Continuation Sheet A

RFP Part 3, Chapter 2 Project Objectives

2.2.4.1 Phased Construction: Modify the last two sentences of the second paragraph to read as follows:

The contractor shall schedule and commence work in all of the indicated early construction facilities prior to scheduling and beginning work in other buildings. Only at the discretion of the Construction Manager may the contractor be allowed to commence work in other buildings prior to beginning work in all of the early construction group.

RFP Part 3, Chapter 4 Building Requirements

4.1 DDC Modifications

Add the following after the first sentence of the third paragraph: All DDC upgrade buildings shall be connected via fiber. Fiber is existing within all DDC upgrade buildings.

Add the following paragraphs after the third paragraph:
The facilities will remain operational during DDC upgrade. Changeover from the existing to the new DDC system shall be phased and scheduled to minimize the duration of any single HVAC equipment shutdown. Existing local controllers shall continue to function and control their respective equipment while the building network is being upgraded. Software for new local controllers shall be pre-prepared and ready for installation immediately after applying power and checkout. New local controllers shall be placed into service as soon as possible to restore the HVAC equipment operation during the testing and tuning phases regardless of new building network functionality. Shutdown of unitary equipment and VAV boxes shall be scheduled such that units serving a common space are not being concurrently upgraded.

Upgrade and corresponding shutdown of each central air handling unit, cooling generation and circulating system, and heat generation and circulation system shall be included as separate activities in the contractor Network Analysis Schedule required in Part 2, Section 01 32 17.05 20. All central HVAC equipment shutdowns shall be scheduled during weekend hours and shall be limited to the time period beginning 1700 hrs Friday and ending 0500 hrs the following Monday. At a minimum, the central equipment or system must be able to function in a semi-manual mode after the initial shutdown to re-establish reasonable occupant comfort. Subsequent weekend shutdowns shall be scheduled as necessary until the central equipment is capable of fully automatic operation. Exceptions to the weekend work requirement shall be at the discretion of the Construction Manager.

Add the following to the end of the fourth paragraph: Retain existing communications/connectivity pathways for DDC expansion buildings. The contractor is responsible for any 3rd party software necessary for DDC expansion implementation. Software updates or revisions to existing panels will be provided by the Government.

4.2 HVAC and Lighting ECM Implementation.

Add the following at the end of the first paragraph: Occupancy sensors are intended only for lighting control and are only required to interface with the facility electrical system.

Add the following table reflecting existing DDC system manufacturers:

Table 4-2A provides information regarding DDC systems in ECM facilities.

Building No.	Facility Name	Existing DDC System
CEP-162	Training Building	JCI
O-22	BH, Groshong Hall	JCI
O-27	New NWDC Operations	JCI
Q-80	Waterfront Athletic Complex	JCI
SP-132	Aviation Water Survival Training Pool	ALC
W-130	CVN Repair/PSD Afloat Admin	KMC
X-70	ADMIN/Training/Warehouse	JCI

Add the following paragraph:
4.4 Ventilation Control Damper Replacement

DDC upgrade buildings include replacement of selected ducted outdoor air and exhaust/relief air dampers with low leakage dampers. Replacement of dampers applies to central air distribution systems that deliver ventilation air throughout the building (or large portions of a building) via ductwork to occupied spaces for compliance with ASHRAE 62.1 *Ventilation for Acceptable Indoor Air Quality*. Dampers physically located within central air handling equipment are excluded from replacement. Maximum leakage rate for the new dampers shall be in accordance with UFC4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*.

Table 4-4 identifies dampers selected for replacement along with information relating to size as well as sheets where the existing dampers are depicted within the building record drawings. Where multiple drawing sets exist, an identifier is included which references specific title block data of the applicable drawing set. Tabular data may be cross referenced with RFP Part 6, Attachment 5 Mechanical Record Drawings. The last column indicates whether the damper is currently installed and DDC control exists for damper operation. DDC control (digital output open/close along with electric actuator) shall be provided as part of the building DDC upgrade for all new dampers. Damper sizes for metric unit drawings have been converted and rounded to the nearest even inch size; field verify actual damper dimensions for metric unit plans.

Notify the Contracting Officer if field conditions differ from the Record Drawings and dampers shown as duct mounted are physically installed within central air handling equipment. Also notify the Contracting Officer if dampers indicated within central air handling equipment are found to be duct mounted.

TABLE 4-4
Replacement Damper Matrix

Building No.	Equipment Identification[a] (AHU, DOA, HVU, etc.)	Record Drawing Sheet Number(s)[b]	OA Damper Size (inch x inch)	Exhaust/Relief Damper Size (inch x inch)	Existing DDC Control (Y/N) and Required New Damper
CEP-198	AHU-1	M-4	40 x 32	--	Y
	AHU-2	M-4	40 x 32	--	Y
CEP-209	AHU-1	M-7, M-21	--	34 x 34	Y
	MU-1	M-7, M-21	54 x 36	--	Y
	AHU-2	M-7, M-21	--	40 x 40	Y
	MU-2	M-7, M-22	24 x 20	--	Y
	HV-1	M-8, M-9, M-22	20 x 18	--	Y
	HV-2	M-8, M-9, M-22	48 x 34	--	Y
	HV-3	M-8, M-9, M-22,	10 x 10	--	Y
	HV-4	M-8, M-9, M-22	36 x 30	--	Y
	HV-5	M-2, M-9, M-22	30 x 16	--	Y
LP-21	HP-1	M-301, M-413	38 x 24	--	N - New Damper
	HP-26	M-301, M-413	38 x 24	--	N - New Damper
O-26	6-AHU MIN. OA	AEIT: M-3, M-12	6 x 24	--	Y
	6-AHU MAX. OA	AEIT: M-3, M-12	42 x 24	--	Y
	7-AHU MIN. OA	AEIT: M-5, M-12	8 x 24	--	Y
	7-AHU MAX. OA	AEIT: M-5, M-12	40 x 24	--	Y
	8-AHU MIN. OA	AEIT: M-7, M-12	10 x 20	--	Y
	8-AHU MAX. OA	AEIT: M-7, M-12	38 x 20	--	Y
	9-AHU MIN. OA	AEIT: M-9, M-12	8 x 24	--	Y
	9-AHU MAX. OA	AEIT: M-9, M-12	40 x 24	--	Y
	10-RAH	AEIT: M-3, M-7, M-12	--	42 x 22	Y
	11-RAH	AEIT: M-5, M-7, M-12	--	42 x 22	Y
	12-RAH	AEIT: M-7, M-12	--	42 x 22	Y
	13-RAH	AEIT: M-7, M-9, M-12	--	42 x 24	Y
	FAF-1	ETFA: M-3.1, M-4.2, M-7.4	28 x 20	--	Y
	FAF-2	ETFA: M-3.1, M-4.2, M-7.4	24 x 16	--	Y
	EF-5	ETFA: M-2.7, M-7.4	--	18 x 18	Y
SP-300	RF-1	M-606, M-120, M-805	--	16 x 16	Y
	RF-2	M-606, M-121, M-805	--	16 x 10	Y
	RF-3	M-606, M-121, M-805	--	16 x 10	Y
	RF-4	M-606, M-122, M-805	--	14 x 10	Y

TABLE 4-4
Replacement Damper Matrix

Building No.	Equipment Identification[a] (AHU, DOA, HVU, etc.)	Record Drawing Sheet Number(s)[b]	OA Damper Size (inch x inch)	Exhaust/Relief Damper Size (inch x inch)	Existing DDC Control (Y/N) and Required New Damper
SP-381	MU-1	E-2C: M-6, M-10	12 x 12	--	N - New Damper
	RAF-1	E-2C: M-5, M-10	--	48 x 24	Y
	AC-2	E-2C: M-5, M-10	18 x 12	--	Y
	AHU-2	AIB: M-3, M-5	54 x 22	--	Y
	AHU-3	AIB: M-3, M-5	12 x 6	--	N - New Damper
	RF-1	H-53: M-2	--	30 x 24	Y
	AHU-1	AVMT: M-1, M-3, M-9	108 x 30	--	Y
	RF-1	AVMT: M-1, M-3, M-9	--	36 x 24	Y
	AHU-2	AVMT: M-1, M-3, M-9	112 x 34	--	Y
	RF-2	AVMT: M-1, M-3, M-9	--	44 x 36	Y
V-53	AHU-5	M-402	28 x 12	--	N - New Damper

[a]Equipment Abbreviations
AC = Air Conditioning Unit
AHU = Air Handling Unit
EF = Exhaust Fan
FAF = Fresh Air Fan
HP = Heat Pump
HV = Heating Ventilating Unit
MU = Makeup Unit
RAF = Relief Fan
RAH = Return Air-handling Unit
RF = Relief Fan

[b]Record Drawing Title Block Abbreviations
AIB = Applied Instruction Building
AEIT = Applied Engineering Instruction Building
AVMT = Aviation Maintenance Training Facility
E2C = E-2C & H-53 Trainer Buildings
ETFA = Engineering Training Facility Addition
H53 = Additions to Building SP-381

RFP Part 6, Attachment 1

Paragraph 2.1.1.3 Stand Alone Controllers: Add the following to the end of the existing paragraph:

Controllers without internal time clocks which are to be reused as part of DDC point expansion or ECM implementation may remain in service.

RFP Part 6, Attachment 4 DDC Points Lists

Reference the following Points List associated with new control damper installation. Incorporate the indicated points into the overall points list for the affected building:

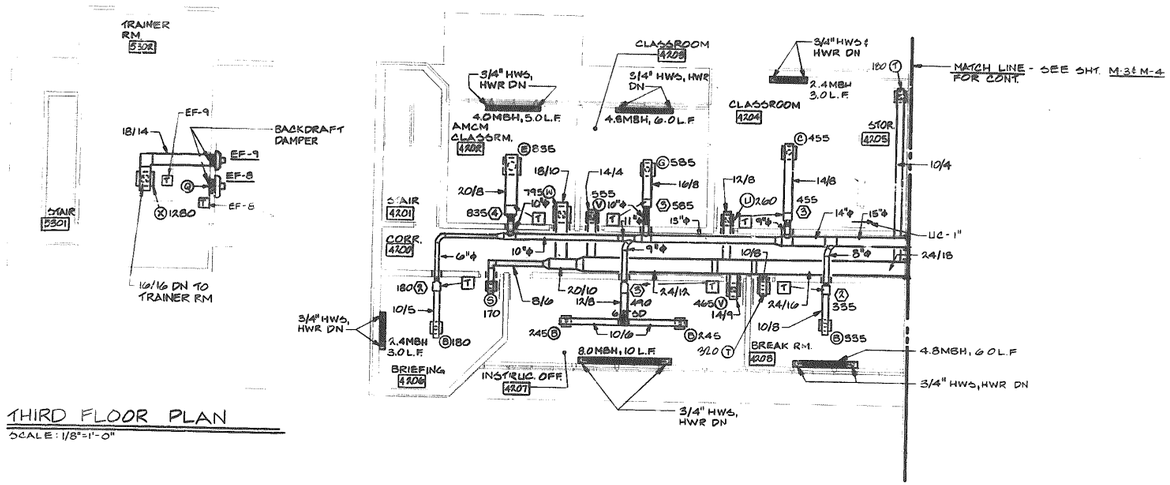
DDC System Points List

System Point Description Additional Control Dampers	Number Required*	Analog																Binary										System Features																	Notes
		Input											Output					Input						Output				Alarms						Programs												
		Temperature	Pressure	RH	kW	GPM	CFM	CO2 PPM	Percent	Status/Alarm	KWh	Flow Rate	Level	DDC(4-20mA, 0-10v)	Number of Stages	Setpoint Adj.			Pneu. Transducer	Status On/Off	Filter Status	Status Open/Closed	Status	Humidity	Off/On	Open/Close	Enable/Disable		High Analog	Low Analog	Proof	Flow Fail	Diagnostics		Time Scheduling	Demand Limiting	Opt. Start/Stop	Reset	Event Program		Run Time	Set Back/Set Up	Morning Warm Up	Chiller Sequencing	Totalizing	Timed Override	Graphic	
Additional Control Dampers, Bldg LP-21																																													x	Include new control dampers on system graphics
HP-1 OA Damper Open/Close	**1**																								x																			x	
HP-26 OA Damper Open/Close	**1**																								x																			x	
Additional Control Dampers, Bldg SP-381																																													x	Include new control dampers on system graphics
MU-1 OA Damper Open/Close	**1**																								x																			x	
AHU-3 OA Damper Open/Close	**1**																								x																			x	
Additional Control Dampers, Bldg V-53																																													x	Include new control dampers on system graphics
AHU-5 OA Damper Open/Close	**1**																								x																			x	

Total Points	**5**

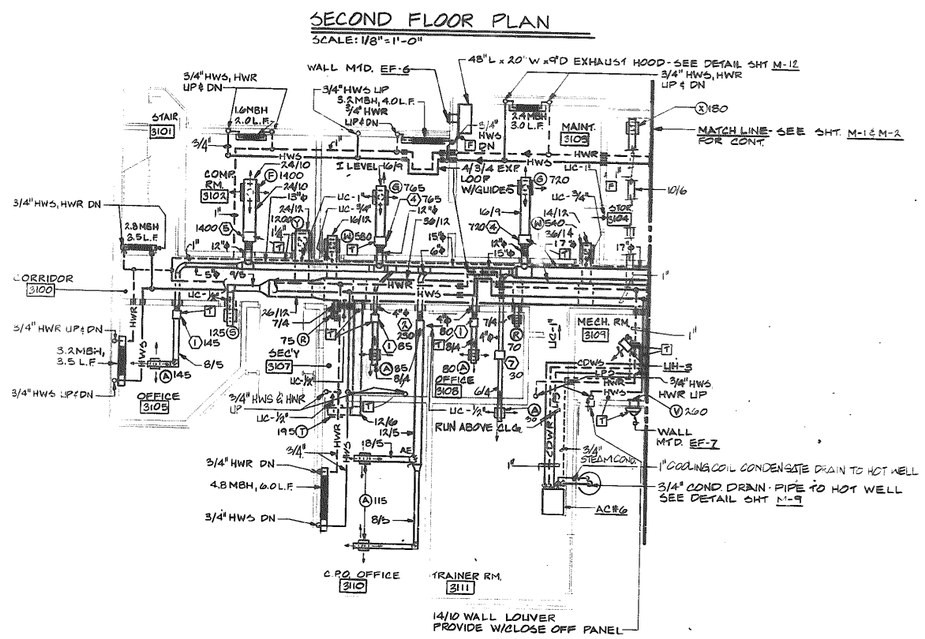
RFP Part 6, Attachment 5 Mechanical Record Drawings

Incorporate the following two sheets: M-11 and M-12 into the Mechanical Record Drawings for Building SP-381.



THIRD FLOOR PLAN

SCALE: 1/8"=1'-0"



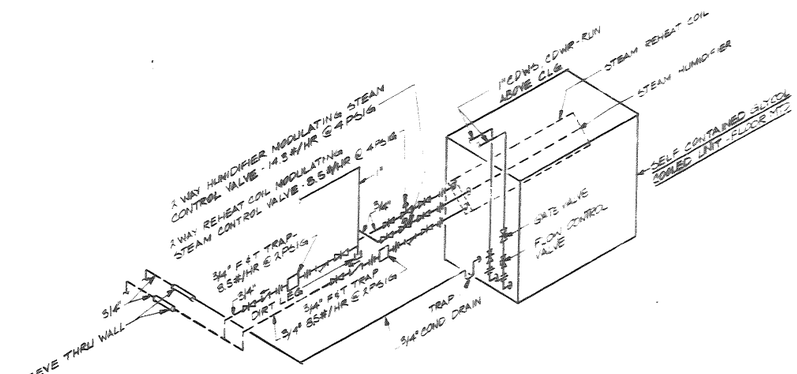
SECOND FLOOR PLAN

SCALE: 1/8"=1'-0"

GROUND FLOOR PLAN

SCALE: 1/8"=1'-0"

NOTES:
1. ALL FIRE RATED WALLS WILL NOT EXCEED MAX. 1 HR. FIRE RATING.
2. SEE SCHEDULE ON SHT. M-6 FOR A/C #6.



COMPUTER UNIT PIPING DIAGRAM

NOT TO SCALE

NOTE: STEAM VALVES & TRAPS SHALL BE LOCATED WITHIN THE UNIT WHERE POSSIBLE.

REVISIONS

SYM	DESCRIPTION	DATE	APPROVED

RECORD DRAWING
LETTER DATED JUL 25 1983

M-11

VANSANT & GUSLER, INC.
CONSULTING ENGINEERS
Norfolk, Virginia

COMMONWEALTH OF VIRGINIA
DONALD L. GUSLER
No. 1921
PROFESSIONAL ENGINEER

HENDERSON ASSOCIATES, ARCHITECTS
a professional corporation,
NORFOLK, VIRGINIA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION NORFOLK, VIRGINIA

DES. BFM | DR. JEW | CHK. KWP
PROJ. MGR. JRH | CH. ENGR. DLG
SUBMITTED BY: DATE: 5-15-81
PUBLIC WORKS OFFICER / PRINCIPAL
EFD 9 FR | EVD.
MD. | DIR.
APPROVED DATE
OFFICER IN CHARGE
APPROVED DATE
FOR CO/EFD FOR COMMANDER NAVFAC

NAVAL AIR STA. N NORFOLK, VIRGINIA
E-2C & H-53 TRAINER BUILDINGS
H-53
FIRST & SECOND FLOOR PLANS

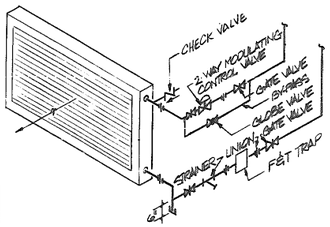
SIZE F | CODE IDENT NO. 80091 | NAVFAC DRAWING NO. 4065-712
CONSTR. CONTR. NO. N62470-79-B-3926
SCALE AS NOTED | SPEC. 05-79-0328 | SHEET 53 OF 57
EFD DWG. NO. 165712

EXHAUST FAN SCHEDULE

MARK	LOCATION	CFM	ESP	HP	RPM	VOLTS	Ø
EF-6	HOOD	850	—	1/21	—	120	1
EF-7	WALL	760	.25	1/12	1055	120	1
EF-8	WALL	2650	1.25	1/8	775	120	1
EF-9	WALL	1250	.25	1/4	975	120	1

NOTE: EF-6 SHALL BE STAINLESS STEEL WALL MOUNTED W/SELF CONTAINED EXHAUST FAN.

OMIT



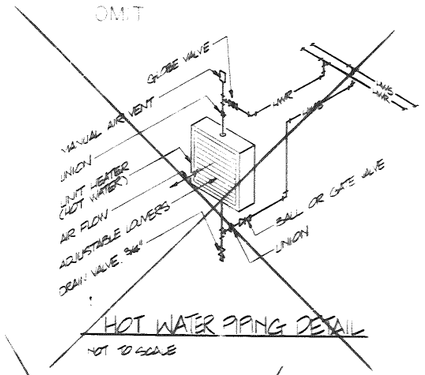
STEAM COIL PIPING DIAGRAM

NOT TO SCALE

UNIT HEATER SCHEDULE

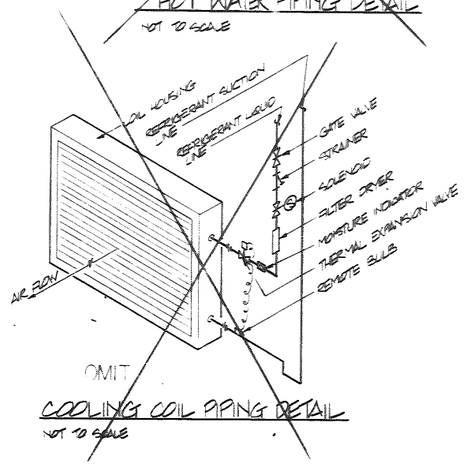
MARK	LOCATION	MBH	GPM	H.P.	VOLTS	Ø
LH-3	MECH. ROOM	14.3	.5	120	120	1

OMIT



HOT WATER PIPING DETAIL

NOT TO SCALE



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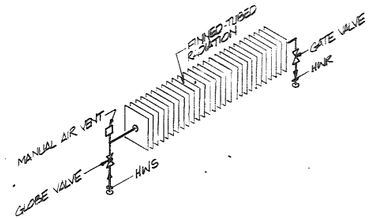
COOLING COIL PIPING DETAIL

NOT TO SCALE



RADIATION PIPING DIAGRAM

NOT TO SCALE

REVISIONS

SYM	DESCRIPTION	DATE	APPROVED

LEGEND:

- UNIT HEATER
- BASEBOARD RADIATION
- EXHAUST GRILLE
- S.A. SUPPLY AIR
- E.A. EXHAUST AIR
- MAU MAKE UP AIR UNIT
- UH-3 UNIT HEATER
- EF-3 EXHAUST FAN
- CR CONDENSATE RETURN LINE
- RL REFRIGERANT LIQUID LINE
- HWS HOT WATER SUPPLY PIPING
- HWR HOT WATER RETURN PIPING
- 3-WAY 3-WAY CONTROL VALVE
- GATE GATE VALVE
- CHECK CHECK VALVE
- BALANCING BALANCING VALVE
- MAV MANUAL AIR VENT
- UNION UNION
- FAN SHEAVE FAN SHEAVE
- THERMOSTAT THERMOSTAT
- SILENCER WITH MIXING BOX SILENCER WITH MIXING BOX
- EXHAUST FAN OR AIR EXTRACTOR EXHAUST FAN OR AIR EXTRACTOR
- PIPE GUIDES OR SLEEVES PIPE GUIDES OR SLEEVES
- 101 LOUVER & ROOM NUMBER LOUVER & ROOM NUMBER
- OA OUTSIDE AIR OUTSIDE AIR
- RA RETURN AIR RETURN AIR
- DOOR LOUVER DOOR LOUVER
- BALL VALVE BALL VALVE
- GLOBE VALVE GLOBE VALVE
- VAV VARIABLE AIR VOLUME TERMINAL BOX VARIABLE AIR VOLUME TERMINAL BOX
- VCD VOLUME CONTROL DAMPER VOLUME CONTROL DAMPER
- FLEXIBLE DUCT FLEXIBLE DUCT
- (3) VARIABLE AIR VOLUME TERMINAL BOX DESIGNATION
- (2) SUPPLY DIFFUSER, RETURN REGISTER, & EXHAUST GRILLE DESIGNATION
- SD DUCTWORK W/ SPLITTER DAMPER

GRILLE & DIFFUSER SCHEDULE

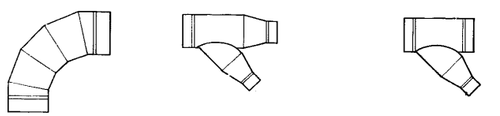
MARK	NECK SIZE	APPLICATION
A	VARIES	SUPPLY AIR - CEILING DIFFUSER
B	9"ø	
C	12"x12"	
D	15"x15"	
E	18"x18"	
F	21"x21"	
P	36"/18"	WALL RETURN - DOUBLE DEFLECTION
Q	24"/18"	EXHAUST AIR - EGG CRATE, NO DAMPER
S	20"/20"	RETURN OR EXHAUST AIR - EGG CRATE
T	6"/6"	
U	10"/6"	
V	24"/6"	
W	12"/6"	
X	8"/6"	
Y	8"/6"	
Z	6"/6"	

OMIT

VARIABLE AIR VOLUME UNIT TERMINAL SCHEDULE

MARK	INLET SIZE	CFM RANGE
1	4"ø	0-170
2	6"ø	170-350
3	8"ø	350-600
4	10"ø	600-1000
5	12"ø	1000-2000
6	10"x24"	2000-4000

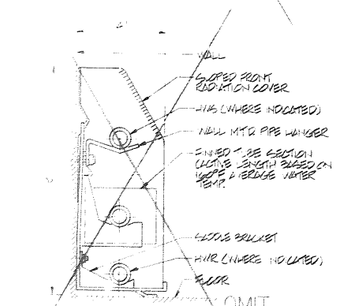
OMIT



FABRICATED — CONICAL LATERAL REDUCING — CONICAL LATERAL

HIGH PRESSURE DUCT FITTING DETAIL

NOT TO SCALE



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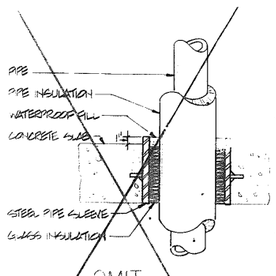
FINNED TUBED RADIATION DETAIL

NOT TO SCALE



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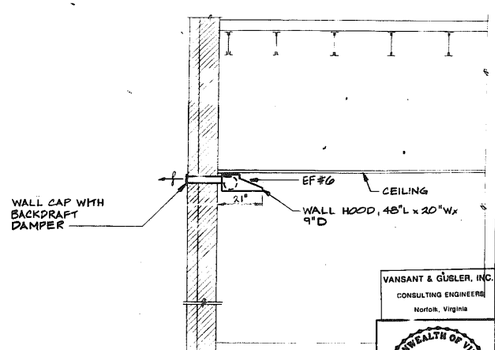
PIPE SLEEVE DETAIL

NOT TO SCALE



WALL MOUNTED EXHAUST FAN DETAIL

NOT TO SCALE

VANSANT & GUSLER, INC.
CONSULTING ENGINEERS
Norfolk, Virginia

COMMONWEALTH OF VIRGINIA
RICHARD L. GUSLER
No. 1921
PROFESSIONAL ENGINEER

RECORD DRAWING
LETTER DATED JUL 25 1983

M-12

HENDERSON ASSOCIATES, ARCHITECTS a professional corporation NORFOLK, VIRGINIA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION NORFOLK, VIRGINIA

DES. BFM DR. TLM CHK. KWP
PROJ. MGR. JEM CH. ENGR.
SUBMITTED BY: DATE 2-13-80
PROJ. MANAGER PRINCIPAL
RVD. RVD.
APPROVED DATE
OFFICER IN CHARGE
APPROVED DATE
FOR CDR FOR COMMANDER NAVFAC

NAVAL AIR STATION NORFOLK, VIRGINIA
E-2C & H-53 TRAINER BUILDINGS
H-53
DETAILS, SCHEDULES, SECTIONS & LEGEND

SIZE F | CODE IDENT NO. 80091 | NAVFAC DRAWING NO. 4065713
CONTR. CONTR. NO. N62472-79-B-9325
SCALE AS NOTED SPEC. 05-79-9325 SHEET 54 OF 57
ED DWG. NO. 165715