

CONTROL SEQUENCES

ROOFTOP UNIT (EXISTING)

- THE SZ CONSTANT VOLUME UNIT WILL HAVE FACTORY OR FIELD INSTALLED CONTROLS WHICH WILL INCLUDE AN AIR ECONOMIZER, LEAVING AIR TEMPERATURE SENSOR, ROOM SENSOR AUTOMATIC HEAT/COOL CHANGE OVER AND A PROGRAMMABLE TIME CLOCK.
- IN THE 'UNOCCUPIED' CYCLE THE UNIT SHALL REMAIN DE-ENERGIZED AND SHALL CYCLE 'ON' BASED ON A CALL FOR COOLING AND/OR HEATING TO MAINTAIN THE SET UP/SET BACK TEMPERATURES.
 - THE O.A. DAMPERS SHALL REMAIN CLOSED.
- IN THE 'OCCUPIED' CYCLE THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND THE O.A. DAMPERS SHALL OPEN TO ALLOW THE MINIMUM O.A. QUANTITY SCHEDULED ON THE DRAWINGS.
 - THE HEATING AND COOLING SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE.
- COMPRESSOR AND BURNER HIGH/LOW FIRE STAGING SHALL BE DETERMINED BY THE LEAVING AIR TEMPERATURE SENSOR SET POINT FOR EACH MODE.
- THE O.A. DAMPERS WILL OPEN TO THE 100% POSITION BASED ON THE UNITS DRY BULB TYPE ECONOMIZER.
- A BAROMETRIC RELIEF DAMPER WITHIN THE UNIT SHALL RELIEVE THE BUILDING PRESSURE DURING THE ECONOMIZER OPERATION.

ELECTRIC BASEBOARD HEATER (NEW)

- EBB-1 - HEATER ELEMENT SHALL ENERGIZE VIA THE BUILT-IN THERMOSTAT TO MAINTAIN SET POINT TEMPERATURE OF 70° F (ADJUSTABLE).

EXHAUST FAN (EXISTING)

- EF - SHALL RUN CONTINUOUSLY DURING THE 'OCCUPIED' CYCLE OF CORRESPONDING ROOFTOP UNIT.

CONSTRUCTION NOTES

- MECHANICAL CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL HVAC EQUIPMENT, DUCTWORK AND GRD'S PRIOR TO INSTALLATION. MECHANICAL CONTRACTOR TO MODIFY DUCTWORK LAYOUT WHEN NECESSARY TO ACHIEVE DESIRED AIR DISTRIBUTION DESIGN.
- MECHANICAL CONTRACTOR TO PROVIDE ACCESS DOORS FOR ALL HVAC EQUIPMENT ABOVE GYP. BOARD CEILINGS.
- MECHANICAL CONTRACTOR TO COORDINATE ALL GRD LOCATIONS WITH REFLECTED CEILING PLAN AND LIGHTING PRIOR TO INSTALLATION.
- MECHANICAL CONTRACTOR TO COORDINATE ALL EXTERIOR AIR INTAKE AND EXHAUST LOCATIONS WITH 2006 IMC AND IBC GUIDELINES PRIOR TO INSTALLATION.

PROJECT NOTE

INASMUCH AS THE REMODELING OR REHABILITATION OF AN EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT DESTROYING ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE CONTRACTOR SHALL VERIFY ALL QUESTIONS, CONDITIONS AND PROCEDURES WITH THE ENGINEER PRIOR TO THE COMMENCEMENT OF EACH PART OF THE NEW WORK.

ELECTRIC BASEBOARD HEATER SCHEDULE

TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	LENGTH	WATTS	VOLTS/PH	BTU/H	EMERG. PWR.	OPTIONS	TAG
EBB-1	RESTROOM 104	RESTROOM 104	MARKEL	E2906-036C	SURFACE MOUNTED	36"	600	120/1	2050	N	A, B	EBB-1

FACTORY INSTALLED OPTIONS:
A. INTEGRAL 2-POLE DISCONNECT SWITCH. B. INTEGRAL UNIT MOUNTED LINE VOLTAGE THERMOSTAT.

FIELD INSTALLED OPTIONS:

AIR DEVICE SCHEDULE

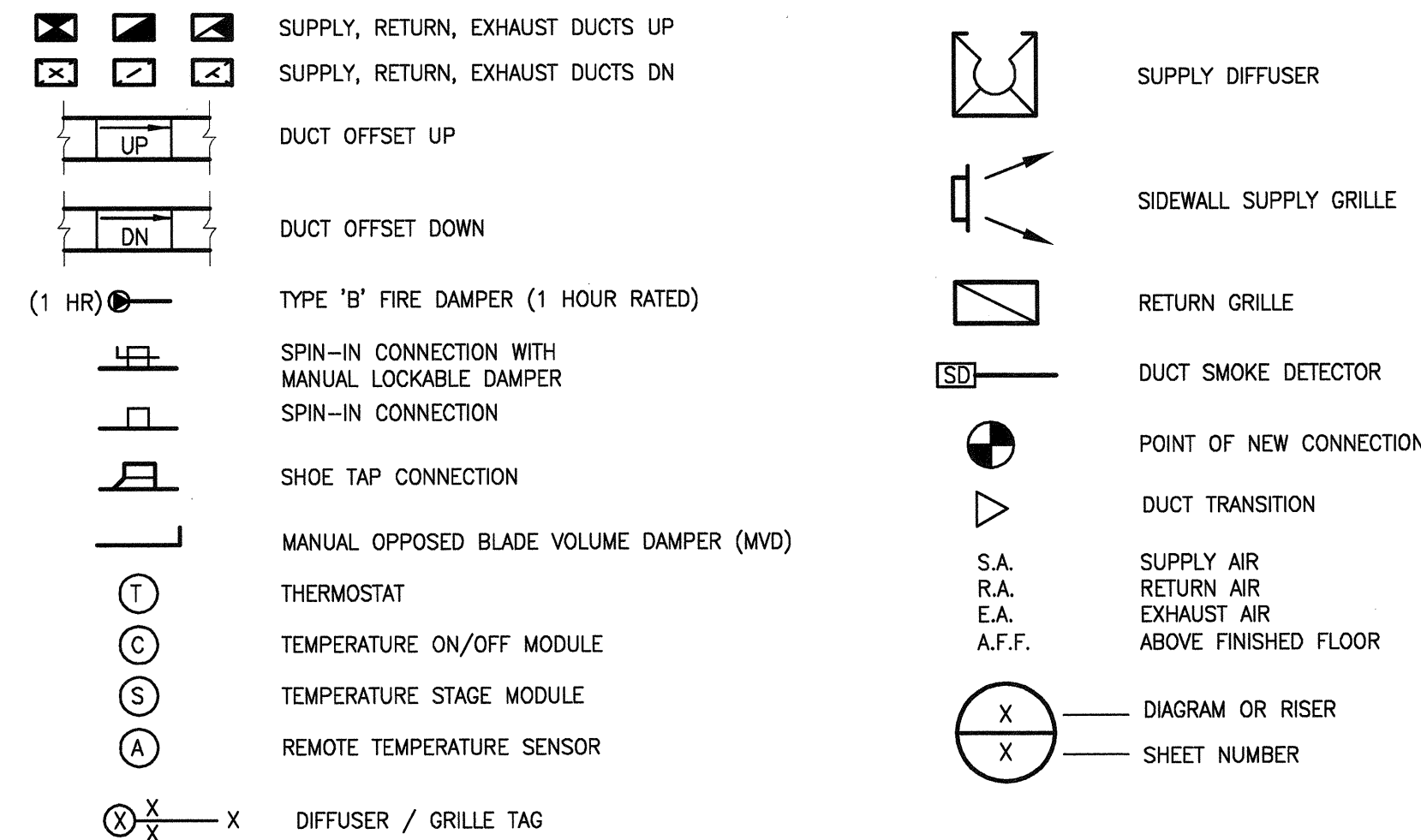
TAG	MANUF.	MODEL	DESCRIPTION	OPTIONS
A	METALAIRE	5700	SUPPLY DIFFUSER, 12"x12" LOUVER FACE, STEEL CONSTRUCTION, OPPOSED BLADE DAMPER.	A, B, C
B	METALAIRE	5700	SUPPLY DIFFUSER, 24"x24" LOUVER FACE, STEEL CONSTRUCTION.	A, B, C
C	METALAIRE	CC5TB	RETURN/EXHAUST GRILLE, 1/2"x1/2"x1/2" ALUMINUM CORE GRID, ALUMINUM BORDER.	A, B, C

OPTIONS:
A. FACTORY STANDARD WHITE FINISH.
B. REFER TO DRAWINGS FOR NECK SIZE AND AIR QUANTITY.
C. VERIFY CEILING TYPE WITH ARCHITECTURAL PLANS AND PROVIDE CORRECT MOUNTING FRAME.

GENERAL NOTES

- OUTSIDE AIR VENTILATION CALCULATIONS ARE BASED ON POPULATION FIGURES PER 2006 INTERNATIONAL MECHANICAL AND BUILDING CODES. ASSUMED NON-SMOKING (MINIMUM SETTING) AND/OR THE MAKE UP AIR REQUIREMENTS FOR THE EXHAUST SYSTEMS.
- UPON COMPLETION OF JOB, FURNISH OWNER COMPLETE OPERATION AND MAINTENANCE MANUALS. MEET WITH OWNER OR OWNER'S REPRESENTATIVE TO INSTRUCT ON OPERATIONS PROCEDURES.
- UPON COMPLETION OF JOB, VERIFY AND PROVIDE REPORT THAT ALL TEMPERATURE CONTROLS ARE OPERATING PROPERLY AND THAT NIGHT SET BACK AND ALL ENERGY SAVING DEVICES HAVE BEEN SET AND THE OWNER IS INSTRUCTED TO PROPER USE.
- MECHANICAL PLANS ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE, COORDINATE ALL DUCT ROUTING AND EQUIPMENT LOCATIONS WITH STRUCTURE. FIELD VERIFY REQUIREMENTS. CHANGES TO DUCTWORK DIMENSIONS FOR CLEARANCE REASONS IS ACCEPTABLE WHERE THE CROSS-SECTIONAL AREA OF THE AIRWAY SIZE SPECIFIED ON THESE PLANS IS MAINTAINED.
- ALL MECHANICAL EQUIPMENT & MATERIALS SELECTIONS SCHEDULED ON THESE DRAWINGS ARE USED FOR THE DESIGN BASIS OF THE MECHANICAL SYSTEMS. MANUFACTURER SUBSTITUTIONS OF EQUIPMENT & MATERIALS MUST ACQUIRE THE ENGINEER'S APPROVAL AT OR BEFORE THE EQUIPMENT SUBMITTAL PHASE OF PROJECT.

LEGEND



DESIGN CRITERIA

PROJECT SITE: LAKEWOOD, COLORADO
 PROJECT ELEVATION: 5,483 FEET
 SUMMER OUTSIDE: 105° DB/ 60° WB
 WINTER OUTSIDE: -10° DB
 EXTERIOR CONSTRUCTION "U" VALUES:
 WALLS: = EXISTING
 ROOF: = EXISTING
 GLAZING: = EXISTING
 CODES:
 2006 INTERNATIONAL BUILDING CODE
 2006 INTERNATIONAL MECHANICAL CODE
 2006 INTERNATIONAL PLUMBING CODE
 2008 NATIONAL ELECTRIC CODE

OUTSIDE AIR VENTILATION CALCULATIONS ARE BASED ON POPULATION DENSITIES AS SET FORTH BY CHAPTER 4 - TABLE 403.3 OF THE INTERNATIONAL MECHANICAL AND CHAPTER 12 OF THE INTERNATIONAL BUILDING CODE. FOR A NON-SMOKING FACILITY.

DESCRIPTION	OCCUPIED AREA SQ. FT.	USE	DENSITY (SF/PERSON)	CFM PER PERSON	CFM PER SQ. FT.	SYSTEMS	REQUIRED	PROVIDED
OFFICE 104	475	OFFICE	142.9	20	-	RTU-1	66.5	70
LOCKER RM. 104	60	LOCKER	-	-	0.5	RTU-1	30	30
STORAGE 104	32	STORAGE	-	-	0.15	RTU-1	4.8	5
REST ROOM 104	38	TOILET	-	75 (PER W.C.)	-	EF-1	0	75
TOTAL	605						41.3	180

DRAWING INDEX

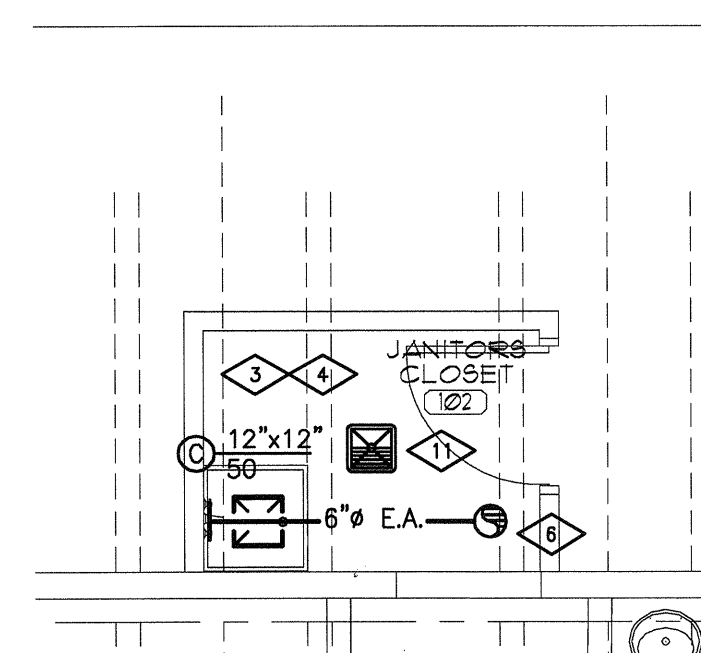
NUMBER	DRAWING TITLE	PERMIT/CD SET
M-1.0	LEGEND, INDEX, GENERAL NOTES, DESIGN CRITERIA, CONTROL SEQUENCES, SCHEDULES, DIAGRAMS AND MECHANICAL FLOOR PLAN.	02/15/2010

COORDINATION:
 01/28/10 - ARCHITECTURAL DRAWING SET
 02/15/10 - ELECTRICAL DRAWING SET
 SHEET S1 - STRUCTURAL DRAWING SET
 NOT AVAILABLE - CIVIL DRAWING SET

KEY NOTES

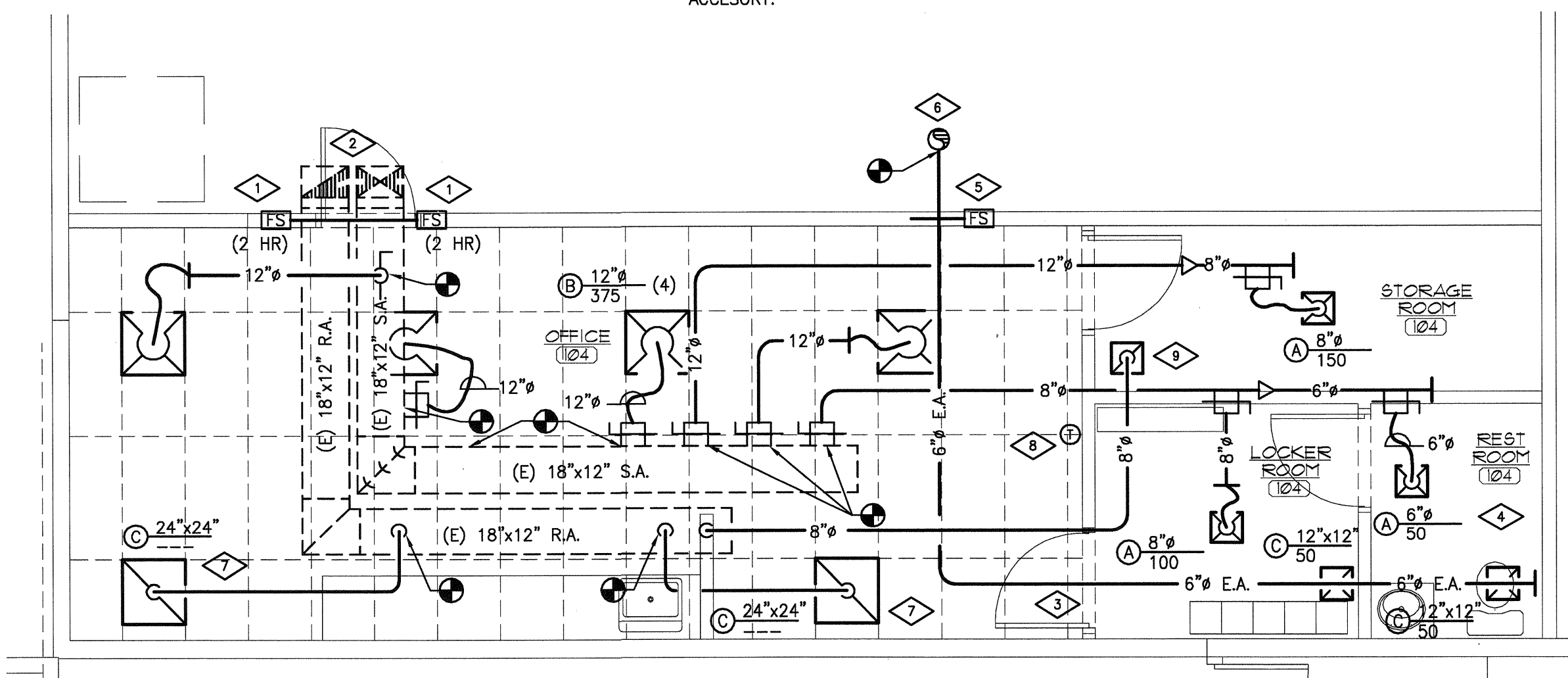
(THIS SHEET ONLY)

- MECHANICAL CONTRACTOR TO PROVIDE (2) HOUR FIRE/SMOKE DAMPER AT PENETRATION THROUGH WALL. ELECTRICAL CONTRACTOR TO PROVIDE POWER AND WIRE BACK TO BUILDING ALARM SYSTEM.
- EXISTING 18"x12" S.A. & R.A. DUCTS UP THROUGH ROOF TO EXISTING ROOFTOP UNIT.
- PLUMBING CONTRACTOR TO REUSE EXISTING CW & HW PIPING TO CONNECT TO SINK.
- PLUMBING CONTRACTOR TO REUSE EXISTING CW, HW & SS PIPING TO CONNECT TO LAV AND WATER CLOSET.
- MECHANICAL CONTRACTOR TO PROVIDE (2) HOUR FIRE/SMOKE DAMPER AT PENETRATION THROUGH WALL. ELECTRICAL CONTRACTOR TO PROVIDE POWER AND WIRE BACK TO BUILDING ALARM SYSTEM.
- EXISTING 6" E.A. DUCT UP THROUGH ROOF TO EXISTING EXHAUST FAN.
- MECHANICAL CONTRACTOR TO PROVIDE 24"Wx24"Lx12"H R.A. PLENUM BOX ATTACHED TO TOP OF GRILLE. PAINT INSIDE FLAT BLACK.
- MECHANICAL CONTRACTOR TO PROVIDE NEW 24/7 DAY PROGRAMMABLE THERMOSTAT FOR EXISTING ROOFTOP UNIT. (EX: HONEYWELL T7300 OR EQUAL)
- MECHANICAL CONTRACTOR TO PROVIDE 12"Wx12"Lx12"H R.A. PLENUM BOX ATTACHED TO TOP OF GRILLE. PAINT INSIDE FLAT BLACK.
- CONNECT NEW 6" E.A. DUCT TO EXISTING EXHAUST DUCT UP THROUGH ROOF TO EXISTING EXHAUST FAN.
- PLUMBING CONTRACTOR TO REUSE EXISTING SS PIPING TO CONNECT TO FLOOR SINK AND PROVIDE TRAP SEAL ACCESSORY.



MECHANICAL FLOOR PLAN

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



MECHANICAL FLOOR PLAN

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

Issue Record:

Designed By: VORJB
 Drawn By: VORJB
 Date: 02/15/10
 Approved By: L.S.VORJB
 Project No.: 10212
 File Name: 10212M10

Sheet Title:
 LEGEND, INDEX, GEN. NTS., DESIGN CRITERIA, CONTROL SEQ., SCHEDULES, DIAGRAMS & MECHANICAL FLOOR PLAN

Sheet Number:

M-1.0

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