

# MECHANICAL SPECIFICATIONS:

## GENERAL

- CONTRACTOR SHALL VISIT THE SITE TO DETERMINE PRE-EXISTING CONDITIONS AND ALL WORK NECESSARY, PRIOR TO BIDDING. VERIFY ALL MEASUREMENTS AND EXISTING CONDITIONS IN THE FIELD. GENERAL SCHEMATIC LAYOUT IS INDICATED; ALL OFFSETS, OBSTRUCTIONS, AND EXISTING CONFIGURATIONS AND CONSTRAINTS SHALL BE FIELD VERIFIED.
- OBTAIN NECESSARY PERMITS AND PAY ASSOCIATED FEES.
- COORDINATE ANY SERVICE DISRUPTIONS WITH THE OWNER.
- INSTALL ALL COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ALL LOCAL CODES AND STANDARDS.
- DRAWINGS ARE DIAGRAMMATIC ONLY; FIELD-VERIFY ALL EXISTING CONDITIONS. COORDINATE INSTALLATIONS WITH OTHER TRADES.
- THE INTENTION OF THESE CONTRACT DOCUMENTS IS TO CALL FOR FINISHED WORK, FULLY TESTED AND READY FOR OPERATION. ANY COMPONENTS OR LABOR NOT MENTIONED IN THE CONTRACT DOCUMENTS BUT REQUIRED FOR FUNCTIONING SYSTEMS SHALL BE PROVIDED. SHOULD THERE APPEAR TO BE ANY DISCREPANCIES OR QUESTIONS OF INTENT, THE CONTRACTOR SHALL REFER THE MATTER TO THE ARCHITECT FOR DIRECTION BEFORE START OF ANY RELATED WORK.
- PERFORM WORK IN ACCORDANCE WITH LOCAL CODES.
- SEAL ALL DUCT AND PIPE PENETRATIONS WITH FIRE SEALANT.
- OBSERVE THE OWNER'S CLEANLINESS PROTOCOLS.

## METAL DUCTWORK

- GALVANIZED STEEL DUCTWORK: ASTM A653 GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, AND G90 ZINC COATING. ALL DUCTWORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. CONSTRUCT DUCT SYSTEMS SO THAT LEAKAGE DOES NOT EXCEED ONE PERCENT OF THE TOTAL AIR QUANTITIES. SEAL ALL DUCT JOINTS WITH GASKETED CONNECTIONS, DUCTMATE, OR EQUAL. ALL DUCTWORK MUST MEET SMACMA CLASS "A" STANDARDS.
- PROVIDE VOLUME DAMPERS AT ALL BRANCH DUCTS.

## MECHANICAL INSULATION

- ALL SUPPLY DUCTS SHALL BE EXTERNALLY INSULATED WITH FIBERGLASS DUCT WRAP EQUAL TO SCHULLER MICOLITE TYPE 75, ASTM C533, NONCOMBUSTIBLE BLANKET, 1-1/2" THICK.
- ALL HOT WATER PIPING SHALL BE INSULATED WITH 1" THICK FIBERGLASS PIPE INSULATION WITH FSK JACKET.

## AUTOMATIC TEMPERATURE CONTROLS

- THE CONTROLS FOR THIS PROJECT WILL BE AN EXTENSION OF THE EXISTING CONTROL SYSTEM AND WILL BE PROVIDED BY THE OWNER. CONTRACTOR TO COORDINATE WORK WITH THE OWNER.

## FIRE DAMPERS

- UL LISTED, GALVANIZED STEEL CONSTRUCTION, MULTI-BLADED TYPE, SPRING LOADED, EQUIPPED WITH FUSIBLE LINK, CONFORMING TO NFPA STANDARD 90A. SIMILAR TO RUSKIN FD60, STYLE B & C, 1-1/2 HR RATED.
- PROVIDE SLEEVE LENGTH AS REQUIRED TO SUIT FIELD CONDITIONS.

## DUCT LINER

- FLEXIBLE DUCT LINER: BASIS OF DESIGN IS NOMACO K-FLEX.
  - THICKNESS: 1 INCH
  - THERMAL CONDUCTIVITY (K-VALUE): 0.27 AT 75 DEG F MEAN TEMPERATURE.
  - FIRE-HAZARD CLASSIFICATION: MAXIMUM FLAME-SPREAD INDEX OF 25 AND SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO ASTM E 84.
  - LINER ADHESIVE: COMPLY WITH NFPA 90A OR NFPA 90B AND ASTM C 916.
  - MECHANICAL FASTENERS: GALVANIZED STEEL SUITABLE FOR MECHANICAL ATTACHMENT OR WELDING ATTACHMENT TO DUCT WITHOUT DAMAGING LINER WHEN APPLIED AS RECOMMENDED BY MANUFACTURE AND WITHOUT CAUSING LEAKAGE IN DUCT. FASTENERS WITH PEEL AND STICK ADHESIVE ARE NOT ALLOWED.

144 Fore Street/P.O. Box 618  
Portland, Maine 04104  
tel. (207) 772-3846  
fax. (207) 772-1070  
www.smrinc.com

ARCHITECTURE  
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**SMRT**

USM SCIENCE BUILDING C WING  
CYBER SECURITY LAB FIT-UP  
PROJECT 2013-007  
PORTLAND, MAINE

ISSUED FOR PERMITTING AND  
CONSTRUCTION  
12-20-13

CURRENT ISSUE STATUS:

REV	DESCRIPTION	DATE
0	ISSUED FOR PERMITTING AND CONSTRUCTION	12-20-13

SCALE: NONE

PROJECT MANAGER: SLB

JC/DRAWN BY: MBD

A/E OF RECORD: MJC

CAD FILE: M-002-12014-02

PROJECT NO: 12014-02

DATE: 12-20-13

SHEET TITLE:

**MECHANICAL  
SPECIFICATIONS**

SHEET No.

**M-002**

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