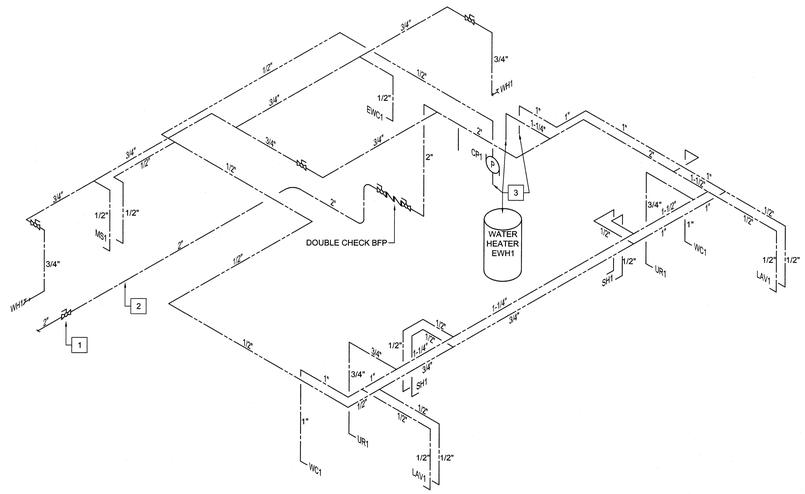
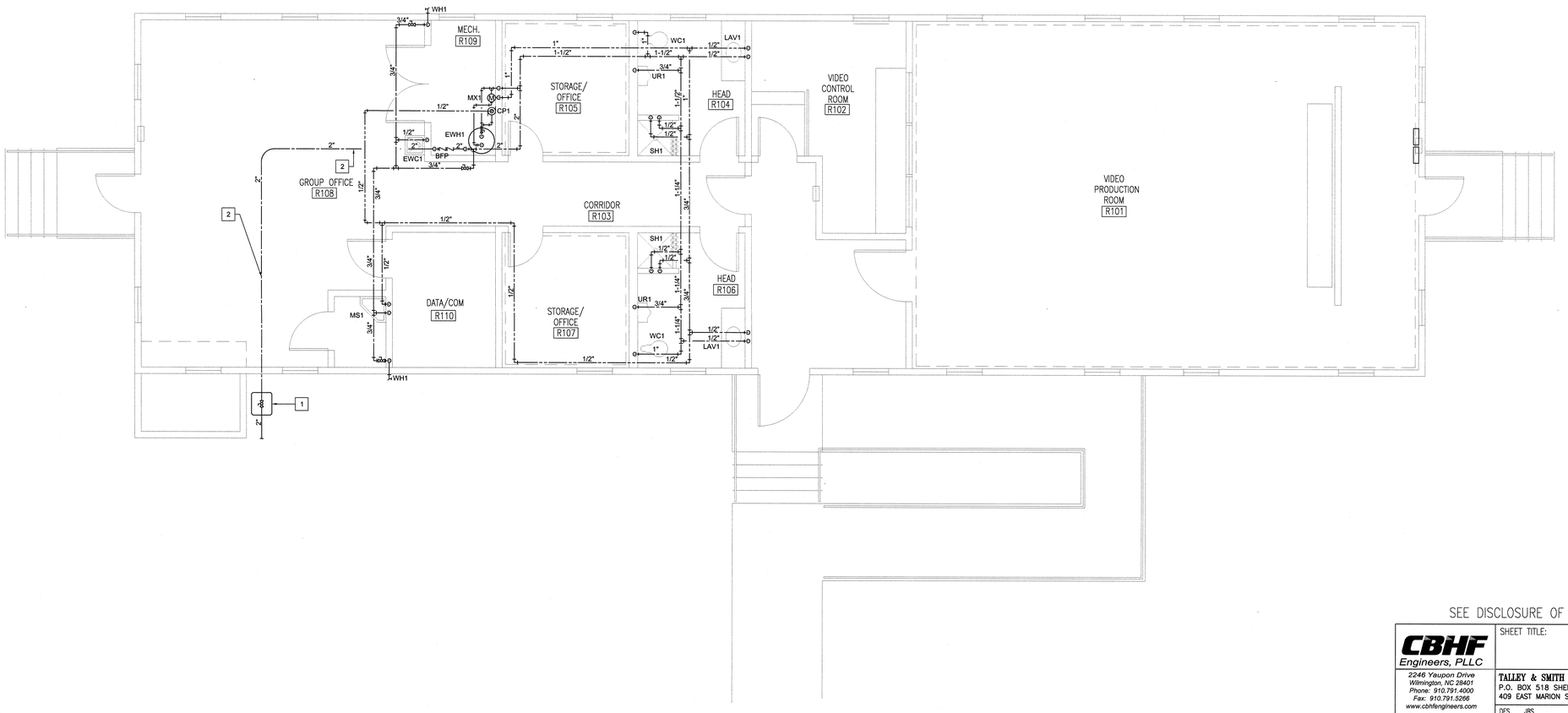
REVISIONS			
SYM.		DATE	APPROVED

CONSTRUCTION KEYED NOTES

1. INSTALL SHUTOFF VALVE IN VALVE BOX.
2. ROUTE DCW PIPING IN CRAWL SPACE TO MECHANICAL ROOM.
3. SEE WATER HEATER DETAIL SHEET P-5 FOR PIPING DETAIL.



2 DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE



1 FIRST FLOOR PLAN
NOT TO SCALE

PLAN NORTH

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

SHEET TITLE: PLUMBING DOM. WATER PLAN AND RISER DIAGRAM — P-4

TALLEY & SMITH ARCHITECTURE INC.
P.O. BOX 518 SHELBY, NC 28151-0518
409 EAST MARION ST. SHELBY, NC 28150

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

DES. JBS
DR. JBS
CHK. TOG
SUBMITTED BY:
DESIGN DIR. T H BURTON, PE

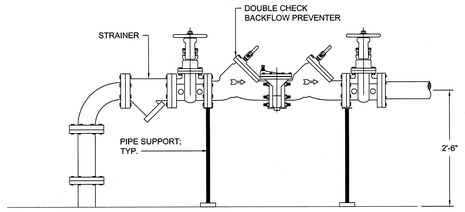
RENOVATE
BLDG. M100
CAMP LEJEUNE, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY 8/21/19

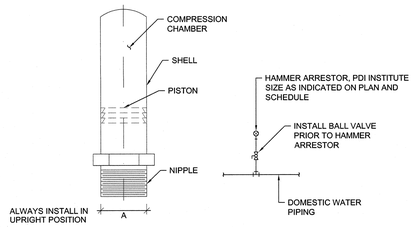
APPROVED: DATE
SATISFACTORY TO: DATE

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60024986
CONST. CONTR. NO. N40085-15-D-0859
SCALE: NOTED | SPEC. 05-19-0062 | SHEET 25 OF 45

REVISIONS			
SYM.		DATE	APPROVED

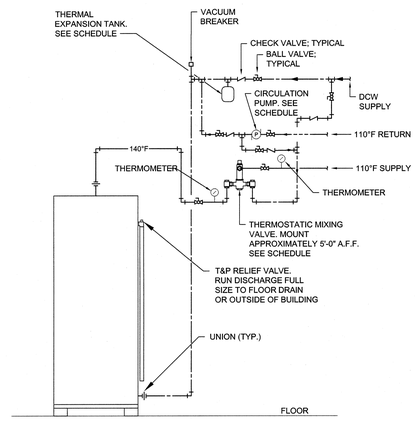


1 **WATER SERVICE ENTRANCE DETAIL**
NOT TO SCALE

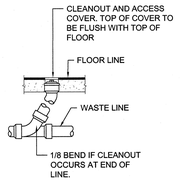


JOSAM NO.	P.D.I. SYMBOL	FIXTURE UNIT RATING	A SIZE
7501-S	A	1-11	1/2
7502-S	B	12-32	3/4
7503-S	C	33-60	1
7504-S	D	61-113	1 1/4
7505-S	E	114-154	1 1/2
7506-S	F	155-330	2

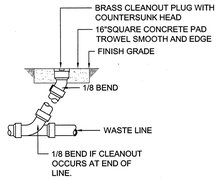
2 **WATER HAMMER ARRESTOR DETAIL**
NOT TO SCALE



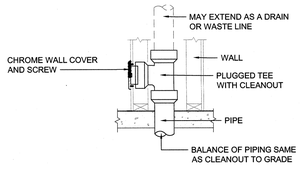
3 **WATER HEATER DETAIL**
NOT TO SCALE



FLOOR CLEANOUT (FCO)



GRADE CLEANOUT (GCO)



NOTE: CLEANOUT TO BE FLUSH WITH FINISHED WALL.

WALL CLEANOUT (WCO)

4 **CLEANOUT DETAILS**
NOT TO SCALE

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY 8/21/19

SHEET TITLE: PLUMBING DETAILS

P-5

TALLEY & SMITH ARCHITECTURE INC.
P.O. BOX 518 SHELBY, NC 28151-0518
409 EAST MARION ST. SHELBY, NC 28150

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

RENOVATE
BLDG. M100
CAMP LEJEUNE, NORTH CAROLINA

DES.	JBS
DR.	JBS
CHK.	TOG
SUBMITTED BY:	
DESIGN DIR.	T H BURTON, PE
APPROVED:	DATE
SATISFACTORY TO:	DATE

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	60024987
		CONST. CONTR. NO. N40085-15-D-0859
SCALE: NOTED	SPEC. 05-19-0062	SHEET 28 OF 45

ABBREVIATIONS

TERM	ABBREVIATION	TERM	ABBREVIATION
ABOVE FINISHED FLOOR	AFF	INCH OF WATER GAUGE	INWG
ABOVE GROUND	AG	INDOOR UNIT	IDU
ABOVE SEA LEVEL	ASL	IRON PIPE SIZE	IPS
ACROSS THE LINE	ACL	KILOVOLT-AMP	KVA
AIR ADMITTANCE VALVE	AAV	KILOWATT	KW
AIR CONDITION(-ING, -ED)	AIR COND	KILOWATT HOUR	KWH
AIR-HANDLING UNIT	AHU OR AH	LEAVING AIR TEMPERATURE	LAT
AIR FLOW MEASURING STATION	AFMA	LEAVING WATER TEMPERATURE	LWT
AMBIENT	AMB	LENGTH	LG
AMPERE (AMP, AMPS)	AMP	LINEAR FEET	LF
ANALOG INPUT	AI	MAXIMUM	MAX
ANALOG OUTPUT	AO	MAXIMUM OVERCURRENT PROTECTION	MOCP
AND	&	MEDIUM-PRESSURE STEAM	MPS
APPARATUS DEW POINT	ADP	MILES PER HOUR	MPH
APPROXIMATE	APPROX	MINIMUM	MIN.
ARCHITECT	ARCH	MINIMUM CIRCUIT AMPERES	MCA
ATMOSPHERE	ATM	MINUTE	MIN
AVERAGE	AVG	MANUFACTURER	MFR
BRAKE HORSEPOWER	BHP	MOTOR CONTROL CENTER	MCC
BROWN & SHARPE WIRE GAGE	B&S	NOISE CRITERIA	NC
BRITISH THERMAL UNIT	BTU	NON-STANDARD PART LOAD	NPLV
BRITISH THERMAL UNIT PER HOUR	BTUH	NORMALLY OPEN	NO
1000 BRITISH THERMAL UNIT	MBH	NORMALLY CLOSED	NC
BUILDING	BLDG	NOT APPLICABLE	N/A
BUILDING AUTOMATION SYSTEM	BAS	NOT IN CONTRACT	N I C
CELSIUS	°C	NOT TO SCALE	NTS
CHILLED WATER RETURN	CHWR	NUMBER	NO
CHILLED WATER SUPPLY	CHWS	ON CENTER	OC
COEFFICIENT, VALVE FLOW	CV	OUNCE	OZ
COEFFICIENT OF PERFORMANCE FACTOR	COP	OUTDOOR UNIT	ODU
COMPRESSOR	COMP	OUTSIDE AIR	OA
CONCRETE	CONC	PACKAGE UNIT	PU
CONDENS(-ER, -ING, -ATION)	COND	PACKAGE TERMINAL AIR CONDITIONER	PTAC
CONNECTION	CONN	PARTS PER MILLION	PPM
CONTINUATION	CONT	PERCENT	%
COOLING LOAD	CLG LOAD	PHASE	PH
CUBIC FEET	CU FT	POUNDS	LBS
CUBIC INCH	CU IN	POUNDS PER SQUARE FOOT	PSF
CUBIC FEET PER MINUTE	CFM	POWER VENTILATOR	PV
CFM, STANDARD CONDITIONS	SCFM	PRESSURE	PRESS
DECIBEL	DB	PRESSURE REDUCING VALVE	PRV
DEGREE	DEG OR °	PRESSURE SAFETY VALVE	PSV
DEDICATED OUTDOOR AIR SYSTEM	DOAS	PUMPED CONDENSATE	PC
DEGREES FAHRENHEIT	DEG. F	QUANTITY	QTY
DETAIL	DET	RATED LOAD AMPS	RLA
DEW-POINT TEMPERATURE	DPT	RECIRCULATE	RECIRC
DIAMETER	DIA	REDUCED PRESSURE BACKFLOW PREVENTER	RPZ
DIAMETER, INSIDE	ID	REFRIGERANT (12, 22, ETC.)	R22, R410
DIAMETER, OUTSIDE	OD	REFRIGERANT LIQUID	RL
DIFFERENCE OR DELTA	DIFF	REFRIGERANT SUCTION	RS
DIGITAL INPUT	DI	REQUIRED	REQD OR REQ'D
DIGITAL OUTPUT	DO	RELATIVE HUMIDITY	RH
DOMESTIC HOT WATER	DHW	RETURN AIR	RA
DOMESTIC HOT WATER RECIRCULATION	DHWR	REVOLUTIONS PER MINUTE	RPM
DRY-BULB TEMPERATURE	DBT	REVOLUTIONS PER SECOND	RPS
DUCTLESS SPLIT SYSTEM AIR HANDLER	DAH	ROOF VENTILATOR	RV
DUCTLESS SPLIT SYSTEM HEAT PUMP	DHP	ROOF TOP UNIT	RTU
ENERGY EFFICIENCY RATING	ERR	SAFETY FACTOR	SF
EFFICIENCY	EFF	SEASONAL ENERGY EFFICIENCY RATIO	SEER
ELECTRIC UNIT HEATER	EUH	SECOND	S
ELEVATION	EL	SHADING COEFFICIENT	SC
ENTERING	ENT	SPECIFICATION	SPEC
ENTERING WATER TEMPERATURE	EWT	SQUARE	SQ
ENTERING AIR TEMPERATURE	EAT	STANDARD	STD
EXISTING	(X)	STATIC PRESSURE	SP
EXTERNAL AMBIENT TEMPERATURE	EAT	SUPPLY	SPLY
EXTERNAL STATIC PRESSURE	ESP	SUPPLY AIR	SA
EXHAUST AIR	EA	TEMPERATURE	TEMP
EXHAUST FAN	EF	TEMPERATURE DIFFERENCE	TD
FACE VELOCITY	FVEL	THERMOSTAT	T STAT
FAHRENHEIT	°F	TONS OF REFRIGERATION	TONS
FEET PER MINUTE	FPM	TO BE DETERMINED	TBD
FEET PER SECOND	FPS	TOP OF STEEL	TOS
FLOOR	FLR	TOTAL DYNAMIC HEAD	TDH
FOOT OR FEET	FT	TYPICAL	TYP
FULL LOAD AMPS	FLA	U-FACTOR	U
GAGE OR GAUGE	GA	UNDER GROUND	UG
GALLONS	GAL	UNLESS OTHERWISE NOTED	UON
GALLONS PER HOUR	GPH	UNIT HEATER - ELECTRIC	UH
GALLONS PER MINUTE	GPM	VARIABLE AIR VOLUME	VAV
GALLONS PER DAY	GPD	VARIABLE FREQUENCY DRIVE	VFD
GAS UNIT HEATER	GUH	VELOCITY	VEL
GRAINS	GR	VENTILATION, VENT	VENT
HEAD	HD	VENT THRU ROOF	VTR
HEAT EXCHANGER	HX	VERTICAL	VERT
HEATING AND VENTILATION UNIT	HV	VOLT	V
HEATING, VENTILATION AND AIR CONDITIONING	HVAC	VOLT AMPERE	VA
HEIGHT	HGT	VOLUME	VOL
HERTZ	HZ	WATER PRESSURE DROP	WPD
HIGH DENSITY POLYPROPYLENE	HDPE	WATER GAUGE	WG
HIGH-PRESSURE STEAM	HPS	WATT	W
HORSEPOWER, HEAT PUMP	HP	WATT-HOUR	WH
HOT WATER COIL	HWC	WITH	W/
HOUR(S)	HR	WEIGHT	WT
HUMIDITY, RELATIVE	RH	WET BULB	WB
INTEGRATED PART LOAD VALUES	IPLV	YARD	YD
INCH	IN.	YEAR	YR

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

MECHANICAL LEGEND

AHU#	AIR HANDLING UNIT NUMBER
BC#	BRANCH CONTROLLER NUMBER
DAH#	DUCTLESS AIR HANDLING UNIT NUMBER
DHP#	DUCTLESS HEAT PUMP UNIT NUMBER
E#	EXHAUST GRILLE NUMBER
F#	EXHAUST FAN NUMBER
HP#	HEAT PUMP UNIT NUMBER
I#	INTAKE GRILLE NUMBER
PU#	PACKAGED UNIT NUMBER
PV#	POWER VENTILATOR NUMBER
R#	RETURN GRILLE NUMBER
RH#	ROOF HOOD SCHEDULE
RPM	ROTATIONS PER MINUTE
S#	SUPPLY DIFFUSER NUMBER
EMERGENCY SHUT OFF	
T THERMOSTAT / TEMPERATURE SENSOR	
EXTENT OF DEMOLITION	
CONNECTION POINT - NEW TO EXISTING	
INDICATES TO DEMOLISH	
1-HR RATED	
R REFRIGERANT PIPING	
VOLUME DAMPER	
NO SHT SECTION CALLOUT	
SR DIFFUSER / REGISTER / GRILLE NO. AS SHOWN ON PLAN AND SCHEDULE AIRFLOW, CFM	

MECHANICAL DEMOLITION NOTES

1. THE MECHANICAL CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL EQUIPMENT, DUCTWORK, SUPPORTS, CONTROLS, ACCESSORIES, ETC..., AND MECHANICAL ITEMS MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE MECHANICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION.
2. PREPARE A DEMOLITION PLAN AND SUBMIT PROPOSED DEMOLITION, AND REMOVAL PROCEDURES FOR APPROVAL BEFORE WORK IS STARTED. PLAN SHALL BE APPROVED BY CONTRACTING OFFICER PRIOR TO WORK BEGINNING. DO NOT BEGIN DEMOLITION UNTIL AUTHORIZATION IS RECEIVED FROM THE CONTRACTING OFFICER.
3. BEFORE BEGINNING ANY DEMOLITION WORK, SURVEY THE SITE AND EXAMINE THE DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF THE WORK. RECORD EXISTING CONDITIONS IN THE PRESENCE OF THE CONTRACTING OFFICER SHOWING THE CONDITION OF STRUCTURES AND OTHER FACILITIES ADJACENT TO AREAS OF ALTERATION OR REMOVAL. PHOTOGRAPHS SIZED 4 INCH WILL BE ACCEPTABLE AS A RECORD OF EXISTING CONDITIONS. INCLUDE IN THE RECORD THE ELEVATION OF THE TOP OF FOUNDATION WALLS, FINISH FLOOR ELEVATIONS, POSSIBLE CONFLICTING ELECTRICAL CONDUITS, PLUMBING LINES, ALARMS SYSTEMS, THE LOCATION AND EXTENT OF EXISTING CRACKS AND OTHER DAMAGE AND DESCRIPTION OF SURFACE CONDITIONS THAT EXIST PRIOR TO BEFORE STARTING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DOCUMENT ALL REQUIRED OUTAGES WHICH WILL BE REQUIRED DURING THE COURSE OF WORK, AND TO NOTE THESE OUTAGES ON THE RECORD DOCUMENT. SUBMIT SURVEY RESULTS.
4. EXCEPT FOR SALVAGED ITEMS, AND FOR MATERIALS OR EQUIPMENT SCHEDULED FOR SALVAGE, ALL MATERIALS AND EQUIPMENT REMOVED AND NOT REUSED OR SALVAGED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM GOVERNMENT PROPERTY. TITLE TO MATERIALS RESULTING FROM DEMOLITION AND DECONSTRUCTION, AND MATERIALS AND EQUIPMENT TO BE REMOVED, IS VESTED IN THE CONTRACTOR UPON APPROVAL BY THE CONTRACTING OFFICER OF THE CONTRACTOR'S DEMOLITION, DECONSTRUCTION, AND REMOVAL PROCEDURES, AND AUTHORIZATION BY THE CONTRACTING OFFICER TO BEGIN DEMOLITION AND DECONSTRUCTION. THE GOVERNMENT WILL NOT BE RESPONSIBLE FOR THE CONDITION OR LOSS OF, OR DAMAGE TO, SUCH PROPERTY AFTER CONTRACT AWARD, SHOWING FOR SALE OR SELLING MATERIALS AND EQUIPMENT ON SITE IS PROHIBITED.
5. THESE DRAWINGS ARE COMPILED BY THE ENGINEER FROM THE OWNER'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, EQUIPMENT LOCATIONS, DIMENSIONS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.
6. WHERE MECHANICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE CONTRACTING OFFICER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
7. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY THE CONTRACTING OFFICER. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY THE GOVERNMENT EXCEPT WHEN APPROVED IN WRITING AND THEN ONLY AFTER TEMPORARY UTILITY SERVICES HAVE BEEN APPROVED AND PROVIDED. DO NOT BEGIN DEMOLITION OR DECONSTRUCTION WORK UNTIL ALL UTILITY DISCONNECTIONS HAVE BEEN MADE. SHUT OFF AND CAP UTILITIES FOR FUTURE USE, AS INDICATED. TEMPORARY SERVICES INCLUDING BUILDING HEAT AND HEATING OF DOMESTIC WATER SHALL BE REQUIRED WHEN ANY INTERRUPTION OF SUCH SERVICES EXCEEDS 12 HOURS EXCEPT WHEN AUTHORIZED IN WRITING BY THE CONTRACTOR OFFICER.

MECHANICAL GENERAL NOTES

1. SCOPE OF WORK: THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS DESCRIBE THE SCOPE OF WORK REQUIRED FOR PROJECT MECHANICAL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR COMPLETE, FULLY FUNCTIONING MECHANICAL SYSTEMS COMPLYING WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
2. DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING HVAC SYSTEMS.
3. MANUFACTURER'S RECOMMENDATIONS - INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. WORKMANSHIP - UTILIZE SKILLED MECHANICS TO OBTAIN A HIGH QUALITY PROFESSIONAL FINISH INSTALLATION WHEN COMPLETED. WORK OF UNACCEPTABLE QUALITY SHALL BE REMOVED AND REWORKED AT NO ADDITIONAL COST. CONTRACTING OFFICER SHALL BE THE JUDGE OF WORKMANSHIP AND THEIR OPINION WILL BE FINAL. IN ADDITION, ANY EXISTING CONSTRUCTION DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CONTRACTING OFFICER BY THE CONTRACTOR AT NO ADDITIONAL COST.
5. SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
6. PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE OWNER. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.
7. COORDINATION: COORDINATE MECHANICAL WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. LAYOUT MECHANICAL WORK SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST ARRANGEMENT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.
8. EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
9. LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.
10. CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.
11. DEMOLISH EXISTING EQUIPMENT PADS AS REQUIRED TO ACCOMMODATE NEW EQUIPMENT LAYOUT.

REVISIONS			
SYM.		DATE	APPROVED

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY 9/21/19

SHEET TITLE: MECHANICAL NOTES ABBREVIATIONS & LEGENDS — M-1

TALLEY & SMITH ARCHITECTURE INC.
P.O. BOX 518 SHELBY, NC 28151-0518
409 EAST MARION ST. SHELBY, NC 28150

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

DES. GAS
DR. GAS
CHK. TOG
SUBMITTED BY:
DESIGN DIR. T H BURTON, PE

RENOVATE
BLDG. M100
CAMP LEJEUNE, NORTH CAROLINA

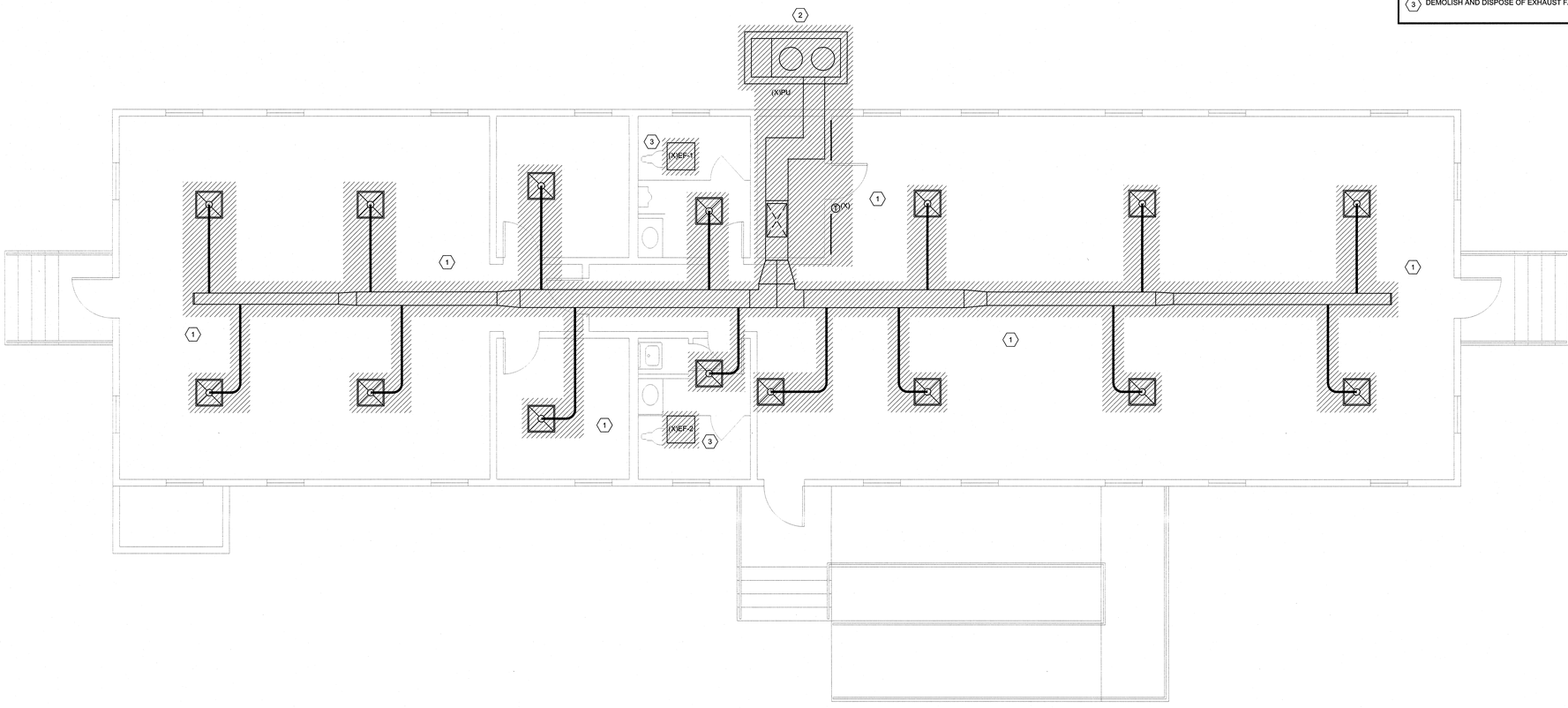
APPROVED: DATE
SATISFACTORY TO: DATE

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60024988 | CONST. CONTR. NO. N40085-15-D-0859 | SCALE: NOTED | SPEC. 05-19-0062 | SHEET 27 OF 45

REVISIONS			
SYM.		DATE	APPROVED

DEMOLITION KEYED NOTES

1. DEMOLISH AND DISPOSE OF ALL SUPPLY AND RETURN DUCTWORK INCLUDING BUT NOT LIMITED TO HANGERS, INSULATION, CONTROLS, GRILLES AND DIFFUSERS.
2. DEMOLISH AND DISPOSE OF OUTDOOR UNIT AND CONCRETE PAD INCLUDING BUT NOT LIMITED TO DUCTWORK CONTROLS AND INSULATION.
3. DEMOLISH AND DISPOSE OF EXHAUST FAN AND EXHAUST DUCTWORK INCLUDING EXISTING ROOF VENTS.



1 **FIRST FLOOR PLAN**
1/4" = 1'-0" 0 2' 4' 8'

PLAN NORTH

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 TROY O. GRADY 5/11/19

SHEET TITLE: MECHANICAL DEMOLITION FLOOR PLAN — M-2

TALLEY & SMITH ARCHITECTURE INC.
P.O. BOX 518 SHELBY, NC 28151-0518
409 EAST MARION ST. SHELBY, NC 28150

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
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RENOVATE
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SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	60024989

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SCALE: NOTED | SPEC. 05-19-0062 | SHEET 28 OF 45

REVISIONS			
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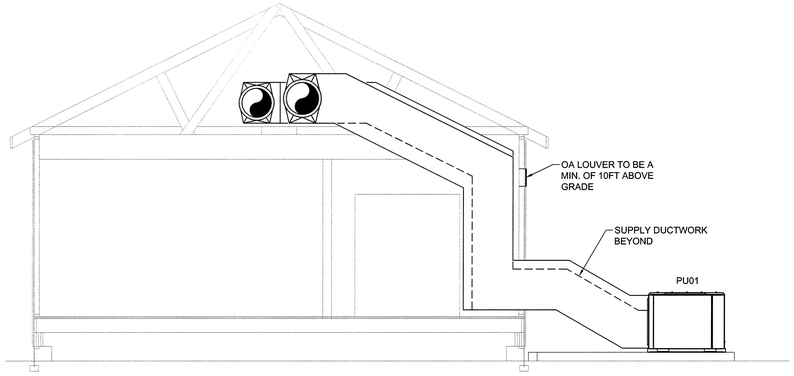
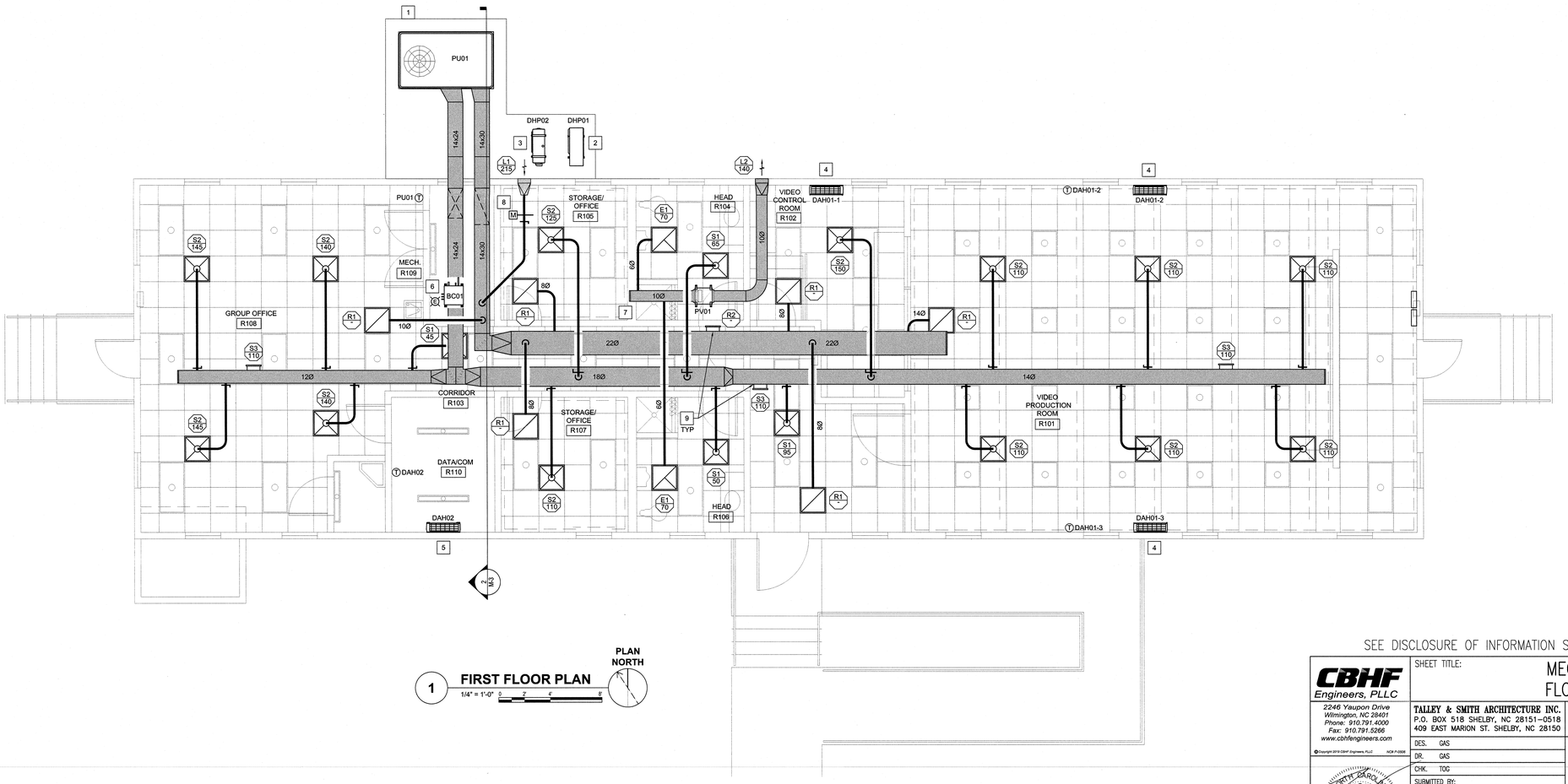


2 MECHANICAL ROOM SECTION
NOT TO SCALE

CONSTRUCTION KEYED NOTES

1. INSTALL NEW PACKAGED UNIT ON 6" CONCRETE PAD. ROUTE DUCTWORK INTO MECHANICAL ROOM. PENETRATIONS TO BE MADE WEATHER TIGHT. REFER TO SECTION 2/M-3 FOR MORE INFORMATION.
2. INSTALL OUTDOOR UNIT ON 6" CONCRETE PAD. ROUTE REFRIGERANT PIPING INTO MECHANICAL ROOM TO ASSOCIATED BRANCH CIRCUIT CONTROLLER.
3. INSTALL OUTDOOR UNIT ON 6" CONCRETE PAD. ROUTE REFRIGERANT PIPING INTO MECHANICAL ROOM AND THEN TO ASSOCIATED AIR HANDLER.
4. INSTALL AIR HANDLER HIGH ON WALL WHILE MAINTAINING MANUFACTURERS RECOMMENDED CLEARANCE. ROUTE REFRIGERANT PIPING TO BRANCH CIRCUIT CONTROLLER. ROUTE CONDENSATE PIPING DOWN INSIDE WALL CAVITY TO EXTERIOR OF BUILDING AND SPILL TO GRADE.
5. INSTALL AIR HANDLER HIGH ON WALL WHILE MAINTAINING MANUFACTURERS RECOMMENDED CLEARANCE. ROUTE REFRIGERANT PIPING TO OUTSIDE UNIT. ROUTE CONDENSATE PIPING DOWN INSIDE WALL CAVITY TO EXTERIOR OF BUILDING AND SPILL TO GRADE.
6. SUSPEND BRANCH CONTROLLER FROM STRUCTURE ABOVE. ROUTE REFRIGERANT PIPING TO ASSOCIATED AIR HANDLING UNITS.
7. SUSPEND INLINE POWER VENTILATOR PV01 FROM STRUCTURE ABOVE. ROUTE EXHAUST DUCT WORK TO ROOF HOOD RH01 (NOT SHOWN) INSTALLED ON ROOF.
8. INSTALL MOTORIZED OUTDOOR AIR DAMPER AND MANUAL BALANCE DAMPER.
9. INSTALL SUPPLY AND RETURN GRILLES IN ATTIC SPACE.



1 FIRST FLOOR PLAN
1/4" = 1'-0"

PLAN NORTH

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com

NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
9/21/19

SHEET TITLE: MECHANICAL FLOOR PLAN

M-3

TALLEY & SMITH ARCHITECTURE INC.
P.O. BOX 518 SHELBY, NC 28151-0518
409 EAST MARION ST. SHELBY, NC 28150

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

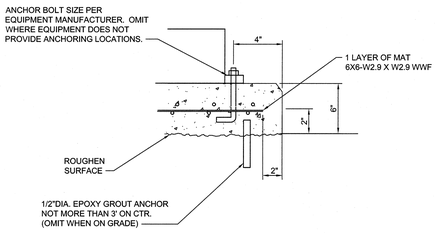
DES. GAS
DR. GAS
CHK. TOC
SUBMITTED BY:
DESIGN DIR. T H BURTON, PE
APPROVED: DATE
SATISFACTORY TO: DATE

RENOVATE
BLDG. M100
CAMP LEJEUNE, NORTH CAROLINA

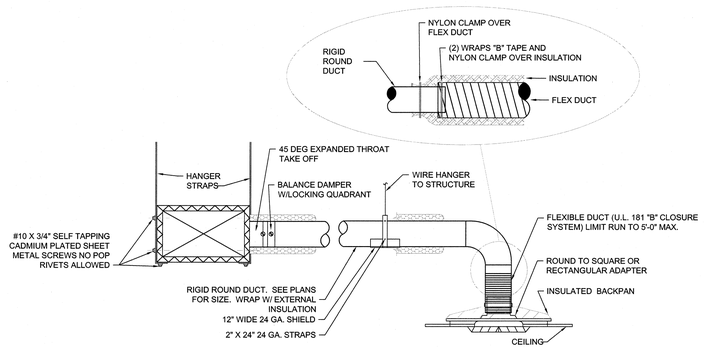
SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 6002499O
CONST. CONTR. NO. N40085-15-D-0859
SCALE: NOTED | SPEC. 05-19-0062 | SHEET 29 OF 45

REVISIONS			
SYM.		DATE	APPROVED

NOTE:
1. SINGLE LAYER OF MAT AND 2 ANCHOR BOLTS ARE ADEQUATE FOR ALL EQUIPMENT EXCEPT BOILERS OVER 400 MBH AND STORAGE TANKS.
2. MESH SHALL BE FURNISHED IN SHEETS.
3. ALL PAD EDGES SHALL BE CHAMFERED.
4. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS
5. ONLY ANCHOR EQUIPMENT WITH MANUFACTURER SUPPLIED ANCHOR MOUNTS



1 EQUIPMENT PAD DETAIL
NOT TO SCALE



2 DIFFUSER CONNECTION DETAIL
NOT TO SCALE

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

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Wilmington, NC 28401
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Fax: 910.791.5266
www.cbhfengineers.com

NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY 8/21/19

SHEET TITLE: MECHANICAL DETAILS

M-4

TALLEY & SMITH ARCHITECTURE INC.
P.O. BOX 518 SHELBY, NC 28151-0518
409 EAST MARION ST. SHELBY, NC 28150

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

DES. GAS
DR. GAS
CHK. TOG
SUBMITTED BY:
DESIGN DIR. T H BURTON, PE
APPROVED: DATE
SATISFACTORY TO: DATE

RENOVATE
BLDG. M100
CAMP LEJEUNE, NORTH CAROLINA

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60024991
CONST. CONTR. NO. N40085-15-D-0859
SCALE: NOTED | SPEC. 05-19-0062 | SHEET 30 OF 45

PACKAGED UNIT SCHEDULE

DRAWING CODE	SYSTEM TYPE	COOLING				HOT GAS REHEAT		NATURAL GAS HEATING				EVAPORATOR FAN			ELECTRICAL			WEIGHT (LBS.)	NOTES	ACCESSORIES
		TOTAL (MBH)	SENSIBLE (MBH)	EFFICIENCY	EAT (°Fdb/°Fwb)	REHEAT CAPACITY (MBH)	COOLING LDB W/ REHEAT (°F)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	STAGES	EAT (°Fdb)	SUPPLY AIRFLOW MAXIMUM(CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN. WG.)	POWER SUPPLY (V/PH/HZ)	MCA	MOCP			
PU01	GAS-PACK	68	50	EER 12.6	75.5 / 68.1	33.6	68.3	80	64	MODULATING	66.8	2,200	215	0.75	208/3/60	31.0	45	1168	1,2	A,B,C,D,E,F,G

NOTES:
1. REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATION, AND COOLING SYSTEM FOR FURTHER REQUIREMENTS.
2. CONDENSER COILS TO BE COATED FOR EXPOSURE TO ASTM B117-90 3000 HOUR SALT SPRAY RESISTANCE TEST WITH NO DEGRADATION.

ACCESSORIES:
A. PROVIDE WITH HOT GAS RE-HEAT FOR DEHUMIDIFICATION CYCLE.
B. STAINLESS STEEL GAS HEAT EXCHANGER.
C. PROVIDE BACNET MSTP INTERFACE AND WALL MOUNTED ZONE TEMPERATURE AND HUMIDITY SENSOR
D. COIL GUARDS.
E. HAIL GUARDS.
F. PHASE MONITOR.
G. PROVIDE VARIABLE SPEED SUPPLY FAN VIA ECM MOTOR.

LOUVER SCHEDULE

DRAWING CODE	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH (IN.)	SIZE (W x H) (IN.)	SERVICE	AIRFLOW (CFM)	PERFORMANCE RATINGS			NOTES	ACCESSORIES
									FREE AREA (SF)	S.P. LOSS (IN.H20)	WATER PENETRATION (OZ./SF)		
L1	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	4	12 x 12	INTAKE	215	0.35	0.04	0	1,2	A, B
L2	FIXED	CHANNEL	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	4	16 x 12	EXHAUST	340	0.35	0.04	0	1,2	A

NOTES:

ACCESSORIES:
A. BIRD SCREENING (MATERIAL TO MATCH LOUVER MATERIAL).
B. PROVIDE MOTORIZED DAMPER WITH END PROVING SWITCH.

POWER VENTILATOR SCHEDULE

DRAWING CODE	FAN TYPE	SERVICE	CAPACITIES					ELECTRICAL					SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
			AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE ARRANGEMENT	FAN RPM	MOTOR RPM	MOTOR TYPE	MOTOR SIZE (HP)	V/PH/HZ	MCA	MOCP				
PV01	IN-LINE CENTRIFUGAL FANS	EXHAUST	140	0.25	DIRECT	1411	1725	ECM	1/15	115V/1/60	1	15	5.3	50	1,2	A

NOTES:
1. REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATION, AND COOLING SYSTEM FOR FURTHER REQUIREMENTS.
2. CONTINUOS OPERATION DURING OCCUPIED TIMES. REFER TO CONTROL SEQUENCE FOR FURTHER INFORMATION.

ACCESSORIES:
A. MOTORIZED DAMPER WITH END PROVING SWITCH.

DUCTLESS SPLIT SYSTEM SCHEDULE

DRAWING CODE (INDOOR)	DRAWING CODE (OUTDOOR)	INDOOR UNIT		OUTDOOR UNIT		MIN SEER	MIN COP	INDOOR UNIT				OUTDOOR UNIT				NOTES	ACCESSORIES
		ARI COOLING 80/67/95	ARI HEATING 70/47	COOLING CAPACITY	HEATING CAPACITY				ELECTRICAL		WEIGHT		ELECTRICAL		WEIGHT		
		TOTAL (MBH)	TOTAL (MBH)	(MBH)	(MBH)			FAN SA MIN-MAX (CFM)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	(LBS)		VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)	(LBS)		
DAH01-1	DHP01	12.0	14.4	35.4	36.0	19.2	3.5	145-399	208/1/60	1	22	208/1/60	22.1	25	139	1	A,B,C,D
DAH01-2		14.0	18.0					205-533	208/1/60	1	22					1	A,B,C,D
DAH01-3		14.0	18.0					205-533	208/1/60	1	22					1	A,B,C,D

NOTES:
1. REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATION, AND COOLING SYSTEM FOR FURTHER REQUIREMENTS.

ACCESSORIES:
A. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND CONDUCTOR FROM OUTDOOR UNIT TO INDOOR UNIT.
B. HEAT PUMP COILS TO BE COATED FOR EXPOSURE TO ASTM B117-90 3000 HOUR SALT SPRAY RESISTANCE TEST WITH NO DEGRADATION.
C. BACNET MSTP DDC CONTROL SYSTEM INTERFACE
D. WIRED WALL-MOUNTED REMOTE CONTROLLER WITH VANDAL PROOF ENCLOSURE.

DUCTLESS SPLIT SYSTEM SCHEDULE

DRAWING CODE	ARI COOLING 80/67/95		ARI HEATING 70/47	MIN SEER	MIN HSPF	INDOOR UNIT				OUTDOOR UNIT				REFRIGERANT PIPING		NOTES	ACCESSORIES
	TOTAL (MBH)	MIN. (MBH)	TOTAL (MBH)			FAN SA MIN-MAX (CFM)	ELECTRICAL VOLTAGE (V/PH/HZ)	ELECTRICAL MCA (AMPS)	WEIGHT (LBS)	ELECTRICAL VOLTAGE (V/PH/HZ)	ELECTRICAL MCA (AMPS)	ELECTRICAL MOCP (AMPS)	WEIGHT (LBS)	MAXIMUM LENGTH (FT.)	MAXIMUM HEIGHT DIFFERENTIAL (FT.)		
(IDU / ODU)																	
DAH02 / DHP02	12	1.5	14.4	23.1	12.5	109-364	208/1/60	1	22	208/1/60	9	15	81	65	40	1	A,B,C,D

NOTES:
1. REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATION, AND COOLING SYSTEM FOR FURTHER REQUIREMENTS.

ACCESSORIES:
A. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND CONDUCTOR FROM OUTDOOR UNIT TO INDOOR UNIT.
B. HEAT PUMP COILS TO BE COATED FOR EXPOSURE TO ASTM B117-90 3000 HOUR SALT SPRAY RESISTANCE TEST WITH NO DEGRADATION.
C. BACNET MSTP DDC CONTROL SYSTEM INTERFACE
D. WIRED WALL-MOUNTED REMOTE CONTROLLER WITH VANDAL PROOF ENCLOSURE.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	SQUARE CEILING DIFFUSER	SUPPLY	6Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S2	SQUARE CEILING DIFFUSER	SUPPLY	8Ø	12 X 12	ALUMINUM	WHITE	T-BAR	1,2	A
S4	SPIRAL DUCT GRILLE	SUPPLY	-	14 X 6	ALUMINUM	WHITE	DUCT SURFACE	1	B
R1	FIXED FACE GRILLE	RETURN	20 X 20	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	
R2	SPIRAL DUCT GRILLE	RETURN	-	18 X 6	ALUMINUM	WHITE	DUCT SURFACE	1	
E1	FIXED FACE GRILLE	EXHAUST	20 X 20	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	

NOTES:
1. REFER TO SPECIFICATION SECTION 23 37 13 - DIFFUSERS, REGISTERS, AND GRILLES FOR FURTHER INFORMATION.
2. DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES:
A. VOLUME DAMPER.
B. AIR SCOOP.

BRANCH BOX SCHEDULE

DRAWING CODE	POWER INPUT (RATED) COOLING (kw)	POWER INPUT (RATED) HEATING (kw)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
			VOLTAGE (V/PH/HZ)	MCA (A)	MOCP (A)			
BC01	0.003	0.003	208/1/60	0.05	15	15	1,2	A

NOTES:
1. REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATION, AND COOLING SYSTEM FOR FURTHER REQUIREMENTS.

ACCESSORIES:
A. SUCTION AND LIQUID LINES SERVICE ISOLATION VALVES FOR ALL PORTS.

REVISIONS

SYM.		DATE	APPROVED

SEE DISCLOSURE OF INFORMATION STATEMENT ON SHEET T-1

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
8/21/19

SHEET TITLE: MECHANICAL SCHEDULES

M-5

TALLEY & SMITH ARCHITECTURE INC.
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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
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DES. QAS
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APPROVED: DATE
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RENOVATE
BLDG. M100
CAMP LEJEUNE, NORTH CAROLINA

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60024992
CONST. CONTR. NO. N40085-15-D-0859
SCALE: NOTED | SPEC. 05-19-0062 | SHEET 31 OF 45