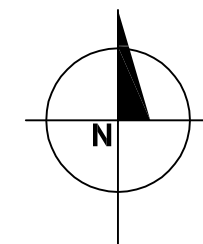


This drawing shall not be scaled. Follow given dimensions only.



ISSUED FOR

ISSUED FOR CONSTRUCTION AUGUST 24, 2015

SEAL



ARCHITECT / PRIME CONSULTANT

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ENGINEERING CONSULTANT



PROJECT TITLE

**CENTRAL YARDS FIELD
SERVICES BUILDING**

**1220 PACIFIC AVENUE
OFFICE RENOVATION**

1220 PACIFIC AVE. WINNIPEG MANITOBA

DRAWING TITLE

**723-2015_MECHANICAL LAYOUT -
EXISTING AND NEW
CONSTRUCTION AND
SPECIFICATIONS_M1-R0**

DESIGNED BY DH DRAWN BY MIS

ISSUE DATE 08-24-2015 REVISION No. 0

PROJECT No. 15040 DRAWING No. M1

GENERAL SPECIFICATIONS

- THE BIDDERS SHALL EXAMINE THE SITE AND THE EXISTING CONDITIONS AFFECTING THE PROJECT. EXAMINE THE COMPLETE SET OF CONTRACT DOCUMENTS TO ENSURE THAT THE WORK CAN BE CARRIED OUT WITHOUT SIGNIFICANT CHANGES TO THE INTENT OF THE DOCUMENTS. NO FUTURE ALLOWANCE WILL BE MADE FOR CHANGES UNLESS THE CONTRACT ADMINISTRATOR HAS BEEN NOTIFIED IN WRITING OF ANY DISCREPANCIES OR INTERFERENCES, PRIOR TO THE CLOSE OF BIDS, NO ALLOWANCE WILL BE MADE FOR ITEMS THAT SHOULD HAVE BEEN NOTED DURING A PRE-BID SITE INSPECTION.
- THE LOCATION, ROUTING AND ELEVATIONS OF ALL NEW AND EXISTING SERVICES AND UTILITIES AS SHOWN ON THE DRAWINGS ARE TO BE CONSIDERED AS APPROXIMATIONS ONLY. VERIFY THE EXACT LOCATIONS, ROUTINGS AND ELEVATIONS OF ALL SERVICES PRIOR TO COMMENCING WORK, AND ASSUME RESPONSIBILITY FOR LAYING OUT ALL WORK. THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR ANY DAMAGE TO EXISTING SERVICES AND UTILITIES.
- ALL ASPECTS OF THE INSTALLATION MUST COMPLY WITH THE MOST STRINGENT OF THE APPLICABLE BUILDING CODES, LOCAL REGULATIONS, AND BY-LAWS. BEFORE PROCEEDING WITH THE WORK, OBTAIN APPROVED DRAWINGS AND SPECIFICATIONS FROM THE AUTHORITIES HAVING JURISDICTION.
- PROVIDE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS, PAY ALL FEES REQUIRED BY LAW, AND ARRANGE FOR ALL INSPECTIONS RELATED TO THE PERFORMANCE OF THE SPECIFIED WORK.
- PROVIDE ALL MATERIALS, LABOUR AND EQUIPMENT REQUIRED TO COMPLETE THE WORK AS SHOWN AND AS SPECIFIED, SO AS TO LEAVE THE CITY WITH A COMPLETE AND FUNCTIONING SYSTEM.
 - ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND C.S.A. APPROVED, UNLESS SPECIFICALLY NOTED OTHERWISE.
 - ALL SIMILAR EQUIPMENT AND OR MATERIALS SHALL BE BY THE SAME MANUFACTURER.
- REQUEST FOR APPROVAL OF SUBSTITUTE MATERIAL AND/OR EQUIPMENT FOR THAT SPECIFIED, SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR WITH A STAMPED SELF-ADDRESSED ENVELOPE OR RETURN FAX NUMBER AT LEAST FIVE WORKING DAYS PRIOR TO BID CLOSING. REQUESTS SHALL INCLUDE ALL PERFORMANCE SPECIFICATIONS, PHYSICAL DATA AND OTHER PERTINENT INFORMATION REQUIRED FOR THE CONTRACT ADMINISTRATOR TO MAKE A COMPLETE COMPARISON.
- PROVIDE SHOP DRAWINGS IN ELECTRONIC FORMAT FOR REVIEW BY THE CONTRACT ADMINISTRATOR. THE SHOP DRAWINGS MUST BE ASSEMBLED INTO COMPLETE BROCHURES.
 - THE REVIEW OF THE SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THE REVIEW SHALL NOT MEAN APPROVAL OF THE DETAILED DESIGN INHERENT IN THE EQUIPMENT. THE RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR. THE REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR CONFIRMING AND CORRELATING THE DIMENSIONS ON THE JOBSITE, AND FOR INFORMATION THAT PERTAINS TO THE FABRICATION PROCESS, CONSTRUCTION TECHNIQUES, AND INSTALLATION DETAILS, AND FOR COORDINATING ALL WORK OF THE RELATED SUB-TRADES.
- EACH CONTRACTOR SHALL COORDINATE THE WORK WITH OTHER CONTRACTORS IN ORDER TO AVOID CONFLICTS.
- NEATLY STORE ALL MATERIALS, AND CLEAN UP REFUSE ON A REGULAR BASIS. PROTECT AND MAINTAIN ALL WORK UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE CITY.
- THE INSTALLATION SHALL BE COMPLETELY TESTED, DEMONSTRATING THAT THE EQUIPMENT AND SYSTEMS INSTALLED ARE PERFORMING IN THE MANNER INTENDED.
- AT THE COMPLETION OF THE INSTALLATION, PROVIDE TWO MARKED-UP COPIES OF THE BID DRAWINGS FOR RECORD PURPOSES. PROVIDE THREE SETS OF OPERATION AND MAINTENANCE MANUALS. PAY ALL COSTS ASSOCIATED WITH THE PRODUCTION OF THE 'RECORD' DRAWINGS AND THE MANUALS. SUBMIT THE DOCUMENTS TO THE CONTRACT ADMINISTRATOR FOR REVIEW, AND MAKE ANY REQUESTED CHANGES BEFORE DELIVERING THEM TO THE CITY.
- REVIEW THE OPERATION AND MAINTENANCE OF THE SYSTEMS WITH THE CITY'S MAINTENANCE PERSONNEL AND PROVIDE WRITTEN AND/OR VERBAL INSTRUCTIONS AS REQUIRED.
- FURNISH CERTIFICATES CONFIRMING THAT THE WORK HAS BEEN INSTALLED TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.
 - NO CERTIFICATE ISSUED, PAYMENT MADE, OR PARTIAL OR ENTIRE USE OF THE SYSTEMS BY THE CITY, SHALL BE CONSTRUED AS ACCEPTANCE OF DEFECTIVE WORK OR MATERIALS.
- PROVIDE TEMPORARY HEATING AS REQUIRED. DO NOT USE NEW EQUIPMENT FOR THIS PURPOSE WITHOUT THE EXPRESS CONSENT OF THE CONTRACT ADMINISTRATOR.
- PROVIDE NOTICE TO CITY OF SHUT-DOWNS OF EXISTING UTILITIES AND SERVICES AS REQUIRED FOR CONNECTIONS OF NEW WORK. WORK WITHIN THE BUILDING MUST CONFORM TO THE WORK RULES OF THE BUILDING, AS DIRECTED BY THE CITY.
- THE DRAWINGS FOR THE MECHANICAL WORK ARE PERFORMANCE DRAWINGS, DIAGRAMMATIC AND APPROXIMATELY TO SCALE, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE LOCATIONS OF APPARATUS, FIXTURES AND PIPE/DUCT RUNS. THESE DRAWINGS DO NOT INTEND TO SHOW ARCHITECTURAL AND STRUCTURAL DETAILS.
- EVEN THOUGH SOME PIPING AND/OR DUCTWORK IS NOT COMPLETELY SHOWN SCHEMATICALLY, AND ALL DETAILS ARE NOT SHOWN OR SPECIFIED, IT IS EXPECTED THAT THE CONTRACTORS BE FAMILIAR ENOUGH WITH THEIR FIELDS OF WORK TO COMPLETE THE PROJECT TO THE STANDARDS GENERALLY ADHERED TO BY THE LOCAL INDUSTRY, INCLUDING GOOD WORKMANSHIP AND COMMON SENSE. THE CONTRACT ADMINISTRATOR RESERVES THE RIGHT TO FURNISH ANY ADDITIONAL DETAIL DRAWINGS, WHICH IN THE JUDGEMENT OF THE CONTRACT ADMINISTRATOR, MAY BE NECESSARY TO CLARIFY THE WORK, AND SUCH DRAWINGS SHALL FORM PART OF THIS CONTRACT. THE WORK FOR SUCH CLARIFICATIONS SHALL BE AT NO COST TO THE CITY.

INSULATION

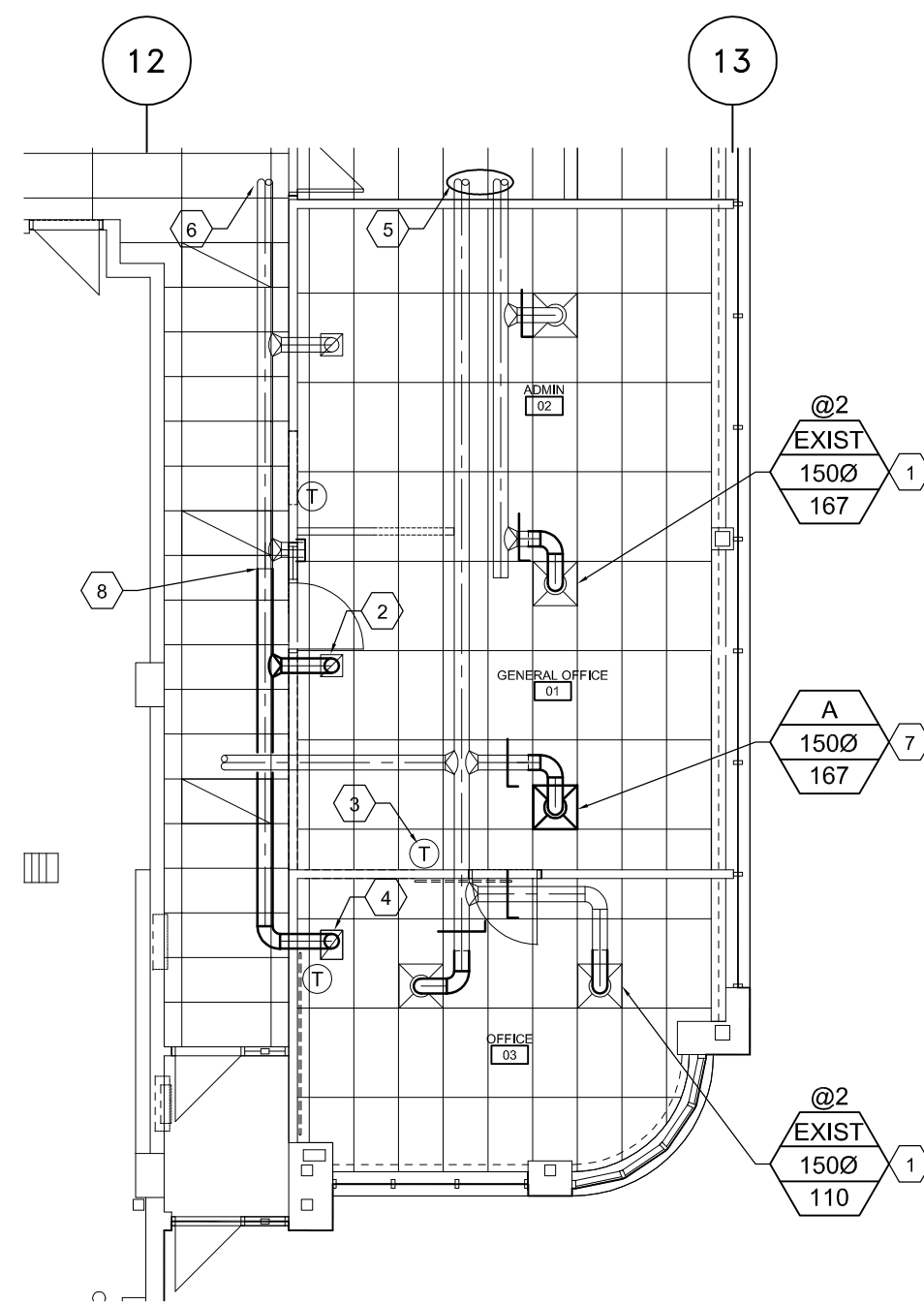
- PROVIDE 2" (50mm) THICK, FOIL-FACED RIGID (FIBREGLASS OR FIBREBOARD) OR FLEXIBLE FIBREGLASS EXTERNAL THERMAL INSULATION ON ALL NEW EXHAUST OR RELIEF DUCTWORK FOR 10'-0" (3.0M) ON THE WARM SIDE OF A PENETRATION THROUGH A WALL/FLOOR/CEILING/ROOF TO A COLD SPACE, WHERE A BACKDRAFT DAMPER IS PROVIDED AT THE PENETRATION TO THE COLD SPACE. WHERE THE BACKDRAFT DAMPER IS PROVIDED IN THE DUCTWORK, INSULATION SHALL EXTEND FROM THE PENETRATION TO 10'-0" (3.0M) UPSTREAM OF THE BACK DRAFT DAMPER.
- PROVIDE ACOUSTIC FLEXIBLE AIR DUCT FOR CONNECTION TO ALL DIFFUSERS. MINIMUM LENGTH 4 FT (1200mm), MAXIMUM LENGTH 5 FT (1500mm); STANDARD OF ACCEPTANCE: THERMAFLEX M-KE.
- PROVIDE 2" (50mm) THICK, FOIL-FACED RIGID FIBREGLASS OR FIBREBOARD EXTERNAL THERMAL INSULATION ON ALL NEW OUTSIDE AIR INTAKE, MIXED AIR AND COMBUSTION AIR DUCTWORK. ROUND COMBUSTION AIR DUCTWORK MAY BE FLEXIBLE FIBREGLASS.
- PROVIDE 1" THICK ACOUSTIC LINING WHERE SHOWN, WHERE 1" ACOUSTIC INSULATION IS PROVIDED, 1" OF THERMAL INSULATION MAY BE DELETED, STANDARD OF ACCEPTANCE: JOHN MANVILLE LINACoustic RC-HP

TESTING AND BALANCING

- BALANCE EACH FAN AND EACH AIR OUTLET AND INLET TO THE AIR QUANTITY NOTED.
- TEST EACH FIRE DAMPER TO ENSURE PROPER ACCESS AND PERFORMANCE. TAG EACH FIRE DAMPER WITH THE DATE OF TESTING.
- PROVIDE A WRITTEN REPORT TO THE CONTRACT ADMINISTRATOR REGARDING THE TESTING AND BALANCING. MAKE ANY REQUESTED CHANGES TO THE REPORT BEFORE DELIVERING THREE FINAL COPIES TO THE CITY.
- TESTING AND BALANCING COMPANY SHALL BE A MEMBER IN GOOD STANDING WITH A.A.B.C., OR SHALL PROVE EQUIVALENCY TO THE CONTRACT ADMINISTRATOR.

NEW CONSTRUCTION KEYNOTES:

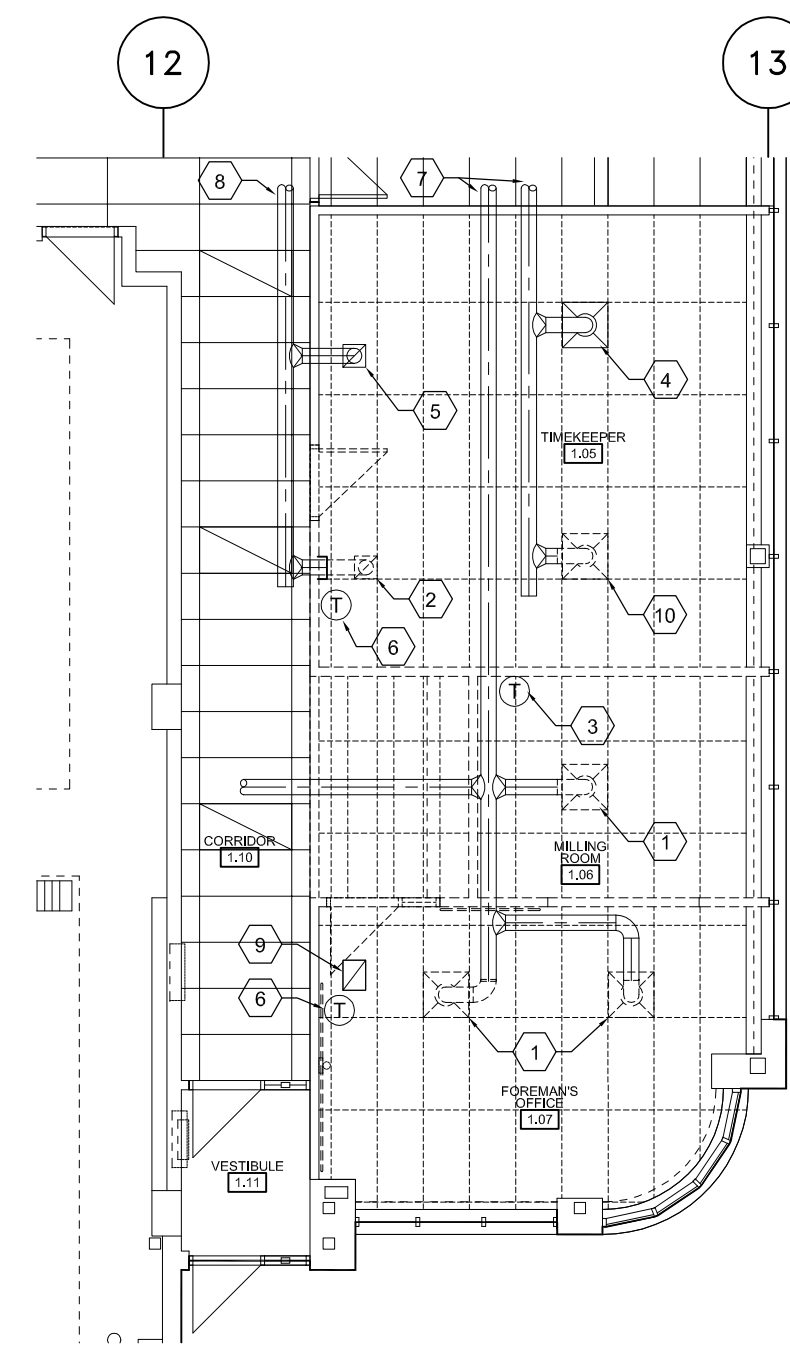
- RELOCATED AIR SUPPLY DIFFUSER.
- RELOCATED RETURN AIR GRILLE.
- RELOCATED THERMOSTAT.
- PROVIDE NEW RETURN AIR DUCT TO EXISTING RETURN AIR GRILLE AND CONNECT TO EXISTING.
- EXISTING SUPPLY AIR DUCTS.
- EXISTING RETURN AIR DUCTS.
- NEW SUPPLY AIR DIFFUSER.
- CONNECT NEW RETURN AIR DUCT TO EXISTING APPROXIMATELY THIS LOCATION. SIZE DUCT TO EXISTING.



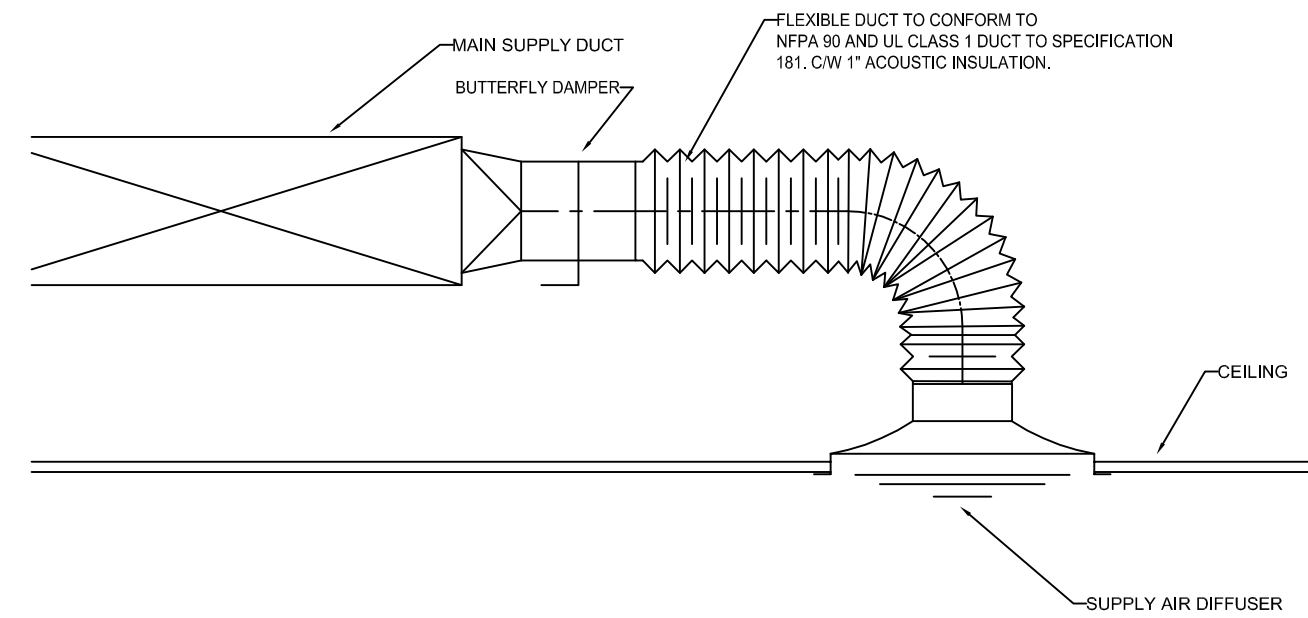
2
NEW CONSTRUCTION
MECHANICAL FLOOR PLAN
M-1 1:100

DEMOLITION KEYNOTES:

- EXISTING SUPPLY AIR DIFFUSER TO BE RELOCATED. REFER TO DRAWING 2/M-1 FOR NEW LOCATION. CAP-OFF EXISTING SUPPLY DUCT AND PREPARE FOR RECONNECTION.
- EXISTING RETURN AIR GRILLE TO BE RELOCATED. CAP-OFF EXISTING RETURN DUCT. REFER TO DRAWING 2/M-1 FOR NEW LOCATION OF RETURN AIR GRILLE.
- EXISTING THERMOSTAT TO BE RELOCATED. REFER TO DRAWING 2/M-1 FOR NEW LOCATION.
- EXISTING SUPPLY AIR DIFFUSER TO REMAIN.
- EXISTING RETURN AIR GRILLE TO REMAIN.
- EXISTING THERMOSTAT TO REMAIN.
- EXISTING SUPPLY AIR DUCT FROM MAIN.
- EXISTING RETURN AIR DUCT FROM MAIN.
- EXISTING RETURN AIR GRILLE TO REMAIN AND TO BE CONNECTED TO EXISTING RETURN AIR DUCT. REFER TO DRAWING 2/M-1 FOR DUCT ROUTING AND CONNECTION.
- EXISTING DIFFUSER TO BE REMOVED.



1
EXISTING/DEMOLITION
MECHANICAL FLOOR PLAN
M-1 1:100



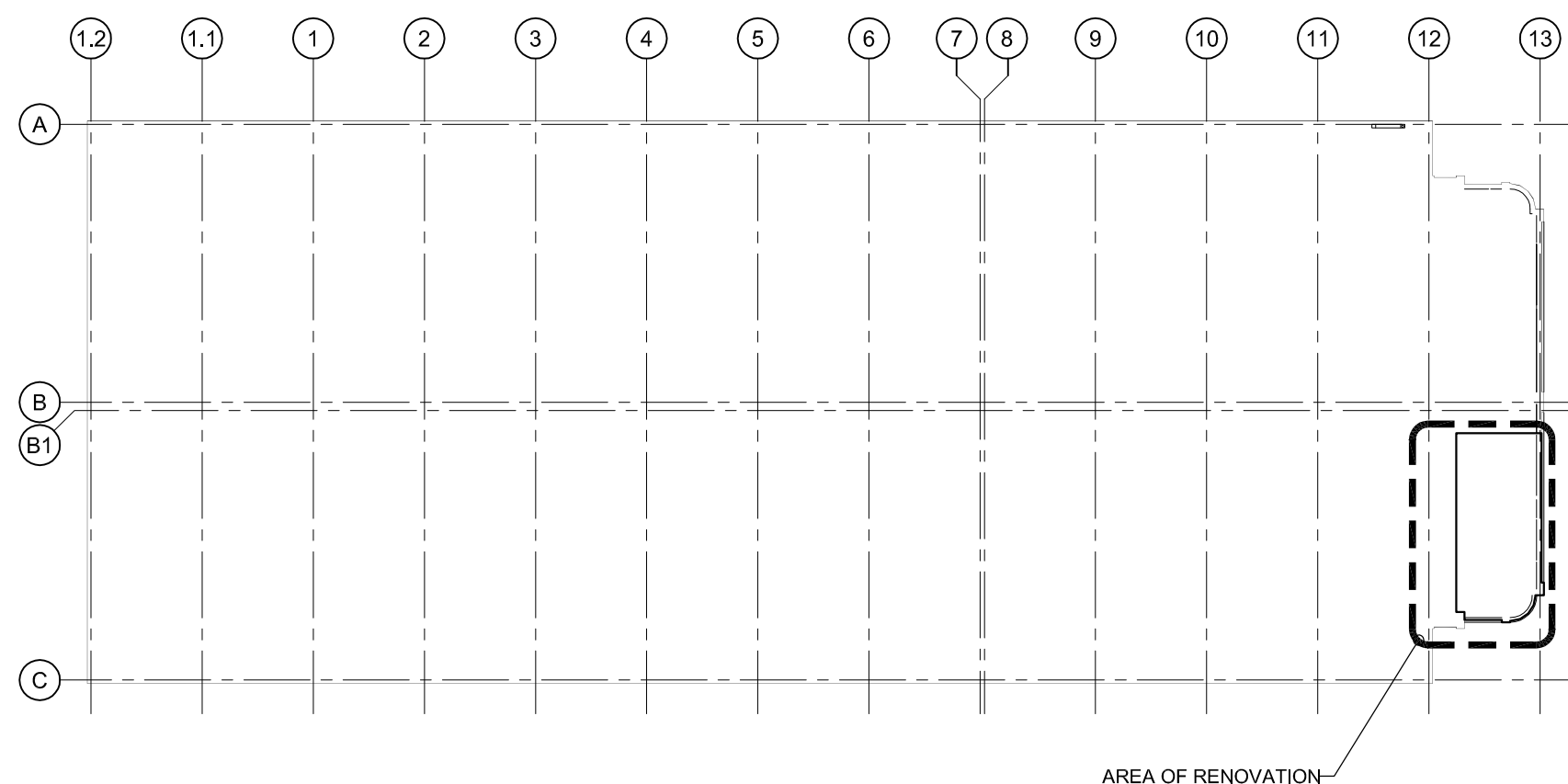
3
CEILING DIFFUSER DETAIL
M-1 NTS

DIFFUSER AND GRILLE SCHEDULE (Based on E. H. PRICE)		
TAG	MODEL	COLOUR
A	24X24" SCD SQUARE CONE DIFFUSER	WHITE
NOTES: 1. PROVIDE BALANCING DAMPER AT EACH SUPPLY BRANCH FOR DIFFUSERS AND AT EACH GRILLE. 2. SIZE AS INDICATED ON DRAWINGS. 3. PROVIDE BORDER TO SUITE SURFACE INSTALLED ON.		

HVAC LEGEND

	BALANCING DAMPER	
	THERMOSTAT	
	DESIGNATION NECK SIZE MAX. AIRFLOW (CFM)	DIFFUSER/ GRILLE SYMBOL
	NEW DUCT	
	EXISTING DUCT	
	EXISTING DUCT TO BE REMOVED	
	SUPPLY AIR DIFFUSER	
	RETURN AIR GRILLE	

KEYPLAN



NOTE: THIS DRAWING SUPERCEDES ALL
PREVIOUSLY ISSUED DRAWINGS.