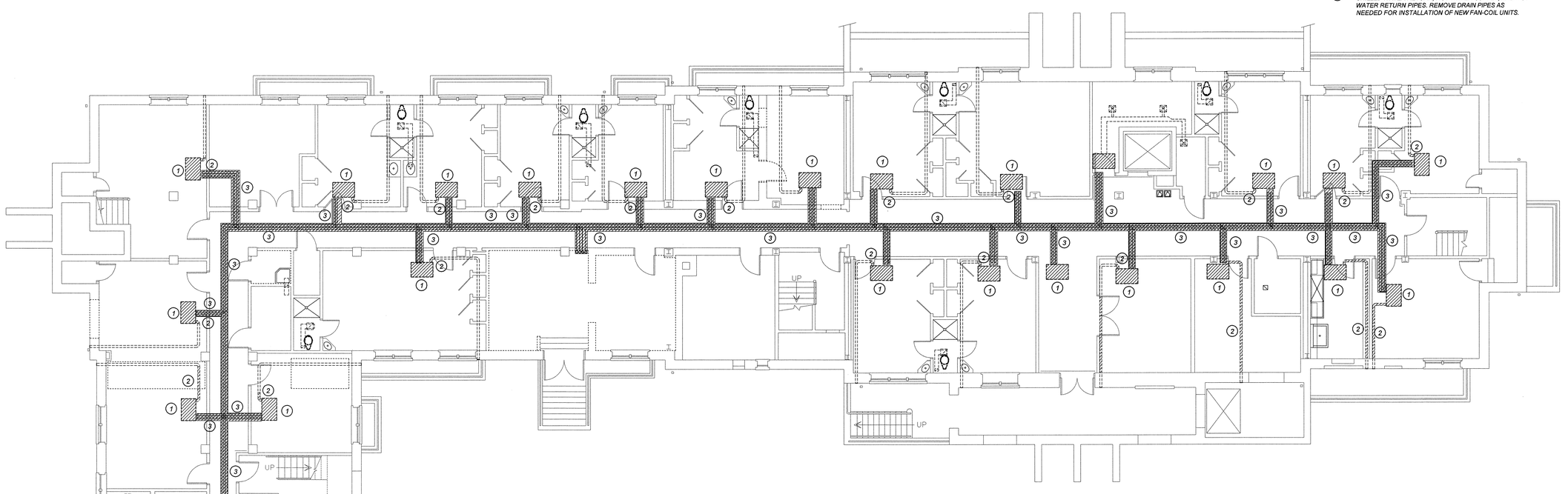
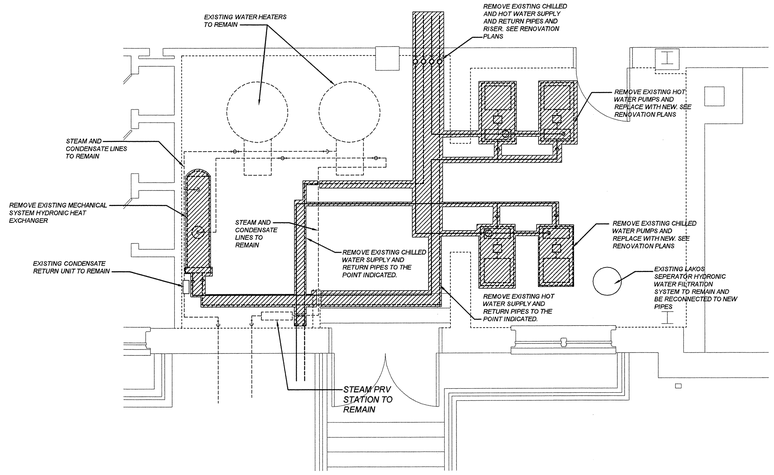
NOTES:

1. EXISTING FAN-COIL TO BE REPLACED WITH NEW. SEE RENOVATION PLANS.
2. REMOVE THE INDICATED PORTION OF THE OUTSIDE AIR DUCT. BLANK OFF LOUVER AT WALL.
3. COMPLETELY REMOVE ALL CHILLED WATER SUPPLY, CHILLED WATER RETURN, HOT WATER SUPPLY, AND HOT WATER RETURN PIPES. REMOVE DRAIN PIPES AS NEEDED FOR INSTALLATION OF NEW FAN-COIL UNITS.



1 M1.0 BASEMENT MECHANICAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"



2 M1.0 MECHANICAL ROOM DEMOLITION PLAN
SCALE: 1/4"=1'-0"

Partner In Charge
JCB
Project Architect
JCB
Drawn By
JDT/TRB
Date Drawn
12/06/11

Revisions
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
Issue Date ____

SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

SOUTH CAROLINA PROFESSIONAL ENGINEER 16827 DATE 1/4/11 REGISTERED FRED P. ROBERTS II

Project
MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title
BASEMENT MECHANICAL DEMOLITION PLAN

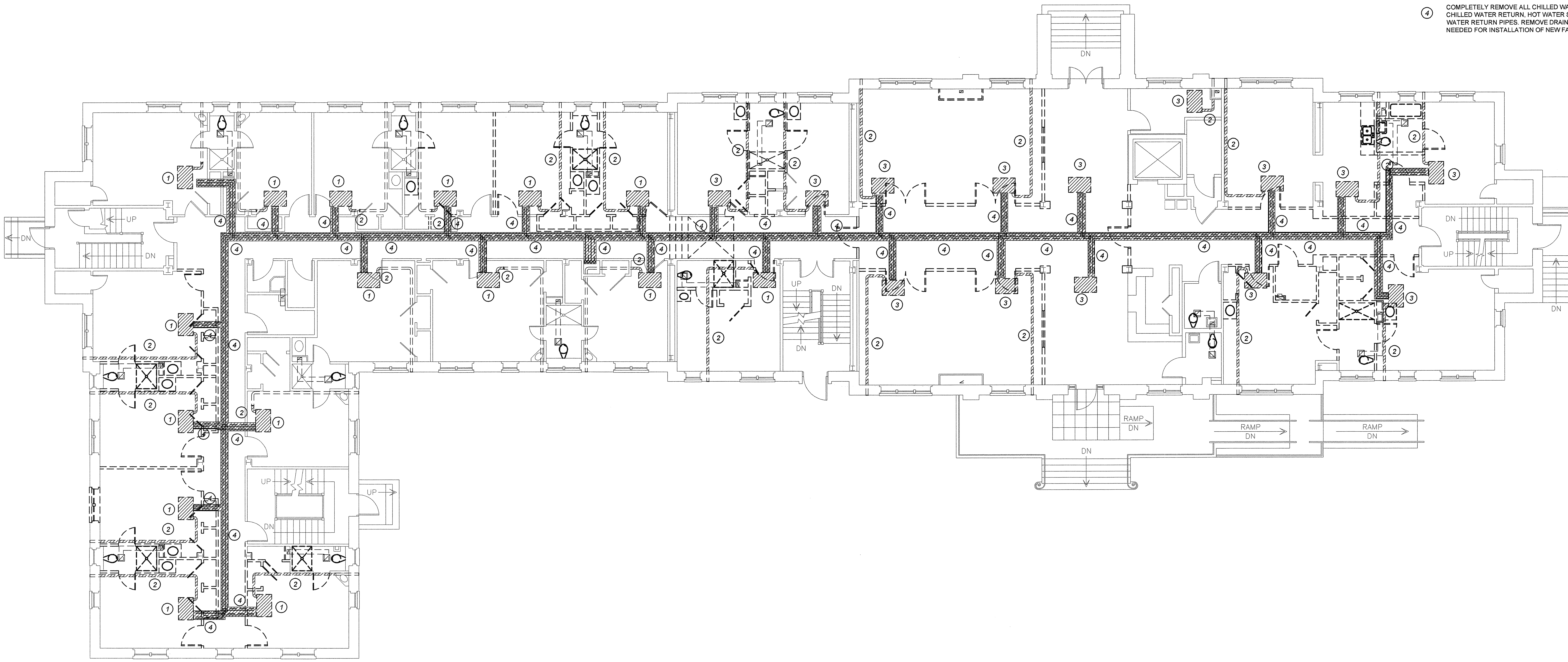
jhs Architecture: Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number
961

Sheet
M1.0

NOTES:

1. EXISTING FAN-COIL TO BE REPLACED WITH NEW. SEE RENOVATION PLANS.
2. REMOVE THE INDICATED PORTION OF THE OUTSIDE AIR DUCT. BLANK OFF LOUVER AT WALL.
3. EXISTING FAN-COIL TO BE REMOVED. SEE RENOVATION PLANS.
4. COMPLETELY REMOVE ALL CHILLED WATER SUPPLY, CHILLED WATER RETURN, HOT WATER SUPPLY, AND HOT WATER RETURN PIPES. REMOVE DRAIN PIPES AS NEEDED FOR INSTALLATION OF NEW FAN-COIL UNITS.



1 / M1.1 FIRST FLOOR MECHANICAL DEMOLITION PLAN

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

Partner In Charge
JCB

Project Architect
JCB

Drawn By
JDT/TRB

Date Drawn
12/06/11

Revisions

No.	Date
No.	Date
No.	Date
No.	Date
No.	Date
No.	Date
No.	Date
No.	Date
No.	Date
No.	Date

Issue Date

SOUTH CAROLINA JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

Project
MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title
FIRST FLOOR MECHANICAL DEMOLITION PLAN

jhs Architecture :- Integrated Design

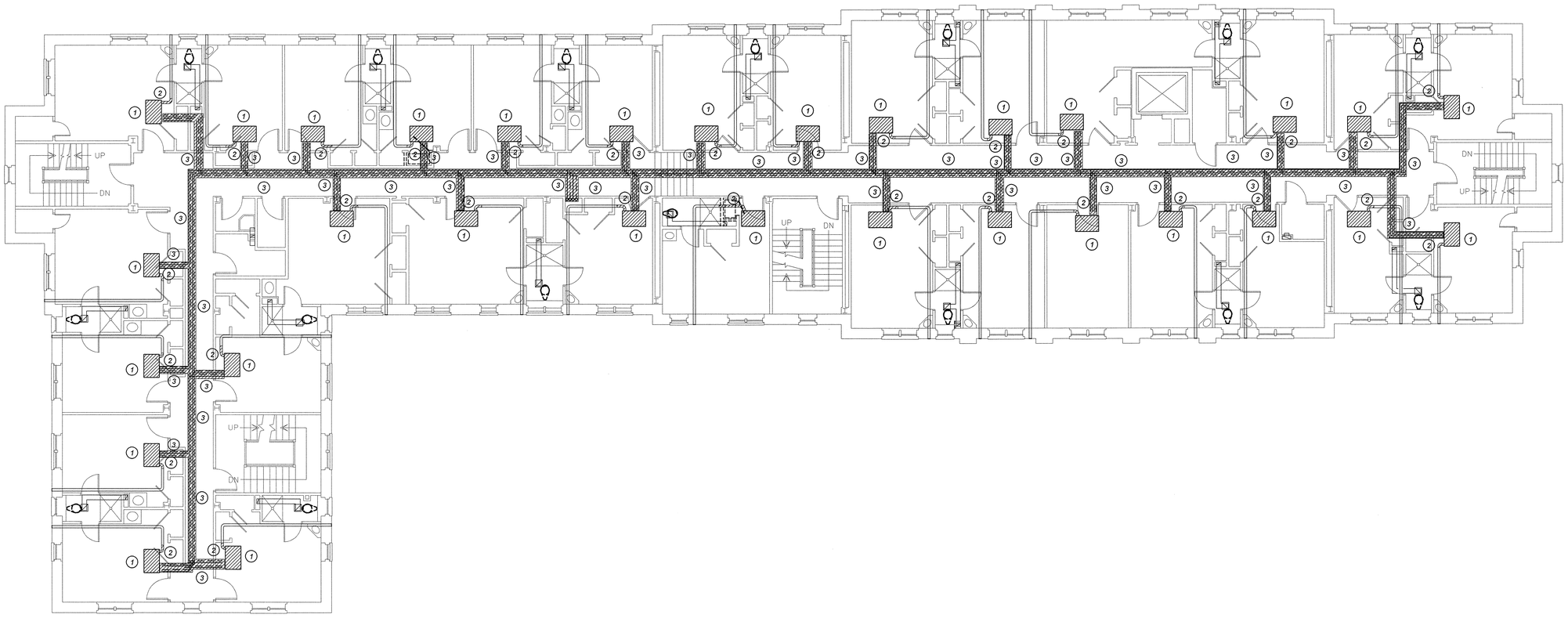
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number
961

Sheet
M1.1

NOTES:

1. EXISTING FAN-COIL TO BE REPLACED WITH NEW. SEE RENOVATION PLANS.
2. REMOVE THE INDICATED PORTION OF THE OUTSIDE AIR DUCT. BLANK OFF LOUVER AT WALL.
3. COMPLETELY REMOVE ALL CHILLED WATER SUPPLY, CHILLED WATER RETURN, HOT WATER SUPPLY, AND HOT WATER RETURN PIPES. REMOVE DRAIN PIPES AS NEEDED FOR INSTALLATION OF NEW FAN-COIL UNITS.



1 / M1.2 SECOND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"

Partner In Charge
JCB
Project Architect
JCB
Drawn By
JDT/TRB
Date Drawn
12/06/11

Revisions
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
Issue Date ____

SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC.
No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :· Integrated Design

SOUTH CAROLINA PROFESSIONAL ENGINEER 16927 DAVID F. ROBERTS

Project
MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title
SECOND FLOOR MECHANICAL DEMOLITION PLAN

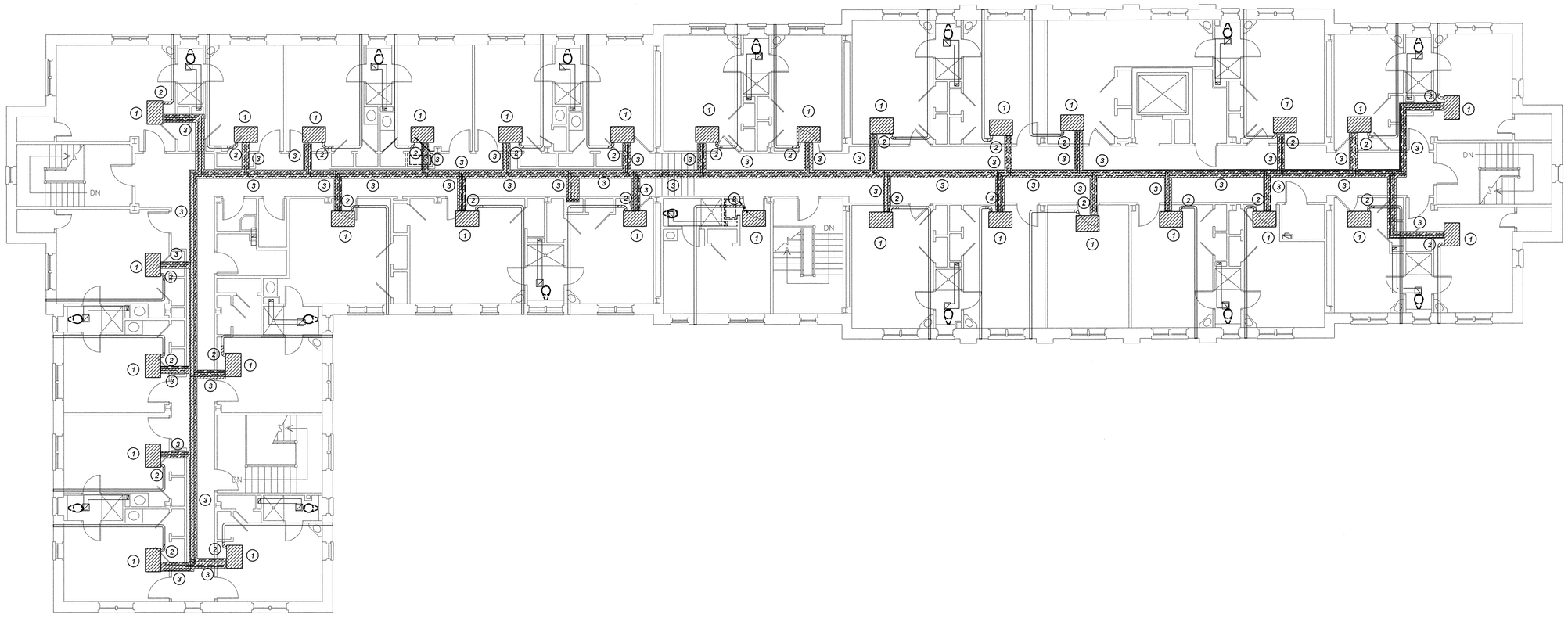
Architecture· Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number
961

Sheet
M1.2

NOTES:

1. EXISTING FAN-COIL TO BE REPLACED WITH NEW. SEE RENOVATION PLANS.
2. REMOVE THE INDICATED PORTION OF THE OUTSIDE AIR DUCT. BLANK OFF LOUVER AT WALL.
3. COMPLETELY REMOVE ALL CHILLED WATER SUPPLY, CHILLED WATER RETURN, HOT WATER SUPPLY, AND HOT WATER RETURN PIPES. REMOVE DRAIN PIPES AS NEEDED FOR INSTALLATION OF NEW FAN-COIL UNITS.



1 / M1.3 THIRD FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"

Partner In Charge
JCB
Project Architect
JCB
Drawn By
JDT/TRB
Date Drawn
12/06/11

Revisions
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
Issue Date

SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC.
No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

SOUTH CAROLINA PROFESSIONAL ENGINEER 16927 PETER F. FOSSETTE

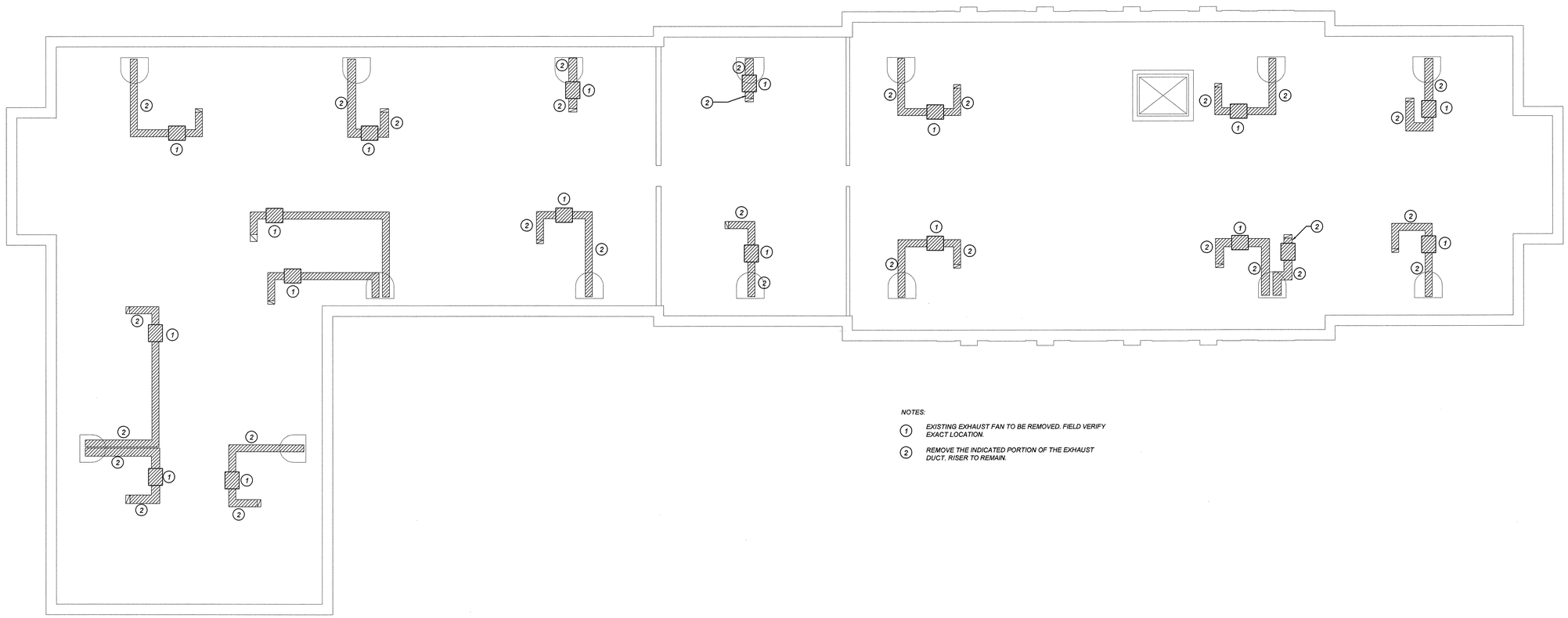
Project
MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title
THIRD FLOOR MECHANICAL DEMOLITION PLAN

Architecture+ Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number
961

Sheet
M1.3



NOTES:

1. EXISTING EXHAUST FAN TO BE REMOVED. FIELD VERIFY EXACT LOCATION.
2. REMOVE THE INDICATED PORTION OF THE EXHAUST DUCT. RISER TO REMAIN.

1 / M1.4 ATTIC MECHANICAL DEMOLITION PLAN

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

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions

No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____

Issue Date ____

SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC.
No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :· Integrated Design

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
6/12/12
RICHARD F. ROSSETTI
EXPIRES 6/30/13

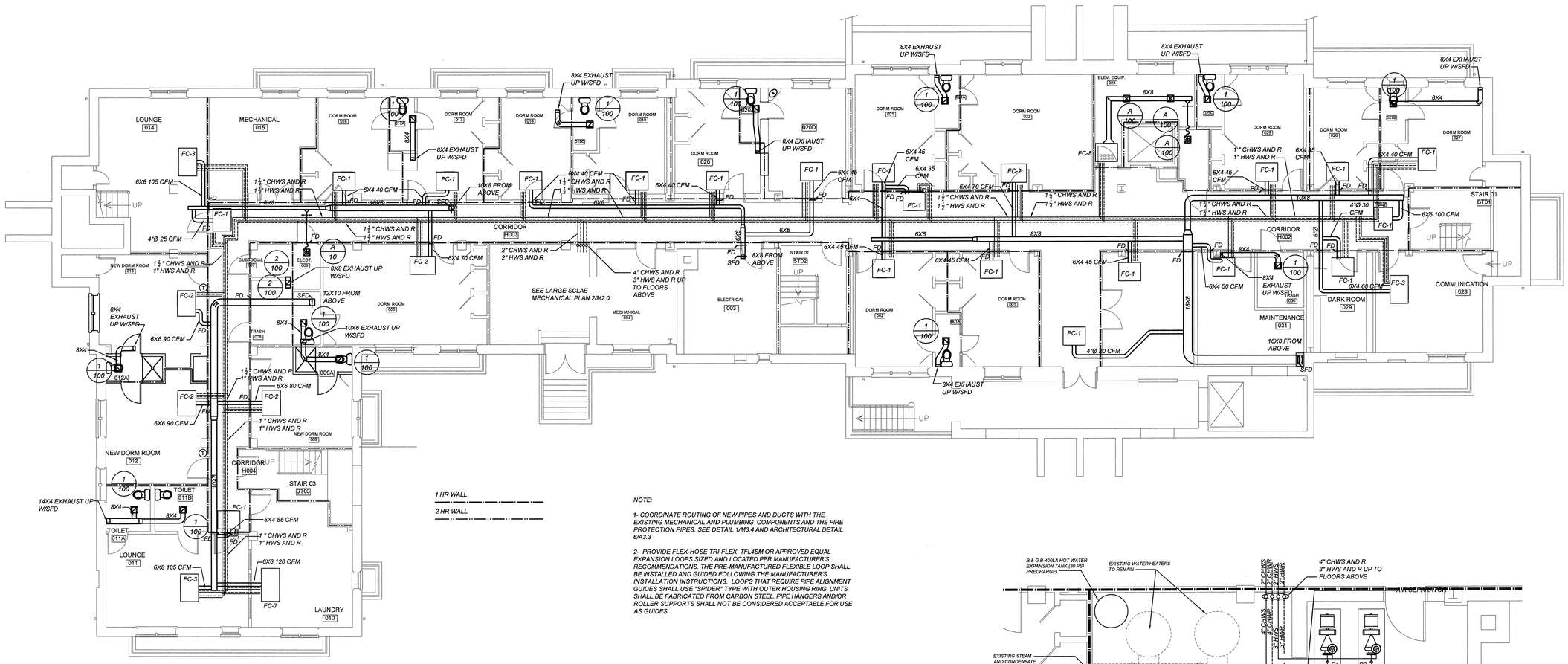
Project: MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title: ATTIC MECHANICAL DEMOLITION PLAN

Architecture: Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number: 961

Sheet: M1.4



1 HR WALL

2 HR WALL

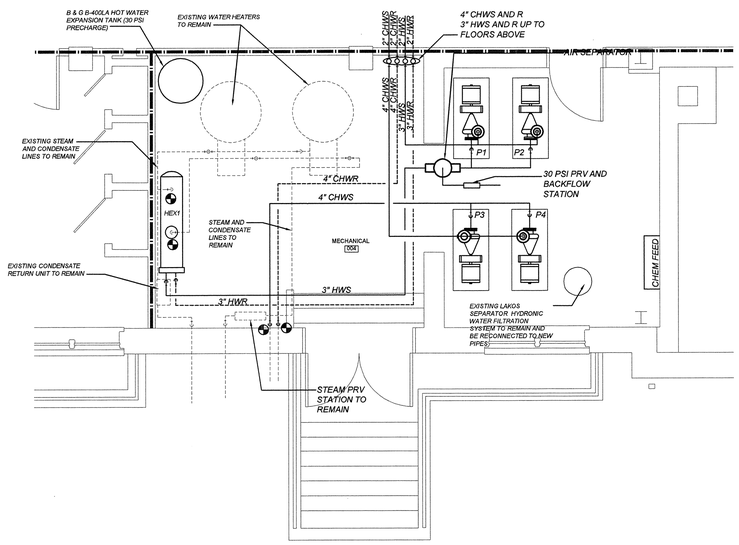
NOTE:

1- COORDINATE ROUTING OF NEW PIPES AND DUCTS WITH THE EXISTING MECHANICAL AND PLUMBING COMPONENTS AND THE FIRE PROTECTION PIPES. SEE DETAIL 1/M3.4 AND ARCHITECTURAL DETAIL 6/A3.3

2- PROVIDE FLEX-HOSE TRI-FLEX TFL4SM OR APPROVED EQUAL EXPANSION LOOPS SIZED AND LOCATED PER MANUFACTURER'S RECOMMENDATIONS. THE PRE-MANUFACTURED FLEXIBLE LOOP SHALL BE INSTALLED AND GUIDED FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. LOOPS THAT REQUIRE PIPE ALIGNMENT GUIDES SHALL USE "SPIDER" TYPE WITH OUTER HOUSING RING. UNITS SHALL BE FABRICATED FROM CARBON STEEL. PIPE HANGERS AND/OR ROLLER SUPPORTS SHALL NOT BE CONSIDERED ACCEPTABLE FOR USE AS GUIDES.

1 / M2.0 BASEMENT MECHANICAL PLAN

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



2 / M2.0 LARGE SCALE MECHANICAL ROOM PLAN

SCALE: 1/4"=1'-0"

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions

No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____

Issue Date ____

SOUTH CAROLINA — JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 — CERTIFICATE OF AUTHORIZATION

JHS Architecture : · Integrated Design

SOUTH CAROLINA — REGISTERED ARCHITECT — 6827 — RICHARD F. ROBERTS

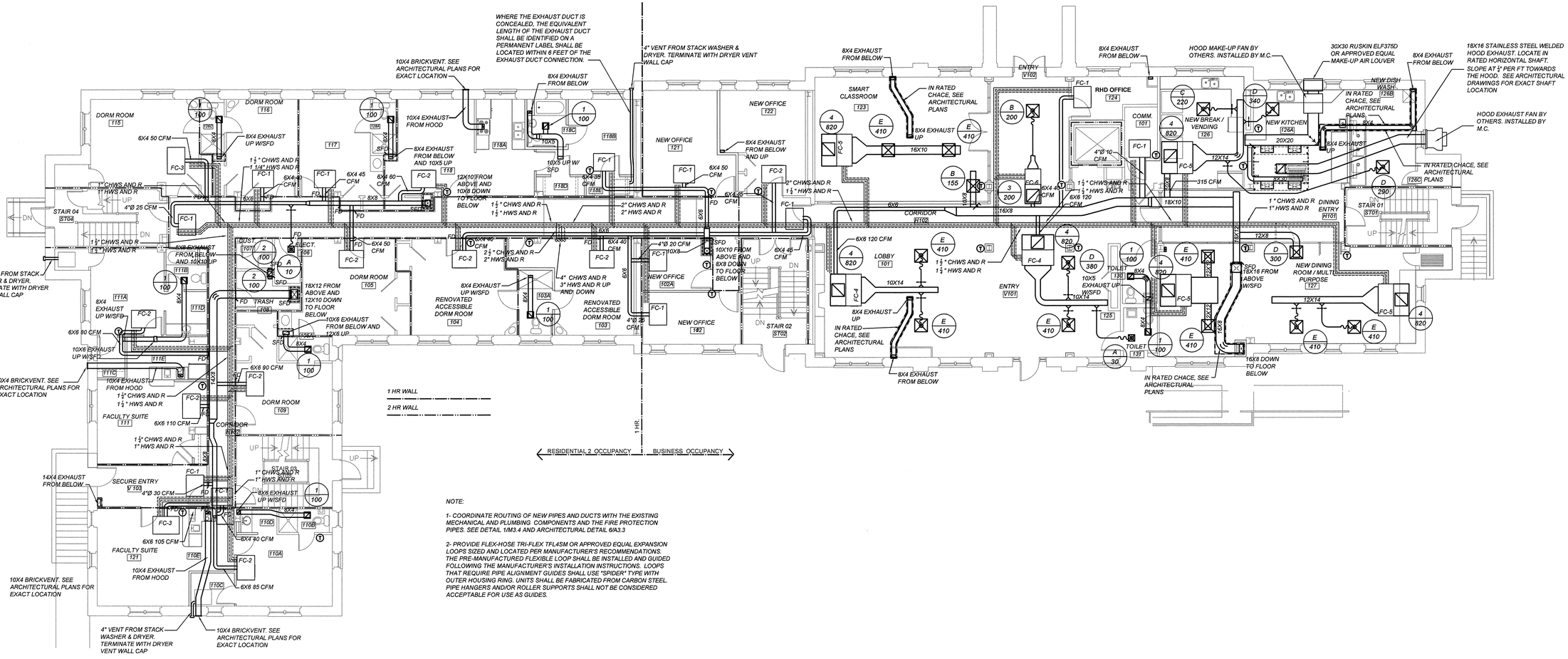
Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

Sheet Title: BASEMENT MECHANICAL PLAN

JHS Architecture : Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number: 961

Sheet: M2.0



NOTE:

1- COORDINATE ROUTING OF NEW PIPES AND DUCTS WITH THE EXISTING MECHANICAL AND PLUMBING COMPONENTS AND THE FIRE PROTECTION PIPES. SEE DETAIL 1/M3.4 AND ARCHITECTURAL DETAIL 6/A3.3

2- PROVIDE FLEX-HOSE TRI-FLEX TFL4SM OR APPROVED EQUAL EXPANSION LOOPS SIZED AND LOCATED PER MANUFACTURER'S RECOMMENDATIONS. THE PRE-MANUFACTURED FLEXIBLE LOOP SHALL BE INSTALLED AND GUIDED FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. LOOPS THAT REQUIRE PIPE ALIGNMENT GUIDES SHALL USE "SPIDER" TYPE WITH OUTER HOUSING RING. UNITS SHALL BE FABRICATED FROM CARBON STEEL. PIPE HANGERS AND/OR ROLLER SUPPORTS SHALL NOT BE CONSIDERED ACCEPTABLE FOR USE AS GUIDES.

1 / M2.1 FIRST FLOOR MECHANICAL PLAN

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

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
Issue Date ____

SOUTH CAROLINA — JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 — CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

SOUTH CAROLINA — PROFESSIONAL ENGINEER — RICHARD F. ROBERTS — 16027 — REGISTERED

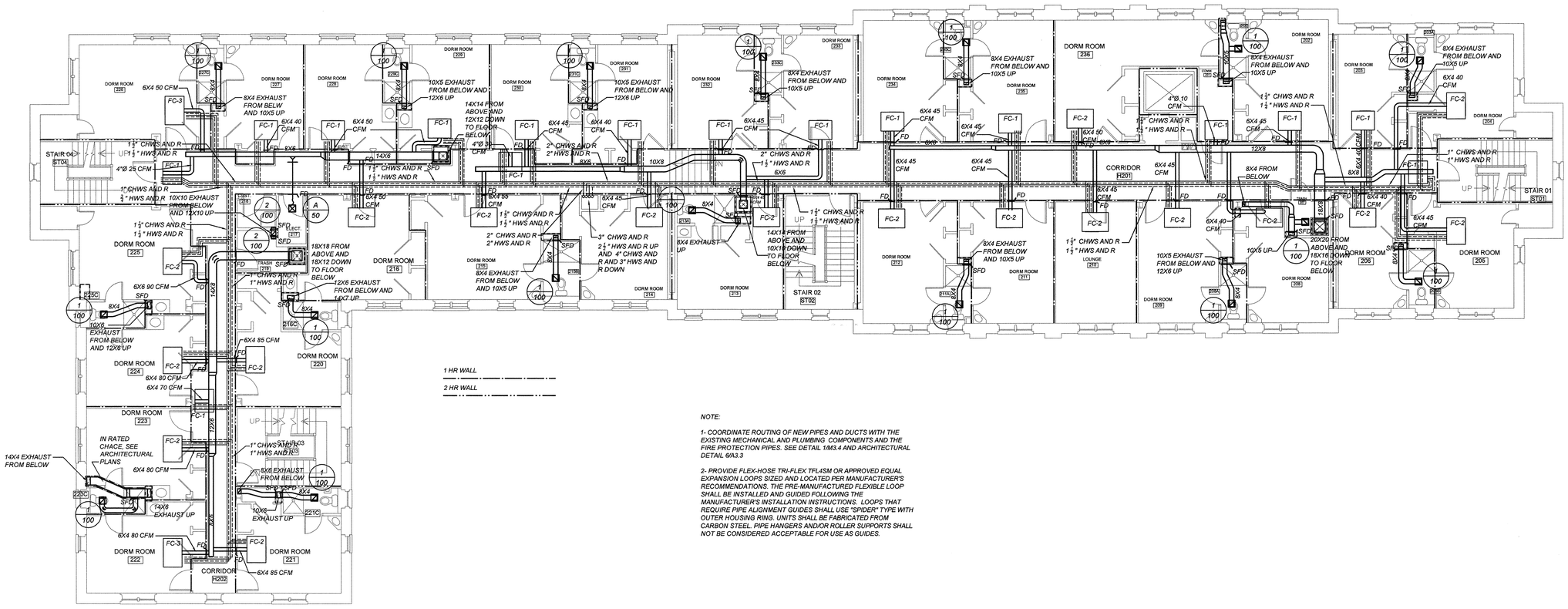
Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

Sheet Title: FIRST FLOOR MECHANICAL PLAN

JHS Architecture Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number: 961

Sheet: M2.1



NOTE:

1- COORDINATE ROUTING OF NEW PIPES AND DUCTS WITH THE EXISTING MECHANICAL AND PLUMBING COMPONENTS AND THE FIRE PROTECTION PIPES. SEE DETAIL 1/M3.4 AND ARCHITECTURAL DETAIL 6/A3.3

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1/M2.2 SECOND FLOOR MECHANICAL PLAN

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

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
No ____ Date ____
Issue Date ____

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654

JHS Architecture :· Integrated Design

SOUTH CAROLINA REGISTERED ARCHITECT 16827 RICHARD P. ROBERTS

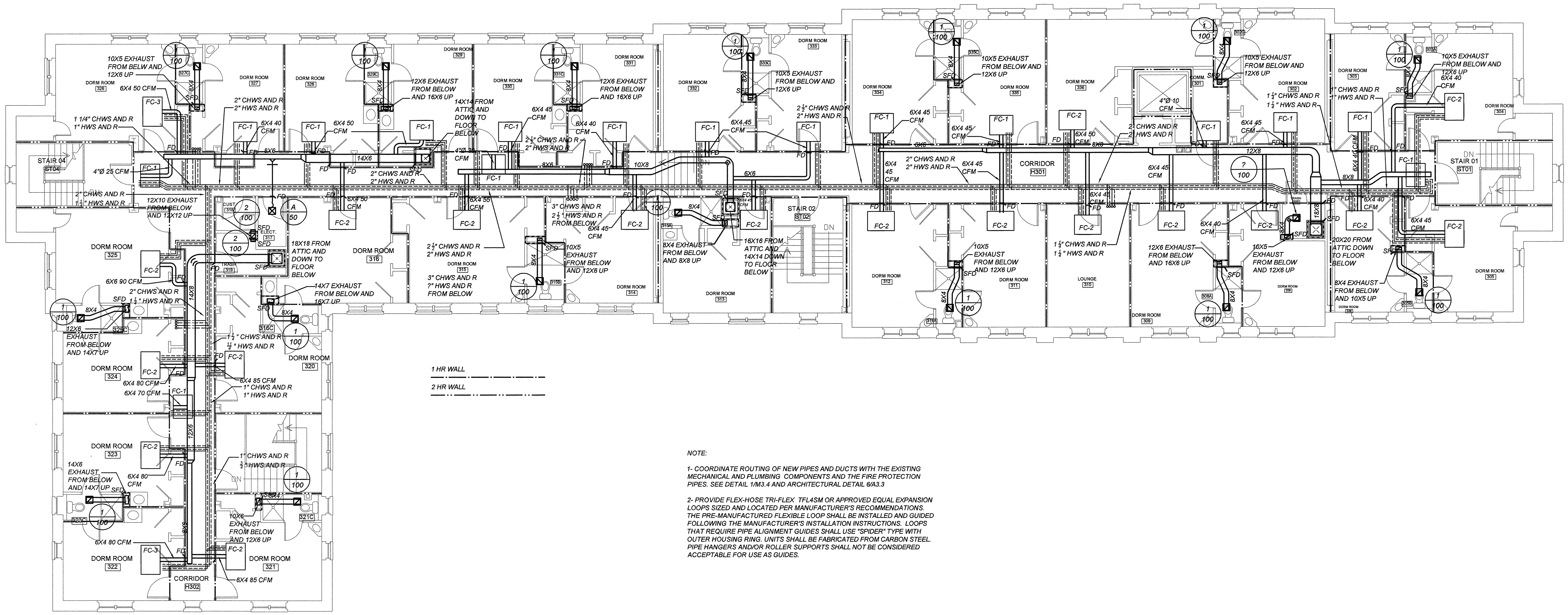
Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

Sheet Title: SECOND FLOOR MECHANICAL PLAN

JHS Architecture · Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE 1.803.252.2400
FAX: 1.803.252.1630

Project Number: 961

Sheet: M2.2



NOTE:

1- COORDINATE ROUTING OF NEW PIPES AND DUCTS WITH THE EXISTING MECHANICAL AND PLUMBING COMPONENTS AND THE FIRE PROTECTION PIPES. SEE DETAIL 1/M3.4 AND ARCHITECTURAL DETAIL 6/A3.3

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1
M2.3
THIRD FLOOR MECHANICAL PLAN
SCALE: 1/8"=1'-0"

Partner In Charge
JCB

Project Architect
JCB

Drawn By
JDT/TRB

Date Drawn
12/06/11

Revisions

No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____

Issue Date

SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC.
No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :· Integrated Design

SOUTH CAROLINA REGISTERED PROFESSIONAL
No. 16027

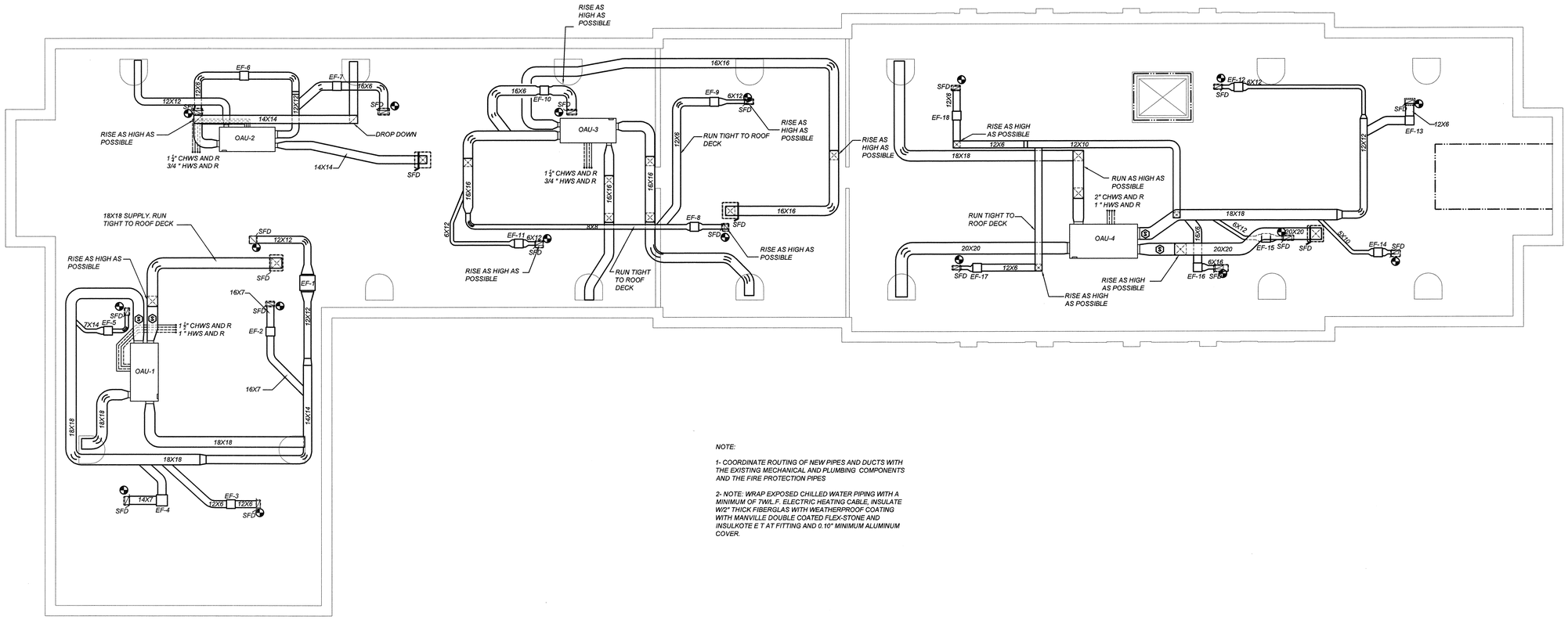
Project
MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title
THIRD FLOOR MECHANICAL PLAN

jhs Architecture:· Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number
961

Sheet
M2.3



NOTE:

1- COORDINATE ROUTING OF NEW PIPES AND DUCTS WITH THE EXISTING MECHANICAL AND PLUMBING COMPONENTS AND THE FIRE PROTECTION PIPES

2- NOTE: WRAP EXPOSED CHILLED WATER PIPING WITH A MINIMUM OF 7W/L.F. ELECTRIC HEATING CABLE, INSULATE W/2" THICK FIBERGLAS WITH WEATHERPROOF COATING WITH MANVILLE DOUBLE COATED FLEX-STONE AND INSULKOTE E T AT FITTING AND 0.10" MINIMUM ALUMINUM COVER.

1 M2.4 ATTIC MECHANICAL PLAN

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

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions

No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____
No. ____ Date ____

Issue Date ____

SOUTH CAROLINA — JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 — CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

SOUTH CAROLINA PROFESSIONAL ENGINEER — 6012 — DONALD F. ROBERTS

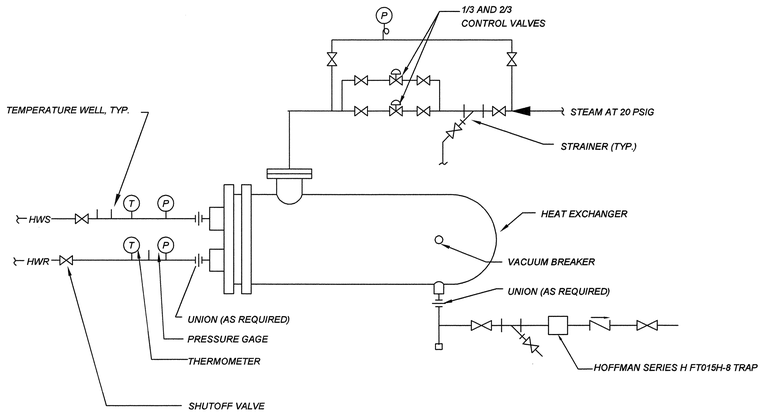
Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

Sheet Title: ATTIC MECHANICAL PLAN

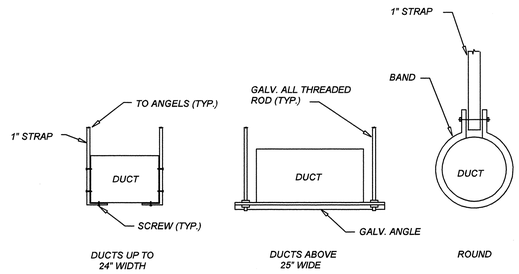
jhs Architecture: Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

Project Number: 961

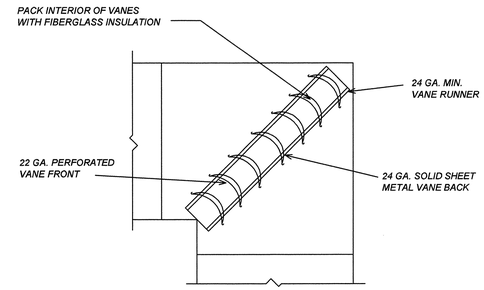
Sheet: M2.4



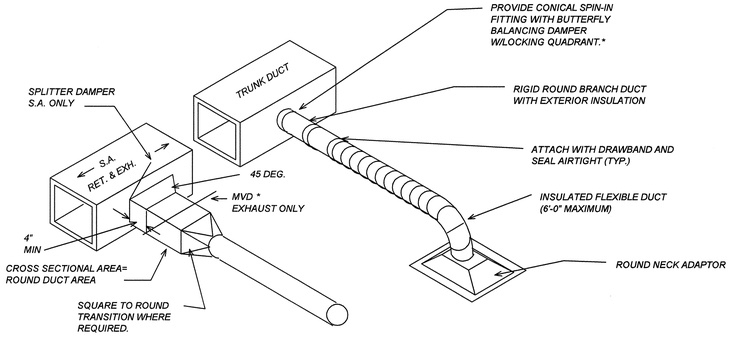
1 M 3.0 HEAT EXCHANGER DETAIL
NTS



2 M 3.0 LOW PRESSURE DUCTWORK
DUCTWORK HANGER DETAIL
NTS

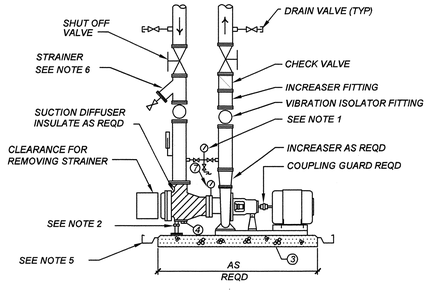


3 M 3.0 ACOUSTICAL TURNING VANE DETAIL
NTS



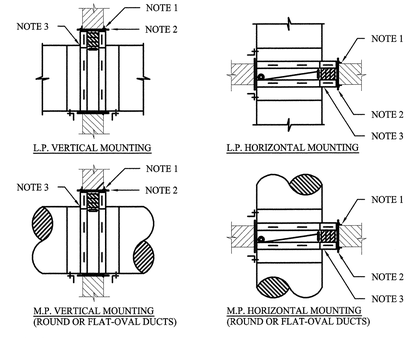
4 M 3.0 DUCT TAKE-OFF DETAIL
NTS

*NOTE: DAMPERS TO BE LEFT OUT IN MEDIUM PRESSURE DUCTWORK.



NOTE:
1 GAUGE COCK AND GAUGE.
2 STANCHION SUPPORT ON SUCTION END AS REQD
3 MINIMUM HOUSEKEEPING PAD THICKNESS = 4"; CHAMFER EDGES 1".
4 1/2" HOSE BIBB DRAIN W/CAP
5 PROVIDE PUMP DRAIN PAN IF NOT FURNISH BY PUMP MFG.
6 REQD IF NOT SUPPLIED W/PUMP SUCTION DIFFUSER
7 MODIFY PIPING AND GAUGE CONNECTIONS IF PUMP FLANGE TAPS DO NOT EXIST.
8 GROUT PUMP BASE AS REQUIRED

5 M 3.0 PUMP PIPING DETAIL
NTS



NOTES:

1. ANGLES SHALL BE A MINIMUM OF 1-1/2x1-1/2x1/8. FASTEN TO COLLAR ONLY W/ 1/4" DIA. NUTS BOLTS. ANGLES REQ'D ON ALL FOUR SIDES OF WALL OR FLOOR SLAB. (TYP. ALL FIRE DAMPERS)
2. COLLAR GAUGES SHALL CONFORM TO SMACNA STDS. (TYP. ALL FIRE DAMPERS)
3. USE SLIP JOINT CONN. AS RECOMMENDED BY SMACNA (TYP. ALL FIRE DAMPERS)
4. PROVIDE AN ACCESS DOOR IN DUCTWORK FOR EACH DAMPER FOR ACCESS TO FUSIBLE LINKS. CONTRACTOR SHALL ASSURE ACCESS THRU CEILING AND STRUCTURE. ACCESS DOORS SHOWN ON PLANS FOR CLARITY.

6 M 3.0 FIRE DAMPER DETAILS
NTS

Partner In Charge
JCB
Project Architect
JCB
Drawn By
JDT/TRB
Date Drawn
12/06/11

Revisions
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
No. Date
Issue Date

SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC.
No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :· Integrated Design

SOUTH CAROLINA
REGISTERED
PROFESSIONAL
ENGINEER
6027
MECHANICAL
RICHARD P. ROBERTS

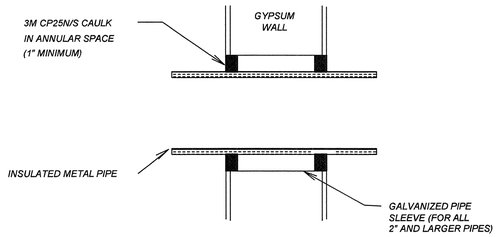
Project
MAXCY COLLEGE RENOVATION
PROJECT # H27-6073-AC

Sheet Title
MECHANICAL DETAILS

JHS Architecture: Integrated Design
1812 LINCOLN STREET
THIRD FLOOR
COLUMBIA, SC 29201-2310
PHONE: 1.803.252.2400
FAX: 1.803.252.1630

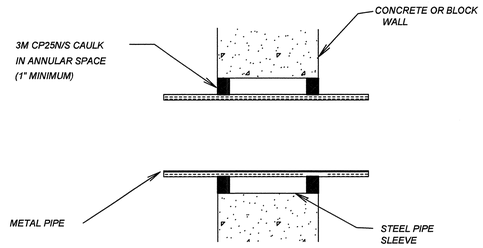
Project Number
961

Sheet
M3.0



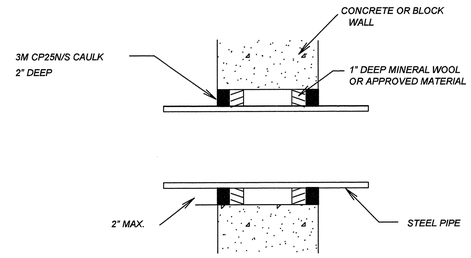
INSULATED METAL PIPE THROUGH
NON-RATED WALLS

1 / M 3.1 NTS



METAL PIPE THROUGH
NON-RATED WALLS

2 / M 3.1 NTS

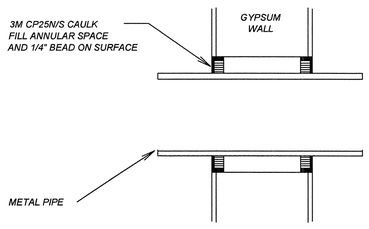


COPPER TYPE K AND L THEROUGH 3 HR WALL (UL395) AND METAL CONDUIT THROUGH 3 HR WALL (UL 49) SIMILAR

NON-INSULATED METAL PIPE THROUGH
ONE, TWO AND THREE HOUR WALLS
(UL CAJ1044)

3 / M 3.1 NTS

FIRE PROOFING DETAILS ARE PROVIDED AS A GENERAL GUIDE TO THE SCOPE AND NATURE OF WORK REQUIRED. CONTRACTOR TO STRICTLY CONFORM TO ALL UL AND MANUFACTURER'S INSTALLATION REQUIREMENTS.

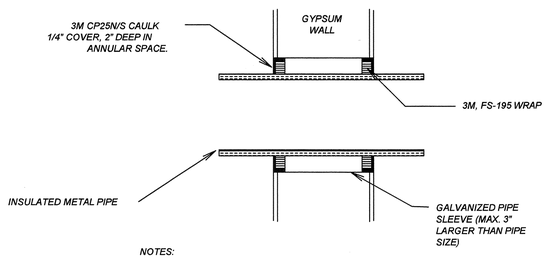


FOR PIPES PENETRATING BUT NOT PASSING THROUGH A RATED WALL, PROVIDE FIRE STOPPING AS INDICATED ON THIS DETAIL.

UNINSULATED METAL PIPE THROUGH
ONE AND TWO HOUR WALLS (UL WL5001)

4 / M 3.1 NTS

FIRE PROOFING DETAILS ARE PROVIDED AS A GENERAL GUIDE TO THE SCOPE AND NATURE OF WORK REQUIRED. CONTRACTOR TO STRICTLY CONFORM TO ALL UL AND MANUFACTURER'S INSTALLATION REQUIREMENTS.



NOTES:

1- WRAP SHALL BE HELD IN PLACE WITH 18 GA. STEEL WIRE, OR HAVE FRICTION FIT.

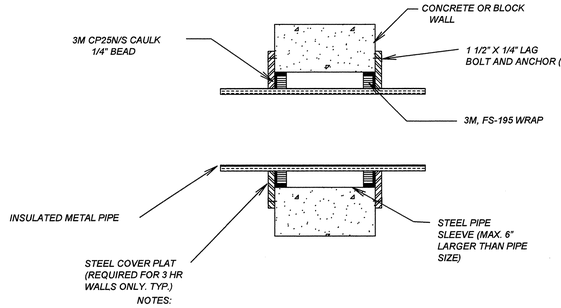
2- WRAP PIPE UNTIL ANNULAR SPACE IS LESS THAN 1/4" (MIN. ONE WRAP PER 1" OF INSULATION.)

3- DO NOT SUPPORT PIPE FROM SLEEVE. CENTER PIPE IN SLEEVE.

INSULATED METAL PIPE THROUGH
ONE AND TWO HOUR WALLS (UL WL5001)

5 / M 3.1 NTS

FIRE PROOFING DETAILS ARE PROVIDED AS A GENERAL GUIDE TO THE SCOPE AND NATURE OF WORK REQUIRED. CONTRACTOR TO STRICTLY CONFORM TO ALL UL AND MANUFACTURER'S INSTALLATION REQUIREMENTS.



NOTES:

1- WRAP SHALL BE HELD IN PLACE WITH 18 GA. STEEL WIRE, OR HAVE FRICTION FIT.

2- WRAP PIPE UNTIL ANNULAR SPACE IS LESS THAN 1/4" (MIN. ONE WRAP PER 1" OF INSULATION.)

3- DO NOT SUPPORT PIPE FROM SLEEVE. CENTER PIPE IN SLEEVE.

4- STEEL COVER PLATE TO BE 28 GA. MIN. BOLT AT 6" O.C. MIN. PLATE TO OVERLAP WALL A MINIMUM OF 2".

INSULATED METAL PIPE THROUGH
ONE , TWO AND 3 HOUR WALLS (UL CAJ5001)

6 / M 3.1 NTS

FIRE PROOFING DETAILS ARE PROVIDED AS A GENERAL GUIDE TO THE SCOPE AND NATURE OF WORK REQUIRED. CONTRACTOR TO STRICTLY CONFORM TO ALL UL AND MANUFACTURER'S INSTALLATION REQUIREMENTS.

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions
No. ____ Date ____
No. ____ Date ____
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SOUTH CAROLINA
JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654
CERTIFICATE OF AUTHORIZATION

JHS Architecture :· Integrated Design

SOUTH CAROLINA PROFESSIONAL ENGINEER 16027 REGISTERED
DONALD F. ROBERTS

Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

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Project Number: 961

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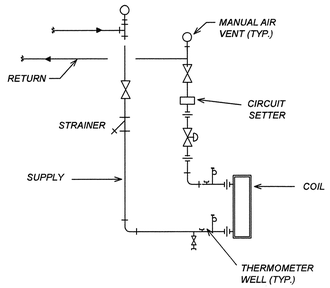
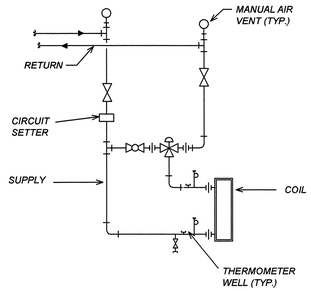


NOTE:
FOR UNITS WITH PIPING LESS THAN ONE INCH DIAMETER, PROVIDE SISCO PLUG AND ONE SET OF GAUGES IN LIEU OF GAUGE COCK AND SNUBBER THERMOMETER WELL.

1 M 3.2 — COIL PIPING- 2 WAY VALVE
NTS

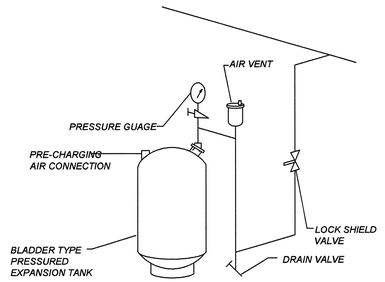
PROVIDE 2-WAY VALVE FOR HOT WATER COILS ONLY. PROVIDE PRESSURE INDEPENDENT VALVE IN LIEU OF TWO WAY VALVE AND CIRCUIT SETTER FOR ALL CHILLED WATER VALVES. EXCEPT AS NOTED ON SCHEDULES.



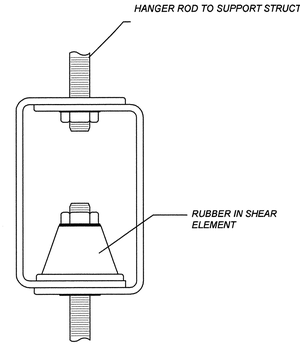
NOTE:
FOR UNITS WITH PIPING LESS THAN ONE INCH DIAMETER, PROVIDE SISCO PLUG AND ONE SET OF GAUGES IN LIEU OF GAUGE COCK AND SNUBBER THERMOMETER WELL.

2 M 3.2 — COIL PIPING- 3 WAY VALVE
NTS

PROVIDE 2-WAY VALVE FOR ALL HOT WATER COILS PROVIDE 3-WAY VALVES ONLY WHEN CALLED FOR IN SCHEDULES.



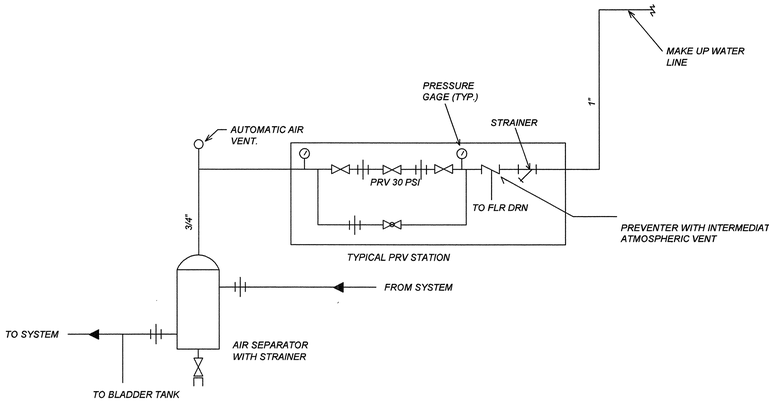
3 M 3.2 — BLADDER TANK DETAIL
NTS



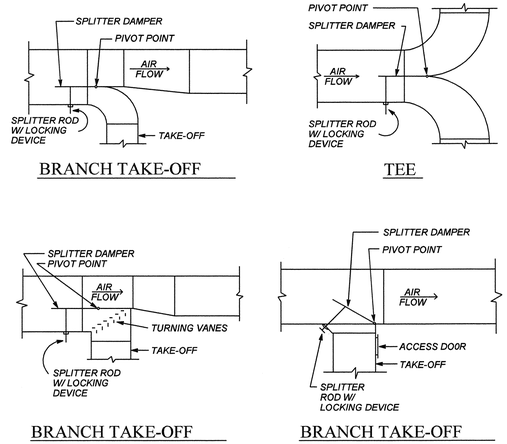
RUBBER IN SHEAR HANGER

AMBER BOOTH MODEL BRD
VMC GROUP MODEL RHD
MASON IND. MODEL HD

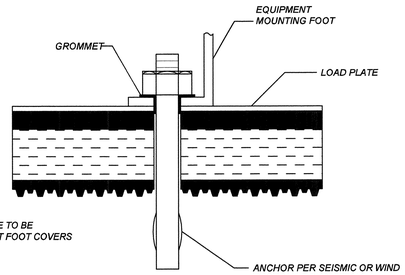
4 M 3.2 — TYPE 2 ISOLATION
NTS



5 M 3.2 — AIR ELIMINATION AND FILL DETAIL
NTS



6 M 3.2 — TYPICAL LOW PRESSURE DUCT DETAILS
NTS



PAD TYPE ISOLATOR

AMBER BOOTH MODEL NRC
VMC GROUP MODEL MAXIFLEX
MASON IND. MODEL NK

7 M 3.2 — TYPE 1 ISOLATION
NTS

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions
No. ____ Date ____
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SOUTH CAROLINA — JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 — CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

SOUTH CAROLINA — REGISTERED — 15027 — PROFESSIONAL ENGINEER — 11/30 — RENEWAL DATE — GERALD F. ROBERTS

Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

Sheet Title: MECHANICAL DETAILS

JHS Architecture: Integrated Design
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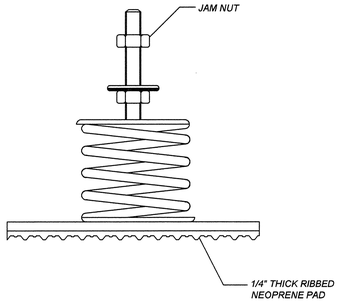
Project Number: 961

Sheet: M3.2

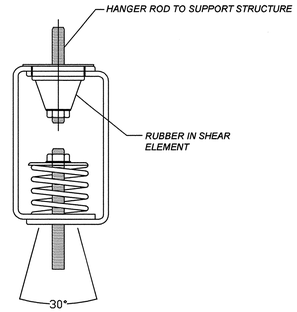


IN SEISMIC OR WIND APPLICATIONS TYPE IV ISOLATORS MUST BE USED IN PLACE OF TYPE III

SPRING VIBRATION ISOLATOR

AMBER BOOTH MODEL SW
VMC GROUP MODEL SERIES A
MASON IND. MODEL SLF

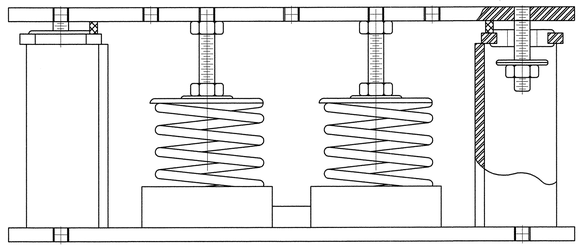
3 / M4.3 TYPE 3 ISOLATION (FLOOR MOUNTED) NTS



SPRING AND RUBBER HANGER FOR 15° MISALLIGNMENT (30° SWING)

AMBER BOOTH MODEL BSRA
VMC GROUP MODEL RSH-30A
MASON IND. MODEL 30N

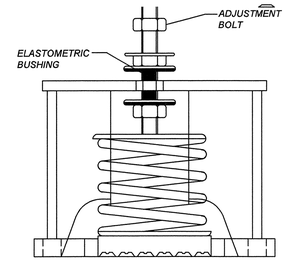
4 / M4.3 TYPE 3 ISOLATION NTS



VIBRATION ISOLATOR WITH INTEGRAL SEISMIC RESTRAINT

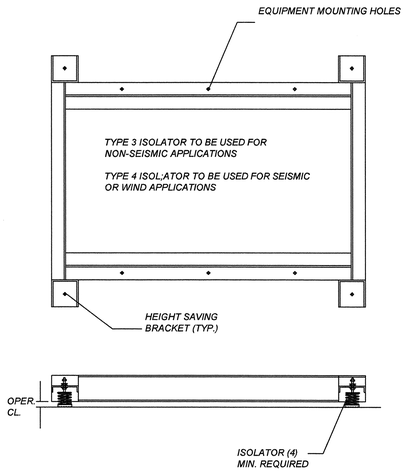
AMBER BOOTH MODEL MS/MSS
VMC GROUP MODEL AWRS
MASON IND. MODEL SLR

5 / M4.3 TYPE 4 ISOLATION NTS



SEISMIC RESTRAINED VIBRATION ISOLATOR

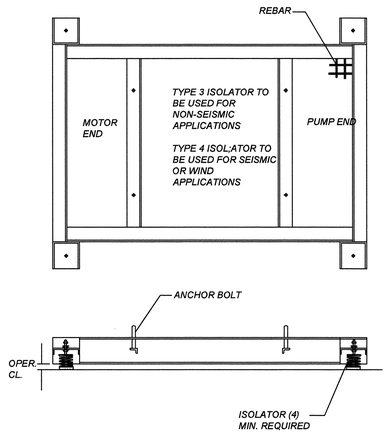
AMBER BOOTH MODEL SWSR
VMC GROUP MODEL ASCM
MASON IND. MODEL SLRA



STEEL ISOLATOR BASE

AMBER BOOTH MODEL SFB
VMC GROUP MODEL WFB
MASON IND. MODEL WF

1 / M4.4 TYPE B ISOLATION NTS



CONCRETE INERTIA BASE WITH ISOLATORS

AMBER BOOTH MODEL CPF
VMC GROUP MODEL MPF
MASON IND. MODEL BMK

2 / M4.4 TYPE C ISOLATION NTS

PIPING AND DUCT VIBRATION ISOLATION REQUIREMENTS

A. PIPING CONNECTED TO EQUIPMENT MOUNTED ON SPRING ISOLATORS MUST BE SUPPORTED USING TYPE 3 ISOLATORS BASED ON THE FOLLOWING:

1. UP TO 4 INCHES PIPE SIZE: FIRST THREE POINTS OF SUPPORT.

2. 5 TO 8 INCHES PIPE SIZE: FIRST FOUR POINTS OF SUPPORT.

3. 10 INCHES PIPE SIZE AND OVER: FIRST SIX POINTS OF SUPPORT.

4. SELECT THREE HANGERS CLOSEST TO VIBRATION SOURCE FOR MINIMUM 1.0 INCH STATIC DEFLECTION OR STATIC DEFLECTION OF ISOLATED EQUIPMENT. SELECT REMAINING ISOLATORS FOR MINIMUM 1.0 INCH STATIC DEFLECTION OR 1/2 STATIC DEFLECTION OF ISOLATED EQUIPMENT.

B. FLEXIBLE CONNECTIONS SHOULD BE PROVIDED FOR ALL PIPING CONNECTIONS TO VIBRATION ISOLATED EQUIPMENT

SEISMIC AND WIND REQUIREMENTS FOR MECHANICAL SYSTEMS

INFORMATION FOR NCSBC 2009 / IBC-2006 /ASCE 7-05

A. PER SECTION 301.12 OF THE 2006 EDITION OF THE INTERNATIONAL MECHANICAL CODE, MECHANICAL EQUIPMENT APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY,

B. SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.

C. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.

D. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL

E. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.

F. SEISMIC RESTRAINTS FOR PIPING AND DUCTWORK MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions
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SOUTH CAROLINA — JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 — CERTIFICATE OF AUTHORIZATION

JHS Architecture :· Integrated Design

SOUTH CAROLINA — PROFESSIONAL ENGINEER — 16927 — REGISTERED — DAVID F. ROBERTS

Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

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JHS Architecture: Integrated Design
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Project Number: 961

Sheet: M3.3

DUCT AND PIPE COMPONENT I DESIGNATION	
I_P=1.0	I_P=1.5
ALL DUCTS	GAS PIPING
CHILLED WATER SUPPLY AND RETURN	
HOT WATER SUPPLY AND RETURN	
DRAIN PIPES	

SEISMIC DESIGN CATEGORIES D, E, F

		COMPONENT IMPORTANCE FACTOR (Ip)			
		1.0		1.5	
COMPONENT IDENTIFICATION		SEISMIC RESTRAINT REQUIREMENT	ASCE 7-05 REFERENCE	SEISMIC RESTRAINT REQUIREMENT	ASCE 7-05 REFERENCE
ROOF MOUNTED		RESTRAIN ALL (SEE NOTE 1)	13.1.4.3	RESTRAIN ALL	13.1.4.3
FLOOR MOUNTED		RESTRAIN ALL (SEE NOTE 1)	13.1.4.3	RESTRAIN ALL	13.1.4.3
WALL MOUNTED		RESTRAIN ALL (SEE NOTE 1)	13.1.4.3	RESTRAIN ALL	13.1.4.3
COMPONENT SUPPORTS		RESTRAIN ALL (SEE NOTE 1)	13.6.5	RESTRAIN ALL	13.6.5
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	13.6.7	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	13.6.7
	NOT INLINE W/ DUCT	RESTRAIN ALL (SEE NOTE 1)	13.1.4.3	RESTRAIN ALL	13.1.4.3
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>3" (SEE NOTE 4,7)	TC-8-CH13-48-R8 13.6.8.3.3.C	>1" (SEE NOTE 4,7)	TC-8-CH13-48-R8 13.6.8.3.3.b
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL (SEE NOTE 4, 7)	TC-8-CH13-48-R8 13.6.8.3.3	RESTRAIN ALL (SEE NOTE 4,7)	TC-8-CH13-48-R8 13.6.8.3.3
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT (SEE NOTE 4,7)	TC-8-CH13-48-R8 13.6.8.3.1	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT (SEE NOTE 4,7)	TC-8-CH13-48-R8 13.6.8.3.1
DUCTWORK		6 SQ.FT. AND LARGER (SEE NOTE 8)	TC-8-CH13-49-R5 13.6.7	6 SQ.FT. AND LARGER (SEE NOTE 5,8)	TC-8-CH13-49-R5 13.6.7
MULTIPLE DUCTS ON TRAPEZE		RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT (SEE NOTES 4,8)	TC-8-CH13-49-R5 13.6.7	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT (SEE NOTES 4,5,8)	TC-8-CH13-49-R5 13.6.7
COMPONENT CERTIFICATION (SEE NOTE 6)		NOT REQUIRED	13.2.2	REQUIRED	13.2.2

NOTES

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHTS 400 LBS. OR LESS, IS MOUNTED AT 4 FT. OR LESS ABOVE A FLOOR, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.

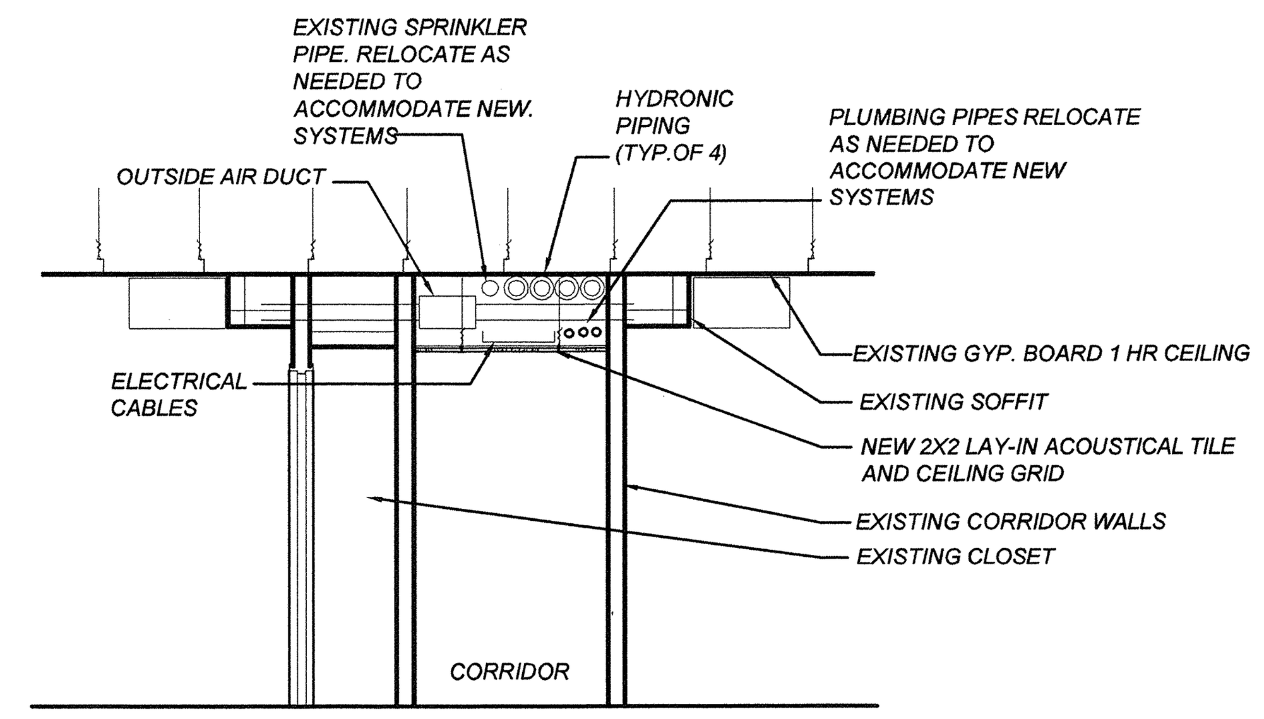
4. RESTRAINT IS NOT REQUIRED IF THE PIPING/DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 " OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12" OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.

5. ALL DUCTWORK , REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.

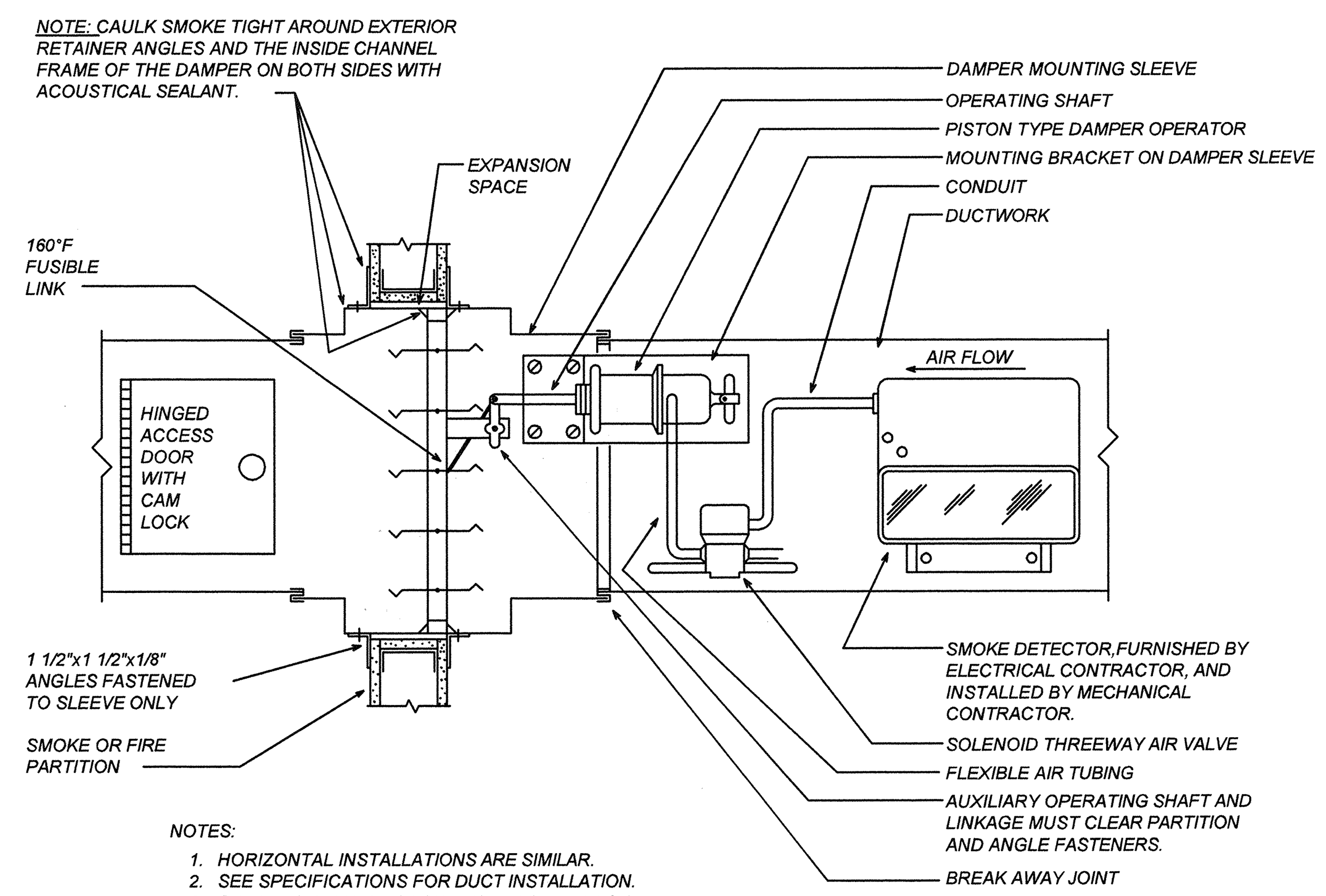
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.

7. TC-8-CH13-48-R8 IS A DOCUMENT DATED DEC. 5, 2008 BY THE ASCE7 STANDARDS COMMITTEE PROPOSING REVISIONS TO THE 2005 EDITION OF ASCE7.

8. TC-8-CH13-49-R5 IS A DOCUMENT BY THE ASCE7 STANDARDS COMMITTEE PROPOSING REVISIONS TO THE 2005 EDITION OF ASCE7.



1 / M 3.4 BUILDING CORRIDOR SECTION
NTS



NOTES:
1. HORIZONTAL INSTALLATIONS ARE SIMILAR.
2. SEE SPECIFICATIONS FOR DUCT INSTALLATION.
3. SEE SPECIFICATIONS FOR MANUFACTURER OF COMBINATION FIRE AND SMOKE DAMPER.
4. CAULK INSIDE OF DAMPER BEFORE DAMPERS ARE INSTALLED.

2 / M 3.4 COMBINATION FIRE-SMOKE DAMPER
NTS

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

Revisions

No.	Date
No.	Date
No.	Date
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No.	Date
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Sheet: M3.4

OUTSIDE AIR UNIT SCHEDULE (OWNER FURNISHED, CONTRACTOR TO INSTALL)

SYMBOL	MODEL NUMBER	AIR CAPACITY		SUPPLY AIR FAN		EXHUAST AIR FAN		WHEEL SUMMER				HEAT PIPE SUMMER				WHEEL WINTER				HEAT PIPE WINTER				CHILLED WATER COIL							HOT WATER COIL							UNIT ELECTRICAL DATA			
								SUPPLY		EXHAUST		SUPPLY		EXHAUST		SUPPLY		EXHAUST		SUPPLY		EXHAUST																				
		SUPPLY SCFM	RETURN SCFM	ESP IN WG	MOTOR HP	ESP IN WG	MOTOR HP	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EAT DB/WB	LAT DB/WB	EWT	LWT	MBH	GPM	WPD FT WG	EAT DB/WB	LAT DB/WB	EWT	LWT	MBH	GPM	WPD FT WG	VPLT/PH	FLA	MCA	MOP
OAU-1	PV-W2-CDS	2400	2400	1.0	3.0	1.0	3.0	95/78	75/67	67/60	88/73	54/54	62/57	75/63	67/60	10/8	49/41	63/51	25/23	49/41	58/45	75/54	63/51	75/67	54/54	48	59	92	17	13	58	72	160	129	36	2.4	5	208/3	27	30	35
OAU-2	PV-W1-CDS	1150	800	1.0	1.5	1.0	1.0	95/78	75/67	64/59	94/77	54/54	62/57	75/63	64/59	10/8	39/35	55/47	14/12	39/35	51/42	75/54	55/47	76/67	54/54	48	59	47	8	8	51	72	160	130	26	1.8	5	208/3	17	19	20
OAU-3	PV-W1-CDS	1200	1200	1.0	1.5	1.0	1.5	95/78	73/65	66/59	90/74	54/54	63/58	75/63	66/59	10/8	52/46	64/51	22/21	52/46	60/47	75/54	64/51	73/65	54/54	48	59	72	8	7	60	72	160	129	16	1.1	5	208/3	19	21	25
OAU-4	PV-W4-CDS	3195	2100	1.0	5.0	1.0	2.0	95/78	78/68	64/58	94/76	54/54	61/57	75/63	64/58	10/8	35/32	52/46	13/12	35/32	47/39	75/54	52/46	78/68	54/54	48	59	142	25	10	47	72	160	130	86	5.7	5	208/3	30	34	50

1- SELECTIONS BASED ON MUNTERS/ DES CHAMPS, UNITS TO BE AS LISTED OR APPROVED EQUALS.
2- SEISMIC Ip=1.0

FAN SCHEDULE

SYMBOL	TYPE	CFM	ESP	RPM	HP	VOL./PH	SONES	CONTROLS	MODEL	REMARKS
EF-1	IN LINE	800	0.3	859	0.08	115/1	4.4	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-130-VG	1,2,3,4
EF-2	IN LINE	500	0.3	797	0.05	115/1	2.4	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-120-VG	
EF-3	IN LINE	300	0.3	1247	0.04	115/1	5.1	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-4	IN LINE	400	0.3	1240	0.05	115/1	5.9	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-5	IN LINE	400	0.25	1166	0.04	115/1	5.3	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-6	IN LINE	400	0.25	1166	0.04	115/1	5.3	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-7	IN LINE	400	0.25	1166	0.04	115/1	5.3	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-8	IN LINE	200	0.3	1144	0.03	115/1	4.6	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-9	IN LINE	300	0.3	1247	0.04	115/1	5.1	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-10	IN LINE	400	0.35	1309	0.06	115/1	6.5	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-11	IN LINE	300	0.25	1072	0.03	115/1	4.6	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-12	IN LINE	300	0.35	1319	0.04	115/1	5.6	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-13	IN LINE	300	0.40	1387	0.05	115/1	6.1	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-14	IN LINE	200	0.25	993	0.02	115/1	3.7	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-15	IN LINE	300	0.35	1319	0.04	115/1	5.6	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-16	IN LINE	400	0.3	1240	0.05	115/1	5.9	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-95-VG	
EF-17	IN LINE	300	0.3	1247	0.04	115/1	5.1	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	
EF-18	IN LINE	300	0.3	1247	0.04	115/1	5.1	DDC OCCUPANCY SCHEDULE	GREENHECK SQ-90-VG	

1- EQUALS BY COOK, PENN, OR APPROVED EQUALS.
2- SOLID STATE SPEED CONTROL
3- BACKDRAFT DAMPER
4- SEISMIC IMPORTANCE FACTOR IP=1.0

AIR DISTRIBUTION SCHEDULE

SEISMIC IP=1.0

SYMBOL	TYPE	CFM	NECK SIZE	PANEL SIZE	FINISH	MODEL	REMARKS
A	PERF. FACE	0-100	6"Ø	12X12	SEE NOTE 5	PRICE PDMC	1,2
B	SQUARE PLAQUE	101-210	8"Ø	24X24	SEE NOTE 5	PRICE SPD	1,2
C	SQUARE PLAQUE	211-280	10"Ø	24X24	SEE NOTE 5	PRICE SPD	1,2
D	SQUARE PLAQUE	281-400	12"Ø	24X24	SEE NOTE 5	PRICE SPD	1,2
E	SQUARE PLAQUE	401-500	12X12	24X24	SEE NOTE 5	PRICE SPD	1,2,3
1	PERF. PANEL	0-200	8X8	12X12	SEE NOTE 5	PRICE PDDR	1,2,4
2	SIDEWALL	0-200	8X6	10X8	SEE NOTE 5	PRICE 520	1,2,3
3	PERF. PANEL	0-200	8X8	24X24	SEE NOTE 5	PRICE PDDR	1,2,4
4	PERF. PANEL	600-820	16X16	24X24	SEE NOTE 5	PRICE PDDR	1,2,4

1- EQUALS BY CARNES, TITUS, OR APPROVED EQUALS.
2- REFER TO ARCHITECTURAL PLANS FOR CEILING TYPES, EXACT LOCATION OF AIR DISTRIBUTION DEVICES, AND FRAMES REQUIRED.
3- PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED.
4- PROVIDE BALANCING DAMPER WHEN USED AS EXHAUST.
5- GRILLE AND DIFFUSER FINISHES SHALL MATCH THE COLOR OF CEILING.

PUMP SCHEDULE

SYMBOL	SERVICE	GPM	HEAD (FT)	RPM	EFF. (%)	HP	VOL./PH	TYPE	MODEL	REMARKS
P1	CHILLED WATER	185	75	1750	71.0	7.5	208/3	END SUCTION	BG 1510 2 BC	1,2,3,5,6
P2	CHILLED WATER	185	75	1750	71.0	7.5	208/3	END SUCTION	BG 1510 2 BC	1,2,3,5,6
P3	HOT WATER	110	70	1750	65.4	5	208/3	END SUCTION	BG 1510 2 BC	1,2,4,5,6
P4	HOT WATER	110	70	1750	65.4	5	208/3	END SUCTION	BG 1510 2 BC	1,2,4,5,6

1- EQUALS BY B&G, PACO OR APPROVED EQUALS.
2- VARIABLE PUMPING SYSTEM. PROVIDE VFD.
3- SEE PUMP PIPING DETAILS. USE OF B&G 3DS-3S TRIPLE DUTY VALVE, IN LIEU OF VALVING SHOWN IS ALLOWED.
4- PREMIUM EFFICIENCY MOTOR.
5- SEISMIC IMPORTANCE FACTOR IP=1.0
6- ISOLATION TYPE C WITH 1" DEFLECTION.

FAN-COIL UNIT SCHEDULE (OWNER FURNISHED, CONTRACTOR TO INSTALL)

SYMBOL	EVAPORATOR FAN			COOLING						HEATING								
	CFM	ESP (in. w.c.)	HP	TOTAL MBH	SENS. MBH	EAT (db/wb) (deg. f)	EWT/LWT (deg. f)	Δ P WATER (in. w.c.)	GPM	TOTAL MBH	EAT (deg. f)	EWT/LWT (deg. f)	Δ P WATER (in. w.c.)	GPM	SEISMIC Ip	VOLT/PH	MODEL	REMARKS
FC-1	235	0.05	1/30	6.7	5.4	75/63	57/45	3.9	1.1	10.5	70	180/160	0.8	1.1	1	120/1	ENVIROTEC HLE20	
FC-2	385	0.05	1/15	10.3	8.6	75/63	57/45	2.0	1.7	15.3	70	180/160	2.1	1.6	1	120/1	ENVIROTEC HLE25	
FC-3	455	0.05	1/10	12.9	10.1	75/63	57/45	13.9	2.2	18.2	70	180/160	3.1	1.9	1	120/1	ENVIROTEC HLE30	
FC-4	820	0.3	1/8	24.0	19.0	75/64	57/45	4.2	4	31.1	70	180/160	1.9	3.2	1	120/1	ENVIROTEC HLP50	
FC-5	820	0.3	1/8	25.7	18.8	75/64	57/45	4.7	4.3	31.1	70	180/160	1.9	3.2	1	120/1	ENVIROTEC HLP50	
FC-6	185	0.3	1/15	5.3	4.2	75/64	57/45	0.6	0.9	9.9	70	180/160	0.9	1.0	1	120/1	ENVIROTEC HLP25	
FC-7	550	0.05	1/10	16.2	12.1	75/64	57/45	4.3	2.7	20.0	70	180/160	3.8	2.1	1	120/1	ENVIROTEC HLE30	
FC-8	300	0.05	1/15	10.3	7.6	75/64	57/45	3.8	1.8	9.7	70	180/160	0.7	1.0	1	120/1	ENVIROTEC HLE20	WITH TELESCOPING BOTTOM PANEL AND INTEGRAL RETURN GRILLE

1- EQUALS BY CARRIER, MCQUAY OR APPROVED EQUALS.
2- NEW THERMOSTATS AND SENSORS TO BE MOUNTED AT THE LOCATION OF EXISTING ONES, EXCEPT WHERE OTHERWISE IS INDICATED.

HEAT EXCHANGER SCHEDULE

SYMBOL	TUBE SIDE					SHELL SIDE				
	FLUID	GPM	EWT	LWT	Δ P PSI	FLUID	FLOW LB/HR	PSI	MODEL	REMARKS
HEX-1	WATER	110	160	180	0.4	STEAM	1119	5	B & G SU 8 4-2	1,2,3,4 SEISMIC IP=1

1- STEEL SHELL, BAFFLES, AND SPACERS.
2- PROVIDE TWO PARALLEL STEAM CONTROL VALVES FOR HEAT EXCHANGER FOR PART-LOAD CONDITIONS.
3- 3/4" TUBES, 0.035" THICKNESS.
4- B&G OR EQUAL MANUFACTURER AND PRODUCT

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

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Issue Date ____

SOUTH CAROLINA — JHS ARCHITECTURE INTEGRATED DESIGN, INC. No. C02654 — CERTIFICATE OF AUTHORIZATION

JHS Architecture :- Integrated Design

SOUTH CAROLINA — REGISTERED — 6827 — PROFESSIONAL ENGINEER — JOSEPH E. ROBERTS

Project: MAXCY COLLEGE RENOVATION PROJECT # H27-6073-AC

Sheet Title: MECHANICAL SCHEDULES

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GENERAL NOTES

1- CONTRACTOR TO COORDINATE ALL DUCTWORK WITH OTHER TRADES PRIOR TO FABRICATION.

2- ALL DUCTS ARE WRAPPED. DO NOT USE DUCT LINER.

3- ALL RUN OUTS TERMINATING IN AN AIR DISTRIBUTION DEVICE (INCLUDING OUTSIDE AIR AT FAN-COILS) SHALL HAVE BALANCING DAMPERS.

4- PROVIDE INSTRUMENT TEST HOLES IN EACH SUPPLY AND RETURN DUCT.

5- ACTUAL DIFFUSER LOCATIONS TO BE PER ARCHITECTURAL REFLECTED CEILING PLANS.

6- ALL DIMENSIONS INDICATED ON THE DRAWINGS ARE IN INCHES, UNLESS NOTED OTHERWISE.

7- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING ALL MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS PRIOR TO RELEASING THE EQUIPMENT FROM THE MANUFACTURER.

8- LOCATE ALL THERMOSTATS AND SWITCHES 4'-0" ABOVE FINISHED FLOOR NEXT TO LIGHT SWITCHES.

9- ALL SUPPLY, RETURN, TRANSFER AND AIR DUCTS SHALL BE INSULATED.

10- AIR INTAKE OPENINGS SHALL BE A MINIMUM OF 10'-0" AWAY FROM ALL EXHAUST AND VENT OPENINGS.

11-TRAP ALL CONDENSATE DRAIN LINES.

12- CONTRACTOR SHALL PROVIDE ALL TRANSITIONS REQUIRED FOR CONNECTION EQUIPMENT.

13- PROVIDE SEISMIC RESTRAINS FOR ALL PIPE, DUCTS AND EQUIPMENT, REQUIRED BY CODE. CONTRACTOR SHALL PROVIDE CALCULATIONS AND DETAILS CERTIFIED BY A REGISTERED SEISMIC PROFESSIONAL ENGINEER.

14- CONSTRUCT DUCTWORK AS JOB PROGRESSES AFTER COORDINATING WITH ALL OTHER TRADES AND CONTRACTORS.

15- FLEXIBLE DUCT RUNS SHALL NOT EXCEED 6' IN LENGTH. USE RIGID ROUND DUCTS WHERE NECESSARY.

16- WHERE DUCTS PASS OVER ELECTRICAL ROOMS, COORDINATE EXACT LOCATION OF DUCTS WITH ELECTRICAL CONTRACTOR TO AVOID RUNNING OVER ELECTRICAL PANELS OR EQUIPMENT.

17- ALL UNITS TO BE PROVIDED WITH MERV 8 FILTERS DURING AND A CLEAN SET OF MERV 13 FILTERS AT THE END OF CONSTRUCTION.

18- SMOKE DETECTORS ARE SUPPLIED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY M.C. AND WIRED BY THE ELECTRICAL CONTRACTOR.

19- ALL TERMOMETERS TO BE SOLAR POWERED WITH DIGITAL READOUTS.

20- PROVIDE LIQUID FILLED PRESSURE GAGES.

21- NEW THERMOSTATS AND SENSORS TO BE MOUNTED AT THE LOCATION OF EXISTING ONES, EXCEPT WHERE OTHERWISE IS INDICATED.

MECHANICAL DEMOLITION NOTES:

1- DRAWINGS SHOW GENERAL INTENT OF THE DEMOLITION WORK. QUANTITIES, LOCATIONS, SIZES AND EQUIPMENT ARE SHOWN TO INDICATE TYPE OF SYSTEM INSTALLED AND DOES NOT NECESSARILY REPRESENT EXACT CONDITIONS. CONTRACTOR SHALL FIELD VERIFY BEFORE BIDDING.

2- DEMOLITION OF EQUIPMENT, SYSTEMS AND COMPONENTS SHALL INCLUDE ALL SUPPORTS, PADS, HANGERS, INSULATION, CONTROLS, STARTERS, ACCESSORIES AND APPURTENANCES NOT REQUIRED FOR THE INSTALLATION OF THE NEW SYSTEM.

3- WHEN PARTIAL DEMOLITION OF A SYSTEM IS INDICATED, THE PART OF THE SYSTEM SHOWN TO BE REMOVED SHALL BE REMOVED TO THE ACTIVE MAIN OR BRANCH IF NOT REQUIRED FOR THE INSTALLATION OF THE NEW SYSTEM. THE ACTIVE MAIN OR BRANCH SHALL BE REPAIRED TO MATCH A NEW INSTALLATION. IF THE SYSTEM IS INSULATED, INSULATION SHALL BE PATCHED AND THE FINISH REPAIRED.

4- PATCHING OF BUILDING STRUCTURE AND FINISHES SHALL PERTAIN TO ALL WALLS, FLOORS, SLABS, STRUCTURES AND FINISHES. PATCHES SHALL MATCH EXISTING STRUCTURE, FIRE RATING AND FINISH.

5- ALL OPENINGS CREATED BY THE ABANDONMENT OR REMOVAL OF EXISTING SYSTEMS SHALL BE PATCHED.

6- ALL EXISTING PIPING NOT SHOWN OR NOT SPECIFICALLY DESIGNATED TO BE REMOVED IS TO REMAIN AND BE CONNECTED TO NEW PIPING.

7- REMOVAL OF SYSTEMS SHALL INCLUDE COMPLETE SYSTEM WHENEVER PRACTICAL. OTHERWISE THE PIPES, CONDUITS, ETC., SHALL BE REMOVED TO ONE INCH BELOW SURFACE.

8- WHERE EXISTING EQUIPMENT OR UTILITIES ARE SHOWN TO BE REMOVED, THE OWNER RESERVES THE RIGHT TO INSPECT THE SAME AND RETAIN OWNERSHIP OF THESE ITEMS. IF THE OWNER DECIDES TO RETAIN OWNERSHIP, THE REFERENCED ITEMS SHALL BE REMOVED BY THE PLUMBING CONTRACTOR TO A DESIGNATED AREA ON THE SITE FOR THE OWNER PICK-UP. ANY EQUIPMENT OR UTILITIES WHICH THE OWNER DOES NOT WANT SHALL BECOME THE PROPERTY OF THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SUCH PROPERTY.

PIPE RUN-OUT SCHEDULE

PIPE SIZE	GPM
1/2"	1.5
3/4"	3
1"	5
1 1/4"	12
1 1/2"	18

DUCT RUN-OUT SCHEDULE

DUCT SIZE	MAX CFM
6"Ø	100
8"Ø	200
10"Ø	300
12"Ø	400
14"Ø	800
16"Ø	1000

NOTE: SQUARE DIFFUSER RUN-OUTS SHALL BE SAME AS DIFFUSER NECK SIZES.

FAN-COIL CONDENSATE DRAIN CONNECTION SIZE

TOTAL COIL CAPACITY (MBH)	CONNECTION (IN.)
0 - 24	1"
24.1 - 60	1 1/4"
60.1 - 240	1 1/2"

HVAC LEGEND

SYMBOL	EXPLANATION
	SUPPLY AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	CUBIC FEET PER MINUTE
	GALLONS PER MINUTE
	FLEXIBLE DUCT
	SUPPLY DIFFUSER
	RETURN GRILLE
S	SMOKE DETECTOR
	MANUAL DAMPER
M	MOTOR OPERATED DAMPER
FD	FIRE DAMPER
FD4	FIRE DAMPER WITH FIRE DOOR @ 4HR WALL
SFD	COMBINATION FIRE AND SMOKE DAMPER
CO2	CO2 SENSOR (SEE CONTROL SPECS)
T	THERMOSTAT
	TURNING VANE
	UNDERCUT DOOR. SEE ARCH DWG'S
	PIPE TURNING DOWN
D	DRAIN PIPE

Partner In Charge: JCB
Project Architect: JCB
Drawn By: JDT/TRB
Date Drawn: 12/06/11

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