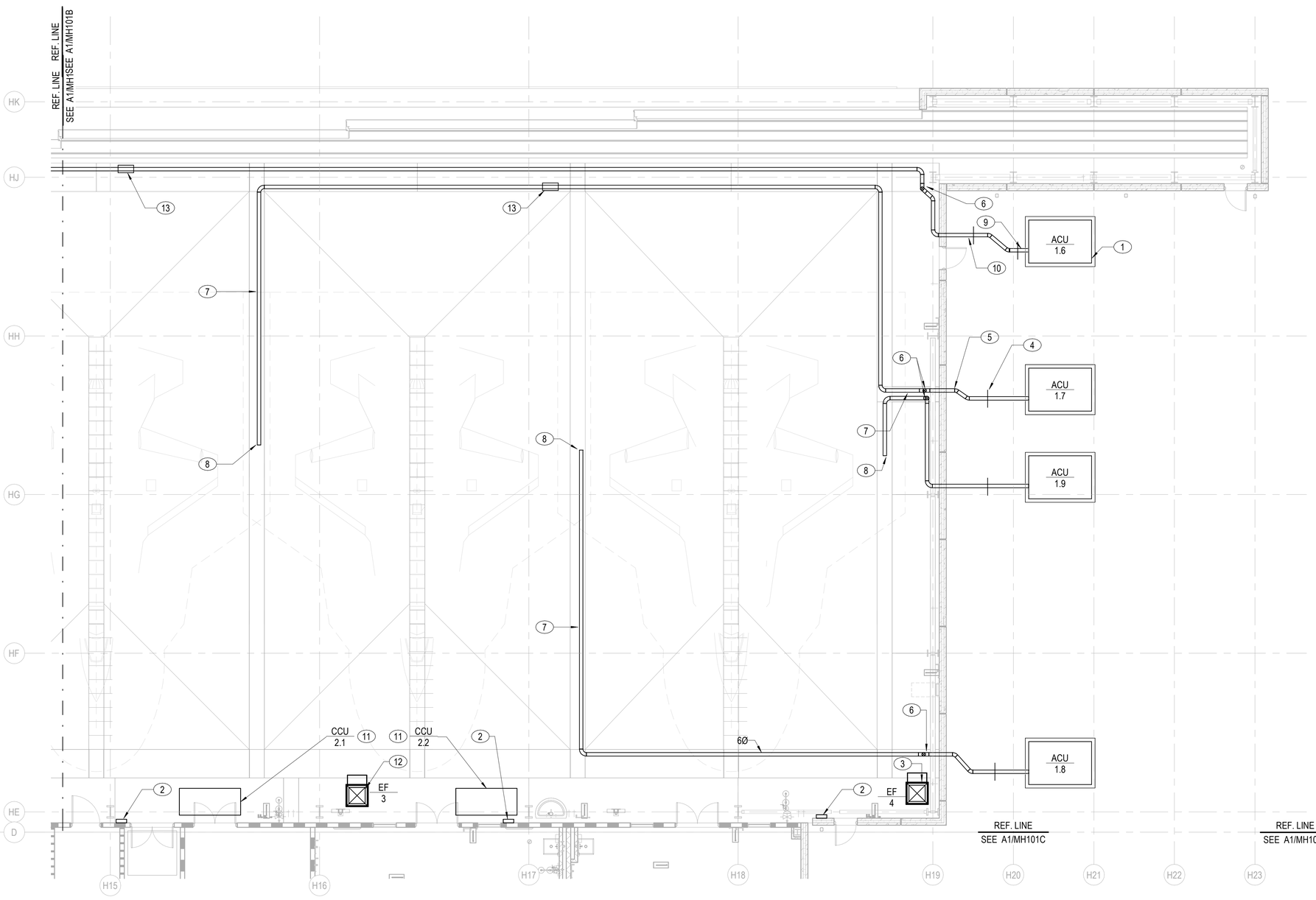


NOTES:

SHEET NOTES:

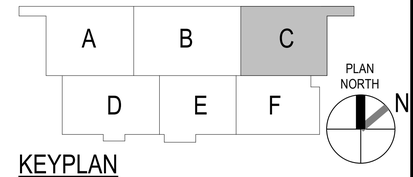
A. REFER TO SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES ON SHEETS MH001 AND MH002.

B. REFER TO DETAILS ON SHEET MH506 FOR PCA SYSTEM.

C. PROVIDE EXTERIOR CORROSSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: 100 HANGAR, 120 GSE STORAGE, 124 COMPRESS, 135B ELEC, 153 MECH, 153A WATER RM, 154 FP CL, 1S02 STAIR 2, AND 1S03 STAIR 3.

KEY NOTES (00)

1 6" HIGH CONCRETE HOUSEKEEPING PAD. REFER TO STRUCTURAL DETAIL - TYPICAL.
2 ACU REMOTE CONTROL PANEL - TYPICAL
3 28x28 DUCT UP TO EXHAUST LOUVER. EXHAUST DUCT DOWN FROM EF TO 12" A.F.F. WITH 26x26 SIDE OPENING WITH W.W.F. TYPICAL THREE SIDES.
4 PIPE SUPPORT - TYPICAL
5 WELD JOINTS AND FITTINGS FOR PCA PIPE INSTALLED ABOVE FLOOR AND INSTALL WITH A CONTINUOUS SLOPE OF 1/16" PER FOOT FROM THE HIGH POINT TO THE VERTICAL DROP DOWN TO THE FLOOR TRENCHES - TYPICAL
6 6" PCA PIPING DOWN TO TRENCH THROUGH FIELD COORDINATED AND SIZED OPENING IN TRENCH GRATING. REFER TO STRUCTURAL DRAWINGS FOR TRENCH DETAILS.
7 PROVIDE BOLTED FLANGED JOINTS FOR 6" PCA PIPING INSTALLED IN THE TRENCHES AND INSTALL AT A CONTINUOUS SLOPE OF 1/16" PER FOOT TOWARDS THE END CONNECTION FOR THE AIRCRAFT. FLANGED JOINTS SHALL BE A MAXIMUM OF 20' SPACING.
8 PROVIDE INDUSTRIAL, STAINLESS STEEL DIAL THERMOMETER AND PRESSURE GAUGE IN 6" PCA PIPING JUST PRIOR TO 6"X4" TRANSITION FITTING. SEE DETAIL A1/MH506 FOR TERMINATION OF PCA PIPING INCLUDING FLEX DUCT CONNECTION ADAPTER.
9 PROVIDE FLEXIBLE EXPANSION JOINT AND PRESSURE/TEMPERATURE TEST PLUG AT DISCHARGE OF PCA UNITS FOR MANUAL MEASUREMENT OF PRESSURE AND TEMPERATURE WITH INSERTION GAUGES. - TYPICAL
10 PROVIDE STUCCO EMBOSSED ALUMINUM JACKET OVER HDPE JACKET ON EXPOSED PCA PIPE. - TYPICAL
11 MOUNT CCU AT 9'-0" AFF. REFER TO STRUCTURAL DRAWINGS (C1/SF414) FOR MOUNTING RACK DETAIL - TYPICAL
12 28x28 EXHAUST DUCT UP. EXHAUST DUCT DOWN TO 12" A.F.F. WITH 26x26 SIDE OPENINGS - TYPICAL THREE SIDES.
13 6" FLANGED, STAINLESS STEEL BELLOWS TYPE EXPANSION JOINT WITH INTERNAL LINER FOR SMOOTH AIRFLOW PATH AND UP TO 2" EXPANSION/CONTRACTION CAPABILITY. SEE DETAIL C4/MH506 FOR INSULATION INSTALLATION REQUIREMENTS.



KEYPLAN

0 ½" 1" 2" 3" 4"
1'-0" = 1'-0" GRAPHIC SCALE

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A1 DUCTWORK PLAN, GROUND FLOOR, AREA C
1/8" = 1'-0"

1	MOD P00005	05/2023	
2	MOD P00006 AND MOD P00007	10/2025	

NAVFAC

JOHN EDWARD BAMFORTH License No 90893 STATE OF FLORIDA PROFESSIONAL ENGINEER

BAMFORTH ENGINEERS CONSTRUCTORS

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NORFOLK, VA
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P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 6
SITE BASE BID WITH ADDITIONAL OPTIONS
HANGAR - DUCTWORK PLAN - GROUND FLOOR - SECTOR C

SCALE:	1/8" = 1'-0"
EPROJECT NO.:	1363603
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12871500
SHEET	1405 OF 1412

MH101ZC

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