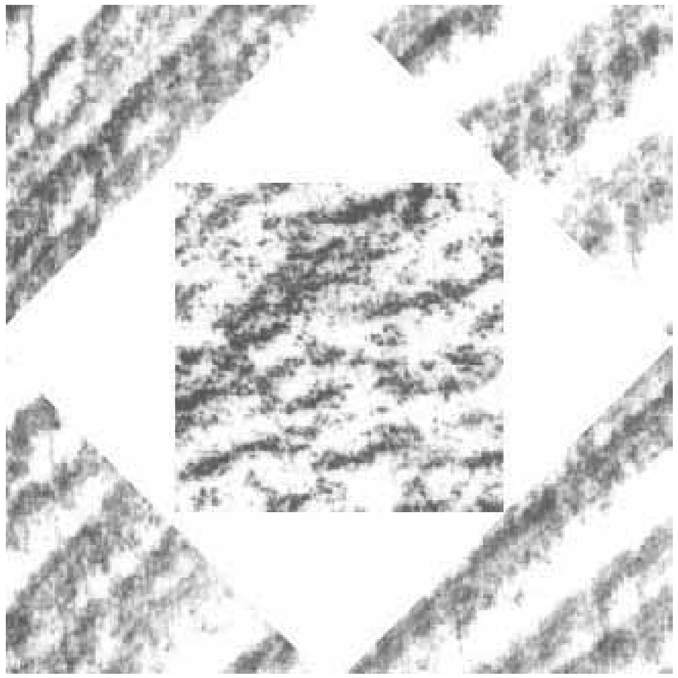

COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

Weber State University

State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

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

CODE ANALYSIS

APPLICABLE CODES	Year		Year
International Building Code	2003	National Electrical Code	2005
International Mechanical Code	2003	Uniform Code for Building Conservation	N/A
International Plumbing Code	2003	ADA Accessibility Guidelines	1994
International Fire Code	2003		
International Energy Conservation Code	2003		

A. Occupancy and Group: B

Change in Use: Yes ____ No X Mixed Occupancy: Yes ____ No X

Special Use and Occupancy (e.g. High Rise, Covered Mall): N/A

B. Seismic Design Category: N/A Design Wind Speed: N/A mph

C. Type of Construction (circle one):

I A | I B | II A | (II B) | III A | III B | IV HT | V A | V B

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

North: N/A South: N/A East: N/A West: N/A

E. Mixed Occupancies: N/A Nonseparated Uses: N/A

F: Sprinklers:

Required: NO Provided: YES 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:

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

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: N/A
2) Two Story: $A_a(2)$ N/A
3) Three Story: $A_a(3)$ N/A

d) Unlimited Area Building: Yes ____ No ____ Code Section: ____

K. Fire Resistance Rating Requirements for Building Elements (hours).

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

L. Design Occupant Load: 20

Exit Width Required: 4" Exit Width Provided: 36"

M. Minimum Number of Required Plumbing Facilities:

a) Water Closets - Required (m) N/A (f) N/A Provided (m) 0 (f) 0
b) Lavatories - Required (m) N/A (f) N/A Provided (m) 0 (f) 0
c) Bath Tubs or Showers: N/A
d) Drinking Fountains: N/A Service Sinks: N/A

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through X - 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.

GENERAL ABBREVIATIONS

ACT.	ACCOUSTIC CEILING TILE
ALT.	ALTERNATE
ALUM.	ALUMINUM
A.B.	ANCHOR BOLT
&	AND
ARCH.	ARCHITECTURAL
@	AT OR AT THE
BM.	BEAM
BLK.	BLOCK
BLKG.	BLOCKING
BD.	BOARD
BOT.	BOTTOM
BLDG.	BUILDING
CPT.	CARPET
CLKG.	CAULKING
C.I.	CAST IRON
CLG.	CEILING
CEM.	CEMENT
CTR.	CENTER
CL	CENTER LINE
CER.	CERAMIC
C.T.	CERAMIC TILE
CLR.	CLEAR (ANCE)
CLO.	CLOSET
COL.	COLUMN
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CMP	CORRUGATED METAL PIPE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUE/CONTINUOUS
CONTR.	CONTRACTOR
C.J.	CONTROL JOINT
CORR.	CORRIDOR
CNTR.	COUNTER
CTSK.	COUNTERSUNK
DET.	DETAIL
DEPT.	DEPARTMENT
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
D.S.	DOWNSPOUT
DWG.	DRAWING
D.F.	DRINKING FOUNTAIN
E.	EAST
EA.	EACH
ELEC.	ELECTRIC (AL)
ELEV./EL.	ELEVATION
EXIST.	EXISTING
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
FIN.	FINISH
F.A.	FIRE ALARM
F.E.	FIRE EXTINGUISER
F.E.C.	F.E. CABINET
FLR./FL.	FLOOR
F.D.	FLOOR DRAIN
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
FTG.	FOOTING
FDN.	FOUNDATION
F.F.	FINISH FLOOR
GALV	GALVANIZED
G.I.	GALVANIZED IRON
GA.	GAUGE
GL.	GLASS
GR.	GRADE
GND.	GROUND
GYP. BD.	GYPSUM BOARD
GWB	GYPSUM WATERPROOF BOARD
H.D.P.E.	HIGH DENSITY POLYETHYLENE
HG#	HARDWARE GROUP #
HDWD.	HARDWOOD
HT.	HEIGHT
H.P.	HIGH POINT
HORIZ.	HORIZONTAL
H.B.	HOSE BIBB
H.M.	HOLLOW METAL
HR.	HOURS (FIRE RATING)
IN.	INCH
I.D. INSUL.	INSIDE DIAMETER
INT.	INSULATION
I.E.	INTERIOR
INV.	INVERT ELEVATION
JAN.	JANITOR
JT.	JOINT
J-BOX	JUNCTION BOX
KIT.	KITCHEN
LAM.	LAMINATE
LAV.	LAVATORY
LT.	LIGHT
L.P.	LOW POINT
MATL.	MATERIAL
MAS.	MASONRY
MAINT.	MAINTENANCE
MFR.	MANUFACTURER
M.H.	MANHOLE
M.O.	MASONRY OPENING
MAX.	MAXIMUM
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEN	MEN'S TOILET
MTL./MET.	METAL
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
MTD.	MOUNTED
MUL.	MULLION
NOM.	NOMINAL
N.	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
OR #	ORDINATE NUMBER
OFF.	OFFICE
O.C.	ON CENTER
OPNG.	OPENING
OPP.	OPPOSITE
OPP. H.	OPPOSITE HAND
O.D.	OUTSIDE DIAMETER
O.R.D.	OVERFLOW ROOF DRAIN
PTD. -E	PAINTED EPOXY
PTD.	PAINTED
PR.	PAIR
PART.	PARTITION
PED.	PEDESTRIAN
PLAS.	PLASTER
P. LAM.	PLASTIC LAMINATE
PL	PLATE
PLYWD.	PLYWOOD
PT.	POINT
Q.T.	QUARRY TILE
RAD.	RADIUS
R.B.	RUBBER BASE
R.W.L.	RAIN WATER LEADER
R.F.F.	REFERENCE FINISH FLOOR
REFL.	REFLECTED
REINF.	REINFORCING
REQ.	REQUIRED
RET.	RETAINING
REV.	REVISED
R.	RISER
R.D.	ROOF DRAIN
RM.	ROOM
R.O.	ROUGH OPENING
SCHED.	SCHEDULE
SEAL.	SEALANT
SECT.	SECTION
S.S.K.	SERVICE SINK
SHT.	SHEET
SIM.	SIMILAR
SL./SLP.	SLOPE
S.C.	SOLID CORE
SPEC.	SPECIFICATIONS
SQ.	SQUARE
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT	STRUCTURAL/STRUCTURE
SYM.	SYMMETRICAL
T.B.R.	TO BE REMOVED
TEL.	TELEPHONE
TEMP.	TEMPORARY/TEMPERED
THK.	THICK (NESS)
T & G	TONGUE & GROOVE
T/CONC	TOP OF CONCRETE
T/CURB	TOP OF CURB
T.O. FTG.	TOP OF FOOTING
T.O.P.	TOP OF PLATE
T/WALL	TOP OF WALL
T.	TREAD
TYP.	TYPICAL
UNF.	UNFINISHED
U.N.O.	UNLESS NOTED OTHERWISE
VAR.	VARY OR VARIES
VERT.	VERTICAL
V.T.R.	VENT THROUGH ROOF
VCT	VINYL COMPOSITION TILE
W/	WITH
W.A.S.	WELDED ANCHOR STUD
WD.	WOOD
WP.	WATERPROOF
WSCT.	WAINSCOT
W/O	WITHOUT
W.P.	WORKING POINT
W.R.	WATER RESISTANT
W.I.	WROUGHT IRON

MATERIALS LEGEND

EARTH
SAND
CONCRETE W/ ARCH. FINISH
CMU
BRICK
LIMESTONE
WOOD (BLOCKING)
WOOD FRAMING
STEEL
RIGID INSULATION
PLASTER
COMPRESSIBLE FILLER
METAL LATH
FENCE
GRAVEL
CONCRETE
CAST STONE
MARBLE
GRANITE
STONE
PLYWOOD
WOOD FINISH
ALUMINUM
BATT INSULATION
ACOUSTICAL TILE
BACKER ROD AND FILLER
GYPSUM BOARD
TO REMOVE

PROJECT DIRECTORY

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GRAPHIC SYMBOLS

DTL# / SHT# — BLDG. ELEV. SYMB.
DTL# / SHT# — BLDG. SECT. SYMB.
DTL# / SHT# — WALL SECT. SYMB.
E — KEYED NOTE SYMB.
T.O. ELEV — DATUM PT. SYMB.
ELEV — SPOT ELEV. SYMB.
RM NAME / RM# / F/S W/W — RM. NAME/NUMB RM. FINISH SYMB.
ELEV — CEIL. FINISH/ELEV. SYMB.
DTL# / SHT# — DETAIL REF. SYMB.
DTL# / SHT# — INTR. ELEV. SYMB.
DOOR/HDWR — DOOR/HDWR. SYMB.
WINDOW SYMB.

DRAWING INDEX

ARCHITECTURAL DRAWINGS

GI100	TITLE SHEET, GENERAL INFO, & SHEET INDEX
AE101	DEMO, FLOOR, ROOF & CEILING PLANS, BLDG. ELEVATIONS
AE601	DOOR SCHEDULE & DETAILS

STRUCTURAL DRAWINGS

SE101	MECHANICAL / ROOF FRAMING PLANS
SE501	DETAILS & GSN

MECHANICAL DRAWINGS

MG001	MECHANICAL GENERAL NOTES AND LEGENDS
MD101	DEMOLITION PLANS, FLOOR & ROOF PLANS
ME101	NEW MECHANICAL FLOOR & ROOF PLANS
ME501	MECHANICAL DETAILS
ME601	MECHANICAL SCHEDULES

ELECTRICAL DRAWINGS

ED101	ELECTRICAL DEMOLITION PLANS AND DETAILS
E-101	ELECTRICAL AND FIRE ALARM PLANS
E-401	ENLARGED POWER PLAND AND PANEL SCHEDULES
E-601	SINGLE LINE DIAGRAM AND SCHEDULES

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CONSULTANT

STATE OF UTAH — BARRY W. SMITH — 123799 — LICENSED ARCHITECT

COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

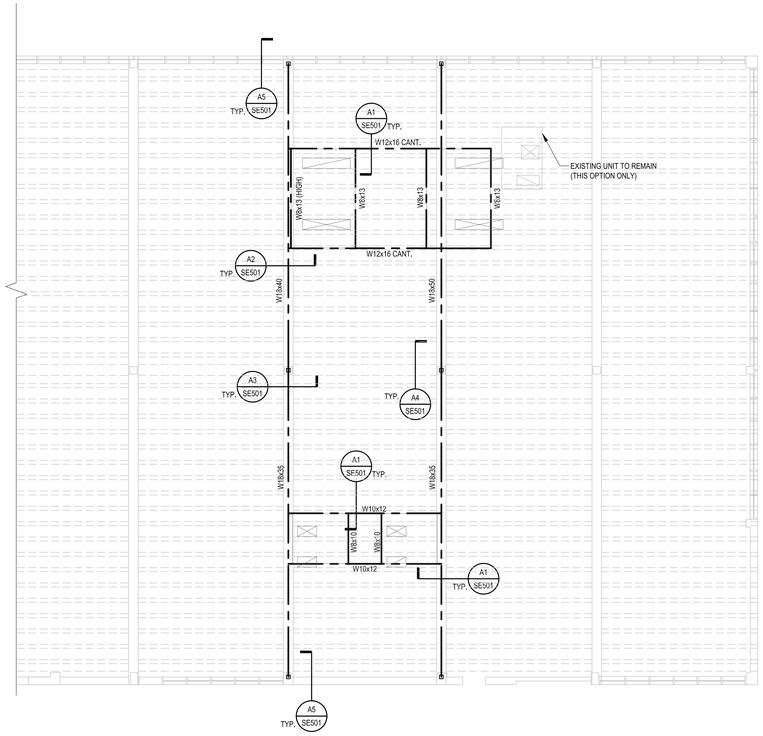
DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
HFSA PROJECT NO:	0612.01
CAD DWG FILE NO:	
DRAWN BY:	RLS
CHECKED BY:	BWS
DESIGNED BY:	RLS
DWG TYPE:	ARCHITECTURAL
ARCHITECTURAL PHASE:	CONSTRUCTION BID DOCUMENTS

SHEET TITLE

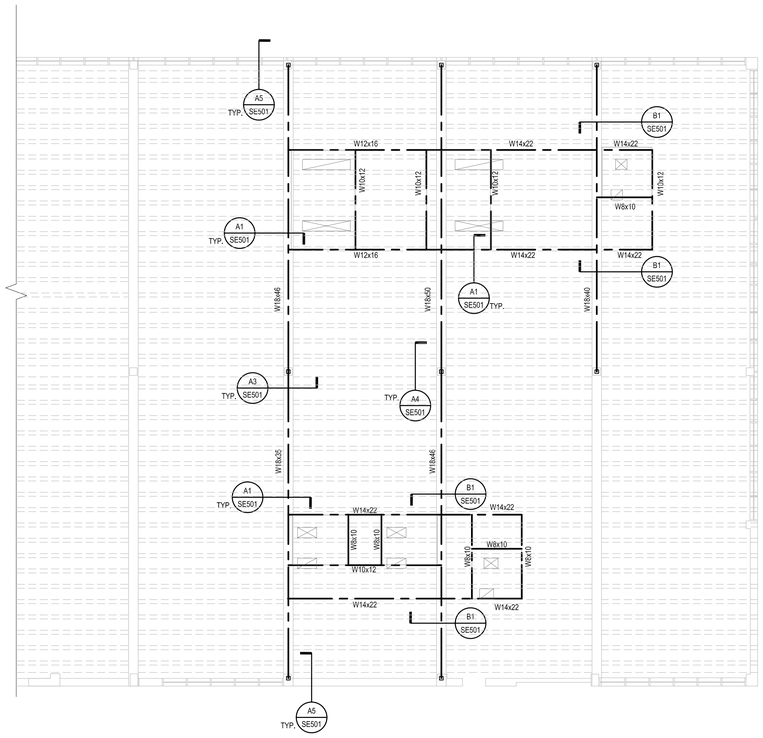
COVER SHEET, GENERAL INFO, & SHEET INDEX

GI100

SHEET 1 OF 14



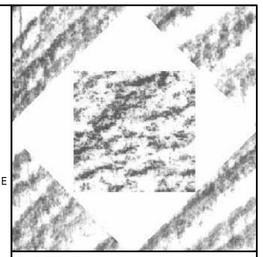
FRAMING PLAN SCALE: 1/8" = 1'-0"



FRAMING PLAN W/ ALTERNATE 2 & 3 SCALE: 1/8" = 1'-0"

FRAMING NOTES:

1. ALL EXPOSED STEEL TO BE GALVANIZED.
2. SEE ADDITIONAL NOTES ON SE501.
3. COORDINATE DIMENSIONS & LOCATIONS W/ MECHANICAL & ARCH.
4. CONTRACTOR TO VERIFY ALL LOCATIONS PRIOR TO FABRICATION & ERECTIONS OF STEEL FRAME.
5. ALL NEW OPENINGS IN EXISTING CONCRETE DECK FOR MECHANICAL CHASES TO BE SEALED & PROTECTED (PROVIDE FLASHING), SEE ARCH.
6. DO NOT CUT INTO EXISTING CONCRETE BEAMS. CUT BETWEEN BEAMS IN DESIGNATED AREAS WHERE CONCRETE SLAB IS PRESENT
7. IF EXISTING CONDITIONS VARY FROM SHOWN, CONTACT E.O.R.



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CONSTRUCTION BID DOCUMENTS

SHEET TITLE

MECHANICAL/ ROOF FRAMING PLANS

SE101

SHEET 2 OF 14

GENERAL STRUCTURAL NOTES

BASIS OF DESIGN

1. BUILDING CODE ..... 2003 IBC
2. BUILDING CLASSIFICATION CATEGORY II
3. GRAVITY DESIGN:
   DEAD LOADS
   BEAM SELF WEIGHT & MECH. UNITS, SEE MECHANICAL FOR LOADS
   SNOW LOADS
   Snow load on flat roof, Pf .... 30 psf
   Importance factor: Is 1.0
   Exposure factor: Ce 1.0
   Thermal factor: Ct 1.0

GENERAL

1. THE GENERAL CONTRACTOR SHALL:
   A. Be familiar with the contract documents and insure that subcontractors are familiar with their portion of the work. Submit a written request to the Arch/EOR for approval before proceeding with any changes.
   B. Verifies site conditions and dimensions at the site. If they differ from the contract documents, notify the Arch/EOR prior to fabrication/construction of affected elements. Existing condition information on the drawings is based on best knowledge acquired during the design phase and may differ from actual conditions. Affected details may require redesign.
   C. Report to the Arch/EOR modifications made to the structure.
   D. Be responible for safety and protection on and around the job site and adjacent properties.

2. THE GENERAL CONTRACTOR SHALL COORDINATE:
   A. And verify locations, weights and sizes of mechanical units, equipment, etc. prior to the fabrication and erecting of structural supporting elements. Report sizes and locations that differ from those shown on the drawings to the Arch/EOR for review. Additional framing maybe required.
   B. Roof, floor, and wall openings required for mechanical, etc. which are not shown on the structural drawings with the Arch/EOR.
   C. Any structural situation not covered by the drawings with the Arch/EOR.
   D. Doors, windows, walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, pads, landscape walls, trenches in slabs, etc. with the structural work.
   E. Inspections, testing, and structural observations as work proceeds. Notify the EOR 48 hours prior to any required structural observations.

3. CONTRACT DOCUMENTS & DRAWINGS:
   A. These structural notes complement the specifications and the drawings.
   B. Specific details, sections and notes shown on the drawings govern over these general notes and typical details.
   C. Contract documents take precedence over shop drawings, UNO.
   D. Apply typical or similar details, sections and notes to similar situations on the drawings where specific details are not referenced.
   E. Drawings and details have been prepared to visually represent information provided in scaled form. However, DO NOT scale plans or details for dimensional information.
   F. Refer to architectural drawings for dimensions.

4. BUILDING CODE COMPLIANCE: Construction, inspection, materials, testing, and workmanship shall conform to the requirements of the governing building code.

5. CONSTRUCTION SEQUENCE, SHORING, AND BRACING REQUIREMENTS: The general contractor is responsible for the method, means, and sequence of structural erection, UNO. He shall provide adequate temporary shoring or bracing for all structural elements until the entire structural system is completed. Design of shoring and bracing is by others at no additional cost to the owner.

6. OMISSIONS, CONFLICTS & DISCREPANCIES:
   A. Bring omissions, conflicts or discrepancies between the elements of the contract documents to the attention of the Arch/EOR before proceeding with work involved.
   B. In case of conflicts or discrepancies, follow the most stringent requirements as directed by the Arch/EOR.

7. MISCELLANEOUS:
   A. During and after construction, builder and/owner shall keep loads on the structure within the limits of this design. See Basis of Design.
   B. Site observations by WCA's field representative shall neither be construed as inspection nor approval of construction..

8. SUBMITTALS:
   A. Make submittals in a timely manner. WCA's review is for general compliance only and is not intended as approval. Contractor is responsible for verifying sizes, dimensions and elevations on submittals as related to the contract documents.
   B. Submit the following items for review prior to proceeding with the work:

   Shop Drawings: Structural steel

   Special loads on the structure.
   Roof, floor and wall openings not shown on the drawings.
   Welding procedures and certifications.

   C. Allow two weeks for the review of submittals by the EOR.
   D. Have EOR approved shop drawings & materials on site before construction of those components begin.
   E. Substitutions are not allowed unless approved by the EOR. Submit requests for structural substitutions to the Arch/EOR.

STRUCTURAL STEEL

1. CODES AND STANDARDS: Comply with:
   A. AISC "Specification for Structural Steel Buildings & Commentary".
   B. AISC "Code of Standard Practice" excluding sections 7.5.4, and 7.11.5.
   C. AWS "Structural Welding Code", exclude items conflicting with AISC.

2. MATERIALS SHALL CONFORM AS FOLLOWS:
   A. Wide Flange beams: ASTM A992 Fy = 50 ksi.
   B. Hollow Structural Sections: ASTM A500, Fy = 46 ksi, Gr. B.
   C. High strength bolts: ASTM A325.
   D. Anchor rods: ASTM F1554 Fy = 36 ksi.
   E. Other bolts: ASTM A307 or better.

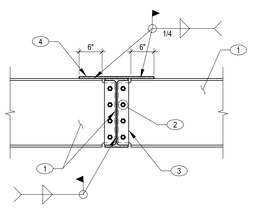
3. CONSTRUCTION:
   A. Fabricate in an approved fabricator's shop.
   B. Fabricate beams with incidental camber up, UNO.

4. BOLTED CONNECTIONS:
   A. Use 3/4" diameter bolts in Std. holes (bolt diameter + 1/16"), UNO.
   B. Steel-to-steel connections: Use ASTM A325 type "N" connections, UNO.
   C. Other connections: Use ASTM A307 bolts or better except for anchor rods, UNO.
   D. Use hardened washers beneath the turned element of the bolt or nut. Use beveled hardened washers where the outer face of bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolts axis. At oversized holes, use hardened washers or plates at least 5/16" thick conforming to ASTM F436.
   E. Tighten bolts until all plies of the joint are in firm contact. Snug tight condition, UNO.
   F. Enlarge bolt holes by reaming. DO NOT torch cut.

5. WELDED CONNECTIONS:
   A. Perform welding and cutting by AWS certified welders in accordance with ANSI/AWS D1.1 (latest edition).
   B. For typical shop & field welds, use filler metals with nominal 70 ksi tensile strength having:
      a. Matching material for multiple pass welds.
      b. A diffusible hydrogen limit of H16 or less.
      c. A CVN toughness of 20 ft-lbs at 0 deg. F.
   C. Use pre-qualified procedures.
   D. Weld intersecting steel shapes together, which are not connected with bolts, with all-around fillet welds, UNO.
   E. Weld studs and DBA's according to Manufacturer's specs.
   F. Wherever possible use shop welds. The contractor shall coordinate field and shop welds between shop fabrication and the steel erector.
   G. Remove slag from welds.

KEYNOTES:

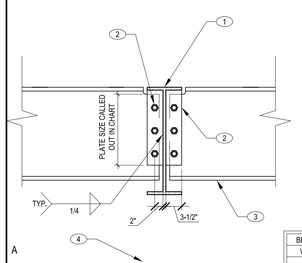
1. BEAM, SEE PLAN
2. BOLTS, SEE DETAIL A1/SE501
3. 3/8" THICK STIFFENERS, TYP.
4. 4" WIDE x 1/2" THICK PLATE



B1 DETAIL
NO SCALE

KEYNOTES:

1. STEEL GIRDER, SEE PLAN.
2. A325 BOLTS AND WEB STIFFENER, SEE TABLE BELOW FOR SIZE AND BOLTS REQ'D.
3. STEEL BEAM, SEE PLAN. COPE AS REQ'D.
4. EXISTING ROOF DECK ETC. NOT SHOWN, SEE PLANS

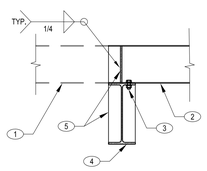


BEAM SIZE	PLATE SIZE	BOLTS (3/4"Ø)
W8, W10	5/16"x6"	2
W12	5/16"x9"	3
W14, W16	5/16"x12"	4
W18	3/8"x15"	5

A1 DETAIL
NO SCALE

KEYNOTES:

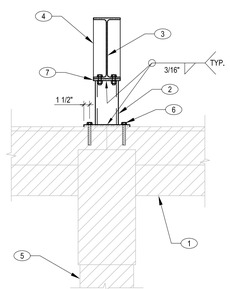
1. CANTILEVERED BEAM, WHERE OCCURS, SEE PLAN
2. STEEL BEAM, SEE PLAN
3. (2) 3/4" Ø THRU BOLTS
4. STEEL GIRDER, SEE PLAN
5. 3/8" PLATE STIFFENER, EACH SIDE OF WEB



A2 DETAIL
NO SCALE

KEYNOTES:

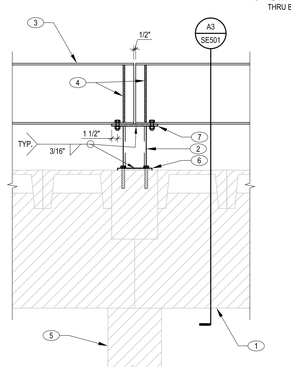
1. EXISTING STRUCTURE
2. HSS 6x6x1/4" x 0'-12" ALIGN OVER EXISTING COLUMN
3. STEEL GIRDER, SEE PLANS
4. 3/8" PLATE STIFFENERS, EACH SIDE
5. EXISTING COLUMN
6. 12" x 9" x 5/8" BASE PLATE W/ (4) 5/8" Ø DRILLED & EPOXIED ANCHORS
7. 9" x 7" x 1/2" CAP PLATE W/ (2) 3/4" Ø THRU BOLTS, SEE 5/S3.0 FOR SIDE PROFILE OF CONNECTION



A3 DETAIL
NO SCALE

KEYNOTES:

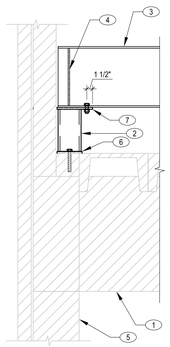
1. EXISTING STRUCTURE
2. HSS 6x6x1/4" x 0'-12" ALIGN OVER EXISTING COLUMN
3. STEEL GIRDER, SEE PLANS
4. 3/8" PLATE STIFFENERS, EACH SIDE
5. EXISTING COLUMN
6. 12" x 9" x 5/8" BASE PLATE W/ (4) 5/8" Ø DRILLED & EPOXIED ANCHORS
7. 9" x 7" x 1/2" CAP PLATE W/ (2) 3/4" Ø THRU BOLTS, SEE 5/S3.0 FOR SIDE PROFILE OF CONNECTION



A4 DETAIL
NO SCALE

KEYNOTES:

1. EXISTING STRUCTURE
2. HSS 6x6x1/4" x 0'-12" ALIGN OVER EXISTING COLUMN
3. STEEL GIRDER, SEE PLANS
4. 3/8" PLATE STIFFENERS, EACH SIDE
5. EXISTING COLUMN
6. 12" x 6-1/2" x 5/8" BASE PLATE W/ (2) 5/8" Ø DRILLED & EPOXIED ANCHORS
7. 9" x 7" x 1/2" CAP PLATE W/ (2) 3/4" Ø THRU BOLTS, SEE 5/S3.0 FOR SIDE PROFILE OF CONNECTION



A5 DETAIL
NO SCALE

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CONSULTANT

COMPUTER CENTER
AIR CONDITIONING &
ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167610
HFSA PROJECT NO:	0612.01
CAD DWG FILE NO:	
DRAWN BY:	NT
CHECKED BY:	BWS
DESIGNED BY:	RLS
DWG TYPE:	ARCHITECTURAL

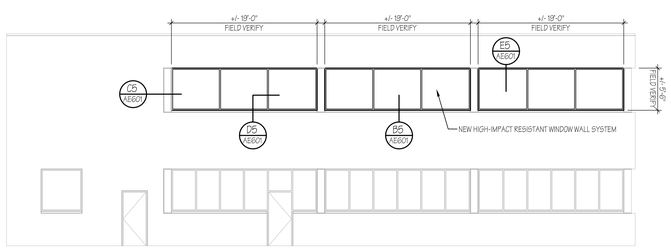
ARCHITECTURAL PHASE:
CONSTRUCTION BID DOCUMENTS

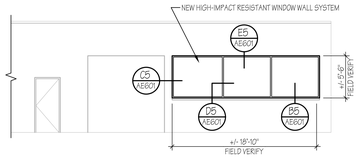
SHEET TITLE

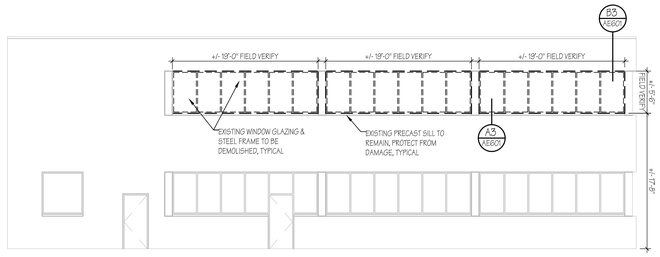
DETAILS
& GSN

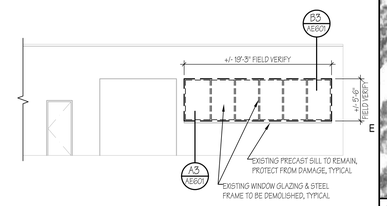
SE501

SHEET 3 OF 14



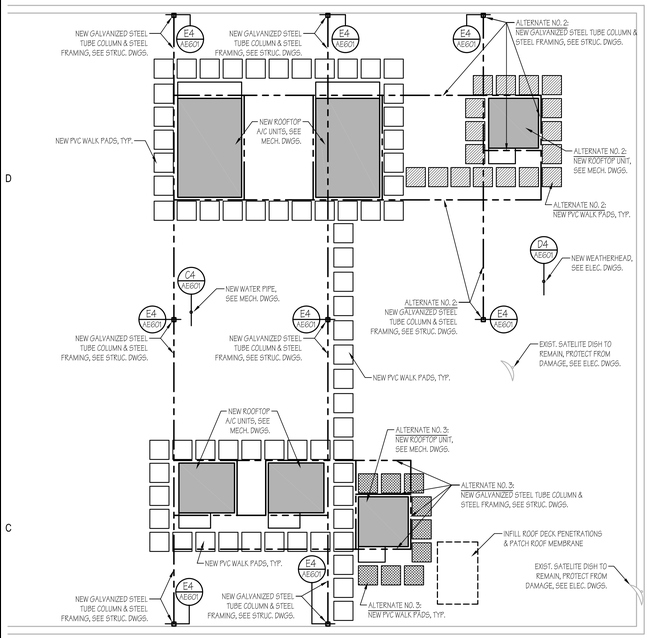






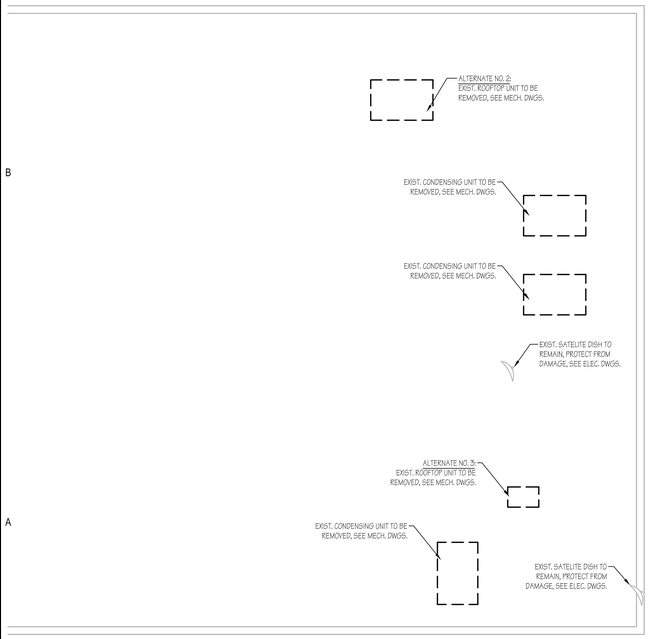
E1 NEW NORTH ELEVATION

1/8"=1'-0"



C1 NEW ROOF PLAN

1/8"=1'-0"

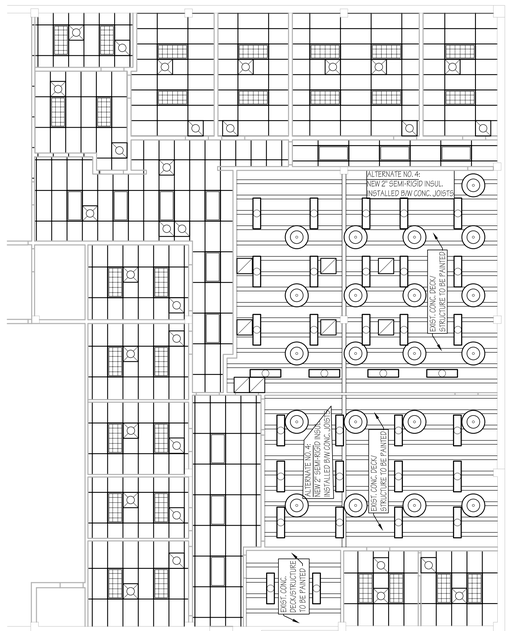


A1 ROOF DEMOLITION PLAN

1/8"=1'-0"

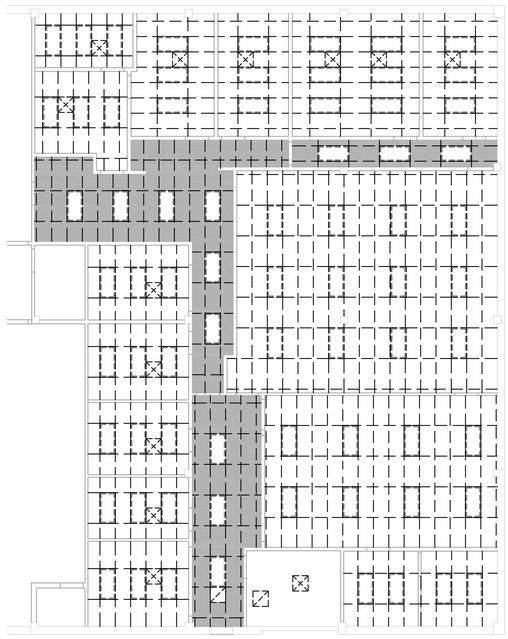
E3 NEW PARTIAL EAST ELEVATION

1/8"=1'-0"



C3 NEW SECOND FLOOR CEILING PLAN

1/8"=1'-0"

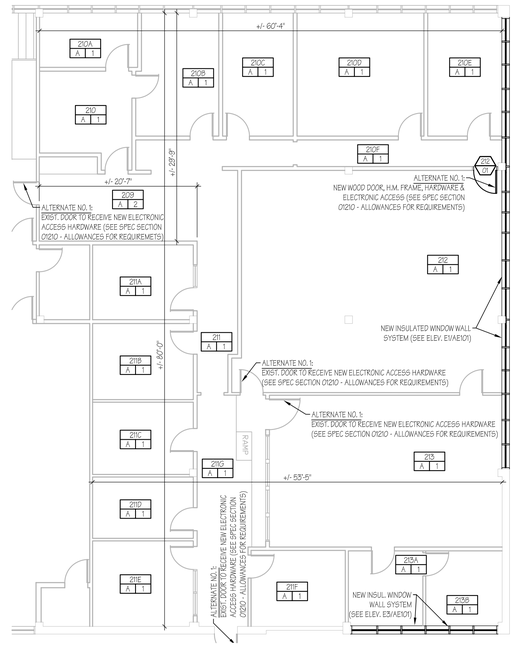


A3 SECOND FLOOR CEILING DEMO PLAN

1/8"=1'-0"

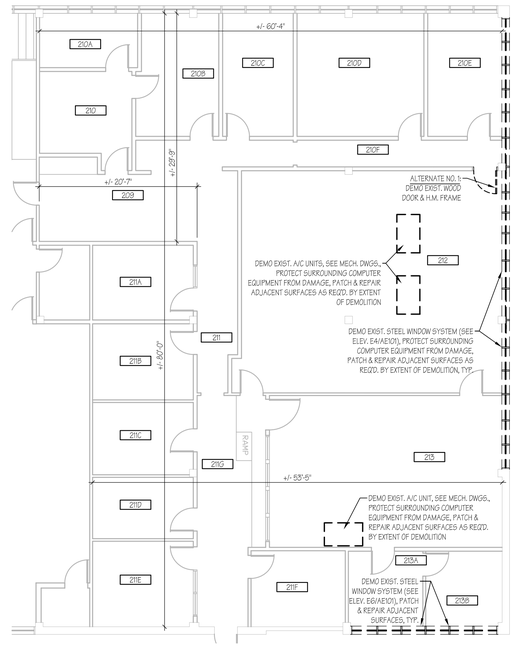
E4 WINDOW DEMO, NORTH ELEVATION

1/8"=1'-0"



C5 NEW SECOND FLOOR PLAN

1/8"=1'-0"



A5 SECOND FLOOR DEMOLITION PLAN

1/8"=1'-0"

E6 WINDOW DEMO, PARTIAL EAST ELEV.

1/8"=1'-0"

GENERAL NOTES

1. THE OWNER WILL OCCUPY PROJECT SITE & THE COMPUTER CENTER MUST STAY COMPLETELY OPERATIONAL THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. COOPERATE WITH THE OWNER DURING CONSTRUCTION OPERATIONS TO MINIMIZE CONFLICTS & FACILITATE THE OWNERS USAGE OF THE SITE. PERFORM THE WORK SO AS NOT TO INTERFERE WITH THE OWNER'S DAY-TO-DAY OPERATIONS.
2. PROTECT ALL COMPUTER EQUIPMENT IN ROOMS 212 & 213 FROM DAMAGE DURING DEMOLITION & CONSTRUCTION, PROVIDE PROTECTION THAT CAN BE SECURELY SEALED AROUND THE EQUIPMENT PREVENTING INFILTRATION OF CONSTRUCTION/DEMOLITION DUST & DEBRIS, LIQUIDS OR FLUIDS OF ANY KIND, AND OVER-SPRAY FROM PAINTING.
3. NOTED AREAS INDICATED THE GENERAL EXTENT OF DEMOLITON. THE CONTRACTOR'S CHOICE OF MEANS & METHODS OF CONSTRUCTION MAY REQUIRE MORE OR LESS DEMOLITION. THE MEANS & METHODS OF DEMOLITION & CONSTRUCTION MUST BE ACCOUNTED FOR IN THE CONTRACTOR'S BID. ANY DEMOLITION & REPAIR TO ADJACENT SURFACES BEYOND THE AREAS INDICATED IN THE CONTRACT DOCUMENTS WILL NOT BE COMPENSATED FOR AFTER THE BID OPENING.
4. PROTECT ALL AREAS & SURFACES ADJACENT TO DEMOLITION & CONSTRUCTION. PATCH & REPAIR ANY DAMAGE OR HOLES IN WALLS, CEILINGS & FLOORS RESULTING FROM THE DEMOLITION OF EXISTING ITEMS OR THE CONSTRUCTION OF NEW ITEMS.
5. ALL DIMENSIONS & EXISTING CONDITIONS IN AREAS OF WORK ARE TO BE FIELD VERIFIED PRIOR TO COMMENCING WORK - ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT OR ENGINEER OF RECORD PRIOR TO COMMENCING WORK.
6. DO NOT INTERRUPT THE ELECTRICAL POWER OR OTHER UTILITIES SERVING THE COMPUTER CENTER FACILITY DURING DEMOLITION & CONSTRUCTION, INTERRUPTION OF ELECTRICAL POWER TO COMPUTER CENTER ROOMS 212 & 213 WILL ONLY BE ALLOWED ON FRIDAY, NOVEMBER 24, 2006.
7. WEBER STATE UNIVERSITY IS PARTICIPATING IN UTAH POWER & LIGHT'S "ENERGY FINANCIER" PROGRAM. THE GENERAL CONTRACTOR AND/OR THE SUBCONTRACTORS WILL BE REQUIRED TO FURNISH ALL NECESSARY DOCUMENTATION FOR COMPLIANCE WITH UP&L STIPULATIONS.

CEILING LEGEND

- EXIST. SUSP. CEILING GRID SYSTEM & PANELS TO BE DEMOLISHED
- NEW 2X4 SUSP. CEILING GRID & ACOUSTICAL PANELS TO BE INSTALLED @ 9'-0" A.F.F.
- EXIST. 2ND LAYER SUSP. CEILING GRID SYSTEM TO BE DEMOLISHED
- NEW 2X4 PARABOLIC FLORESCENT FIXTURE, COORDINATE W/ ELEC. DWGS.
- NEW 2X4 FLORESCENT FIXTURE, COORDINATE W/ ELEC. DWGS.
- NEW 1X4 FLORESCENT PENDANT FIXTURE, COORDINATE W/ ELEC. DWGS.
- EXIST. LIGHT FIXTURES TO BE DEMOLISHED, COORDINATE W/ ELEC. DWGS.
- NEW SUPPLY DIFFUSER, COORDINATE W/ MECH. DWGS.
- EXIST. MECH. GRILLE TO BE DEMOLISHED, COORDINATE W/ MECH. DWGS.
- NEW SUPPLY DIFFUSER, COORDINATE W/ MECH. DWGS.
- EXIST. MECH. GRILLE TO BE DEMOLISHED, COORDINATE W/ MECH. DWGS.
- NEW RETURN AIR GRILLE, COORDINATE W/ MECH. DWGS.
- NEW RETURN AIR GRILLE, COORDINATE W/ MECH. DWGS.

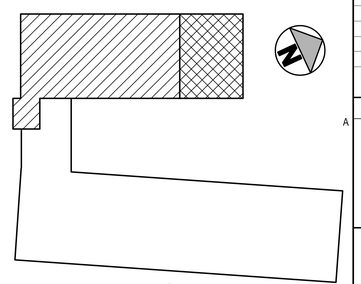
FINISH LEGEND

ROOM NAME
RM NUM
FLOOR / BASE — F | W — WALL/WAINSCOT

A. EXISTING TO REMAIN, PROTECT FROM DAMAGE

1. REPAINT WALLS
2. EXISTING FINISH TO REMAIN

KEY PLAN



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CONSULTANT

STATE OF UTAH — BARRY W. SMITH — 123799 — LICENSED ARCHITECT

COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

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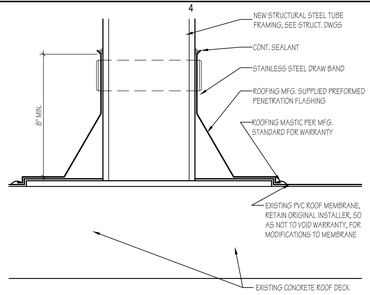
CHECKED BY:	BWS
DESIGNED BY:	RLS
DWG TYPE:	ARCHITECTURAL
ARCHITECTURAL PHASE:	CONSTRUCTION BID DOCUMENTS

SHEET TITLE

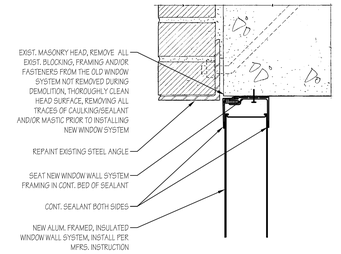
DEMO, FLOOR, ROOF & CEILING PLANS BLDG. ELEVATIONS

AE101

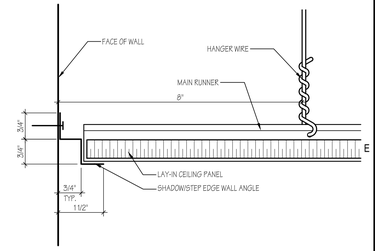
SHEET 4 OF 14



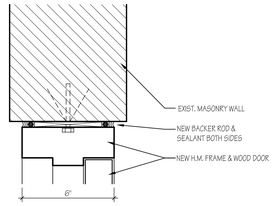
E4 NEW STEEL TUBE FLASHING DETAIL
3"=1'-0"



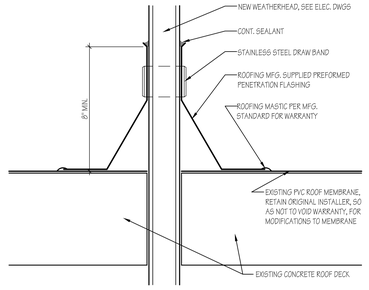
E5 NEW WINDOW WALL HEAD DETAIL
3"=1'-0"



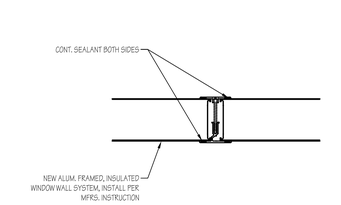
E6 TYPICAL CEILING DETIAL
6"=1'-0"



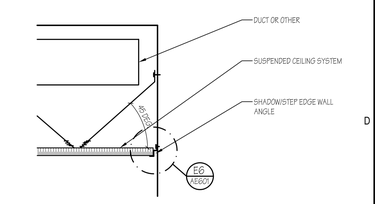
D3 H.M. DOOR HEAD (ALTERNATE NO. 1)
3"=1'-0"



D4 NEW CONDUIT FLASHING DETAIL
3"=1'-0"

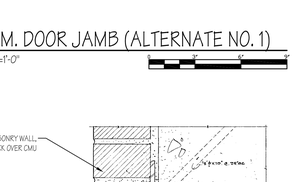


D5 NEW WINDOW WALL MULLION DETAIL
3"=1'-0"

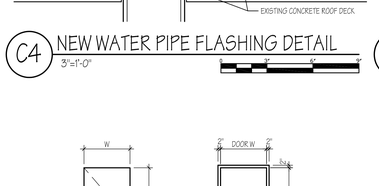


NOTE: WHEN DUCT OR OTHER OBSTRUCTION PREVENTS SPLAY WIRE ATTACHED AT CEILING, OR IF 45° CANNOT BE ACHIEVED THE USE OF SIDEWALL MAY BE USED.

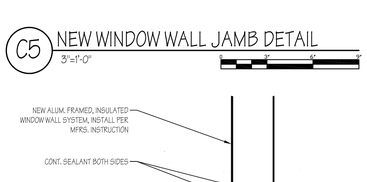
D6 TYPICAL CEILING DETIAL
2"=1'-0"



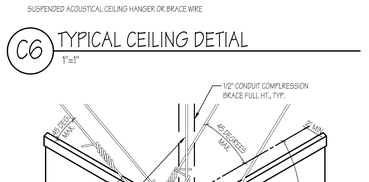
C3 H.M. DOOR JAMB (ALTERNATE NO. 1)
3"=1'-0"



C4 NEW WATER PIPE FLASHING DETAIL
3"=1'-0"

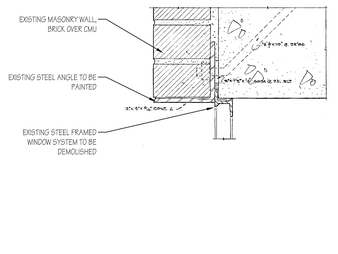


C5 NEW WINDOW WALL JAMB DETAIL
3"=1'-0"

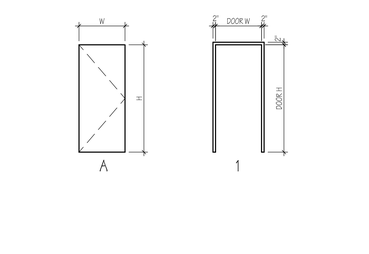


SUSPENDED ACOUSTICAL CEILING HANGER OR BRACE WIRE

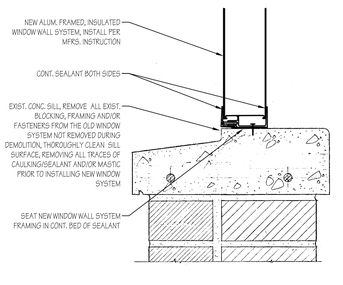
C6 TYPICAL CEILING DETIAL
1"=1'



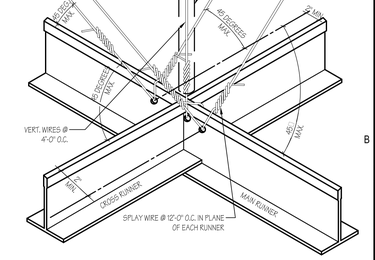
B3 EXISTING STEEL WINDOW HEAD
N.T.S.



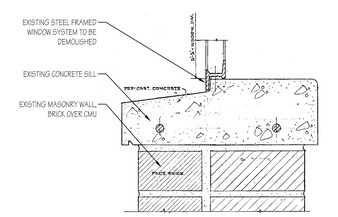
B4 DOOR/FRAME TYPES (ALTERNATE NO. 1)
1/4"=1'-0"



B5 NEW WINDOW WALL SILL DETAIL
3"=1'-0"



B6 TYPICAL CEILING DETIAL
N.T.S.

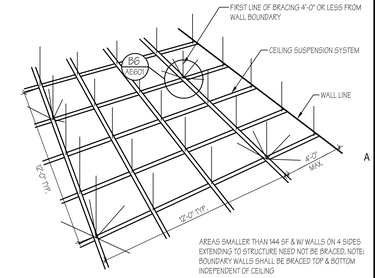


A3 EXISTING STEEL WINDOW SILL
N.T.S.

DOOR SCHEDULE

DOOR NUMB.	DOOR						FRAME							COMMENTS
	TYPE	MATERIAL	FINISH	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	TYPE	MATERIAL	FINISH	UL LABEL	DETAILS H	DETAILS J	DETAILS T	
212	A	S.C. WOOD	PRE-FINISHED	3'-0"	7'-0"	1-3/4"	1	H.M.	PAINTED	N/A	D3/AE601	C3/AE601	N/A	

A4 DOOR SCHEDULE (ALTERNATE NO. 1)
N.T.S.



AREAS SMALLER THAN 144 SF & W/ WALLS ON 4 SIDES EXTENDING TO STRUCTURE NEED NOT BE BRACED. NOTE: BOUNDARY WALLS SHALL BE BRACED TOP & BOTTOM INDEPENDENT OF CEILING

A6 TYPICAL CEILING DETIAL
N.T.S.

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DESIGNED BY:	RLS
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ARCHITECTURAL PHASE:	CONSTRUCTION BID DOCUMENTS

SHEET TITLE

DOOR SCHEDULE & DETAILS

AE601

SHEET 5 OF 14

MECHANICAL LEGEND

SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY		
A / ME-101		SECTION LETTER DESIGNATION; SECTION DRAWN ON THIS SHEET
A2		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION
AH-1		MECHANICAL EQUIPMENT DESIGNATION; EQUIPMENT ITEM DESIGNATION
D-1 / CFM		REGISTER, GRILLE OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE, OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRED
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
AFF		ABOVE FINISHED FLOOR
AP		ACCESS PANEL
℄ EL.		CENTER LINE ELEVATION
INV. ELEV.		INVERT ELEVATION
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
CC		CONTROL CONTRACTOR
EC		ELECTRICAL CONTRACTOR
FPC		FIRE PROTECTION CONTRACTOR
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

SYMBOL	ABR.	DESCRIPTION
AIR SIDE		
		EXISTING AIR DUCT TO BE REMOVED
		EXISTING AIR DUCT TO REMAIN
		NEW AIR DUCT
		RECT. TO RECT. AIR DUCT TAKE-OFF
		RECT. TO RND. AIR DUCT TAKE-OFF
		RND. TO RND. AIR DUCT TAKE-OFF
		RECT. TAKE-OFF AT END OF MAIN
		BURIED OR UNDER FLOOR DUCT
		FLEXIBLE AIR DUCT
		LINED DUCT
		VANED ELBOW
		RADIUS ELBOW
		CONCENTRIC DUCT TRANSITION
		ECCENTRIC DUCT TRANSITION
		FLEXIBLE DUCT CONNECTION
VD		VOLUME DAMPER
		SUPPLY AIR DIFFUSER
		RETURN AIR, FRESH AIR, AND TRANSFER AIR
		CEILING MOUNTED EXHAUST FAN OR EXHAUST GRILLE
		RETURN OR OUTSIDE AIR DUCT UP
		SUPPLY DUCT UP
		EXHAUST AIR INTAKE UP
		RETURN OR OUTSIDE AIR DUCT DOWN
		SUPPLY DUCT DOWN
		EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		RAISE DUCT UP
		LOWER DUCT DOWN
		FLEXIBLE DUCT CONNECTION
		FILTER BANK
		COIL
	AP	ACCESS PANEL
		EXISTING EQUIPMENT TO BE REMOVED
		EXISTING EQUIPMENT TO REMAIN
		NEW EQUIPMENT
M	MVD	MOTORIZED VOLUME DAMPER
BD	BD	BACKDRAFT DAMPER
F	FD	FIRE DAMPER
R	RD	RADIATION TYPE FIRE DAMPER
S	SD	SMOKE DAMPER
F/S	FS	FIRE & SMOKE DAMPER
T	T'STAT	WALL MOUNTED THERMOSTAT
S		WALL MOUNTED TEMP. SENSOR
H	H'STAT	WALL MOUNTED HUMIDISTAT
F	F'STAT	WALL MOUNTED FIRESTAT
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
MA		MIXED AIR
FA		FRESH AIR
RF		RELIEF AIR

GENERAL NOTES:

G-1 MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS BY OTHER DISCIPLINES AND SPECIFICATIONS.

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 THE RESPONSIBILITY OF THIS CONTRACTOR. ARCHITECT SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

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 MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

G-7 SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

G-8 PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

G-9 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS AND GRILLES.

G-10 PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

G-11 THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

G-12 THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

G-13 C.F.M. LISTED IS ACTUAL AIR.

G-14 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-15 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-16 ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2003 EDITION OF THE IMC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-17 THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

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COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
HFSA PROJECT NO:	0612.01
CAD DWG FILE NO:	
DRAWN BY:	
CHECKED BY:	SLW
DESIGNED BY:	WP
DWG TYPE:	MECHANICAL

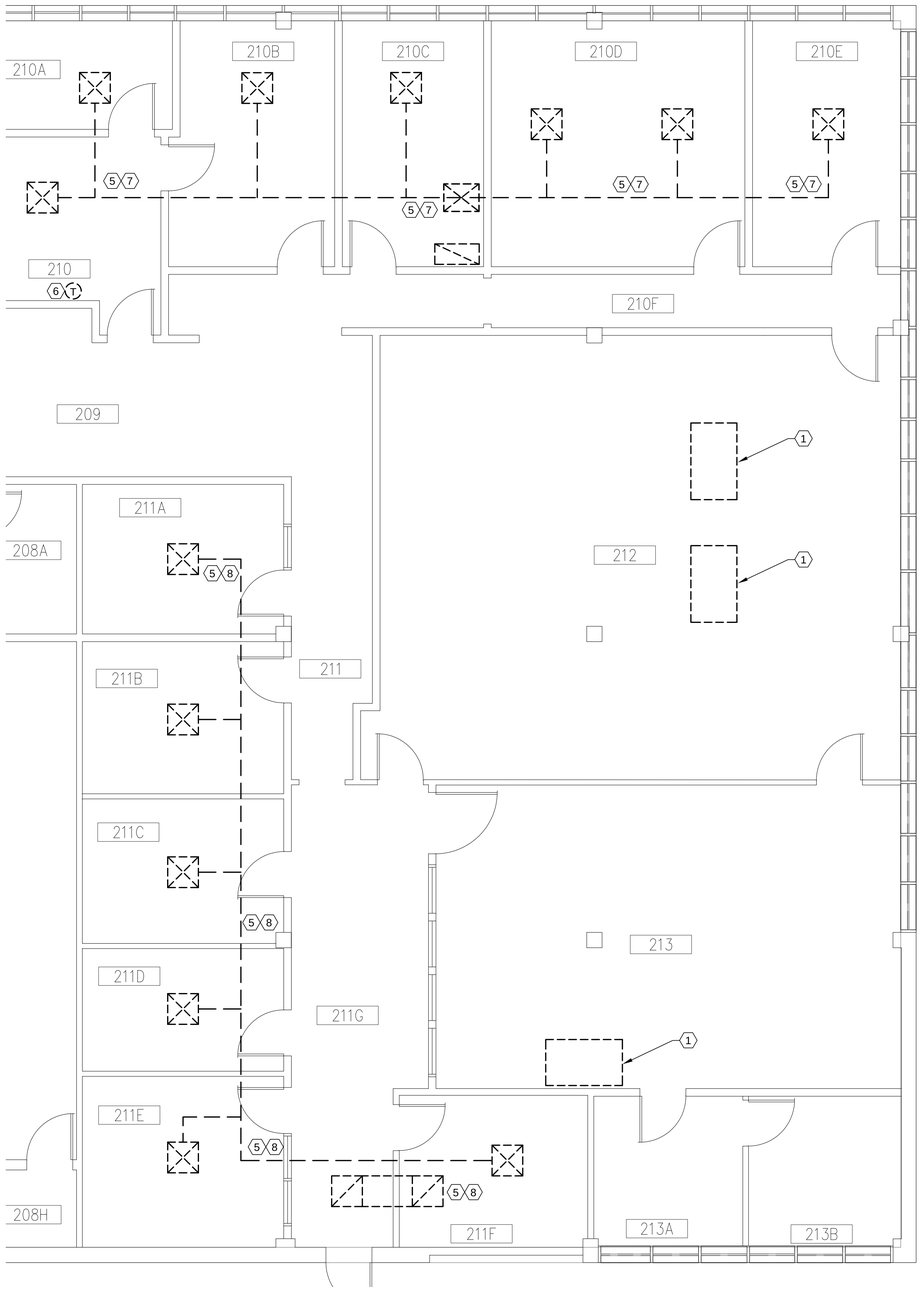
ARCHITECTURAL PHASE:
CONSTRUCTION BID DOCUMENTS

SHEET TITLE

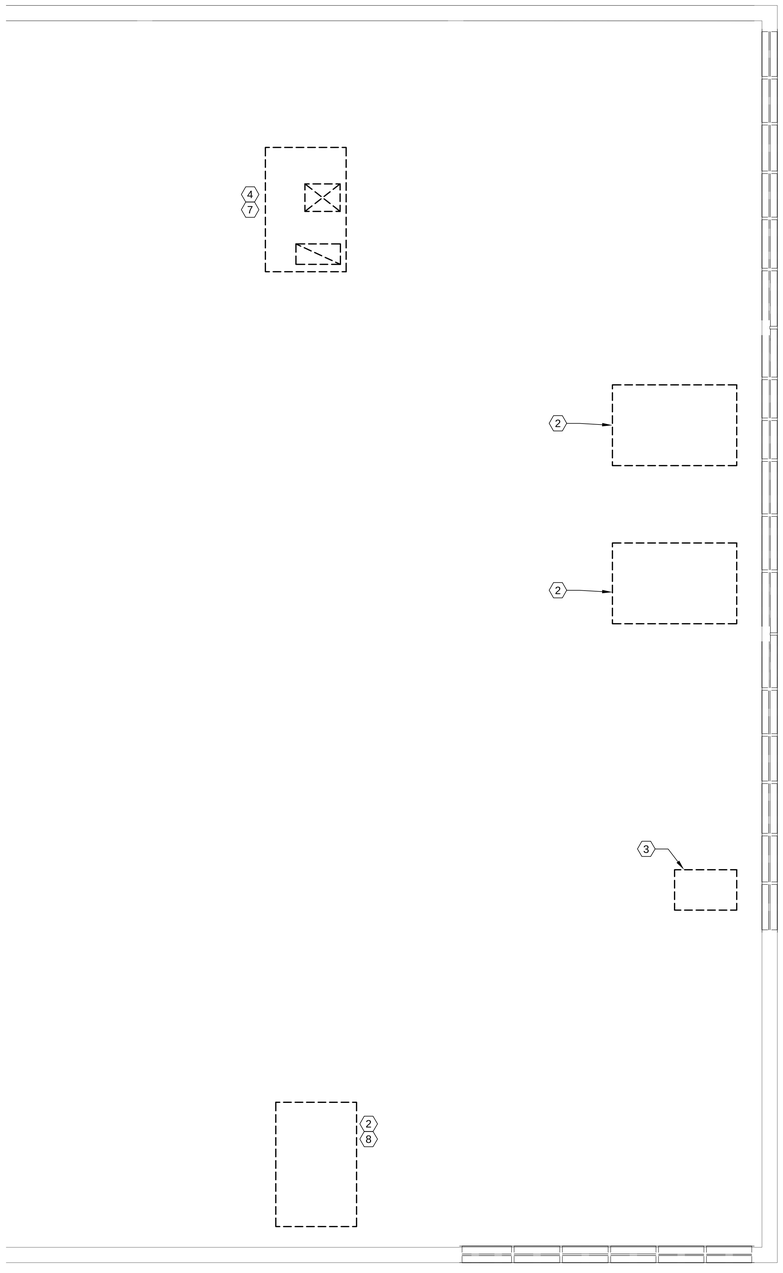
MECHANICAL GENERAL NOTES AND LEGENDS

MG001

SHEET 6 OF 14



A5 SECOND FLOOR MECHANICAL DEMOLITION PLAN
1/8"=1'-0"



A1 ROOF MECHANICAL DEMOLITION PLAN
1/8"=1'-0"

DEMOLITION NOTES:

1. REMOVE EXISTING COMPUTER ROOM COOLING UNIT AFTER NEW COMPUTER HVAC SYSTEM IS FUNCTIONING PROPERLY.
2. AFTER NEW COMPUTER HVAC SYSTEM IS FUNCTIONING PROPERLY. REMOVE EXISTING ROOF MOUNTED CONDENSING UNITS ASSOCIATED WITH EACH EXISTING COMPUTER ROOM UNIT, ALSO REMOVE AND PATCH REFRIGERANT LINE ROOF PENETRATIONS.
3. ALTERNATE #3: REMOVE EXISTING YORK ROOFTOP UNIT AND ASSOCIATED DUCTWORK, CONTROLS, ETC.
4. ALTERNATE #2: REMOVE EXISTING CARRIER ROOFTOP UNIT AND ASSOCIATED DUCTWORK, CONTROL, ETC. COORDINATE WITH G.C. TO PATCH AND SEAL ROOF.
5. ALTERNATES #2&3: REMOVE ALL EXISTING SUPPLY AND RETURN DUCTWORK, DIFFUSERS, GRILLES, ETC. IN THIS AREA. FIELD VERIFY EXACT SIZE, LOCATION, ETC. COORDINATE WITH G.C. TO PATCH AND SEAL ROOF.
6. REMOVE EXISTING PNEUMATIC THERMOSTAT SERVING STEAM CONVECTOR, AND SALVAGE TO OWNER. SEE ME101 FOR NEW THERMOSTAT.
7. ALTERNATE #2: REPLACE HVAC SYSTEMS INCLUDING ROOFTOP, DUCTWORK, GRILLES, CONTROLS, ETC. RT-6 SERVING THE WEST OFFICES.
8. ALTERNATE #3: REPLACE HVAC SYSTEMS INCLUDING ROOFTOP, DUCTWORK, GRILLES, CONTROLS, ETC. RT-5 SERVING THE SOUTH OFFICES.

GENERAL NOTES:

1. WHERE CONDUIT, CABLING, OR OTHER ITEMS ARE SUPPORTED BY DUCTWORK, RE-HANG AND RE-SUPPORT FROM STRUCTURE AFTER REMOVING DUCTWORK. COORDINATE WITH ELECTRICAL ENGINEER.

MECHANICAL GENERAL NOTES AND LEGENDS

KEY PLAN

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SHEET TITLE

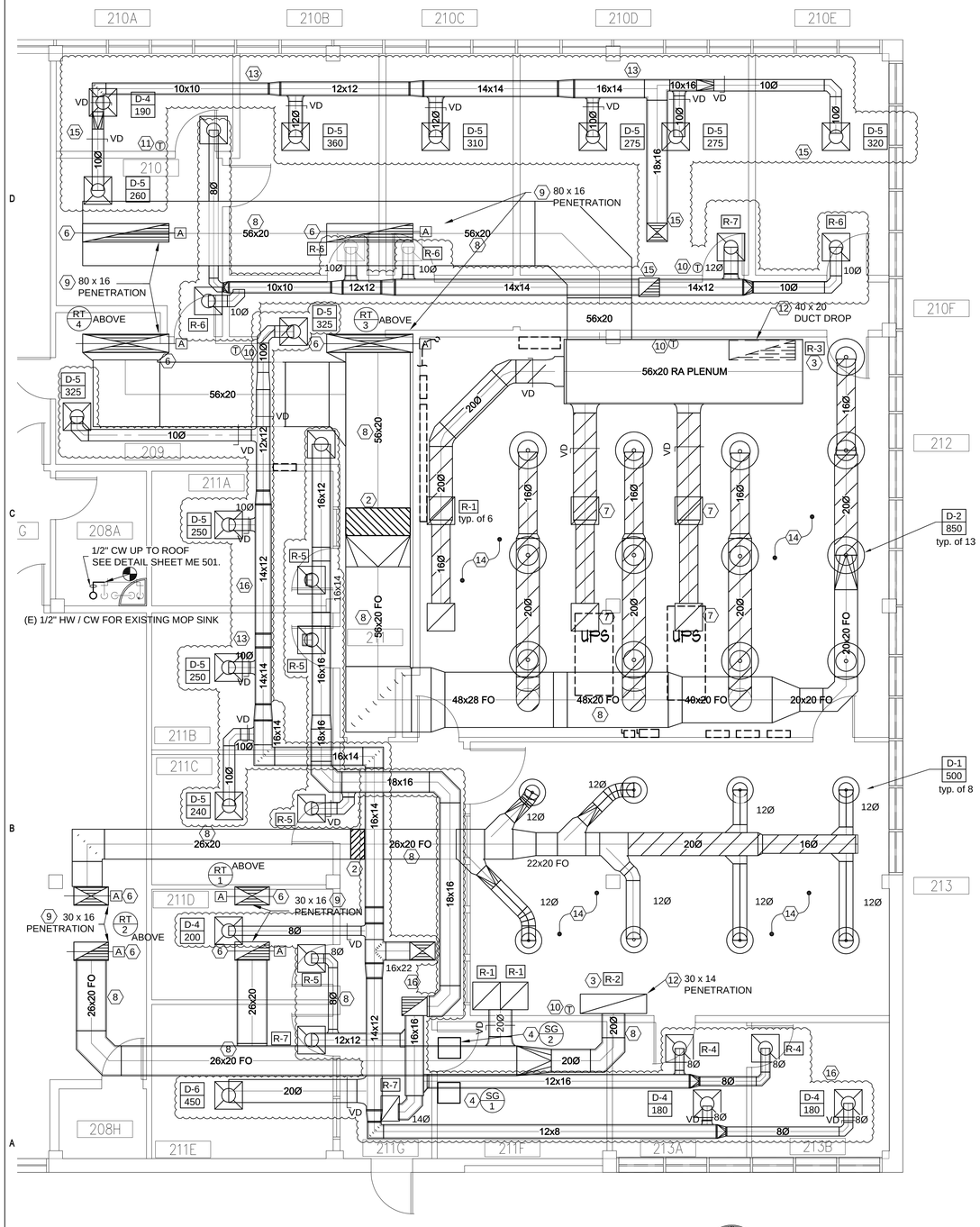
DEMOLITION PLANS FLOOR & ROOF PLANS

MD101

SHEET 7 OF 14

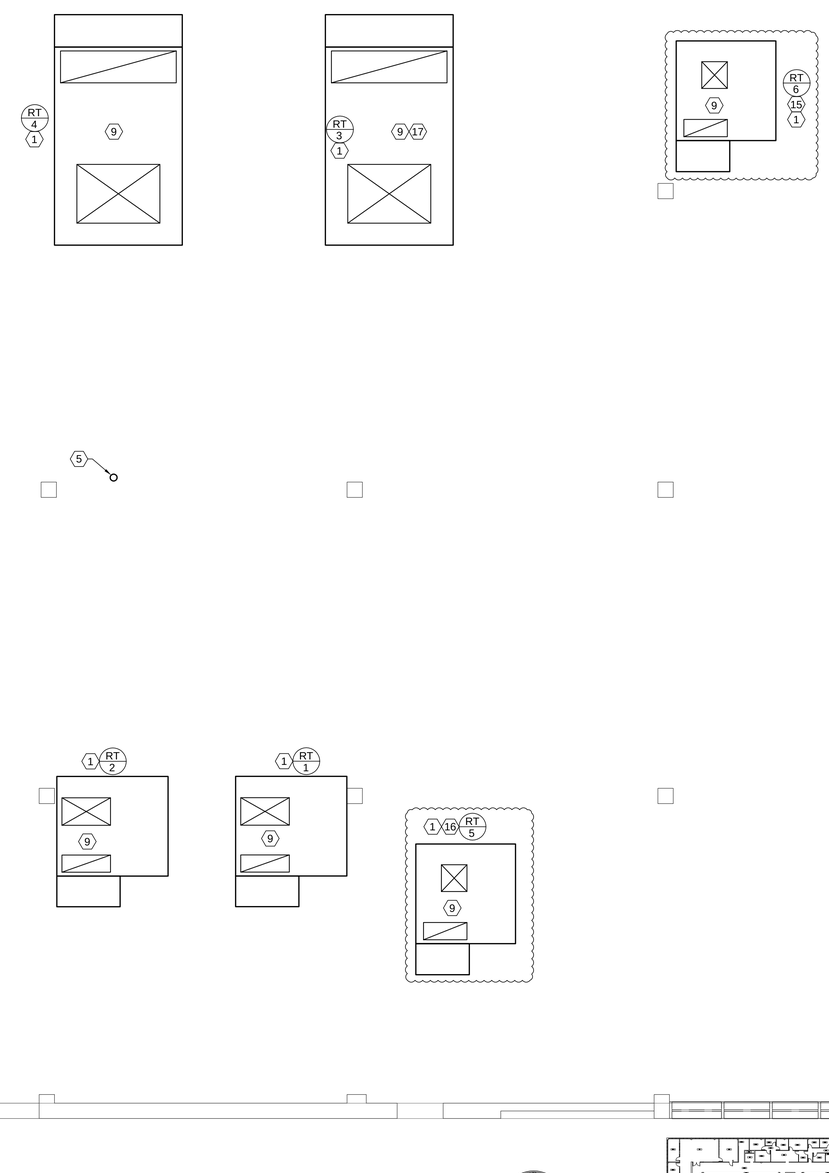
SHEET NOTES:

1. PROVIDE NEW HIGH EFFICIENCY PACKAGED ROOFTOP UNIT. COORDINATE WITH G.C. TO CUT AND PATCH ROOF FOR NEW DUCT PENETRATIONS. PROVIDE TRANSITION FROM UNIT CONNECTION TO DUCT SIZES SHOWN ON PLAN VIEW. CURB AROUND DUCT PENETRATIONS.
2. PROVIDE DUCT MOUNTED HUMIDIFIER.
3. PROVIDE DUCT DROP AND LOW SIDEWALL RETURN GRILLE.
4. PROVIDE PACKAGED ELECTRIC STEAM GENERATOR. MOUNT ON HIGH ON WALL ABOVE DOOR, AND PIPE PER MANUFACTURERS RECOMMENDATIONS.
5. PROVIDE HOSE BIBB AT ROOF. PROVIDE SHUT-OFF VALVE AND DRAIN VALVE IN MECHANICAL CLOSET BELOW. SEE DETAIL ME501.
6. PROVIDE AUTOMATIC ISOLATION DAMPERS AT EACH UNIT. COORDINATE WITH ATC.
7. COORDINATE EXACT LOCATION OF RETURN AIR DUCT WITH AIR DISCHARGE OF EQUIPMENT BELOW.
8. DUCTWORK IN SYSTEMS WITH HUMIDIFICATION SHALL BE WRAPPED, NOT LINED.
9. COORDINATE EXACT SIZE AND LOCATION OF ROOF PENETRATION WITH STRUCTURAL. TRANSITION FROM PENETRATION TO DUCT SIZE SHOWN ON PLANS.
10. PROVIDE NEW DDC THERMOSTAT FOR NEW ROOFTOP COOLING UNIT. COORDINATE EXACT LOCATION WITH OWNER, ARCHITECT, AND EXISTING CONDITIONS.
11. PROVIDE NEW PNEUMATIC THERMOSTAT FOR EXISTING STEAM CONVECTOR IN THIS OFFICE.
12. PROVIDE RECTANGULAR RETURN AIR DUCT DROP ALONG WALL. INSTALL LOW SIDEWALL RETURN AT 6" AFF.
13. ALTERNATES 2 & 3 RUN DUCT TIGHT TO STRUCTURE. COORDINATE WITH ARCHITECTS CEILING PLAN.
14. RE-LOCATE AND RE-DISTRIBUTE SPRINKLER HEADS TO ACCOMMODATE CEILING REMOVAL, NEW DUCT, NEW LIGHTS, ETC.. PROVIDE NEW HEADS AS NECESSARY. SEE PERFORMANCE SPECIFICATION, SECTION 15300.
15. ALTERNATE #2: REPLACE HVAC SYSTEMS INCLUDING ROOFTOP (RT-6), DUCTWORK, GRILLES, CONTROLS, ETC. RT-6 SERVING THE WEST OFFICES.
16. ALTERNATE #3: REPLACE HVAC SYSTEMS INCLUDING ROOFTOP (RT-5), DUCTWORK, GRILLES, CONTROLS, ETC. RT-5 SERVING THE SOUTH OFFICES.
17. RT-3 COORDINATE WITH STRUCTURAL FOR LOCATION OF NEW ROOF MOUNTED STEEL BEAMS. DUCTWORK FROM THIS UNIT SHALL TRANSITION TO MISS BEAM AND CONNECT TO DUCT RISER FROM BUILDING. DUCT MAY HAVE TO TEAR DROP AROUND BEAM. FIELD VERIFY AFTER STRUCTURE IS EXPOSED.

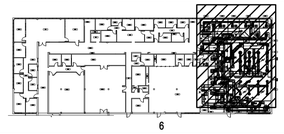


C5 SECOND FLOOR NEW MECHANICAL PLAN
1/8"=1'-0"

KEY PLAN



C2 ROOF MECHANICAL PLAN
1/8"=1'-0"



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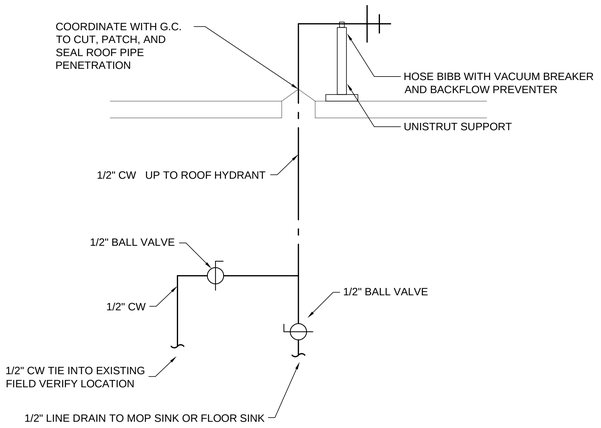
SHEET TITLE

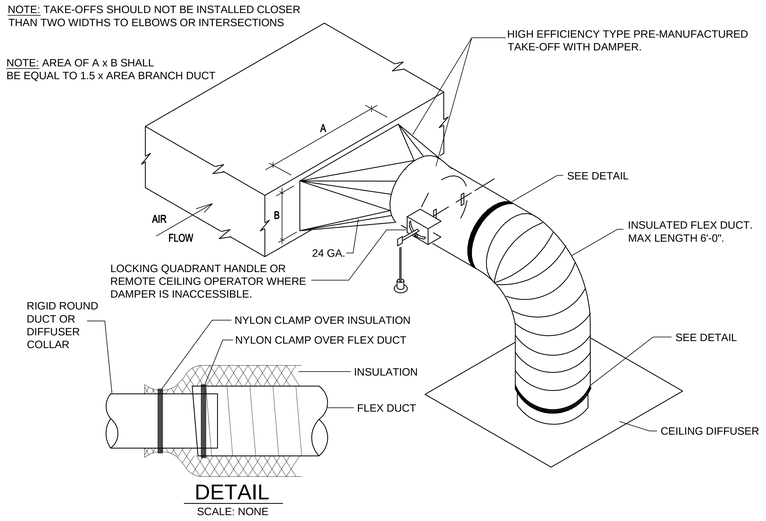
NEW MECHANICAL FLOOR & ROOF PLANS

ME101

SHEET 8 OF 14

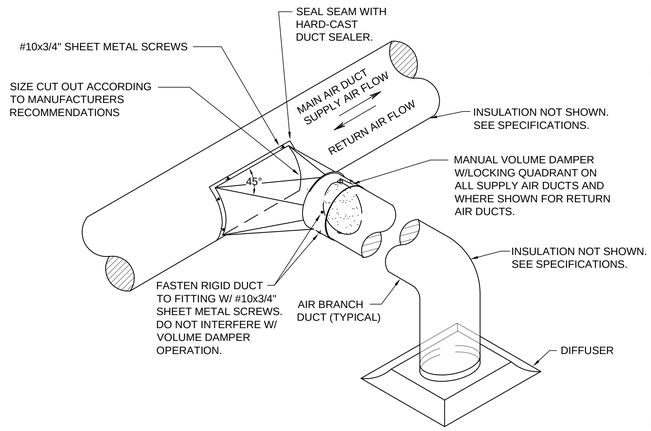


D1 ROOF HYDRANT DETAIL
SCALE: NONE

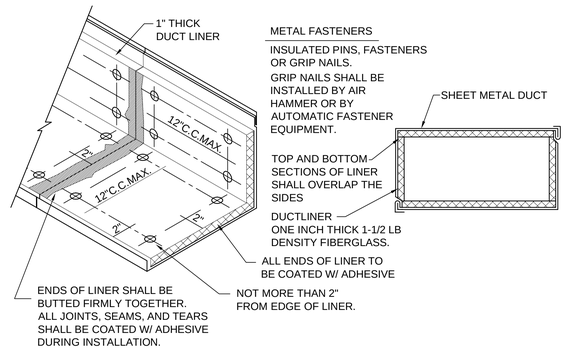


DETAIL
SCALE: NONE

D3 SQUARE-TO-ROUND TAKE-OFF DETAIL
SCALE: NONE



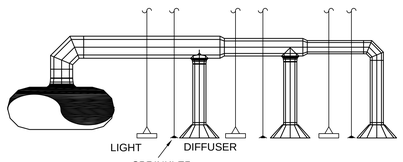
D6 HARD DUCT DIFFUSER DETAIL
SCALE: NONE



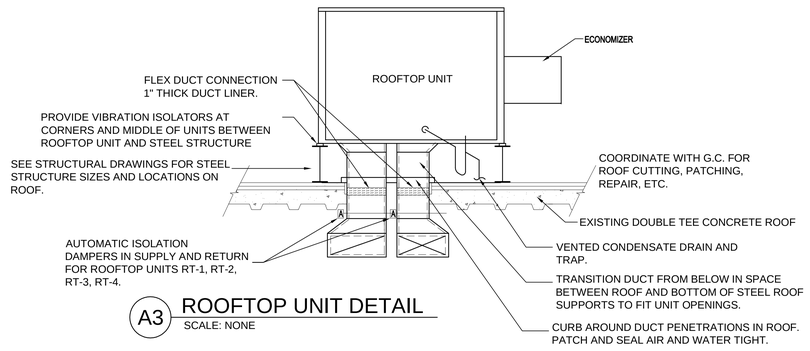
C1 DUCT LINER DETAIL
SCALE: NONE

C4 DUCT STRAP HANGER DETAIL
SCALE: NONE

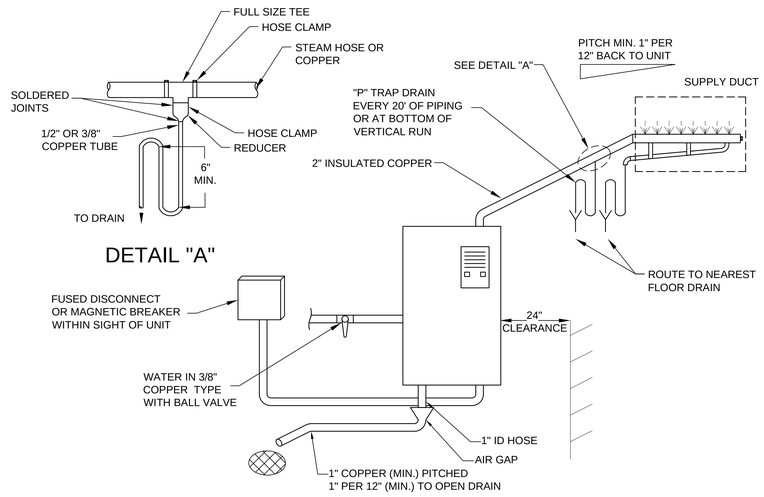
C5 BRANCH DUCT TAKE-OFF & DAMPER DETAIL
SCALE: NONE



A1 COMPUTER ROOM DIFFUSER ELEVATIONS
SCALE: NONE



A3 ROOFTOP UNIT DETAIL
SCALE: NONE



A5 HUMIDIFIER INSTALLATION DETAIL
SCALE: NONE

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SHEET TITLE

MECHANICAL DETAILS

ME501

SHEET 9 OF 14

ROOFTOP AIR CONDITIONER SCHEDULE (COOLING ONLY)

	SYMBOL	MANUFACTURER & MODEL NUMBER	SA CFM	OSA CFM	E.S.P. IN W.G.	COOLING			ELECTRICAL						EER	OPER. WT. (LBS)	SCHEDULE NOTES
						AMB. AIR (DB)	AMB. AIR (WB)	MIN. TOTAL MBH	V - Ø - Hz	COMPRESSOR #	COMPRESSOR RLA (EACH)	UNIT FLA	EVAP BLOWER HP	MCA	MOCP			
	RT 1	AAON RM-010	3,600	0	1.0	95	67	113	208/3/60	2	18.1	49	2.0	54	70	11.0	1500	1,2,3,4,5,6,7
	RT 2	AAON RM-010	3,600	0	1.0	95	67	113	208/3/60	2	18.1	49	2.0	54	70	11.0	1500	1,2,3,4,5,6,7
	RT 3	AAON RN-031	11,050	0	1.0	95	67	352	208/3/60	4	25	155	(2) 5	161	175	11.7	5400	1,2,3,4,5,6,7
	RT 4	AAON RN-031	11,050	0	1.0	95	67	352	208/3/60	4	25	155	(2) 5	161	175	11.7	5400	1,2,3,4,5,6,7
ALTERNATE #3	RT 5	AAON RM-006	2400	480	1.0	95	67	72	208/3/60	1	22.4	35	2.0	41	60	10.4	1000	1,2,3,5,6,7
ALTERNATE #2	RT 6	AAON RM-005	1995	400	1.0	95	67	60	208/3/60	1	18.1	28	2.0	33	50	11.8 SEER	1000	1,2,3,5,6,7

1. E.S. P. DOES NOT INCLUDE LOSSES THROUGH ACCESSORIES.
2. MINIMUM EER AT ARI CONDITIONS. THIS SHALL BE DOCUMENTED AS NECESSARY TO RECEIVE UTAH POWER REBATES.
3. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
4. PROVIDE WITH LOW AMBIENT KIT.
5. PROVIDE FACTORY INSTALLED, FIELD WIRED, NEMA 5.20 GFCI DUPLEX RECEPTACLE.
6. ROOFTOP UNIT SHALL BE JOHNSON N2 INTEGRATEABLE.
7. PROVIDE WITH ECONOMIZER.

DIFFUSER SCHEDULE

	SYMBOL	TYPE	MAX CFM	FACE SIZE	NCK SIZE	CEILING TYPE	BLOW PATTERN	SCHEDULE NOTES
	D-1 CFM	DUCT MOUNTED	450	23"Ø	10"Ø	EXPOSED	ADJUSTABLE /VERTICAL	1,2,5
	D-2 CFM	DUCT MOUNTED	850	32"Ø	16"Ø	EXPOSED	ADJUSTABLE /VERTICAL	1,2,5
ALTERNATE	D-3 CFM	CEILING	100	6X6	6"Ø	LAY-IN	4--WAY	3,4,5
ALTERNATE	D-4 CFM	CEILING	200	9X9	8"Ø	LAY-IN	4--WAY	3,4,5
ALTERNATE	D-5 CFM	CEILING	380	12X12	10"Ø	LAY-IN	4--WAY	3,4,5
ALTERNATE	D-6 CFM	CEILING	650	15X15	14"Ø	LAY-IN	4--WAY	3,4,5

1. PRICE RCDA OR EQUAL. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
2. MAXIMUM NC 30 AT CFM LISTED.
3. PROVIDE LAY-IN CEILING AND BORDER / MODULE AS REQUIRED. SEE ARCHITECTURAL CEILING PLANS.
4. MAXIMUM NC 25 AT CFM LISTED.
5. TRANSITION AS REQUIRED TO DUCT WORK SHOWN ON PLAN.

REGISTER, LOUVER & GRILLE SCHEDULE

	SYMBOL	TYPE	SERVICE	MAX CFM	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	COMMENTS	SCHEDULE NOTES
	R-1	DUCT MOUNTED/ CEILING	RETURN	1000	22x22	14"Ø	EXPOSED	PRICE 535	1,2,3
	R-2	LOW SIDEWALL	RETURN	2000	30X14	30X14	NA	PRICE 95	1,2,3,4
	R-3	LOW SIDEWALL	RETURN	6000	40x32	40x32	NA	PRICE 95	1,2,3,4
ALTERNATE	R-4	CEILING	RETURN	180	8/8	8/8	LAY-IN	PRICE 535	2,3,5
ALTERNATE	R-5	CEILING	RETURN	250	10/10	10/10	LAY-IN	PRICE 535	2,3,5
ALTERNATE	R-6	CEILING	RETURN	375	12/12	12/12	LAY-IN	PRICE 535	2,3,5
ALTERNATE	R-7	CEILING	RETURN	600	16/16	16/16	LAY-IN	PRICE 535	2,3,5

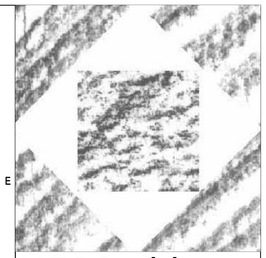
REGISTER. LOUVER AND DIFFUSER SCHEDULE NOTES:

1. MAXIMUM NC = 30 @ MAXIMUM CFM NOTED.
2. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
3. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.
4. RETURN AIR GRILLE TO BE MOUNTED 6" FROM FLOOR TO BOTTOM EDGE OF GRILLE.
5. MAXIMUM NC=25 @ MAXIMUM CFM NOTED.

ELECTRIC STEAM GENERATOR

MARK	SERVES	CFM	STEAM	DUCT SIZE	ELECTRICAL				BASIS OF DESIGN	NOTES
			LBS/ HR		VOLT/Ø/HZ	AMPS	BREAKER	KW		
SG 1	RT-1, RT-2	3,600	5.0	26x20	208/3/60	22	30	9	ARMSTRONG HUMIDICLEAN	1,2,3
SG 2	RT-3, RT-4	11,050	12.7	56x20	208/3/60	22	30	9	ARMSTRONG HUMIDICLEAN	1,2,3

1. PROVIDE WITH STEAM GENERATOR UNIT, AND DUCT DISPERSION UNIT. PIPE PER DETAILS, AND MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE WITH WALL MOUNTING BRACKET FOR STEAM GENERATING UNT.
3. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.



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STATE OF UTAH

COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

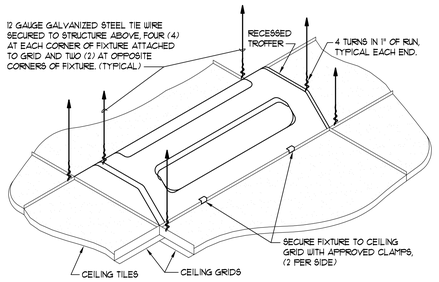
DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
HFSA PROJECT NO:	0612.01
CAD DWG FILE NO:	
DRAWN BY:	
CHECKED BY:	SLW
DESIGNED BY:	WP
DWG TYPE:	MECHANICAL
ARCHITECTURAL PHASE:	CONSTRUCTION BID DOCUMENTS

SHEET TITLE

MECHANICAL SCHEDULES

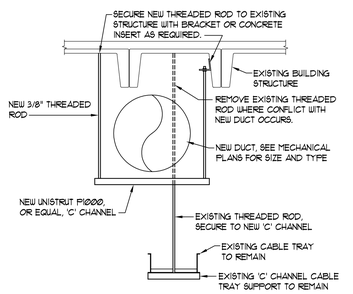
ME601

SHEET 10 OF 14

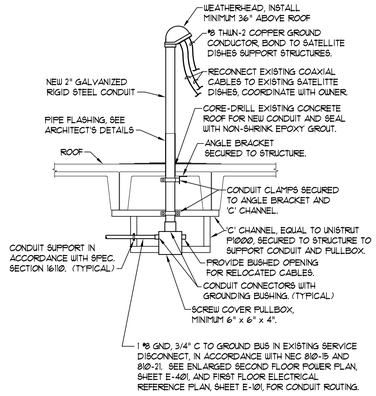


1. ALL LIGHTING FIXTURES SHALL BE POSITIVELY ATTACHED TO THE SUSPENDED CEILING SYSTEM. THE ATTACHMENT DEVICE SHALL HAVE A CAPACITY OF 100% OF THE LIGHTING FIXTURE WEIGHT ACTING ANY DIRECTION. 12 GA. HANGERS SHALL BE ATTACHED TO THE GRID MEMEBERS WITHIN THREE INCHES OF EACH CORNER OF EACH FIXTURE. TANDEM FIXTURES MAY UTILIZE COMMON WIRES.
2. LIGHTING FIXTURES WEIGHING LESS THAN 56 LBS. SHALL HAVE IN ADDITION TO THE REQUIREMENTS OUTLINED ABOVE, TWO NO. 12 GA. HANGERS CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.
3. LIGHTING FIXTURES WEIGHING 56 LBS. OR MORE SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY APPROVED HANGERS.
4. PENDANT HUNG LIGHTING FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE USING NO. 9 GA. WIRES OR APPROVED ALTERNATE SUPPORT WITHOUT USING CEILING SUSPENSION SYSTEM FOR DIRECT SUPPORT.
5. COORDINATE SUPPORT WIRE INSTALLATION WITH CEILING CONTRACTOR.
6. ABOVE REQUIREMENTS ARE A MINIMUM, PROVIDE SUPPORTS AS REQUIRED BY AUTHORITY HAVING JURISDICTION (AHJ); COORDINATE WITH AHJ PRIOR TO BEGINNING WORK.

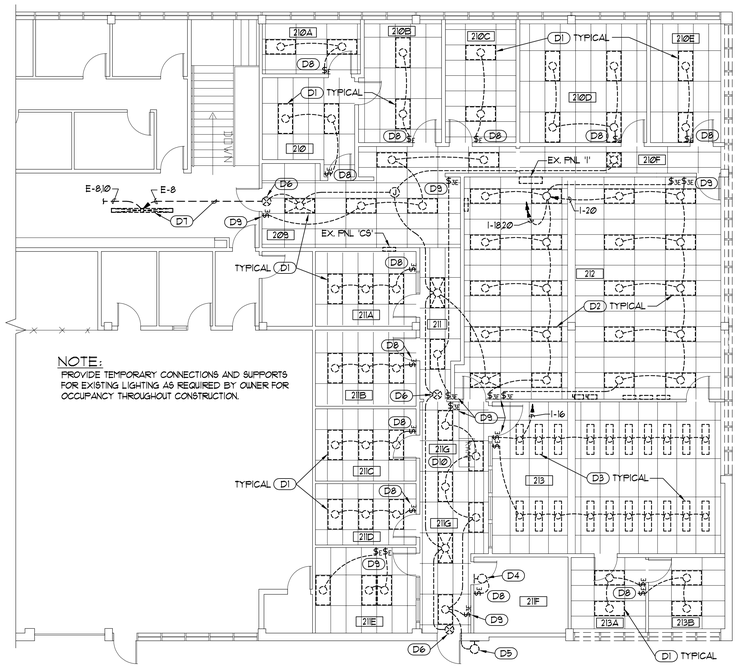
E1 TYPICAL LAY-TROFFER SUPPORT DETAIL
NOT TO SCALE



C1 CABLE TRAY SUPPORT DETAIL
SCALE: 3/4" = 1'-0"



C2 WEATHERHEAD MAST DETAIL
SCALE 3/4" = 1'-0"



C4 SECOND FLOOR LIGHTING DEMOLITON PLAN
SCALE: 1/8" = 1'-0"

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION PLANS ARE SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. CONTRACTOR MAY USE EXISTING BRANCH CIRCUIT WIRING AND RACEWAYS WHERE CONVENIENT TO CONNECT TO NEW ELECTRICAL DEVICES ONLY IF THE EXISTING WIRING AND RACEWAYS ARE IN GOOD CONDITION AND MEET DIVISION 16 SPECIFICATION REQUIREMENTS FOR NEW WIRING AND RACEWAYS.
4. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS OR FEEDERS TO EXISTING EQUIPMENT TO REMAIN, FURNISH AND INSTALL NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
5. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
6. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.

DEMOLITION KEYED NOTES:

(D1) REMOVE EXISTING LAY-IN FLOURESCENT FIXTURES INCLUDING ALL ABANDONED WIRING, CONDUIT, AND BOXES. FIXTURES ARE BELIEVED TO BE CONNECTED TO EXISTING PANEL 'CS'. FIELD VERIFY EXISTING CIRCUITING.

(D2) REMOVE EXISTING LAY-IN FLOURESCENT FIXTURES INCLUDING ALL ABANDONED WIRING, CONDUIT, AND BOXES. RETAIN EXISTING BRANCH FOR CONNECTION TO NEW FIXTURES.

(D3) REMOVE EXISTING SURFACE MOUNTED FLUORESCENT FIXTURES INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC. RETAIN EXISTING BRANCH FOR CONNECTION TO NEW FIXTURES.

(D4) REMOVE EXISTING WALL MOUNTED INCANDESCENT FIXTURE INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC. PROVIDE BLANK COVERPLATE ON EXISTING FLUSH OUTLET BOX.

(D5) EXISTING EXTERIOR FIXTURE WITH PHOTOCELL TO REMAIN. REMOVE ABANDONDED WIRING, CONDUIT, ETC. RECONNECT TO NEW BRANCH CIRCUIT AS SHOWN ON NEW LIGHTING PLAN.

(D6) REMOVE EXISTING EXIT LIGHT INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC.

(D7) EXISTING EMERGENCY LIGHT FIXTURE AND EMERGENCY BRANCH CIRCUIT TO REMAIN. RECONNECT EMERGENCY CIRCUIT TO NEW EMERGENCY LIGHTS AS SHOWN ON NEW LIGHTING PLAN.

(D8) REMOVE EXISTING SWITCH AND WIRING. EXISTING OUTLET BOX AND CONDUIT TO CEILING SPACE TO REMAIN FOR NEW OCCUPANCY SENSOR SWITCH AS SHOWN ON NEW LIGHTING PLAN.

(D9) EXISTING SWITCH TO REMAIN FOR CONNECTION TO NEW LIGHTING AS SHOWN ON NEW LIGHTING PLAN.

(D10) AREA WITH BRANCH CIRCUIT CONDUITS SUPPORT FROM ABANDONED CEILING GRID ABOVE EXISTING FINISHED CEILING. PROVIDE NEW SUPPORTS FROM BUILDING STRUCTURE FOR THE EXISTING BRANCH CIRCUIT CONDUITS. FIELD VERIFY EXTENT OF ABANDONED CEILING GRID PRIOR TO BEGINNING WORK.

(D11) EXISTING CABLE TRAY SYSTEM AND WALL MOUNTED SUPPORT BRACKETS TO REMAIN.

(D12) MODIFY EXISTING THREADED ROD CABLE TRAY SUPPORTS FROM BUILDING STRUCTURE AS REQUIRED TO ALLOW INSTALLATION ON NEW MECHANICAL DUCTWORK. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR.

(D13) EXISTING SATELLITE DISH TO REMAIN.

(D14) RELOCATE EXISTING COAXIAL CABLE FROM EXISTING PENETRATION THROUGH ROOF TO NEW SATELLITE WEATHERHEAD, SEE ROOF NEW ELECTRICAL PLAN. COORDINATE REQUIREMENTS WITH WEBER STATE UNIVERSITY.

(D15) RELOCATE EXISTING COAXIAL CABLE FROM EXISTING PENETRATION THROUGH EXTERIOR WINDOW TO NEW SATELLITE WEATHERHEAD, SEE ROOF NEW ELECTRICAL PLAN. COORDINATE REQUIREMENTS WITH WEBER STATE UNIVERSITY.

(D16) REMOVE ABANDONED ANTENNA MOUNTING BRACKET. SEAL DRILL HOLES IN BRICK WALL WITH NON-SHRINK GROUT COLORED TO MATCH EXISTING BRICK.

(D17) REMOVE ABANDONED COAXIAL CABLES COMPLETE. FIELD VERIFY TERMINATION POINT OF CABLE WITHIN BUILDING.

(D18) REMOVE EXISTING ELECTRICAL SERVICE TO EXISTING COMPUTER ROOM AIR CONDITIONING UNITS INCLUDING ALL ABANDONED CONDUIT, WIRING, BOXES, ETC. EXISTING AC UNITS ARE TO REMAIN OPERATIONAL UNTIL NEW COMPUTER ROOM ROOFTOP UNITS ARE INSTALLED, TESTED, AND OPERATIONAL.

(D19) REMOVE EXISTING 3P-30A NON-FUSED SAFETY SWITCH FOR EXISTING COMPUTER ROOM AC CONDENSING UNITS INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC. EXISTING CONDENSING UNITS ARE TO REMAIN OPERATIONAL UNTIL NEW COMPUTER ROOM ROOFTOP UNITS ARE INSTALLED, TESTED, AND OPERATIONAL.

(D20) PROVIDE NEW ENGRAVED NAMEPLATES TO INDICATE "SPARE" FOR BREAKERS IN PANEL 'I' SERVING EXISTING COMPUTER ROOM AC UNITS AFTER UNITS ARE REMOVED.

(D21) PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX FOR EXISTING PANEL 'II' TO REFLECT ALL CHANGES IN CIRCUITING.

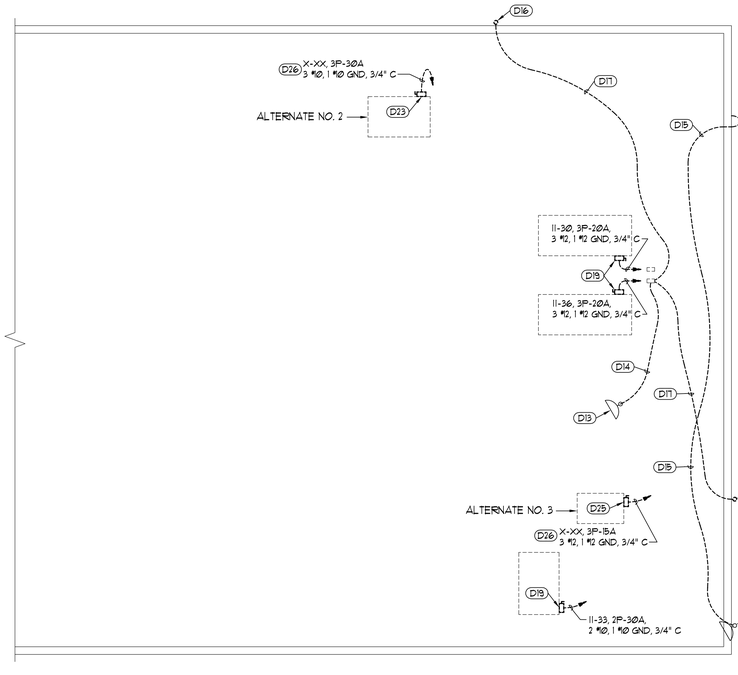
(D22) ALTERNATE NO. 2: REMOVE EXISTING SAFETY SWITCHE FOR EXISTING ROOFTOP AIR CONDITIONING UNIT TO BE REMOVED.

(D23) ALTERNATE NO. 2: REMOVE EXISTING 3P-30A NON-FUSED SAFETY SWITCH FOR EXISTING CARRIER ROOFTOP AIR CONDITIONING UNIT INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC.

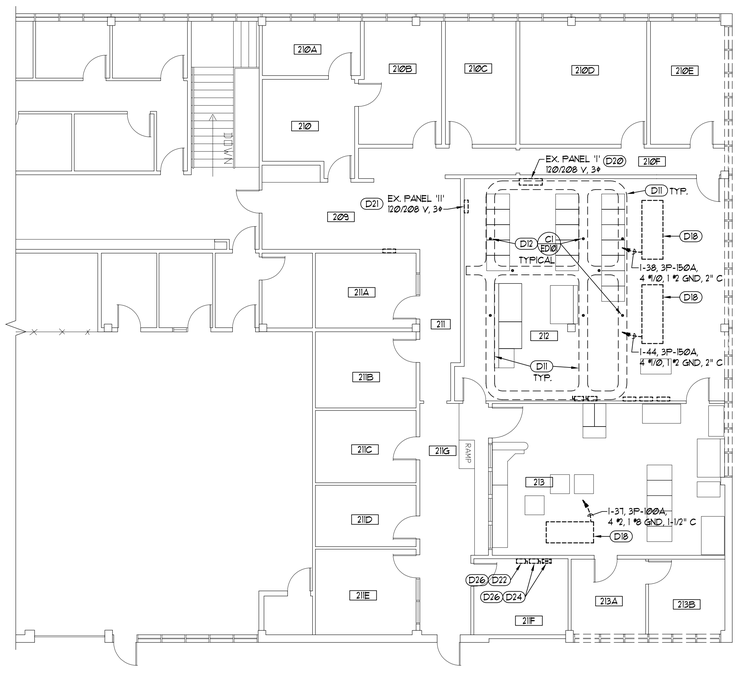
(D24) ALTERNATE NO. 3: REMOVE EXISTING SAFETY SWITCH AND ABANDONED STARTER FOR EXISTING ROOFTOP AIR CONDITIONING UNIT TO BE REMOVED.

(D25) ALTERNATE NO. 3: REMOVE EXISTING 3P-30A SAFETY SWITCH WITH 15 AMPERE FUSES FOR EXISTING YORK ROOFTOP AIR CONDITIONING UNIT INCLUDING ALL ABANDONED WIRING, CONDUIT, BOXES, ETC.

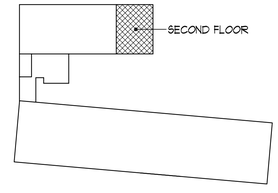
(D26) EXISTING CIRCUITS FOR EXISTING OFFICE AREA ROOFTOP UNITS COULD NOT BE DETERMINED. CONTRACTOR TO FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK. INCLUDE MINIMUM 150 FEET OF EXISTING BRANCH CIRCUIT WIRING AND CONDUIT TO BE REMOVED FOR EACH UNIT. IMMEDIATELY NOTIFY THE ARCHITECT IF LENGTH EXCEEDS 150 FEET.



A1 ROOF ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



A4 SECOND FLOOR POWER DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN
NO SCALE

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COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
HFSA PROJECT NO:	0612.01
CAD DWG FILE NO:	0612 E-101
DRAWN BY:	W.B.G.
CHECKED BY:	R.G.K.
DESIGNED BY:	W.B.G.
DWG TYPE:	ELECTRICAL

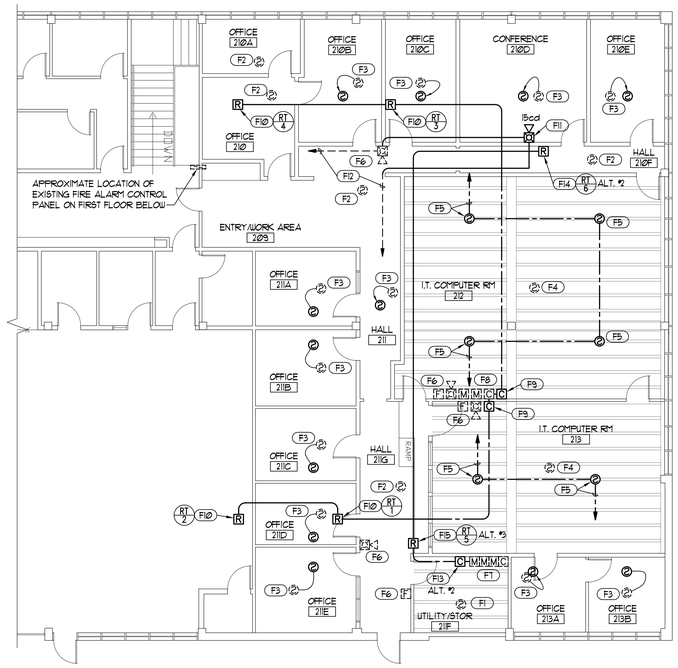
ARCHITECTURAL PHASE:
CONSTRUCTION BID DOCUMENTS

SHEET TITLE

ELECTRICAL DEMOLITION PLANS AND DETAILS

ED101

SHEET 11 OF 14

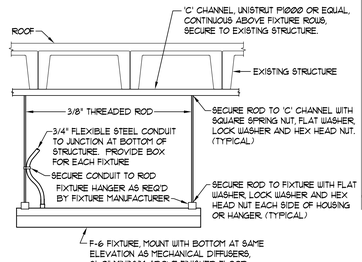


C1 SECOND FLOOR FIRE ALARM SYSTEM PLAN

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

0 4' 8' 16'

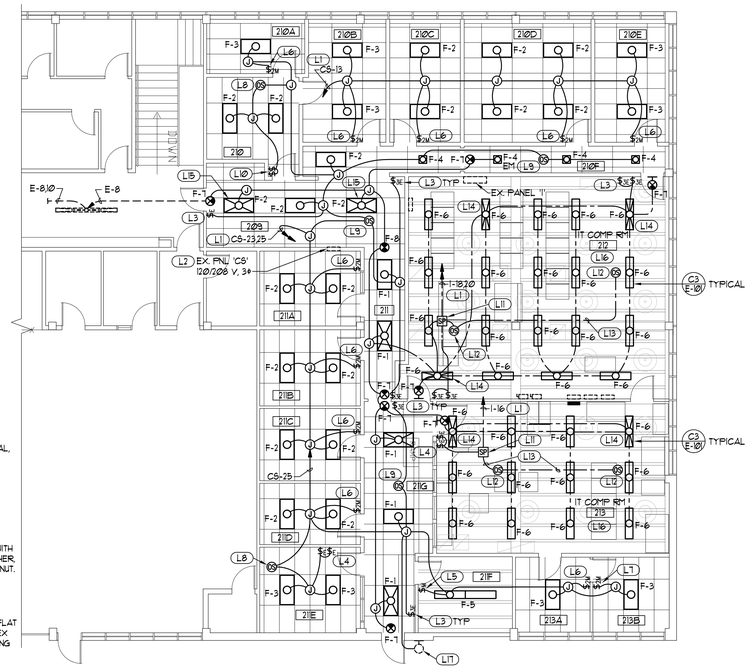
NORTH



C3 TYPICAL F-6 FIXTURE SUPPORT DETAIL

SCALE 3/4" = 1'-0"

0 6" 1'-0" 2'-0"



C4 SECOND FLOOR NEW LIGHTING PLAN

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

0 4' 8' 16'

NORTH

GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. COORDINATE FIXTURE LOCATIONS WITH ARCHITECT'S REFLECTED CEILING PLAN, CEILING CONTRACTOR, BUILDING STRUCTURE, MECHANICAL EQUIPMENT & DUCTWORK LOCATIONS, ETC.
3. COORDINATE MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR.
4. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.

LIGHTING PLAN KEYED NOTES:

- L1 CONNECT NEW LIGHTING TO EXISTING BRANCH CIRCUITS ABANDONED BY LIGHTING DEMOLITION. FIELD VERIFY EXISTING CIRCUITING.
- L2 PROVIDE NEW BREAKER NUMBER LABELS FOR EXISTING PANEL 'C5' TO MATCH CONVENTIONAL BREAKER NUMBERING. FIELD VERIFY ALL EXISTING BRANCH CIRCUITS FOR EXISTING PANEL 'C5' AND PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX TO REFLECT MODIFIED BREAKER NUMBERING AND FIELD VERIFIED CIRCUITS.
- L3 EXISTING SWITCH TO REMAIN. CONNECT TO NEW LIGHTING AS INDICATED.
- L4 TWO EXISTING 15 AMPERE DESPARD SWITCHES IN SINGLE GANG OUTLET BOX TO REMAIN. CONNECT TO NEW LIGHTING FOR SEPARATE CONTROL OF INBOARD AND OUTBOARD LAMPS.
- L5 NEW OCCUPANCY SENSOR WALL SWITCH IN EXISTING OUTLET BOX. CONNECT TO NEW LIGHTING AS INDICATED.
- L6 NEW DUAL LEVEL OCCUPANCY SENSOR WALL SWITCH IN EXISTING OUTLET BOX. CONNECT TO NEW LIGHTING FOR SEPARATE CONTROL OF INBOARD AND OUTBOARD LAMPS.
- L7 PROVIDE NEW FLUSH MOUNTED OUTLET BOX IN EXISTING WALL WITH NEW DUAL LEVEL OCCUPANCY SENSOR AND CONNECT TO NEW LIGHTING FOR SEPARATE CONTROL ON INBOARD AND OUTBOARD LAMPS. CHANNEL EXISTING WALL AS REQUIRED TO INSTALL NEW OUTLET BOX AND CONDUIT, AND REPAIR WALL AS REQUIRED TO MATCH SURROUNDING SURFACES.
- L8 NEW 180° CEILING MOUNTED OCCUPANCY AND SWITCHPACK TO CONTROL NEW LIGHTING AS INDICATED. CONNECT ROOM SWITCHES TO LOAD SIDE OF NEW SWITCHPACK.
- L9 NEW 360° CEILING MOUNTED OCCUPANCY AND SWITCHPACK TO CONTROL NEW LIGHTING AS INDICATED. CONNECT ROOM SWITCHES TO LOAD SIDE OF NEW SWITCHPACK.
- L10 TWO NEW 15 AMPERE DESPARD SWITCHES IN EXISTING SINGLE GANG OUTLET BOX. CONNECT TO LOAD SIDE OF NEW OCCUPANCY SENSOR SWITCHPACK TO CONTROL INBOARD AND OUTBOARD LAMPS OF NEW LIGHTING AS INDICATED.
- L11 NEW OCCUPANCY SENSOR SWITCHPACK TO CONTROL OUTBOARD LAMPS OF NEW LIGHTING IN I.T. COMPUTER ROOMS. (CONNECT SWITCHES) FOR OUTBOARD LAMPS TO LOAD SIDE OF NEW SWITCHPACK. CONNECT INBOARD LAMPS THROUGH SECOND ROOM SWITCH(ES).
- L12 NEW 360° OCCUPANCY SENSOR MOUNTED TO GRC STEM RIGIDLY SECURED TO BUILDING STRUCTURE WITH OCCUPANCY SENSOR AT THE SAME ELEVATION AS BOTTOM NEW FIXTURES.
- L13 INSTALL CLASS 2 CONTROL WIRING FROM OCCUPANCY SENSOR TO SWITCHPACK IN MINIMUM 1/2" CONDUIT. DO NOT INSTALL ANY OTHER WIRING IN THE SAME RACEWAY SYSTEM.
- L14 CONNECT SINGLE INBOARD LAMP TO UNSWITCHED EMERGENCY LIGHTING CIRCUIT. CIRCUIT AND SWITCH TWO OUTBOARD LAMPS WITH ROOM LIGHTING.
- L15 CONNECT TWO OUTBOARD LAMPS TO UNSWITCHED EMERGENCY LIGHTING CIRCUIT. CIRCUIT AND SWITCH SINGLE INBOARD LAMP WITH ROOM LIGHTING.
- L16 PAINT ALL EXPOSED RACEWAYS, BOXES, ETC., IN I.T. COMPUTER ROOM TO MATCH NEW EXPOSED STRUCTURE FINISH. COORDINATE WITH GENERAL CONTRACTOR.
- L17 EXISTING EXTERIOR WALL MOUNTED FIXTURE WITH PHOTOCELL TO REMAIN. RECONNECT TO NEW CIRCUIT AS INDICATED.

FIRE ALARM SYSTEM NOTES:

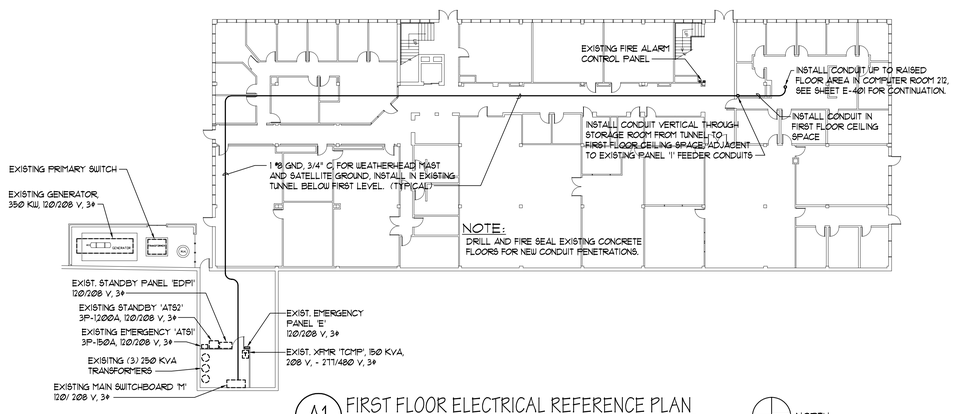
1. THE EXISTING BUILDING IS PROTECTED THROUGHOUT BY AN EXISTING AUTOMATIC FIRE ALARM SYSTEM WHICH IS TO REMAIN OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD.
2. SUBMIT REQUESTS FOR FIRE ALARM SYSTEM OUTAGES TO THE WEBER STATE UNIVERSITY FIRE MARSHAL NOT LESS THAN 48 HOURS PRIOR TO ANY PROPOSED FIRE ALARM OUTAGES. IMMEDIATELY NOTIFY THE WSU FIRE MARSHAL IF THE FIRE ALARM IS UNINTENTIONALLY DISABLED AND IMMEDIATELY MAKE REPAIRS TO RESTORE THE SYSTEM TO AN OPERATIONAL CONDITION.
3. THE CONTRACTOR SHALL MAINTAIN A FIRE WATCH DURING ALL FIRE ALARM SYSTEM OUTAGES IN ACCORDANCE WITH IFC SECTION 901.7, AND AS REQUIRED BY THE WSU FIRE MARSHAL.
4. ANY WORK PERFORMED ON THE FIRE ALARM SYSTEM SHALL BE APPROVED IN ADVANCE BY THE FIRE ALARM SYSTEM FACTORY REPRESENTATIVE. CONTACT MOUNTAIN ALARM CORPORATION (801) 355-8100.
5. PROTECT EXISTING SMOKE DETECTORS FROM EXCESSIVE DUST ACCUMULATION BY MEANS OF TEMPORARY DUST COVERS DURING DUST PRODUCING WORK OPERATIONS. REMOVE DUST COVERS IMMEDIATELY UPON COMPLETION OF DUST PRODUCING WORK.
6. CLEAN ALL SMOKE DETECTORS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS UPON COMPLETION OF WORK AND PRIOR TO TESTING.
7. TEST ALL SMOKE DETECTORS AFFECTED BY CONSTRUCTION WORK AFTER CLEANING AND PRIOR TO SUBSTANTIAL COMPLETION. TESTING SHALL BE PERFORMED BY A FACTORY AUTHORIZED AND TRAINED TECHNICIAN OF THE FIRE ALARM SYSTEM MANUFACTURER. CONTACT MOUNTAIN ALARM CORPORATION AT (801) 355-8100. INCLUDE COPIES OF ALL TEST REPORTS IN THE OPERATION AND MAINTENANCE MANUALS.
8. SEE SPECIFICATION SECTION 16720 - FIRE ALARM SYSTEM FOR ADDITIONAL REQUIREMENTS.

FIRE ALARM PLAN KEYED NOTES:

- F1 EXISTING SMOKE DETECTOR TO REMAIN.
- F2 RELOCATE EXISTING SMOKE DETECTOR FROM EXISTING CEILING TO NEW CEILING AT APPROXIMATELY THE SAME LOCATION AND RECONNECT EXISTING SIGNAL LINE CIRCUIT.
- F3 RELOCATE EXISTING SMOKE DETECTOR FROM EXISTING CEILING TO NEW CEILING AT NEW LOCATION TO BE MINIMUM 3 FT FROM NEW SUPPLY AIR GRILLE AND RECONNECT EXISTING SIGNAL LINE CIRCUIT.
- F4 REMOVE EXISTING CEILING MOUNTED SMOKE DETECTOR FROM EXISTING I.T. COMPUTER ROOM CEILING TO BE REMOVED.
- F5 NEW SMOKE DETECTORS IN EXISTING I.T. COMPUTER ROOMS MOUNTED TO BOTTOM OF EXPOSED CONCRETE TEES. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT EXISTING SIGNAL LINE CIRCUIT.
- F6 EXISTING PULL STATION AND NOTIFICATION APPLIANCES TO REMAIN. SHOWN FOR REFERENCE ONLY.
- F7 EXISTING ADDRESSABLE MONITOR MODULES AND CONTROL MODULES FOR EXISTING I.T. COMPUTER ROOM PRE-ACTION FIRE SPRINKLER SYSTEM TO REMAIN. SHOWN FOR REFERENCE ONLY.
- F8 EXISTING ADDRESSABLE MONITOR MODULES AND CONTROL MODULES FOR EXISTING I.T. COMPUTER ROOM POWER EMERGENCY POWER OFF INTERLOCKS TO REMAIN. SHOWN FOR REFERENCE ONLY.
- F9 NEW ADDRESSABLE CONTROL MODULE TO CONTROL FAN SHUT DOWN FOR NEW I.T. COMPUTER ROOM ROOFTOP UNITS. CONNECT TO EXISTING SIGNAL LINE CIRCUIT AND 24 VDC FIRE SAFETY FUNCTION CIRCUIT FROM EXISTING ADJACENT DEVICES. PROGRAM CONTROL MODULE TO SHUT DOWN ROOFTOP UNITS ONLY UPON ACTIVATION OF SMOKE DETECTORS OR PULL STATION IN THE COMPUTER ROOM SERVED BY THE ROOFTOP UNIT.
- F10 NEW FIRE SAFETY FUNCTION POWER RELAY FOR COMPUTER ROOM ROOFTOP UNITS FAN SHUT DOWN. INSTALL RELAY IN CONTROL CABINET OF ROOFTOP UNIT OR OTHER LOCATION ACCESSABLE FROM FLOOR. INTERLOCK ROOFTOP UNIT CONTROL CIRCUIT TO SHUT DOWN SUPPLY AIR FAN UPON ACTIVATION OF THE ADDRESSABLE CONTROL MODULE. COORDINATE CONNECTIONS WITH THE MECHANICAL AND CONTROLS CONTRACTORS.

FIRE ALARM PLAN KEYED NOTES:

- F11 NEW 15 CANDELA HORN/STROBE IN EXISTING CONFERENCE ROOM TO MATCH EXISTING NOTIFICATION APPLIANCES. CUT IN NEW OUTLET BOX IN EXISTING WALL AND REPAIR WALL AS REQUIRED TO MATCH SURROUNDING SURFACES.
- F12 EXISTING NOTIFICATION APPLIANCE CIRCUIT TO REMAIN. INTERCEPT AND EXTEND TO NEW HORN/STROBE AND CONNECT IN CLASS 'A' LOOP. FIELD VERIFY EXISTING CIRCUIT ROUTING.
- F13 ALTERNATE NO. 2: NEW ADDRESSABLE CONTROL MODULE TO CONTROL FAN SHUT DOWN FOR NEW OFFICE AREA ROOFTOP UNITS. CONNECT TO EXISTING SIGNAL LINE CIRCUIT AND 24 VDC FIRE SAFETY FUNCTION CIRCUIT FROM EXISTING ADJACENT DEVICES. PROGRAM CONTROL MODULE TO SHUT DOWN ROOFTOP UNITS UPON GENERAL BUILDING FIRE ALARM.
- F14 ALTERNATE NO. 2: NEW FIRE SAFETY FUNCTION POWER RELAY FOR RT/6 FAN SHUT DOWN. INSTALL RELAY IN CONTROL CABINET OF ROOFTOP UNIT OR OTHER LOCATION ACCESSABLE FROM FLOOR. INTERLOCK ROOFTOP UNIT CONTROL CIRCUIT TO SHUT DOWN SUPPLY AIR FAN UPON ACTIVATION OF THE ADDRESSABLE CONTROL MODULE. COORDINATE CONNECTIONS WITH THE MECHANICAL AND CONTROLS CONTRACTORS.
- F15 ALTERNATE NO. 3: NEW FIRE SAFETY FUNCTION POWER RELAY FOR RT/5 FAN SHUT DOWN. INSTALL RELAY IN CONTROL CABINET OF ROOFTOP UNIT OR OTHER LOCATION ACCESSABLE FROM FLOOR. INTERLOCK ROOFTOP UNIT CONTROL CIRCUIT TO SHUT DOWN SUPPLY AIR FAN UPON ACTIVATION OF THE ADDRESSABLE CONTROL MODULE. COORDINATE CONNECTIONS WITH THE MECHANICAL AND CONTROLS CONTRACTORS.

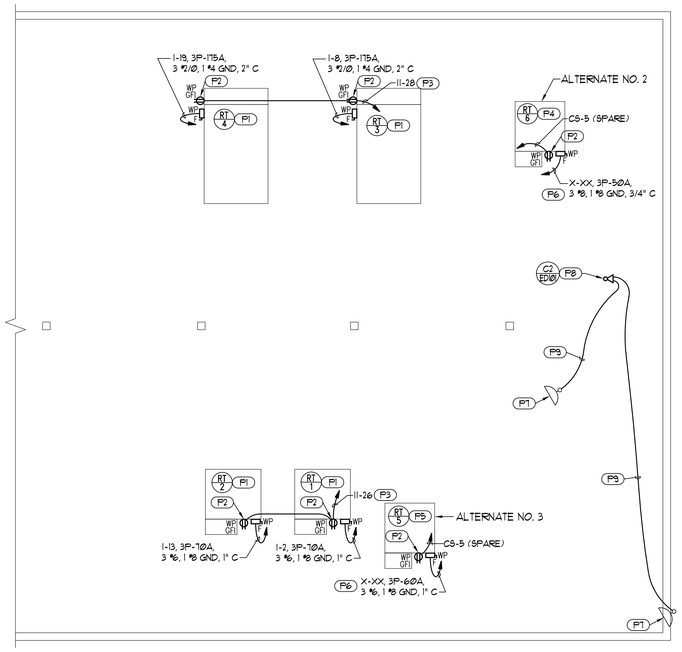


A1 FIRST FLOOR ELECTRICAL REFERENCE PLAN

SCALE: 1" = 20'-0"

0 10' 20' 40'

NORTH



A4 ROOF NEW ELECTRICAL PLAN

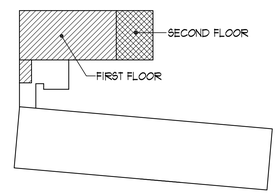
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

NORTH

ROOF PLAN KEYED NOTES:

- P1 CONNECT TO NEW ROOFTOP AC UNIT. COORDINATE WITH MECHANICAL CONTRACTOR TO ALLOW OPERATION OF ONLY ONE UNIT AT A TIME UNTIL EXISTING I.T. COMPUTER ROOM AC UNITS ARE REMOVED.
- P2 DUPLEX GFCI, 20 AMPERE, RECEPTACLE FURNISHED WITH ROOFTOP UNIT TO BE WIRED BY CONTACTOR AS INDICATED.
- P3 PROVIDE TWO NEW 1P-20A SQUARE D TYPE 'QOB' BRANCH CIRCUIT BREAKERS IN EXISTING PANEL 'II' TO SERVE NEW ROOFTOP RECEPTACLES. POWER SHUTDOWN WILL NOT BE ALLOWED FOR EXISTING PANEL 'II' AND NEW BREAKERS WILL BE REQUIRED TO BE INSTALLED WITH THE PANEL ENERGIZED.
- P4 ALTERNATE NO. 2: CONNECT TO NEW ROOFTOP AC UNIT RT/6 INCLUDING SAFETY SWITCH, NEW CIRCUIT BREAKER, AND RECEPTACLES.
- P5 ALTERNATE NO. 3: CONNECT TO NEW ROOFTOP AC UNIT RT/5 INCLUDING SAFETY SWITCH, NEW CIRCUIT BREAKER, AND RECEPTACLES.
- P6 CONNECT NEW OFFICE AREA ROOFTOP UNITS TO THE SAME PANELBOARD SERVING EXISTING ROOFTOP UNIT REMOVED FROM NEAR THE SAME LOCATION. CIRCUITS FOR EXISTING OFFICE AREA ROOFTOP UNITS COULD NOT BE DETERMINED. CONTRACTOR TO FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK. INCLUDE MINIMUM 150 FEET OF NEW BRANCH CIRCUIT WIRING AND CONDUIT FOR EACH UNIT. IMMEDIATELY NOTIFY THE ARCHITECT IF LENGTH EXCEEDS 150 FEET. PROVIDE NEW BRANCH CIRCUIT BREAKERS OF RATINGS INDICATED IN EXISTING PANEL AND PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX TO REFLECT CHANGES IN CIRCUITING.
- P7 EXISTING SATELLITE DISH TO REMAIN.
- P8 NEW WEATHERHEAD.
- P9 RELOCATE EXISTING COAXIAL CABLES FROM SATELLITE DISH THROUGH NEW WEATHERHEAD. FIELD VERIFY TERMINATION POINT OF EXISTING CABLES WITHIN BUILDING. COORDINATE REQUIREMENTS WITH OWNER.



KEY PLAN

NO SCALE

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COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
HFSA PROJECT NO:	0612.01
CAD DWG FILE NO:	0612 E-101
DRAWN BY:	W.B.G.
CHECKED BY:	R.G.K.
DESIGNED BY:	W.B.G.
DWG TYPE:	ELECTRICAL
ARCHITECTURAL PHASE:	CONSTRUCTION BID DOCUMENTS

SHEET TITLE

ELECTRICAL AND FIRE ALARM PLANS

E-101

SHEET 12 OF 14

EXISTING PANEL 'A1'
GENERAL ELECTRIC TYPE 'AQ' WITH TYPE 'THQB' BREAKERS
3 POLE 125 AMP MAIN LUGS
FED FROM 36 KVA 'UPS1'
10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
43	1	30	DAVE TAYLOR RACK			855	1,530			675			CISCO NTWK RACK (1)	1	30	44
45	2	30	BLADE POWER SUPPLY A (1)			360		640		280			BLADE POWER SUPPLY (1)	2	30	46
47	-	-	(BOTTOM)			360			660	300			(TOP)	-	-	48
49	1	30	RACK C3 PDU L5-30			720	1,045			325			BLADE POWER SUPPLY B (1)	2	30	50
51	1	30	RACK C3 PDU L5-30			1,360		1,735		375			(BOTTOM)	-	-	52
53	1	30	RACK C3 PDU L5-30			1,680			1,935	255			CISCO 6500 ROUTER (1)	1	20	54
55	1	30	L5-30 ??			0	265			265			CISCO 6500 ROUTER (1)	1	20	56
57	1	20	NORTH RACK			1,755		1,865		110			5C IN	1	20	58
59	2	20	3A OUT			75			415	340			5A IN, LAN2 SW	1	20	60
61	-	-	-			35	335			300			5B IN, OPS SK	1	20	62
63	2	20	4A IN			900		1,860		960			1B IN C3	1	30	64
65	-	-	-			995			1,955	960			2A IN C1	1	30	66
67	2	20	4B OUT			15	1,335			1,320			2B IN C1	1	30	68
69	-	-	-			25		785		760			3B IN C2, L6-20	2	20	70
71	1	30	1A IN			820			1,600	780			-	-	-	72
							4,510	6,885	6,565							
			TOTAL CONNECTED LOAD:				17,960 VA		50 AMPS							
			CALCULATED FEEDER DEMAND, NEC 220:				22,450 VA		62 AMPS				FEEDER: 4 #1, 1 #6 GND, 1-1/2" C (VERIFY)			

NOTES:
(1) EXISTING CIRCUIT CONNECTED BY 'SD' CORD. REPLACE WITH NEW LIQUID-TIGHT FLEXIBLE STEEL CONDUIT. FIELD VERIFY QUANTITY.
(2) CIRCUIT LOADS ARE SPOT MEASUREMENTS FROM JANUARY 6, 2006 POWER SYSTEM ANAYLSIS. FEEDER DEMAND CALCULATED AT 125%

EXISTING PANEL 'A2'
GENERAL ELECTRIC TYPE 'AQ' WITH TYPE 'THQB' BREAKERS
3 POLE 225 AMP MAIN LUGS
FED FROM 64 KVA 'UPS2'
10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	2	30	SUN L6-30			1,080	8,575			7,495			PANEL 'A3'	3	100	2
3	-	-	-			1,140		10,250		9,110			-	-	-	4
5	1	20	BILL CISCO RACK WEST			40			7,790	7,750			-	-	-	6
7	2	30	BLADE TOP SUPPLY (1)			385	1,310			925			DELNI	1	20	8
9	-	-	-			445		540		95			NORTH SRV STRIPS/JUKE BOX	1	30	10
11	1	20	SOUTH SRV STRIPS #2, #3			1,490			1,505	15			SOUTH SRV STRIPS #1	1	20	12
13	3	100	NEW PANEL 'A4' (3)			60	1,200			1,140			NIMS	1	30	14
15	-	-	-			520		1,660		1,140			NIMS	1	30	16
17	-	-	-			605			1,685	1,080			NIMS	1	30	18
19	1	30	C5 - 30 AMP PDU			695	755			60			4 REGULAR 110	1	20	20
21	1	30	BACKUP EXEC RACK 213			85		195		110			NORTH PLUGMOLD	1	20	22
23	2	30	SUN L6-30 (1)			1,010			1,875	865			SPARE	1	30	24
25	-	-	-			915	1,095			180			EAST PLUGMOLD	1	30	26
27	1	20	BACKUP SRV & TAPES			565		1,250		685			HP CABINET PDU	1	30	28
29	1	20	SD WALL ??			195			230	35			HP CABINET CAVE	1	30	30
31	1	20	SD WALL ??			25	1,755			1,730			SPARE	1	20	32
33	1	20	SD WALL ??			915		1,000		85			SPARE	1	20	34
35	1	20	OUTLETS #A			890			2,225	1,335			SC HP UNIV	1	30	36
37	1	30	OUTLETS #B			2,760	2,955			195			C5 HP UNIV	1	30	38
39	1	30	OUTLETS #B			1,320		1,395		75			OUTLETS #A	1	30	40
41	1	30	CISCO NTWK RACK #C			840			1,500	660			OUTLETS #C RUSSELL RACKS	1	30	42
							17,645	16,290	16,810							
			TOTAL CONNECTED LOAD:				50,745 VA		141 AMPS							
			CALCULATED FEEDER DEMAND, NEC 220:				63,431 VA		176 AMPS				FEEDER: 4 #3/0, 1 #4 GND, 2" C (VERIFY)			

NOTES:
(1) EXISTING CIRCUIT CONNECTED BY 'SD' CORD. REPLACE WITH NEW LIQUID-TIGHT FLEXIBLE STEEL CONDUIT. FIELD VERIFY QUANTITY.
(2) CIRCUIT LOADS ARE SPOT MEASUREMENTS FROM JANUARY 6, 2006 POWER SYSTEM ANAYLSIS. FEEDER DEMAND CALCULATED AT 125%
(3) PROVIDE NEW 3P-100A GENERAL ELECTRIC TYPE 'THQB' BREAKER TO SERVE NEW PANEL 'A4'. RECONNECT EXISTING CIRCUITS TO NEW PANEL 'A4'.

EXISTING PANEL 'A3'
GENERAL ELECTRIC TYPE 'AQ' WITH TYPE 'THQB' BREAKERS
3 POLE 225 AMP MAIN LUGS
3P-100A MAIN IN PANEL 'A2'
10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	2	30	SUN 3 (1)			360	865			505			SUN 1 (1)	2	30	2
3	-	-	-			410		940		530			-	-	-	4
5	2	30	SUN 4800 (1)			600			1,010	410			SUN 2 (1)	2	30	6
7	-	-	-			660	1,130			470			-	-	-	8
9	2	30	SUN 4800 (1)			1,045		1,885		840			SUN 2 (1)	2	30	10
11	-	-	-			1,080			2,005	925			-	-	-	12
13	2	30	SUN STREDG (1)			550	1,405			855			SUN 1 (1)	2	30	14
15	-	-	-			630		1,540		890			-	-	-	16
17	2	30	SUN STREDG (1)			600			1,190	590			SUN 3 (1)	2	30	18
19	-	-	-			600	1,260			660			-	-	-	20
21	2	30	SUN 4 (1)			760		1,780		1,020			SUN 4 (1)	2	30	22
23	-	-	-			840			1,960	1,120			-	-	-	24
25	2	30	SUN 5 (1)			960	1,910			950			SUN 5 (1)	2	30	26
27	-	-	-			1,045		2,080		1,035			-	-	-	28
29	2	30	SUN 6 (1)			155			600	445			SUN 6 (1)	2	30	30
31	-	-	-			130	660			530			-	-	-	32
33	2	30	SUN 6 (1)			100		605		505			SUN 7 (1)	2	30	34
35	-	-	-			145			625	480			-	-	-	36
37	2	30	SUN 7 (1)			120	265			145			SUN 7 (1)	2	30	38
39	-	-	-			145		280		135			-	-	-	40
41	1	20	REC, ENTRY 209			180			360	180			REC, ENTRY 209	1	20	42
							7,495	9,110	7,750							
			TOTAL CONNECTED LOAD:				24,355 VA		68 AMPS							
			CALCULATED FEEDER DEMAND, NEC 220:				30,444 VA		85 AMPS				FEEDER: 4 #2, 1 #6 GND, 2" C			

NOTES:
(1) EXISTING CIRCUIT CONNECTED BY 'SD' CORD. REPLACE WITH NEW LIQUID-TIGHT FLEXIBLE STEEL CONDUIT.
(2) CIRCUIT LOADS ARE SPOT MEASUREMENTS FROM JANUARY 6, 2006 POWER SYSTEM ANAYLSIS. FEEDER DEMAND CALCULATED AT 125%

NEW PANEL 'A4'
TYPE 'AQ', BOLT-ON BREAKERS
3 POLE 225 AMP MAIN LUGS
3P-100A MAIN IN PANEL 'A2'
10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

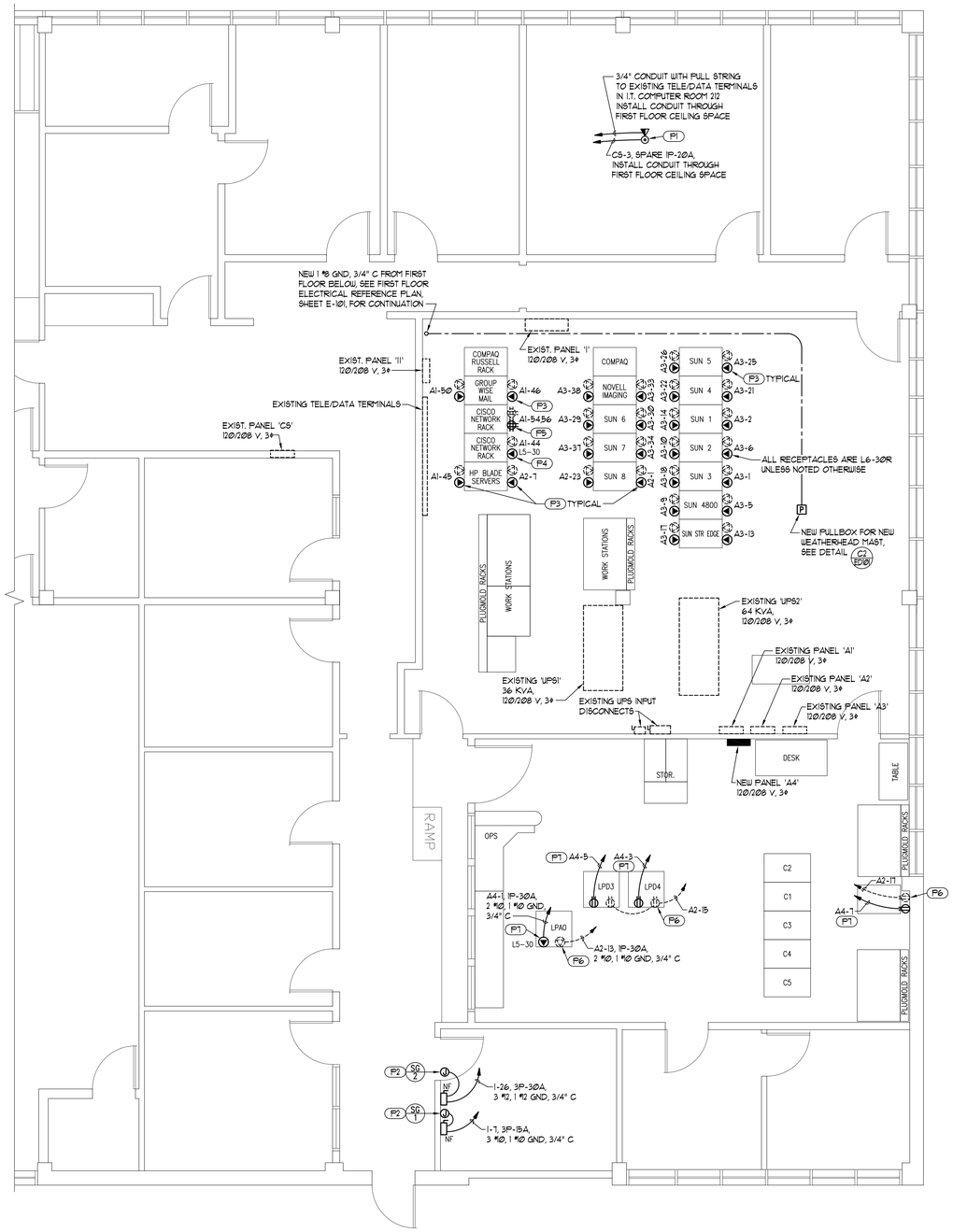
CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	30	LPAD (1), (2)			60	60						SPARE	1	20	2
3	1	20	LPD4 (1), (2)			520		520					SPARE	1	20	4
5	1	20	LPD3 (1), (2)			520			605	85			DANS RACK/GODZILLA (1)(2)	1	20	6
7	2	30	SPARE				0						SPARE	2	30	8
9	-	-	-					0					-	-	-	10
11	2	30	SPARE						0				SPARE	2	30	12
13	-	-	-				0						-	-	-	14
15	2	30	SPARE					0					SPARE	2	30	16
17	-	-	-						0				-	-	-	18
19	1		SPACE				0						SPACE	1		20
21								0								22
23									0							24
25							0									26
27								0								28
29									0							30
31							0									32
33								0								34
35									0							36
37							0									38
39								0								40
41	1		SPACE						0				SPACE	1		42
							60	520	605							
			TOTAL CONNECTED LOAD:				1,185 VA		3 AMPS							
			CALCULATED FEEDER DEMAND, NEC 220:				1,481 VA		4 AMPS				FEEDER: 4 #2, 1 #6 GND, 2" C			

NOTES:
(1) EXISTING CIRCUIT TO BE RECONNECTED FROM FROM EXISTING PANEL 'A2' TO ALLOW INSTALLATION OF NEW FEEDER BREAKER.
(2) CIRCUIT LOADS ARE SPOT MEASUREMENTS FROM JANUARY 6, 2006 POWER SYSTEM ANAYLSIS. FEEDER DEMAND CALCULATED AT 125%

EXISTING PANEL 'CS'
SQUARE D TYPE 'NQOD' WITH 'QOD' BREAKERS
3 POLE 225 AMP MAIN LUGS
3P-175A MAIN IN PANEL 'LDP3'
10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
FLUSH MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	*			1,500	1,500			0			TVSS	3	30	2
3			FLOOR REC, CONF. 210D	1		180		180		0			-	-	-	4
5			REC ON ROOF, RT-5, RT-6	2		360			360	0			-	-	-	6
7			*			1,000	2,000			1,000			*	1	20	8
9			*			1,000		2,000		1,000			*			10
11			*			1,000			2,000	1,000			*			12
13			LTS, 210B - 210E	10		1,020	2,520			1,500			PAINTING LTS *			14
15			LECTURE LTS, RM 219A *			1,500		3,000		1,500			LTS, RM 222A *			16
17			LECTURE LTS, RM 219A *			1,500			3,000	1,500			CERARVICS *			18
19			CERARVICS *			1,500	1,700			200			CLOCK *			20
21			REC, 220, 221, 222, 211A *			1,000		2,000		1,000			*			22
23			LTS, 209, 210, 211, 211A-C	14		940			1,940	1,000			*			24
25			LTS, 211D-G, 213A-B, OUTSIDE	9		990	1,990			1,000			*			26
27			RELAY TRANSFORMER *			250		1,250		1,000			REC, RM 219 *			28
29	1	20	LTS, EAST HALL *			1,500			2,500	1,000			REC, 211F, 213A, 213B *	1	20	30
							9,710	8,430	9,800							
			TOTAL CONNECTED LOAD:				27,940 VA		78 AMPS							
			CALCULATED FEEDER DEMAND, NEC 220:				32,740 VA		91 AMPS				FEEDER: 3 #2/0, 1 #1 N, 2-1/2" C			

NOTES:
+ PROVIDE NEW LABELS FOR CIRCUIT BREAKERS TO MATCH CONVENTIONAL BREAKER NUMBERING AND PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX TO MATCH REVISED BREAKER NUMBERING.
* FIELD VERIFY LOCATION AND LOAD SERVED BY ALL EXISTING BREAKERS AND INDICATE ON NEW TYPEWRITTEN CIRCUIT INDEX USING CURRENT ROOM NUMBERING. CIRCUIT LOAD IS ESTIMATED.



A3 ENLARGED SECOND FLOOR POWER PLAN
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

NORTH

GENERAL ELECTRICAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEETS ED101 & E-101.
2. SEE FIRE ALARM SYSTEM NOTES, SHEET E-101.
3. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
4. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN COMPUTER ROOMS TO NOT DISCONNECT ANY ELECTRICAL OR COMMUNICATION CONNECTIONS TO EXISTING COMPUTER EQUIPMENT.

CONSTRUCTION SEQUENCE AND POWER OUTAGE NOTES:

1. POWER OUTAGES TO PANELS SERVING THE COMPUTER ROOMS HVAC SYSTEMS, IT NETWORK COMPUTER EQUIPMENT, OR WHICH WILL OTHERWISE AFFECT CONTINUOUS OPERATION OF THE IT NETWORK SYSTEM WILL NOT BE ALLOWED EXCEPT ONE, AND ONLY ONE, POWER SHUT DOWN WILL BE ALLOWED. THE POWER SHUT DOWN IS TENTATIVELY SCHEDULED FOR OCTOBER 20, 2006 WHICH IS THE PREFERRED DATE FOR THE IT NETWORK SYSTEM SHUT DOWN.
2. PRIOR TO THE COMPUTER ROOM POWER SHUT DOWN THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK:
   - MAKE ALL ELECTRICAL CONNECTIONS TO NEW COMPUTER ROOM ROOFTOP AIR CONDITIONING UNITS AND REMOVE ELECTRICAL SERVICE TO EXISTING COMPUTER ROOM AC UNITS. THIS WILL REQUIRE INSTALLATION OF NEW CIRCUIT BREAKERS IN EXISTING PANELS 'I' & 'II' WITH PANELS ENERGIZED. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THE SAFETY OF WORKERS AND BUILDING OCCUPANTS WHILE WORKING ON THE ENERGIZED PANELS.
   - INSTALL ALL NEW COMPUTER EQUIPMENT RECEPTACLES IN ROOM 212 COMPLETE WITH NEW CONDUIT, WIRING, AND CONDUIT CONNECTORS. LEAVE SUFFICIENT LIQUID-TIGHT FLEXIBLE STEEL CONDUIT COILED IN RAISED FLOOR SPACE, READY FOR FINAL CONNECTION TO EXISTING PANELS.
   - INSTALL NEW PANEL 'A4' WITH NEW FEEDER CONDUIT INSTALLED TO EXISTING PANEL 'A2'. NEW FEEDER CONDUCTORS DO NOT NEED TO BE INSTALLED BUT SHALL BE AT THE PROJECT SITE.
   - INSTALL NEW RECEPTACLES IN ROOM 213 COMPLETE WITH CONNECTIONS TO NEW PANEL 'A4'.
   - VERIFY ALL WIRE CONNECTORS AND ALL OTHER ACCESSORIES NECESSARY FOR ALL FINAL ELECTRICAL CONNECTIONS ARE AVAILABLE AND AT THE PROJECT SITE.
3. ALLOW MINIMUM 2 HOURS PRIOR TO POWER SHUT DOWN FOR OWNER TO SHUT DOWN THE IT NETWORK SYSTEM. POWER OUTAGE FOR COMPUTER ROOM PANELS 'A1', 'A2', AND 'A3' MAY BE TAKEN ONLY AFTER THE IT NETWORK SYSTEM IS SUCCESSFULLY SHUT DOWN.
4. DURING THE POWER OUTAGE THE CONTRACTOR SHALL:
   - DISCONNECT ALL EXISTING CORD CONNECTED CIRCUITS FROM EXISTING COMPUTER ROOM PANELS AND CONNECT NEW CIRCUIT CONDUIT AND WIRING.
   - INSTALL NEW CIRCUIT BREAKER AND FEEDER CONDUCTORS FOR PANEL 'A4'.
5. RESTORE POWER AFTER ALL NEW ELECTRICAL CONNECTIONS ARE MADE AND CHECK ALL NEW CIRCUITS FOR FAULTS AND PROPER WIRING CONNECTIONS.
6. RECONNECT ALL EXISTING COMPUTER EQUIPMENT FROM EXISTING RECEPTACLES TO NEW RECEPTACLES.
7. ALLOW MINIMUM 2 HOURS FOR OWNER TO BRING THE IT NETWORK SYSTEM BACK ON LINE.
8. AFTER THE POWER OUTAGE AND SUCCESSFUL RESTORATION OF THE IT NETWORK SYSTEM, REMOVE EXISTING CORD CONNECTED RECEPTACLES AND ALL EXISTING CORDS BEING CAREFUL NOT TO DISRUPT CONNECTIONS TO ANY EXISTING COMPUTER EQUIPMENT.

POWER PLAN KEYED NOTES:

P1 PROVIDE NEW FIRE-RATED POKE-THROUGH OUTLET WITH ONE 20 AMPERE DUPLEX RECEPTACLE, PROVISIONS FOR TWO RJ45 8 WIRE TELE/DATA COUPLERS, BRASS FINISH, AND BRASS CARPET FLANGE. SEE SPECIFICATION SECTION 16140. CORE-DRILL EXISTING CONCRETE FLOOR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS TO MAINTAIN FIRE RATING OF CONCRETE FLOOR. REPAIR EXISTING CARPET AS REQUIRED.

P2 NEW STEAM GENERATORS MOUNTED HIGH ON EXISTING WALL. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR. INSTALL SAFETY SWITCHES AT STANDARD HEIGHT, 5'-0"± ABOVE FINISHED FLOOR.

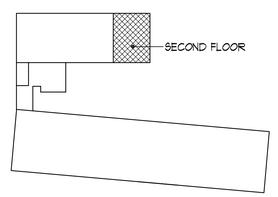
P3 NEW L6-30R RECEPTACLE IN PLENUM RATED OUTLET BOX WITH RAISED INDUSTRIAL COVER IN RAISED FLOOR SPACE OF COMPUTER. CONNECT TO 2P-30A BREAKER INDICATED WITH 2 #0, 1 #0 GND, IN 3/4" LIQUID-TIGHT FLEXIBLE STEEL CONDUIT.

P4 NEW L5-30R RECEPTACLE IN PLENUM RATED OUTLET BOX WITH RAISED INDUSTRIAL COVER IN RAISED FLOOR SPACE. CONNECT TO 1P-30A BREAKER INDICATED WITH 2 #2, 1 #2 GND, IN 3/4" LIQUID-TIGHT FLEXIBLE STEEL CONDUIT.

P5 TWO NEW 5-20R DUPLEX RECEPTACLES IN PLENUM RATED OUTLET BOX WITH RAISED INDUSTRIAL COVER IN RAISED FLOOR SPACE. CONNECT TO (2) 1P-20A BREAKERS INDICATED WITH 4 #2, 1 #2 GND, IN 3/4" LIQUID-TIGHT FLEXIBLE STEEL CONDUIT. PROVIDE SEPARATE NEUTRAL FOR EACH CIRCUIT.

P6 ALL EXISTING RECEPTACLES AND CIRCUITS ARE TO REMAIN ACTIVE UNTIL NEW RECEPTACLES ARE INSTALLED AND READY FOR CONNECTION. FINAL CONNECTION OF NEW RECEPTACLES AND EQUIPMENT CHANGEOVER TO NEW RECEPTACLES SHALL BE DONE AS OUTLINED IN "CONSTRUCTION SEQUENCE AND POWER OUTAGE NOTES" ABOVE, AND SHALL BE SUPERVISED BY THE OWNER.

P7 PROVIDE NEW RECEPTACLES FOR EXISTING EQUIPMENT AND CONNECT TO NEW PANEL 'A4' AS SHOWN. REMOVE EXISTING CIRCUITS TO EXISTING PANEL 'A2' AND REMOVE EXISTING BREAKERS FOR INSTALLATION OF NEW FEEDER BREAKER FOR NEW PANEL 'A4'.



KEY PLAN
NO SCALE

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MARK	DATE	DESCRIPTION

COMPUTER CENTER
AIR CONDITIONING &
ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
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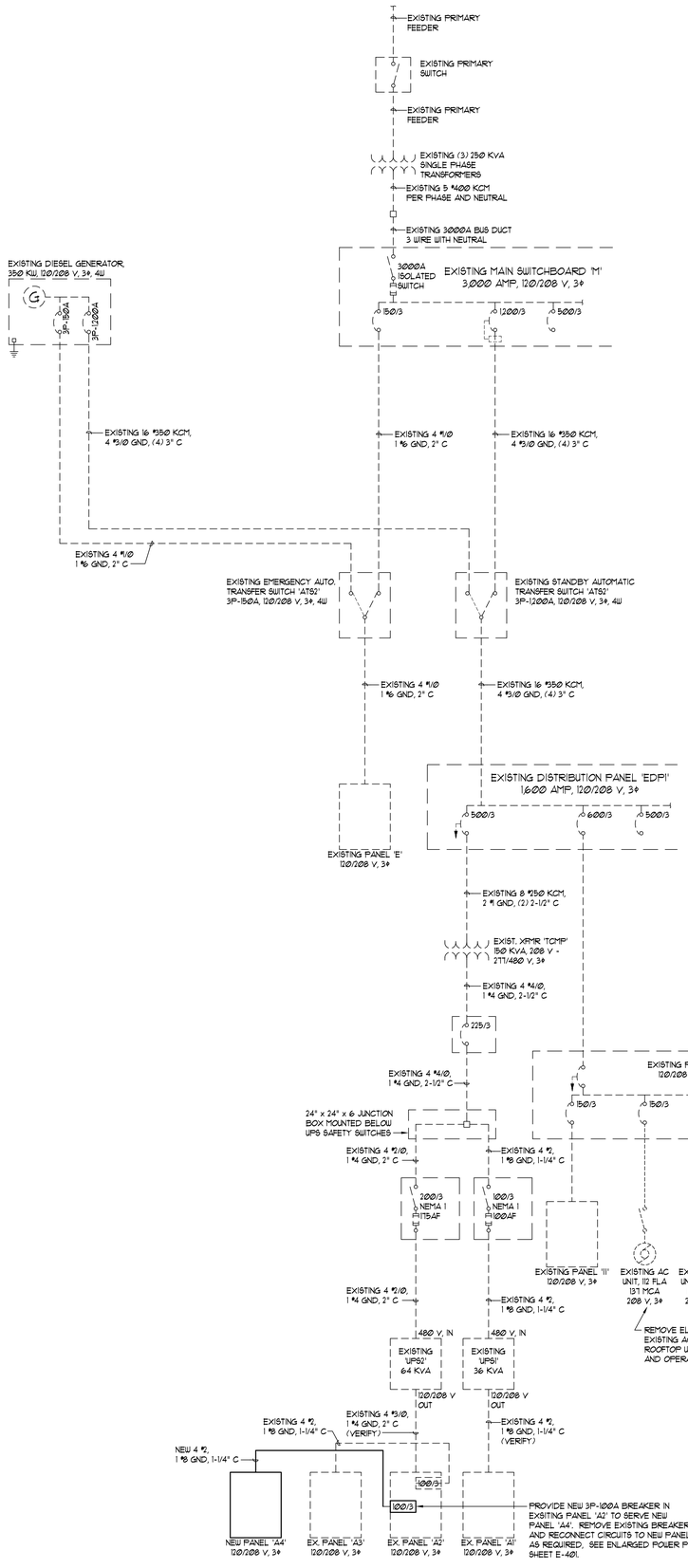
CAD DWG FILE NO:	0612 E-101
DRAWN BY:	W.B.G.
CHECKED BY:	R.G.K.
DESIGNED BY:	W.B.G.
DWG TYPE:	ELECTRICAL
ARCHITECTURAL PHASE:	CONSTRUCTION BID DOCUMENTS

SHEET TITLE

ENLARGED
POWER PLAN AND
PANEL SCHEDULES

E-401

SHEET 13 OF 14



A1 SINGLE LINE DIAGRAM
SCHEMATIC

FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP
F-1	COLUMBIA DAY-BRITE LIGHTOLIER LITHONIA METALUX WILLIAMS	P424-232G-LD12-S-EB8LH-120 2P3GS-232-26SL-120-1/2-EB10 DPS2G12LS232-120-H1 2PM3GB-232-12LD-120-GEB10 2EP3GX-232S261-120-TEB81 HE3G-B24-232-26S-EBLH2-120	2' x 4', 2 LAMP, LAY-IN FLUORESCENT FIXTURE WITH FLOATING DOOR WITH BLACK REVEAL, 3" DEEP, 12 CELL LOW IRIDESCENCE SEMI-SPECULAR ALUMINUM LOUVER AND ONE 2 LAMP, 120 VOLT, <10% THD ELECTRONIC BALLAST.	2F32T8/TL841
F-2	COLUMBIA DAY-BRITE LIGHTOLIER LITHONIA METALUX WILLIAMS	P424-332G-LD18-S-EB8LH-120 2P3GS-332-36SL-120-1/21-EB10 DPS2G18LS332-120-H1 2PM3GB-332-18LD-120-GEB10 2EP3GX-332S361-120-TEB82 HE3G-B24-332-36S-EBLH2/1-120	2' x 4', 3 LAMP, LAY-IN FLUORESCENT FIXTURE WITH FLOATING DOOR WITH BLACK REVEAL, FULL 3" DEEP, 18 CELL LOW IRIDESCENCE SEMI-SPECULAR ALUMINUM LOUVER AND ONE 2 LAMP & ONE 1 LAMP, 120 VOLT, <10% THD ELECTRONIC BALLASTS WIRED FOR INBOARD/OUTBOARD LAMP OPERATION.	3F32T8/TL841
F-3	COLUMBIA DAY-BRITE LIGHTOLIER LITHONIA METALUX WILLIAMS	P424-432G-LD24-S-EB8LH-120 2P3GS-432-46SL-120-2/2-EB10 DPS2G24LS432-120-H1 2PM3GB-432-24LD-120-GEB10 2EP3GX-432S461-120-TEB82 HE3G-B24-432-46S-EBLH2/2-120	2' x 4', 4 LAMP, LAY-IN FLUORESCENT FIXTURE WITH FLOATING DOOR WITH BLACK REVEAL, FULL 3" DEEP, 24 CELL LOW IRIDESCENCE SEMI-SPECULAR ALUMINUM LOUVER AND TWO 2 LAMP, 120 VOLT, <10% THD ELECTRONIC BALLASTS WIRED FOR INBOARD/OUTBOARD LAMP OPERATION.	4F32T8/TL841
F-4	CAPRI DMF LIGHTING LIGHTOLIER LITHONIA PORTFOLIO PRESCOLITE	CM9-FV26-U-WB5 DMFV9-126-DB26 8022CL-7132BU AFV-26TRT-BAR-LD-120 C7032-E-700D-L1 CFTB32EB-STFB02	RECESSED COMPACT FLOURESCENT DOWNLIGHT WITH SPECULAR CLEAR LOW IRRIDESCENT ALZAK REFLECTOR, NOMINAL 8" DIAMETER APERATURE AND 120 VOLT <10% THD ELECTRONIC BALLAST.	1CFM26W/41K
F-5	COLUMBIA DAY-BRITE LIGHTOLIER LITHONIA METALUX WILLIAMS	WCB-232-4EB8LH-120 TCAN-232-120-1/4-EB10 JSBA232-120-H4 TLB232-120-1/4-GEB10 8TWS232A-120-TEB81 17-B-432-A-EBLH4-120	8 FT, 2 LAMP ROW SURFACE MOUNTED 'WRAPAROUND' FLUORESCENT FIXTURE WITH ACRYLIC PRISMATIC LENS AND ONE 4 LAMP, 120 VOLT, <10% THD ELECTRONIC BALLAST	4F32T8/TL841
F-6	COLUMBIA DAY-BRITE HOLOPHANE METALUX SPECLIGHT	LHR4-332-15-EB8LH-120-LHRNWG IK-A-332-120-1/21EB10/IK173 IWT04-DSWGU-043-EP2-10%THD-1 18-332-G-WG-UNV-TEB82-UPL FH14-332-S1DEOU-MVOLT-GEB10-WG	SUSPENDED 4 FT LONG FLUORESCENT FIXTURE WITH WHITE FINISH, WHITE PAINTED REFLECTOR, WIRE GRILLE, AND ONE 1 LAMP AND ONE 2 LAMP, 120 VOLT, <10% THD ELECTRONIC BALLASTS WIRED FOR INBOARD/ OUTBOARD LAMP OPERATION.	3F32T8/TL841
F-7	EXITRONIX LIGHTOLIER LITHONIA MCPHILBEN PRESCOLITE SURE-LITES	G40DU-LB-WW LD-A-1-G-W LE-S-W-1-G-120/277 3DVL-1-W-G DMX1GAW CX-6-1-G-W	UNIVERSAL MOUNTED, SINGLE FACE, LIGHT EMITTING DIODE (LED) EXIT LIGHT WITH DIE CAST ALUMINUM HOUSING, WHITE FINISH, GREEN LETTERS ON STENCIL FACE, UNIVERSAL KNOCKOUT CHEVRON ARROWS AND 120/277 DUAL VOLTAGE INPUT.	FURNISHED W/ FIXTURE
F-8	EXITRONIX LIGHTOLIER LITHONIA MCPHILBEN PRESCOLITE SURE-LITES	G40DU-LB-WW LD-A-2-G-W LE-S-W-2-G-120/277 3DVL-2-W-G DMX2GAW CX-6-2-G-W	SAME AS F-2 EXCEPT DOUBLE FACED	FURNISHED W/ FIXTURE

NOTE:
PROVIDE EXTRA STOCK OF SPARE LAMPS, LENSES, AND LOUVERS. SEE SPECIFICATION SECTION 16500.

EXISTING PANEL 'I' — 10,000 A.I.C., FULLY RATED
SQUARE D TYPE 'HCM', I-LINE WITH TYPE 'FA' & 'KA' BREAKERS — 120/208 VOLT, 3 PHASE, 4 WIRE
3 POLE 600 AMP SHUNT TRIP MAIN BREAKER — 3P-600A MAIN IN PANEL 'EDP1' — SURFACE MOUNTED

CIR NO.	P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	3	20	TVSS			0	5,880			5,880			ROOFTOP UNIT RT-1 (4)	3	70	2
3	-	-	-			0		5,880		5,880			-	-	-	4
5	-	-	-			0			5,880	5,880			-	-	-	6
7	3	15	HUMIDIFIER SG-1 (4)			925	19,525			18,600			ROOFTOP UNIT RT-3 (5)	3	175	8
9	-	-	-			925		19,525		18,600			-	-	-	10
11	-	-	-			925			19,525	18,600			-	-	-	12
13	3	70	ROOFTOP UNIT RT-2 (4)			5,880	5,880						SPACE	1		14
15	-	-	-			5,880		6,850		970		12	ROOM 213 LIGHTING	1	20	16
17	-	-	-			5,880			6,840	960		16	ROOM 212 LIGHTING	2	20	18
19	3	175	ROOFTOP UNIT RT-4 (5)			18,600	19,265			665		19	ROOM 212 LIGHTING	-	-	20
21	-	-	-			18,600		18,600		0			SHUNT TRIP CONTROL	2	20	22
23	-	-	-			18,600			18,600				SPARE	-	-	24
25	3	50	SPARE				2,640			2,640			HUMIDIFIER SG-2 (3)	3	30	26
27	-	-	-					2,640		2,640			-	-	-	28
29	-	-	-						2,640	2,640			-	-	-	30
31	3	100	SPARE				0						SPARE	3	50	32
33	-	-	-					0					-	-	-	34
35	-	-	-						0				-	-	-	36
37	3	100	SAC-3 (2)			9,120	22,560			13,440			SAC-1 (2)	3	150	32
39	-	-	-			9,120		22,560		13,440			-	-	-	34
41	-	-	-			9,120			22,560	13,440			-	-	-	36
43	3	150	PANEL 'II' (1)			12,000	25,440			13,440			SAC-2 (2)	3	150	38
45	-	-	-			12,000		25,440		13,440			-	-	-	40
47	-	-	-			12,000			25,440	13,440			-	-	-	42
							101,190	101,495	101,485							

TOTAL CONNECTED LOAD: 304,170 VA 844 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 137,329 VA 381 AMPS FEEDER: 8 #350 KCM, 2 #1/0 GND, (2) 3" C

NOTES:
(1) ESTIMATED LOAD FOR EXISTING PANEL 'II', CALCULATED AS NON-CONTINUOUS LOAD WITH 100% FEEDER DEMAND.
(2) EXISTING I.T. COMPUTER ROOM AC UNIT TO BE REMOVED. LOAD IS EXCLUDED FROM CALCULATED FEEDER DEMAND. LABEL BREAKER AS 'SPARE'
(3) CONNECT NEW EQUIPMENT TO EXISTING SPARE BREAKER.
(4) PROVIDE NEW SQUARE D TYPE 'FA' BRANCH CIRCUIT BREAKER, RATING AS INDICATED, TO SERVE NEW EQUIPMENT. INSTALL BREAKER WITH PANEL ENERGIZED.
(5) PROVIDE NEW SQUARE D TYPE 'KA' BRANCH CIRCUIT BREAKER, RATING AS INDICATED, TO SERVE NEW EQUIPMENT. INSTALL BREAKER WITH PANEL ENERGIZED.

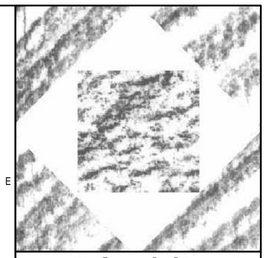
SYMBOL LIST

SYMBOL	DESCRIPTION
	NEW CEILING MOUNTED FIXTURE
	NEW WALL MOUNTED FIXTURE
	NEW RECESSED FIXTURE
	NEW FLUORESCENT FIXTURE
	NEW EXIT LIGHT WITH ARROW INDICATING DIRECTION OF EXIT
	EXISTING CEILING MOUNTED FIXTURE
	EXISTING WALL MOUNTED FIXTURE
	EXISTING RECESSED FIXTURE
	EXISTING FLUORESCENT FIXTURE
	EXISTING EXIT LIGHT
EM	FIXTURE CONNECTED TO UNSWITCHED EMERGENCY LIGHTING BRANCH CIRCUIT
$	NEW SINGLE POLE SWITCH
$3	NEW THREE WAY SWITCH
$M	NEW DUAL LEVEL OCCUPANCY SENSOR WALL SWITCH
$M2	NEW OCCUPANCY SENSOR WALL SWITCH
	NEW CEILING MOUNTED OCCUPANCY SENSOR
SP	NEW OCCUPANCY SENSOR SWITCHPACK
$E	EXISTING SINGLE POLE SWITCH
$3E	EXISTING THREE WAY SWITCH
J	NEW JUNCTION BOX
J	EXISTING JUNCTION BOX
	NEW DUPLEX CONVENIENCE OUTLET
	NEW DOUBLE DUPLEX CONVENIENCE OUTLET
	EXISTING DUPLEX CONVENIENCE OUTLET
	EXISTING DOUBLE DUPLEX CONVENIENCE OUTLET
GFI	OUTLET WITH GROUND FAULT CIRCUIT INTERRUPTER
EWC	OUTLET FOR ELECTRIC WATER COOLER
L6-30	NEW SPECIAL PURPOSE OUTLET WITH NEMA DESIGNATION
L6-30	EXISTING SPECIAL PURPOSE OUTLET WITH NEMA DESIGNATION
	NEW COMBINATION FLOOR OUTLET, DUPLEX RECEPTACLE AND TELEPHONE/DATA
	NEW POWER PANELBOARD, 120/208 VOLT, 3 PHASE
	EXISTING POWER PANELBOARD, 120/208 VOLT, 3 PHASE
A-1352	NEW 3 PHASE, 4 WIRE HOMERUN INDICATING PANEL AND CIRCUIT NUMBERS
	NEW BRANCH CIRCUIT CONCEALED IN WALL OR CEILING
	NEW BRANCH CIRCUIT CONCEALED IN FLOOR OR WALL
	NEW BRANCH CIRCUIT EXPOSED ON WALL OR CEILING
	EXISTING BRANCH CIRCUIT
	NEW MOTOR
	NEW MAGNETIC MOTOR STARTER
F	NEW DISCONNECT SWITCH, 'F' INDICATES FUSED
$TH	NEW MANUAL MOTOR STARTING SWITCH W/ THERMAL OVERLOAD PROTECTION
	EXISTING MOTOR
	EXISTING MAGNETIC MOTOR STARTER
F	EXISTING DISCONNECT SWITCH, 'F' INDICATES FUSED
$ET	EXISTING MANUAL MOTOR STARTING SWITCH W/ THERMAL OVERLOAD PROTECTION
RT 1	EQUIPMENT SCHEDULE SYMBOL
F-2	FIXTURE SCHEDULE SYMBOL
	EXISTING FIRE ALARM SYSTEM CONTROL PANEL
	EXISTING SMOKE DETECTOR
	NEW OR RELOCATED SMOKE DETECTOR
F	EXISTING MANUAL PULL STATION
M	EXISTING ADDRESSABLE MONITOR MODULE
C	EXISTING ADDRESSABLE CONTROL MODULE
C	NEW ADDRESSABLE CONTROL MODULE
R	NEW FIRE SAFETY FUNCTION CONTROL RELAY
	EXISTING COMBINATION HORN/STROBE
Bcd	NEW COMBINATION HORN/STROBE INDICATING MINIMUM EFFECTIVE CANDLEPOWER
1	KEYED NOTE SYMBOL
102	ROOM NUMBER
C1 E-101	DETAIL NUMBER OR SECTION LETTER
	SHEET ON WHICH DETAIL OR SECTION IS SHOWN
WP	INDICATES ITEM IN WEATHERPROOF (NEMA 3R MINIMUM) ENCLOSURE

EQUIPMENT SCHEDULE

EQUIP. NO.	DESCRIPTION	CIRCUIT NUMBER	VOLTS	PHASE	WATTS H.P.	BREAKER	STARTERS FURNISH	STARTERS INSTALL	STARTERS SIZE	AUX. CONT.	LOCATION
RT 1	ROOFTOP AIR CONDITIONER	1-2	208	3	49 AMPS	3P-70A	M	M	M	-	ON ROOF
RT 2	ROOFTOP AIR CONDITIONER	1-3	208	3	49 AMPS	3P-70A	M	M	M	-	ON ROOF
RT 3	ROOFTOP AIR CONDITIONER	1-8	208	3	155 AMPS	3P-175A	M	M	M	-	ON ROOF
RT 4	ROOFTOP AIR CONDITIONER	1-13	208	3	155 AMPS	3P-175A	M	M	M	-	ON ROOF
RT 5	ROOFTOP AIR CONDITIONER ADDITIVE ALTERNATE NO. 3	FIELD VERIFY	208	3	35 AMPS	3P-60A	M	M	M	-	ON ROOF
RT 6	ROOFTOP AIR CONDITIONER ADDITIVE ALTERNATE NO. 2	FIELD VERIFY	208	3	28 AMPS	3P-50A	M	M	M	-	ON ROOF
SG 1	ELECTRIC STEAM GENERATOR	1-7	208	3	7.7 AMPS	3P-15A	M	M	M	-	ROOM 211F
SG 2	ELECTRIC STEAM GENERATOR	1-26	208	3	22 AMPS	3P-30A	M	M	M	-	ROOM 211F

E - ELECTRICAL CONTRACTOR
M - MECHANICAL CONTRACTOR



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COMPUTER CENTER AIR CONDITIONING & ELECTRICAL UPGRADES

WEBER STATE UNIVERSITY
Ogden, Utah

MARK	DATE	DESCRIPTION

DATE:	26 JUNE 2006
DFCM PROJECT NO:	06167810
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CAD DWG FILE NO:	0621 E-601.dwg
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DESIGNED BY:	W.B.G.
DWG TYPE:	ELECTRICAL
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SHEET TITLE

SINGLE LINE DIAGRAM AND SCHEDULES

E-601

SHEET 14 OF 14