

# NAVAL STATION NEWPORT NEWPORT, RI

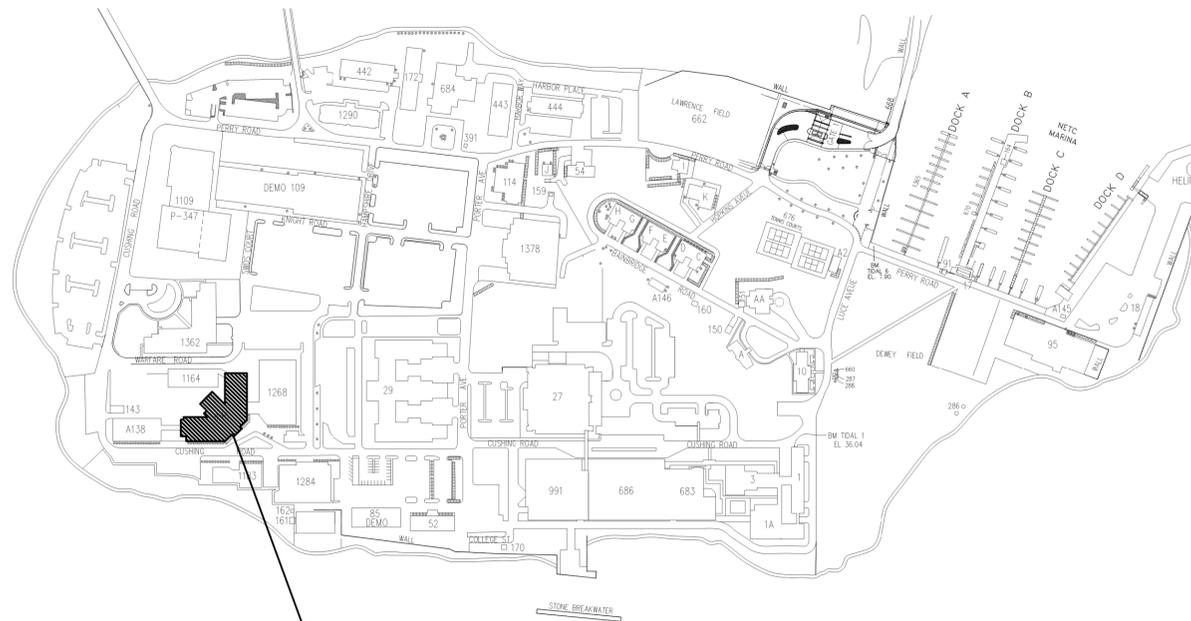
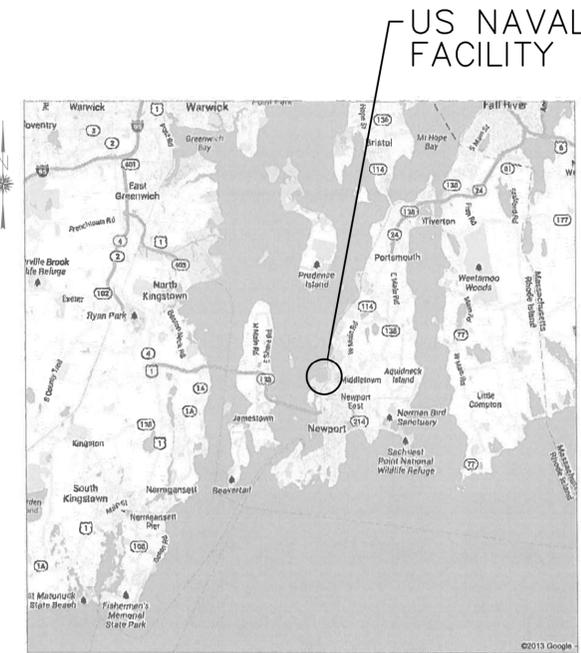
## BLDG. 446

### HVAC REPLACEMENT

#### CONTRACT NO. \_\_\_\_\_

#### LIST OF DRAWINGS

SHEET NO.	SHEET NO.	NAVFAc DWG. NO.	NAVSTA DWG. NO.	DRAWING TITLE	SHEET NO.	SHEET NO.	NAVFAc DWG. NO.	NAVSTA DWG. NO.	DRAWING TITLE
1	G-100	12684342	42235-390	COVER SHEET	25	M-201	12684366	42259-390	PARTIAL FIRST FLOOR PLAN - NEW PIPING
2	H-100	12684343	42236-390	ABATEMENT NOTES	26	M-202	12684367	42260-390	PARTIAL FIRST FLOOR PLAN - NEW PIPING
3	H-101	12684344	42237-390	PARTIAL FIRST FLOOR ABATEMENT PLAN	27	M-203	12684368	42261-390	PARTIAL SECOND FLOOR PLAN - NEW PIPING
4	H-102	12684345	42238-390	PARTIAL FIRST FLOOR ABATEMENT PLAN	28	M-204	12684369	42262-390	PARTIAL SECOND FLOOR PLAN - NEW PIPING
5	H-103	12684346	42239-390	PARTIAL SECOND FLOOR ABATEMENT PLAN	29	M-205	12684370	42263-390	ENLARGED MECHANICAL ROOM NEW WORK PLAN
6	H-104	12684347	42240-390	PARTIAL SECOND FLOOR ABATEMENT PLAN	30	M-501	12684371	42264-390	SCHEDULES
7	H-105	12684348	42241-390	PARTIAL ROOF ABATEMENT PLAN	31	M-601	12684372	42265-390	CONTROLS
8				NOT USED	32	M-602	12684373	42266-390	CONTROLS
9	S-001	12684350	42243-390	GENERAL STRUCTURAL NOTES AND LEGEND	33	M-701	12684374	42267-390	DETAILS
10	S-101	12684351	42244-390	PARTIAL FRAMING PLANS	34	M-702	12684375	42268-390	DETAILS
11	S-102	12684352	42245-390	DETAILS	35	E-001	12684376	42269-390	LEGEND AND GENERAL NOTES
12	M-100	12684353	42246-390	MECHANICAL LEGEND AND GENERAL NOTES	36	ED101	12684377	42270-390	PARTIAL FIRST FLOOR DEMOLITION PLAN
13	MD101	12684354	42247-390	PARTIAL FIRST FLOOR DEMOLITION PLAN	37	ED102	12684378	42271-390	PARTIAL FIRST FLOOR DEMOLITION PLAN
14	MD102	12684355	42248-390	PARTIAL FIRST FLOOR DEMOLITION PLAN	38	ED103	12684379	42272-390	PARTIAL SECOND FLOOR DEMOLITION PLAN
15	MD103	12684356	42249-390	PARTIAL SECOND FLOOR DEMOLITION PLAN	39	ED104	12684380	42273-390	PARTIAL SECOND FLOOR DEMOLITION PLAN
16	MD104	12684357	42250-390	PARTIAL SECOND FLOOR DEMOLITION PLAN	40	ED105	12684381	42274-390	PARTIAL ROOF DEMOLITION PLAN
17	MD105	12684358	42251-390	PARTIAL ROOF DEMOLITION PLAN	41	ED106	12684382	42275-390	PARTIAL ROOF DEMOLITION PLAN
18	MD106	12684359	42252-390	PARTIAL ROOF DEMOLITION PLAN	42	E-101	12684383	42276-390	PARTIAL FIRST FLOOR NEW WORK PLAN
19	MD107	12684360	42253-390	ENLARGED MECHANICAL ROOM DEMOLITION PLAN	43	E-102	12684384	42277-390	PARTIAL FIRST FLOOR NEW WORK PLAN
20	M-101	12684361	42254-390	PARTIAL FIRST FLOOR PLAN - NEW DUCTWORK	44	E-103	12684385	42278-390	PARTIAL SECOND FLOOR NEW WORK PLAN
21	M-102	12684362	42255-390	PARTIAL FIRST FLOOR PLAN - NEW DUCTWORK	45	E-104	12684386	42279-390	PARTIAL SECOND FLOOR NEW WORK PLAN
22	M-103	12684363	42256-390	PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK	46	E-105	12684387	42280-390	PARTIAL SECOND FLOOR NEW WORK PLAN
23	M-104	12684364	42257-390	PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK	47	E-601	12684388	42281-390	PARTIAL ROOF NEW WORK PLAN
24	M-105	12684365	42258-390	PARTIAL ROOF PLAN - NEW DUCTWORK					PANEL SCHEDULES



SITE PLAN  
SCALE: 1" = 300'

FINAL BID DOCUMENTS  
01/16/15

REV	DATE	DESCRIPTION
A	01/16/15	REVISED PER NAVFAC DESIGN REVIEW COMMENTS
0	01/16/15	FINAL BID DOCUMENTS



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APPROVED: \_\_\_\_\_  
FOR COMMANDER NAVFAC

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
DES: JMN EDW JWS CHK: KDB

BRANCH MANAGER: \_\_\_\_\_  
CHIEF ENGINEER/ARCH: \_\_\_\_\_  
DESIGN DIRECTOR: \_\_\_\_\_

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NEWPORT, RHODE ISLAND  
**BUILDING 446 HVAC REPLACEMENT**  
COVER SHEET

SCALE: NO SCALE  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.:  
NAVFAC DRAWING NO.: 12684342  
SHEET 1 OF 47  
**G-100**

FILE NAME: I:\Projects\3016438\3016438\_0001\901\_CAD\_Models\_and\_Sheets\00\_General\0100.dwg LAYOUT NAME: G-001 PLOTTED: Friday, February 13, 2015 - 7:24am USER: acikley

# GENERAL SHEET NOTES

- REFER TO AND COORDINATE WITH ALL CONTRACT DOCUMENTS FOR LOCATION OF DEMOLITION WORK.
- THE ENVIRONMENTAL ABATEMENT SCOPE INCLUDES THE WORK REQUIRED BY THE SPECIFICATIONS, DRAWINGS, AND THE SURVEY REPORT. THE CONTRACTOR SHALL FIRST LOOK TO WHAT IS REQUIRED BY THE SPECIFICATIONS AND THEN COORDINATE THAT WITH WHAT IS REQUIRED BY THE DRAWINGS AND THE SURVEY REPORT. ORDER OF PRECEDENCE OF THE CONTRACT DOCUMENTS IS FIRST THE SPECIFICATIONS, SECOND THE DRAWINGS AND THIRD (FOR ENVIRONMENTAL INFORMATION PURPOSES ONLY) THE SURVEY REPORTS.
- THE CONTRACTOR SHALL SUBMIT PROOF OF TRAINING IN ACCORDANCE WITH THE REVISED OSHA HAZARD COMMUNICATION STANDARD "GLOBAL HARMONIZATION TRAINING" PRIOR TO COMMENCEMENT OF WORK.
- DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL VERIFY ALL JOB SITE CONDITIONS, DIMENSIONS AND QUANTITIES.

# ASBESTOS-CONTAINING MATERIALS

- ALL ASBESTOS ABATEMENT WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, AND FEDERAL, STATE AND LOCAL LAWS INCLUDING BUT NOT LIMITED TO THE STATE OF RHODE ISLAND RULES AND REGULATIONS FOR ASBESTOS CONTROL (R23-24.5-ASB).
- PRIOR TO THE START OF WORK THE CONTRACTOR SHALL PROVIDE A DETAILED ASBESTOS REMOVAL AND DISPOSAL WORK PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS.
- THE ABATEMENT CONTRACTOR SHALL HOLD AND DOCUMENT A PRE-ABATEMENT SAFETY MEETING, WITH PROJECT MONITORS, APPROPRIATE REPRESENTATIVES OF THE OWNER, THE AUTHORITIES HAVING JURISDICTION, AND THE GC TO REVIEW SAFE WORK PRACTICES AND EMERGENCY COMMUNICATION PROGRAM FOR THE PROJECT. THE CONTRACTOR SHALL ENSURE PROPER FIRE EXTINGUISHING EQUIPMENT IS PRESENT, A COMPETENT PERSON IS KNOWLEDGEABLE IN THE USE OF FIRE EXTINGUISHING EQUIPMENT, AND EMERGENCY EXIT PLANS AND PHONE NUMBERS ARE POSTED IN THE IMMEDIATE VICINITY OF WORK AREAS.
- CONTRACTOR SHALL POST APPROVED "ASBESTOS WARNING" SIGNS. THE AREA SHALL BE DESIGNATED OFF LIMITS TO UNAUTHORIZED PERSONNEL.
- NO ASBESTOS-CONTAINING MATERIALS SHALL BE DISTURBED UNTIL ALL ENGINEERING CONTROLS ARE ESTABLISHED, ALL REQUIRED NOTICES ARE POSTED AND ALL REQUIRED APPROVALS ARE OBTAINED FROM THE AUTHORITIES HAVING JURISDICTION.
- CERTIFIED ASBESTOS WORKERS & SUPERVISORS SHALL WEAR 1/2 FACE NEGATIVE PRESSURE RESPIRATORS DURING PREPARATION WORK.
- CONTRACTOR SHALL INSTALL AND MAINTAIN PUBLIC PROTECTION DEVICES AND TEMPORARY SIGNAGE, AS REQUIRED.
- PROJECT PHASING WILL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND REPRESENTATIVES OF THE AUTHORITY HAVING JURISDICTION IN SUCH A WAY AS TO MINIMIZE DISRUPTION OF ONGOING OPERATIONS. ALL POWER TO THE WORK AREA SHALL BE GFCI PROTECTED.
- THESE ASBESTOS ABATEMENT DRAWINGS IDENTIFY ASBESTOS-CONTAINING MATERIALS AND SUSPECT ASBESTOS-CONTAINING MATERIALS THAT ARE EXPECTED TO BE AFFECTED WITHIN THE FOOTPRINT OF THE PROPOSED SCOPE.
- ASBESTOS-CONTAINING MATERIALS AND SUSPECT ASBESTOS-CONTAINING MATERIALS ARE KNOWN TO EXIST IN AREAS ADJACENT TO THE BOUNDARIES OF THE SCOPE AND HAVE POTENTIAL TO BE IMPACTED BY THE PROPOSED CONSTRUCTION ACTIVITIES. ASBESTOS ABATEMENT WORK PLANS SHALL BE PROVIDED BY THE CONTRACTOR, FOR APPROVAL BY THE OWNERS REPRESENTATIVE, IN DIRECT COORDINATION AND IN CONJUNCTION WITH THE PROPOSED RENOVATION WORK ASSOCIATED WITH THE PROPOSED PROJECT SCOPE.
- CONTRACTOR MUST HAVE ALL APPLICABLE APPROVED PERMITS AND PROOF OF REQUIRED NOTIFICATIONS IN HAND AND ON-SITE PRIOR TO START OF ANY ABATEMENT WORK AND HAVE ISSUED ALL NOTIFICATIONS AND COMPLIED WITH MANDATORY WAITING PERIODS.
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.
- THE CONTRACTOR SHALL MANAGE, TRANSPORT AND DISPOSE OF ASBESTOS-CONTAINING WASTE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
- ALL ABATEMENT AND CONSTRUCTION WORK SHALL COMPLY WITH THE NATIONAL EMISSION STANDARDS FOR HAZARD AIR POLLUTION (NESHAP) (CITED AS 40 CFR PART 61 SUBPART M).
- THE ASBESTOS CONTRACTOR SHALL PROVIDE OSHA AIR SAMPLING FOR HIS PERSONNEL. THIS OSHA AIR SAMPLING SHALL BE PERFORMED IN THE WORKER'S BREATHING ZONE, AS REQUIRED BY CURRENT OSHA REGULATIONS.
- SHOULD THE CONTRACTOR PROCEED TO WORK WITHOUT NOTIFYING THE OWNER OF THESE KNOWN OR SUSPECT ASBESTOS-CONTAINING MATERIALS ENCOUNTERED OR OTHER DISCREPANCIES, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL COSTS ASSOCIATED WITH THE CONTAINMENT, CLEAN UP, AND OTHER COSTS AND DAMAGES RESULTING THEREFROM. THE OWNER RESERVES THE RIGHT TO UTILIZE ITS ASBESTOS CONTRACTORS TO CONDUCT ANY SUCH CLEAN-UP AT THE CONTRACTORS SOLE EXPENSE.
- THE CONTRACTOR SHALL NOT UNLAWFULLY IMPACT EXISTING LIFE SAFETY EQUIPMENT AND SYSTEMS THAT PASS THROUGH, ARE EXCLUSIVELY ACCESSIBLE FROM, AND/OR SERVE AREAS OF WORK.
- THE CONTRACTOR SHALL SEQUENCE WORK TO PREVENT CROSS CONTAMINATION IN ACCORDANCE WITH PROJECT SCHEDULE SO AS NOT TO DELAY OTHER SUBSEQUENT WORK.
- IF ANY AIR SAMPLES COLLECTED OUTSIDE CONTAINMENT AREA DURING ABATEMENT MEET OR EXCEED 0.01 FIBER PER CUBIC CENTIMETER OR THE BACKGROUND LEVEL, WHICHEVER IS GREATER, WORK SHALL BE STOPPED AND METHODS ALTERED TO REDUCE THE ASBESTOS FIBER CONCENTRATION TO THE AFOREMENTIONED LEVEL.
- THE CONTRACTOR SHALL FIELD VERIFY THE AMOUNT OF ACM AND FAMILIARIZE HIMSELF IN ALL VARIABLE FIELD CONDITIONS AT THE SITE BEFORE THE SUBMISSION OF THEIR BID. FAILURE TO FAMILIARIZE THEMSELVES WITH ACTUAL AND PLANNED CONDITIONS AFFECTING THE WORK SHALL NOT BE GROUNDS FOR ADDITIONAL COSTS OR TIME TO COMPLETE THE WORK.
- IN ADDITION TO THE AUTHORITIES HAVING JURISDICTION, THE OWNER'S REPRESENTATIVE AND THE OWNER'S ENVIRONMENTAL CONSULTANT SHALL HAVE THE AUTHORITY TO STOP THE ABATEMENT WORK AT ANY TIME A DETERMINATION IS MADE THAT CONDITIONS ARE NOT WITHIN SPECIFICATION AND APPLICABLE REGULATIONS. THE STOPPAGE OF WORK SHALL CONTINUE UNTIL CONDITIONS HAVE BEEN CORRECTED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AND OWNER'S ENVIRONMENTAL CONSULTANT. STANDBY TIME TO RESOLVE THE PROBLEMS SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.

# LEAD-CONTAINING MATERIALS

- THE CONTRACTOR SHALL PERFORM WORK THAT AFFECTS LEAD CONTAINING PAINT IN STRICT ACCORDANCE WITH THE CONTRACT SPECIFICATIONS, OSHA LEAD IN CONSTRUCTION STANDARD 29 CFR 1926.62, FEDERAL, STATE AND LOCAL LAWS.
- PRIOR TO THE START OF WORK THE CONTRACTOR SHALL PROVIDE A DETAILED LEAD MANAGEMENT WORK PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS.
- LEAD-CONTAINING PAINT IS EXPECTED TO BE AFFECTED WITHIN THE FOOTPRINT OF THE PROPOSED SCOPE OF WORK.
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.
- THE CONTRACTOR SHALL CONTAIN THE LEAD WORK AREA IN ACCORDANCE WITH SSPC GUIDE 6 - GUIDE FOR CONTAINING DEBRIS GENERATED DURING PAINT REMOVAL OPERATIONS AND THE CONTRACT SPECIFICATIONS.
- ON ANY STRUCTURES WHERE TORCH CUTTING, OPEN FLAME BURNING, RIVET/BOLT BUSTING, WELDING, OR OTHER IMPACT WHICH MAY BE ASSUMED TO CAUSE LEAD PARTICULATE RELEASES, THE WORK SHALL BE PERMITTED ONLY AFTER ALL VISIBLE PAINT HAS BEEN REMOVED FROM ALL SIDES OF THE STRUCTURE DOWN TO THE SUBSTRATE SURFACE FOR A MINIMUM OF FOUR (4) INCHES ON BOTH SIDES OF THE CUT LINE WHERE CUTTING, BURNING, WELDING, OR RIVET/BOLT BUSTING WILL TAKE PLACE.
- THE CONTRACTOR SHALL DESIGNATE A COMPETENT PERSON WITH CREDENTIALS, CERTIFICATION AND EXPERIENCE AS DEFINED BY DISTURBANCE OF LEAD CONTAINING SURFACE COATINGS SPECIFICATION. CONTRACTORS COMPETENT PERSON SHALL ENFORCE OSHA LEAD REQUIREMENTS AND PERFORM DAILY INSPECTIONS OF THE WORK AREA.
- THE CONTRACTOR SHALL PROVIDE OSHA INITIAL EXPOSURE ASSESSMENT AIR SAMPLING FOR HIS PERSONNEL. THIS OSHA AIR SAMPLING SHALL BE PERFORMED IN THE WORKER'S BREATHING ZONE, AS REQUIRED BY CURRENT OSHA REGULATIONS.
- THE CONTRACTOR SHALL CLEAN ACCUMULATIONS OF DUST OR DEBRIS CONTAINING LEAD DAILY AND CONDUCT ALL CLEANING WITH HEPA (HIGH EFFICIENCY PARTICULATE AIR) FILTERED VACUUMS. CONTAINERIZE THE DEBRIS FOR PROPER DISPOSAL. LABEL BAGS AND CONTAINERS AS LEAD-CONTAINING WASTE.
- THE CONTRACTOR SHALL ESTABLISH RESTRICTED ZONES AROUND AREAS OR ACTIVITIES THAT MIGHT GENERATE AIRBORNE EMISSIONS OF LEAD IN EXCESS OF THE OSHA ACTION LEVEL AND POST CAUTION SIGNS AROUND EACH RESTRICTED ZONE.
- THE CONTRACTOR SHALL CONDUCT DAILY ASSESSMENTS OF VISIBLE EMISSIONS AND RELEASES FROM THE WORK AREA AND SHALL UNDERTAKE ALL NECESSARY CORRECTIVE ACTION TO CONTROL EMISSIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COLLECTION, HANDLING, STORAGE, TRANSPORTATION AND DISPOSAL OF ALL HAZARDOUS WASTES GENERATED FROM THIS WORK.
- THE CONTRACTOR SHALL MANAGE, TRANSPORT AND DISPOSE OF LEAD-CONTAINING WASTE IN ACCORDANCE WITH CONTRACT DOCUMENTS, FEDERAL, STATE AND LOCAL REGULATIONS.
- THE CONTRACTOR SHALL NOT UNLAWFULLY IMPACT EXISTING LIFE SAFETY EQUIPMENT AND SYSTEMS THAT PASS THROUGH, ARE EXCLUSIVELY ACCESSIBLE FROM, AND/OR SERVE AREAS OF WORK.
- THE CONTRACTOR SHALL SEQUENCE WORK TO PREVENT CROSS CONTAMINATION IN ACCORDANCE WITH PROJECT SCHEDULE SO AS NOT TO DELAY OTHER SUBSEQUENT WORK.
- THE CONTRACTORS SCOPE OF WORK FOR LEAD-CONTAINING PAINT SHALL INCLUDE WORK AS NOTED ON DRAWINGS AND SPECIFICATIONS AND AS-NEEDED FOR THE PROTECTION OF WORKERS, GENERAL PUBLIC AND ENVIRONMENT TO IMPLEMENT DEMOLITION AND CONSTRUCTION WORK.

ASBESTOS CONTAINING MATERIALS QUANTITIES			
MATERIAL	ESTIMATED QUANTITY (NOTE 1)	REMOVAL METHOD	CONTAINMENT TYPE
REMOVE 2'X4' CEILING TILES (FIRST FLOOR)	18,236 SF	INTERIOR FRIABLE	FULL CONTAINMENT
REMOVE 2'X4' CEILING TILES AND DEBRIS ON TOP OF CEILING TILES (SECOND FLOOR)	18,236 SF	INTERIOR FRIABLE	FULL CONTAINMENT
CLEAN DUCTWORK AND UNIT VENTILATORS	1500 SF	HEPA VACUUM, WET CLEAN	FULL CONTAINMENT
REMOVE RED DUCT SEAM SEALANT	40 SF	INTERIOR NON-FRIABLE	NEGATIVE PRESSURE TENT ENCLOSURE
REMOVE WALLBOARD / JOINT COMPOUND	435 SF	INTERIOR FRIABLE	NEGATIVE PRESSURE TENT ENCLOSURE
REMOVE FLOOR TILE AND ASSOCIATED MASTIC	230 SF	INTERIOR NON-FRIABLE	NEGATIVE PRESSURE TENT ENCLOSURE
REMOVE BLACK ROOF FLASHING AND ROOF PITCH POCKETS	200 SF	EXTERIOR NON-FRIABLE	LIMITED CONTAINMENT
CLEAN AND STORE LIGHT FIXTURES (2ND FLOOR)	200 FIXTURES	HEPA VACUUM, WET CLEAN	FULL CONTAINMENT
CLEAN PIPING (2ND FLOOR)	450 LF	HEPA VACUUM, WET CLEAN	FULL CONTAINMENT
REMOVE SHOWER CEILING COATING	20 SF	INTERIOR FRIABLE	NEGATIVE PRESSURE TENT ENCLOSURE

NOTE:  
1. QUANTITIES ARE APPROXIMATIONS AND SHOULD BE FIELD VERIFIED BY CONTRACTOR.

OSHA LEAD-CONTAINING PAINT QUANTITY TABLE				
COMPONENT	LOCATION	SUBSTRATE	COLOR	APPROXIMATE QUANTITY
WALLS	THROUGHOUT	WALL BOARD AND CMU	GREEN, WHITE, BEIGE, BLUE	435 SF
STRUCTURAL STEEL	ROOF FRAMING AND THROUGHOUT	METAL	RED, ORANGE	200 SF

UNIVERSAL WASTE			
HAZARDOUS MATERIAL	DESCRIPTION	LOCATION	TOTAL APPROXIMATE QUANTITY
MERCURY	THERMOSTAT	THROUGHOUT	45

DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0
	
	
	
STV Incorporated 205 West Walsh Drive Douglassville, PA 19518 610-385-8200 www.stvinc.com	
APPROVED	
FIR COMMANDER NAFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES	DG
DRW	JWS
CHK	JZ
<<PM/DM>>	
BRANCH MANAGER	
CHIEF ENGINEER	
DESIGN DIRECTOR	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - NEWPORT, RI NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND	
BUILDING 446 HVAC REPLACEMENT ABATEMENT NOTES	
SCALE:	NO SCALE
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684343
SHEET	2 OF 47
<b>H-100</b>	
DRAWING REVISION: 10 MARCH 2009	
NAVSTA DWG. NO. 42236-390	

FILE NAME: I:\Projects\301643\301643\_01\_Hazardous Material\H-100.dwg LAYOUT NAME: H-100 PLOTTED: Thursday, January 15, 2015 - 1:41pm USER: rick@stv.com

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
100	ENTRANCE VESTIBULE
101	LOBBY
102	STAIR A
103	O.D.
104	SAFETY ROOM
105	CPO MESS
106	LCS CST INSTRUCTOR OFFICE
107	E.M. INSTR. OFFICE
108	CORR. I
109	LCS-1 CST LAB
110	LCS-1 CST CR
111	CORR. H
113	CORR. G
116	LCS-2 CST LAB
117	LCS-2 CST CR
118	STORAGE CLOSET
119	CLASSROOM
120	DATA ROOM
121	STORAGE
123	E.M. CLASSROOM #5
124	STORAGE
125	E.M. TOILET #1

ROOM NUMBER	ROOM NAME
125A	JANITOR
126	C.P.O. TOILET #1
127	SHOWER ROOM
127A	STORAGE
128	CORR. A
129	SERVICE ROOM
130	CORR. J
131	LADIES
131A	SOUND ROOM
134	STORAGE ROOM
138	MAIL
140	CORRIDOR
144	ISWOS
146	ISWOS
159	AUDITORIUM

**PHASING NOTES**

1. WORK SHALL BE ACCOMPLISHED IN 2 PHASES, PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**GENERAL SHEET NOTES**

1. FOR ABATEMENT NOTES SEE SHEET H-100.

**SHEET KEYNOTES**

- REMOVE 2'x4' CEILING TILES.
- REMOVE WALLBOARD/JOINT COMPOUND AS NEEDED.
- REMOVE FLOOR TILE AND ASSOCIATED MASTIC AS NEEDED.
- REMOVE RED DUCT SEAM SEALANT.
- REMOVE SHOWER CEILING COATING AS NEEDED.

NO.	DESCRIPTION	DATE	APPR.
0	FINAL BID DOCUMENTS	01/16/15	



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 Douglassville, PA 19518  
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A/E INFO

APPROVED

FIR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: DG DRW: JWS CHK: JZ

BRANCH MANAGER

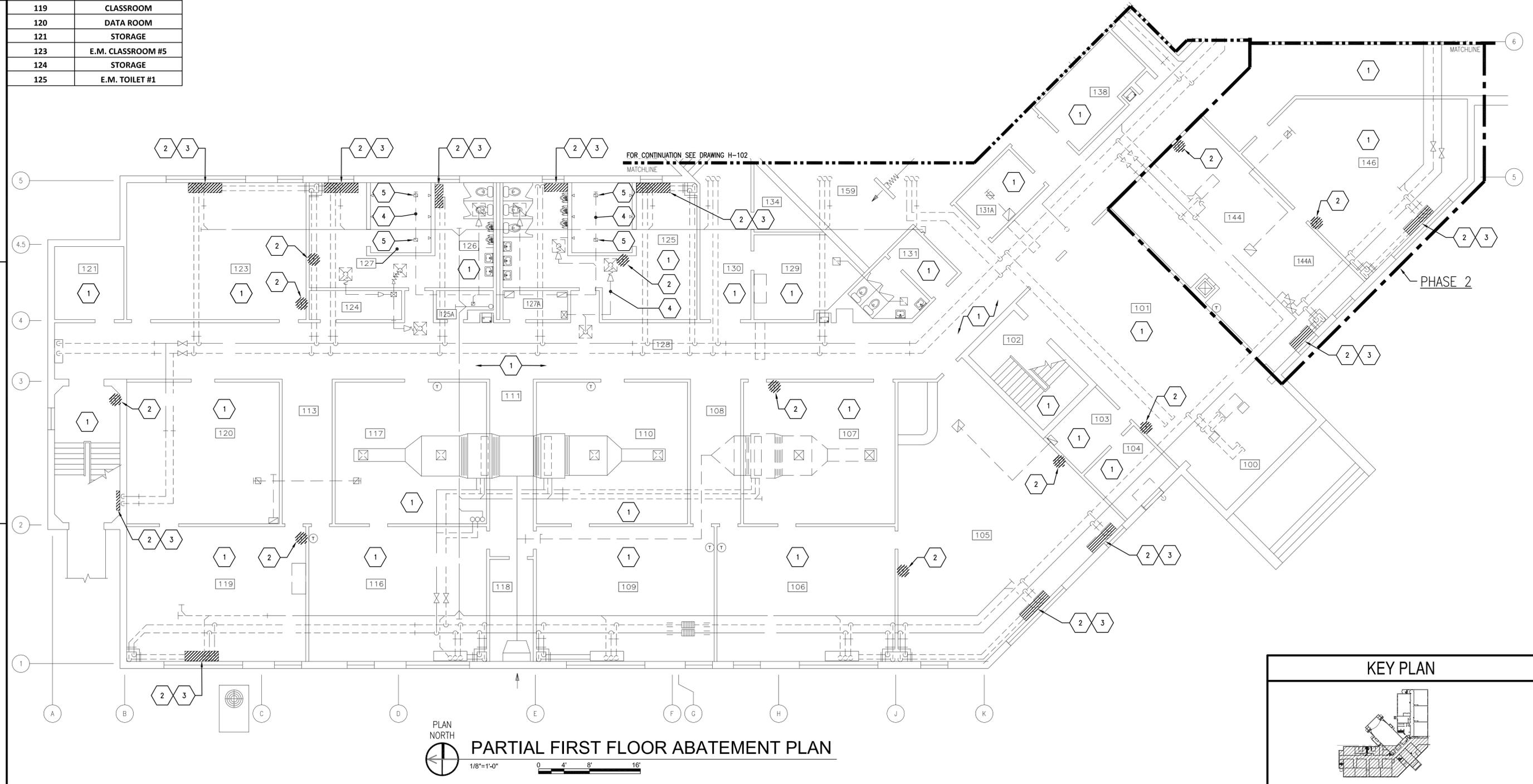
CHIEF ENGR/ARCH

DESIGN DIRECTOR

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL FIRST FLOOR ABATEMENT PLAN

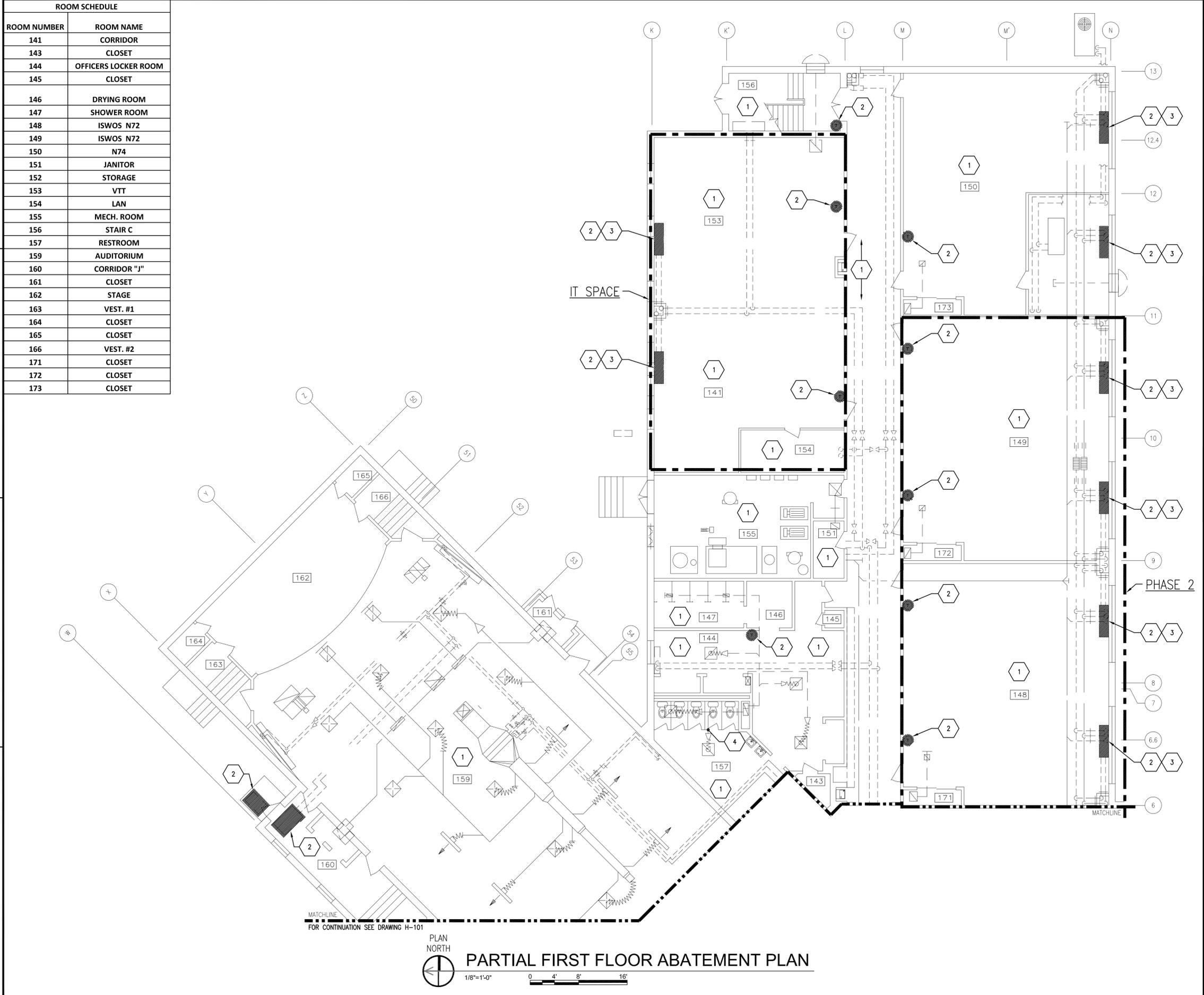
SCALE: AS NOTED  
 PROJECT NO.: 1312379  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO.: 12684344  
 SHEET 3 OF 47  
**H-101**  
 DRAWING REVISION: 10 MARCH 2009  
 NAVSTA DWG. NO. 42237-390



FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\01\_Hazardous\_Material\H-101.dwg LAYOUT NAME: H-101 PLOTTED: Thursday, January 15, 2015 - 1:43pm USER: stckleby

FILE NAME: I:\Projects\301643\301643\_0001\90\_CAD\_Models\_and\_Sheets\01\_Hazardous\_Material\H-102.dwg LAYOUT NAME: H-102 PLOTTED: Thursday, January 15, 2015 - 1:46pm USER: rick@jw

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
141	CORRIDOR
143	CLOSET
144	OFFICERS LOCKER ROOM
145	CLOSET
146	DRYING ROOM
147	SHOWER ROOM
148	ISWOS N72
149	ISWOS N72
150	N74
151	JANITOR
152	STORAGE
153	VTT
154	LAN
155	MECH. ROOM
156	STAIR C
157	RESTROOM
159	AUDITORIUM
160	CORRIDOR "J"
161	CLOSET
162	STAGE
163	VEST. #1
164	CLOSET
165	CLOSET
166	VEST. #2
171	CLOSET
172	CLOSET
173	CLOSET



MATCHLINE  
FOR CONTINUATION SEE DRAWING H-101



**PARTIAL FIRST FLOOR ABATEMENT PLAN**

**GENERAL SHEET NOTES**

- FOR ABATEMENT NOTES SEE SHEET H-100.

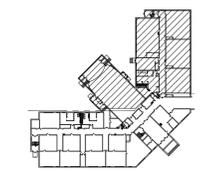
**SHEET KEYNOTES**

- REMOVE 2'x4' CEILING TILES.
- REMOVE WALLBOARD/JOINT COMPOUND AS NEEDED.
- REMOVE FLOOR TILE AND ASSOCIATED MASTIC AS NEEDED.
- REMOVE RED DUCT SEAM SEALANT.

**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**KEY PLAN**



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0
SEAL	
<p>STV Incorporated 205 West Welsh Drive Douglassville, PA 19518 610-385-8200 www.stvinc.com</p>	
APPROVED	
FIR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES DG	DRW JWS
CHK	JZ
BRANCH MANAGER	
CHIEF ENGINEER/ARCH	
DESIGN DIRECTOR	
<p>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND PUBLIC WORKS DEPARTMENT NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND</p>	
<p><b>BUILDING 446 HVAC REPLACEMENT</b> PARTIAL FIRST FLOOR ABATEMENT PLAN</p>	
SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684345
SHEET	4 OF 47
<p><b>H-102</b></p>	
<p>NAVSTA DWG. NO. 42238-390</p>	

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
200	CO
201	CO'S CONFERENCE ROOM
202	PASSAGE
203	OFFICE
205	CORR. L
207	DHASO/DC
208	CORR. K
213	LPD-17
214	TRAINING AIDS AND STORAGE
215	CORR. J
216	CLASSROOM
217	E.M. CLASSROOM #6
221	FACILITIES (N3)
221A	STORAGE
221B	STORAGE
223	CORR. D
224	C.P.O. TOILET #2

ROOM NUMBER	ROOM NAME
226	JANITOR
227	STORAGE
228	COMPTROLLER (N8)/SUPPLY (N8)
230	VFO
231	ED OFFICE
232	CORRIDOR
233	STAIR A
234	STORAGE
235	OFFICER IN CHARGE
235A	CLOSET
240	RECEPTIONIST
241	XO OFFICE

**PHASING NOTES**

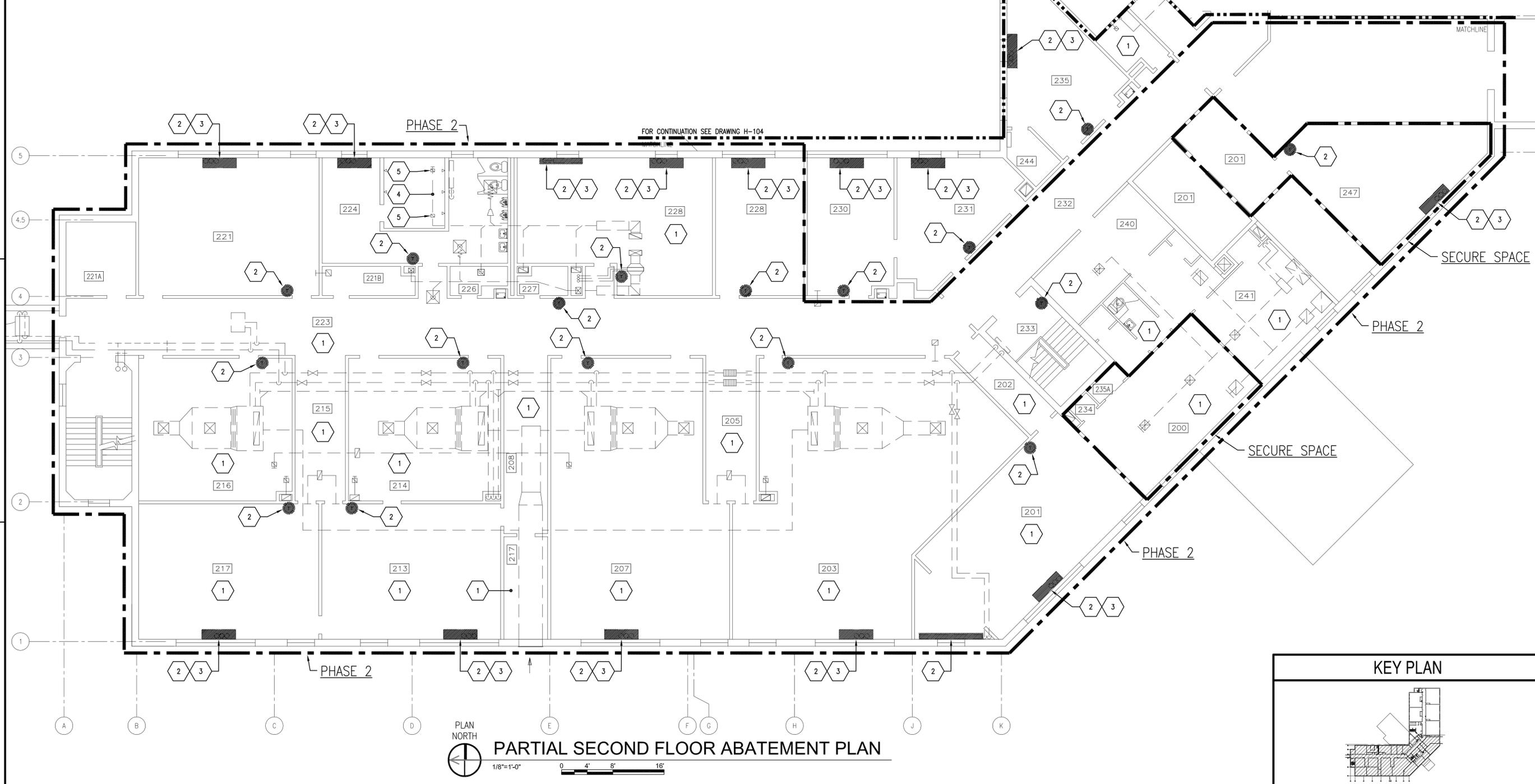
1. WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**GENERAL SHEET NOTES**

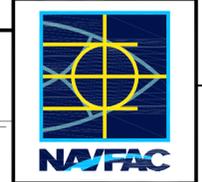
- FOR ABATEMENT NOTES SEE SHEET H-100.
- CLEAN EXISTING TO REMAIN DUCTWORK AND UNIT VENTILATORS.
- CLEAN AND STORE LIGHT FIXTURES.
- CLEAN PIPING.

**SHEET KEYNOTES**

- REMOVE 2'x4' CEILING TILES AND DEBRIS ON TOP OF CEILING TILES.
- REMOVE WALLBOARD/JOINT COMPOUND AS NEEDED.
- REMOVE FLOOR TILE AND ASSOCIATED MASTIC AS NEEDED.
- REMOVE RED DUCT SEAM SEALANT.
- REMOVE SHOWER CEILING COATING AS NEEDED.



DATE	DESCRIPTION	BY
01/16/15	FINAL BID DOCUMENTS	JAW



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 FIR COMMANDER NAVFAC

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DES: DG | DRW: JWS | CHK: JZ  
 BRANCH MANAGER: \_\_\_\_\_  
 CHIEF ENGINEER/ARCH: \_\_\_\_\_  
 DESIGN DIRECTOR: \_\_\_\_\_

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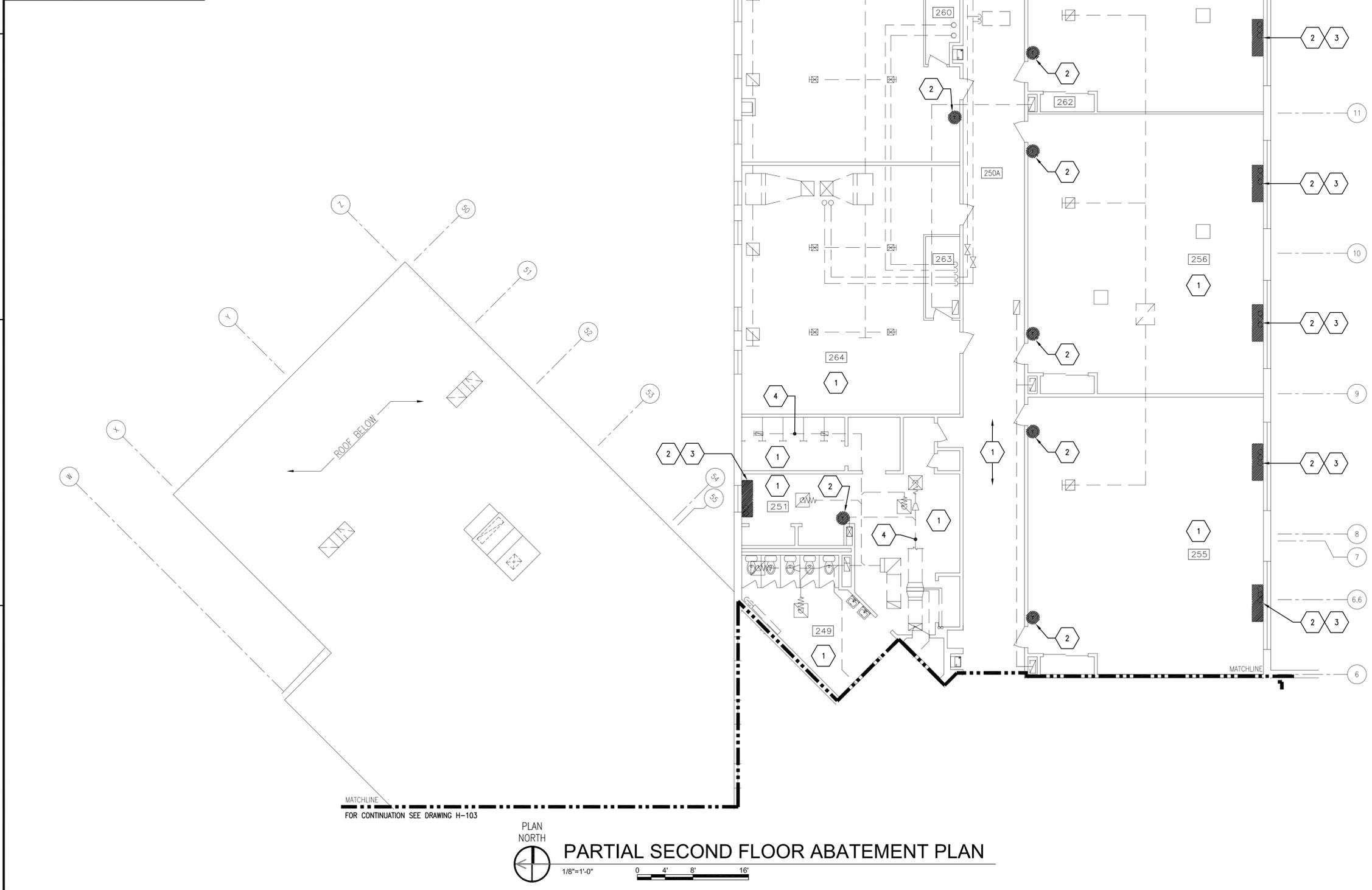
**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL SECOND FLOOR ABATEMENT PLAN

SCALE: AS NOTED  
 EPROJCT NO.: 1312379  
 CONSTR. CONTR. NO.:  
 NAVFAC DRAWING NO.: 12684346  
 SHEET 5 OF 47  
**H-103**

FILE NAME: I:\Projects\301643\301643\_0001\90\_CAD\_Models\_and\_Sheets\01\_Hazardous\_Material\H-103.dwg LAYOUT NAME: H-103 PLOTTED: Thursday, January 15, 2015 - 1:52pm USER: stv\stj

FILE NAME: I:\Projects\301643\301643\_0001\90\_CAD\_Models\_and\_Sheets\01\_Hazardous Material\H-104.dwg LAYOUT NAME: H-104 PLOTTED: Thursday, January 15, 2015 - 1:53pm USER: sck69jw

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
249	OFF TOILET #2
250	STAIR
250A	CORR. F
251	OFFICERS LOCKER ROOM #2
254	CLOSET
255	TRAINING REQ. (N9)
256	VTC
257	OMMS-NG (N72)
259	CLOSET
260	STORAGE
261	MCM
262	CLOSET
263	STORAGE
264	ADMIN (N1)



MATCHLINE  
FOR CONTINUATION SEE DRAWING H-103



**PARTIAL SECOND FLOOR ABATEMENT PLAN**

1/8"=1'-0" 0 4' 8' 16'

**GENERAL SHEET NOTES**

- FOR ABATEMENT NOTES SEE SHEET H-100.
- CLEAN EXISTING TO REMAIN DUCTWORK AND UNIT VENTILATORS.
- CLEAN AND STORE LIGHT FIXTURES.
- CLEAN PIPING.

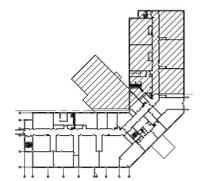
**SHEET KEYNOTES**

- REMOVE 2'x4' CEILING TILES AND DEBRIS ON TOP OF CEILING TILES.
- REMOVE WALLBOARD/JOINT COMPOUND AS NEEDED.
- REMOVE FLOOR TILE AND ASSOCIATED MASTIC AS NEEDED.
- REMOVE RED DUCT SEAM SEALANT.

**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**KEY PLAN**



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0

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ACTIVITY: \_\_\_\_\_

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_

DES: DG | DRW: JWS | CHK: JZ

BRANCH MANAGER: \_\_\_\_\_

CHIEF ENGR/ARCH: \_\_\_\_\_

DESIGN DIRECTOR: \_\_\_\_\_

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**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL SECOND FLOOR ABATEMENT PLAN

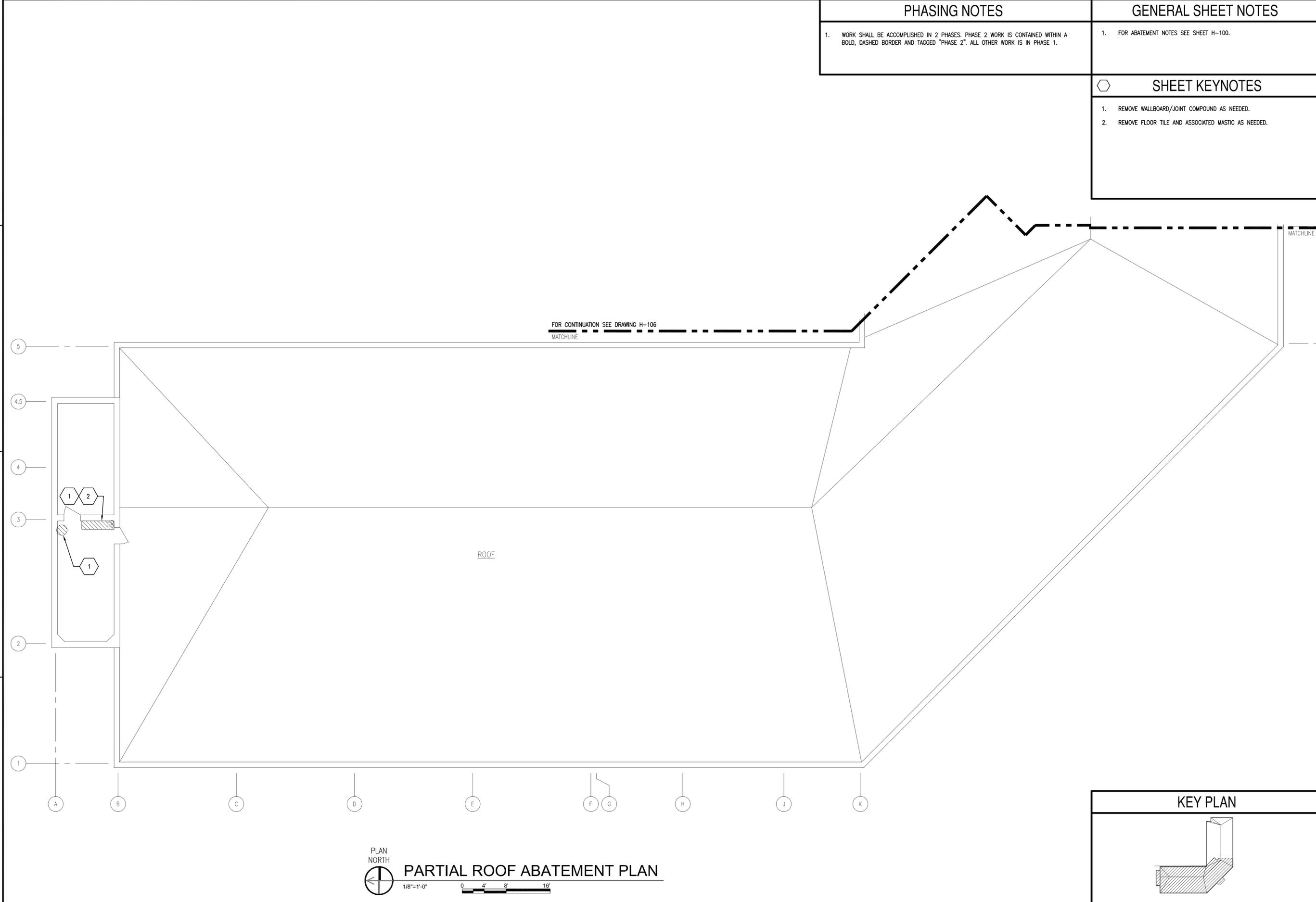
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PROJECT NO.: 1312379  
CONSTR. CONTR. NO.: \_\_\_\_\_

NAVFAC DRAWING NO.: 12684347  
SHEET 6 OF 47

**H-104**

DRAWN/REVISED: 10 MARCH 2009  
NAVSTA DWG. NO. 42240-390

FILE NAME: I:\Projects\301643\301643\_0001\90\_CAD\_Models\_and\_Sheets\01\_Hazardous\_Material\H-105.dwg LAYOUT NAME: H-105 PLOTTED: Friday, February 13, 2015 7:22am USER: acdlegk



**PHASING NOTES**

1. WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

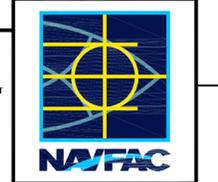
**GENERAL SHEET NOTES**

1. FOR ABATEMENT NOTES SEE SHEET H-100.

**SHEET KEYNOTES**

1. REMOVE WALLBOARD/JOINT COMPOUND AS NEEDED.  
 2. REMOVE FLOOR TILE AND ASSOCIATED MASTIC AS NEEDED.

SYN	DESCRIPTION	DATE	APPR
A	REVISD PER NAVFAC DESIGN REVIEW COMMENTS 01-21-15 02/11/15	01/16/15	
0	FINAL BID DOCUMENTS	01/16/15	

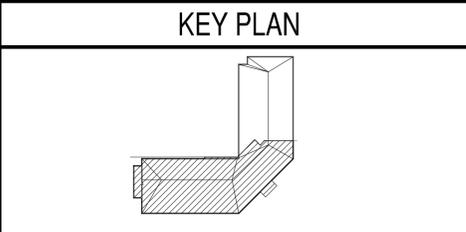


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FIR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES DG DRW JWS CHK JZ	
BRANCH MANAGER	
CHIEF ENG/ARCH	
DESIGN DIRECTOR	

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 NAVAL STATION NEWPORT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND  
**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL ROOF ABATEMENT PLAN

SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684348
SHEET	7 OF 47
<b>H-105</b>	



PLAN NORTH  
**PARTIAL ROOF ABATEMENT PLAN**  
 1/8"=1'-0"  
 0 4' 8' 16'

**GENERAL STRUCTURAL NOTES**

**A. DESIGN INFORMATION**

1. CODES
    - a. DESIGN CONFORMS TO INTERNATIONAL BUILDING CODE (IBC) 2012, AS AMENDED BY UFC 3-301-01, DATED JUNE 1, 2013.
    - b. AMERICAN CONCRETE INSTITUTE (ACI) - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-11.
    - c. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) - "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 360-10.
    - d. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) - "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", ASCE 7-10.
    - e. AMERICAN WELDING SOCIETY (AWS) - "STRUCTURAL WELDING CODE - STEEL", AWS D1.1-2010.
  2. LOADS
    - a. ROOF LIVE LOAD ----- 20 PSF
    - b. GROUND SNOW LOAD, P<sub>g</sub> ----- 30 PSF
      - FLAT ROOF SNOW LOAD, P<sub>f</sub> ----- 21 PSF
      - SNOW EXPOSURE FACTOR, C<sub>e</sub> ----- 1.0
      - SNOW IMPORTANCE FACTOR, I ----- 1.0
      - THERMAL FACTOR, C<sub>t</sub> ----- 1.0
    - c. WIND LOADS
      - BASIC WIND SPEED, V ----- 140 MPH
      - WIND OCCUPANCY CATEGORY ----- II
      - WIND EXPOSURE CATEGORY ----- C
      - WIND IMPORTANCE FACTOR ----- 1.0
- SEISMIC LOADS - ASCE 7 / 2010
- SEISMIC RISK CATEGORY ----- II
  - SEISMIC IMPORTANCE FACTOR, I<sub>s</sub> ----- 1.0
  - SOIL SITE CLASS ----- D
  - 0.2 SEC SPECTRAL RESPONSE, S<sub>s</sub> ----- 0.16
  - 1.0 SEC SPECTRAL RESPONSE, S<sub>1</sub> ----- 0.06
  - SITE COEFFICIENT SHORT PERIOD, F<sub>a</sub> ----- 1.6
  - SITE COEFFICIENT LONG PERIOD, F<sub>v</sub> ----- 2.4
  - S<sub>ms</sub> ----- 6.2484
  - S<sub>m1</sub> ----- 0.139
  - S<sub>ds</sub> ----- 0.176
  - S<sub>d1</sub> ----- 0.093
  - SEISMIC DESIGN CATEGORY ----- B
- e. ICE LOAD
    - NOMINAL ICE THICKNESS ----- 0.75 INCH
  - f. EQUIPMENT WEIGHT ----- SEE PLAN

**B. DEMOLITION**

1. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING DEMOLITION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF ANY REQUIRED SHORING PRIOR TO DEMOLITION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF ALL TEMPORARY DUST PROOFING AND WATERPROOFING REQUIRED TO PREVENT DEBRIS OR WATER FROM ENTERING OTHER AREAS OF THE STRUCTURE WHICH ARE NOT INCLUDED WITHIN THE WORK.
4. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF THE TEMPORARY DUST PROOFING AND WATER PROOFING WITH THE CONTRACTING OFFICER.
5. DAMAGE TO EXISTING STRUCTURE TO REMAIN AS A RESULT OF OR ASSOCIATED WITH THE DEMOLITION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL PREVENT DEBRIS FROM ENTERING OTHER AREAS OF THE STRUCTURE WHICH ARE NOT INCLUDED WITHIN THE WORK.
7. ALL MATERIALS FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

**B. DEMOLITION (CONT.)**

8. THE CONTRACTOR SHALL FIELD VERIFY ALL STRUCTURAL CONDITIONS, NEW AND EXISTING, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
9. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WITH THE CONTRACTING OFFICER.

**C. STRUCTURAL STEEL**

1. MATERIALS
  - a. STRUCTURAL STEEL ----- ASTM A992, GRADE 50 UNLESS NOTED
  - b. ANGLES, CHANNELS AND MISCELLANEOUS STEEL ----- ASTM A36
  - c. ANCHOR RODS ----- ASTM F1554, GRADE 36
  - d. HIGH STRENGTH BOLTS ----- ASTM A325 (3/4"Ø) UNLESS NOTED (OF NORTH AMERICAN MANUFACTURE)
  - e. WELDING ELECTRODES ----- AWS A5.1 (E70XX)
  - f. PIPE ----- ASTM A53, GRADE B
  - g. SQUARE AND RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS) ----- ASTM A500, GRADE B
  - h. SAG RODS ----- ASTM A36
  - i. BASE PLATES GROUT (FLOWABLE) ----- 10,000 PSI
  - j. PLATES ----- ASTM A36 OR ASTM A572 GRADE 50 WHERE INDICATED
2. STEEL CONSTRUCTION SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL STEEL FOR BUILDINGS" AISC 360-10.
3. WELDING SHALL CONFORM TO "STRUCTURAL WELDING CODE" AWS D1.1
4. CONNECTIONS NOT SHOWN ON THE DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR. CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" AND AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES". ALL BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS. MINIMUM BOLT SIZE SHALL BE 3/4"Ø AND MINIMUM WELD SIZE SHALL BE 3/16". WT BRACING CONNECTIONS SHALL HAVE A MINIMUM OF 4 BOLTS. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF AWS D1.1.
5. ALL CLIP ANGLE CONNECTION MATERIALS AND GUSSETS SHALL BE 5/16" THICK MINIMUM. PROVIDE 3/8" STIFFENER PLATES LOCALLY AT ALL HANGERS AND POSTS. SHEAR TABS SHALL BE 3/8" THICK MINIMUM.
6. ALL SHEAR CONNECTIONS SHALL BE DESIGNED BY THE STEEL FABRICATOR FOR LOADS SHOWN ON PLANS UNLESS OTHERWISE INDICATED. SHEAR TABS ARE REQUIRED AT ALL FR MOMENT CONNECTIONS.
7. PROVIDE 3/4"Ø ASTM A325X FASTENERS AT ALL SHEAR TAB CONNECTIONS.
8. ALL LOADS SHOWN ON PLANS ARE SERVICE LOADS IN KIPS. WHERE NO LOADS ARE SHOWN, CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM SHEAR OF 10 KIPS AND A MINIMUM TENSIONS OF 5 KIPS.
9. STEEL EXPOSED TO EXTERIOR ENVIRONMENT SHALL BE HOT-DIPPED GALVANIZED.
10. SHOP CONNECTIONS MAY BE BOLTED OR WELDED.
11. PROVIDE STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS SUPPORTING COLUMNS OR RUNNING OVER THE TOPS OF COLUMNS. BEAMS SUPPORTING STAIR STRUTS AND STAIR HANGERS, ETC. MINIMUM STIFFENER PLATE THICKNESS SHALL BE 3/8", FLANGE THICKNESS OF COLUMN ABOVE OR BELOW BEAM, OR BEAM WEB THICKNESS, WHICHEVER IS GREATER.

**C. STRUCTURAL STEEL (CONT)**

12. STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING OF THE STEEL FRAME REQUIRED TO MAINTAIN PLUMBNESS AND STABILITY DURING CONSTRUCTION.
13. STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE DECK SUPPORT ANGLES AS REQUIRED.
14. ALL FIELD WELDS MUST BE INSPECTED BY AN AWS CERTIFIED WELD INSPECTOR.

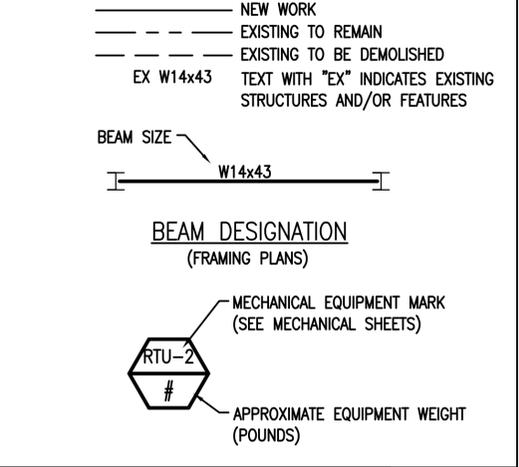
**D. MISCELLANEOUS**

1. DIMENSIONS OF EQUIPMENT OPENINGS, SUPPORTS, PADS, SLAB DEPRESSIONS, FOUNDATIONS AND ANCHORAGE HAVE BEEN DETERMINED USING SPECIFIC MANUFACTURER'S EQUIPMENT. FINAL DIMENSIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT PURCHASED. DIMENSIONS SHALL BE CHANGED ONLY WITH APPROVAL OF THE ENGINEER.
2. SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL SHEETS FOR ADDITIONAL OPENINGS, SLEEVES, EMBEDDED ITEMS, UNDERGROUND PIPING, AND ELECTRICAL GROUNDING NOT SHOWN ON STRUCTURAL SHEETS.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK. VARIATIONS BETWEEN SHEET AND ACTUAL EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
4. COORDINATE FINAL DIMENSIONS OF DUCT OPENINGS, SLAB DEPRESSIONS, AND EQUIPMENT SUPPORTS WITH THE APPROPRIATE CONTRACTOR. DIMENSIONS WHERE SHOWN ON CONTRACT DOCUMENTS SHALL BE CHANGED ONLY WITH THE APPROVAL OF THE ENGINEER.
5. SEE OTHER DISCIPLINE DRAWINGS FOR LOCATION OF CURBS, CONCRETE PADS, FLOOR DEPRESSIONS, ROOF AND FLOOR DRAINS.
6. VERIFY FRAMING FOR SUPPORT OF MECHANICAL EQUIPMENT AND ANY MECHANICAL OPENINGS WITH MECHANICAL TRADES PRIOR TO SUBMISSION OF SHOP DRAWINGS.
7. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.
8. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH OTHER DISCIPLINES DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE ENGINEER PRIOR TO PERFORMING WORK.
9. SEE OTHER DISCIPLINES DRAWINGS AND SPECIFICATIONS FOR WATERPROOFING / DAMPPROOFING AND FIREPROOFING DETAILS AND REQUIREMENTS.

**E. STRUCTURAL SPECIAL INSPECTIONS**

1. IN ACCORDANCE WITH SECTION 1704 & 1705 OF THE INTERNATIONAL BUILDING CODE, AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS, AN INDEPENDENT APPROVED AGENCY SHALL MAKE PERIODIC AND/OR CONTINUOUS INSPECTIONS OF THE CONSTRUCTION PROGRESS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
- STEEL CONSTRUCTION  
STRUCTURAL STEEL ----- SECTION 1705.2.1  
AISC 360 - CHAPTER N

**LEGEND**



**TECHNICAL TERMS**

ABBREVIATION	TERM
B TO B	BACK TO BACK
CNJ	CONNECTION JOINT
CONN	CONNECTION
CORP	CORPORATION
DWL	DOWEL
EMBD	EMBEDMENT
EOD	EDGE OF DECK
ES	EACH SIDE
GA	GAGE, GAUGE
GR	GUARD RAIL
HPT	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
IJ	ISOLATION JOINT
JT	JOINT
NIC	NOT IN CONTRACT
PCP	PRECAST HOLLOW CORE PLANK
PL	PLATE
PMF	PREMOLDED FILLER
PROJ	PROJECTION
SPA	SPACES
STL	STEEL
VB	VERTICAL BRACE
WWR	WELDED WIRE REINFORCING

**STATEMENT OF SPECIAL INSPECTIONS**

1. SPECIAL INSPECTIONS SHALL BE PROVIDED BY SPECIAL INSPECTION AGENCY ACCORDING TO IBC 2012, CHAPTER 17
2. THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND CONTRACTING OFFICER FOR APPROVAL.
3. SPECIAL INSPECTION REPORTS SHALL BE PROVIDED TO THE ENGINEER OF RECORD AND CONTRACTING OFFICER.
4. STEEL CONSTRUCTION (STRUCTURAL STEEL), SECTION 1705.2.1, AISC - CHAPTER N.

DATE: 01/16/15

DESCRIPTION: 0

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ACTIVITY: \_\_\_\_\_

SATISFACTORY TO DATE: \_\_\_\_\_

DES: KCB | DRW: TAW | CHK: JJC

BRANCH MANAGER: \_\_\_\_\_  
CHIEF ENGINEER/ARCH: \_\_\_\_\_  
DESIGN DIRECTOR: \_\_\_\_\_

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**BUILDING 446 HVAC REPLACEMENT**

GENERAL STRUCTURAL NOTES & LEGEND

SCALE: AS NOTED  
EPROJCT NO.: 1312379  
CONSTR. CONTR. NO.: \_\_\_\_\_

NAVFAC DRAWING NO.: 12684350  
SHEET 9 OF 47

**S-001**

NAVSTA DWG. NO. 42243-390

FILE NAME: I:\Projects\1312379\1312379\_001.dwg  
 USER: JJC  
 DATE: 1/16/15 2:20pm  
 PLOTTER: HP DesignJet 5000PS  
 PLOTTED: 1/16/15 2:20pm  
 PLOT: 1/16/15 2:20pm



1

2

3

4

5

GENERAL SHEET NOTES

- 1. FOR GENERAL STRUCTURAL NOTES AND LEGEND SEE DRAWING S-001.

DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0

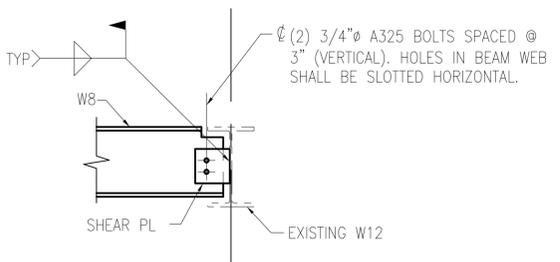


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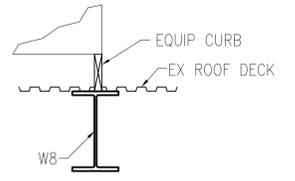
APPROVED	
FIR COMMANDER	NAVFAC
SATISFACTORY TO	DATE
DES	KCB
DRW	TAW
CHK	JJC

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 NAVAL STATION NEWPORT  
 BUILDING 446 HVAC REPLACEMENT  
 NEWPORT, RHODE ISLAND

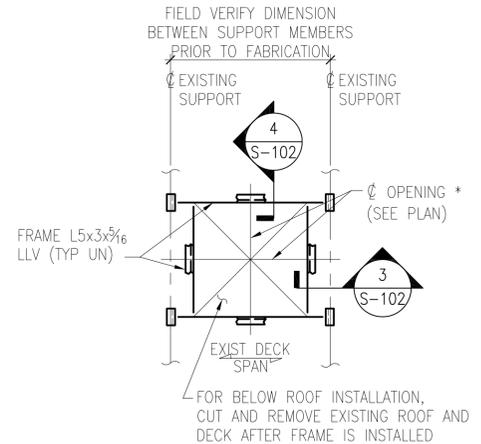
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PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684352
SHEET	11 OF 47
<b>S-102</b>	



**1 SECTION**  
 S-101 NOT TO SCALE

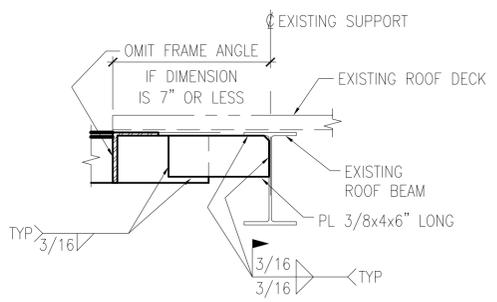


**2 SECTION**  
 S-101 NOT TO SCALE

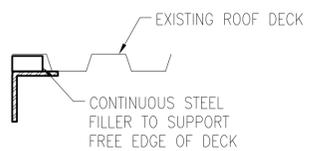


**ROOF OPENING FRAME IN EXISTING CONSTRUCTION**  
 NOT TO SCALE

- \* COORDINATE OPENING SIZE AND LOCATION WITH ACTUAL EQUIPMENT TO BE INSTALLED AND APPROVED DUCT SHOP DRAWINGS.
- FIELD VERIFY PLAN ORIENTATION OF EXISTING ROOF MEMBERS.

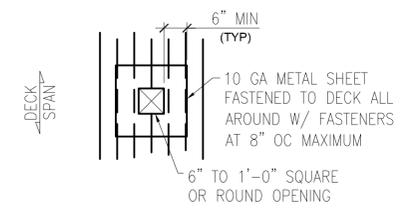


**3 SECTION**  
 S-102 NOT TO SCALE



**4 SECTION**  
 S-102 NOT TO SCALE

- \* PROVIDE UNDER EQUIPMENT CURB



**DECK SUPPORT AT OPENING DETAIL**  
 NOT TO SCALE

- DECK SUPPORT TYPICAL FOR ROOF OR FLOOR OPENING WHERE SUPPLEMENTAL FRAMING IS NOT SHOWN ON PLAN.
- PROVIDE SUPPLEMENTAL FRAMING ON (4) SIDES OF OPENINGS LARGER THAN 1'-0" IN ANY ONE DIRECTION.

FILE NAME: I:\Projects\301643\301643\_001\90\_CAD\_Models\_and\_Sheets\06\_S\_Structure\S-102.dwg LAYOUT NAME: S-102 PLOTTED: Friday, January 16, 2015 2:31pm USER: wslata

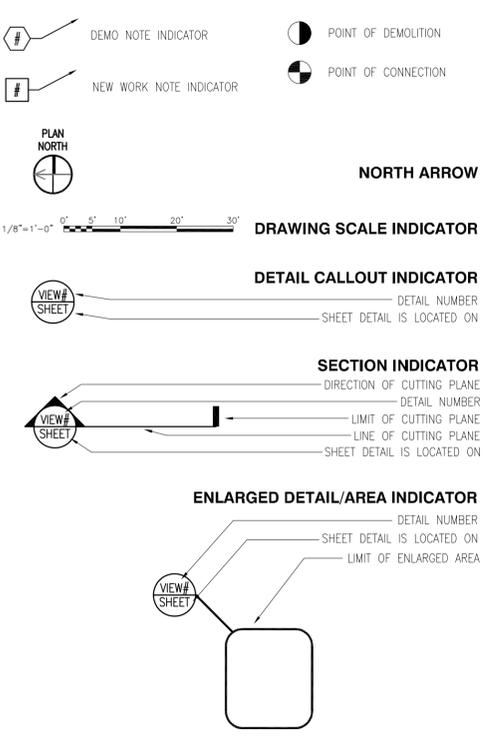
# HVAC ABBREVIATIONS LEGEND

SCALE: NTS

<b>A</b>	ABS	ABSOLUTE	<b>G</b>	GA	GAGE OR GAUGE	<b>Q</b>	QTY	QUANTITY
<b>ABV</b>	ACH	AIR CHANGES PER HOUR	<b>GAL</b>	GALV	GALVANIZED	<b>R</b>	RA	RETURN AIR
<b>AD</b>	ADJ	ACCESS DOOR	<b>GBD</b>	GDH	GRAVITY BACKDRAFT DAMPER	<b>RD</b>	RD	REFRIGERATED AIR DRYER
<b>ADJ</b>	AFF	ADJUSTABLE	<b>GDH</b>	GPD	GAS DUCT HEATER	<b>RD</b>	RD	REFRIGERANT AIR DRYER
<b>AFF</b>	AFF	ABOVE FINISHED FLOOR	<b>GPH</b>	GPM	GALLONS PER HOUR	<b>REF</b>	REF	REFERENCE
<b>AFF</b>	AFF	ABOVE FINISHED GRADE	<b>GPM</b>	GPU	GALLONS PER MINUTE	<b>REL</b>	REL	RELIEF AIR
<b>AFF</b>	AFF	AIR HANDLING UNIT	<b>GPU</b>	GUH	GALLONS PER USE	<b>RH</b>	RH	RELATIVE HUMIDITY
<b>ALT</b>	AMB	ALTITUDE	<b>GUH</b>	GW	GAS UNIT HEATER	<b>RHC</b>	RHC	REHEAT COIL
<b>AMB</b>	ANSI	AMBIENT	<b>GW</b>		GREASE WASTE	<b>RI</b>	RI	ROOF INTAKE
<b>ANSI</b>		AMERICAN NATIONAL STANDARDS INSTITUTE				<b>RL</b>	RL	REFRIGERANT LIQUID/RAIN LEADER
<b>AP</b>	APD	ACCESS PANEL				<b>RO</b>	RO	ROOF OPENING
<b>APD</b>	APD	AIR PRESSURE DROP				<b>RPM</b>	RPM	REVOLUTIONS PER MINUTE
<b>APPROX</b>	ARF	APPROXIMATE				<b>RS</b>	RS	REFRIGERANT SUCTION
<b>ARF</b>	ASJ	ABOVE RAISED FLOOR	<b>H</b>	HB	HOSE BIB			
<b>ASJ</b>	ATC	ALL SERVICE JACKET	<b>HOA</b>	HP	HAND-OFF-AUTOMATIC SWITCH			
<b>ATC</b>	ATM	AUTOMATIC TEMPERATURE CONTROL	<b>HPU</b>	HR	HORSEPOWER			
<b>ATM</b>	AW	ATMOSPHERE	<b>HWP</b>	HWS	HOT WATER PUMP			
<b>AW</b>	AVS	ACID WASTE	<b>HWR</b>	HX	HOT WATER SUPPLY			
<b>AVS</b>		ACID WASTE STACK			HOT WATER RETURN			
		ACID VENT STACK			HEAT EXCHANGER			
<b>B</b>	BAS	BOILER						
<b>BAS</b>	BDD	BUILDING AUTOMATION SYSTEM						
<b>BDD</b>	B/D	BASEBOARD HEATERS						
<b>B/D</b>	BHP	BACKDRAFT DAMPER						
<b>BHP</b>	BMS	BELOW FLOOR						
<b>BMS</b>	BOD	BRAKE HORSEPOWER						
<b>BOD</b>	BOF	BUILDING MANAGEMENT SYSTEM						
<b>BOF</b>	BOL	BOTTOM OF DUCT						
<b>BOL</b>	BOP	BOTTOM OF FAN						
<b>BOP</b>	BOS	BOTTOM OF LOUVER						
<b>BOS</b>	BTUH	BOTTOM OF PIPE						
<b>BTUH</b>		BOTTOM OF STEEL						
		BRITISH THERMAL UNIT PER HOUR						
<b>C</b>	C	CELSIUS	<b>K</b>	KG	KILOGRAMS	<b>I</b>	TBD	TO BE DETERMINED
<b>CD</b>	CFM	CONDENSATE DRAIN LINE	<b>KPA</b>	KW	KILO PASCAL	<b>TEMP</b>	TEMP	TEMPERATURE
<b>CFM</b>	CH	CUBIC FEET PER HOUR				<b>TOD</b>	TOD	TOP OF DUCT
<b>CH</b>	CHP	CUBIC FEET PER MINUTE				<b>TOF</b>	TOF	TOP OF FAN
<b>CHP</b>	CHS	CHILLER				<b>TOL</b>	TOL	TOP OF LOUVER
<b>CHS</b>	CHR	CHILLED WATER PUMP				<b>TOS</b>	TOS	TOP OF STRUCTURE
<b>CHR</b>	CL	CHILLED WATER SUPPLY				<b>TOT</b>	TOT	TOTAL
<b>CL</b>	CLG	CHILLED WATER RETURN				<b>TP</b>	TP	TOTAL PRESSURE / TRAP PRIMER
<b>CLG</b>	CM	CENTER LINE				<b>TSP</b>	TSP	TOTAL STATIC PRESSURE
<b>CM</b>	CO	CEILING				<b>T-STAT</b>	T-STAT	THERMOSTAT
<b>CO</b>	COU	CENTIMETERS				<b>TUP</b>	TUP	TILT-UP
<b>COU</b>	COOL	CONCRETE MASONRY UNIT				<b>TP</b>	TP	PANEL TYPICAL
<b>COOL</b>	CONN	CLEANOUT				<b>T&amp;P</b>	T&P	TEMPERATURE & PRESSURE
<b>CONN</b>	CONT	COLUMN						
<b>CONT</b>	CP	CONNECT						
<b>CP</b>	CU	CONTINUED						
<b>CU</b>	CRU	CONTROL PANEL						
<b>CU</b>	CT	CUBIC FEET						
<b>CRU</b>	CUH	COMPUTER ROOM UNIT						
<b>CT</b>	CV	COOLING TOWER						
<b>CUH</b>	CWP	CABINET UNIT HEATER						
<b>CV</b>	CWR	CONSTANT VOLUME						
<b>CWP</b>	CWS	CONDENSER WATER PUMP						
<b>CWR</b>		CONDENSER WATER RETURN						
<b>CWS</b>		CONDENSER WATER SUPPLY						
<b>D</b>	DAC	DUCTLESS SPLIT INDOOR UNIT						
<b>DAC</b>	DB	DRY BULB						
<b>DB</b>	db	DECIBELS						
<b>db</b>	DCU	DUCTLESS SPLIT OUTDOOR UNIT						
<b>DCU</b>	DDC	DIRECT DIGITAL CONTROL						
<b>DDC</b>	DEG	DEGREES						
<b>DEG</b>	DIA	DIAMETER						
<b>DIA</b>	DN	DOWN						
<b>DN</b>	DWG	DRAWING						
<b>DWG</b>	DX	DIRECT EXPANSION						
<b>DX</b>								
<b>E</b>	E	ECONOMIZER						
<b>EA</b>	EAT	EACH / EXHAUST AIR						
<b>EAT</b>	EAU	ENTERING AIR TEMPERATURE						
<b>EAU</b>	ECH	EVAPORATIVE COOLING UNIT						
<b>ECH</b>	EED	ELECTRIC DUCT HEATER						
<b>EED</b>	EEF	ENERGY EFFICIENCY RATIO						
<b>EEF</b>	EL	EXHAUST FAN						
<b>EL</b>	ELEC	ELEVATION						
<b>ELEC</b>	EQ	ELECTRICAL / ELECTRIC						
<b>EQ</b>	ERV	EQUIVALENT						
<b>ERV</b>	ESP	ENERGY RECOVERY VENTILATOR						
<b>ESP</b>	ET	EXTERNAL STATIC PRESSURE						
<b>ET</b>	ETR	EXPANSION TANK						
<b>ETR</b>	EUH	EXISTING TO REMAIN						
<b>EUH</b>	EWC	ELECTRIC UNIT HEATER						
<b>EWC</b>	EWH	ELECTRIC WATER COOLER						
<b>EWH</b>	EWS	ELECTRIC WALL HEATER						
<b>EWS</b>	EWT	EMERGENCY EYEWASH/SHOWER						
<b>EWT</b>	EXH	ENTERING WATER TEMPERATURE						
<b>EXH</b>	EXP	EXHAUST AIR						
<b>EXP</b>	EXIST	EXPANSION						
<b>EXIST</b>		EXISTING						
<b>F</b>	F	FAHRENHEIT						
<b>FA</b>	FA	FIRE ALARM						
<b>FA</b>	FC	FLEXIBLE CONNECTION						
<b>FC</b>	FCO	FLOOR CLEANOUT						
<b>FCO</b>	FCU	FAN COIL UNIT						
<b>FCU</b>	FD	FIRE DAMPER/FLOOR DRAIN						
<b>FD</b>	FL	FLOOR						
<b>FL</b>	FLA	FULL LOAD AMPERES						
<b>FLA</b>	FLD	FLOOR DRAIN						
<b>FLD</b>	FOB	FLAT ON BOTTOM						
<b>FOB</b>	FPB	FAN POWERED VARIABLE						
<b>FPB</b>	FPM	AIR VOLUME BOX						
<b>FPB</b>	FPS	FEET PER MINUTE						
<b>FPS</b>	FS	FEET PER SECOND						
<b>FS</b>	FSD	FLOOR SINK						
<b>FSD</b>	FSK	FIRE/SMOKE DAMPER						
<b>FSK</b>	FT	FOIL SCRIM KRAFT						
<b>FT</b>	FTG	FEET OR FOOT						
<b>FTG</b>		FOOTING						

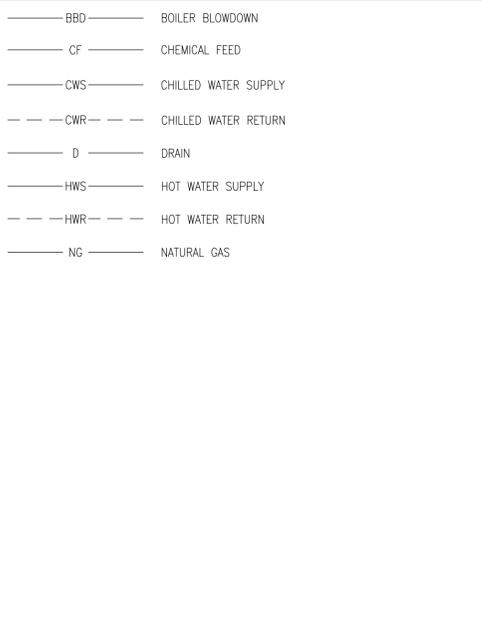
# SYMBOLS LEGEND

SCALE: NTS



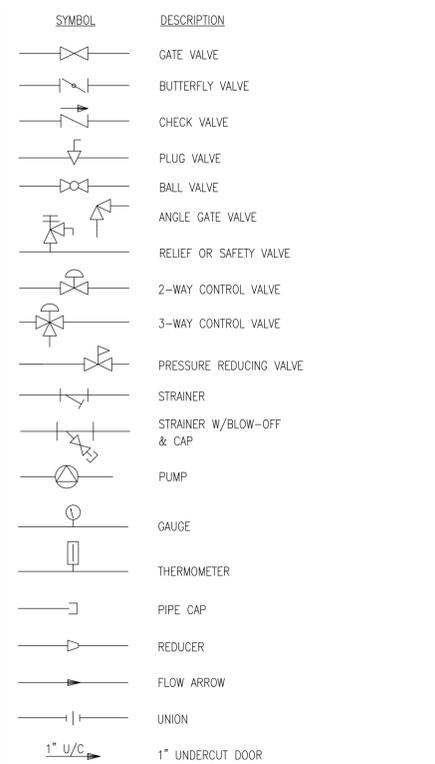
# HVAC PIPING LEGEND

SCALE: NTS



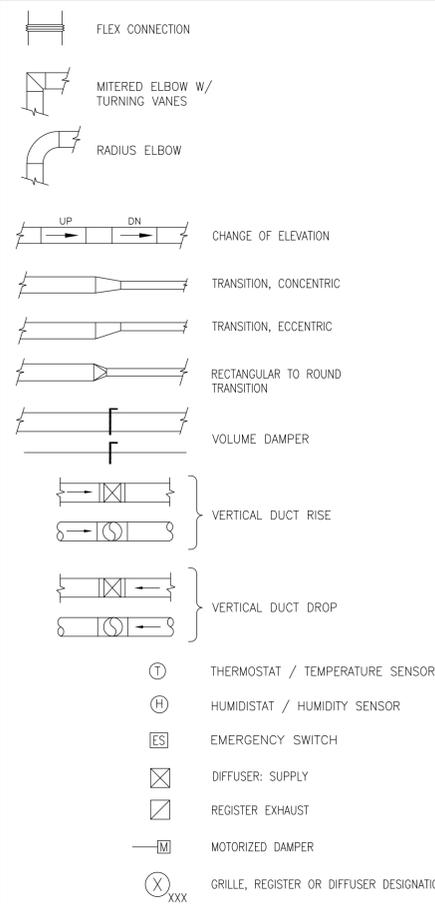
# HVAC PIPING SYMBOLS

SCALE: NTS



# HVAC SYMBOL LEGEND

SCALE: NTS



# HVAC GENERAL NOTES

SCALE: NTS

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

COORDINATE THAT OUTSIDE AIR INTAKE OPENINGS FOR VENTILATION AIR ARE LOCATED AT LEAST 10 FEET MEASURED IN ANY DIRECTION FROM ANY FLUES, VENTS, CHIMNEYS, PLUMBING VENTS UNLESS TOP OF SUCH INTAKE OPENING IS 2 FEET BELOW ANY OF THE LISTED ITEMS.

OVERHEAD PIPING IN SPACES WITHOUT HUNG CEILINGS SHALL BE RUN AS CLOSE TO OVERHEAD DECK AS PRACTICAL, AS CLOSE TO PARALLEL JOISTS AS POSSIBLE AND ABOVE LIGHTING FIXTURES TO CONCEAL PIPING.

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

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

EXERCISE DUE CAUTION IN INSTALLING RUNOUTS AND BRANCH PIPING FROM MAINS FOR EXPANSION MOVEMENT.

COORDINATE LOCATION OF GRILLES, REGISTERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC 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.

EQUIPMENT ON THE ROOF SHALL BE INSTALLED SO AT LEAST 10 FEET OF CLEARANCE SHALL BE MAINTAINED BETWEEN EQUIPMENT AND THE ROOF EDGE.

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

COORDINATE LOCATION AND INSTALLATION OF EQUIPMENT WITH OTHER TRADES.

TEMPERATURE SENSORS SHALL BE LOCATED IN THE ROOMS INDICATED. INSTALL AT APPROXIMATELY 48" ABOVE FINISH FLOOR AND CENTERLINE WITH LIGHT SWITCHES.

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

STRUCTURAL SUPPORTS SHOWN INDICATE SIZES REQUIRED FOR EQUIPMENT USED FOR BASIS OF DESIGN. COORDINATE SUPPORT SIZES WITH ACTUAL EQUIPMENT PROVIDED.

VALVES AND SPECIALTIES SHALL BE LINE SIZE EXCEPT FOR CONTROL VALVES OR UNLESS NOTED OTHERWISE.

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 1/8" PER FOOT. VERIFY INVERT IS ESTABLISHED AFTER AIR HANDLING UNIT IS INSTALLED BUT PRIOR TO DUCTWORK INSTALLATION.

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.

RUNOUTS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF 1" IN 3'.

FOR PIPE SIZES NOT INDICATED ON PLANS, SEE EQUIPMENT CONNECTION DETAILS AND FLOW DIAGRAMS.

PROVIDE UNION OR FLANGED CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON BOTH SIDES ON CONTROL VALVES AND PRESSURE REGULATING VALVES. PROVIDE SHUT-OFF VALVES ON BOTH SIDES OF AUTOMATIC VALVES.

FLOOR MOUNTED EQUIPMENT IN THE MECHANICAL ROOMS SHALL BE LOCATED ON 6" THICK CONCRETE HOUSEKEEPING PADS UNLESS OTHERWISE INDICATED.

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.

CORRECT SETTING ON BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.

INSTALL ANCHORS AND EXPANSION DEVICES WHERE INDICATED AND WHERE REQUIRED TO ALLOW FOR EXPANSION.

LOCATE AND SIZE CURBS FOR MECHANICAL EQUIPMENT IN ACCORDANCE WITH ACTUAL EQUIPMENT PURCHASED.

FOR LOCATION OF MOTOR STARTERS, SEE ELECTRICAL DRAWINGS.

**FIRE CAULKING**

PROVIDE UL LISTED THROUGH PENETRATIONS FOR FIREWALLS AND FLOORS.

**HOT AND CHILLED WATER PIPING:**

PROVIDE MINIMUM PITCH SUFFICIENT TO INSURE ADEQUATE VENTING AND DRAINAGE.

PROVIDE MANUAL AIR VENTS AT HIGH POINTS OF SYSTEM.

PROVIDE 1/2" DRAIN VALVES AND CAPPED CONNECTIONS AT LOW POINTS IN PIPING SYSTEM FOR DRAINING.

INSTALL ALL AUTOMATIC CONTROL DEVICES (AUTOMATIC DAMPERS, CONTROL VALVES, TEMPERATURE SENSING WELL, ETC.) IN DUCTWORK AND PIPING AS INDICATED ON THESE DRAWINGS AND AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

**SHEET METAL:**

PROVIDE ACCESS DOORS IN DUCTWORK WHERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING THE FOLLOWING:

- FIRE DAMPERS
- SMOKE DETECTORS

INSTALL CEILING REGISTERS A MINIMUM OF 4" FROM EXTERIOR WALL.

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

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

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

DUCTWORK AND PIPING SHOWN INDICATES CONNECTION TO EQUIPMENT USED FOR THE BASIS OF DESIGN. COORDINATE DUCTWORK AND PIPING CONNECTIONS WITH ACTUAL EQUIPMENT PROVIDED.

**MAINTENANCE:**

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

EQUIPMENT INSTALLED ABOVE CEILINGS SHALL BE MOUNTED APPROX. 12" ABOVE CEILING (JUN) FOR MAINTENANCE ACCESS.

INSTALL PIPE RUNS AT LEAST 6" ABOVE CEILING TILES. WHERE PRACTICABLE INSTALL VALVES AND OTHER MAINTENANCE DEVICES LOW ENOUGH TO REACH WITH A 6' LADDER.

PROVIDE ACCESS TO ANY INSPECTABLE 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 SHALL BE MAINTAINED. COORDINATE THESE REQUIREMENTS WITH ALL OTHER TRADES.

**REFRIGERANTS:**

FOLLOW THE REQUIREMENTS OF NAVSTA ENVIRONMENTAL FOR REFRIGERANT RECLAIM AND NEW REFRIGERANTS. REFER TO SPECIFICATIONS FOR GUIDANCE.

APPROVED	DATE
FOR COMMANDER NAVFAC	01/16/15
ACTIVITY	01/16/15
DESIGNED BY: JMN	DATE: 02/11/15
DRAWN BY: JWS	DATE: 02/11/15
CHECKED BY: KDB	DATE: 02/11/15
BRANCH MANAGER	DATE: 02/11/15
CHIEF ENGINEER/ARCH	DATE: 02/11/15
DESIGN DIRECTOR	DATE: 02/11/15
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND <b>BUILDING 446 HVAC REPLACEMENT</b> MECHANICAL LEGEND AND GENERAL NOTES	
SCALE: NO SCALE	DATE: 02/11/15
PROJECT NO.: 1312379	DATE: 02/11/15
CONSTR. CONTR. NO.	DATE: 02/11/15
NAVFAC DRAWING NO. 12684353	DATE: 02/11/15
SHEET 12 OF 47	DATE: 02/11/15
M-100 DRAWN BY: JWS DATE: 02/11/15 NAVSTA DWG. NO. 42246-390	

FILE NAME: I:\Projects\3016435\3016435\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-100.dwg LAYOUT NAME: M-100 PLOTTED: Friday, February 13, 2015 - 7:34am USER: jcd@jw

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
100	ENTRANCE VESTIBULE
101	LOBBY
102	STAIR A
103	O.D.
104	SAFETY ROOM
105	CPO MESS
106	LCS CST INSTRUCTOR OFFICE
107	E.M. INSTR. OFFICE
108	CORR. I
109	LCS-1 CST LAB
110	LCS-1 CST CR
111	CORR. H
113	CORR. G
116	LCS-2 CST LAB
117	LCS-2 CST CR
118	STORAGE CLOSET
119	CLASSROOM
120	DATA ROOM
121	STORAGE
123	E.M. CLASSROOM #5
124	STORAGE
125	E.M. TOILET #1

ROOM NUMBER	ROOM NAME
125A	JANITOR
126	C.P.O. TOILET #1
127	SHOWER ROOM
127A	STORAGE
128	CORR. A
129	SERVICE ROOM
130	CORR. J
131	LADIES
131A	SOUND ROOM
134	STORAGE ROOM
138	MAIL
140	CORRIDOR
144	ISWOS
146	ISWOS
159	AUDITORIUM

### GENERAL SHEET NOTES

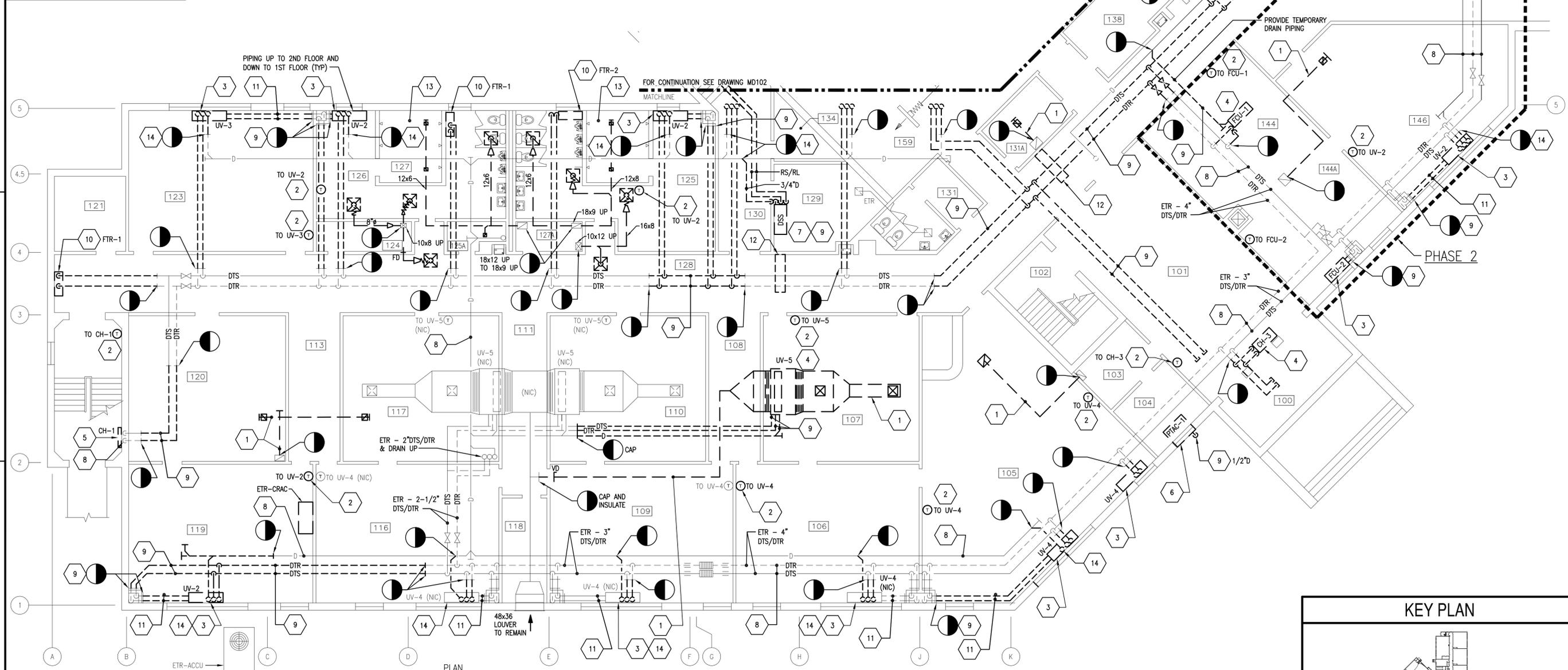
- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- REMOVE ACT AND GRID FROM ALL AREAS OF WORK EXCEPT ROOMS 106, 110, 117-119, 121 AND STAIRWELLS. PROTECT CEILINGS TO REMAIN DURING DEMOLITION AND NEW WORK.
- ROOMS 106, 109, 110, 116, 117 DEPICT EXISTING DESIGN CONDITIONS. CONTRACTOR SHALL FIELD VERIFY.

### PHASING NOTES

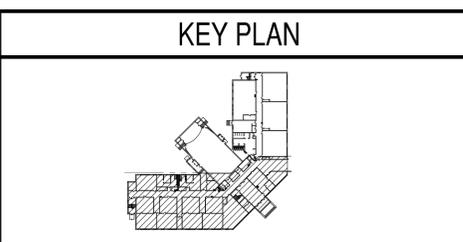
- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1. CAP PIPING AND PROVIDE TEMPORARY FLEXIBLE PIPING (ROOM 144 TO ROOM 151) AS REQUIRED TO PRESERVE SERVICE TO PHASE 2.

### SHEET KEYNOTES

- REMOVE DUCTWORK, INSULATION, HANGERS, AND SUPPORTS COMPLETE. ABANDON IN PLACE WHEN CONCEALED IN CHASE OR WALLS.
- REMOVE THERMOSTAT, CONTROL WIRING AND CONDUIT COMPLETE. PATCH AND PAINT WALL TO MATCH EXISTING ADJACENT CONDITIONS.
- REMOVE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT, SUPPORTS AND MOUNTINGS COMPLETE. EXTERIOR WALL LOUVER IS ETR.
- REMOVE SUSPENDED CONCEALED UNIT VENTILATOR OR FAN COIL UNIT, HANGERS, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE WALL MOUNTED HOT WATER CABINET UNIT HEATER, SUPPORTS AND MOUNTINGS COMPLETE.
- REMOVE PACKAGE THRU WALL AIR CONDITIONER, SUPPORTS AND MOUNTINGS COMPLETE.
- REMOVE WALL MOUNTED DUCTLESS SPLIT SYSTEM EVAPORATOR, MOUNTINGS AND SUPPORTS COMPLETE. REFER TO SPECIFICATION 0157 1900 20, "TEMPORARY ENVIRONMENTAL CONTROLS" FOR CONTACT INFORMATION AND SUBMITTAL REQUIREMENTS.
- REMOVE PIPING INSULATION COMPLETE.
- REMOVE PIPING, INSULATION, HANGERS, AND SUPPORTS COMPLETE. ABANDON IN PLACE WHEN CONCEALED IN CHASES OR WALLS.
- REMOVE WALL MOUNTED FIN TUBE RADIATOR, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE WALL MOUNTED PIPE COVER COMPLETE. SEE GENERAL NOTE 4 ON M-101 FOR NEW WORK.
- REMOVE ABANDONED PIPE MOUNTINGS.
- REMOVE GYPSUM WALL BOARD CEILING IN SHOWER AREA. SUPPORT AND FRAMING TO REMAIN.
- PROVIDE TEMPORARY DTS/DTR AND DRAIN PIPING.



PLAN NORTH  
PARTIAL FIRST FLOOR DEMOLITION PLAN  
1/8"=1'-0"  
0 4' 8' 16'



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
DATE	02/11/15
DESCRIPTION	REVISION PER NAFC DESIGN REVIEW COMMENTS

STV Incorporated  
205 West Welsh Drive  
Douglassville, PA 19518  
610-385-8200  
www.stvinc.com

APPROVED: \_\_\_\_\_  
FTR COMMANDER NAFC

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_

DES: JMN | DRAW: JWS | CHK: KDB

BRANCH MANAGER: \_\_\_\_\_

CHIEF ENGINEER: \_\_\_\_\_

DESIGN DIRECTOR: \_\_\_\_\_

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL FIRST FLOOR DEMOLITION PLAN

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.: \_\_\_\_\_

NAFC DRAWING NO.: 12684354  
SHEET 13 OF 47

**MD101**

DRAWING REVISION: 10 MARCH 2009  
NAVSTA DWG. NO. 42247-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\MD101.dwg LAYOUT NAME: MD-101 PLOTTED: Friday, February 13, 2015 - 7:35am USER: scleley

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
141	CORRIDOR
143	CLOSET
144	OFFICERS LOCKER ROOM
145	CLOSET
146	DRYING ROOM
147	SHOWER ROOM
148	ISWOS N72
149	ISWOS N72
150	N74
151	JANITOR
152	STORAGE
153	VTT
154	LAN
155	MECH. ROOM
156	STAIR C
157	RESTROOM
159	AUDITORIUM
160	CORRIDOR "J"
161	CLOSET
162	STAGE
163	VEST. #1
164	CLOSET
165	CLOSET
166	VEST. #2
171	CLOSET
172	CLOSET
173	CLOSET

### GENERAL SHEET NOTES

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- REMOVE ACT AND GRID FROM ALL AREAS OF WORK EXCEPT ROOMS 159-166 AND STAIRWELLS. PROTECT CEILINGS TO REMAIN IN DURING DEMOLITION AND NEW WORK.

### PHASING NOTES

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1. CAP PIPING AND PROVIDE TEMPORARY FLEXIBLE PIPING (ROOM 144 TO ROOM 151) AS REQUIRED TO PRESERVE SERVICE TO PHASE 2.

### SHEET KEYNOTES

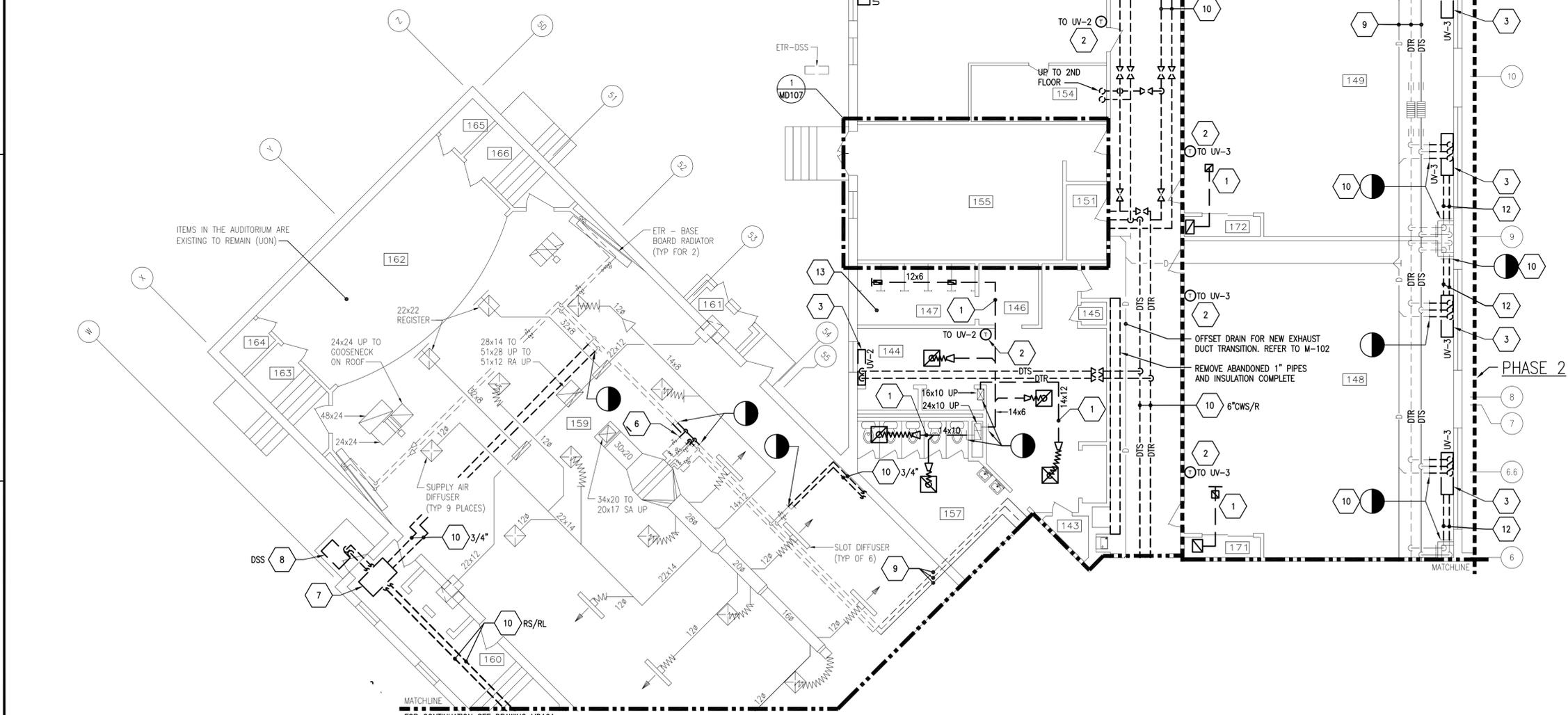
- REMOVE DUCTWORK, INSULATION, HANGERS, AND AND SUPPORTS COMPLETE. ABANDON IN PLACE WHERE CONCEALED IN CHASES OR WALLS.
- REMOVE THERMOSTAT, CONTROL WIRING AND CONDUIT COMPLETE.
- REMOVE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT, SUPPORTS AND MOUNTINGS COMPLETE. EXTERIOR WALL LOUVER IS ETR.
- NOT USED.
- REMOVE WALL MOUNTED HOT WATER CABINET UNIT HEATER, SUPPORTS AND MOUNTINGS COMPLETE.
- DISCONNECT HOT WATER COIL FROM DTS/DTR MAIN. RETAIN CHILLED WATER COIL PIPING, COIL AND VALVE WORK.
- REMOVE SUSPENDED HOT WATER CABINET HEATER, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE ROOF MOUNTED DUCTLESS SPLIT SYSTEM CONDENSING UNIT, SUPPORTS AND MOUNTINGS COMPLETE. APPROXIMATELY 1 TON. EVACUATE AND DISPOSE OF REFRIGERANT. ASSUME R-22 FOR BIDDING PURPOSES. REFER TO SPECIFICATION 01 57 19.00 20 "TEMPORARY ENVIRONMENTAL CONTROLS" FOR CONTRACTS AND SUBMITTAL REQUIREMENTS.
- REMOVE PIPING INSULATION COMPLETE.
- REMOVE PIPING, INSULATION, HANGERS, AND SUPPORTS COMPLETE. ABANDON IN PLACE WHERE CONCEALED IN CHASES OR WALLS.
- REMOVE SIDEWALL EXHAUST FAN, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE WALL MOUNTED PIPE CHASE COMPLETE. SEE GENERAL NOTE 4 ON M-102 FOR NEW WORK.
- REMOVE GYPSUM WALLBOARD CEILING IN SHOWER AREA. SUPPORT FRAMING TO REMAIN.

DATE	02/11/15
DESCRIPTION	FINAL BID DOCUMENTS
DATE	01/16/15
DESCRIPTION	



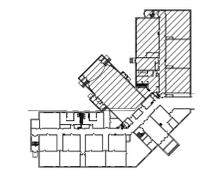


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PLAN NORTH  
PARTIAL FIRST FLOOR DEMOLITION PLAN  
1/8"=1'-0"  
0 4' 8' 16'

### KEY PLAN



APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: JMN | DRW: JWS | CHK: KDB

BRANCH MANAGER

CHIEF ENG/ARCH

DESIGN DIRECTOR

NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL STATION NEWPORT - NEWPORT, RI  
NEWPORT, RHODE ISLAND

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT

**BUILDING 446 HVAC REPLACEMENT**

PARTIAL FIRST FLOOR DEMOLITION PLAN

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.

NAVFAC DRAWING NO.: 12684355  
SHEET 14 OF 47

**MD102**

DRAWN/REVISED: 10 MARCH 2009  
NAVSTA DWG. NO. 42248-390

FILE NAME: I:\Projects\3016435\3016435\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\MD102.dwg LAYOUT NAME: MD-102 PLOTTED: Friday, February 13, 2015 - 7:36am USER: sclegh

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
200	CO
201	CO'S CONFERENCE ROOM
202	PASSAGE
203	OFFICE
205	CORR. L
207	DHASO/DC
208	CORR. K
213	LPD-17
214	TRAINING AIDS AND STORAGE
215	CORR. J
216	CLASSROOM
217	E.M. CLASSROOM #6
221	FACILITIES (N3)
221A	STORAGE
221B	STORAGE
223	CORR. D
224	C.P.O. TOILET #2

ROOM NUMBER	ROOM NAME
226	JANITOR
227	STORAGE
228	COMPTROLLER (N8)/SUPPLY (N8)
230	VFO
231	ED OFFICE
232	CORRIDOR
233	STAIR A
234	STORAGE
235	OFFICER IN CHARGE
235A	CLOSET
240	RECEPTIONIST
241	XO OFFICE
244	CLOSET
247	LIBRARY
248	STORAGE

**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- REMOVE ACT AND GRID FROM ALL AREAS OF WORK EXCEPT ROOMS 221A AND STAIRWELLS. PROTECT CEILINGS TO REMAIN DURING DEMOLITION AND NEW WORK CONSTRUCTION.

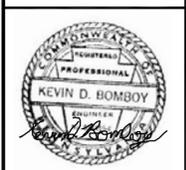
**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1. CAP PIPING AS REQUIRED TO PRESERVE SERVICE TO PHASE 2.

**SHEET KEYNOTES**

- REMOVE DUCTWORK, INSULATION, HANGERS, AND ALL SUPPORTS COMPLETE. ABANDON IN PLACE WHERE CONCEALED IN CHASES OR WALLS.
- REMOVE THERMOSTAT, CONTROL WIRING AND CONDUIT COMPLETE.
- REMOVE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT, SUPPORTS AND MOUNTINGS COMPLETE. EXTERIOR WALL LOUVER IS ETR. PROVIDE INSULATED SHEETMETAL BLANK-OFF PLATE.
- REMOVE SUSPENDED CONCEALED UNIT VENTILATOR OR CABINET UNIT HEATER, HANGERS, MOUNTINGS AND SUPPORTS COMPLETE.
- NOT USED.
- REMOVE WALL MOUNTED HOT WATER FINNED TUBE RADIATOR, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE WALL MOUNTED CABINET UNIT HEATER MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE PIPING, INSULATION, HANGERS, AND SUPPORTS COMPLETE. ABANDON IN PLACE WHERE CONCEALED IN CHASES OR WALLS.
- REMOVE PIPING INSULATION COMPLETE.

DATE	DESCRIPTION
01/16/15	FINAL BID DOCUMENTS
0	SM



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APPROVED: [Signature]  
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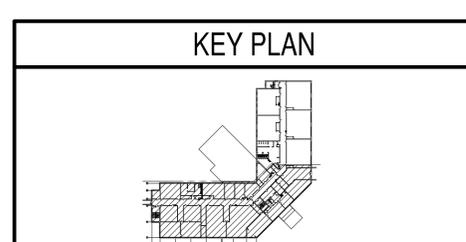
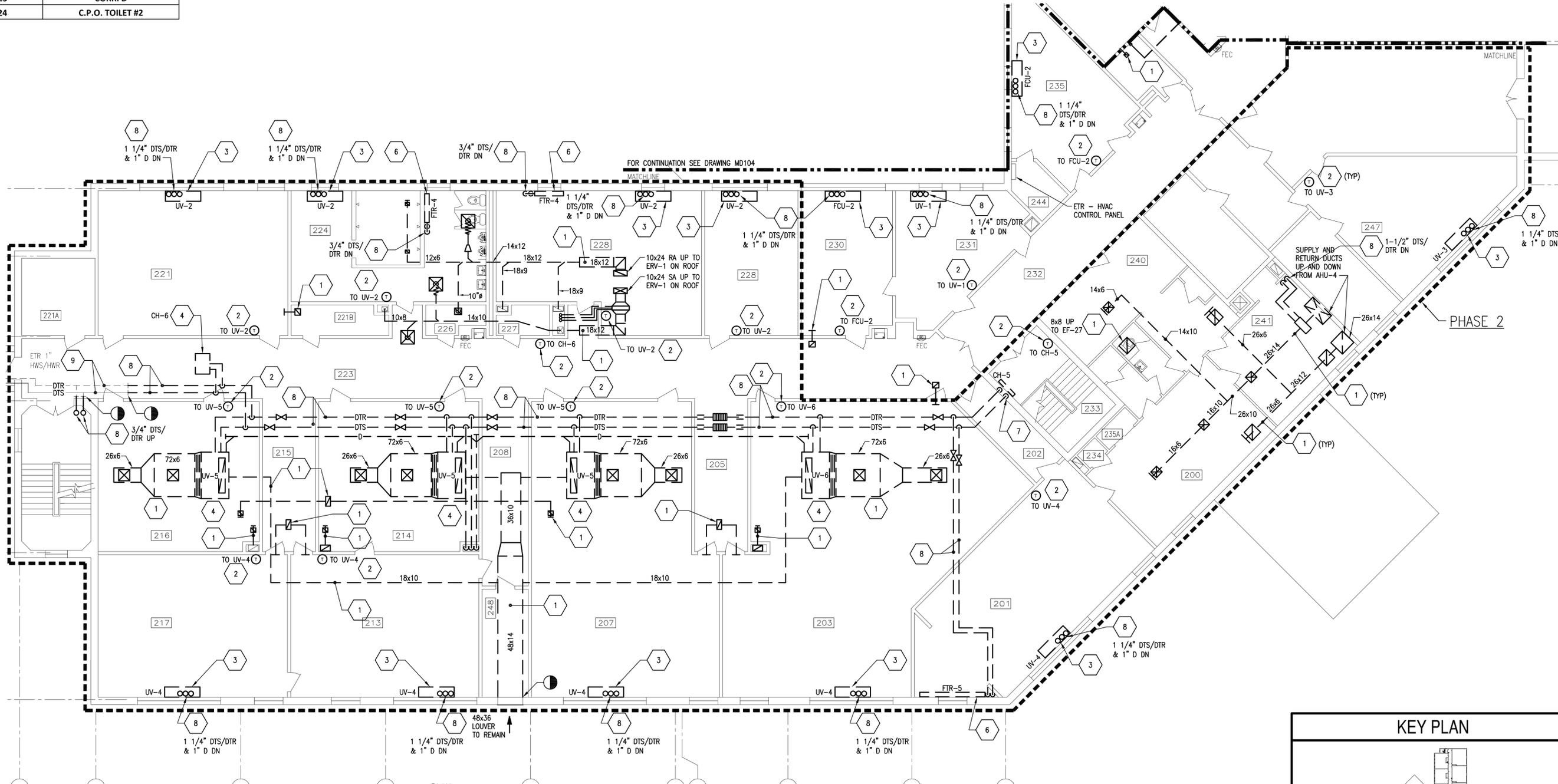
SATISFACTORY TO DATE  
DES: JMN | DRW: JWS | CHK: KDB  
BRANCH MANAGER  
CHIEF ENGINEER  
DESIGN DIRECTOR

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NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL SECOND FLOOR DEMOLITION PLAN

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.  
NAVFAC DRAWING NO.: 12684356  
SHEET 15 OF 47  
**MD103**

NAVSTA DWG. NO. 42249-390



PLAN NORTH  
1/8"=1'-0"  
**PARTIAL SECOND FLOOR DEMOLITION PLAN**

FILE NAME: I:\Projects\3016435\3016435\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\MD103.dwg LAYOUT NAME: MD-103 PLOTTED: Thursday, January 15, 2015 - 3:01pm USER: stckkyk

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
249	OFF TOILET #2
250	STAIR
250A	CORR. F
251	OFFICERS LOCKER ROOM #2
254	CLOSET
255	TRAINING REQ. (N9)
256	VTC
257	OMMS-NG (N72)
259	CLOSET
260	STORAGE
261	MCM
262	CLOSET
263	STORAGE
264	ADMIN (N1)

### GENERAL SHEET NOTES

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- REMOVE ACT AND GRID FROM ALL AREAS OF WORK EXCEPT STAIRWELLS. PROTECT ALL CEILINGS TO REMAIN DURING DEMOLITION AND NEW WORK.

### PHASING NOTES

- WORK ON THIS DRAWING SHALL BE ACCOMPLISHED IN PHASE 1.

### SHEET KEYNOTES

- REMOVE DUCTWORK, INSULATION, HANGERS, AND AND SUPPORTS COMPLETE. ABANDON IN PLACE WHERE CONCEALED IN CHASES OR WALLS.
- REMOVE TEMPERATURE SENSOR, CONTROL WIRING AND CONDUIT COMPLETE.
- REMOVE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT, SUPPORTS AND MOUNTINGS COMPLETE. EXTERIOR WALL LOUVER IS ETR.
- EXISTING TO REMAIN SUSPENDED DUCTLESS SPLIT SYSTEM, RS/RL AND DRAIN PIPING, HANGERS, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE WALL MOUNTED HOT WATER CABINET UNIT HEATER OR FIN TUBE RADIATOR, SUPPORTS AND MOUNTINGS COMPLETE.
- REMOVE WALL MOUNTED FINNED TUBE RADIATOR MOUNTING AND SUPPORTS COMPLETE.
- REMOVE CEILING MOUNTED CABINET UNIT HEATER, HANGERS, MOUNTINGS AND SUPPORTS COMPLETE.
- REMOVE PIPING, INSULATION, HANGERS AND SUPPORTS COMPLETE. ABANDON IN PLACE WHERE CONCEALED IN CHASES OR WALLS.

DATE	DESCRIPTION	BY
01/16/15	FINAL BID DOCUMENTS	APPR
0		SM



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ACTIVITY

SATISFACTORY TO DATE  
DES: JMN | DRW: JWS | CHK: KDB

BRANCH MANAGER  
CHIEF ENGR/ARCH

DESIGN DIRECTOR

NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT - NEWPORT R

NEWPORT, RHODE ISLAND

BUILDING 446 HVAC REPLACEMENT

PARTIAL SECOND FLOOR DEMOLITION PLAN

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

PUBLIC WORKS DEPARTMENT

NAVAL STATION NEWPORT

SCALE: AS NOTED

PROJECT NO.: 1312379

CONSTR. CONTR. NO.

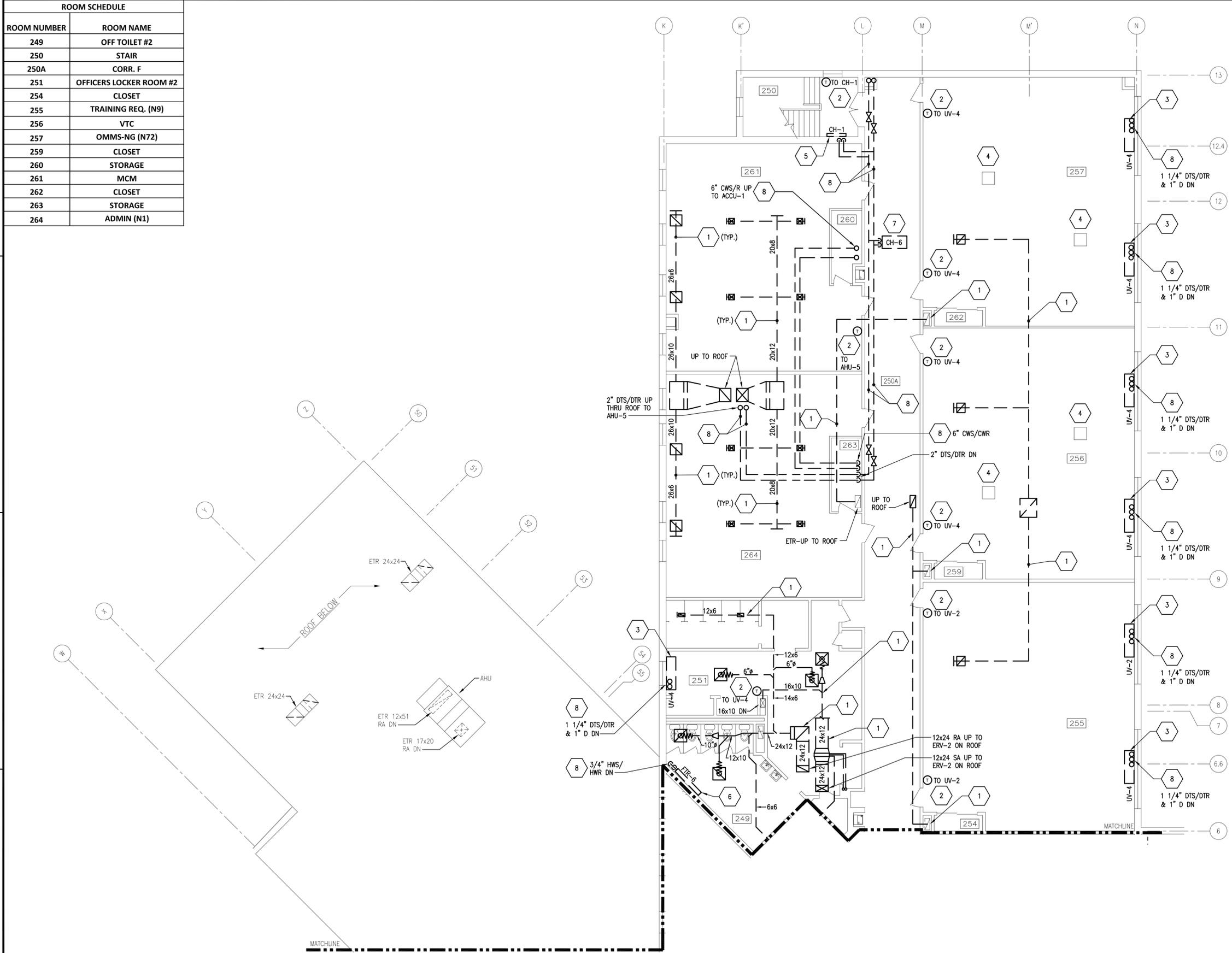
NAVFAC DRAWING NO. 12684357

SHEET 16 OF 47

MD104

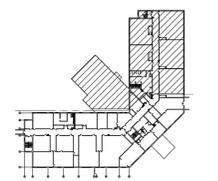
DRAWING REVISION: 10 MARCH 2009

NAVSTA DWG. NO. 42250-390



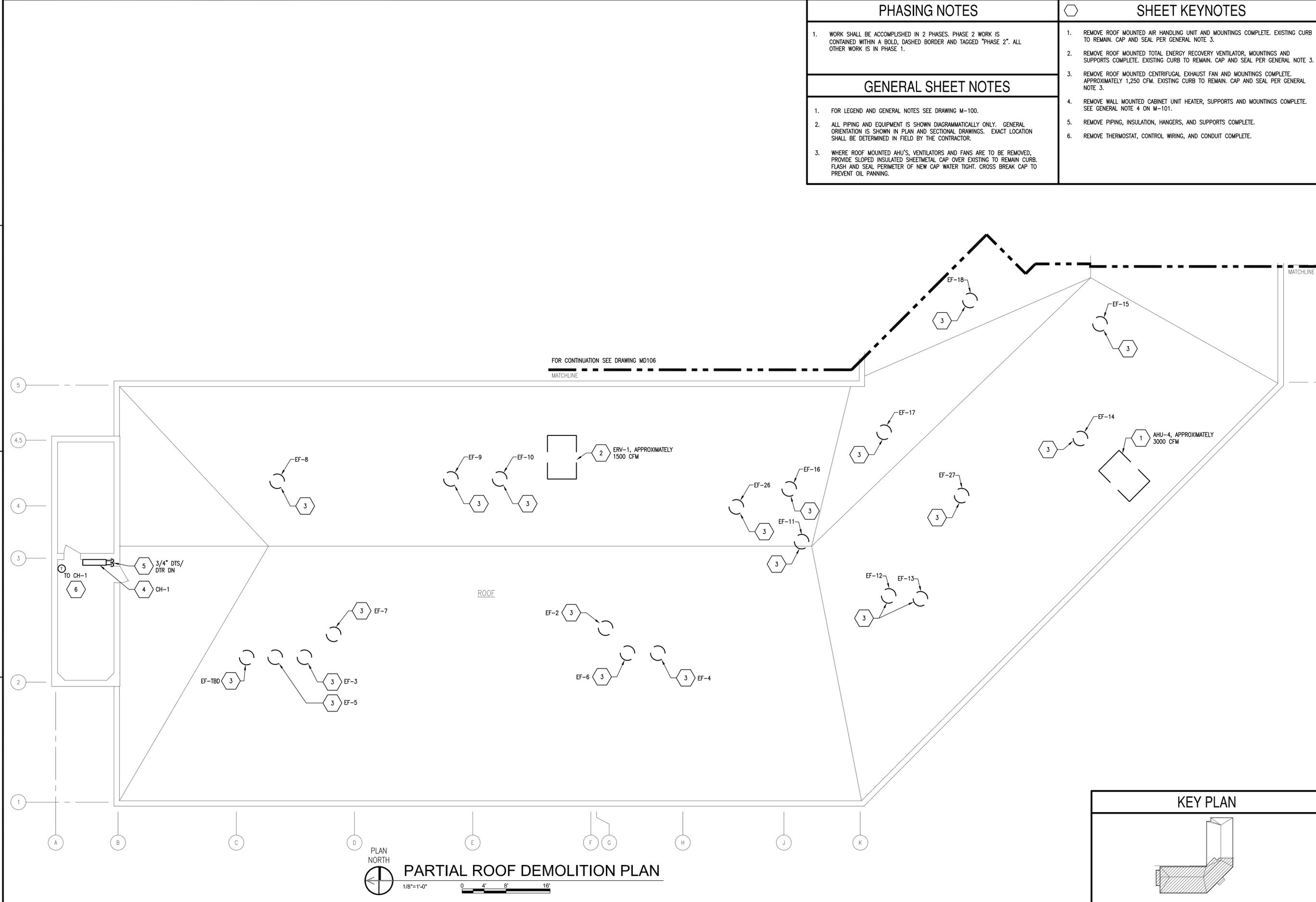
PLAN NORTH  
**PARTIAL SECOND FLOOR DEMOLITION PLAN**  
1/8"=1'-0" 0 4' 8' 16'

### KEY PLAN



FILE NAME: I:\Projects\3016435\3016435\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\MD104.dwg LAYOUT NAME: MD-104 PLOTTED: Thursday, January 15, 2015 - 3:02pm USER: eickley

FILE NAME: I:\Projects\3016436\3016436\_0001\901\_CAD\_Models\_and\_Sheets\13\_Mechanical\MD105.dwg LAYOUT NAME: MD-105 PLOTTED: Thursday, January 15, 2015 - 3:03pm USER: sckklyk



SY#	DESCRIPTION	DATE	APP#
0	FINAL BID DOCUMENTS	01/16/15	

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ACTIVITY	
SATISFACTORY TO	DATE
DES: JMN	DRW: JWS
CHK: KDB	
BRANCH MANAGER	
CHIEF ENGR/ARCH	
DESIGN DIRECTOR	

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NAVAL FACILITIES ENGINEERING COMMAND  
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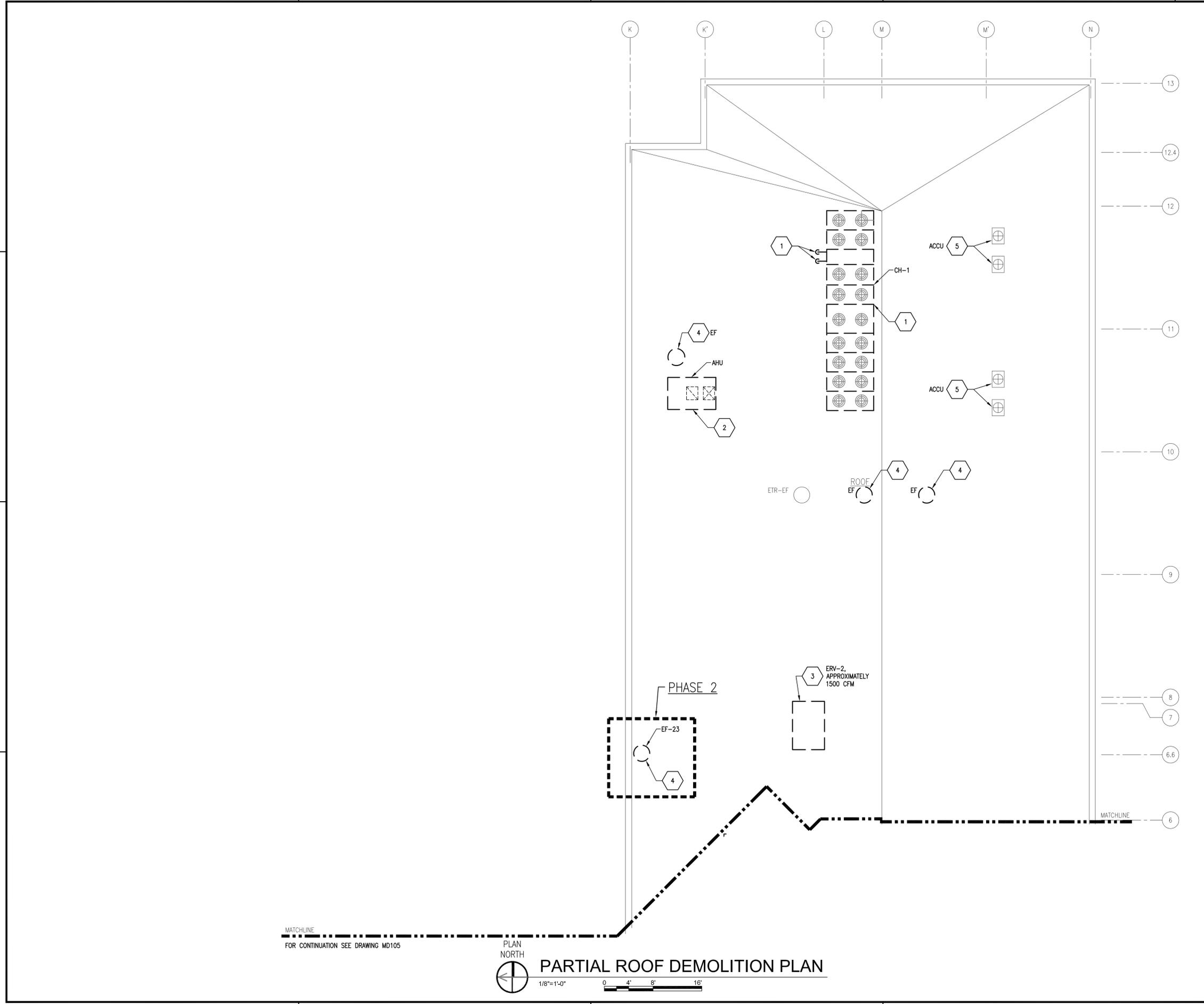
MID-ATLANTIC  
NAVAL STATION NEWPORT - NEWPORT, RI

**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL ROOF DEMOLITION PLAN

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.  
NAVFAC DRAWING NO.: 12684358  
SHEET 17 OF 47  
**MD105**

NAVSTA DWG. NO. 42251-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\3\_Mechanical\MD106.dwg LAYOUT NAME: MD-106 PLOTTED: Thursday, January 15, 2015 - 3:04pm USER: sckklyk



**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- WHERE ROOF MOUNTED AHU'S, VENTILATORS AND FANS ARE TO BE REMOVED, PROVIDE SLOPED INSULATED SHEETMETAL CAP OVER EXISTING TO REMAIN CURB. FLASH AND SEAL PERIMETER OF NEW CAP WATER TIGHT. CROSS BREAK CAP TO PREVENT OIL PANNING.

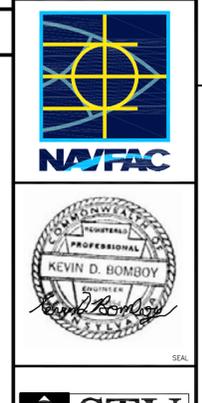
**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**SHEET KEYNOTES**

- REMOVE ROOF MOUNTED AIR COOLED CHILLER, PIPING AND HANGERS. APPROXIMATELY 210 TONS. EVACUATE AND DISPOSE OF REFRIGERANT. ASSUME R-22 FOR BIDDING PURPOSES. ELEVATED STEEL PLATFORM TO REMAIN.
- REMOVE ROOF MOUNTED AIR HANDLING UNIT COMPLETE. CURB MOUNTINGS AND SUPPORTS TO REMAIN. CAP AND SEAL PER GENERAL NOTE 3.
- REMOVE ROOF MOUNTED TOTAL ENERGY RECOVERY VENTILATOR COMPLETE. MOUNTINGS AND SUPPORTS TO REMAIN. CAP AND SEAL PER GENERAL NOTE 3.
- REMOVE ROOF MOUNTED CENTRIFUGAL EXHAUST FAN COMPLETE. APPROXIMATELY 1,250 CFM. ROOF CURB MOUNTINGS AND SUPPORTS TO REMAIN. CAP AND SEAL PER GENERAL NOTE 3.
- EXISTING TO REMAIN ROOF MOUNTED AIR COOLED CONDENSING UNIT, RS/RL AND DRAIN PIPING, UNIT SUPPORTS AND MOUNTINGS COMPLETE.

SY#	DESCRIPTION	DATE	APP#
0	FINAL BID DOCUMENTS	01/16/15	



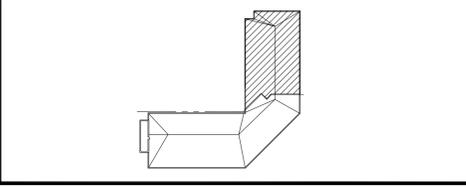
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SATISFACTORY TO	DATE
DES: JMN	DRW: JWS
CHK: KDB	
BRANCH MANAGER	
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DESIGN DIRECTOR	

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 NAVAL FACILITIES ENGINEERING COMMAND  
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 NAVAL STATION NEWPORT  
 NAVAL STATION NEWPORT - NEWPORT, RHODE ISLAND  
**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL ROOF DEMOLITION PLAN

SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684359
SHEET	18 OF 47
<b>MD106</b>	

**KEY PLAN**



MATCHLINE  
 FOR CONTINUATION SEE DRAWING MD105

PLAN NORTH

**PARTIAL ROOF DEMOLITION PLAN**

1/8"=1'-0"

0 4' 8' 16'



ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
100	ENTRANCE VESTIBULE
101	LOBBY
102	STAIR A
103	O.D.
104	SAFETY ROOM
105	CPO MESS
106	LCS CST INSTRUCTOR OFFICE
107	E.M. INSTR. OFFICE
108	CORR. I
109	LCS-1 CST LAB
110	LCS-1 CST CR
111	CORR. H
113	CORR. G
116	LCS-2 CST LAB
117	LCS-2 CST CR
118	STORAGE CLOSET
119	CLASSROOM
120	DATA ROOM
121	STORAGE
123	E.M. CLASSROOM #5
124	STORAGE
125	E.M. TOILET #1

ROOM NUMBER	ROOM NAME
125A	JANITOR
126	C.P.O. TOILET #1
127	SHOWER ROOM
127A	STORAGE
128	CORR. A
129	SERVICE ROOM
130	CORR. J
131	LADIES
131A	SOUND ROOM
134	STORAGE ROOM
138	MAIL
140	CORRIDOR
144	ISWOS
146	ISWOS
159	AUDITORIUM

### SHEET KEYNOTES

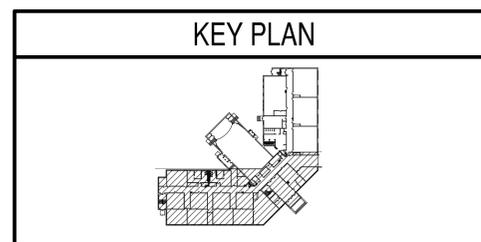
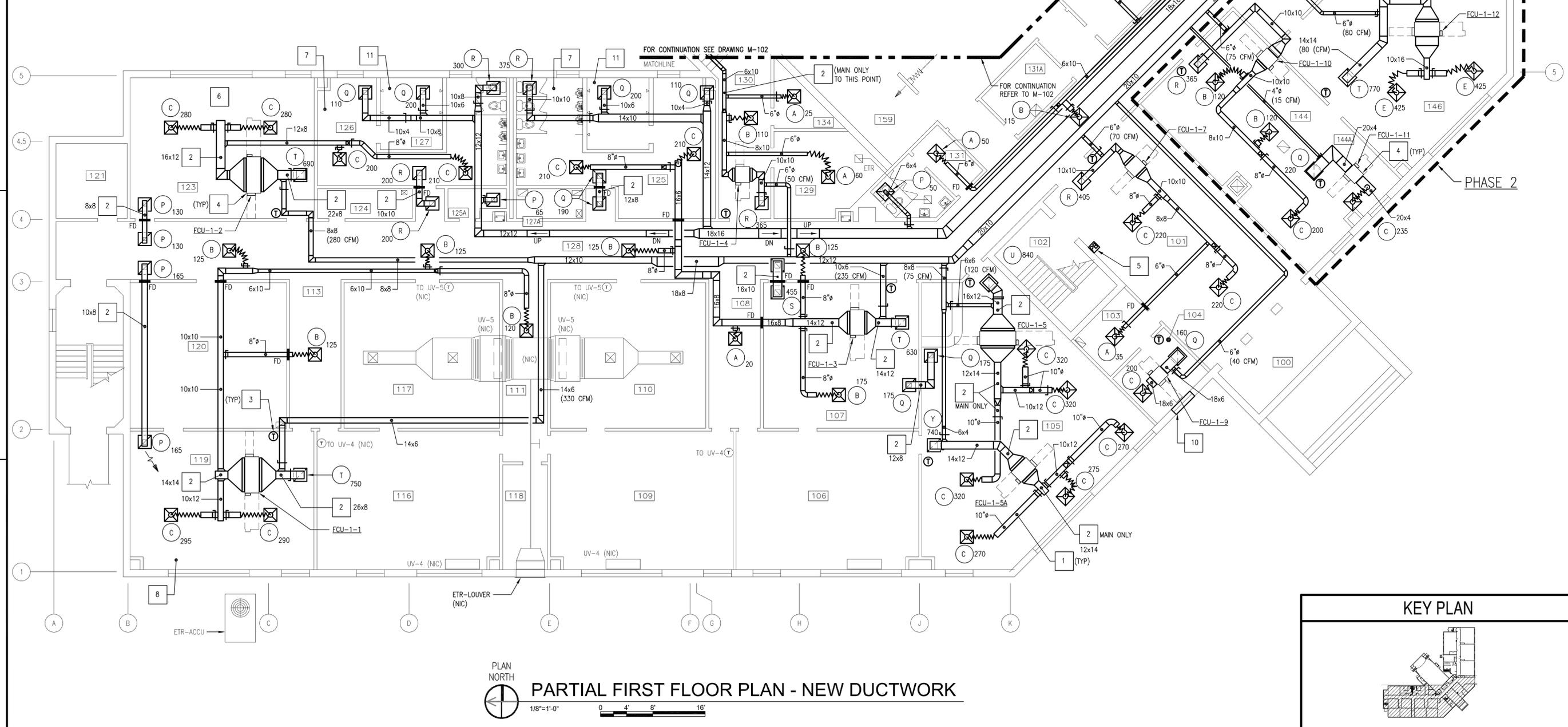
- PROVIDE DUCTWORK, INSULATION (WHERE SPECIFIED), HANGERS, AND SUPPORTS COMPLETE. ROUTE CONCEALED UNLESS OTHERWISE NOTED. SUSPEND FROM OVERHEAD STRUCTURE. PROVIDE INTERMEDIATE STEEL ANGLE OR STEEL UNISTRUT SUPPORTS AS REQUIRED.
- PROVIDE ACOUSTICAL DUCT LINER.
- PROVIDE WALL MOUNTED TEMPERATURE SENSOR. MOUNT APPROXIMATELY 4'-0" AFF AND CENTERLINE WITH LIGHT SWITCHES. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED. CONDUIT AND CONTROL WIRING SHALL BE CONCEALED.
- PROVIDE SUSPENDED, CONCEALED, 4-PIPE FAN COIL UNIT, HANGERS AND SUPPORTS COMPLETE. SUSPEND FROM OVERHEAD STRUCTURE WITH RUBBER IN SHEAR, 4-POINT, VIBRATION HANGER SYSTEM. PROVIDE INTERMEDIATE STEEL ANGLE (OR UNISTRUT) SUPPORTS AS REQUIRED. PROVIDE SECONDARY DRAIN PAN WITH MOISTURE SENSOR.
- PROVIDE HVAC SYSTEM EMERGENCY STOP PUSH BUTTON.
- LOWER CEILING IN THIS ROOM TO 8'-6" ABOVE FINISHED FLOOR FROM 9'-9".
- PROVIDE MOISTURE RESISTANT 2x2 ACT AND GRID IN TOILET ROOMS.
- INFILL OPENING IN RAISED ACCESS FLOORING TO MATCH EXISTING SYSTEM AND HEIGHT. PROVIDE CARPET TO MATCH EXISTING IN COLOR AND TEXTURE.
- NOT USED.
- TOOTH IN BRICK AT EXTERIOR WALL. BRICK AND MORTAR TO MATCH EXISTING IN COLOR AND TEXTURE. INFILL INTERIOR WALL W/METAL STUBS, INSULATION AND GWB TO MATCH EXISTING WALL THICKNESS. SEE GENERAL NOTE 4 ON THIS SHEET.
- PROVIDE MOISTURE RESISTANT GWB CEILING ATTACHED TO EXISTING CEILING SUPPORT IN SHOWER AREA.

### PHASING NOTES

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

### GENERAL SHEET NOTES

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- AT LOCATIONS WHERE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT HAS BEEN REMOVED, PROVIDE INSULATED SHEETMETAL BLANK OFF PANEL BEHIND EXISTING LOUVER. PATCH FLOOR TO MATCH EXISTING ADJACENT SURFACE IN TEXTURE AND COLOR. SEE GENERAL NOTE 4 ON THIS SHEET.
- WHERE EQUIPMENT HAS BEEN REMOVED FROM WALL, PATCH SUBSTRATE AS REQUIRED TO MATCH EXISTING ADJACENT SUBSTRATE IN THICKNESS AND TEXTURE. PAINT WALL FROM FLOOR TO 4" ABOVE CEILING, CORNER TO CORNER TO MATCH ADJACENT WALL IN COLOR AND TEXTURE.
- PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED AS PART OF DEMOLITION. FIRE RATED PARTITIONS ARE DEFINED AS CHASES, CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.
- PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLABS.
- PROVIDE 2x2 ACT AND GRID IN ALL AREAS OF WORK EXCEPT ROOMS 106, 110, 117-119, 121 AND STAIRWELLS.



PLAN NORTH  
**PARTIAL FIRST FLOOR PLAN - NEW DUCTWORK**  
 1/8"=1'-0" 0 4' 8' 16'

DATE	02/11/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0

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 FIR COMMANDER NAVFAC  
 ACTIVITY: \_\_\_\_\_

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DES: JMN DRAW: JWS CHK: KDB  
 <<PM/DM>>  
 BRANCH MANAGER: \_\_\_\_\_  
 CHIEF ENGINEER: \_\_\_\_\_  
 DESIGN DIRECTOR: \_\_\_\_\_

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
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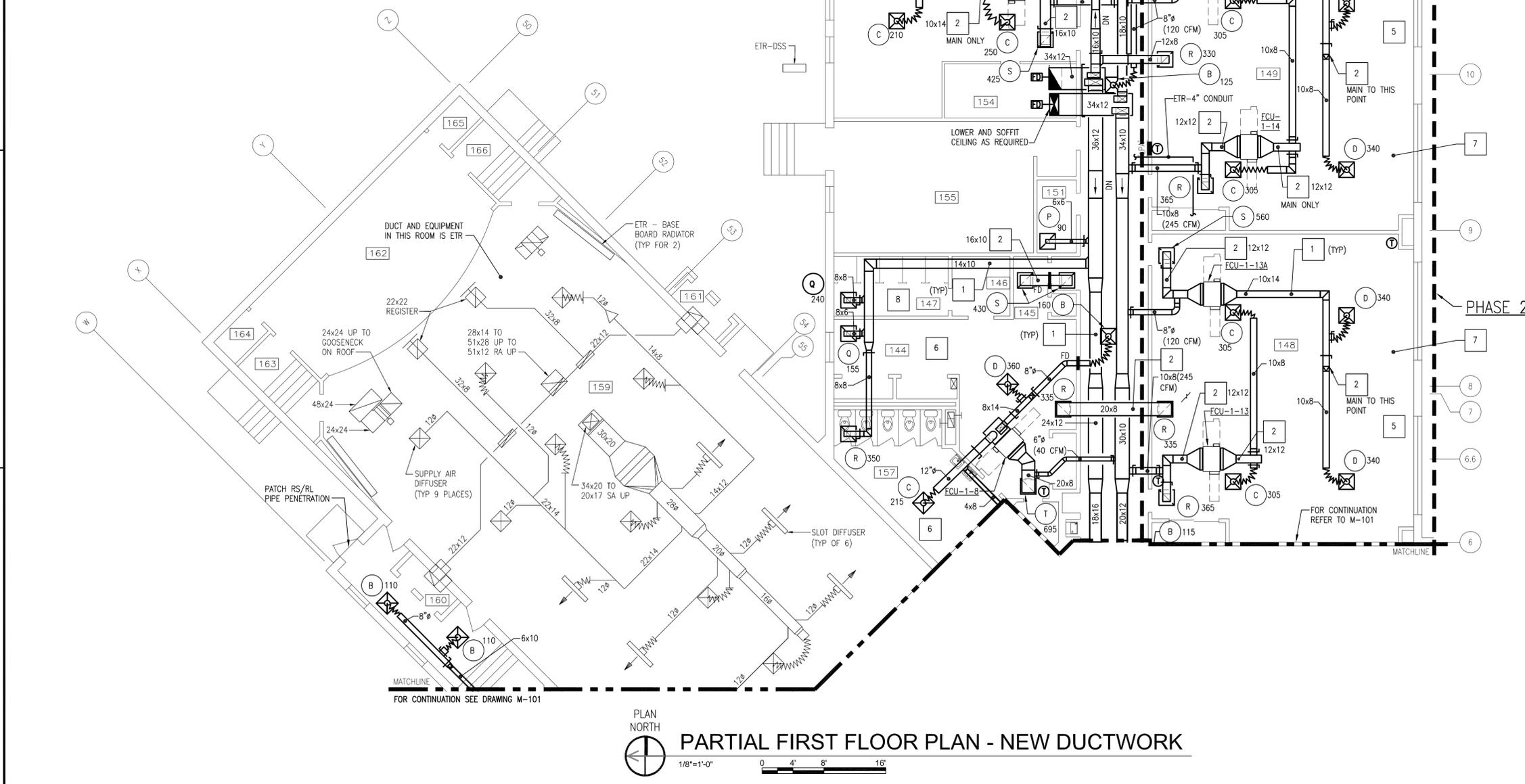
**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL FIRST FLOOR PLAN - NEW DUCTWORK

SCALE: AS NOTED  
 EPROJCT NO.: 1312379  
 CONSTR. CONTR. NO.: \_\_\_\_\_  
 NAVFAC DRAWING NO.: 12684361  
 SHEET 20 OF 47  
**M-101**  
 DRAWN/REVISED: 10 MARCH 2009  
 NAVSTA DWG. NO. 42254-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-101.dwg PLOTTED: Friday, February 13, 2015 - 7:39am USER: acleley

FILE NAME: I:\Projects\301643\301643\_001\90\_CAD Models and Sheets\13\_Mechanical\M-102.dwg LAYOUT NAME: M-102 PLOTTED: Friday, February 13, 2015 - 7:40am USER: jcd619w

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
141	CORRIDOR
143	CLOSET
144	OFFICERS LOCKER ROOM
145	CLOSET
146	DRYING ROOM
147	SHOWER ROOM
148	ISWOS N72
149	ISWOS N72
150	N74
151	JANITOR
152	STORAGE
153	VTT
154	LAN
155	MECH. ROOM
156	STAIR C
157	RESTROOM
159	AUDITORIUM
160	CORRIDOR "J"
161	CLOSET
162	STAGE
163	VEST. #1
164	CLOSET
165	CLOSET
166	VEST. #2
171	CLOSET
172	CLOSET
173	CLOSET



PLAN NORTH  
**PARTIAL FIRST FLOOR PLAN - NEW DUCTWORK**  
 1/8"=1'-0" 0 4' 8' 16'

**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- AT LOCATIONS WHERE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT HAS BEEN REMOVED, PROVIDE INSULATED SHEETMETAL BLANK OFF PANEL BEHIND EXISTING LOUVER. PATCH FLOOR TO MATCH EXISTING ADJACENT SURFACE IN TEXTURE AND COLOR. SEE GENERAL NOTE 4 ON THIS SHEET.
- WHERE EQUIPMENT HAS BEEN REMOVED FROM WALL, PATCH SUBSTRATE AS REQUIRED TO MATCH EXISTING ADJACENT SUBSTRATE IN THICKNESS AND TEXTURE. PAINT WALL FROM FLOOR TO 4" ABOVE CEILING, CORNER TO CORNER TO MATCH ADJACENT WALL IN COLOR AND TEXTURE.
- PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED AS PART OF DEMOLITION. FIRE RATED PARTITIONS ARE DEFINED AS CHASES, CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.
- PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLABS.
- PROVIDE 2x2 ACT AND GRID IN ALL AREAS OF WORK EXCEPT ROOMS 159-166 AND STAIRWELLS.

**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**SHEET KEYNOTES**

- PROVIDE DUCTWORK, INSULATION (WHERE SPECIFIED), HANGERS, AND SUPPORTS COMPLETE. ROUTE CONCEALED UNLESS OTHERWISE NOTED. SUSPENDED FROM OVERHEAD STRUCTURE. PROVIDE INTERMEDIATE STEEL ANGLE OR STEEL UNISTRUT SUPPORTS AS REQUIRED.
- PROVIDE ACOUSTICAL DUCT LINER.
- PROVIDE WALL MOUNTED TEMPERATURE SENSOR. MOUNT APPROXIMATELY 4'-0" AFF AND CENTERLINE WITH LIGHT SWITCHES. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED. CONDUIT AND CONTROL WIRING SHALL BE CONCEALED.
- PROVIDE SUSPENDED, CONCEALED, 4-PIPE FAN COIL UNIT, HANGERS AND SUPPORTS COMPLETE. SUSPEND FROM OVERHEAD STRUCTURE WITH RUBBER IN SHEAR, 4-POINT, VIBRATION HANGER SYSTEM. PROVIDE INTERMEDIATE STEEL ANGLE (OR UNISTRUT) SUPPORTS AS REQUIRED. PROVIDE SECONDARY DRAIN PAN WITH MOISTURE SENSOR.
- LOWER CEILING IN THIS ROOM TO 8'-6" ABOVE RAISED FLOOR FROM 9'-3" ABOVE RAISED FLOOR.
- PROVIDE MOISTURE RESISTANT 2x2 ACT AND GRID IN TOILET ROOMS.
- INFILL OPENING IN RAISED ACCESS FLOORING TO MATCH EXISTING SYSTEM AND HEIGHT. PROVIDE CARPET TO MATCH EXISTING IN COLOR AND TEXTURE.
- PROVIDE MOISTURE RESISTANT GWB CEILING ATTACHED TO EXISTING CEILING SUPPORT IN SHOWER AREA.
- TOOTH IN BRICK AT EXTERIOR WALL. BRICK AND MORTAR TO MATCH EXISTING IN COLOR AND TEXTURE. INFILL INTERIOR WALL W/METAL STUBS, INSULATION AND GWB TO MATCH EXISTING WALL THICKNESS. SEE GENERAL NOTE 4 ON THIS SHEET.

**KEY PLAN**



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0
<b>STV Incorporated</b> 205 West Welsh Drive Douglassville, PA 19518 610-385-8200 www.stvinc.com	
APPROVED	
FOR COMMANDER NAVFAC	
ACTIVITY	
SUBFACTORY TO DATE	
DES: JMN	CHK: KDB
DRW: JWS	
BRANCH MANAGER	
CHIEF ENGINEER/ARCH	
DESIGN DIRECTOR	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND PUBLIC WORKS DEPARTMENT NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND	
<b>BUILDING 446 HVAC REPLACEMENT</b> PARTIAL FIRST FLOOR PLAN - NEW DUCTWORK	
SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684362
SHEET	21 OF 47
<b>M-102</b>	
DRAWING REVISION: 10 MARCH 2009 NAVSTA DWG. NO. 42255-390	

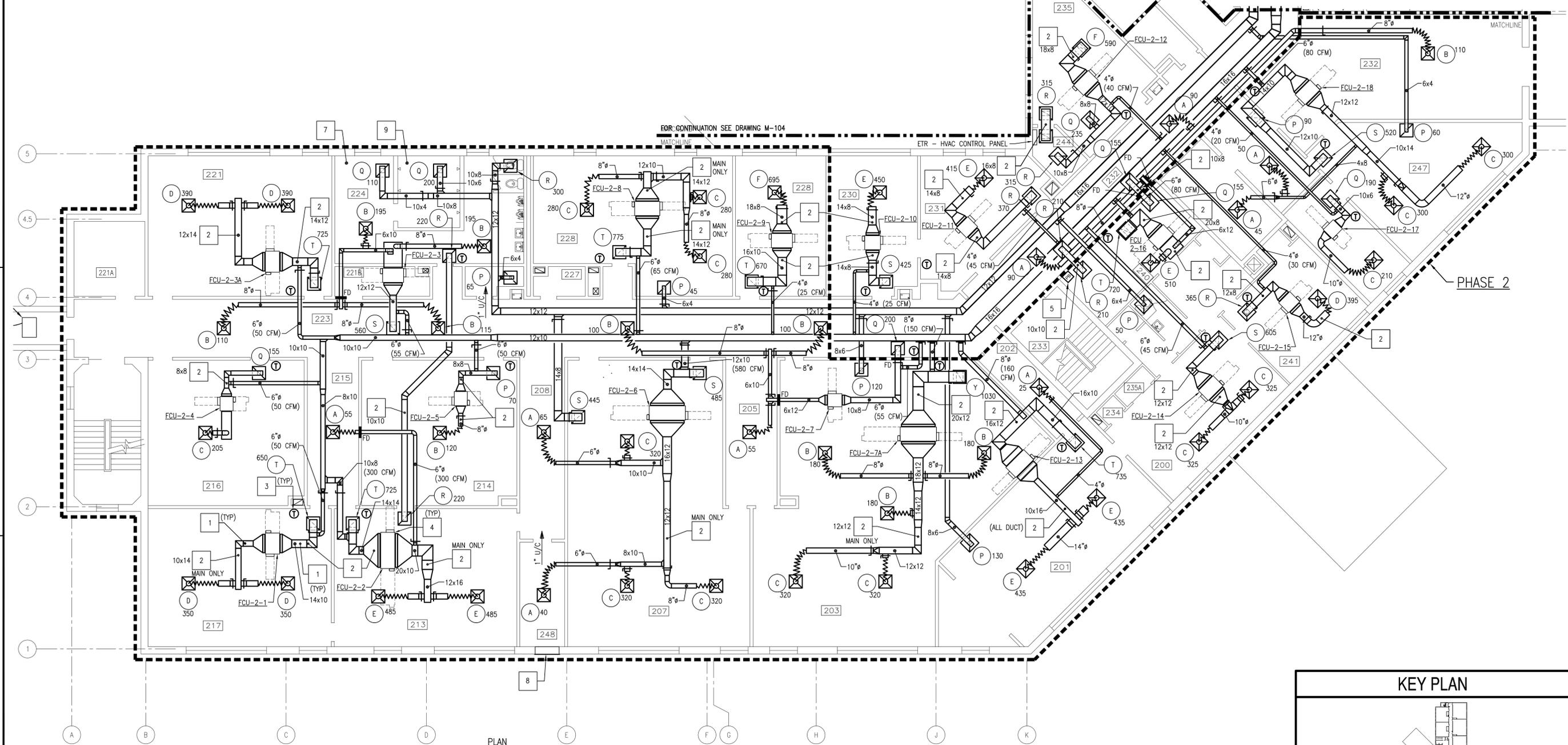
ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
200	CO
201	CO'S CONFERENCE ROOM
202	PASSAGE
203	OFFICE
205	CORR. L
207	DHASO/DC
208	CORR. K
213	LPD-17
214	TRAINING AIDS AND STORAGE
215	CORR. J
216	CLASSROOM
217	E.M. CLASSROOM #6
221	FACILITIES (N3)
221A	STORAGE
221B	STORAGE
223	CORR. D
224	C.P.O. TOILET #2

ROOM NUMBER	ROOM NAME
226	JANITOR
227	STORAGE
228	COMPTROLLER (N8)/SUPPLY (N8)
230	VFO
231	ED OFFICE
232	CORRIDOR
233	STAIR A
234	STORAGE
235	OFFICER IN CHARGE
235A	CLOSET
240	RECEPTIONIST
241	XO OFFICE
244	CLOSET
247	LIBRARY
248	STORAGE

- ### SHEET KEYNOTES
- PROVIDE DUCTWORK, INSULATION (WHERE SPECIFIED), HANGERS, AND SUPPORTS COMPLETE. ROUTE CONCEALED UNLESS OTHERWISE NOTED. SUSPEND FROM OVERHEAD STRUCTURE. PROVIDE INTERMEDIATE STEEL ANGLE OR STEEL UNISTRUT SUPPORTS AS REQUIRED.
  - PROVIDE ACOUSTICAL DUCT LINER.
  - PROVIDE WALL MOUNTED TEMPERATURE SENSOR. MOUNT APPROXIMATELY 4'-0" AFF AND CENTERLINE WITH LIGHT SWITCHES. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED. CONDUIT AND CONTROL WIRING SHALL BE CONCEALED.
  - PROVIDE SUSPENDED, CONCEALED, 4-PIPE FAN COIL UNIT, HANGERS AND SUPPORTS COMPLETE. SUSPEND FROM OVERHEAD STRUCTURE WITH RUBBER IN SHEAR, 4-POINT, VIBRATION HANGER SYSTEM. PROVIDE INTERMEDIATE STEEL ANGLE (OR UNISTRUT) SUPPORTS AS REQUIRED. PROVIDE SECONDARY DRAIN PAN WITH MOISTURE SENSOR.
  - PROVIDE HVAC SYSTEM EMERGENCY STOP PUSH BUTTON.
  - LOWER CEILING IN THIS ROOM TO 8'-6" ABOVE FINISHED FLOOR FROM 9'-9".
  - PROVIDE MOISTURE RESISTANT 2x2 ACT AND GRID IN TOILET ROOMS..
  - PROVIDE INSULATED BLANK OFF PANEL AND INFILL WALL OPENING W/METAL STUDS AND GWB TO MATCH EXISTING INTERIOR WALL. SEE GENERAL NOTE 4 ON THIS SHEET.
  - PROVIDE MOISTURE RESISTANT GWB CEILING ATTACHED TO EXISTING CEILING SUPPORTS IN SHOWER AREA.

- ### PHASING NOTES
- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

- ### GENERAL SHEET NOTES
- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
  - ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
  - AT LOCATIONS WHERE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT HAS BEEN REMOVED, PROVIDE INSULATED SHEETMETAL BLANK OFF PANEL BEHIND EXISTING LOUVER. PATCH FLOOR TO MATCH EXISTING ADJACENT SURFACE IN TEXTURE AND COLOR.
  - WHERE EQUIPMENT HAS BEEN REMOVED FROM WALL, PATCH SUBSTRATE AS REQUIRED TO MATCH EXISTING ADJACENT SUBSTRATE IN THICKNESS AND TEXTURE. PAINT WALL FROM FLOOR TO 4" ABOVE CEILING, CORNER TO CORNER TO MATCH ADJACENT WALL IN COLOR AND TEXTURE.
  - PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED AS PART OF DEMOLITION. FIRE RATED PARTITIONS ARE DEFINED AS CHASES, CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.
  - PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLABS.
  - PROVIDE 2x2 ACT AND GRID IN ALL AREAS OF WORK EXCEPT ROOMS 221A AND STAIRWELLS.



**PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK**

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">     </td> <td style="width: 50%; text-align: center;"> <p><b>STV</b> STV Incorporated 205 West Welsh Drive Douglasville, GA 19518 610-385-8200 www.stvinc.com</p> </td> </tr> </table>	  	<p><b>STV</b> STV Incorporated 205 West Welsh Drive Douglasville, GA 19518 610-385-8200 www.stvinc.com</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> <p>APPROVED: _____ DATE: 01/16/15</p> </td> <td style="width: 50%;"> <p>DESIGNED BY: JMN DRAWN BY: JWS CHECKED BY: KDB</p> </td> </tr> <tr> <td colspan="2"> <p>BRANCH MANAGER: _____ CHIEF ENGINEER/ARCHITECT: _____ DESIGN DIRECTOR: _____</p> </td> </tr> <tr> <td colspan="2" style="text-align: center;"> <p><b>NAVFACILITIES ENGINEERING COMMAND - MID-ATLANTIC</b> NAVAL STATION NEWPORT - NEWPORT, RHODE ISLAND</p> </td> </tr> <tr> <td colspan="2" style="text-align: center;"> <p><b>BUILDING 446 HVAC REPLACEMENT</b> PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK</p> </td> </tr> <tr> <td colspan="2"> <p>SCALE: AS NOTED PROJECT NO.: 1312379 CONSTR. CONTR. NO.: _____</p> </td> </tr> <tr> <td colspan="2"> <p>NAVFAC DRAWING NO.: 12684363 SHEET 22 OF 47 <b>M-103</b></p> </td> </tr> <tr> <td colspan="2"> <p>NAVSTA DWG. NO. 42256-390</p> </td> </tr> </table>	<p>APPROVED: _____ DATE: 01/16/15</p>	<p>DESIGNED BY: JMN DRAWN BY: JWS CHECKED BY: KDB</p>	<p>BRANCH MANAGER: _____ CHIEF ENGINEER/ARCHITECT: _____ DESIGN DIRECTOR: _____</p>		<p><b>NAVFACILITIES ENGINEERING COMMAND - MID-ATLANTIC</b> NAVAL STATION NEWPORT - NEWPORT, RHODE ISLAND</p>		<p><b>BUILDING 446 HVAC REPLACEMENT</b> PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK</p>		<p>SCALE: AS NOTED PROJECT NO.: 1312379 CONSTR. CONTR. NO.: _____</p>		<p>NAVFAC DRAWING NO.: 12684363 SHEET 22 OF 47 <b>M-103</b></p>		<p>NAVSTA DWG. NO. 42256-390</p>	
  	<p><b>STV</b> STV Incorporated 205 West Welsh Drive Douglasville, GA 19518 610-385-8200 www.stvinc.com</p>																
<p>APPROVED: _____ DATE: 01/16/15</p>	<p>DESIGNED BY: JMN DRAWN BY: JWS CHECKED BY: KDB</p>																
<p>BRANCH MANAGER: _____ CHIEF ENGINEER/ARCHITECT: _____ DESIGN DIRECTOR: _____</p>																	
<p><b>NAVFACILITIES ENGINEERING COMMAND - MID-ATLANTIC</b> NAVAL STATION NEWPORT - NEWPORT, RHODE ISLAND</p>																	
<p><b>BUILDING 446 HVAC REPLACEMENT</b> PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK</p>																	
<p>SCALE: AS NOTED PROJECT NO.: 1312379 CONSTR. CONTR. NO.: _____</p>																	
<p>NAVFAC DRAWING NO.: 12684363 SHEET 22 OF 47 <b>M-103</b></p>																	
<p>NAVSTA DWG. NO. 42256-390</p>																	

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-103.dwg PLOTTED: Friday, February 13, 2015 - 7:40am USER: acleley

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
249	OFF TOILET #2
250	STAIR
250A	CORR. F
251	OFFICERS LOCKER ROOM #2
254	CLOSET
255	TRAINING REQ. (N9)
256	VTC
257	OMMS-NG (N72)
259	CLOSET
260	STORAGE
261	MCM
262	CLOSET
263	STORAGE
264	ADMIN (N1)

### GENERAL SHEET NOTES

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- AT LOCATIONS WHERE FLOOR MOUNTED UNIT VENTILATOR OR FAN COIL UNIT HAS BEEN REMOVED, PROVIDE INSULATED SHEETMETAL BLANK OFF PANEL BEHIND EXISTING LOUVER. PATCH FLOOR TO MATCH EXISTING ADJACENT SURFACE IN TEXTURE AND COLOR. SEE NOTE 4 ON THIS SHEET.
- WHERE EQUIPMENT HAS BEEN REMOVED FROM WALL, PATCH SUBSTRATE AS REQUIRED TO MATCH EXISTING ADJACENT SUBSTRATE IN THICKNESS AND TEXTURE. PAINT WALL FROM FLOOR TO 4" ABOVE CEILING, CORNER TO CORNER TO MATCH ADJACENT WALL IN COLOR AND TEXTURE.
- PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED AS PART OF DEMOLITION. FIRE RATED PARTITIONS ARE DEFINED AS CHASES, CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.
- PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLAB.
- PROVIDE 2x2 ACT AND GRID IN ALL AREAS OF WORK EXCEPT STAIRWELLS.

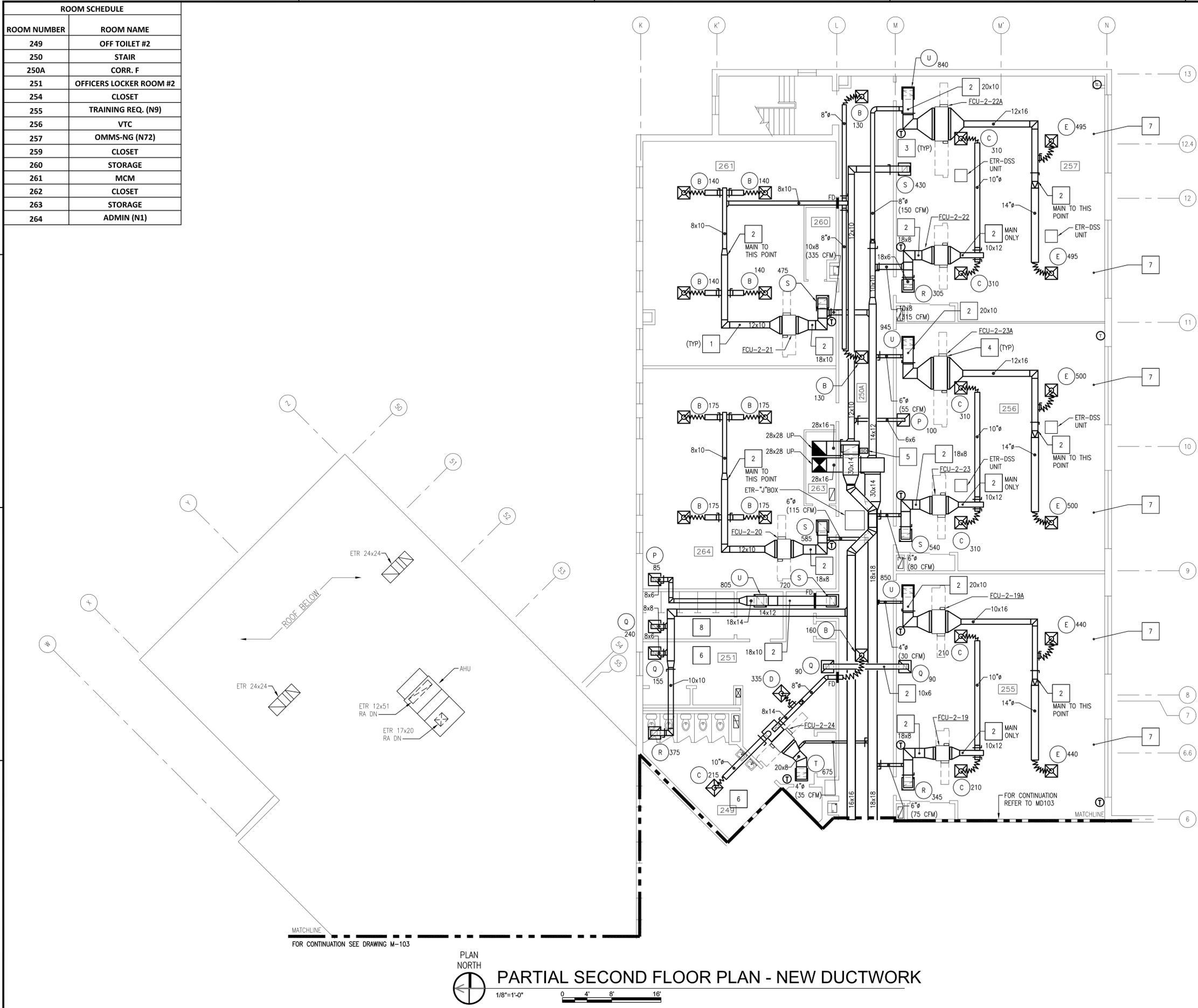
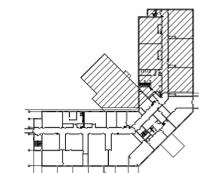
### PHASING NOTES

- WORK ON THIS DRAWING SHALL BE ACCOMPLISHED IN PHASE 1.

### SHEET KEYNOTES

- PROVIDE DUCTWORK, INSULATION (WHERE SPECIFIED), HANGERS, AND SUPPORTS COMPLETE. ROUTE CONCEALED UNLESS OTHERWISE NOTED. SUSPENDED FROM OVERHEAD STRUCTURE. PROVIDE INTERMEDIATE STEEL ANGLE OR STEEL UNISTRUT SUPPORTS AS REQUIRED.
- PROVIDE ACOUSTICAL DUCT LINER.
- PROVIDE WALL MOUNTED TEMPERATURE SENSOR. MOUNT APPROXIMATELY 4'-0" AFF AND CENTERLINE WITH LIGHT SWITCHES. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED. CONDUIT AND CONTROL WIRING SHALL BE CONCEALED.
- PROVIDE SUSPENDED, CONCEALED, 4-PIPE FAN COIL UNIT, HANGERS AND SUPPORTS COMPLETE. SUSPEND FROM OVERHEAD STRUCTURE WITH RUBBER IN SHEAR, 4-POINT, VIBRATION HANGER SYSTEM. PROVIDE INTERMEDIATE STEEL ANGLE (OR UNISTRUT) SUPPORTS AS REQUIRED. PROVIDE SECONDARY DRAIN PAN WITH MOISTURE SENSOR.
- PROVIDE DUCT MOUNTED SMOKE DETECTOR.
- PROVIDE MOISTURE RESISTANT 2x2 ACT AND GRID IN TOILET ROOMS.
- INFILL OPENING IN RAISED ACCESS FLOORING TO MATCH EXISTING SYSTEM AND HEIGHT. PROVIDE CARPET TO MATCH EXISTING IN COLOR AND TEXTURE.
- PROVIDE MOISTURE RESISTANT GWB CEILING ATTACHED TO EXISTING CEILING SUPPORT IN SHOWER AREA.

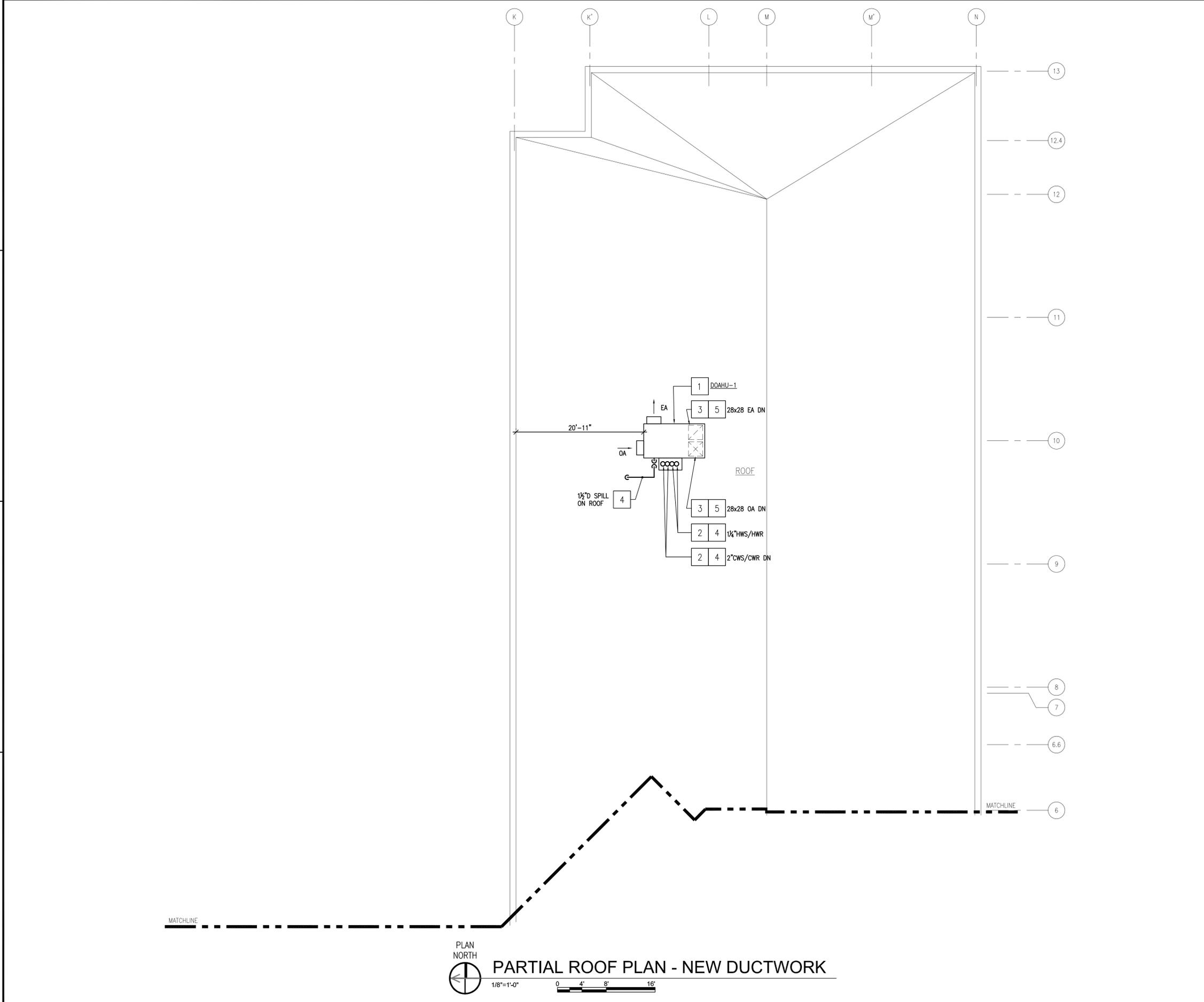
### KEY PLAN



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0
<b>STV Incorporated</b> 205 West Walsh Drive Douglassville, PA 19518 610-385-8200 www.stvinc.com	
APPROVED	
FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES: JMN	DRW: JWS
CHK: KDB	
BRANCH MANAGER	
CHIEF ENGR/ARCH	
DESIGN DIRECTOR	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT NAVAL STATION NEWPORT NEWPORT, RHODE ISLAND	
<b>BUILDING 446 HVAC REPLACEMENT</b> PARTIAL SECOND FLOOR PLAN - NEW DUCTWORK	
SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684364
SHEET	23 OF 47
<b>M-104</b>	
DRAWING REVISION: 10 MARCH 2009 NAVSTA DWG. NO. 42257-390	

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-104.dwg LAYOUT NAME: M-104 PLOTTED: Thursday, January 15, 2015 - 3:11pm USER: siddhik

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\3\_Mechanical\M-105.dwg LAYOUT NAME: M - 105 PLOTTED: Thursday, January 15, 2015 - 3:12pm USER: sldslgk



PLAN NORTH  
**PARTIAL ROOF PLAN - NEW DUCTWORK**  
 1/8"=1'-0" 0 4' 8' 16'

**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE SHEET M001.
- ALL PIPING AND EQUIPMENT SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.

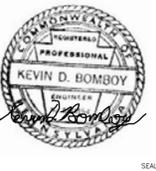
**PHASING NOTES**

- WORK ON THIS DRAWING SHALL BE ACCOMPLISHED IN PHASE 1.

**SHEET KEYNOTES**

- PROVIDE DEDICATED ROOFTOP OUTSIDE AIR UNIT AND SUPPORTS COMPLETE. PROVIDE AND MOUNT ON MANUFACTURER'S ACOUSTICAL CURB AND VIBRATION ISOLATION PACK.
- PENETRATE ROOF THRU DOAHU-1 PIPE ENCLOSURE.
- PROVIDE ACOUSTICAL DUCT LINER.
- PROVIDE PIPING, INSULATION AND SUPPORTS COMPLETE. PROVIDE HEAT TAPE FOR HOT AND CHILLED WATER PIPING ABOVE THE ROOF LINE. POWER FROM MAINTENANCE RECEPTACLE CIRCUIT.
- PROVIDE DUCTWORK, INSULATION AND SUPPORTS COMPLETE.

DATE	DESCRIPTION	BY	APPR
01/16/15	FINAL BID DOCUMENTS		
0			

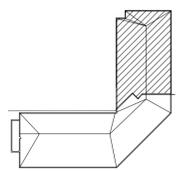


**STV**  
 STV Incorporated  
 205 West Welsh Drive  
 Douglassville, PA 19518  
 610-385-8200  
 www.stvinc.com

APPROVED  
 PER COMMANDER NAVFAC  
 ACTIVITY

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND  
**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL ROOF PLAN - NEW DUCTWORK

SCALE: AS NOTED  
 PROJECT NO.: 1312379  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO. 12684365  
 SHEET 24 OF 47  
**M -105**



**KEY PLAN**

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
100	ENTRANCE VESTIBULE
101	LOBBY
102	STAIR A
103	O.D.
104	SAFETY ROOM
105	CPO MESS
106	LCS CST INSTRUCTOR OFFICE
107	E.M. INSTR. OFFICE
108	CORR. I
109	LCS-1 CST LAB
110	LCS-1 CST CR
111	CORR. H
113	CORR. G
116	LCS-2 CST LAB
117	LCS-2 CST CR
118	STORAGE CLOSET
119	CLASSROOM
120	DATA ROOM
121	STORAGE
123	E.M. CLASSROOM #5
124	STORAGE
125	E.M. TOILET #1

ROOM NUMBER	ROOM NAME
125A	JANITOR
126	C.P.O. TOILET #1
127	SHOWER ROOM
127A	STORAGE
128	CORR. A
129	SERVICE ROOM
130	CORR. J
131	LADIES
131A	SOUND ROOM
134	STORAGE ROOM
138	MAIL
140	CORRIDOR
144	ISWOS
146	ISWOS
159	AUDITORIUM

**PHASING NOTES**

1. WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1. CAP PIPING AND PROVIDE TEMPORARY PIPING (ROOM 144 TO ROOM 151) AS REQUIRED TO PRESERVE SERVICE TO PHASE 2.

**GENERAL SHEET NOTES**

1. FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.

2. ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.

3. PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED. FIRE RATED PARTITIONS ARE DEFINED AS CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.

4. PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLABS.

**SHEET KEYNOTES**

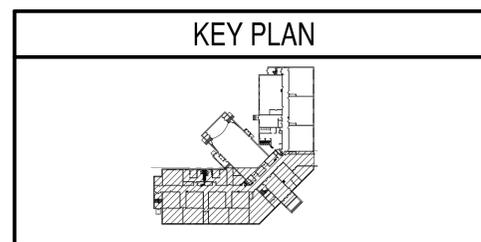
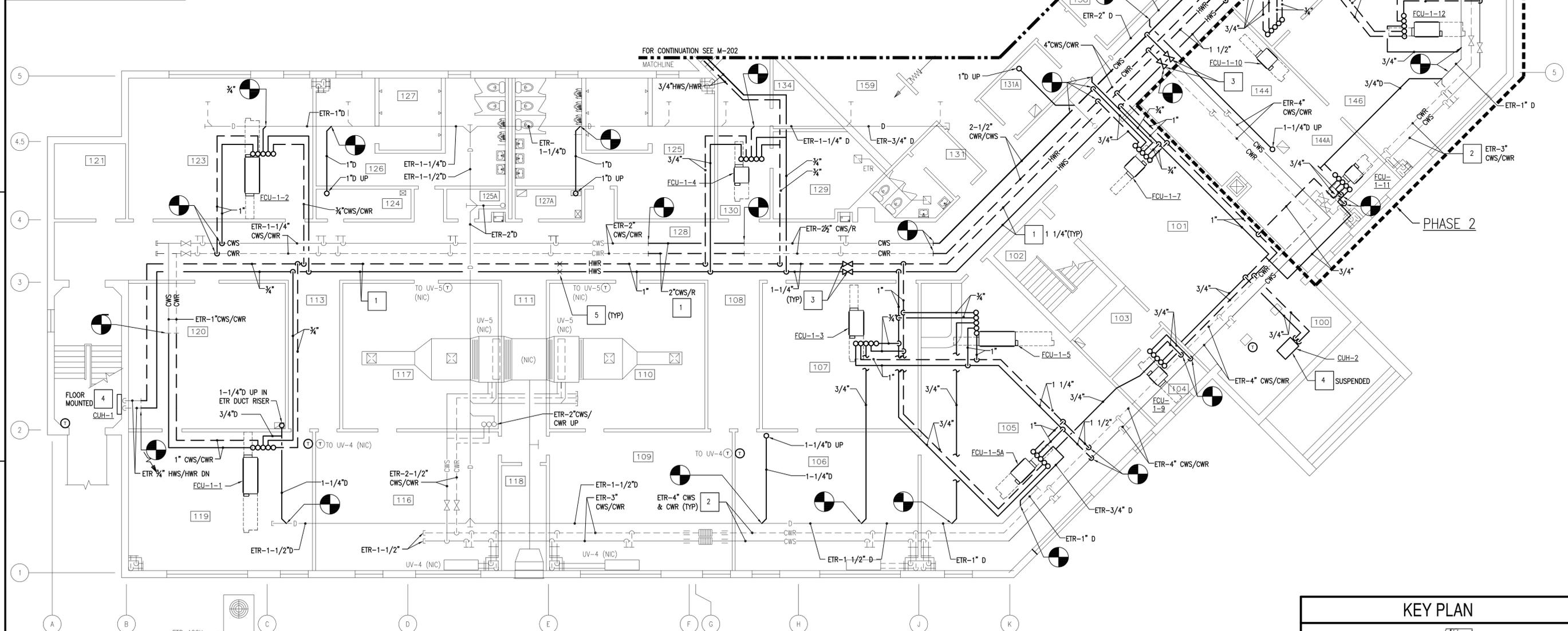
1. PROVIDE HWS/HWR, CWS/CWR, AND DRAIN PIPING INSULATION, HANGERS AND SUPPORTS COMPLETE.

2. INSULATE ETR CWS/CWR, HWS/HWR AND DRAIN (FORMERLY DTS/DTR PIPING) PIPING COMPLETE. INSULATE DRAIN PIPING COMPLETE.

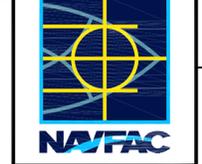
3. PROVIDE ISOLATION VALVE WITH 3/8" HOSE BIB DOWN STREAM OF VALVE.

4. PROVIDE HOT WATER CABINET UNIT HEATER, MOUNTINGS, AND SUPPORTS COMPLETE. SUSPEND SUSPENDED UNITS FROM OVERHEAD STRUCTURE. PROVIDE INTERMEDIATE STEEL UNISTRUT SUPPORTS AS REQUIRED.

5. PROVIDE PIPE ANCHOR.



NO.	DATE	DESCRIPTION
0	01/16/15	FINAL BID DOCUMENTS
1	02/11/15	REVISED PER HVAC DESIGN REVIEW COMMENTS



**STV**  
 STV Incorporated  
 205 West Walsh Drive  
 Douglassville, PA 19518  
 610-385-8200  
 www.stvinc.com

APPROVED	DATE
FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DESIGNED BY: JMN	DRAWN BY: JWS
CHECKED BY: KDB	
BRANCH MANAGER	
CHIEF ENGINEER/ARCH	
DESIGN DIRECTOR	

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL FIRST FLOOR PLAN - NEW PIPING

SCALE: AS NOTED  
 PROJECT NO.: 1312379  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO.: 12684366  
 SHEET 25 OF 47  
**M-201**

NAVSTA DWG. NO. 42259-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-201.dwg LAYOUT NAME: M-201 PLOTTED: Friday, February 13, 2015 - 7:44am USER: bickleyw



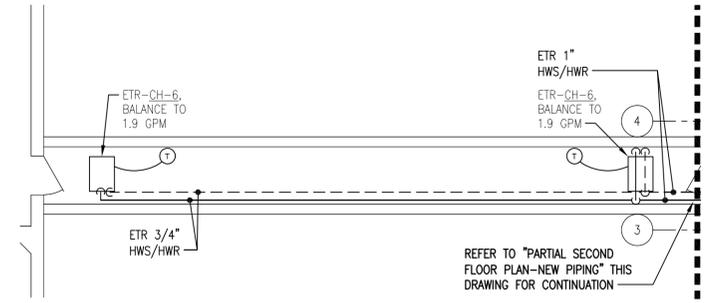
ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
200	CO
201	CO'S CONFERENCE ROOM
202	PASSAGE
203	OFFICE
205	CORR. L
207	DHASO/DC
208	CORR. K
213	LPD-17
214	TRAINING AIDS AND STORAGE
215	CORR. J
216	CLASSROOM
217	E.M. CLASSROOM #6
221	FACILITIES (N3)
221A	STORAGE
221B	STORAGE
223	CORR. D
224	C.P.O. TOILET #2

ROOM NUMBER	ROOM NAME
226	JANITOR
227	STORAGE
228	COMPTROLLER (N8)/SUPPLY (N8)
230	VFO
231	ED OFFICE
232	CORRIDOR
233	STAIR A
234	STORAGE
235	OFFICER IN CHARGE
235A	CLOSET
240	RECEPTIONIST
241	XO OFFICE
244	CLOSET
247	LIBRARY
248	STORAGE

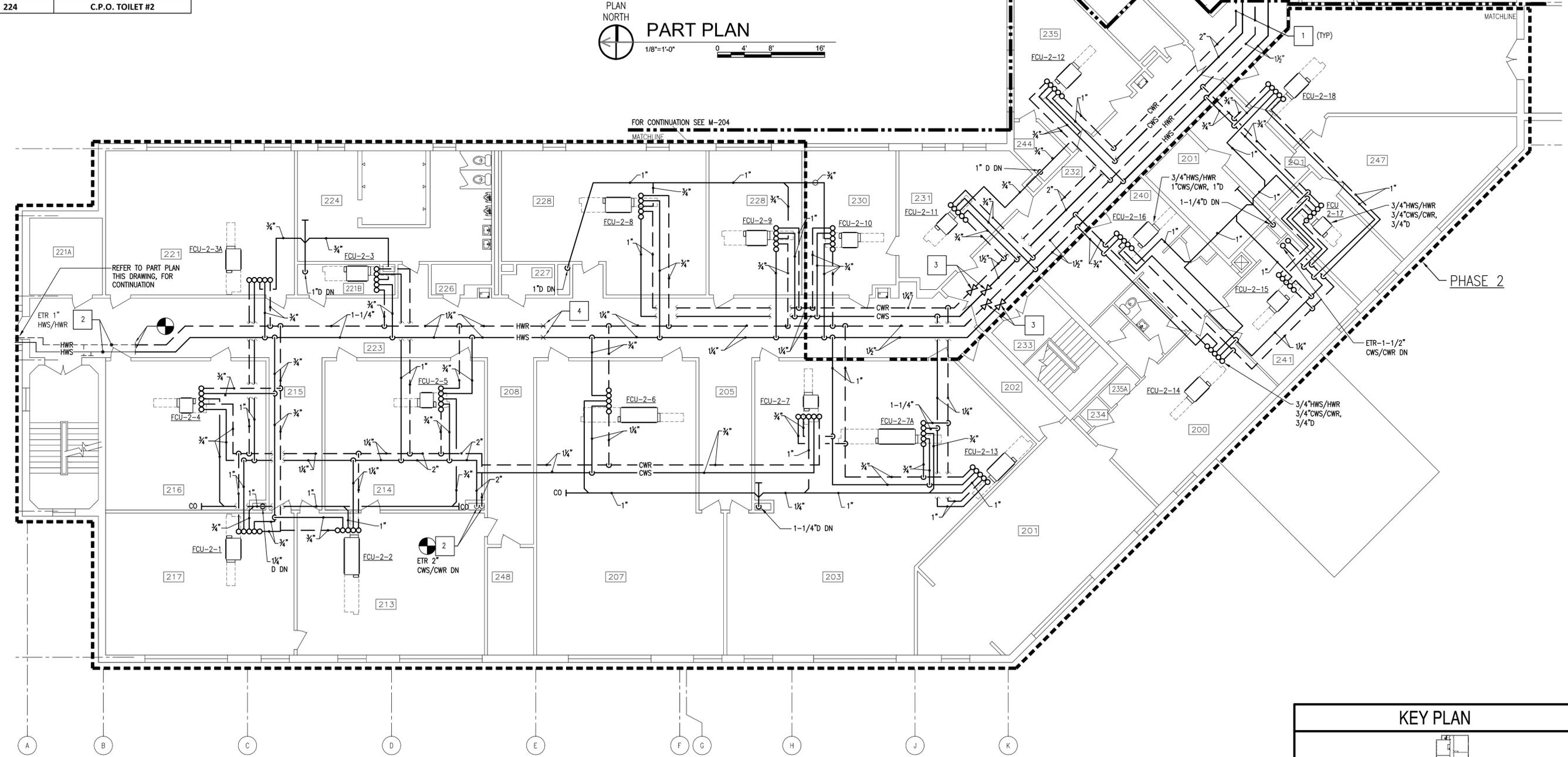
- ### PHASING NOTES
- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.
  - CAP PIPING AS REQUIRED TO PRESERVE SERVICE TO PHASE 2.

- ### SHEET KEYNOTES
- PROVIDE HWS/HWR, CWS/CWR, AND D PIPING INSULATION, HANGERS AND SUPPORTS COMPLETE.
  - INSULATE ETR CWS/CWR, HWS/HWR AND DRAIN (FORMERLY DTS/DTR PIPING) PIPING COMPLETE. INSULATE D PIPING COMPLETE.
  - PROVIDE ISOLATION VALVE WITH 3/4" HOSE BIB DOWN STREAM OF VALVE.
  - PROVIDE PIPE ANCHOR.

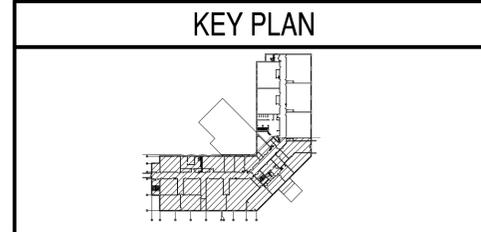
- ### GENERAL SHEET NOTES
- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
  - ALL PIPING AND EQUIPMENT IS SHOWN DIAGMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
  - PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED. FIRE RATED PARTITIONS ARE DEFINED AS CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.
  - PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLABS.



PLAN NORTH  
PART PLAN  
1/8"=1'-0"  
0 4' 8' 16'



PLAN NORTH  
PARTIAL SECOND FLOOR PLAN - NEW PIPING  
1/8"=1'-0"  
0 4' 8' 16'



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
DATE	02/11/15
DESCRIPTION	REVISED PER NAFC DESIGN REVIEW COMMENTS

STV Incorporated  
205 West Welsh Drive  
Douglassville, PA 19518  
610-385-8200  
www.stvinc.com

APPROVED: \_\_\_\_\_  
FIR COMMANDER NAFC

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
DES: JMN (DW: JWS) (CHK: KDB)  
BRANCH MANAGER: \_\_\_\_\_  
CHIEF ENG/ARCH: \_\_\_\_\_  
DESIGN DIRECTOR: \_\_\_\_\_

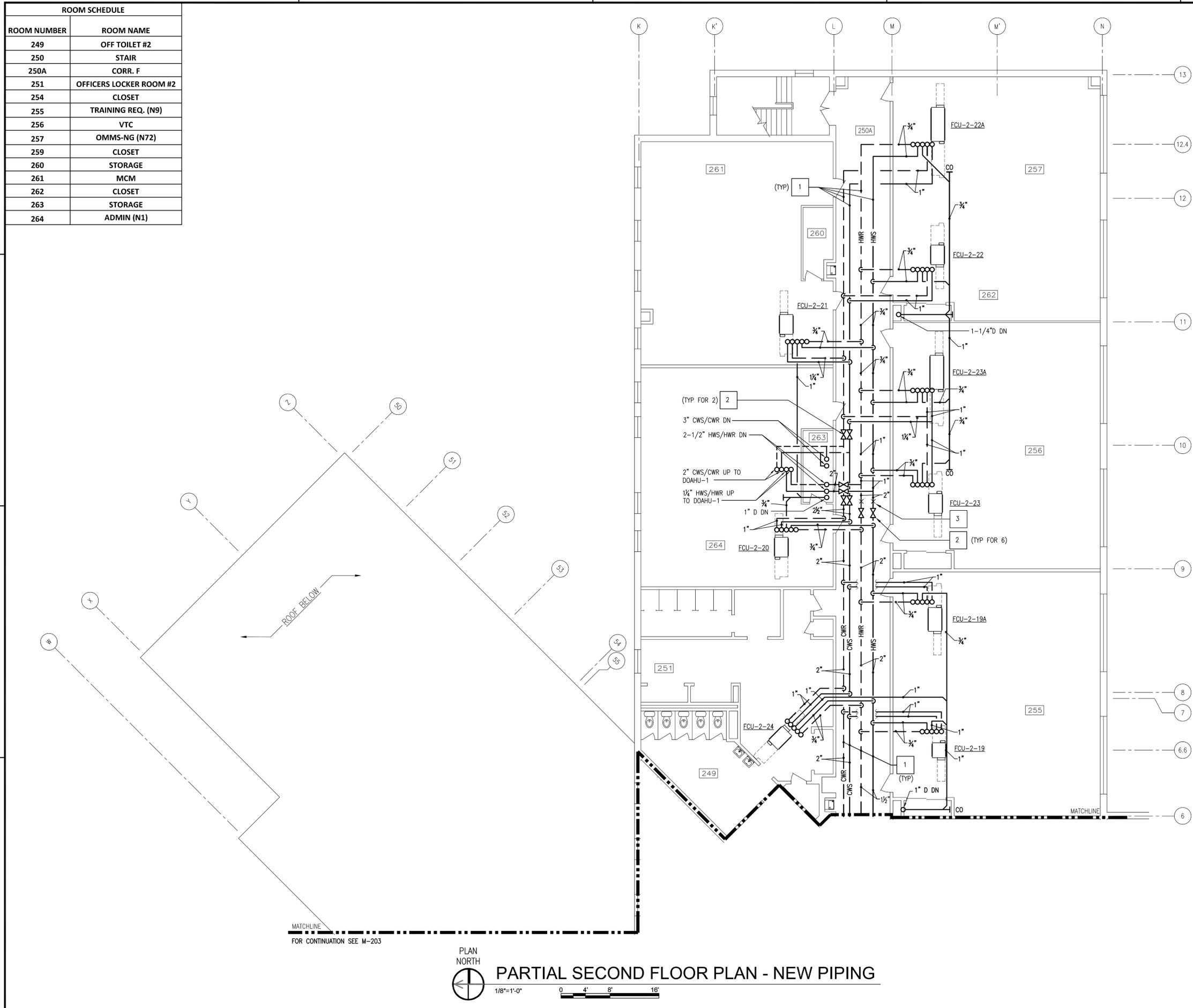
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NEWPORT, RHODE ISLAND

BUILDING 446 HVAC REPLACEMENT  
PARTIAL SECOND FLOOR PLAN - NEW PIPING

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.: \_\_\_\_\_  
NAFC DRAWING NO.: 12684368  
SHEET 27 OF 47  
M-203  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DATE: 10 MARCH 2009  
NAVFAC DWG. NO. 42261-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-203.dwg PLOTTED: Friday, February 13, 2015 - 7:45pm USER: acleley

ROOM SCHEDULE	
ROOM NUMBER	ROOM NAME
249	OFF TOILET #2
250	STAIR
250A	CORR. F
251	OFFICERS LOCKER ROOM #2
254	CLOSET
255	TRAINING REQ. (N9)
256	VTC
257	OMMS-NG (N72)
259	CLOSET
260	STORAGE
261	MCM
262	CLOSET
263	STORAGE
264	ADMIN (N1)



MATCHLINE  
FOR CONTINUATION SEE M-203



**PARTIAL SECOND FLOOR PLAN - NEW PIPING**

**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.
- PROVIDE FIRE STOPPING AT ALL EXISTING PENETRATIONS IN FIRE RATED PARTITIONS AND SLABS WHERE DUCTS OR PIPING HAS BEEN REMOVED. FIRE RATED PARTITIONS ARE DEFINED AS CORRIDOR, LOBBY, AND STAIRWELL WALLS. SECOND FLOOR SLAB IS DEFINED AS FIRE RATED.
- PROVIDE FIRE STOPPING AT ALL NEW DUCT OR PIPE PENETRATIONS THROUGH FIRE RATED PARTITIONS AND SLABS.

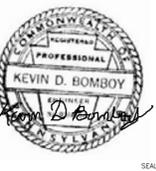
**PHASING NOTES**

- WORK ON THIS DRAWING SHALL BE ACCOMPLISHED IN PHASE 1.

**SHEET KEYNOTES**

- PROVIDE HWS/HWR, CWS/CWR, AND D PIPING INSULATION, HANGERS AND SUPPORTS COMPLETE.
- PROVIDE ISOLATION VALVE WITH 3/4" HOSE BIB DOWN STREAM OF VALVE.
- PROVIDE PIPE ANCHOR.

REV	DATE	DESCRIPTION
A	02/11/15	REVISION PER HVAC DESIGN REVIEW COMMENTS
0	01/16/15	FINAL BID DOCUMENTS



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610-385-8200  
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APPROVED

FIR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: JMN | DRW: JWS | CHK: KDB

BRANCH MANAGER

CHIEF ENGR/ARCH

DESIGN DIRECTOR

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC

PUBLIC WORKS DEPARTMENT

NAVAL STATION NEWPORT - NEWPORT, RHODE ISLAND

NEWPORT, RHODE ISLAND

BUILDING 446 HVAC REPLACEMENT

PARTIAL SECOND FLOOR PLAN - NEW PIPING

SCALE: AS NOTED

PROJECT NO.: 1312379

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 12684369

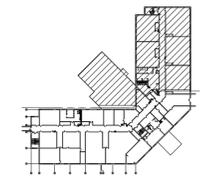
SHEET 28 OF 47

**M-204**

DRAWING REVISION: 10 MARCH 2009

NAVSTA DWG. NO. 42262-390

**KEY PLAN**



FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-204.dwg LAYOUT NAME: M-204 PLOTTED: Friday, February 13, 2015 - 7:45pm USER: acleley

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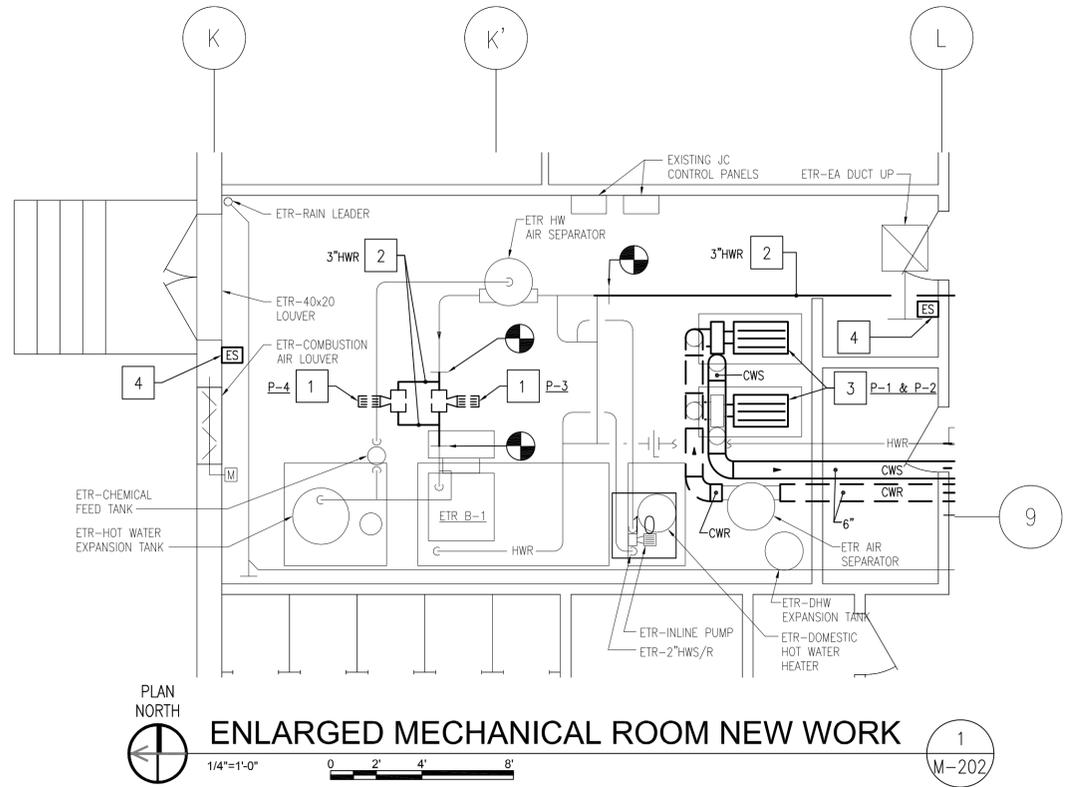
D

C

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FILE NAME: I:\Projects\301643\301643\_001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-205.dwg LAYOUT NAME: M-205 PLOTTED: Thursday, January 15, 2015 - 3:19pm USER: sldkjh



### GENERAL SHEET NOTES

- FOR LEGEND AND GENERAL NOTES SEE DRAWING M-100.
- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY ONLY. GENERAL ORIENTATION IS SHOWN IN PLAN AND SECTIONAL DRAWINGS. EXACT LOCATION SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR.

### SHEET KEYNOTES

- PROVIDE INLINE PUMP, HANGERS AND SUPPORTS COMOPLETE
- PROVIDE CWS/CWR, HWS/HWR PIPING, INSULATION, HANGERS AND SUPPORTS COMPLETE.
- PROVIDE PAD MOUNTED CENTRIFUGAL PUMP. MOUNT ON EXISTING CONCRETE EQUIPMENT PAD.
- PROVIDE BOILER BURNER EMERGENCY CUTOFF SWITCH.

NO.	DESCRIPTION	DATE	APP'R
0	FINAL BID DOCUMENTS	01/16/15	



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 Douglassville, PA 19518  
 610-385-8200  
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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES	JMN	DRW	JWS	CHK	KDB
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BRANCH MANAGER

CHIEF ENGR/ARCH

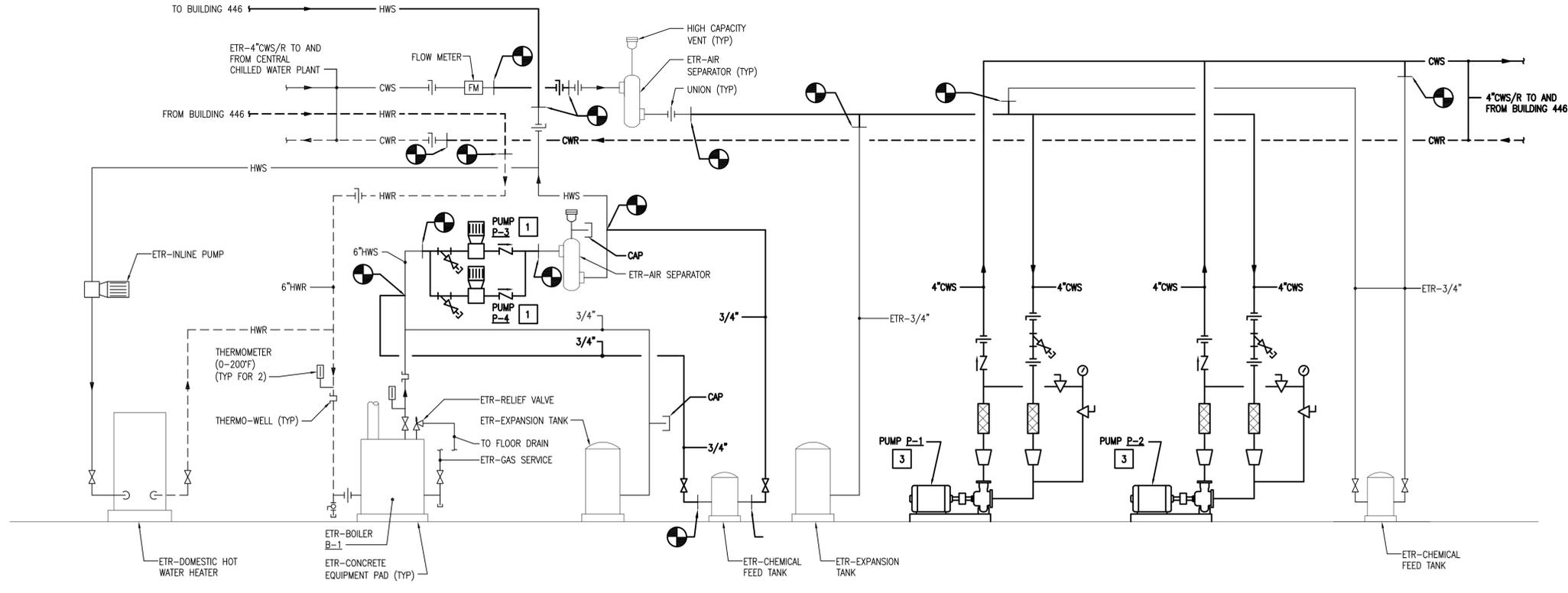
DESIGN DIRECTOR

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
 ENLARGED MECHANICAL ROOM NEW WORK

SCALE: AS NOTED  
 EPROJCT NO.: 1312379  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO. 12684370  
 SHEET 29 OF 47  
**M-205**

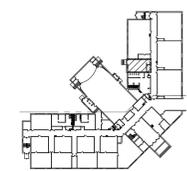
DRAWN/REVISED: 10 MARCH 2009  
 NAVSTA DWG. NO. 42263-390



### BUILDING 446 - NEW WORK FLOW DIAGRAM

NOT TO SCALE

### KEY PLAN



1

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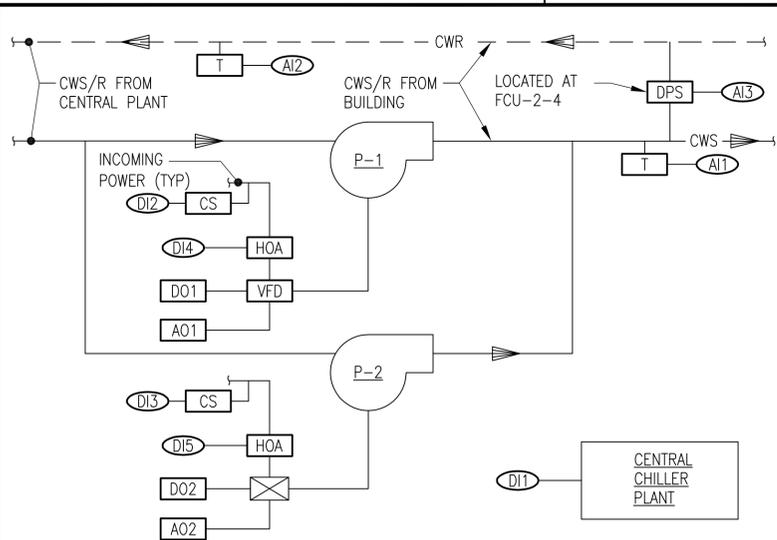
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### CHILLED WATER SYSTEM (DDC)

SCALE: NTS

CHILLED WATER SYSTEM				
SYSTEM CONTROLS				
INPUTS				
ANALOG	AI1	BUILDING CWS TEMPERATURE	DIGITAL	
	AI2	BUILDING CWR TEMPERATURE		
	AI3	SYSTEM DIFFERENTIAL PRESSURE		
	DI1	CENTRAL CW PLANT		
	DI2	P-1 STATUS (ON/OFF)		
DIGITAL	DI3	P-2 STATUS (ON/OFF)		
	DI4	P-1 HAND/AUTO POSITION		
	DI5	P-2 HAND/AUTO POSITION		
OUTPUTS				
ANALOG	AO1	P-1	DIGITAL	
	AO2	P-2		
			DO1	P-1 ENABLE/DISABLE
			DO2	P-2 ENABLE/DISABLE

### CHILLED WATER SYSTEM SEQUENCE

**CHILLED WATER PUMP:**  
THE CHILLED WATER PUMP IN THE AUTOMATIC POSITION SHALL RUN ANYTIME THE CENTRAL CHILLED WATER PLANT IS ENABLED AND THERE IS A CALL FOR COOLING. A CALL FOR COOLING IS DEFINED AS ANY CHILLED WATER VALVE OPEN A MINIMUM OF 30% FOR 5 MINUTES.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- CHILLED WATER PUMP FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- CHILLED WATER PUMP RUNNING IN HAND: COMMAND OFF, BUT THE STATUS IS ON.
- CHILLED WATER PUMP RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT.

PUMPS ARE REDUNDANT. SHOULD THE LEAD PUMP FAIL THE STAND BY PUMP SHALL BE ENERGIZED, LEAD STATUS SHALL ROTATE WEEKLY BASED ON RUN TIME.

#### CHILLED WATER DIFFERENTIAL PRESSURE CONTROL

THE CONTROLLER SHALL MEASURE LOOP DIFFERENTIAL PRESSURE TO MODULATE THE CHILLED WATER PUMP VFD TO MAINTAIN THE CHILLED WATER DIFFERENTIAL PRESSURE SET POINTS (ADJUSTABLE). VFD SPEED SHALL INCREASE AS DIFFERENTIAL PRESSURE FALLS BELOW SETPOINT, AND DECREASE AS DIFFERENTIAL PRESSURE RISES ABOVE SETPOINT.

THE VFD MINIMUM SPEED SHALL NOT DROP BELOW 10 HZ (ADJ.). ALARMS SHALL BE PROVIDED AS FOLLOWS:

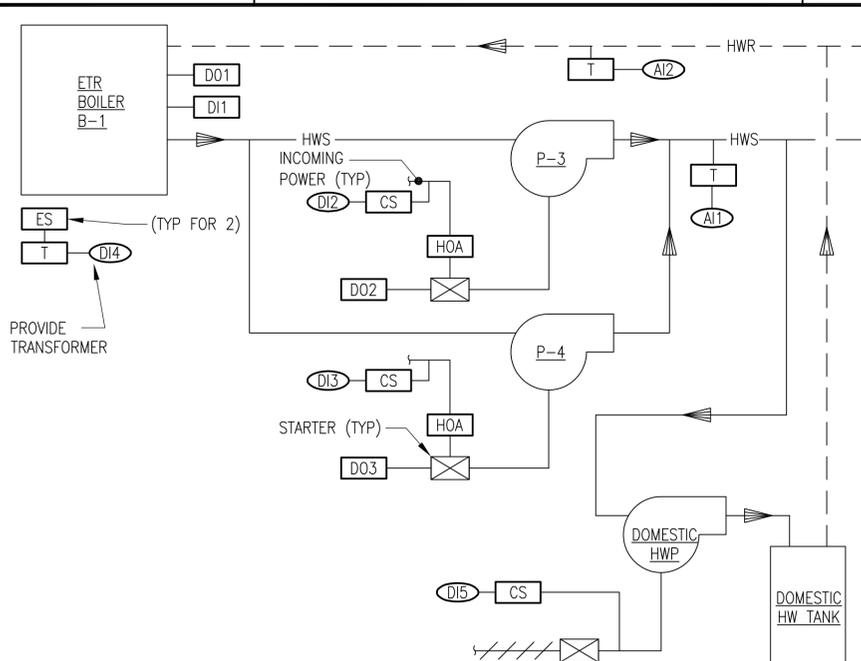
- HIGH CHILLED WATER DIFFERENTIAL PRESSURE: IF THE CHILLED WATER DIFFERENTIAL PRESSURE IS 25% (ADJ.) GREATER THAN SET POINT.
- LOW CHILLED WATER DIFFERENTIAL PRESSURE: IF THE CHILLED WATER DIFFERENTIAL PRESSURE IS 25% (ADJ.) LESS THAN SET POINT.

#### CHILLED WATER TEMPERATURE MONITORING:

THE FOLLOWING TEMPERATURES SHALL BE MONITORED: CHILLED WATER SUPPLY AND CHILLED WATER RETURN

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH CHILLED WATER SUPPLY TEMP: IF THE CHILLED WATER SUPPLY TEMPERATURES IS GREATER THAN 55°F (ADJ.).
- LOW CHILLED WATER SUPPLY TEMP: IF THE CHILLED WATER SUPPLY TEMPERATURES IS LESS THAN 38°F (ADJ.).



### HOT WATER SYSTEM (DDC)

SCALE: NTS

HOT WATER SYSTEM				
SYSTEM CONTROLS				
INPUTS				
ANALOG	AI1	BUILDING HWS TEMPERATURE	DIGITAL	
	AI2	BUILDING HWR TEMPERATURE		
DI1	B-1 STATUS (ON/OFF)			
DI2	P-3 STATUS (ON/OFF)			
DI3	P-4 STATUS (ON/OFF)			
DIGITAL	DI4	EMERGENCY SWITCH		
	DI5	DOMESTIC HWP STATUS		
	DO1	B-1 ENABLE/DISABLE		
ANALOG			DO2	P-3 ENABLE/DISABLE
			DO3	P-4 ENABLE/DISABLE

### HOT WATER SYSTEM SEQUENCE

GENERAL:

PUMPS ARE SIZED FOR CONNECTED LOAD AND EACH ARE FULLY REDUNDANT. LEAD/STANDBY STATUS SHALL ALTERNATE WEEKLY BASED ON RUN TIME.

#### BOILER AND HOT WATER PUMP CONTROL:

WHEN THE DDC CONTROL SYSTEM RECEIVES A CALL FOR HEATING, WHICH IS DEFINED AS ANY HOT WATER VALVE OPEN A MINIMUM OF 30% FOR MORE THAN 5 MINUTES OR THE DOMESTIC HOT WATER HEATER PUMP IS ENABLED. THE BOILER CONTROL SYSTEMS SHALL BE ENERGIZED AND THE DDC CONTROL SYSTEM SHALL ENABLE THE BOILER. SHOULD LEAD PUMP FAIL, STANDBY PUMP SHALL BE ENERGIZED AND AN ALARM SHALL BE ANNUNCIATED.

#### BOILER EMERGENCY SHUT-OFF CONTROL:

PROVIDE TWO POSITION "ON-OFF" SWITCH LABELED "BOILER EMERGENCY SHUT-OFF" LOCATED AS INDICATED WHICH SHALL BE HARDWIRE INTERLOCKED WITH THE BOILER CONTROL PANEL. WHEN INDEXED TO THE "ON" POSITION, THE BOILER SHALL OPERATE UNDER NORMAL CONTROL OF THE DDC CONTROL SYSTEM. WHEN INDEXED TO THE "OFF" POSITION, THE BOILER SHALL BE DISABLED, AND THE GAS BURNER TO THE BOILER SHALL SHUTDOWN. MANUAL RESET SHALL BE REQUIRED.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- ALARM FOR LEAVING WATER TEMPERATURES EXCEEDING 200°F (ADJ.) OR FALLING 10°F BELOW THE SCHEDULED HWS TEMPERATURE.
- ALARM IF BOILER OR PUMP FAILS TO START OR FAILS DURING OPERATION.

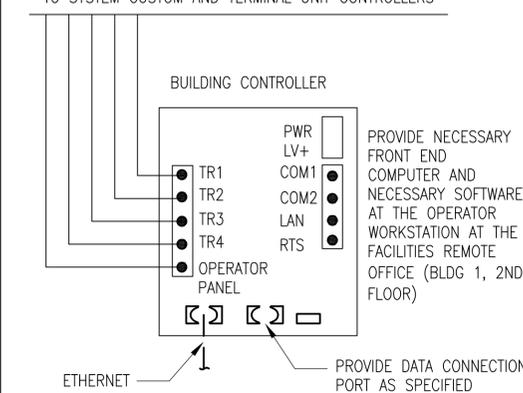
ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HOT WATER PUMP FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- HOT WATER PUMP RUNNING IN HAND: COMMAND OFF, BUT THE STATUS IS ON.
- HOT WATER PUMP RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT.

### GENERAL DDC NOTES

- 1) CONTROLS SHALL BE CAPABLE OF STAND ALONE OPERATION, INDEPENDENT OF THE BASE SYSTEM.
- 2) NETWORK POINTS TO THE OPERATOR INTERFACE PANEL AS INDICATED ON THIS DRAWING FOR OPERATOR CONTROLS.
- 3) SYSTEMS SHALL HAVE BACNET INTERFACE CAPABILITY TO THE BASE WIDE ENERGY MANAGEMENT CONTROL SYSTEM (EMCS), CONNECT TO THE BASE EMCS VIA ETHERNET/LAN CONNECTION FOR MONITORING.
- 4) BUILDING SYSTEM IS A JOHNSON SYSTEM.
- 5) COMMUNICATE ALL POINTS TO THE BASE EMCS SYSTEM.
- 6) PROVIDE I/O MAP AND UPDATE BASE EMCS SYSTEM AND GRAPHICS FOR THESE POINTS.
- 7) ALL SETPOINTS SHALL BE ADJUSTABLE.

TO SYSTEM CUSTOM AND TERMINAL UNIT CONTROLLERS

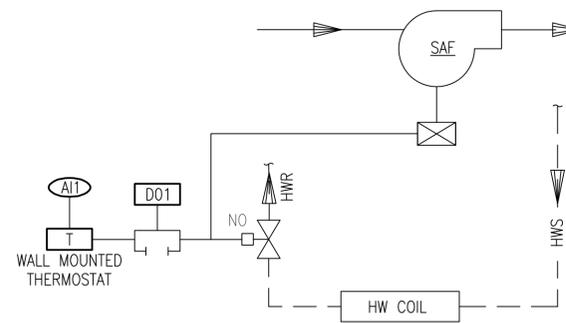


### ETR DDC BUILDING CONTROLLER

SCALE: NTS

### ETR BLDG GLOBAL POINT (TYP. FOR 1) (DDC)

SCALE: NTS



### CABINET UNIT HEATER (CUH) (DDC)

SCALE: NTS

### SEQUENCE OF OPERATION

UNIT SHALL BE ENERGIZED AND DE-ENERGIZED BY THE DDC SYSTEM BASED ON THE BUILDING SCHEDULED OCCUPIED/UNOCCUPIED MODE. UNIT SHALL BE CONTROLLED BY THE SPACE TEMPERATURE SENSOR. UPON A FALL IN SPACE TEMPERATURE BELOW 65°F THE HW 2-POSITION CONTROL VALVE SHALL OPEN AND THE FAN SHALL BE ENERGIZED. UPON A RISE IN SPACE TEMPERATURE ABOVE 68°F, THE OPPOSITE SHALL OCCUR.

HOT WATER CABINET UNIT HEATER				
LOCAL DDC CONTROLLER				
INPUTS		OUTPUTS		
ANALOG	AI1	SPACE TEMPERATURE	DIGITAL	
			DO1	STATUS (ON/OFF)

APPROVED

PER COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES: JMN | DRW: JWS | CHK: KDB

BRANCH MANAGER

CHIEF ENGR/ARCH

DESIGN DIRECTOR

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC

NAVAL STATION NEWPORT - NEWPORT, RI

NAVAL STATION NEWPORT

NEWPORT, RHODE ISLAND

BUILDING 446 HVAC REPLACEMENT

CONTROLS

SCALE: AS NOTED

PROJECT NO.: 1312379

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 12684372

SHEET 31 OF 47

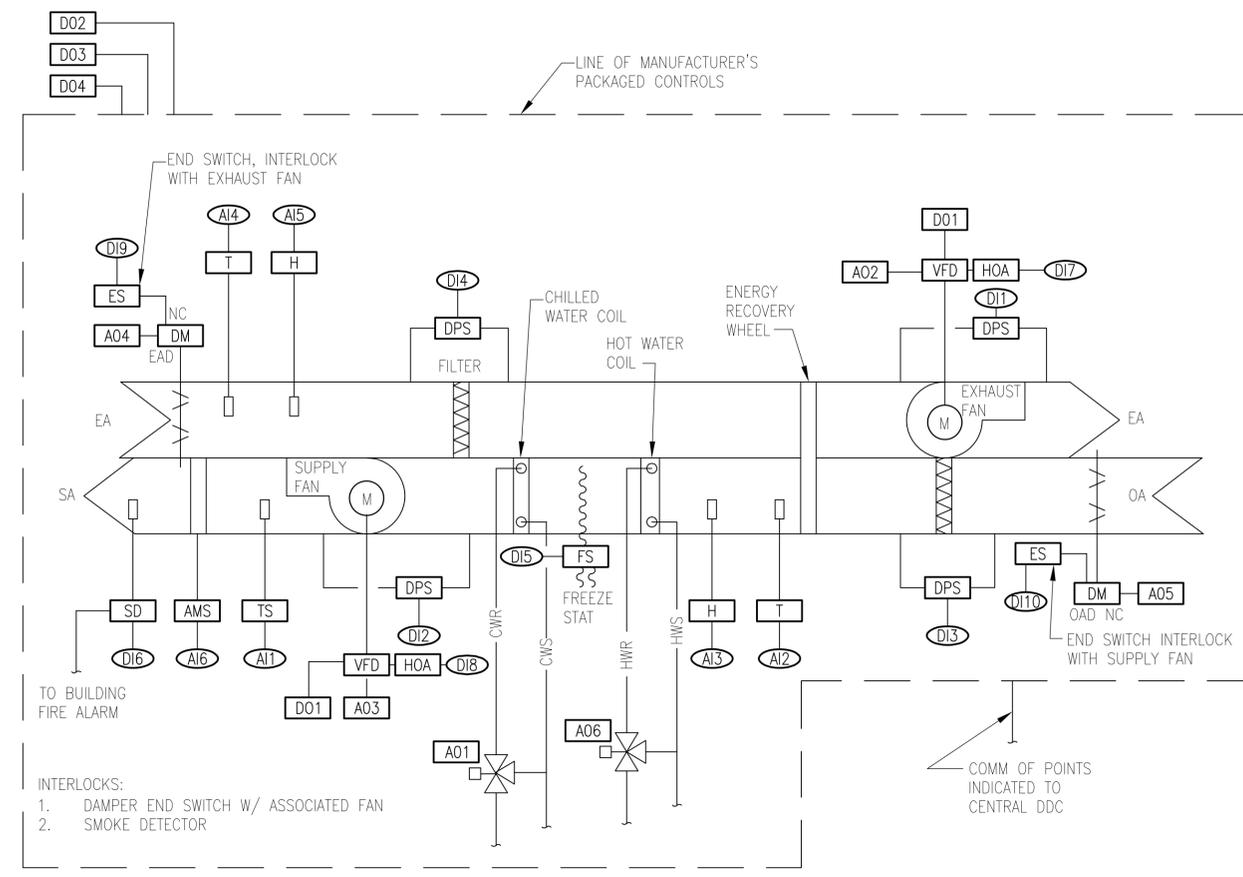
M-601

DRAWN BY: 10 MARCH 2009

NAVSTA DWG. NO. 42265-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD Models and Sheets\13\_Mechanical\M-601.dwg LAYOUT NAME: M-601 PLOTTED: Friday, February 13, 2015 - 7:46am USER: bcd6jw

DOAHU-1	
DDC CONTROLLER	
INPUTS	
ANALOG	AI1 SUPPLY AIR TEMPERATURE
	AI2 OA (AFTER RECOVERY) TEMPERATURE
	AI3 OA (AFTER RECOVERY) HUMIDITY
	AI4 EA TEMPERATURE
	AI5 EA HUMIDITY
	AI6 SF AIR FLOW CFM
DIGITAL	DI1 EXHAUST FAN STATUS
	DI2 SUPPLY FAN STATUS
	DI3 FILTER DIFFERENTIAL PRESSURE
	DI4 FILTER DIFFERENTIAL PRESSURE
	DI5 FREEZESTAT
	DI6 DUCT SMOKE DETECTOR
	DI7 EF HAND/AUTO POSITION
	DI8 SF HAND/AUTO POSITION
	DI9 EA DAMPER OPEN
	DI10 OA DAMPER OPEN
OUTPUTS	
ANALOG	A01 COOLING CONTROL VALVE
	A02 EF VFD
	A03 SF VFD
	A04 EAD POSITION
	A05 OAD POSITION
	A06 HEATING CONTROL VALVE
DIGITAL	DO1 EF/SF START/STOP
	DO2 RUN SYSTEM IN HAND
	DO3 SYSTEM OFF
	DO4 RUN SYSTEM AUTO



DOAHU-1 CONTROL DIAGRAM

SCALE: NTS

DOAHU-1 SEQUENCE & OPERATION

**OCCUPIED / UNOCCUPIED MODE:**  
 THE SYSTEM SHALL BE PLACED IN OCCUPIED OR UNOCCUPIED MODE BY A USER ADJUSTABLE TIME OF DAY/WEEK/YEAR SCHEDULE. IN OCCUPIED MODE THE SUPPLY AND EXHAUST FANS SHALL RUN CONTINUOUSLY, THE HEAT WHEEL SHALL BE ENERGIZED AND THE EXHAUST AND SUPPLY DAMPERS SHALL OPEN. IN UNOCCUPIED MODE, THE OPPOSITE SHALL OCCUR.

**COOLING:**  
 THE SUPPLY FAN SHALL RUN CONTINUOUSLY WHEN THE SYSTEM IS INDEXED TO COOLING. WHEN THE SUPPLY TEMPERATURE RISES ABOVE THE SET POINT (55°F); THE CHILLED WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SETPOINT (ADJUSTABLE). WHEN THE SUPPLY TEMPERATURE DROPS BELOW THE SETPOINT, THE OPPOSITE SHALL OCCUR.

**HEATING:**  
 THE SUPPLY FAN SHALL RUN CONTINUOUSLY WHEN THE SYSTEM IS INDEXED TO HEATING. WHEN THE SUPPLY TEMPERATURE DROPS BELOW THE SET POINT (72°F); THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SETPOINT (ADJUSTABLE). WHEN THE SUPPLY TEMPERATURE RISES ABOVE THE SETPOINT, THE OPPOSITE SHALL OCCUR.

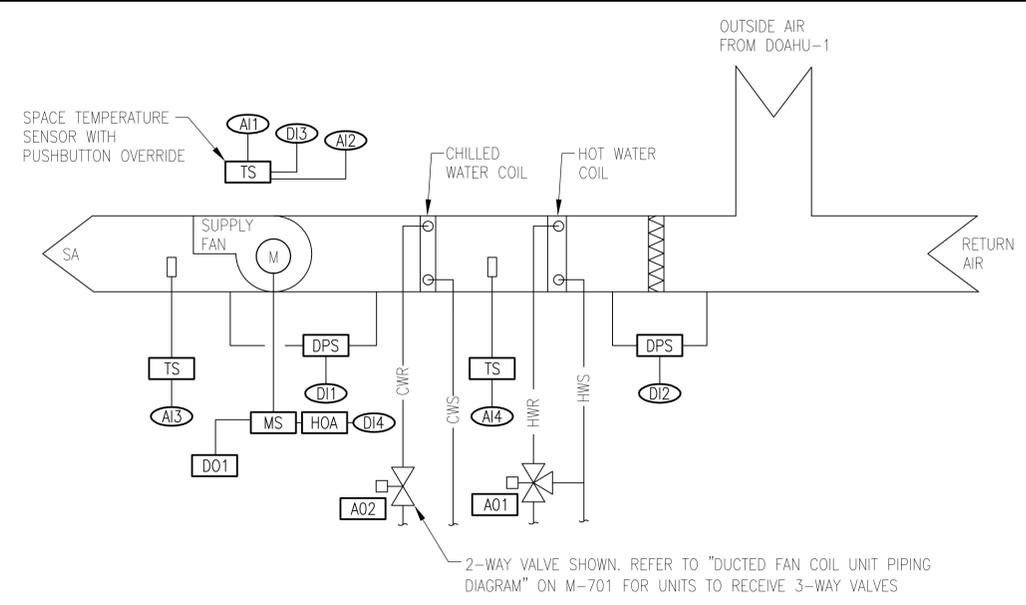
**FREEZE PROTECTION:**  
 IF FREEZESTAT TEMPERATURE FALLS BELOW 40°F DURING HEATING MODE, THE SYSTEM SHALL CLOSE THE OUTSIDE AND EXHAUST AIR DAMPERS, DE-ENERGIZE THE SUPPLY AND EXHAUST AIR FANS AND FULLY OPEN THE HOT WATER VALVE TO THE COIL. MANUAL RESET SHALL BE REQUIRED.

**SAFETY CONTROL:**  
 UPON DETECTION OF THE PRODUCTS OF COMBUSTION BY THE DUCT SMOKE DETECTOR, THE SUPPLY AND ASSOCIATED EXHAUST FANS SHALL BE DE-ENERGIZED.

**ALARMS:**  
 ALARM FOR DIRTY FILTER: WHEN PRESSURE DROP EXCEEDS 0.5" WG ABOVE INITIAL PRESSURE DROP.  
 ALARM IF SUPPLY AIR TEMPERATURE EXCEEDS 60°F (ADJUSTABLE) IN COOLING MODE OR DROPS BELOW 65°F (ADJUSTABLE) IN HEATING MODE.  
 ALARM IF SUPPLY OR EXHAUST FAN FAILS TO START OR FAILS DURING OPERATION.  
 ALARM IF SUPPLY AIR FLOW FALLS BELOW 90 PERCENT OF SETPOINT.

FILE NAME: I:\Projects\301643\301643\_001\90\_CAD\_Models and Sheets\3\_Mechanical\M-602.dwg LAYOUT NAME: M-602 PLOTTED: Thursday, January 15, 2015 - 3:22pm USER: siddh

FCU	
DDC CONTROLLER	
INPUTS	
ANALOG	AI1 SPACE TEMPERATURE
	AI2 SPACE TEMPERATURE SETPOINT
	AI3 SUPPLY AIR TEMPERATURE
	AI4 HW COIL DISCHARGE TEMPERATURE
DIGITAL	DI1 SUPPLY AIR FAN STATUS
	DI2 DIRTY FILTER
	DI3 UNOCCUPIED OVERRIDE
	DI4 SF HAND/AUTO POSITION
OUTPUTS	
ANALOG	A01 HW VALVE CONTROL
	A02 CW VALVE CONTROL
DIGITAL	DO1 SUPPLY AIR FAN START



FAN COIL UNIT (FCU) CONTROL DIAGRAM

SCALE: NTS

FCU SEQUENCE & OPERATION

**OCCUPIED MODE:**  
 WHEN THE SYSTEM IS INDEXED TO OCCUPIED BY TIME OF DAY SCHEDULE OR SYSTEM IS MANUALLY INDEXED FROM UNOCCUPIED MODE BY OVERRIDE BUTTON INTEGRAL TO SPACE TEMPERATURE SENSOR, THE RESPECTIVE CONTROL VALVE SHALL MODULATE TO MAINTAIN RESPECTIVE PROGRAMMED TEMPERATURE SETTINGS (75°F COOLING, 68°F HEATING). THE SUPPLY FAN SHALL RUN CONTINUOUSLY.

**UNOCCUPIED MODE:**  
 WHEN THE SYSTEM IS INDEXED TO UNOCCUPIED, THE RESPECTIVE CONTROL VALVE SHALL MODULATE TO MAINTAIN RESPECTIVE PROGRAMMED TEMPERATURE SETTINGS (80°F COOLING, 60°F HEATING). THE SUPPLY FAN SHALL CYCLE.

**COOLING-OCCUPIED:**  
 THE SUPPLY FAN SHALL BE ENERGIZED WHEN THE SYSTEM IS INDEXED TO COOLING AND THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT (75°). THE 2-WAY OR 3-WAY CHILLED WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SETPOINT (ADJUSTABLE). WHEN THE SPACE TEMPERATURE DROPS BELOW THE SETPOINT, THE OPPOSITE SHALL OCCUR.

**HEATING-OCCUPIED:**  
 THE SUPPLY FAN SHALL BE ENERGIZED WHEN THE SYSTEM IS INDEXED TO HEATING AND THE SPACE TEMPERATURE DROPS BELOW THE SETPOINT (68°). THE 3-WAY HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SETPOINT (ADJUSTABLE). WHEN THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE OPPOSITE SHALL OCCUR.

**ALARMS:**  
 ALARM FOR DIRTY FILTER: WHEN PRESSURE DROP EXCEEDS 0.5" WG ABOVE INITIAL PRESSURE DROP.  
 ALARM IF LEAVING AIR TEMPERATURE EXCEEDS 60°F IN COOLING MODE OR DROPS BELOW 50°F IN HEATING MODE.  
 ALARM IF SUPPLY FAN FAILS TO START OR FAILS DURING OPERATION.

DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
REV	0

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APPROVED: \_\_\_\_\_  
 PER: COMMANDER NAVFAC

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_

DES: JMN | DRW: JWS | CHK: KDB

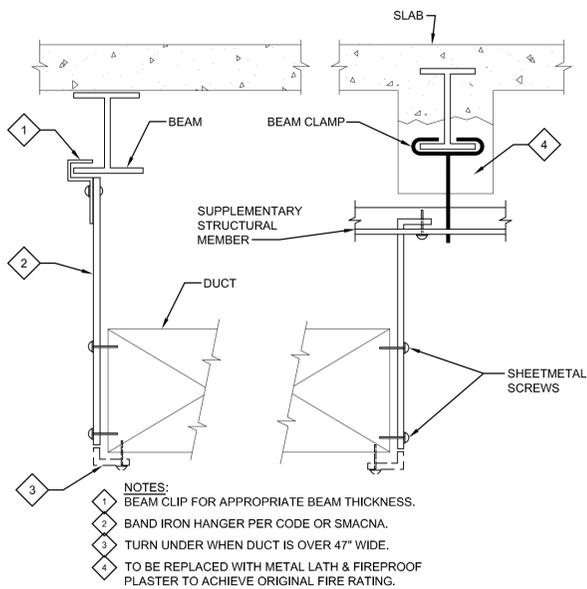
BRANCH MANAGER: \_\_\_\_\_  
 CHIEF ENG/ARCH: \_\_\_\_\_  
 DESIGN DIRECTOR: \_\_\_\_\_

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**

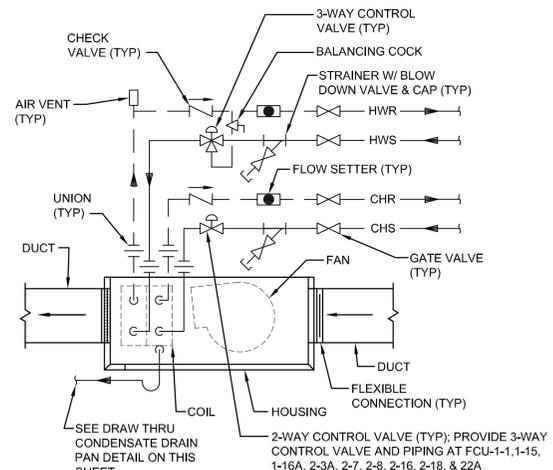
CONTROLS

SCALE: AS NOTED  
 PROJECT NO.: 1312379  
 CONSTR. CONTR. NO.: \_\_\_\_\_  
 NAVFAC DRAWING NO.: 12684373  
 SHEET 32 OF 47  
**M-602**  
 DRAWFORM REVISION: 10 MARCH 2009  
 NAVSTA DWG. NO. 42266-390



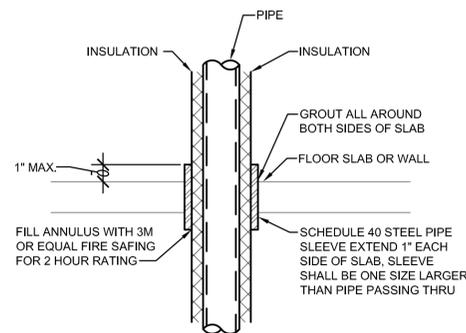
**METHOD OF HANGING DUCTWORK**

NO SCALE



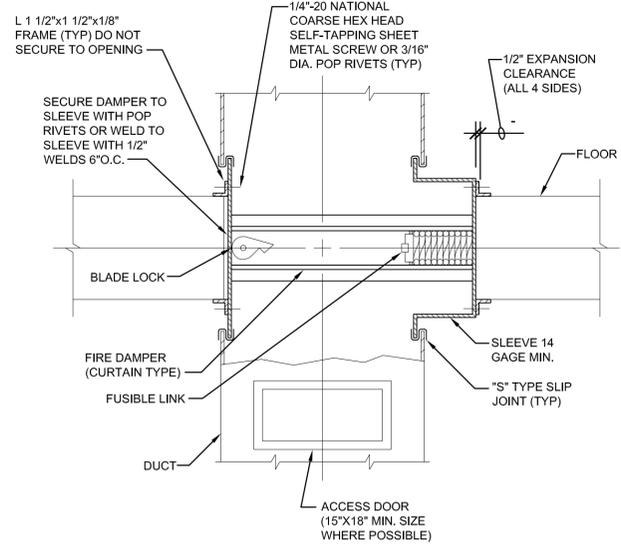
**DUCTED FAN COIL UNIT PIPING DIAGRAM**

NO SCALE



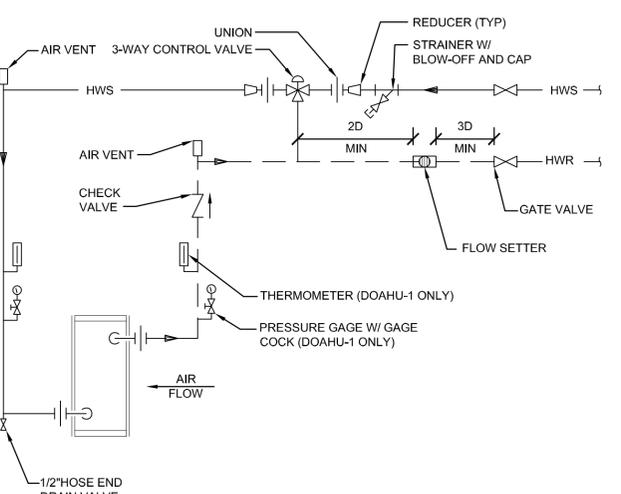
**PIPING FLOOR & WALL PENETRATION DETAIL**

NO SCALE



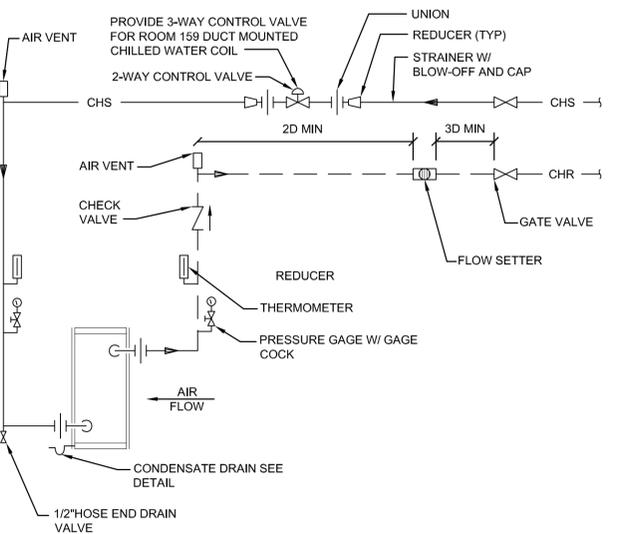
**HORIZONTAL FIRE DAMPER DETAIL**

NO SCALE



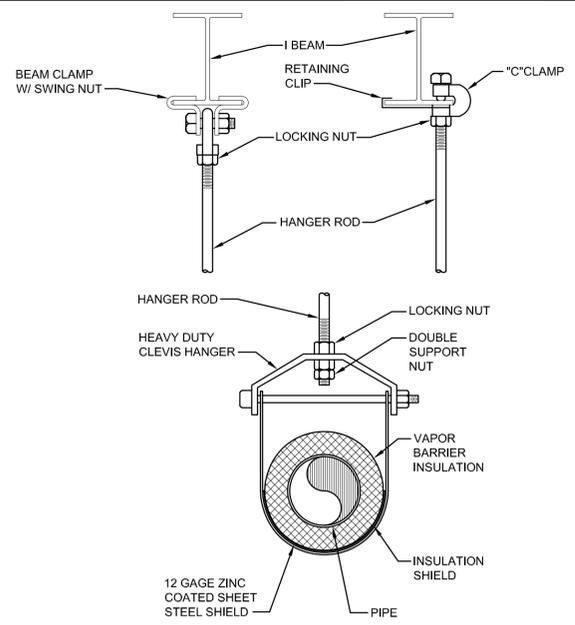
**HEATING COIL PIPING DIAGRAM (DOAHU-1)**

NO SCALE



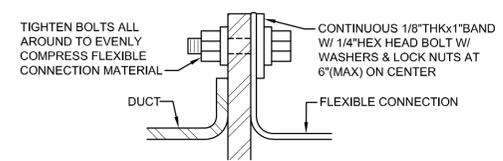
**COOLING COIL PIPING DIAGRAM**

NO SCALE



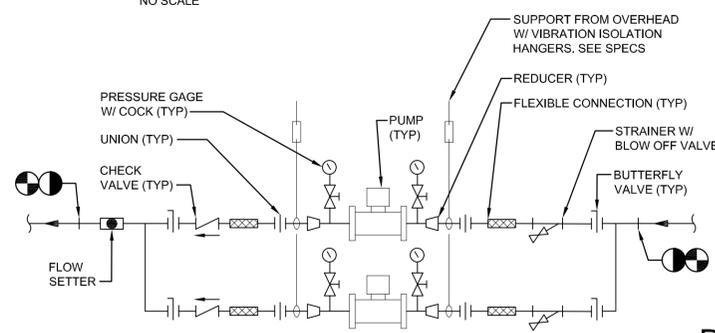
**TYPICAL CLEVIS HANGER DETAIL**

NO SCALE



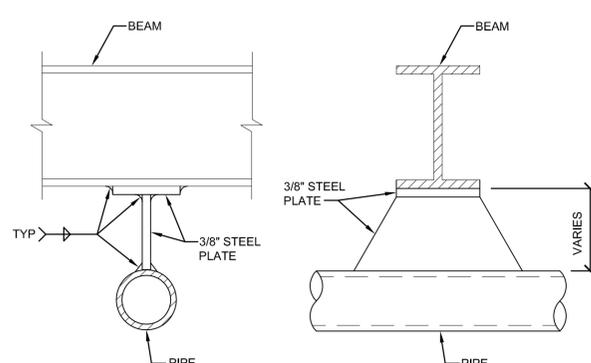
**FLEXIBLE DUCT CONNECTION TO RIGID DUCT DETAIL**

NO SCALE



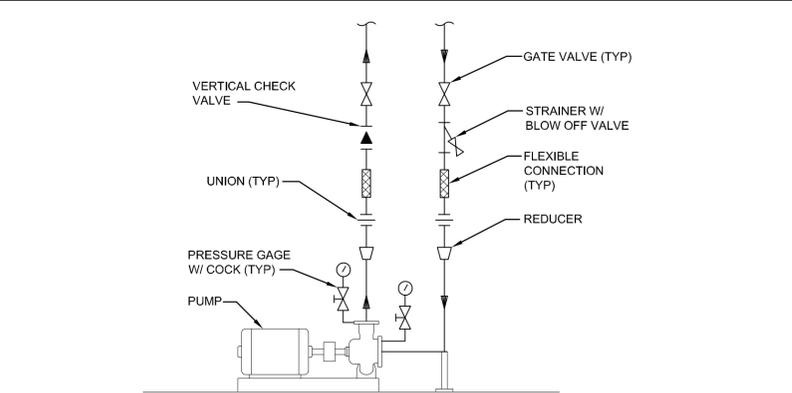
**INLINE PUMP PIPING DIAGRAM**

NO SCALE



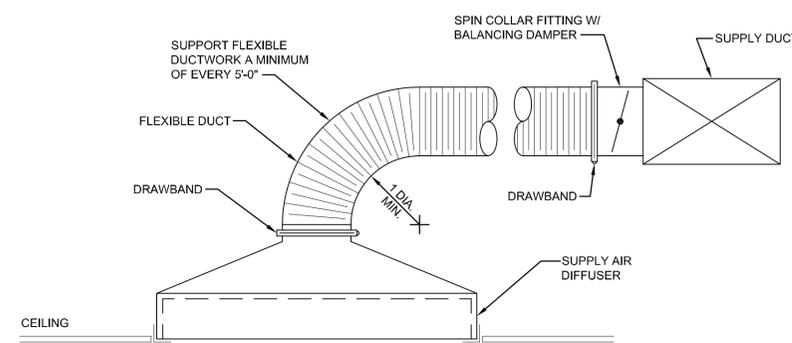
**TYPICAL PIPE ANCHOR DETAIL**

NO SCALE



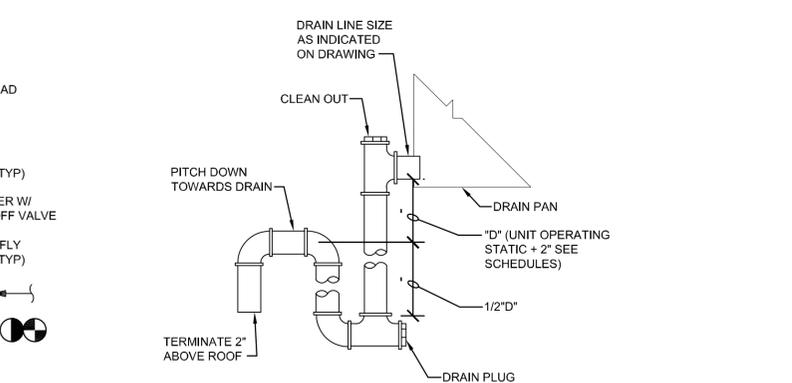
**END SUCTION PUMP PIPING DIAGRAM**

NO SCALE



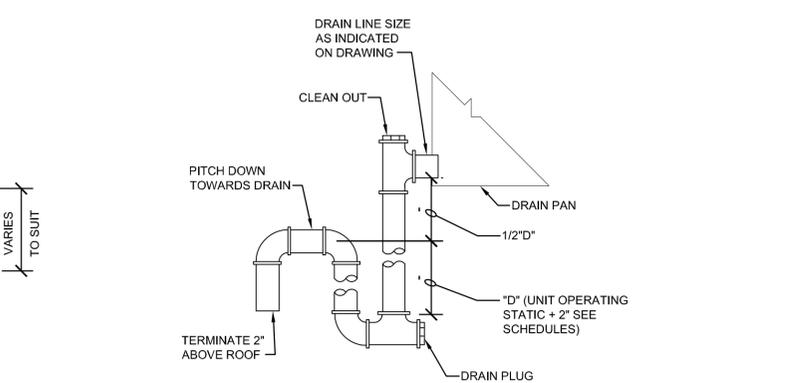
**FLEXIBLE DUCT CONNECTION DETAIL**

NO SCALE



**DRAW THRU CONDENSATE DRAIN PAN DETAIL**

NO SCALE



**BLOW THRU CONDENSATE DRAIN PAN DETAIL**

NO SCALE

FILE NAME: I:\Projects\301643\301643\_001\90\_CAD\_Models and Sheets\13\_Mechanical\M-701.dwg PLOTTED: Thursday, January 15, 2015 - 3:23pm USER: sldklyw

DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0

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APPROVED: \_\_\_\_\_  
FIR COMMANDER: NAFAC

SATISFACTORY TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
DES: JMN | DRW: JWS | CHK: KDB  
BRANCH MANAGER: \_\_\_\_\_  
CHIEF ENGINEER/ARCH: \_\_\_\_\_  
DESIGN DIRECTOR: \_\_\_\_\_

NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
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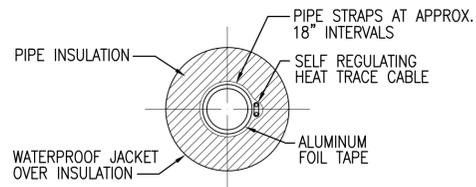
**BUILDING 446 HVAC REPLACEMENT**

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.: \_\_\_\_\_  
NAFAC DRAWING NO.: 12684374  
SHEET 33 OF 47  
**M-701**

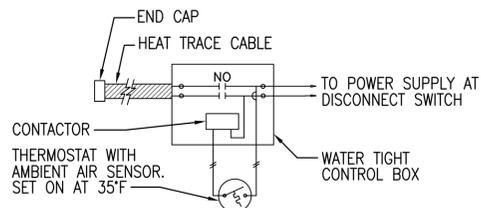
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
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DETAILS

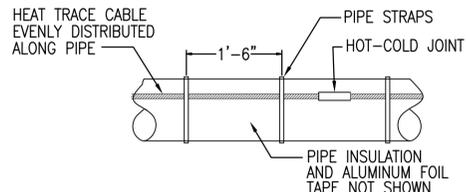
NAVSTA DWG. NO. 42267-390



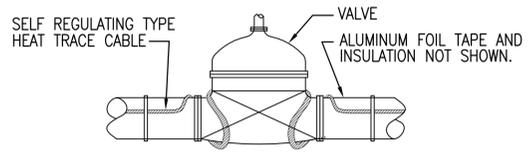
**SECTION THRU PIPE**  
NO SCALE



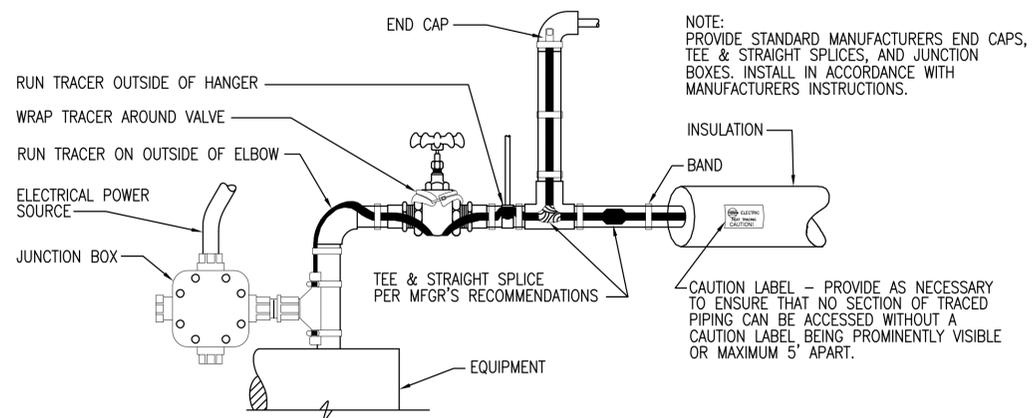
**HEAT TRACE CONTROL BOX DIAGRAM**  
NO SCALE



**INSTALLATION DETAIL**  
NO SCALE



**INSTALLATION AT VALVES**  
NO SCALE



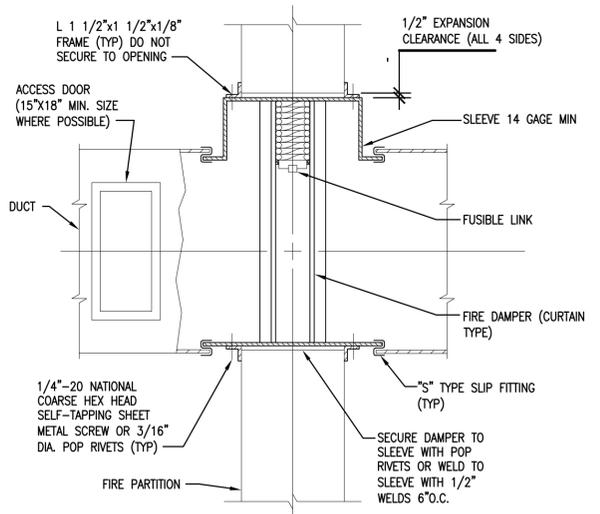
NOTE: PROVIDE STANDARD MANUFACTURERS END CAPS, TEE & STRAIGHT SPLICES, AND JUNCTION BOXES. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

CAUTION LABEL - PROVIDE AS NECESSARY TO ENSURE THAT NO SECTION OF TRACED PIPING CAN BE ACCESSED WITHOUT A CAUTION LABEL BEING PROMINENTLY VISIBLE OR MAXIMUM 5' APART.

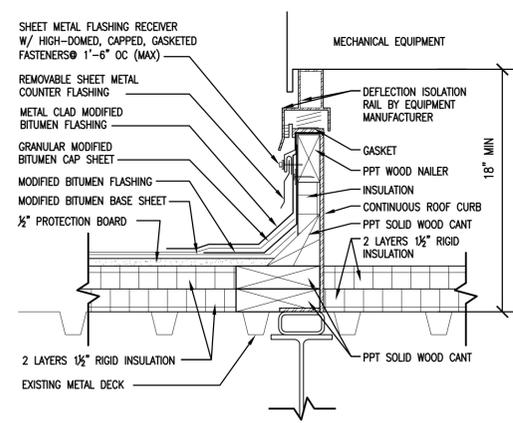
**HEAT TRACING DETAILS**

NO SCALE

NOTES:  
1. PROVIDE WEATHER RESISTANT LABELING ON EXTERIOR OF JACKET IDENTIFYING PIPES AS BEING "ELECTRIC TRACED" WITH VOLTAGE INDICATED

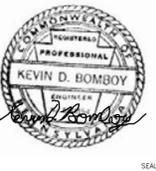


**VERTICAL FIRE DAMPER DETAIL**  
NO SCALE



**EQUIPMENT SUPPORT CURB**  
1 1/2"=1'-0" 0 1' 1'6"

DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYN	0

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APPROVED

FIR COMMANDER NAFAC

ACTIVITY

SATISFACTORY TO DATE

DES: JMN | DRW: JWS | CHK: KDB

BRANCH MANAGER

CHIEF ENGINEER/ARCH

DESIGN DIRECTOR

NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT - NEWPORT, RI  
NAVAL STATION NEWPORT  
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**BUILDING 446 HVAC REPLACEMENT**

DETAILS

SCALE: AS NOTED

PROJECT NO.: 1312379

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 12684375

SHEET 34 OF 47

**M-702**

DRAWING REVISION: 10 MARCH 2009  
NAVSTA DWG. NO. 42268-390

FILE NAME: I:\Projects\301643\301643\_0001\90\_CAD\_Models\_and\_Sheets\13\_Mechanical\M-702.dwg LAYOUT NAME: M-702 PLOTTED: Thursday, January 15, 2015 - 3:24pm USER: siddigw



ROOM SCHEDULE		ROOM SCHEDULE	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
100	ENTRANCE VESTIBULE	123	E.M. CLASSROOM #5
101	LOBBY	124	STORAGE
102	STAIR A	125	E.M. TOILET #1
103	O.D.	125A	JANITOR
104	SAFETY ROOM	126	C.P.O. TOILET #1
105	CPO MESS	127	SHOWER ROOM
106	LCS CST INSTRUCTOR OFFICE	127A	STORAGE
107	E.M. INSTR. OFFICE	128	CORR. A
108	CORR. I	129	SERVICE ROOM
109	LCS-1 CST LAB	130	CORR. J
110	LCS-1 CST CR	131	LADIES
113	CORR. G	131A	SOUND ROOM
116	LCS-2 CST LAB	134	STORAGE ROOM
117	LCS-2 CST CR	138	MAIL
118	STORAGE CLOSET	140	CORRIDOR
119	E.M. CLASSROOM #1	144	ISWOS
120	A.C.C. ROOM #1	144A	ISWOS OFFICE
121	STORAGE	146	ISWOS

- ### SHEET KEYNOTES
- DISCONNECT EXISTING UNIT VENTILATOR AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
  - DISCONNECT EXISTING CABINET UNIT HEATER AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
  - DISCONNECT EXISTING WALL AC UNIT. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
  - DISCONNECT EXISTING EVAPORATOR AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
  - DISCONNECT FAN COIL UNIT AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.

- ### GENERAL DEMOLITION NOTES
- EQUIPMENT SHOWN IN HEAVY DASHED LINE WEIGHT ON DEMOLITION PLANS SHALL BE REMOVED. EQUIPMENT SHOWN IN LIGHT LINE WEIGHT ON DEMOLITION PLANS SHALL REMAIN.
  - WHERE REMOVAL OF ELECTRICAL WORK SHOWN, OR OF ASSOCIATED WIRING, INTERRUPTS SERVICE TO EXISTING ELECTRICAL EQUIPMENT TO REMAIN, THE CONTRACTOR SHALL EXTEND SERVICE TO REMAINING EQUIPMENT. ROUTING OF THIS EXTENDED SERVICE SHALL BE SUCH THAT IT DOES NOT INTERFERE WITH NEW WORK.
  - CONTRACTOR SHALL PROVIDE BLANK COVER PLATES ON ALL JUNCTION BOXES AND DEVICE BOXES WHICH ARE UNCOVERED AS A RESULT OF REMOVAL OF EQUIPMENT.
  - ALL ITEMS TO BE REMOVED SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE REMOVED FROM SITE, UNLESS CONTRACTING OFFICER WISHES TO RETAIN OWNERSHIP OR IF ITEM IS SPECIFICALLY NOTED TO BE RELOCATED OR SALVAGED. CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH CONTRACTING OFFICER TO ASSURE THEIR RIGHT OF FIRST REFUSAL FOR ALL ITEMS BEING REMOVED FROM THE PROJECT.
  - ALL EXISTING SURFACES DAMAGED OR EXPOSED BY DEMOLITION OR REMOVAL OF EQUIPMENT SHALL BE PATCHED AND REPAIRED WITH MATERIALS AND FINISHES TO MATCH EXISTING ADJACENT SURFACES.
  - CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL WORK WITH CONTRACTING OFFICER TO MINIMIZE DISRUPTIONS TO ONGOING OPERATIONS AND DOWN-TIME TO EXISTING SYSTEMS.
  - REMOVAL OF DEVICE SHALL INCLUDE REMOVAL OF ALL ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
  - THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH ALL TRADES.
  - PERMISSION TO INTERRUPT UTILITY SERVICES SHALL BE REQUESTED IN WRITING A MINIMUM OF 15 CALANDER DAYS PRIOR TO THE DESIRED DATE OF INTERRUPTION. REQUESTS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER.
  - CONTRACTOR SHALL LOCK-OUT AND TAG-OUT ENERGIZED EQUIPMENT PRIOR TO PERFORMING WORK ON EQUIPMENT.

- ### PHASING NOTES
- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

REV	DATE	DESCRIPTION
A	02/11/15	REVISION PER NAVAC DESIGN REVIEW COMMENTS
0	01/16/15	FINAL BID DOCUMENTS





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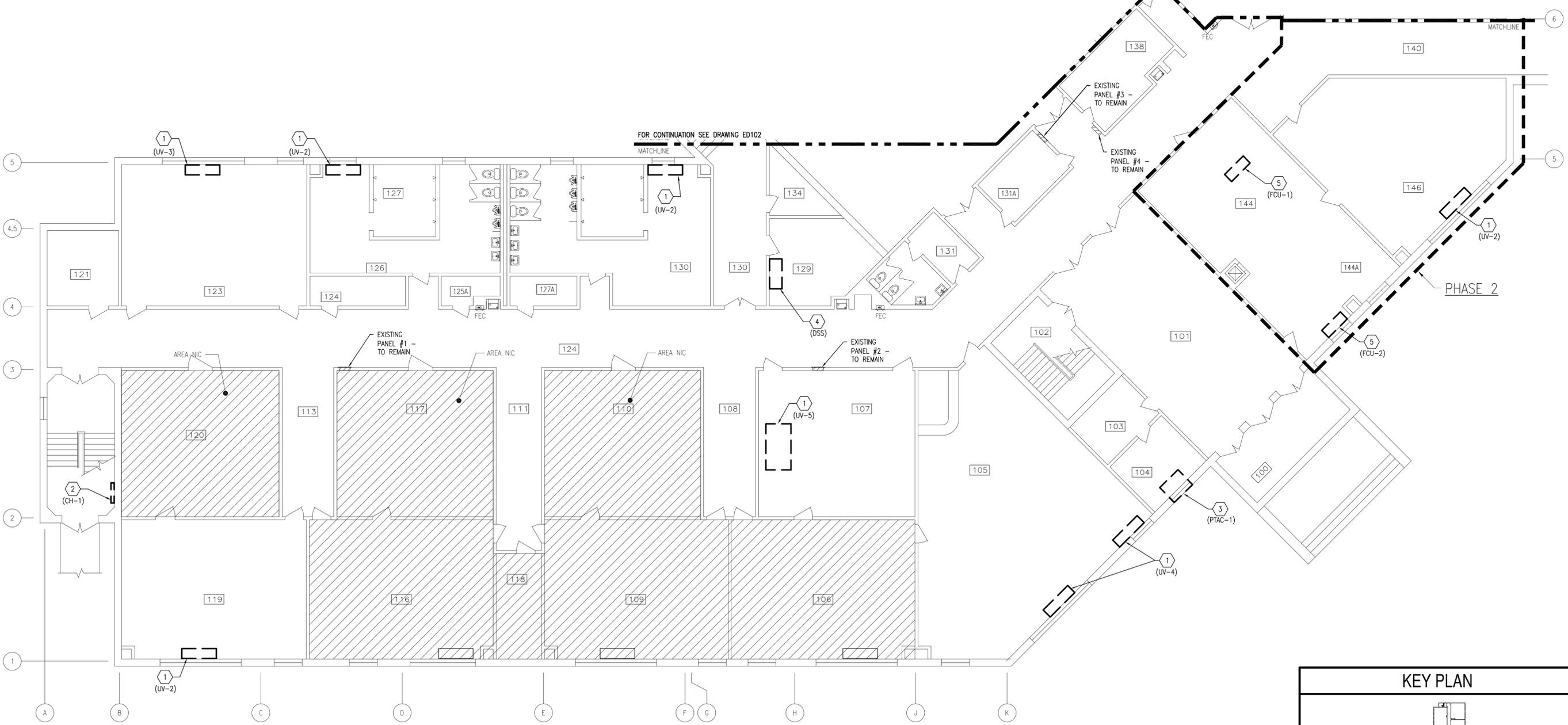
APPROVED	DATE
FIR COMMANDER NAVAC	
SATISFACTORY TO	DATE
DES SP	DRW RMT
CHIEF ENGR/ARCH	
DESIGN DIRECTOR	

DEPARTMENT OF THE NAVY  
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PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NEWPORT, RHODE ISLAND

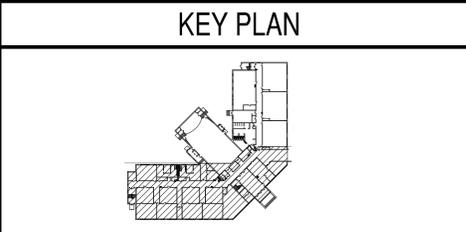
**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL FIRST FLOOR DEMOLITION PLAN

SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.  
NAVFAC DRAWING NO.: 12684377  
SHEET 36 OF 47  
**ED101**

NAVSTA DWG. NO. 42270-390

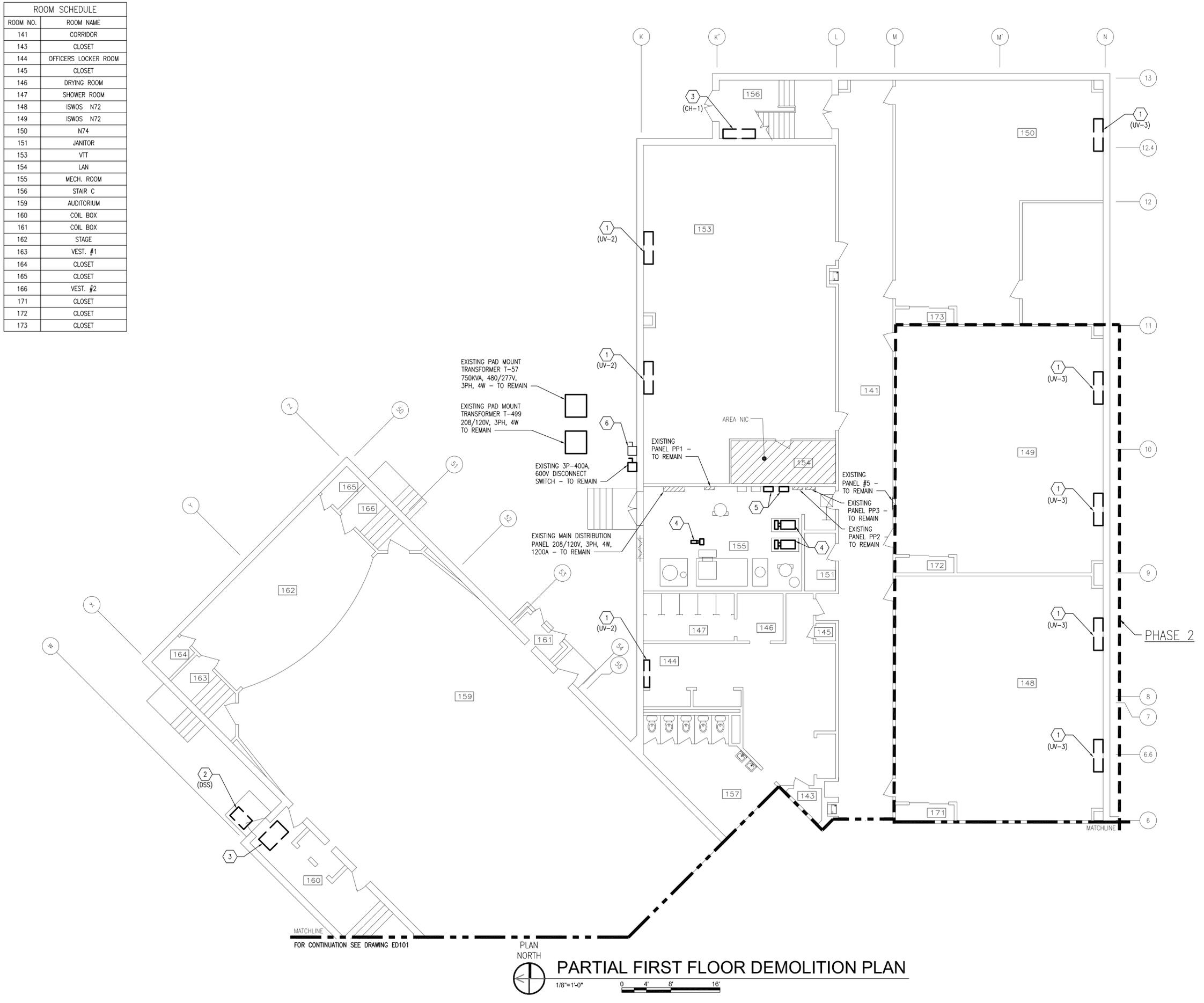


PLAN NORTH  
**PARTIAL FIRST FLOOR DEMOLITION PLAN**  
1/8"=1'-0"  
0 4' 8' 16'



FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\ED101.dwg LAYOUT NAME: 3016436\_0001 PLOTTED: Friday, February 13, 2015 - 7:56am USER: sld47x

ROOM NO.	ROOM NAME
141	CORRIDOR
143	CLOSET
144	OFFICERS LOCKER ROOM
145	CLOSET
146	DRYING ROOM
147	SHOWER ROOM
148	ISWOS N72
149	ISWOS N72
150	N74
151	JANITOR
153	VIT
154	LAN
155	MECH. ROOM
156	STAIR C
159	AUDITORIUM
160	COIL BOX
161	COIL BOX
162	STAGE
163	VEST. #1
164	CLOSET
165	CLOSET
166	VEST. #2
171	CLOSET
172	CLOSET
173	CLOSET



**GENERAL SHEET NOTES**

- FOR GENERAL DEMOLITION NOTES SEE SHEET ED101.
- CONTRACTOR SHALL LOCK-OUT AND TAG-OUT ENERGIZED EQUIPMENT PRIOR TO PERFORMING WORK ON EQUIPMENT.
- ALL EXISTING SURFACES DAMAGED OR EXPOSED BY DEMOLITION OR REMOVAL OF EQUIPMENT SHALL BE PATCHED AND REPAIRED WITH MATERIALS AND FINISHES TO MATCH EXISTING ADJACENT SURFACES.

**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

**SHEET KEYNOTES**

- DISCONNECT EXISTING UNIT VENTILATOR AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
- DISCONNECT EXISTING ROOF MOUNTING CONDENSING UNIT AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
- DISCONNECT CABINET UNIT HEATER AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
- DISCONNECT EXISTING PUMP. REMOVE ASSOCIATED WIRING AND CONDUIT IN THEIR ENTIRETY.
- DISCONNECT EXISTING VFD. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
- REMOVE 3P-400A DISCONNECT SWITCH SERVING EXISTING ROOF TOP CHILLER IN ITS ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT TO EXISTING TRANSFORMER T-57.

REV	DATE	DESCRIPTION
A	02/11/15	REVISION PER NAVFAC DESIGN REVIEW COMMENTS
0	01/16/15	FINAL BID DOCUMENTS



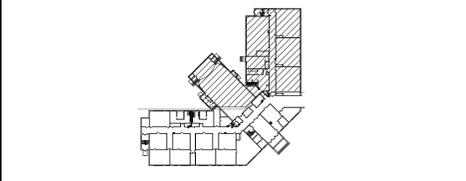
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APPROVED	DATE
FIR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES SP	DRW RMT
CHK JH	
BRANCH MANAGER	
CHIEF ENG/ARCH	
DESIGN DIRECTOR	

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
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 PUBLIC WORKS DEPARTMENT  
 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND  
**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL FIRST FLOOR DEMOLITION PLAN

SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684378
SHEET	37 OF 47
<b>ED102</b>	

**KEY PLAN**



FILE NAME: I:\Projects\3016438\3016438\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\ED102.dwg LAYOUT NAME: 3016438\_0001 PLOTTED: Friday, February 13, 2015 - 7:50am USER: sisk4kx

PLAN NORTH  
**PARTIAL FIRST FLOOR DEMOLITION PLAN**  
 1/8"=1'-0" 0 4' 8' 16'

MATCHLINE  
 FOR CONTINUATION SEE DRAWING ED101

MATCHLINE

ROOM SCHEDULE		ROOM SCHEDULE	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
200	CO	224	C.P.O. TOILET #2
201	CO'S CONFERENCE ROOM	226	JANITOR
202	PASSAGE	227	STORAGE
203	OFFICE	228	SUPPLY (N8)
204		228	COMPTROLLER/SUPPLY (N8)
205	CORR. L	230	VFO
207	DHASO/DC	231	ED OFFICE
208	CORR. K	233	STAIR A
213	LPD-17	234	STORAGE
214	TRAINING AIDS AND STORAGE	235	OFFICER IN CHARGE
215	CORR. J	235A	CLOSET
217	E.M. CLASSROOM #6	240	RECEPTIONIST
221	FACILITIES (N3)	241	XO OFFICE
221A	STORAGE	244	CLOSET
221B	STORAGE	247	LIBRARY
223	CORR. D	248	STORAGE

- ### SHEET KEYNOTES
- DISCONNECT EXISTING UNIT VENTILATOR AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
  - DISCONNECT FAN COIL UNIT AND REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
  - DISCONNECT EXISTING WALL CABINET UNIT HEATER. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.

- ### GENERAL SHEET NOTES
- FOR GENERAL DEMOLITION NOTES SEE SHEET ED101.
  - CONTRACTOR SHALL LOCK-OUT AND TAG-OUT ENERGIZED EQUIPMENT PRIOR TO PERFORMING WORK ON EQUIPMENT.
  - ALL EXISTING SURFACES DAMAGED OR EXPOSED BY DEMOLITION OR REMOVAL OF EQUIPMENT SHALL BE PATCHED AND REPAIRED WITH MATERIALS AND FINISHES TO MATCH EXISTING ADJACENT SURFACES.

- ### PHASING NOTES
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REV	DATE	DESCRIPTION
0	01/16/15	FINAL BID DOCUMENTS
1	02/11/15	REVISION PER NAFC DESIGN REVIEW COMMENTS





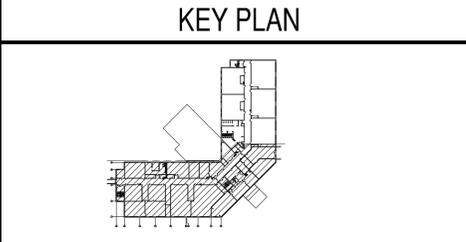
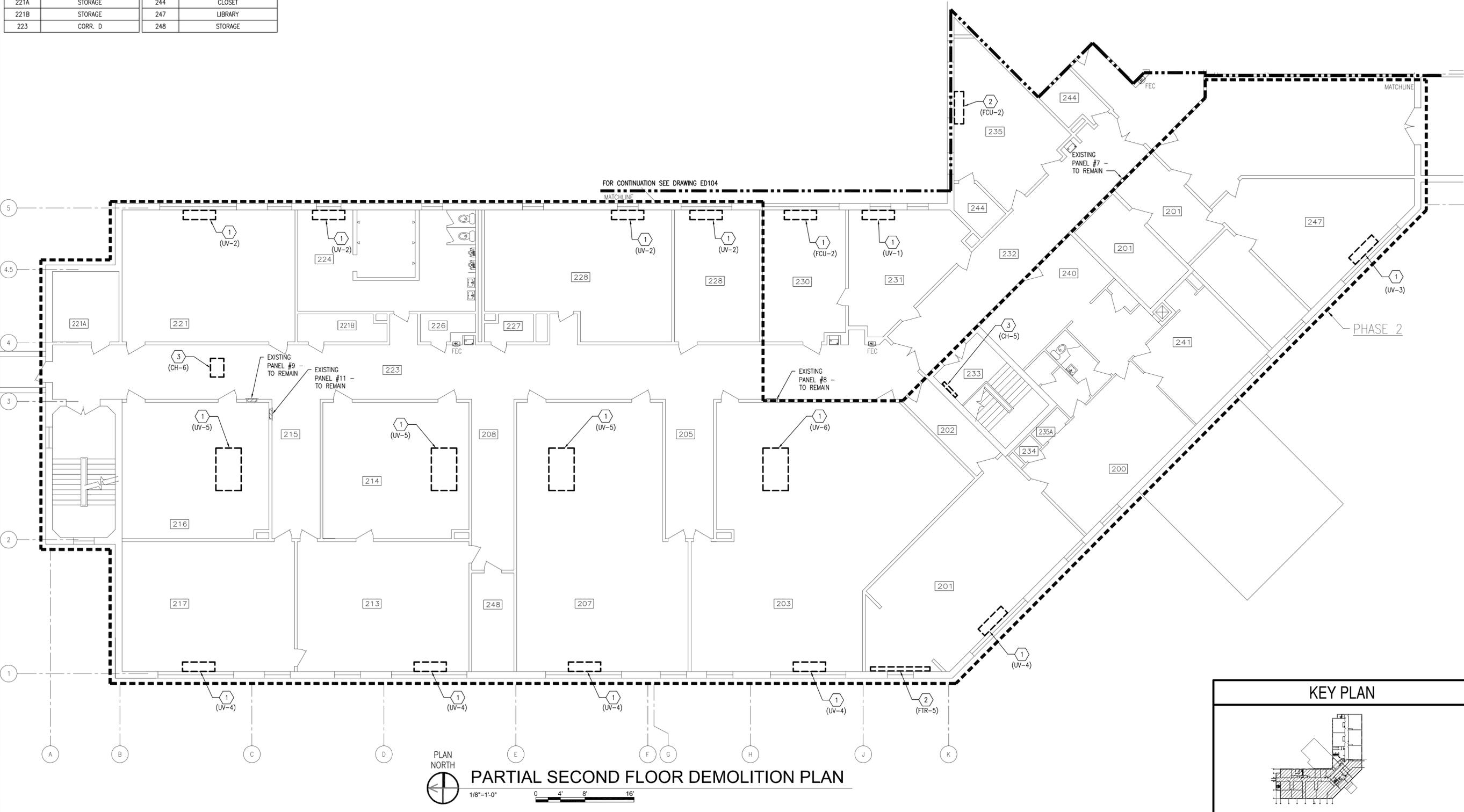
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APPROVED	DATE
FIR COMMANDER NAFC	
ACTIVITY	
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DES SP	DRW RMT
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BRANCH MANAGER	
CHIEF ENGR/ARCH	
DESIGN DIRECTOR	

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL SECOND FLOOR DEMOLITION PLAN

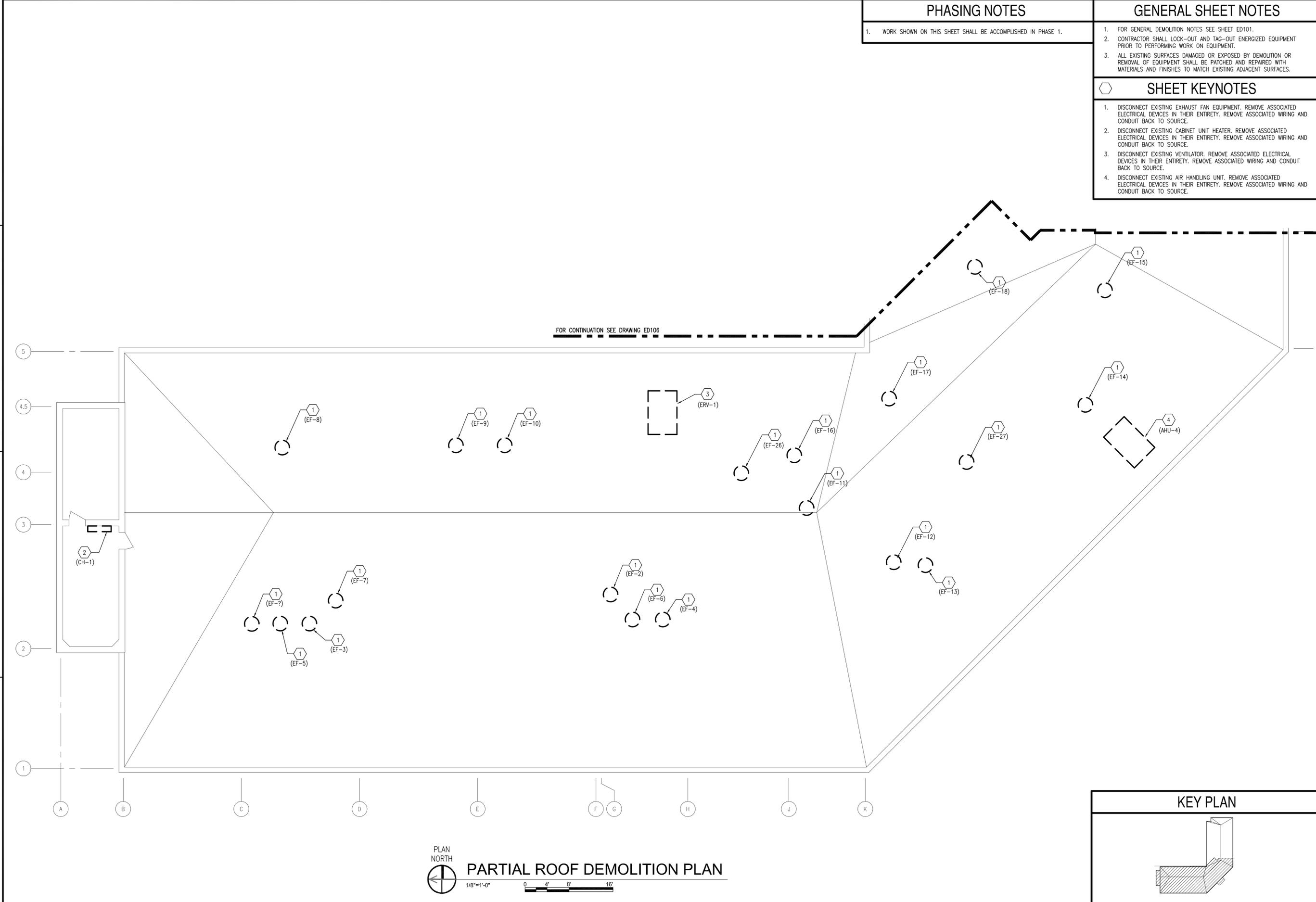
SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAFAC DRAWING NO.	12684379
SHEET	38 OF 47
<b>ED103</b>	



FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\ED103.dwg LAYOUT NAME: 3016436\_0001 PLOTTED: Friday, February 13, 2015 - 7:50am USER: sld447x



FILE NAME: I:\Projects\3016438\3016438\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\ED105.dwg LAYOUT NAME: 3016438\_0001 PLOTTED: Thursday, January 15, 2015 - 3:33pm USER: sckhlym



**PHASING NOTES**

1. WORK SHOWN ON THIS SHEET SHALL BE ACCOMPLISHED IN PHASE 1.

**GENERAL SHEET NOTES**

1. FOR GENERAL DEMOLITION NOTES SEE SHEET ED101.
2. CONTRACTOR SHALL LOCK-OUT AND TAG-OUT ENERGIZED EQUIPMENT PRIOR TO PERFORMING WORK ON EQUIPMENT.
3. ALL EXISTING SURFACES DAMAGED OR EXPOSED BY DEMOLITION OR REMOVAL OF EQUIPMENT SHALL BE PATCHED AND REPAIRED WITH MATERIALS AND FINISHES TO MATCH EXISTING ADJACENT SURFACES.

**SHEET KEYNOTES**

1. DISCONNECT EXISTING EXHAUST FAN EQUIPMENT. REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
2. DISCONNECT EXISTING CABINET UNIT HEATER. REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
3. DISCONNECT EXISTING VENTILATOR. REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.
4. DISCONNECT EXISTING AIR HANDLING UNIT. REMOVE ASSOCIATED ELECTRICAL DEVICES IN THEIR ENTIRETY. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.

APPR	DATE	DESCRIPTION	SYN
	01/16/15	FINAL BID DOCUMENTS	0

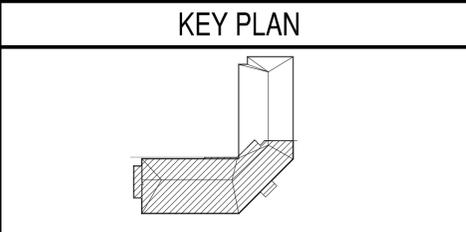
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ACTIVITY	
SATISFACTORY TO	DATE
DES SP	DRW RMT
CHK	JH
BRANCH MANAGER	
CHIEF ENG/ARCH	
DESIGN DIRECTOR	

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 NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL ROOF DEMOLITION PLAN

SCALE: AS NOTED  
 PROJECT NO.: 1312379  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO. 12684381  
 SHEET 40 OF 47  
**ED105**



PLAN NORTH

**PARTIAL ROOF DEMOLITION PLAN**

1/8"=1'-0"



ROOM SCHEDULE		ROOM SCHEDULE	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
100	ENTRANCE VESTIBULE	123	E.M. CLASSROOM #5
101	LOBBY	124	STORAGE
102	STAIR A	125	E.M. TOILET #1
103	O.D.	125A	JANITOR
104	SAFETY ROOM	126	C.P.O. TOILET #1
105	CPO MESS	127	SHOWER ROOM
106	LCS CST INSTRUCTOR OFFICE	127A	STORAGE
107	E.M. INSTR. OFFICE	128	CORR. A
108	CORR. I	129	SERVICE ROOM
109	LCS-1 CST LAB	130	CORR. J
110	LCS-1 CST CR	131	LADIES
113	CORR. G	131A	SOUND ROOM
116	LCS-2 CST LAB	134	STORAGE ROOM
117	LCS-2 CST CR	138	MAIL
118	STORAGE CLOSET	140	CORRIDOR
119	E.M. CLASSROOM #1	144	ISWOS
120	A.C.C. ROOM #1	144A	ISWOS OFFICE
121	STORAGE	146	ISWOS

**GENERAL SHEET NOTES**

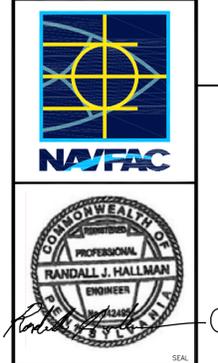
- FOR LEGEND AND GENERAL NOTES SEE SHEET E001.
- FOR PANEL SCHEDULES SEE SHEET E-601.

**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

APPR	DATE
	01/16/15

NO	DESCRIPTION
0	FINAL BID DOCUMENTS



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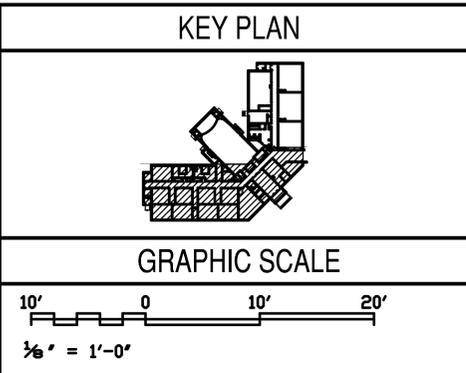
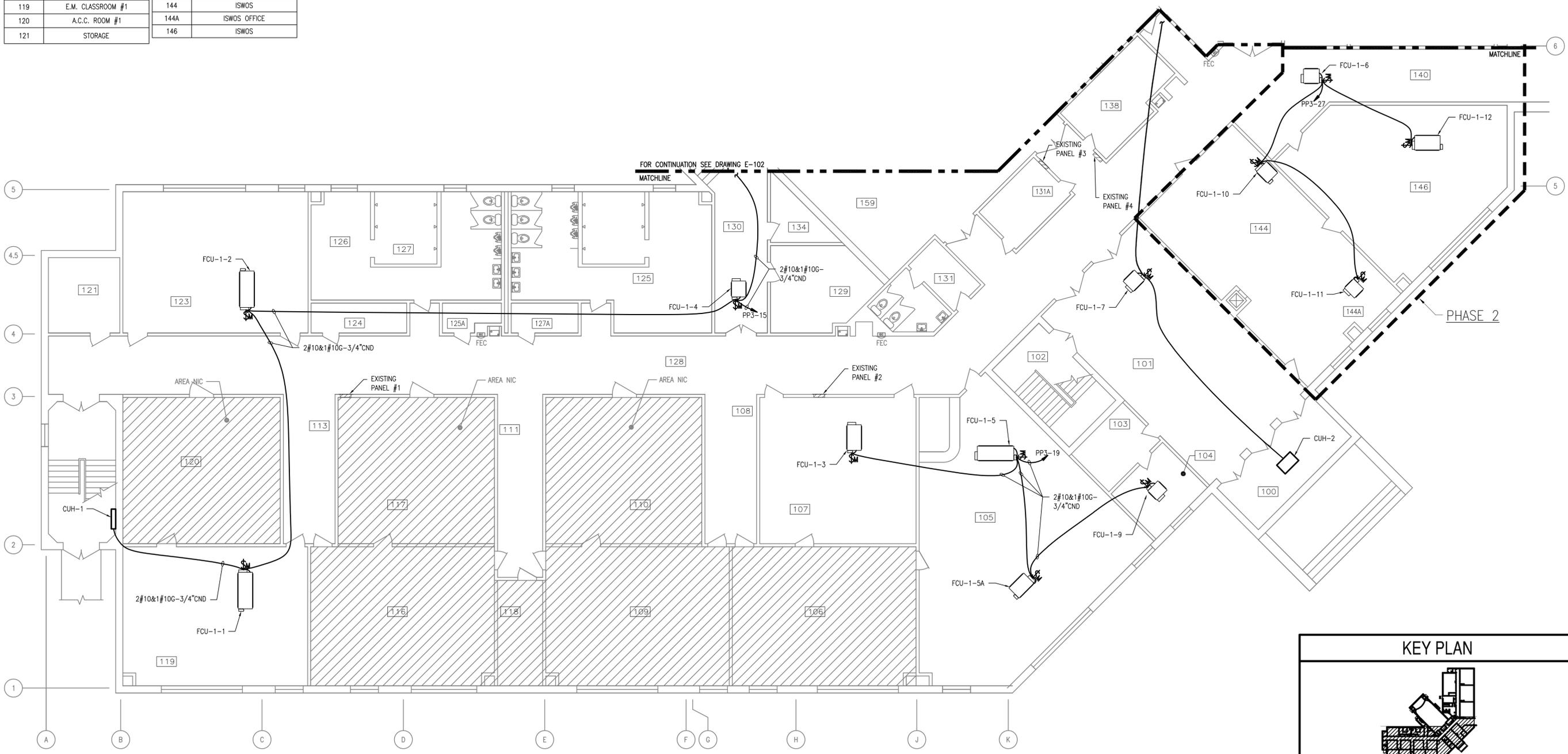
APPROVED	DATE				
PER COMMANDER NAVFAC	ACTIVITY				
SATISFACTORY TO	DATE				
DES	SP	DRW	RMT	CHK	JH
BRANCH MANAGER					
CHIEF ENGR/ARCH					
DESIGN DIRECTOR					

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 NAVAL STATION NEWPORT  
 NEWPORT, RHODE ISLAND

**BUILDING 446 HVAC REPLACEMENT**  
 PARTIAL FIRST FLOOR PLAN - NEW WORK

SCALE: AS NOTED  
 PROJECT NO.: 1312379  
 CONSTR. CONTR. NO.  
 NAVFAC DRAWING NO.: 12684383  
 SHEET 42 OF 47  
**E-101**

NAVSTA DWG. NO. 42276-390

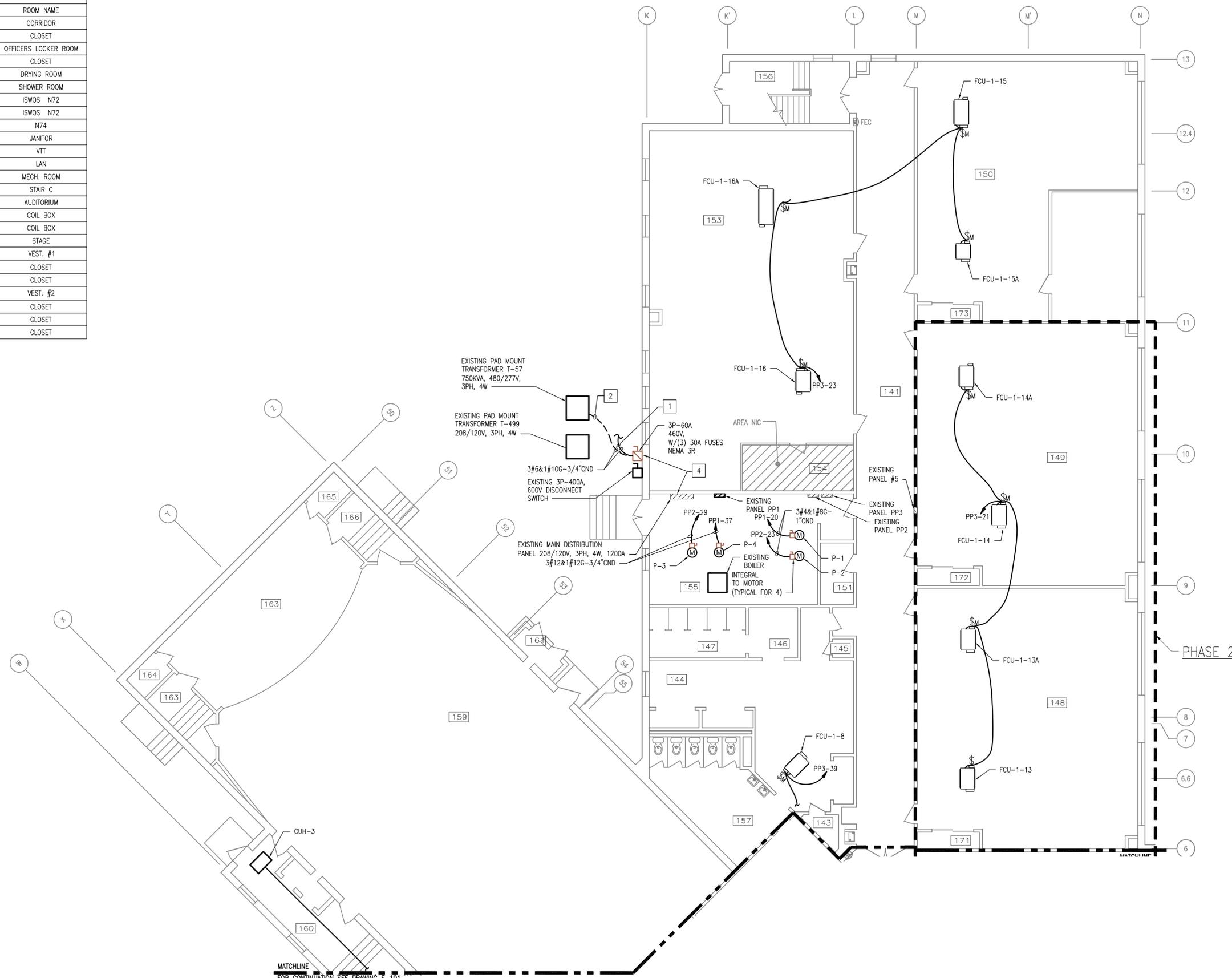


**PARTIAL FIRST FLOOR PLAN - NEW WORK**  
 SCALE: 1/8" = 1'-0"



FILE NAME: I:\Projects\3016438\3016438\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\E-101.dwg LAYOUT NAME: 3016438\_0001\_PLOTTED: Thursday, January 15, 2015 - 3:36pm USER: schleyh

ROOM NO.	ROOM NAME
141	CORRIDOR
143	CLOSET
144	OFFICERS LOCKER ROOM
145	CLOSET
146	DRYING ROOM
147	SHOWER ROOM
148	ISWOS N72
149	ISWOS N72
150	N74
151	JANITOR
153	VTT
154	LAN
155	MECH. ROOM
156	STAIR C
159	AUDITORIUM
160	COIL BOX
161	COIL BOX
162	STAGE
163	VEST. #1
164	CLOSET
165	CLOSET
166	VEST. #2
171	CLOSET
172	CLOSET
173	CLOSET



**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE SHEET E001.
- FOR PANEL SCHEDULES SEE SHEET E-601.

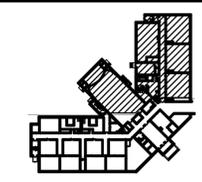
**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

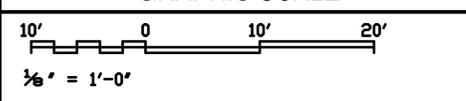
**SHEET KEYNOTES**

- SURFACE MOUNT CONDUIT ON EXTERIOR WALL UP TO AIR HANDLING UNIT. CONTRACTOR SHALL COORDINATE EXACT ROUTING IN FIELD.
- CONNECT TO LUG PREVIOUSLY SERVING REMOVED DISCONNECT SWITCH IN EXISTING TRANSFORMER T-57.
- EXTEND EXISTING WIRING AND CONDUIT PREVIOUSLY SERVING REMOVED PUMP AND CONNECT.
- CONTRACTOR SHALL PROVIDE A PERMANENT ENGRAVED AND WEATHERPROOF PLAQUE FOR EACH SERVICE WHICH READ:  
 PLAQUE ON SERVICE #1 - MAIN DISTRIBUTION PANEL  
 SERVICE #1 OF TWO (2) SERVICES;  
 SERVICE #2 IS LOCATED ON THE EXTERIOR OF THE NORTH WALL ON THE BUILDING  
 PLAQUE ON SERVICE #2 - SAFETY SWITCH  
 SERVICE #2 OF TWO (2) SERVICES;  
 SERVICE #1 IS LOCATED IN MECHANICAL ROOM 155

**KEY PLAN**



**GRAPHIC SCALE**



**PARTIAL FIRST FLOOR PLAN - NEW WORK**  
SCALE: 1/8"=1'-0"



DATE	01/16/15
DESCRIPTION	FINAL BID DOCUMENTS
SYMBOL	0
SEAL	
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CHIEF ENGR/ARCH	
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NAVAL STATION NEWPORT	
NAVAL STATION NEWPORT - NEWPORT ISLAND	
NEWPORT, RHODE ISLAND	
<b>BUILDING 446 HVAC REPLACEMENT</b>	
PARTIAL FIRST FLOOR PLAN - NEW WORK	
SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684384
SHEET	43 OF 47
<b>E-102</b>	
DRAWN/REVISED: 10 MARCH 2009	
NAVSTA DWG. NO. 42277-390	

FILE NAME: I:\Projects\3016438\3016438\_001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\E-102.dwg LAYOUT NAME: 3016438\_001 PLOTTED: Thursday, January 15, 2015 - 3:37pm USER: schleyw

ROOM SCHEDULE		ROOM SCHEDULE	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
200	CO	224	C.P.O. TOILET #2
201	CO'S CONFERENCE ROOM	226	JANITOR
202	PASSAGE	227	STORAGE
203	OFFICE	228	SUPPLY (N8)
204		228	COMPTROLLER/SUPPLY (N8)
205	CORR. L	230	VFO
207	DHASO/DC	231	ED OFFICE
208	CORR. K	233	STAIR A
213	LPD-17	234	STORAGE
214	TRAINING AIDS AND STORAGE	235	OFFICER IN CHARGE
215	CORR. J	235A	CLOSET
217	E.M. CLASSROOM #6	240	RECEPTIONIST
221	FACILITIES (N3)	241	XO OFFICE
221A	STORAGE	244	CLOSET
221B	STORAGE	247	LIBRARY
223	CORR. D	248	STORAGE

**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE SHEET E001.
- FOR PANEL SCHEDULES SEE SHEET E-601.

**PHASING NOTES**

- WORK SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE 2 WORK IS CONTAINED WITHIN A BOLD, DASHED BORDER AND TAGGED "PHASE 2". ALL OTHER WORK IS IN PHASE 1.

DATE	DESCRIPTION	BY
01/16/15	FINAL BID DOCUMENTS	
0		





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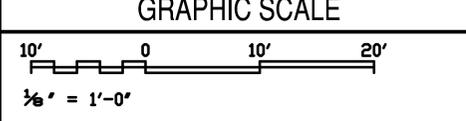
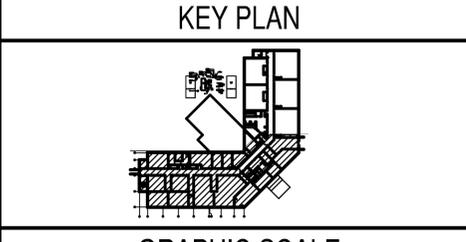
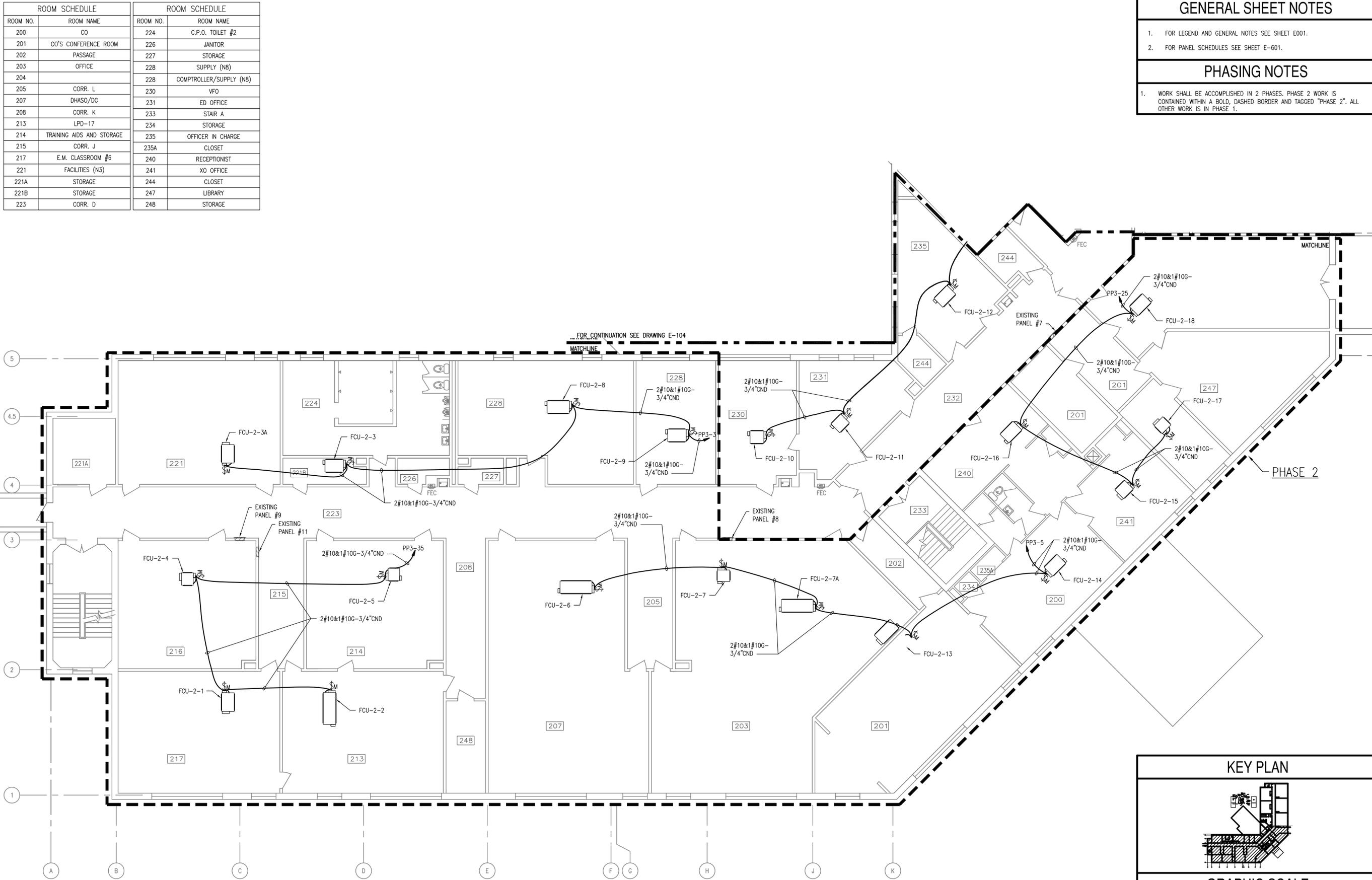
APPROVED	DATE
PER COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES SP	DRW RMT
CHCK	JH
BRANCH MANAGER	
CHIEF ENGR/ARCH	
DESIGN DIRECTOR	

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PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
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**BUILDING 446 HVAC REPLACEMENT**

PARTIAL SECOND FLOOR PLAN - NEW WORK

SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684385
SHEET	44 OF 47
<b>E-103</b>	



**PARTIAL SECOND FLOOR PLAN - NEW WORK**  
SCALE: 1/8"=1'-0"

FILE NAME: I:\Projects\3016438\3016438\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\E-103.dwg LAYOUT NAME: 3016438\_0001\_PLOTTED: Thursday, January 15, 2015 - 3:39pm USER: schleyw

ROOM NO.	ROOM NAME
249	OFF TOILET #2
250	STAIR
250A	CORR. F
251	OFFICERS LOCKER ROOM #2
254	CLOSET
255	TRAINING REQ. (N9)
256	VTC
257	OMMS-NG (N72)
259	CLOSET
260	STORAGE
261	MCM
262	CLOSET
263	STORAGE
264	ADMIN (N1)

**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE SHEET E001.
- FOR PANEL SCHEDULES SEE SHEET E-601.

**PHASING NOTES**

- WORK SHOWN ON THIS SHEET SHALL BE ACCOMPLISHED IN PHASE 1.

DATE	DESCRIPTION	BY
01/16/15	FINAL BID DOCUMENTS	SM

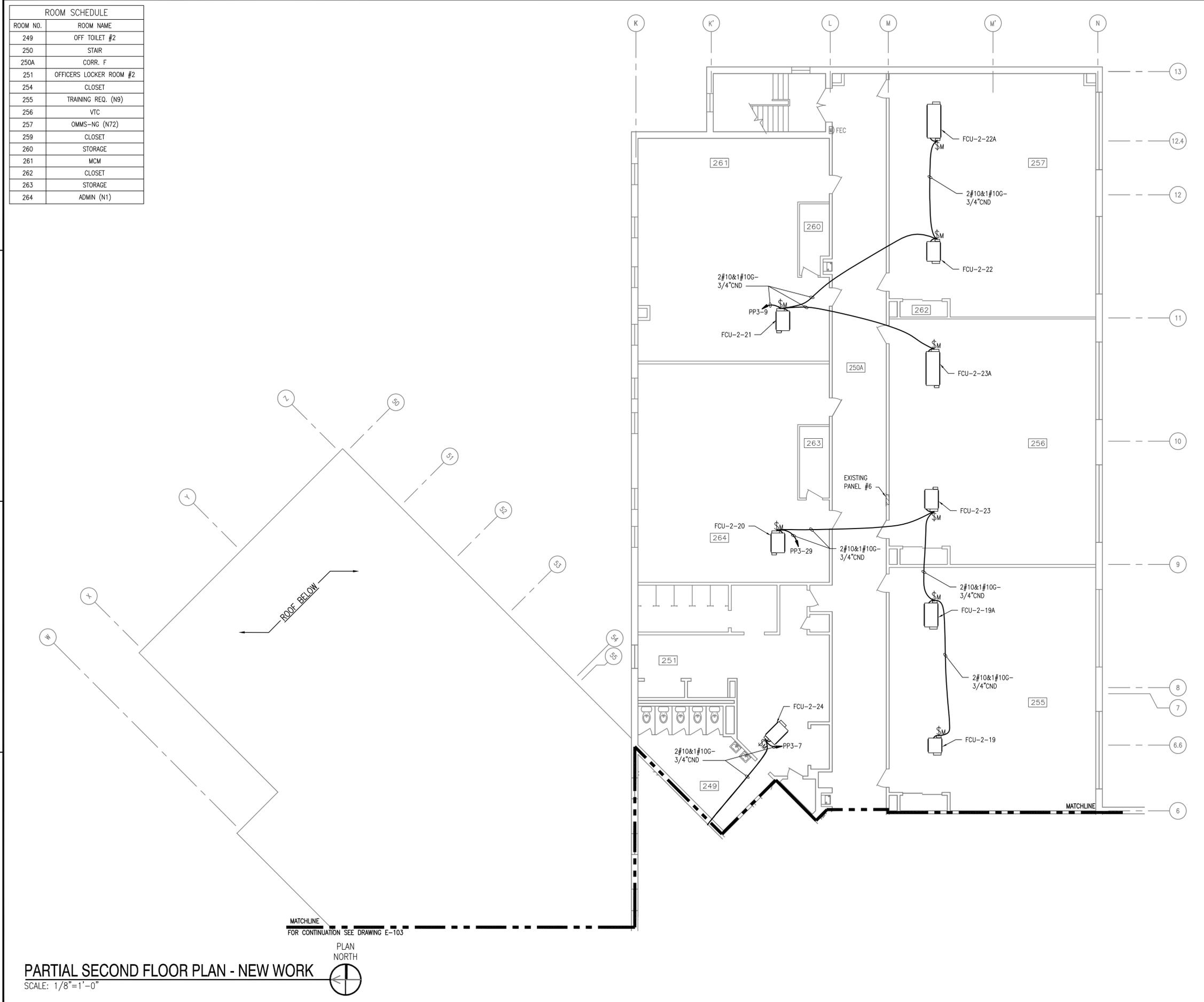


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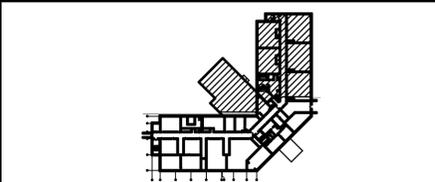
APPROVED	DATE
FIR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES SP	DRW RMT
CHIEF ENGR/ARCH	DESIGN DIRECTOR

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 NAVAL FACILITIES ENGINEERING COMMAND  
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 NAVAL STATION NEWPORT  
 BUILDING 446 HVAC REPLACEMENT  
 PARTIAL SECOND FLOOR PLAN - NEW WORK

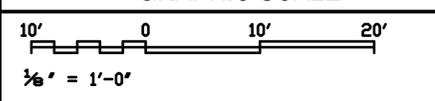
SCALE:	AS NOTED
PROJECT NO.:	1312379
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12684386
SHEET	45 OF 47
<b>E-104</b>	



**KEY PLAN**



**GRAPHIC SCALE**

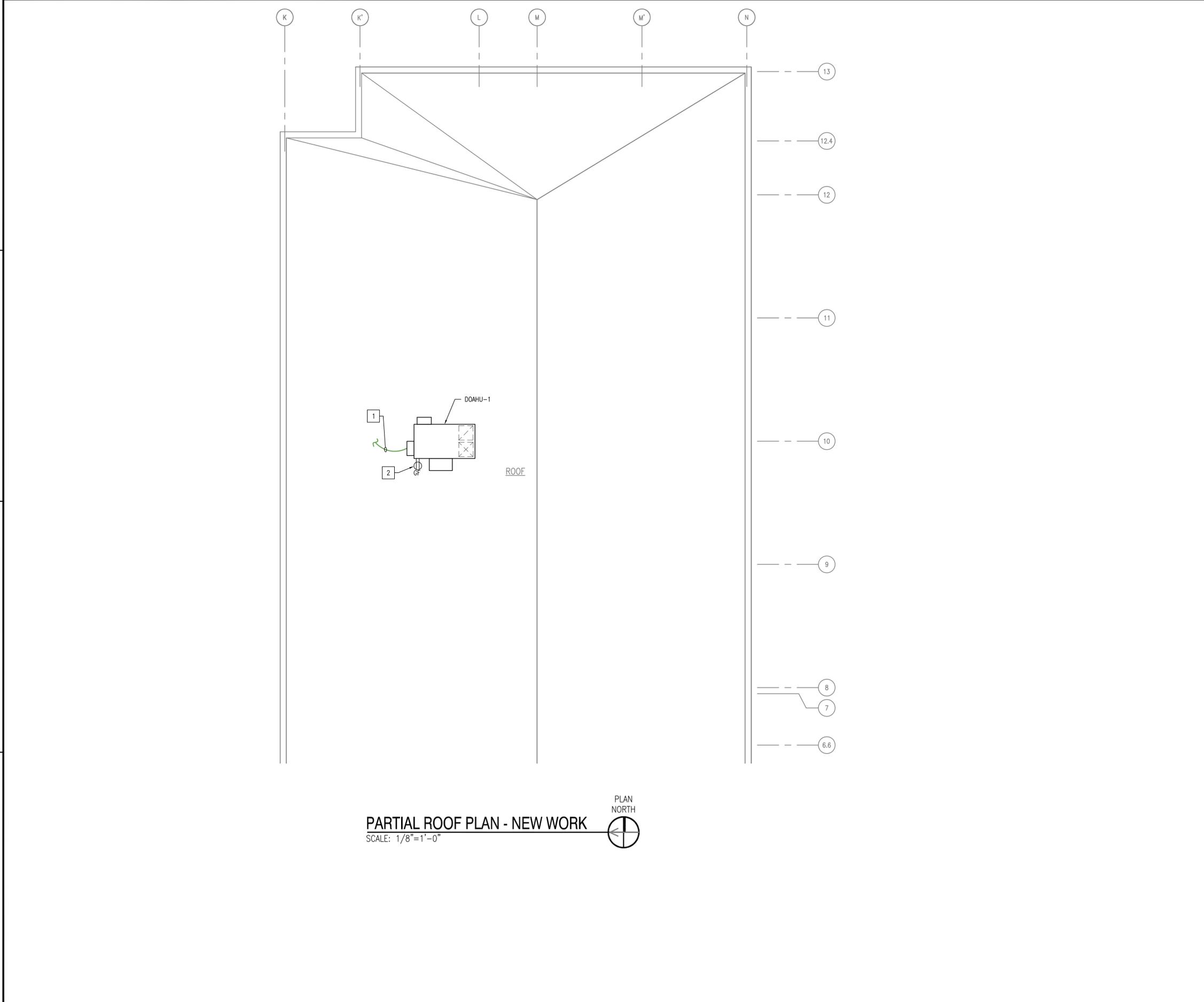


**PARTIAL SECOND FLOOR PLAN - NEW WORK**  
 SCALE: 1/8"=1'-0"



FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\E-104.dwg LAYOUT NAME: 3016436\_0001 PLOTTED: Thursday, January 15, 2015 - 3:39pm USER: sck64g

FILE NAME: I:\Projects\3016438\3016438\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\E-105.dwg LAYOUT NAME: 3016438\_0001 PLOTTED: Thursday, January 15, 2015 - 3:40pm USER: sckley#



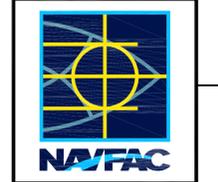
**GENERAL SHEET NOTES**

- FOR LEGEND AND GENERAL NOTES SEE SHEET E001.
- FOR PANEL SCHEDULES SEE SHEET E-601.

**SHEET KEYNOTES**

- TO DISCONNECT SWITCH MOUNTED ON EXTERIOR WALL. FOR CONTINUATION SEE SHEET E-102.
- RELOCATED RECEPTACLE, MOUNT ON UNIT. EXTEND EXISTING WIRING AND CONDUIT PREVIOUSLY SERVING RECEPTACLE AND RECONNECT.

APPR	DATE	DESCRIPTION
	01/16/15	FINAL BID DOCUMENTS
0		SM



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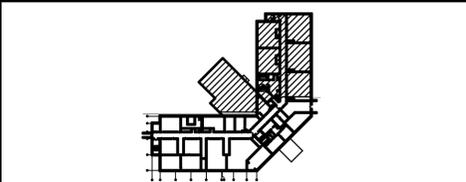
ACTIVITY

DES	SP	DRW	RMT	CHK	JH
<<PM/DM>>					

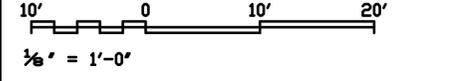
BRANCH MANAGER  
CHIEF ENG/ARCH  
DESIGN DIRECTOR

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NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT  
NAVAL STATION NEWPORT  
NAVAL STATION NEWPORT - NEWPORT, RI  
NEWPORT, RHODE ISLAND  
**BUILDING 446 HVAC REPLACEMENT**  
PARTIAL ROOF PLAN - NEW WORK

**KEY PLAN**



**GRAPHIC SCALE**



SCALE: AS NOTED  
PROJECT NO.: 1312379  
CONSTR. CONTR. NO.  
NAVFAC DRAWING NO.: 12684387  
SHEET 46 OF 47  
**E-105**

### EXISTING PANEL "PP1" SCHEDULE

GE PANEL TYPE NLAB STYLE 3  
WITH GE TOB CIRCUIT BREAKERS

100A, MCB, 208/120V, 3 PHASE, 4 WIRE SURFACE MOUNTED

LOAD SERVED	LOAD (AMPS)			BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE			CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (AMPS)			LOAD SERVED
	A	B	C				A	B	C				A	B	C	
EXISTING CIRCUIT				60		1	●			2						EXISTING CIRCUIT
						3	●			4						EXISTING CIRCUIT
						5	●			6						EXISTING CIRCUIT
EXISTING CIRCUIT				20		7	●			8						EXISTING CIRCUIT
EXISTING CIRCUIT				15		9	●			10						EXISTING CIRCUIT
EXISTING CIRCUIT				15		11	●			12						SPARE
EXISTING CIRCUIT				15		13	●			14						SPARE
EXISTING CIRCUIT				20		15	●			16						SPARE
EXISTING CIRCUIT				20		17	●			18						EXISTING CIRCUIT
SPARE				15		19	●			20						PUMP P-1
						21	●			22						
						23	●			24						
SPARE				20		25	●			26						EXISTING CIRCUIT
						27	●			28						
						29	●			30						
SPARE				25		31	●			32						EXISTING CIRCUIT
						33	●			34						
						35	●			36						
PUMP P-4				20*		37	●			38						EXISTING CIRCUIT
						39	●			40						
						41	●			42						
TOTAL																TOTAL

TOTAL CONNECTED AMPS: A= B= C=

\*REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW CIRCUIT BREAKER, SIZE AS INDICATED.

### EXISTING PANEL "PP2" SCHEDULE

200A, MLO, 208/120V, 3 PHASE, 4 WIRE SURFACE MOUNTED

LOAD SERVED	LOAD (AMPS)			BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE			CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (AMPS)			LOAD SERVED
	A	B	C				A	B	C				A	B	C	
EXISTING CIRCUIT				20		1	●			2						EXISTING CIRCUIT
EXISTING CIRCUIT				20		3	●			4						EXISTING CIRCUIT
EXISTING CIRCUIT				20		5	●			6						EXISTING CIRCUIT
EXISTING CIRCUIT				20		7	●			8						EXISTING CIRCUIT
EXISTING CIRCUIT				20		9	●			10						EXISTING CIRCUIT
EXISTING CIRCUIT				20		11	●			12						EXISTING CIRCUIT
EXISTING CIRCUIT				20		13	●			14						EXISTING CIRCUIT
EXISTING CIRCUIT				20		15	●			16						EXISTING CIRCUIT
EXISTING CIRCUIT				20		17	●			18						EXISTING CIRCUIT
EXISTING CIRCUIT				20		19	●			20						EXISTING CIRCUIT
EXISTING CIRCUIT				20		21	●			22						EXISTING CIRCUIT
PUMP P-2				100*		23	●			24						EXISTING CIRCUIT
						25	●			26						EXISTING CIRCUIT
						27	●			28						EXISTING CIRCUIT
						29	●			30						EXISTING CIRCUIT
PUMP P-3				20*		31	●			32						EXISTING CIRCUIT
						33	●			34						EXISTING CIRCUIT
EXISTING CIRCUIT				20		35	●			36						EXISTING CIRCUIT
EXISTING CIRCUIT				15		37	●			38						EXISTING CIRCUIT
						39	●			40						
						41	●			42						
TOTAL																TOTAL

TOTAL CONNECTED AMPS: A= B= C=

\*REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW CIRCUIT BREAKER, SIZE AS INDICATED.

### EXISTING PANEL "PP3" SCHEDULE

XXXA, MLO, 208/120V, 3 PHASE, 4 WIRE SURFACE MOUNTED

LOAD SERVED	LOAD (AMPS)			BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE			CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (AMPS)			LOAD SERVED
	A	B	C				A	B	C				A	B	C	
EXISTING CIRCUIT				20		1	●			2						EXISTING CIRCUIT
FCU-2-3,3A,8,9-RM 221,221B,228	6.6			20		3	●			4		15				EXISTING CIRCUIT
FCU-2-6,7,7A,13,14-RM 200, 203, 207		9.4		20		5	●			6						EXISTING CIRCUIT
FCU-2-2,10,11,12-RM 213,230,231,235	5.6			20		7	●			8		20				EXISTING CIRCUIT
FCU-2-21,22,22A,23A-RM 256,257,261	7.4			20		9	●			10		20				EXISTING CIRCUIT
EXISTING CIRCUIT				20		11	●			12		20				EXISTING CIRCUIT
				20		13	●			14		20				EXISTING CIRCUIT
FCU-1,2,4,CUH-1,3-RM 119,123,130,160	7.4			20		15	●			16		20				EXISTING CIRCUIT
EXISTING CIRCUIT				20		17	●			18		20				EXISTING CIRCUIT
FCU-1-3,5,5A,9-RM 104, 105, 107	7.3			20		19	●			20		20				EXISTING CIRCUIT
FCU-1-13,13A,14,14A-RM 148, 149	6.4			20		21	●			22		20				EXISTING CIRCUIT
FCU-1-15,15A,16,16A-RM 150,153		6.7		20		23	●			24		20				EXISTING CIRCUIT
FCU-2-15,16,17,18-RM 240,241,232,247	6.2			20		25	●			26		20				EXISTING CIRCUIT
FCU-1-6,10,11,12-RM 140,144,144A,146		6.0		20		27	●			28		20				EXISTING CIRCUIT
FCU-2-19,19A,20,23-RM 255,256, 264		6.7		20		29	●			30		20				EXISTING CIRCUIT
				20		31	●			32		20				EXISTING CIRCUIT
				20		33	●			34		20				EXISTING CIRCUIT
FCU-2-1,2,4,5-RM 213, 214, 216, 217		7.3		20		35	●			36		20				EXISTING CIRCUIT
				20		37	●			38		15				EXISTING CIRCUIT
FCU-1-7,8, CUH-2-RM 100, 101, 144	4.6			20		39	●			40		20				EXISTING CIRCUIT
				20		41	●			42		20				EXISTING CIRCUIT
TOTAL																TOTAL

TOTAL CONNECTED AMPS: A= B= C=



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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SP DRW RMT CHK JH

BRANCH MANAGER

CHIEF ENG/ARCH

DESIGN DIRECTOR

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC

PUBLIC WORKS DEPARTMENT

NAVAL STATION NEWPORT - NEWPORT, RI

NAVAL STATION NEWPORT

NEWPORT, RHODE ISLAND

BUILDING 446 HVAC REPLACEMENT

PANEL SCHEDULES

SCALE: NTS

PROJECT NO.: 1312379

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.

12684388

SHEET 47 OF 47

E-601

DRAWING REVISION: 10 MARCH 2009

NAVSTA DWG. NO. 42281-390

FILE NAME: I:\Projects\3016436\3016436\_0001\90\_CAD\_Models\_and\_Sheets\14\_Electrical\E-601.dwg LAYOUT NAME: 3016436\_0001 PLOTTED: Thursday, January 15, 2015 - 3:41pm USER: sck66g