

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for	
International Plumbing Code	2006	Building Conservation	
International Fire Code	2006	ADA Accessibility	
International Energy Conservation Code	2006	Guidelines	

A. Occupancy and Group: - EXISTING -

Change in Use: Yes No X Mixed Occupancy: Yes No X
Special Use and Occupancy (e.g. High Rise, Covered Mall): MECH. ROOM

B. Seismic Design Category: N/A Design Wind Speed: N/A mph
EXISTING BUILDING- WE ARE NOT PROVIDING ANY ADDITIONS OR EXTERIOR MECHANICAL EQUIPMENT.

C. Type of Construction (circle one): EXISTING CONSTRUCTION-CONCRETE DOUBLE TEE, BLOCK, CONCRETE AND FACE BRICK.

 I I II II III IV V V
 A B A B A B HT A B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours): EXISTING CONSTRUCTION

North: South: East: West:

E. Mixed Occupancies: X Nonseparated Uses:

F. Sprinklers:
Required: X Provided: X Type of Sprinkler System: WET

G. Number of Stories: N/A Building Height: N/A

H. Actual Area per Floor (square feet): N/A

I. Tabular Area: N/A

J. Area Modifications: N/A

$$a) A_a = A_t + \left[\frac{A_t I_f}{100} \right] + \left[\frac{A_t I_s}{100} \right] \quad I_f = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$$

c) Total Allowable Area for:

- 1) One Story:
- 2) Two Story: A_a(2)
- 3) Three Story: A_a(3)

d) Unlimited Area Building: Yes No Code Section:

K. Fire Resistance Rating Requirements for Building Elements (hours): N/A

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls			Floors - Ceiling Floors		
Interior Bearing Walls			Roofs - Ceiling Roofs		
Exterior Non-Bearing Walls			Exterior Doors and Windows		
Structural Frame			Shaft Enclosures		
Partitions - Permanent			Fire Walls		
Fire Barriers			Fire Partitions		
			Smoke Partitions		

L. Design Occupant Load: N/A

Exit Width Required: N/A Exit Width Provided: N/A

M. Minimum Number of Required Plumbing Facilities: N/A- TOILET ROOMS ARE PROVIDED ON EACH FLOOR. (MEN AND WOMEN)

- a) Water Closets - Required (m) (f) Provided (m) (f)
 - b) Lavatories - Required (m) (f) Provided (m) (f)
 - c) Bath Tubs or Showers:
 - d) Drinking Fountains: Service Sinks:
- HANDICAPPED FIXTURES ARE PROVIDED.

FOOTNOTES:

- 1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through IX - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.
- 2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
 - a) High Rise Requirements.
 - b) Atriums.
 - c) Performance Based Criteria.
 - d) Means or Egress Analysis.
 - e) Fire Assembly Locator Sheet.
 - f) Exterior and Interior Accessibility Route.
 - g) Fire Stopping, Including Tested Design Number.

THIS PROJECT IS REPLACING THE AIR COMPRESSORS IN BOTH SCIENCE BUILDING AND TECH. EDUCATION BUILDING. NOTHING IS BEING DONE WITHIN THE CLASSROOMS; ONLY IN THE BASEMENT MECHANICAL ROOMS. THIS PROJECT ALSO INCLUDES THE UPGRADING OF THE TECH EDUCATION'S MECHANICAL EQUIPMENT ROOM VENTILATION SYSTEM.

WEBER STATE UNIVERSITY TECH. EDUCATION BLDG. AND SCIENCE BLDG. SHOP AIR UPGRADE DFCM #08057810



State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018



WHW
ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
8619 Sandy Parkway Suite 101
SANDY, UTAH 84070
(801) 466-4021, FAX 466-8536
EMAIL: excellence@whw-engineering.com



DRAWING INDEX:

- M000 - TITLE SHEET
- MG001- MECHANICAL GENERAL NOTES AND LEGEND
- MD101- TECH. ED. MECHANICAL DEMOLITION LOCATION PLAN
- MD401- TECH. ED. LARGE SCALE MECHANICAL DEMOLITION PLAN
- MD402- SCIENCE BLDG. LARGE SCALE MECHANICAL DEMOLITION PLAN
- ME401- TECH. ED. LARGE SCALE MAKE-UP AIR PLAN
- ME402- TECH. ED. LARGE SCALE VENTILATION PLAN
- ME403- TECH. ED. LARGE SCALE MECHANICAL PLAN
- ME404- SCIENCE BLDG. LARGE SCALE MECHANICAL PLAN
- ME501- MECHANICAL DETAILS
- ME601- MECHANICAL SCHEDULES
- ME701- MECHANICAL FLOW DIAGRAMS

MECHANICAL ENGINEER
WHW ENGINEERING, INC.
8619 SANDY PARKWAY
SUITE 101
SANDY, UTAH 84075
PHONE: (801) 466-4021 FAX: (801) 466-8536

CONSULTANTS



WHW
ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
8619 Sandy Parkway Suite 101
SANDY, UTAH 84070
(801) 466-4021, FAX 466-8536
EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

**WSU TECH ED.
AND SCIENCE
BLDG. SHOP AIR
UPGRADE**

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER: WP	
DRAWN BY: LGD	
CHECKED BY: SLW	
DATE: 09/11/08	
WHW JOB NO.: 08036	

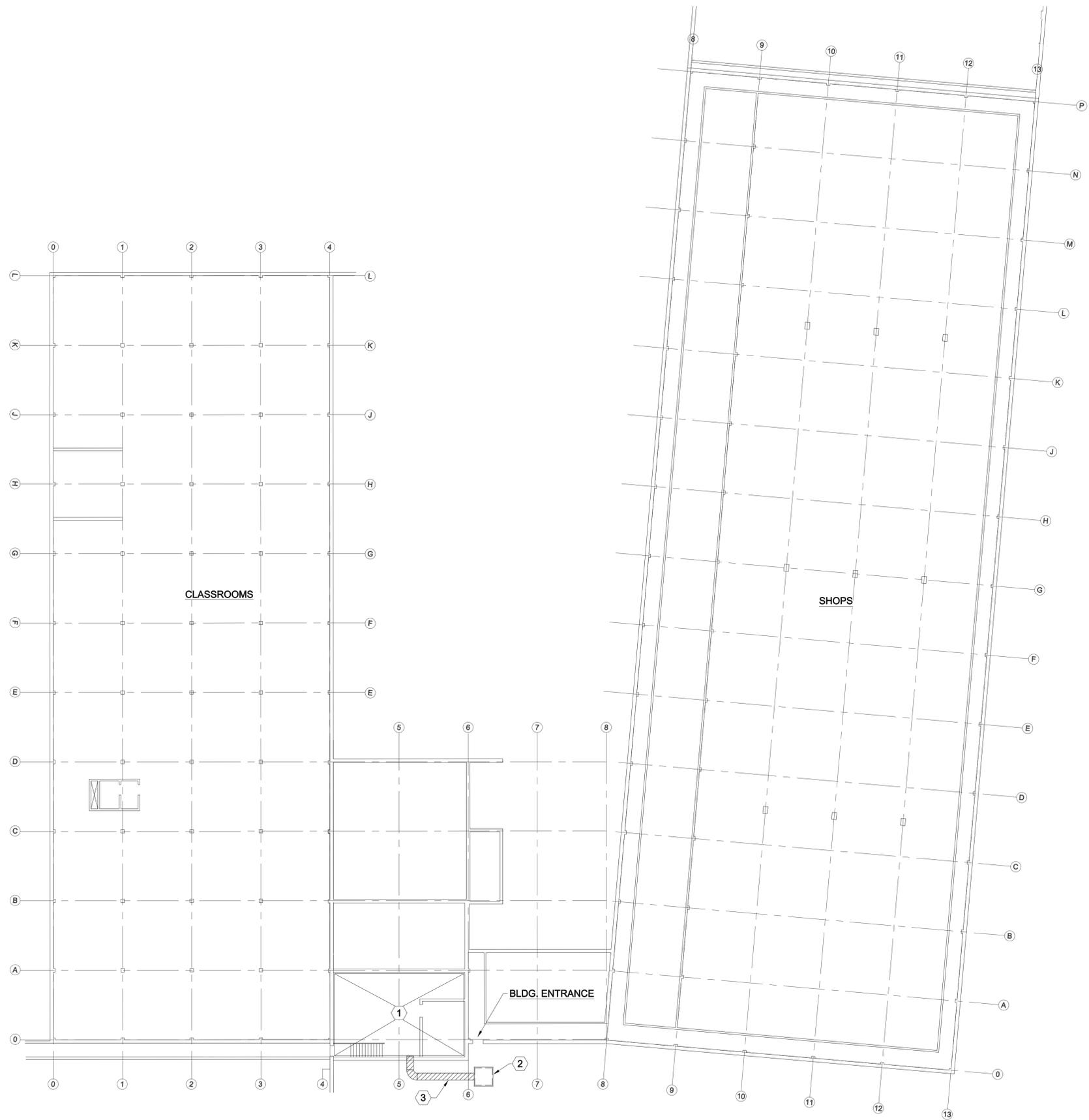
SHEET TITLE
**MECHANICAL GENERAL
NOTES AND LEGEND**

SHEET NO.
MG001

MECHANICAL LEGEND					
SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY			WET SIDE		
		SECTION LETTER DESIGNATION			UNION
		SECTION DRAWN ON THIS SHEET			MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)
		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION			THREADED OR SWEAT VALVE CONNECTION
		MECHANICAL EQUIPMENT DESIGNATION		BV	BALL VALVE
		EQUIPMENT ITEM DESIGNATION		PRV	PRESSURE RELIEF VALVE
		REVISION DESIGNATOR AND NUMBER			NEEDLE VALVE
		KEY NOTE DESIGNATOR AND NUMBER			PRESSURE GAUGE AND GAUGE COCK
	POC	POINT OF CONNECTION			DIRECTION OF FLOW
	POR	POINT OF REMOVAL			PITCH DOWN
	AFF	ABOVE FINISHED FLOOR			ELBOW UP
	CL	CENTER LINE ELEVATION			ELBOW DOWN
	INV. ELEV.	INVERT ELEVATION			TEE UP
	GC	GENERAL CONTRACTOR			TEE DOWN
	MC	MECHANICAL CONTRACTOR			EXISTING PIPING TO BE REMOVED
	ATC	CONTROL CONTRACTOR			EXISTING PIPING TO REMAIN
	EC	ELECTRICAL CONTRACTOR			NEW PIPING
	NIC	NOT IN CONTRACT			PIPE CAP OR PLUG
	NTS	NOT TO SCALE	AIR SIDE		
		EXISTING EQUIPMENT TO BE REMOVED			CONCENTRIC REDUCER
		EXISTING EQUIPMENT TO REMAIN			ECCENTRIC REDUCER
		NEW EQUIPMENT			FLEXIBLE CONNECTION
	RTU-1	WALL MOUNTED THERMOSTAT MECHANICAL EQUIPMENT CONTROLLED		D	DRAIN
	EA	EXHAUST AIR			
	FA	FRESH AIR			

GENERAL NOTES:

- G-1** MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD CONDITIONS, EXISTING PIPING, CONNECTION POINTS, ACCESS, AND WAYS TO ROUTE NEW EQUIPMENT INTO THE MECHANICAL ROOMS.
- A** - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.
- B** - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.
- C** - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.
- D** - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.
- E** - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.
- G-2** ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.
- G-3** CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.
- G-4** THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.
- G-5** THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.
- G-6** SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE INSIDE FREE AREA DIMENSIONS.
- G-7** PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.
- G-8** THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, HAZARDOUS MATERIALS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.
- G-9** THE MECHANICAL AND DESIGN BUILD ELECTRICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH EXISTING ELECTRICAL BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
- G-10** C.F.M. LISTED IS ACTUAL AIR.
- G-11** SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.
- G-12** CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.
- G-13** ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2006 EDITION OF THE IMC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.
- G-14** THIS CONTRACTOR SHALL CONTRACT WITH A DESIGN BUILD ELECTRICAL CONTRACTOR FOR THE DESIGN AND CONSTRUCTION OF THE ELECTRICAL PORTION OF THIS PROJECT. ELECTRICAL INSTALLATION AND DESIGN SHALL BE PER 2005 NEC.
- G-15** ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE.



TECH. ED. MECHANICAL DEMOLITION LOCATION PLAN
 SCALE: 1/16" = 1'-0"



SHEET NOTES

- ① SEE LARGE SCALE SHEETS MD401 AND ME401 FOR THIS AREA.
- ② SEE LARGE SCALE SHEET ME402 FOR EXHAUST AIR PENTHOUSE AREA.
- ③ EXISTING BELOW GRADE EXHAUST DUCT WORK SHALL REMAIN.

State of Utah
 Department of Administrative Services

Division of Facilities
 Construction & Management
 4110 State Office Building
 Salt Lake City, Utah 84114
 Phone: (801) 538 - 3018
 Fax: (801) 538 - 3267

Internet: <http://www.dfcm.state.ut.us>

CONSULTANTS



WHW ENGINEERING INC.
 PROFESSIONAL MECHANICAL ENGINEERING
 8619 Sandy Parkway Suite 101
 SANDY, UTAH 84070
 (801) 466-4021, FAX 466-8636
 EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

**WSU TECH ED.
 AND SCIENCE
 BLDG. SHOP AIR
 UPGRADE**

DFCM # 08057810

Ogden, Utah

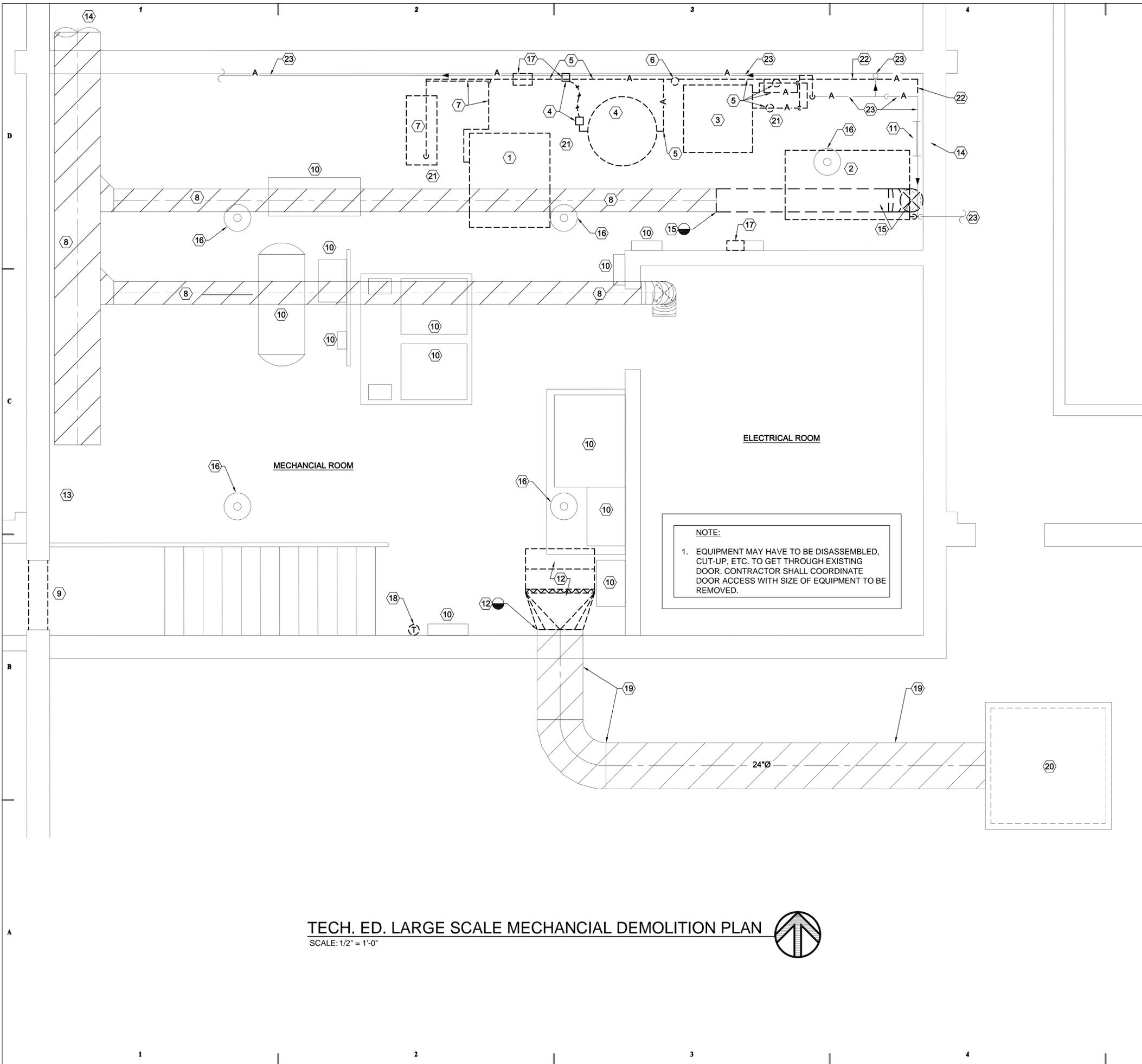
MARK	DATE	REVISION

PROJECT MANAGER:
 WP
 DRAWN BY:
 LGD
 CHECKED BY:
 SLW
 DATE:
 09/11/08
 WHW JOB NO.:
 08036



**TECH. EDUCATION
 MECHANICAL DEMOLITION
 LOCATION PLAN**

SHEET NO. **MD101**



NOTE:
 1. EQUIPMENT MAY HAVE TO BE DISASSEMBLED, CUT-UP, ETC. TO GET THROUGH EXISTING DOOR. CONTRACTOR SHALL COORDINATE DOOR ACCESS WITH SIZE OF EQUIPMENT TO BE REMOVED.

TECH. ED. LARGE SCALE MECHANICAL DEMOLITION PLAN
 SCALE: 1/2" = 1'-0"

SHEET NOTES

- ① REMOVE EXISTING AIR COMPRESSOR #1 AND ALL ASSOCIATED EQUIPMENT, SUPPORTS, PIPING, ELECTRICAL, CONTROLS, ETC.
- ② REMOVE EXISTING AIR COMPRESSOR #2 AND ALL ASSOCIATED EQUIPMENT, SUPPORTS, PIPING, ELECTRICAL, CONTROLS, ETC.
- ③ REMOVE EXISTING REFRIGERANT DRYER AND ALL ASSOCIATED EQUIPMENT, SUPPORTS, PIPING, ELECTRICAL, CONTROLS, ELECTRIC DRAIN ETC.
- ④ REMOVE EXISTING COMPRESSED AIR VERTICAL STORAGE TANK AND ALL ASSOCIATED PIPING, SUPPORTS, CONTROLS, PANELS, CONDUIT, DRAINS, ETC.
- ⑤ REMOVE EXISTING FILTERS, PIPING, DRAINS, ETC.
- ⑥ REMOVE EXISTING COMPRESSED AIR SEPARATOR.
- ⑦ REMOVE EXISTING COMPRESSED AIR AFTER COOLER AND ALL ASSOCIATED EQUIPMENT, SUPPORTS, PIPING, ELECTRICAL, CONTROLS, ETC.
- ⑧ EXISTING MAKE-UP AIR MAIN AND TAKE-OFFS SHALL REMAIN.
- ⑨ REMOVE EXISTING STEEL DOOR.
- ⑩ EXISTING EQUIPMENT, ELECTRICAL, ETC. SHALL REMAIN.
- ⑪ EXISTING LADDER SHALL REMAIN.
- ⑫ REMOVE EXISTING EXHAUST FAN AND ALL ASSOCIATED EQUIPMENT, DUCT WORK, ELECTRICAL AND CONTROLS. LEAVE ENOUGH OF DUCT THRU THE WALL FOR NEW CONNECTION.
- ⑬ BUILDING CRAWL SPACE ENTRANCE.
- ⑭ BUILDING TUNNEL ACCESS.
- ⑮ REMOVE THIS PORTION OF EXISTING SUPPLY AIR DUCT AND DROP.
- ⑯ EXISTING LIGHTS SHALL REMAIN.
- ⑰ REMOVE EXISTING DISCONNECTS, PANELS ETC. SERVING THE TWO COMPRESSORS.
- ⑱ REMOVE EXISTING VENTILATION THERMOSTAT AND ALL ASSOCIATED CONDUIT, ELECTRICAL, ETC.
- ⑲ EXISTING BELOW GRADE EXHAUST DUCT SHALL REMAIN.
- ⑳ EXISTING CONCRETE RELIEF AIR PENTHOUSE SHALL REMAIN.
- ㉑ REMOVE ALL ELECTRIC, AUTOMATIC DRAINS, DRAIN PIPING, SUPPORTS ETC.
- ㉒ REMOVE AIR PIPING, SUPPORTS ETC. FROM AIR COMPRESSOR AC-2.
- ㉓ EXISTING AIR SUPPLY SHALL REMAIN.



Internet: <http://www.dfcm.state.ut.us>

CONSULTANTS

WHW ENGINEERING INC.
 PROFESSIONAL MECHANICAL ENGINEERING
 8619 Sandy Parkway Suite 101
 SANDY, UTAH 84070
 (801) 466-4021, FAX 466-8536
 EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

WSU TECH ED. AND SCIENCE BLDG. SHOP AIR UPGRADE

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER: WP
 DRAWN BY: LGD
 CHECKED BY: SLW
 DATE: 09/11/08
 WHW JOB NO.: 08036

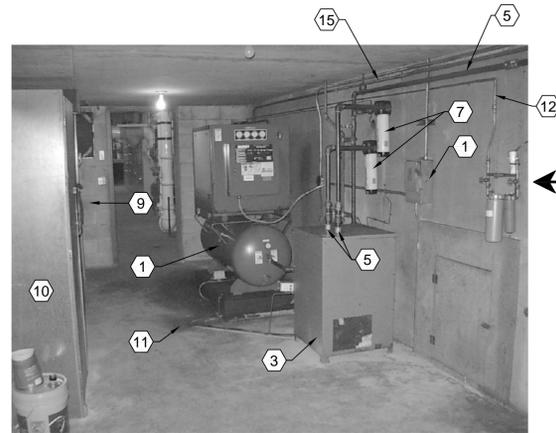
TECH. ED. LARGE SCALE MECHANICAL DEMOLITION PLAN

SHEET NO. **MD401**

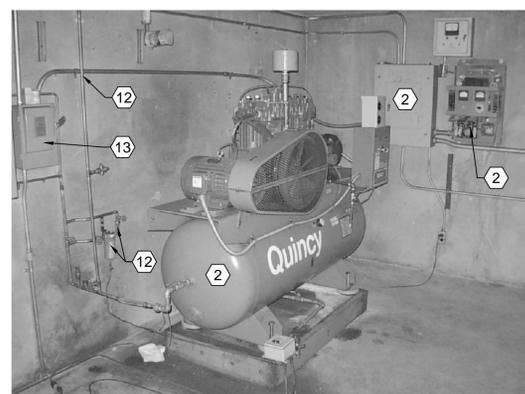
CONSULTANTS



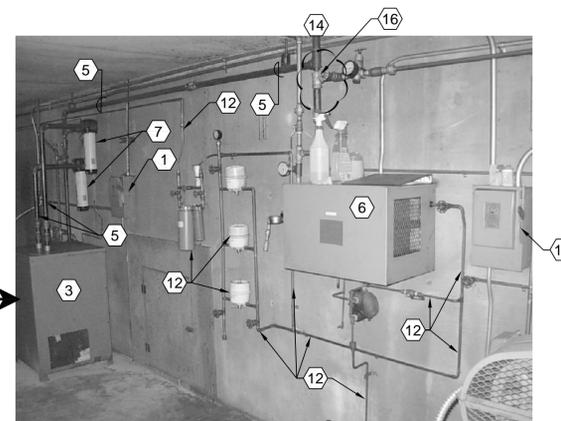
- SHEET NOTES:
- ① REMOVE EXISTING TANK MOUNTED AIR COMPRESSOR AND ASSOCIATED EQUIPMENT PIPING, SUPPORTS, ELECTRICAL, STORAGE TANK, CONCRETE PAD, CONTROLS, ELECTRIC AUTO DRAIN ETC.
 - ② EXISTING ATC CONTROLS FOR COMPRESSOR SHALL REMAIN.
 - ③ REMOVE EXISTING REFRIGERANT DRYER, AND ALL ASSOCIATED EQUIPMENT, SUPPORTS, PIPING, ELECTRICAL, CONTROLS, ETC.
 - ④ EXISTING 6"Ø MAKE-UP AIR WALL OPENINGS SHALL REMAIN.
 - ⑤ REMOVE ALL PIPING FROM EXISTING AC-1.
 - ⑥ EXISTING REFRIGERANT DRYER FOR ATC COMPRESSOR SHALL REMAIN.
 - ⑦ REMOVE EXISTING AIR FILTERS, PIPING, SUPPORTS, ETC.
 - ⑧ EXISTING ELECTRICAL DISCONNECTS SERVING EF-1, 2, & 3 SHALL REMAIN.
 - ⑨ EXISTING VFD FOR FANS 1 & 2 SHALL REMAIN.
 - ⑩ EXISTING STORAGE CABINETS SHALL REMAIN.
 - ⑪ EXISTING FLOOR DRAINS SHALL REMAIN.
 - ⑫ ALL PIPING, FILTERS, DRAINS, TRAPS SERVING ATC COMPRESSOR SHALL REMAIN.
 - ⑬ EXISTING DISCONNECT FOR ATC COMPRESSOR SHALL REMAIN.
 - ⑭ EXISTING 1"Ø PIPE TO BUILDING SHALL REMAIN.
 - ⑮ EXISTING ATC COMPRESSED AIR PIPING SHALL REMAIN.
 - ⑯ REMOVE EXISTING TEE WHERE ATC AIR CONNECTS WITH BUILDING COMPRESSED AIR, SO THE TWO AIR SOURCES ARE SEPARATED.



C1 COMPRESSOR ROOM LOOKING NORTHEAST
SCALE: NONE



A1 COMPRESSOR ROOM LOOKING SOUTHWEST
SCALE: NONE



A4 COMPRESSOR ROOM LOOKING NORTHEAST
SCALE: NONE

SCIENCE BLDG. LARGE SCALE MECHANICAL DEMOLITION PLAN
SCALE: 1/2" = 1'-0"



PROJECT NAME & ADDRESS

**WSU TECH ED.
AND SCIENCE
BLDG. SHOP AIR
UPGRADE**

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

WP

DRAWN BY:

LGD

CHECKED BY:

SLW

DATE:

09/11/08

WHW JOB NO.:

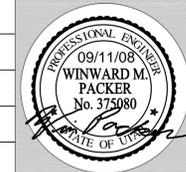
08036

SHEET TITLE

**SCIENCE BLDG. LARGE
SCALE MECHANICAL
DEMOLITION PLAN**

SHEET NO.

MD402



SHEET NOTES

- ① CONNECT INTO EXISTING 12" DIA. DUCT AND PROVIDE NEW 12" 90° ELL AND DUCT WORK TO NEW DIFFUSER.
- ② CONNECT NEW 14" DIA. DUCT TO EXISTING 24" DIA. S.A. DUCT IN THIS APPROXIMATE LOCATION AND EXTEND NEW DUCT WORK AS SHOWN. FIELD VERIFY.
- ③ EXISTING 12" DUCT AND DROP TO ELECTRICAL ROOM SHALL REMAIN.
- ④ PROVIDE NEW 12" VOLUME DAMPER IN EXISTING DUCT DROP.
- ⑤ PROVIDE NEW VOLUME DAMPERS IN DUCT DROPS TO DIFFUSERS.
- ⑥ PROVIDE NEW 12" DIA. DUCT WORK.
- ⑦ PROVIDE NEW 14" DIA. DUCT WORK.
- ⑧ EXISTING 24" DIA. S.A. HEADER.
- ⑨ EXISTING 12" DIA. DUCT WORK SHALL REMAIN.
- ⑩ 12" DIA. DUCT DROP TO DIFFUSERS LOCATE DIFFUSERS 9'-0" FROM FLOOR. FIELD VERIFY.
- ⑪ CONTRACTOR SHALL FIELD VERIFY THE ROUTING OF DUCTWORK. ALL OBSTRUCTIONS i.e. CONDUIT, HANGERS, PIPING, ETC. SHALL BE LOCATED BEFORE ROUTING OF DUCT WORK.
- ⑫ EXISTING OVERHEAD LIGHTS.
- ⑬ EXISTING ELECTRICAL TRANSFORMERS.
- ⑭ EXISTING ATC COMPRESSOR.
- ⑮ EXISTING ELECTRIC PANELS, DISCONNECTS, AND EQUIPMENT SHALL REMAIN.

State of Utah
Department of Administrative Services

Division of Facilities
Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: <http://www.dfcm.state.ut.us>

CONSULTANTS



PROJECT NAME & ADDRESS

**WSU TECH ED.
AND SCIENCE
BLDG. SHOP AIR
UPGRADE**

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:

WP

DRAWN BY:
LGD

CHECKED BY:
SLW

DATE:
09/11/08

WHW JOB NO.:

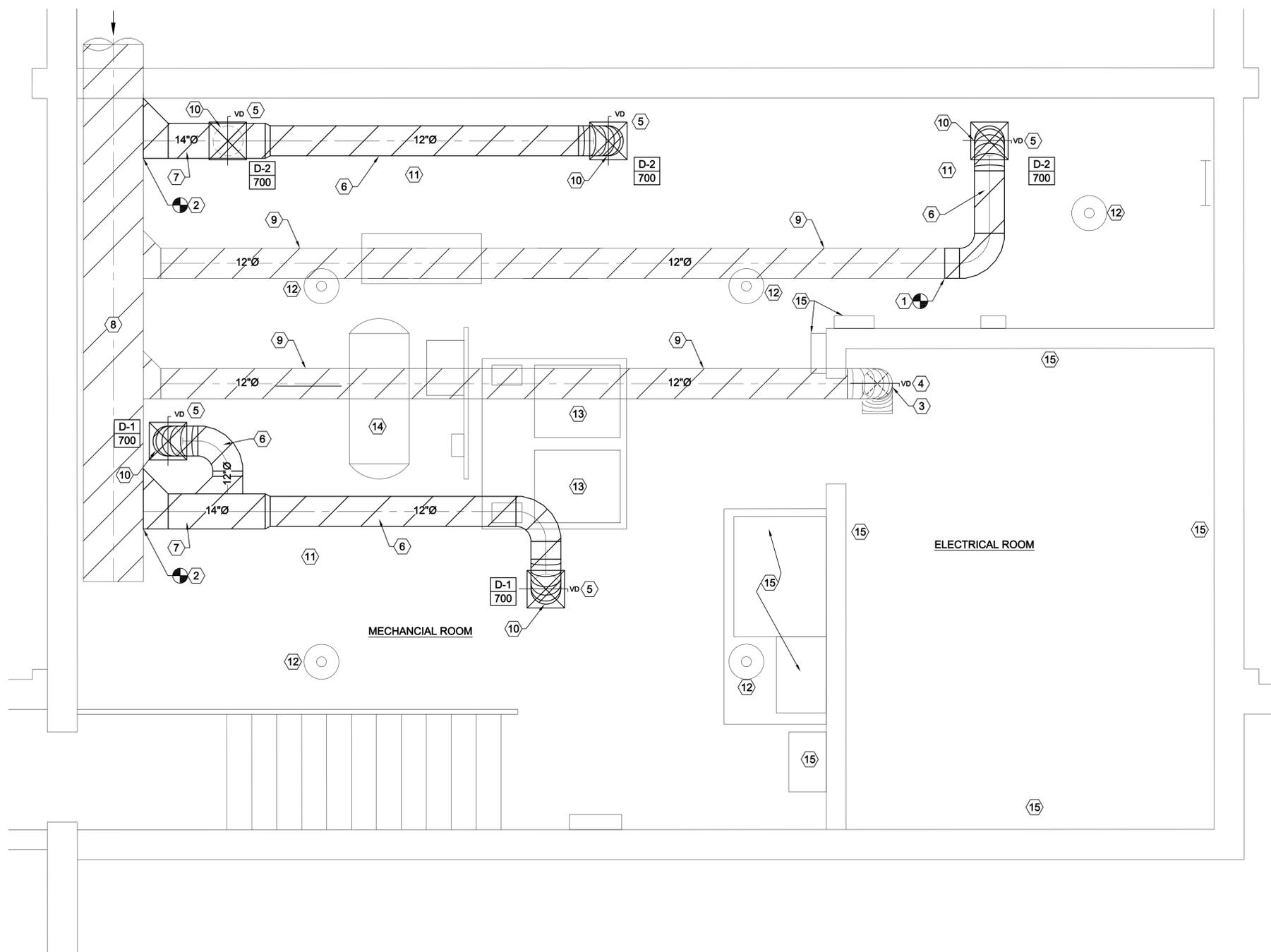
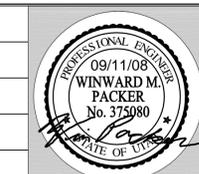
08036

SHEET TITLE

**TECH. ED. LARGE SCALE
MAKE-UP AIR PLAN**

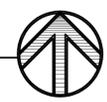
SHEET NO.

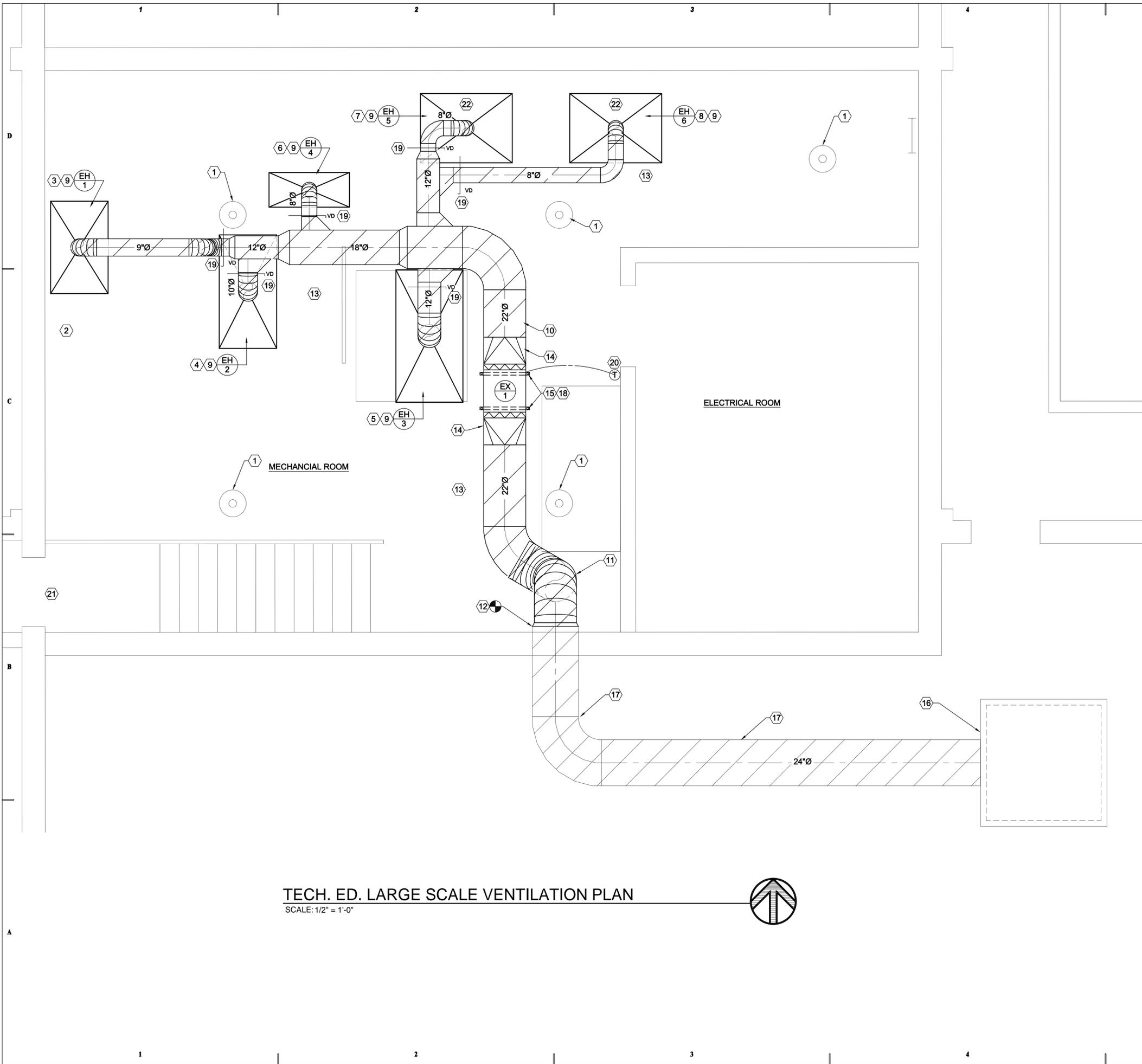
ME401



TECH. ED. LARGE SCALE MAKE-UP AIR PLAN

SCALE: 1/2" = 1'-0"





TECH. ED. LARGE SCALE VENTILATION PLAN
 SCALE: 1/2" = 1'-0"

SHEET NOTES

- ① EXISTING ROUND LIGHTS TO REMAIN IF NOT IN THE WAY OF NEW DUCTS. CONTRACTOR SHALL RELOCATE IF REQUIRED.
- ② 24"Ø EXISTING MAKE-UP AIR MAIN AND TAKE-OFFS ABOVE EH-1 SHALL REMAIN. SEE SHEET ME401.
- ③ NEW EXHAUST HOOD EH-1 - SEE SCHEDULE. MOUNT BOTTOM OF HOOD 11'-5" ABOVE FLOOR. FIELD VERIFY HEIGHT. SEE DETAIL C2/ME501.
- ④ NEW EXHAUST HOOD EH2 - SEE SCHEDULE. MOUNT BOTTOM OF HOOD 8'-6" ABOVE FLOOR. FIELD VERIFY HEIGHT. SEE DETAIL C2/ME501.
- ⑤ NEW EXHAUST HOOD EH3 - SEE SCHEDULE. MOUNT BOTTOM OF HOOD 8'-6" ABOVE FLOOR. FIELD VERIFY HEIGHT. SEE DETAIL C2/ME501.
- ⑥ NEW EXHAUST HOOD EH4 - SEE SCHEDULE. MOUNT BOTTOM OF HOOD 10'-10" ABOVE FLOOR. FIELD VERIFY HEIGHT. SEE DETAIL C2/ME501.
- ⑦ NEW EXHAUST HOOD EH5 - SEE SCHEDULE. MOUNT BOTTOM OF HOOD 9'-0" ABOVE FLOOR. FIELD VERIFY HEIGHT. SEE DETAIL C2/ME501.
- ⑧ NEW EXHAUST HOOD EH6 - SEE SCHEDULE. MOUNT BOTTOM OF HOOD 9'-0" ABOVE FLOOR. FIELD VERIFY HEIGHT. SEE DETAIL C2/ME501.
- ⑨ MOUNT HOODS AS FOLLOWS:
 EH-1- ABOVE EXISTING STEAM PRV HEADER VALVES.
 EH-2- ABOVE EXISTING ATC COMPRESSOR.
 EH-3- ABOVE EXISTING ELECTRICAL TRANSFORMERS.
 EH-4- ABOVE EXISTING STEAM VERTICAL HOT WATER HEATER.
 EH-5- ABOVE NEW COMPRESSOR AC-1.
 EH-6- ABOVE NEW COMPRESSOR AC-2.
- ⑩ ROUTE NEW 22"Ø DUCT OVER CONDUIT. FIELD VERIFY.
- ⑪ RISE UP AND CONNECT TO EXISTING EXHAUST DUCT THRU WALL. TRANSITION IF NECESSARY TO EXISTING 24"Ø DUCT. FIELD VERIFY SIZE OF EXISTING DUCT.
- ⑫ CONNECT TO EXISTING EXHAUST DUCT. FIELD VERIFY SIZE OF EXISTING DUCT THRU-WALL.
- ⑬ CONTRACTOR SHALL VERIFY ROUTING OF DUCT WORK TO AVOID EXISTING OBSTRUCTIONS, EQUIPMENT, SUPPORTS, HANGERS, CONDUIT, ETC. DUCT WORK SHOWN MAY HAVE TO BE OFFSET, MOVED IF IN THE WAY OF MAJOR OBSTRUCTIONS.
- ⑭ CONNECT TO NEW INLINE EXHAUST FAN EX-1. PROVIDE 22" ROUND TO SQUARE TRANSITION AND FLEXIBLE CONNECTIONS AT BOTH ENDS OF FAN.
- ⑮ HANG INLINE EXHAUST FAN WITH 4 (ONE AT EACH CORNER) THREADED ROD ATTACHED TO CONCRETE DOUBLE TEES. PROVIDE SPRING HANGERS ON ALL FOUR RODS. SEE DETAIL B2/ME501.
- ⑯ EXISTING CONCRETE RELIEF AIR PENTHOUSE. PROVIDE ONE ADDITIONAL LOUVER ON WEST WALL. SEE DETAIL A1/ME501.
- ⑰ EXISTING BURIED EXHAUST DUCT SHALL REMAIN.
- ⑱ 2" UNISTRUT SUPPORT MEMBERS LOCATED UNDER NEW EXHAUST FAN.
- ⑲ PROVIDE VOLUME DAMPERS IN EXHAUST DUCT.
- ⑳ PROVIDE EXHAUST FAN ADJUSTABLE THERMOSTAT SO WHEN TEMPERATURE IN THE ROOM REACHES THE SET POINT THE EXHAUST FAN SHALL START. FIELD VERIFY LOCATION ON WALL.
- ㉑ PROVIDE NEW STEEL DOOR WITH FULL LOUVER. SEE DOOR SCHEDULE.
- ㉒ COORDINATE LOCATION OF EXHAUST HOODS EH-5 AND EH-6 WITH EXACT LOCATIONS OF NEW AIR COMPRESSORS AC-1 AND AC-2. SEE SHEET ME403.



Internet: <http://www.dfcv.state.ut.us>



PROJECT NAME & ADDRESS

**WSU TECH ED.
 AND SCIENCE
 BLDG. SHOP AIR
 UPGRADE**

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:
 WP

DRAWN BY:
 LGD

CHECKED BY:
 SLW

DATE:
 09/11/08

WHW JOB NO.:
 08036

SHEET TITLE

**TECH. ED. LARGE SCALE
 VENTILATION PLAN**

SHEET NO. **ME402**

SHEET NOTES

- ① PROVIDE NEW 30 HP COMPRESSORS COMPLETE WITH CONCRETE PAD, ELECTRICAL AND ALL NECESSARY CONNECTIONS. SEE ME701 FOR CONNECTIONS. COMPRESSORS SHALL BE EQUAL TO INGERSOLL-RAND UP6-30-125.
- ② PROVIDE NEW REFRIGERANT DRYER WITH CONCRETE PAD, ELECTRICAL, AND ALL NECESSARY CONNECTIONS. SEE SHEET ME701 FOR CONNECTIONS. REFRIGERANT DRYER SHALL BE EQUAL TO INGERSOLL-RAND TS 200.
- ③ PROVIDE 1 MICRON AND LARGER FILTER STATION. SEE SHEET ME701 FOR PIPING AT STATION. FILTER EQUAL TO INGERSOLL-RAND 1/RGP216.
- ④ PROVIDE .01 MICRON AND SMALLER FILTER STATION. SEE SHEET ME701 FOR PIPING AT STATION. FILTER EQUAL TO INGERSOLL-RAND IRHE 216.
- ⑤ PROVIDE NEW 1" SPOOL FROM THESE TWO LOCATIONS.
- ⑥ CONNECT NEW 1-1/2" COMPRESSED AIR INTO EXISTING 1-1/4" COMPRESSED AIR LINE AT THIS APPROXIMATE LOCATION. FIELD VERIFY.
- ⑦ EXISTING COMPRESSED AIR PIPING SHALL REMAIN. PROVIDE NEW VALVES.
- ⑧ PROVIDE NEW AIR CONTROLLER EQUAL TO INGERSOLL-RAND PacE. PROVIDE UPSTREAM AND DOWNSTREAM PRESSURE GAUGES. SEE PIPING DETAIL ME701.
- ⑨ NEW 1-1/2" COMPRESSED AIR PIPING.
- ⑩ NEW 30"DIA. x 84"HIGH- 240 GALLON AIR STORAGE TANK. SEE TANK DETAIL PIPING ME701.
- ⑪ 1-1/2" BALL VALVE- TYPICAL.
- ⑫ 1-1/2" FLEX CONNECTION- TYPICAL.
- ⑬ 1" UNION.
- ⑭ 1-1/2" x 1" REDUCER. OUTLET OF EACH COMPRESSOR.
- ⑮ 2" x 1-1/2" REDUCER AT ST-1 TANK INLET & OUTLET.
- ⑯ INSTALL FILTER STATION WITH A MINIMUM CLEAR SPACE UNDER FILTERS OF 10".
- ⑰ PROVIDE ELECTRONIC DRAINS FOR COMPRESSORS, REFRIGERANT DRYER, COALESCING FILTERS, STORAGE TANK. ROUTE TO NEW SEPARATOR. ELECTRONIC DRAINS SHALL BE EQUAL TO INGERSOLL-RAND EDV-2000. SEPARATOR SHALL BE EQUAL TO INGERSOLL-RAND POLYSEP. SEE SHEET ME701 FOR DRAIN PIPING. ROUTE DRAINS ON FLOOR ALONG NORTH WALL TO NEAREST FLOOR DRAIN SUPPORTED FROM FLOOR WITH 1-1/2" UNISTRUT AND PIPE CLAMPS.
- ⑱ PROVIDE INGERSOLL RAND 4-LOGIC CONTROLLER FOR COMPRESSORS.
- ⑲ THE ELECTRICAL IN THIS AREA SERVES OTHER BUILDINGS AS WELL AS THE CAMPUS COMPUTER CENTER. DESIGN BUILD ELECTRICAL SHALL BECOME VERY FAMILIAR WITH THE EXISTING ELECTRICAL AND EQUIPMENT, PANELS ETC. BEFORE STARTING DESIGN AND CONSTRUCTION.
- ⑳ NEW DOOR, SEE DOOR SCHEDULE ME601.
- ㉑ ROUTE PIPING OVERHEAD A MINIMUM OF 9'-0" ABOVE FLOOR.

CONSULTANTS



PROJECT NAME & ADDRESS

**WSU TECH ED.
AND SCIENCE
BLDG. SHOP AIR
UPGRADE**

DFCM # 08057810

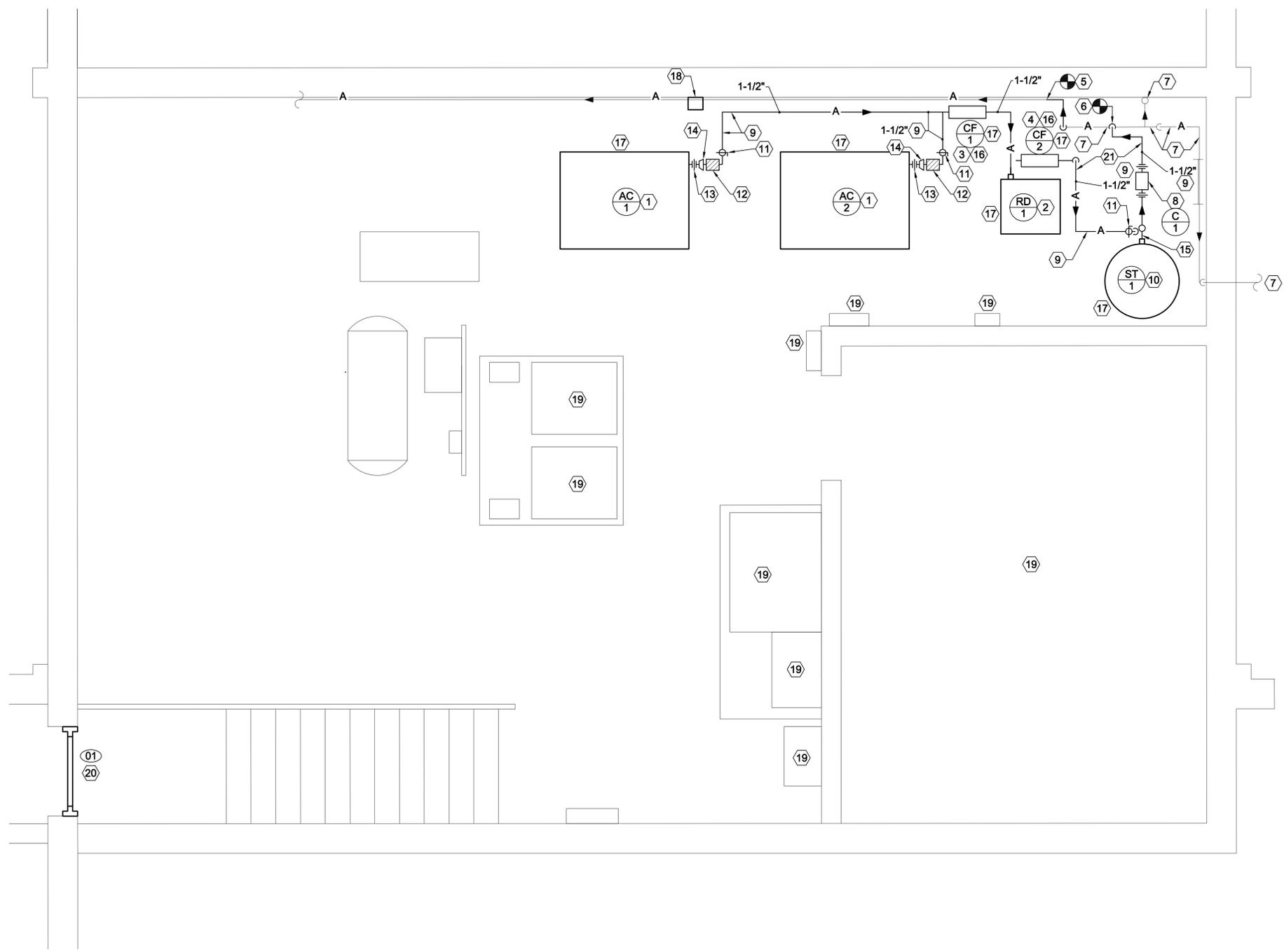
Ogden, Utah

MARK	DATE	REVISION

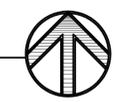
PROJECT MANAGER: WP	
DRAWN BY: LGD	
CHECKED BY: SLW	
DATE: 09/11/08	
WHW JOB NO.: 08036	

**TECH. ED. LARGE SCALE
MECHANICAL PLAN**

SHEET NO. **ME403**



TECH. ED. LARGE SCALE MECHANICAL PLAN
SCALE: 1/2" = 1'-0"



SHEET NOTES

- ① PROVIDE NEW 10 HP COMPRESSORS EQUAL TO INGERSOLL-RAND UP6-10TAS-125 ROTARY SCREW AIR COMPRESSOR WITH 80-GAL TANK. SEE SCHEDULE.
- ② EXISTING ATC COMPRESSOR SHALL REMAIN.
- ③ EXISTING ATC REFRIGERANT DRYER SHALL REMAIN.
- ④ EXISTING ATC DISCONNECT SHALL REMAIN.
- ⑤ CONNECT NEW 1" AIR LINE INTO EXISTING VERTICAL LINE THRU CEILING TO BUILDINGS.
- ⑥ REMOVE ATC PIPING FROM MAIN AIR LINE AT BOTTOM OF RISER.
- ⑦ RISE UP NEW 1" AIR PIPING.
- ⑧ 1" PIPING AND VALVE PROVIDED BY COMPRESSOR MANUFACTURER. PROVIDE FLEX CONNECTION AT TIE-IN TO TANK.
- ⑨ PROVIDE ELECTRONIC DRAIN VALVE IF NOT PROVIDED BY COMPRESSOR MANUFACTURER. EQUAL TO INGERSOLL-RAND EDV-2000.
- ⑩ PROVIDE PRESSURE REDUCING STATION EQUAL TO INGERSOLL-RAND PacE.
- ⑪ PROVIDE PRESSURE GAUGE 0 TO 200 PSIG WITH VALVE AND SNUBBER.
- ⑫ PROVIDE PRESSURE GAUGE 0 TO 150 PSIG WITH VALVE AND SNUBBER.
- ⑬ SEE ISOMETRIC THIS SHEET FOR PIPING.
- ⑭ SEE CONCRETE PAD DETAIL B1/ME501.
- ⑮ REMOVE TEE AND REPLACE WITH 90° ELL FOR SEPARATION OF EXISTING ATC AIR PIPING AND MAIN COMPRESSED AIR PIPING.
- ⑯ EXISTING ATC AIR PIPING SHALL REMAIN.
- ⑰ EXISTING 1" AIR PIPING THRU CEILING OF MECHANICAL FLOOR SHALL REMAIN.
- ⑱ EXISTING EQUIPMENT, ELECTRICAL, ETC. SHALL REMAIN.
- ⑲ PROVIDE OIL WATER SEPARATOR EQUAL TO INGERSOLL-RAND - POLYSEP CONDENSATE SEPARATOR.
- ⑳ PROVIDE WALL MOUNTED 4- LOGIC CONTROLLER BY INGERSOLL RAND. CONTROLLER SHALL FROM A SINGLE PRESSURE TRANSDUCER MOUNTED IN THE AIR LINE. SEQUENCE THE COMPRESSORS TO MATCH THE AIR SYSTEMS DEMAND.
- ㉑ WALL MOUNTED DISCONNECTS BY DESIGN BUILD ELECTRICAL CONTRACTOR.
- ㉒ FLOOR MOUNTED UNISTRUT WITH PIPE CLAMPS FOR DRAIN PIPING.
- ㉓ EXISTING DISCONNECT FOR EF-1,2,&3 SHALL REMAIN.
- ㉔ EXISTING FLOOR DRAINS.
- ㉕ EXISTING SUPPLY FAN 1 & 2 VFD SHALL REMAIN.
- ㉖ EXISTING STORAGE CABINETS.
- ㉗ EXISTING 6" OPENING IN WALL FOR MAKE-UP AIR TO COMPRESSOR ROOM.
- ㉘ CLEVIS TYPE HANGERS. SEE SPECIFICATION AND DETAIL C1/ME501. ATTACH TO CONCRETE CEILING AND FLOOR OF 1ST FLOOR.
- ㉙ ACCESS DOOR HAS A CLEAR OPENING OF 36"x 7'-1/4" TALL. COORDINATE WITH EQUIPMENT ACCESS TO THE ROOM.

CONSULTANTS



PROJECT NAME & ADDRESS

**WSU TECH ED.
AND SCIENCE
BLDG. SHOP AIR
UPGRADE**

DFCM # 08057810

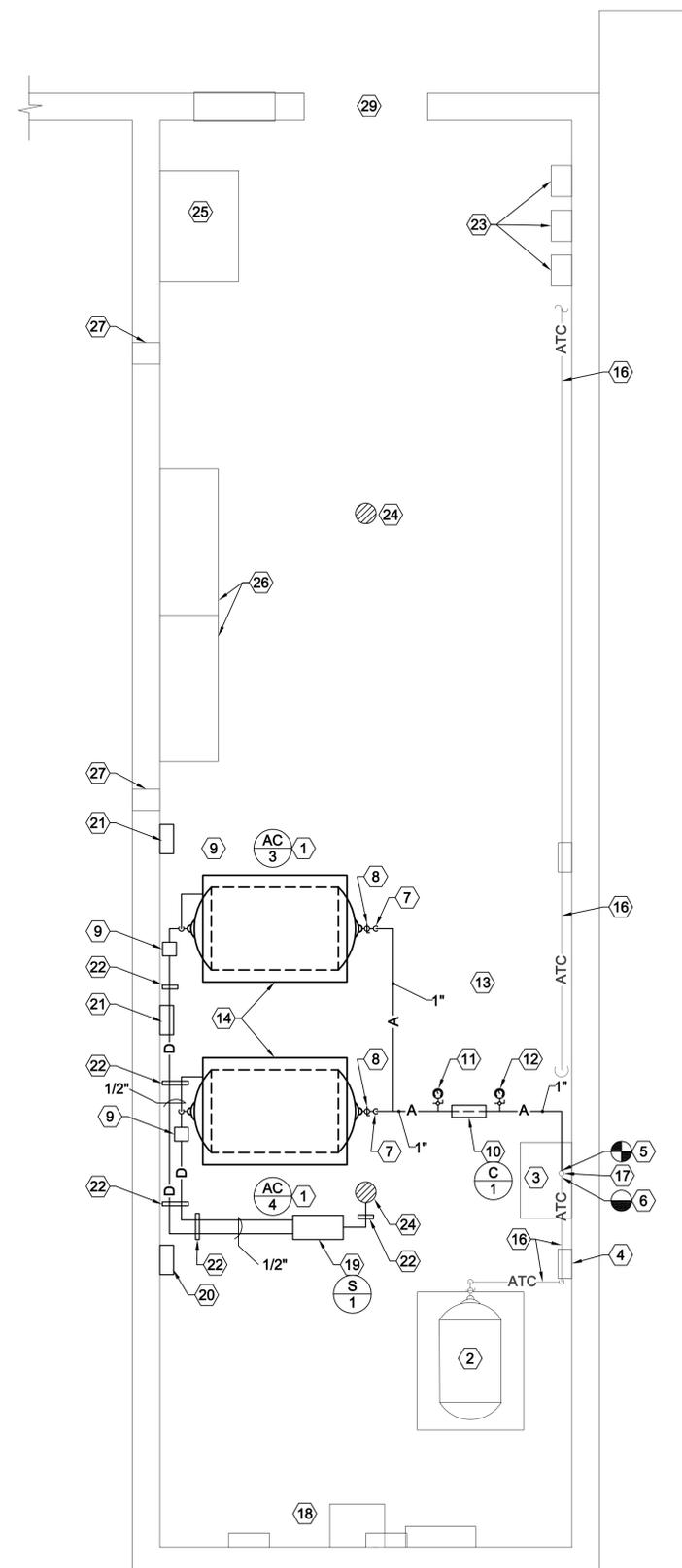
Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER: WP	
DRAWN BY: LGD	
CHECKED BY: SLW	
DATE: 09/11/08	
WHW JOB NO.: 08036	

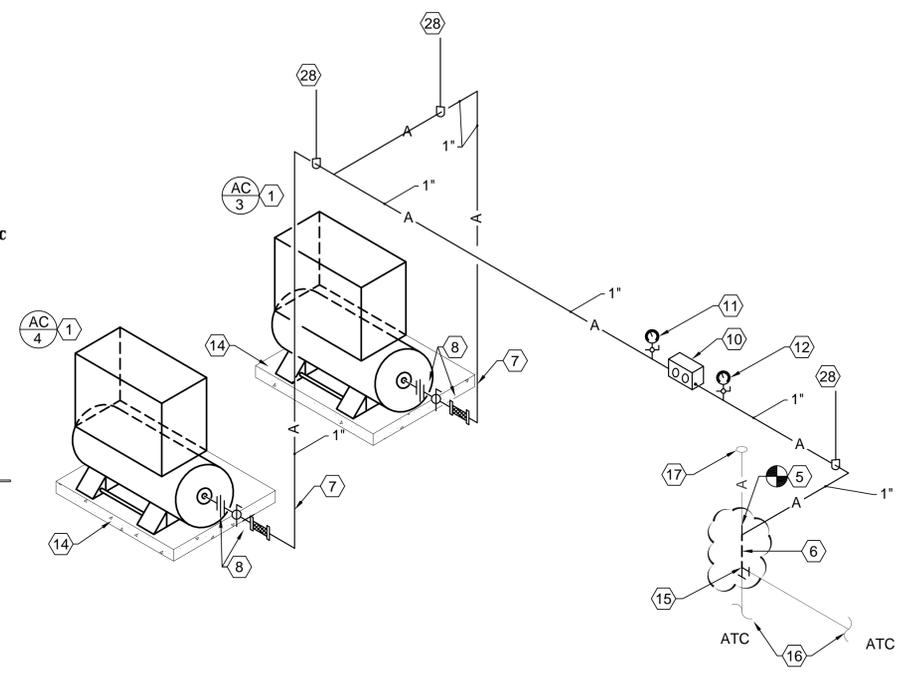
SHEET TITLE
**SCIENCE BLDG. LARGE
SCALE MECHANICAL PLAN**

SHEET NO.
ME404



SCIENCE BLDG. LARGE SCALE MECHANICAL PLAN
SCALE: 1/2" = 1'-0"

B1 AIR COMPRESSORS PIPING ISOMETRIC
SCALE: NONE

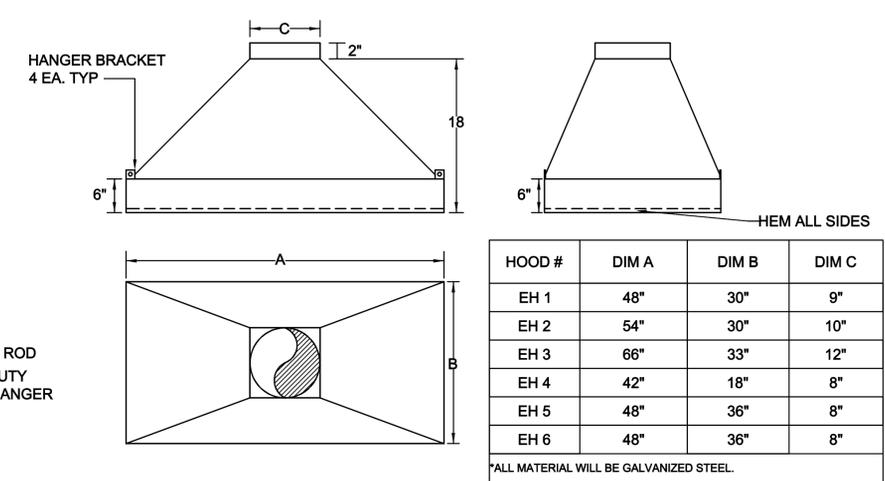
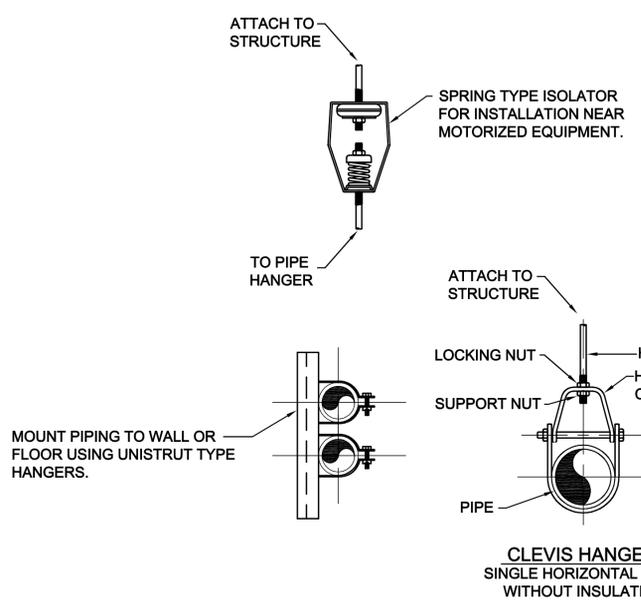


MARK	DATE	REVISION

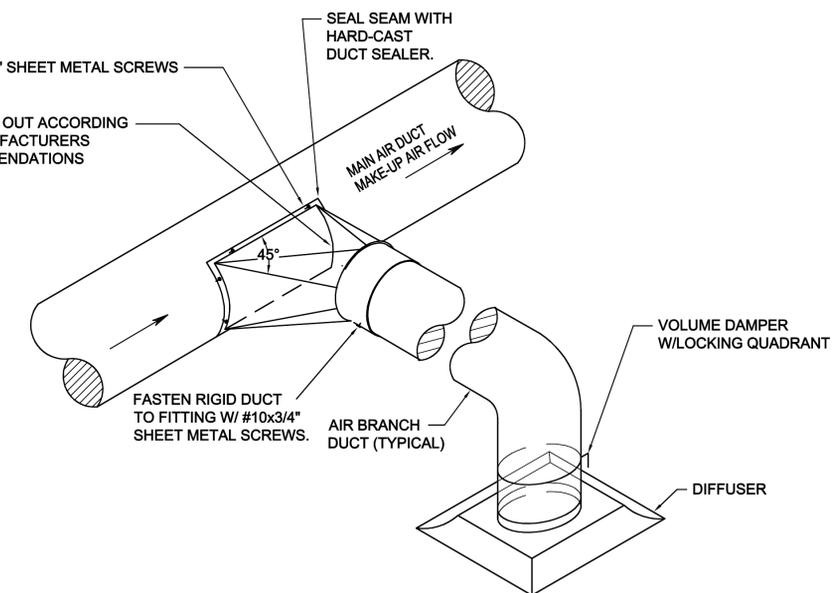
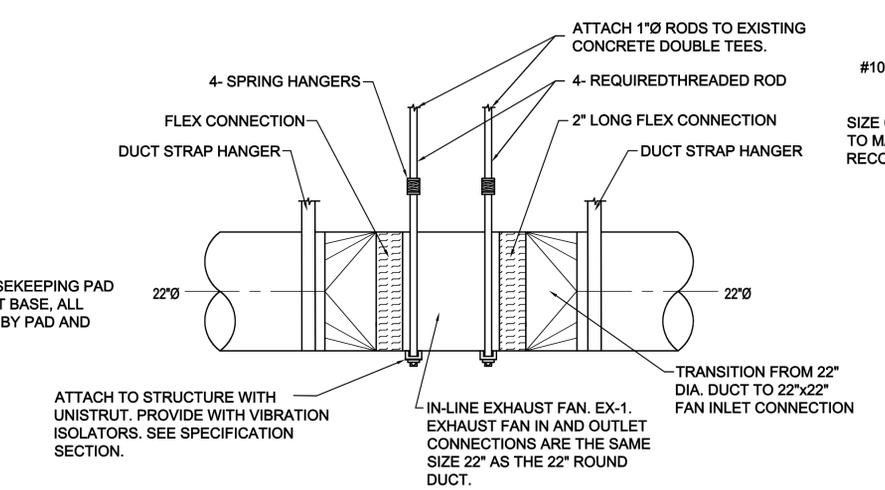
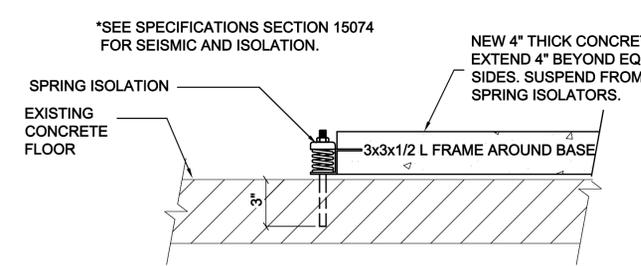
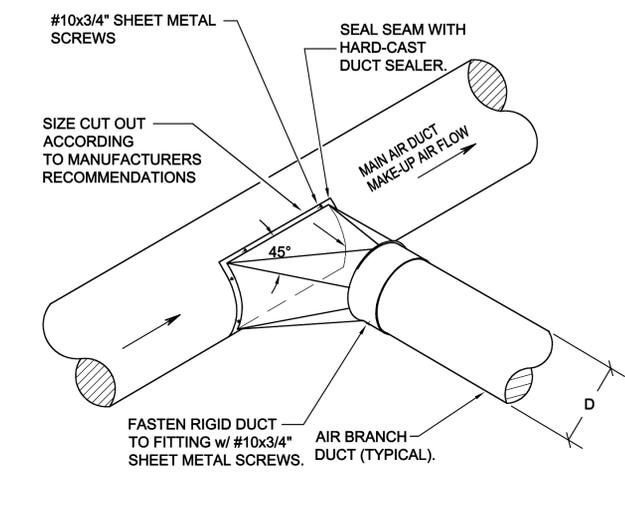
PROJECT MANAGER: WP	
DRAWN BY: LGD	
CHECKED BY: SLW	
DATE: 09/11/08	
WHW JOB NO.: 08036	

SHEET TITLE
MECHANICAL DETAILS

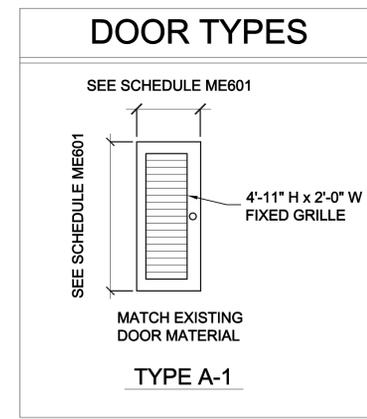
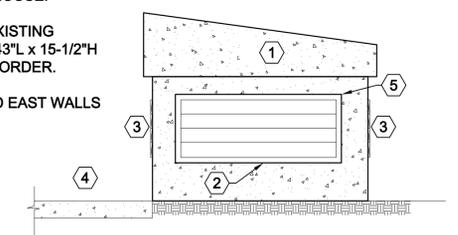
SHEET NO.
ME501



C2 HOOD DETAIL
SCALE: NONE



- 1 EXISTING EXHAUST AIR CONCRETE PENTHOUSE.
- 2 PROVIDE NEW EXHAUST AIR LOUVER IN EXISTING WEST WALL. MATCH EXISTING LOUVERS. 43"L x 15-1/2"H OVERALL OUTSIDE DIMENSIONS WITH 2" BORDER.
- 3 EXISTING LOUVERS IN NORTH, SOUTH AND EAST WALLS SHALL REMAIN.
- 4 EXISTING CONCRETE SIDEWALK.
- 5 SAW CUT EXISTING CONCRETE WALL.



HARDWARE SCHEDULE

-COORDINATE WITH WSU STANDARD FOR HARDWARE MFR, STYLE, FINISH AND KEYING.
-USE CORBIN RUSSWIN - SERIES CL3300 WITH CONSTRUCTION MASTER KEYING. COORDINATE WITH WSU FOR HANDLE.

HARDWARE GROUP 1

3 PAIR HINGES SEE SPECIFICATIONS
1 EACH LOCKSET SERIES CL3300 CORBIN RUSSWIN

CONSULTANTS



PROJECT NAME & ADDRESS

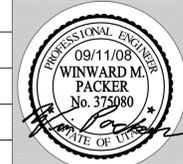
**WSU TECH ED.
AND SCIENCE
BLDG. SHOP AIR
UPGRADE**

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:
WP
DRAWN BY:
LGD
CHECKED BY:
SLW
DATE:
09/11/08
WHW JOB NO.:
08036
SHEET TITLE



MECHANICAL SCHEDULES

SHEET NO.
ME601

AIR COMPRESSOR SCHEDULE

SYMBOL	TYPE	CFM	MOTOR		MAX OP. PRESSURE (PSIG)	NPT OUTLET	AMP DRAW	MANUFACTURER	SCHEDULE NOTES
			HP	ELECTRICAL					
	ROTARY SCREW	125	30	208/3φ/60	150	1" NPT	91.3@208V	INGERSOLL RAND UP6-30-125	1
	ROTARY SCREW	38	10	208/3φ/60	125	3/4" NPT	27@208V	INGERSOLL RAND UP6-10TAS-125	2,3

- FLOOR MOUNTED.
- 80 GALLON TANK.
- COMPLETE WITH INTERNAL DRYER AND FILTERS AND START UP KIT.
- TANK MOUNTED.

REFRIGERATED DRYER SCHEDULE

SYMBOL	CAPACITY SCFM	DEW POINT	MAX OPER. PRESSURE PSIG	FAN AIR FLOW CFM	COM. AIR CONNECTIONS	MANUFACTURER	SCHEDULE NOTES
	200	33°F-39°F	175 PSIG	475	1-1/2" NPT	INGERSOLL RAND TS200	1,2,3

- BASED ON 100 PSIG, 100°F INLET AIR, 100°F AMBIENT.
- 24"Lx22"Wx31"HIGH.
- CONDENSATE DRAIN-3/8" O.D.

COALESCING/ PARTICULATE FILTER

SYMBOL	TYPE	SCFM	CONN. SIZE	MAX. PRESS. PSIG	PARTICLES REMOVED		MANUFACTURER	SCHEDULE NOTES
					BULK	OIL		
	GENERAL INLINE	216	1" NPT	232	1 MICRON AND LARGER	.5mg/m³	INGERSOLL RAND IRGP216	1,3,4
	HIGH EFFICIENCY INLINE	216	1" NPT	232	.01 MICRON AND LESS	.01mg/m³	INGERSOLL RAND IRHE216	2,3,4

- LOCATE ON INLET TO AIR DRYER.
- LOCATE ON AIR DRYER OUTLET.
- DRAIN TYPE - AUTO FLOAT.
- WIDTH- 5.1"x HEIGHT 17.6".

COMPRESSED AIR STORAGE TANK SCHEDULE

SYMBOL	TYPE	GALLONS	SIZE HEIGHT/DIA.	OUTLET AIR	INLET AIR	DESIGN PRESSURE PSI	MANUFACTURER	SCHEDULE NOTES
	VERTICAL	240	84" - 30"	2"	2"	200	INGERSOLL RAND	1

- PROVIDE PRESSURE GAUGE AND VALVE, AND RELIEF VALVE FOR EACH TANK.

AIR CONTROLLER SCHEDULE

SYMBOL	TYPE	MAX FLOW RATE	MAX INLET PRESSURE PSIG	CONTROL RANGE PSIG	OPERATING TEMPERATURE RANGE	MANUFACTURER	SCHEDULE NOTES
	INLINE	250 SCFM	232	145 TO 7	176°F TO -4°F	INGERSOLL RAND PacE	1

- 1" NPT CONNECTION SIZE

OIL WATER SEPARATOR SCHEDULE

SYMBOL	MAX SCFM	MAX HP	AIR INLET	CONDENSATE INLETS	MANUFACTURER	SCHEDULE NOTES
	250	60	1/4" NPT	QTY - 3-1/2" NPT	INGERSOLL-RAND POLYSEP 250 CONDENSATE SEPARATOR	1,2

- L=45.5" x W=19.5" x H= 37.8"
- ABSORPTION MODULE: AM250

DIFFUSER SCHEDULE

SYMBOL	TYPE	MAX CFM	FACE SIZE	NECK SIZE	CEILING TYPE	BLOW	PATTERN	SCHEDULE NOTES
	CEILING	700	15/15	12"Ø	N/A	4--WAY		1,2
	CEILING	700	15/15	12"Ø	N/A	3--WAY		1,2

- DIFFUSER SHALL BE PRICE MODEL SMD DUCT MOUNTED OR EQUAL BY APPROVED MANUFACTURER IN SPECIFICATIONS.
- FINISH SHALL BE ANODIZED ALUMINUM.

DOOR SCHEDULE

NO.	DOOR SIZE			DOOR TYPE	DOOR MAT.	DOOR FINISH	OPENING DETAILS				FRAME TYPE	FRAME MAT.	FRAME FINISH	RATING	HRDW. GROUP	REMARKS
	WIDTH	HEIGHT	THICK				HEAD	RIGHT JAMB	LEFT JAMB	SILL THRES						
	3'-5-1/2"	6'-11"	1-3/4"	A-1	STEEL	PAINT	EXIST	EXIST	EXIST	-	EXIST	EXIST	NEW PAINT	-	3	1

- MATCH EXISTING DOOR FOR SIZE.
- PROVIDE NEW DOOR ONLY-FRAME SHALL REMAIN AND BE RE-PAINTED.
- PER WSU STANDARD.

EXHAUST HOOD SCHEDULE

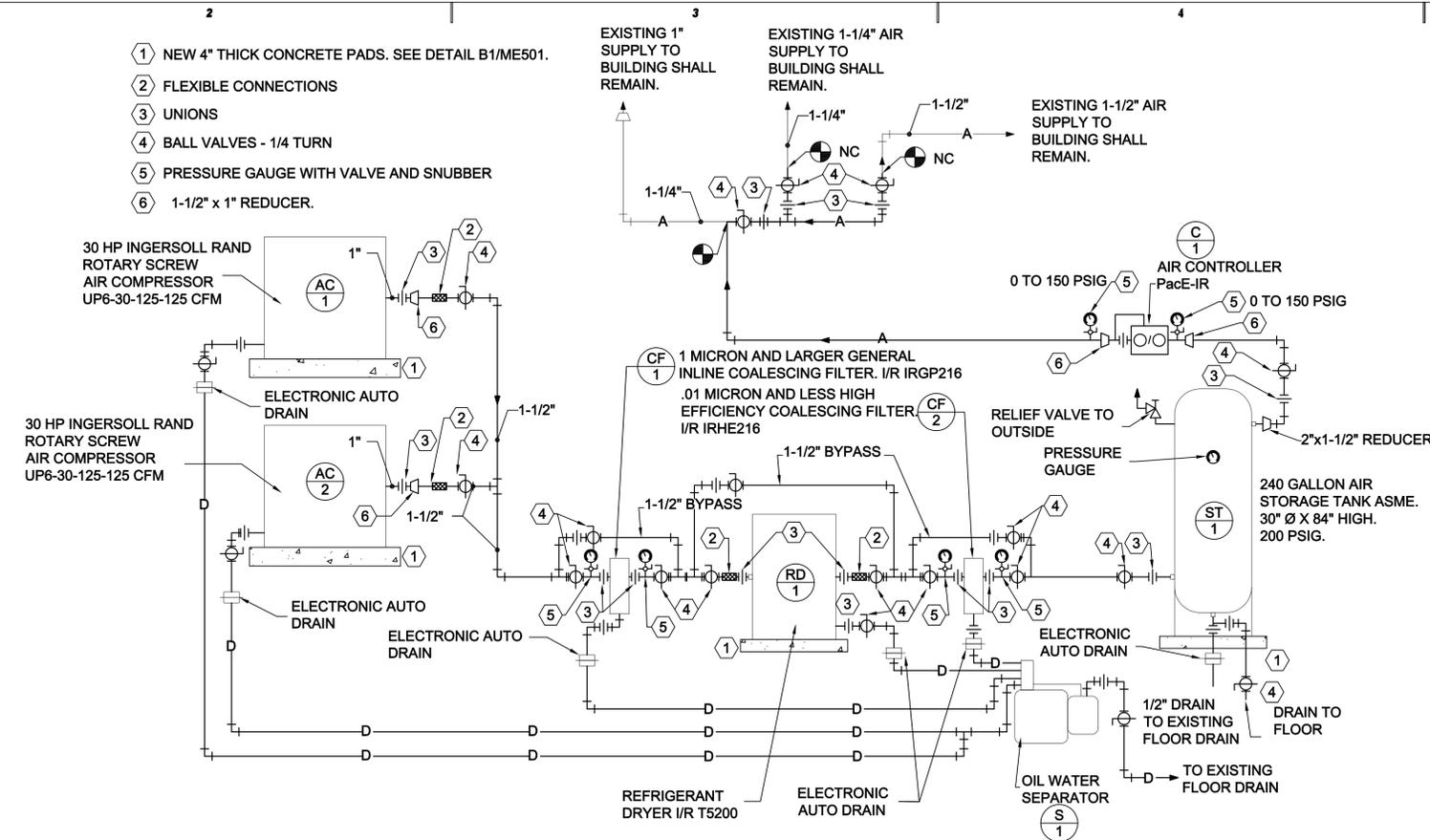
SYMBOL	SERVES EQUIPMENT	SIZE L x W x H	C.F.M.	SCHEDULE NOTES
	STEAM PRV STATION	4'-0" x 2'-6" x 1'-6"	540	1,2,3
	ATC AIR COMPRESSOR	4'-6" x 2'-6" x 1'-6"	840	1,2,3
	ELECTRICAL TRANSFORMERS	5'-6" x 2'-9" x 1'-6"	990	1,2,3
	CULINARY STEAM HOT WATER HEATER	3'-6" x 1'-6" x 1'-6"	600	1,2,3
	NEW COMPRESSOR AC-1	4'-0" x 3'-0" x 1'-6"	600	1,2,3
	NEW COMPRESSOR AC-2	4'-0" x 3'-0" x 1'-6"	600	1,2,3

- FABRICATE FROM GALVANIZED STEEL.
- HEM ALL EDGES ON THE INSIDE OF THE HOOD.
- SEE DETAIL C2/ME501.

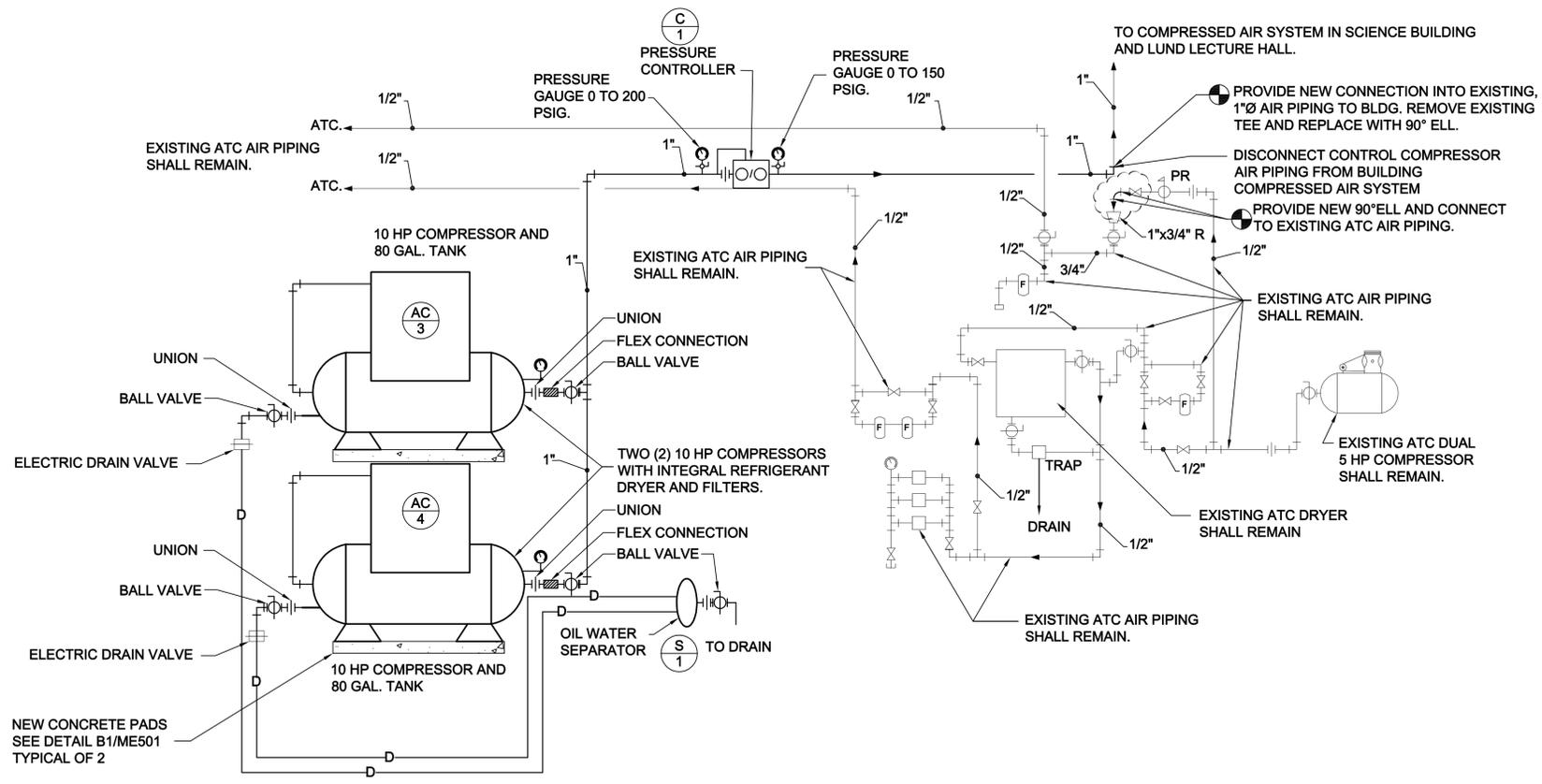
INLINE EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER & MODEL No.	SERVES	C.F.M	STATIC PRESSURE IN. WG.	MAX NOISE SONES	MOTOR			OPER. WT. (LBS)	COMMENTS	SCHEDULE NOTES
						V - Ø - Hz	HP	RPM			
	COOK MODEL 165 SQN-B	EQUIPMENT ROOM	4200	.75	-	208/3φ/60	2	1697	-	SUPPORT FROM SPRING TYPE HANGERS	1

- SEE DETAIL B2/ME501.



C2 TECH. ED. COMPRESSED AIR FLOW SHEET 30 HP
 SCALE: NONE



A2 SCIENCE BLDG. COMPRESSED AIR FLOW SHEET 10 HP
 SCALE: NONE

CONSULTANTS

WHW
 ENGINEERING INC.
 PROFESSIONAL MECHANICAL ENGINEERING
 8619 Sandy Parkway Suite 101
 SANDY, UTAH 84070
 (801) 466-4021, FAX 466-8536
 EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

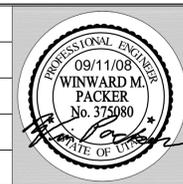
**WSU TECH ED.
 AND SCIENCE
 BLDG. SHOP AIR
 UPGRADE**

DFCM # 08057810

Ogden, Utah

MARK	DATE	REVISION

PROJECT MANAGER:
 WP
 DRAWN BY:
 LGD
 CHECKED BY:
 SLW
 DATE:
 09/11/08
 WHW JOB NO.:
 08036
 SHEET TITLE



**MECHANICAL FLOW
 DIAGRAMS**

SHEET NO.
ME701