CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2008
International Mechanical Code	2006	Uniform Code for Building Conservation	
International Fuel Gas Code	2006	ADA Accessibility Guildelines	ICC/ANSI 117.1 2003
International Plumbing Code	2006		
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: B H-4 H-2

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

B. Seismic Design Category: D Design Wind Speed: 90 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: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: ✓ Nonseparated Uses: 0

F: Sprinklers:
Required: ✓ Provided: ✓
Type of Sprinkler System (IBC 903.3.1) NFPA 13

G: Number of Stories: 2 Building Height: ____

H: Actual Area per Floor (square feet): 41,000 S.F. - FIRST / 8,500 S.F. - SECOND

I: Tabular Area: (table 503): N/A - EXISTING BUILDING - NO CHANGE IN USE

J: Area Modifications:

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

b) Sum of the Ratio Calculations for Mixed Occupancies:

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

c) Total Allowable Area for:
1) One Story: ____
2) Two Story: $A_a(2)$____
3) Three Story: $A_a(3)$____

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

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

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls		0	Floors - Ceiling Floors	0	
Interior Bearing Walls		0	Roofs - Ceiling Roofs	0	
Exterior Non-Bearing Walls		0	Exterior Doors and Windows	0	
Structural Frame		0	Shaft Enclosures	1 Hr.	
Partitions - Permanent		N/A	Fire Walls	N/A	
Fire Barriers		N/A	Fire Partitions	N/A	
			Smoke Partitions	N/A	

L. Design Occupant Load: 94 - WELDING TECH LAB; 77 - SHEET METAL LAB
Exit Width Required: 14.1" > 32" ; 11.6" > 32" Exit Width Provided: 102" ; 102"

M. Minimum Number of Required Plumbing Facilities: N/A - NO CHANGE
a) Water Closets - Required (m) ____ (f) ____ Provided (m) ____ (f) ____
b) Urinals - Required (m) ____ (f) ____ Provided (m) ____ (f) ____
c) Lavatories - Required (m) ____ (f) ____ Provided (m) ____ (f) ____
d) Bath Tubs or Showers: ____
e) Drinking Fountains: ____ Service Sinks: ____

FOOTNOTES:

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

PROJECT TEAM

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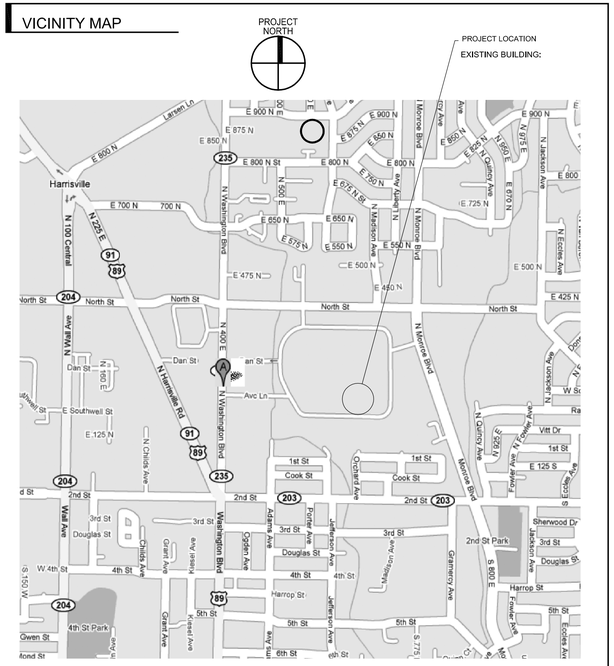
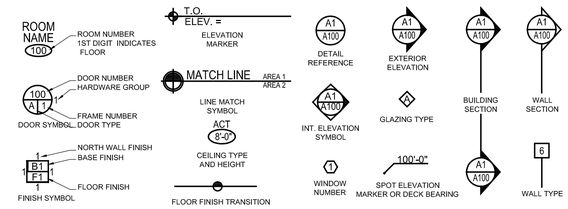
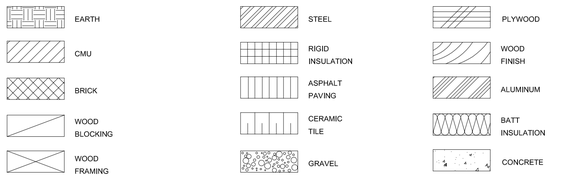
VICINITY MAP



SYMBOL LEGEND



GRAPHIC SYMBOLS



PROJECT PHASING

SHEET METAL LAB
1. PROVIDE TWO WEEKS NOTICE PRIOR TO BEGINNING CONSTRUCTION.
2. OWNER TO: RELOCATE PRESS BRAKE, SHEAR, ROLLS AND OTHER EQUIPMENT OUT OF 30' X 60' CRANE AREA
3. RECONNECT ELECTRICAL TO ABOVE EQUIPMENT.
4. DEMO INTERIOR ROLL-UP DOOR, MAN-DOOR, BOLLARD AND OVERHEAD MONORAIL.
5. RAISE OVERHEAD LIGHTING ABOVE THE NEW CRANE LOCATION.
6. INSTALL OVERHEAD CRANE.
7. CUT DOORWAY FROM NEW LOCKER ROOM TO WELDING LAB
8. INSTALL ELECTRICAL DISCONNECTS AT THE SOUTHEAST CORNER OF THE SHEET METAL LAB.
9. PROVIDE NEW FINISHES IF ALTERNATE #1 IS ACCEPTED.
10. PROVIDE NOTICE TO OWNER TWO WEEKS BEFORE WORK IS COMPLETE.

WELDING LAB
1. PROVIDE TWO WEEKS NOTICE PRIOR TO BEGINNING CONSTRUCTION.
2. START CONSTRUCTION AT THE REAR OF THE WELDING SHOP
3. INSTALL THE NEW ELECTRICAL PANEL AND HOME-RUN THE SWITCHGEAR ROOM ONLY. WAIT UNTIL THE EQUIPMENT IS IN FINAL POSITION TO MAKE ELECTRICAL CONNECTIONS.
4. PROVIDE TWO WEEKS NOTICE FOR OWNER TO MOVE ALL EQUIPMENT, LOCKERS, RACKS, & ETC.
5. CLEAN AND PREP ALL SURFACES AND PAINT ALL SCHEDULED SURFACES.
6. CLEAN CONTROL JOINTS AND CRACKS AND CAULK .
7. WHEN THE OWNER HAS PLACED EQUIPMENT, PROVIDE FINAL ELECTRICAL CONNECTIONS.

DRAWING INDEX

GENERAL
A.0 GENERAL INFORMATION

ARCHITECTURAL
A.1 ARCHITECTURAL DEMOLITION DRAWINGS
A.2 ARCHITECTURAL FINISH PLANS

MECHANICAL
M.1 MECHANICAL FLOOR PLAN

ELECTRICAL
E.1 ELECTRICAL NOTES AND LEGEND
E.2 SHOP ELECTRICAL PLAN
E.3 GE A V LINE SWITCHBOARD DISTRIBUTION PANEL MDP-1
E.4 PANEL SCHEDULES A & D
E.5 PANEL SCHEDULES P & Q

CONCRETE
C.0 GENERAL CONCRETE NOTES
C.1 FOUNDATION LOCATION PLAN & SECTIONS

NOTE: THE SHEETS LISTED ABOVE REPRESENT A FULL SET OF CONSTRUCTION DOCUMENTS AND INCLUDE A PROJECT MANUAL AND SHALL NOT BE SEPARATED. ANY CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT SHALL BE RESPONSIBLE FOR REVIEWING ALL THE CONSTRUCTION DOCUMENTS INCLUDING BUT NOT LIMITED TO DRAWINGS, DETAILS, PROJECT MANUAL, SPECIFICATIONS AND ANY AND ALL ADDENDA ISSUED.

OGDEN / WEBER
APPLIED TECHNOLOGY COLLEGE
200 North Washington Boulevard
Ogden, Utah 84404

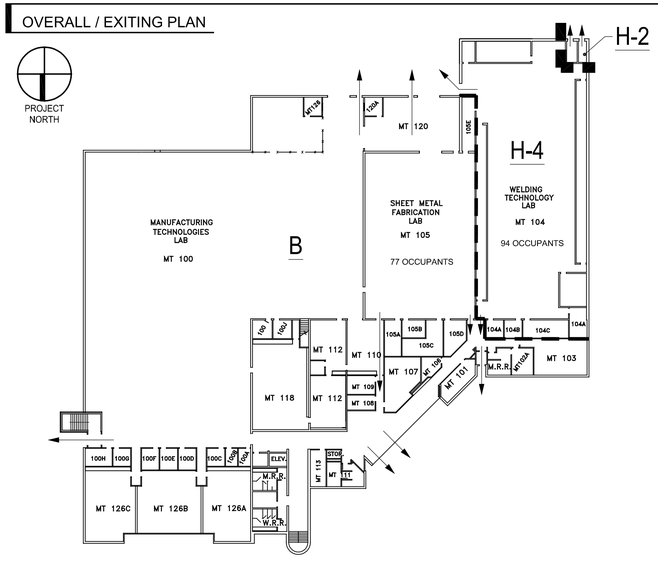
DFCM PROJECT #09170240
CONSTRUCTION DOCUMENTS
AUGUST, 2009

ALTERNATES

ALTERNATE #1:
THIS ALTERNATE CONSISTS OF NEW PAINT AND FLOOR FINISHES SIMILAR TO THOSE OUTLINED FOR THE WELDING SHOP. THIS INCLUDES CLEANING AND RE-SEALING THE CONCRETE FLOORS, AND FILLING CONTROL JOINTS IN THE FLOORS.

ALTERNATE #2:
THIS ALTERNATE IS FOR FILLING OF VOIDS LARGER THAN 1/2" IN THE CONCRETE FLOORS OF THE WELDING SHOP WHERE THEY HAVE BEEN PITTED AND WORN DOWN. THIS WILL INCLUDE ALL NECESSARY PREP. WORK FOR THE FILLER SYSTEM. BIDDING SUBCONTRACTORS SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF FILLING REQUIRED BY OBSERVATION.

OVERALL / EXITING PLAN



BUILDING ACCESSIBILITY:

1. ALL ENTRIES/EXITS TO AND FROM THIS BUILDING ARE ON AN ACCESSIBLE ROUTE CONNECTED TO THE CAMPUS.
2. THE MAIN ENTRANCE TO THE BUILDING IS ALREADY EQUIPPPED WITH AUTOMATIC DOOR OPERATORS.
3. DOOR HARDWARE THROUGHOUT IS ADA COMPLIANT.
4. THE MAIN RESTROOMS ARE ADA COMPLIANT.
5. THE MAIN RESTROOMS ARE EQUIPPED WITH A 'BLIND' ENTRY, SO THERE ARE NO DOORS ON THESE RESTROOMS. (AUTOMATIC OPERATORS ARE UNNECESSARY).
6. DUAL HEIGHT DRINKING FOUNTAINS ARE ALREADY PROVIDED.
7. TWO ADA PARKING STALLS ARE LOCATED TO THE SOUTH, WITHIN 100 FEET OF THE BUILDING, WITH AN ACCESSIBLE ROUTE TO THE BUILDING. SEVERAL OTHER ADA PARKING STALLS ARE LOCATED AROUND THE CAMPUS.

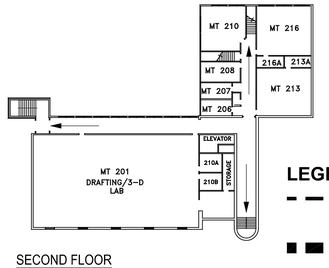
NO NEEDED UPGRADES WERE IDENTIFIED FOR ACCESSIBILITY PER IBC-3409.5 OR IBC-3409.7.

BUILDING EGRESS:

1. THIS PROJECT DOES NOT CONSIST OF A CHANGE IN USE OR A CHANGE IN OCCUPANCY. ONE STORAGE SPACE IS BEING CONVERTED TO A LOCKER ROOM. IT IS NOT BELIEVED THAT A RE-EXAMINATION OF THE EGRESS SYSTEM IS REQUIRED.

OCCUPANCY AND USE

THE OCCUPANCY DESIGNATIONS AS SHOWN ARE AS INDICATED ON AS-BUILT DRAWINGS, AND APPEAR TO BE COMPATIBLE WITH CURRENT CODE DESIGNATIONS. THE H-2 OCCUPANCY CONSISTS OF AN OXYGEN ROOM AND AN ACETYLENE ROOM. THE H-4 OCCUPANCY IS THE WELDING SHOP/LAB. THE REMAINDER OF THE SPACE WITHIN THE BUILDING IS A B OCCUPANCY, AS THERE ARE NO HAZARDOUS MATERIALS.



LEGEND:
- EXISTING 1 HOUR RATING (FIRE BARRIER) - 45 MINUTE DOORS
- EXISTING 2 HOUR RATING (FIRE BARRIER)

State of Utah
Department of Administrative Services
Division of Facilities
Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
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NO.	REVISIONS	DATE	BY	APPROVED
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TITLE: METALS BUILDING UPGRADE
OGDEN-WEBER TECHNOLOGY COLLEGE
GENERAL INFORMATION

	DATE	BY
DRAFTING	08-19-09	BV
DRAWN	08-19-09	AT
CHECKED		

	DATE	BY
ENGINEERING		
ENGINEERED		
APPROVED		

SCALE: AS NOTED

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CADFILE 451-004M2
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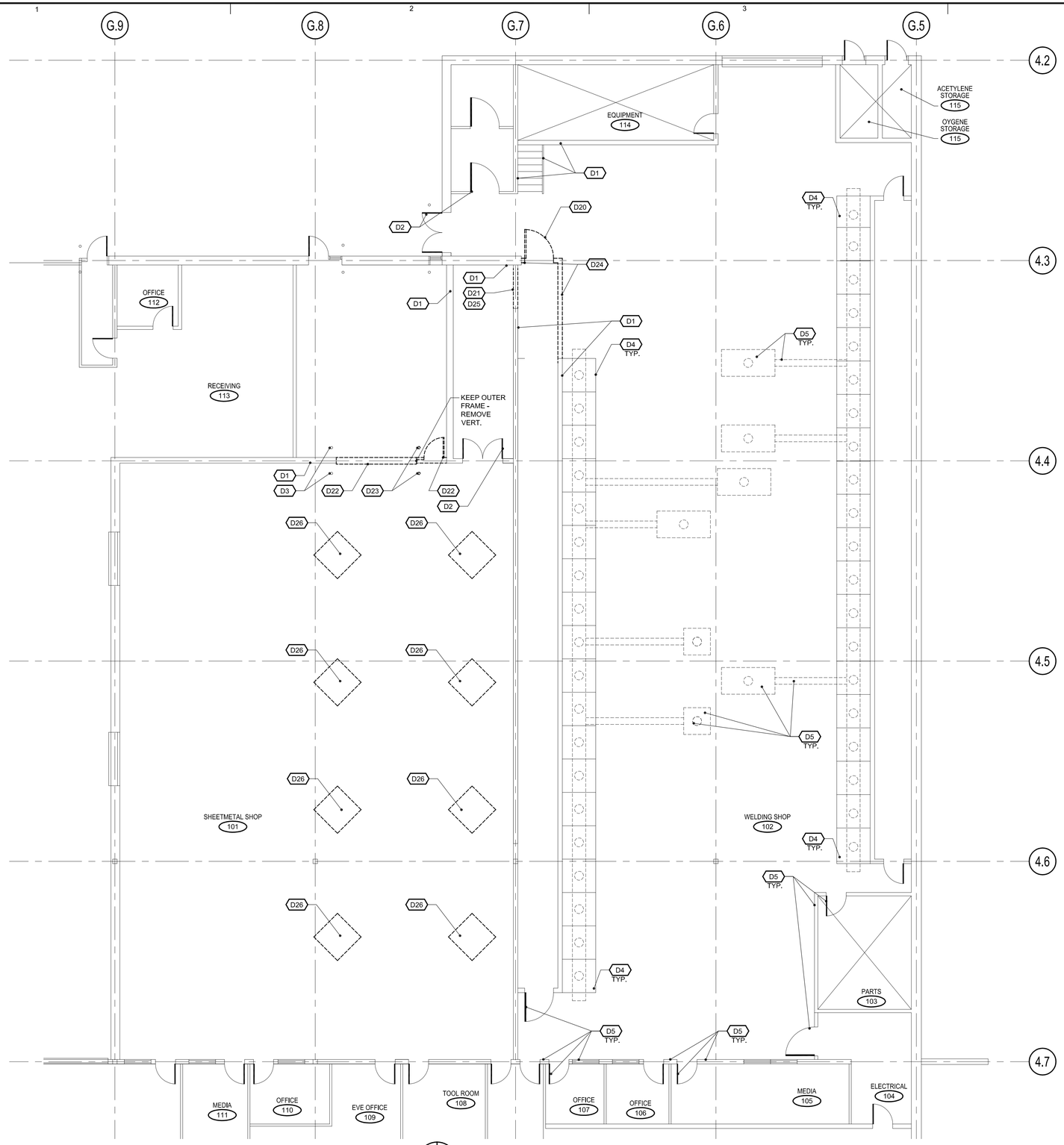
REVISION 0



A1 DEMOLITION FLOOR PLAN

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

DEMOLITION KEYNOTES

REMOVE ITEMS SHOWN IN DASHED LINES

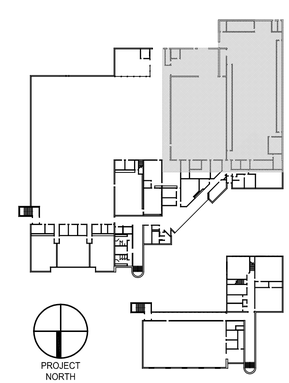
1 - DEMOLITION/EXISTING

- D1 EXISTING WALL TO REMAIN
- D2 EXISTING DOOR TO REMAIN
- D3 EXISTING BOLLARD TO REMAIN
- D4 EXISTING WELDING BOOTH TO REMAIN
- D5 EXISTING TO REMAIN
- D20 REMOVE EXISTING DOOR AND SALVAGE FOR RE-INSTALLATION
- D21 REMOVE PORTION OF WALL FOR INSTALLATION OF NEW DOOR, AT CMU BLOCK, SEE DETAIL D4/A-2
- D22 REMOVE EXISTING OVERHEAD-DOOR AND MAN-DOOR - OUTER FRAME TO REMAIN. REMOVE VERTICAL T.S. BETWEEN MAN DOOR AND OVERHEAD DOOR. GRIND SMOOTH, FOR PATCH FILL & PAINT.
- D23 REMOVE EXISTING BOLLARDS
- D24 REMOVE EXISTING STUD WALL, CMU GROUND COURSE AND ASSOCIATED REINFORCEMENT - COORDINATE WITH FINISHES
- D25 SHORE AND SUPPORT - SEE STRUCTURAL FOR DETAILS
- D26 REMOVE EXISTING FLOOR SLAB FOR CRANE FOOTINGS - COORDINATE WITH STRUCTURAL FOR CRANE INFORMATION, QUANTITY OF FOOTINGS, EXACT LOCATIONS, ETC.

DEMOLITION GENERAL NOTES

1. CONTRACTOR TO PROTECT EXISTING BLDG. DURING CONSTRUCTION INCLUDING CARPET AND OTHER FINISHES, DOORS AND FRAMES ETC.
2. AFTER DEMOLITION, PATCH MATERIALS TO MATCH EXISTING - TYP.
3. CONTRACTOR SHALL COORDINATE BETWEEN FINISH AND DEMOLITION DRAWINGS AND CONTROL THE EXTENT OF DEMOLITION SO THAT THE FINISH WORK CAN BE ACCOMPLISHED.
4. DECALS TO BE DOCUMENTED AND REPLACED THROUGHOUT.
5. COORDINATE ALL DEMOLITION WITH OTHER DISCIPLINES.

KEY PLAN



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TITLE: **METALS BUILDING UPGRADE**
OGDEN-WEBER TECHNOLOGY COLLEGE
ARCHITECTURAL DEMOLITION PLAN

	BY	DATE
DRAFTING		
DRAWN	BV	08-19-09
CHECKED	AT	08-19-09

	BY	DATE
ENGINEERING		
ENGINEERED		
APPROVED		

SCALE: AS NOTED

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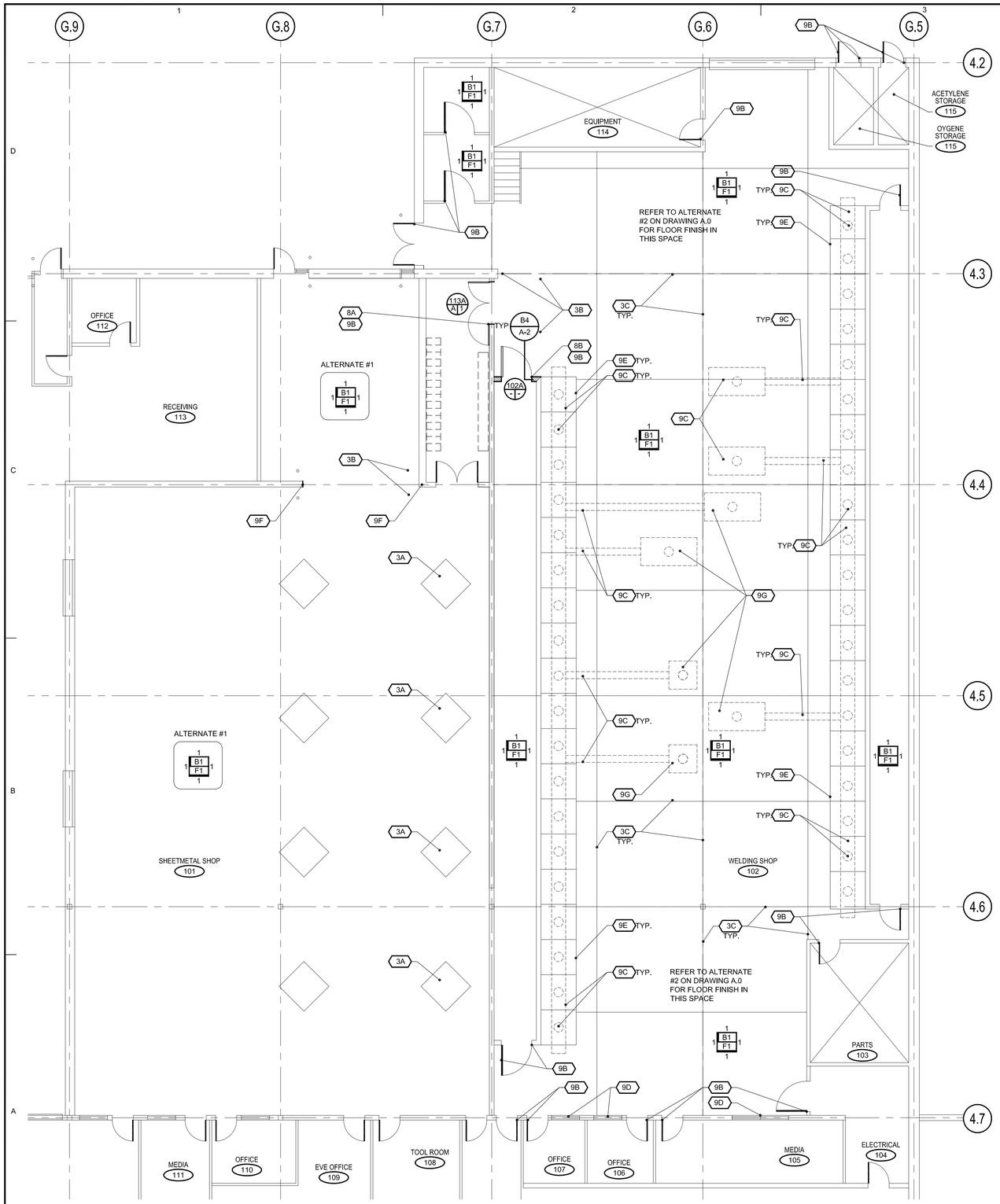
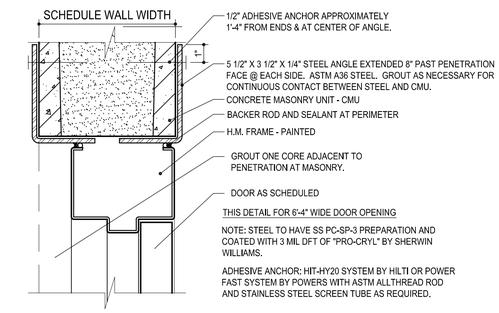
REVISION **0**



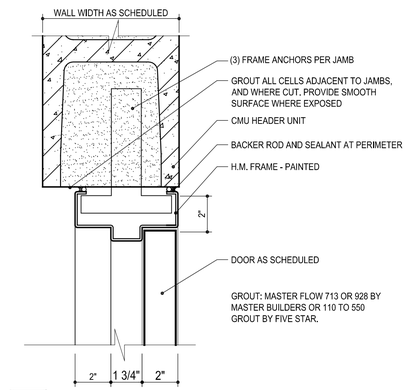
A2 FLOOR PLAN

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



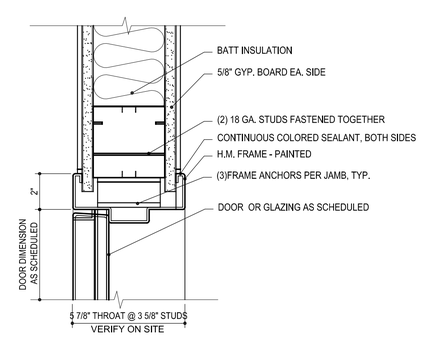
D4 DOOR HEAD AT CMU

SCALE: 3"=1'-0"



C4 DOOR JAMB AT CMU

SCALE: 3"=1'-0"



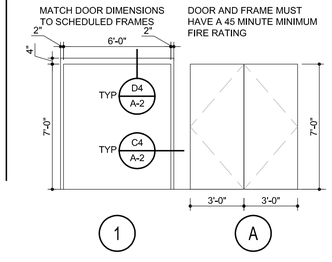
B4 DOOR HEAD AT FRAMED WALL (JAMB SIM.)

SCALE: 3"=1'-0"

NOTES - PLAN

1. CONTRACTOR TO THOROUGHLY CLEAN ALL SURFACES PRIOR TO PAINTING . PATCH AND FILL GYPSUM BOARD WHEREVER DAMAGED. VERIFY EXTENT OF PATCHING AND FILLING AT WALK-THROUGH - ASSUME SIGNIFICANT PATCH AND FILL.
2. CONTRACTOR TO CLEAN AND DEGREASE FLOOR PRIOR TO SEAL.
3. THE CONTRACTOR SHALL CONDUCT A SURVEY OF ALL STICKERS, DECALS AND LABELS (SAFETY IDENTIFICATION) IN THE SPACE AND REPLACE WITH NEW AFTER PAINTING.
4. CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT SITE PRIOR TO BIDDING TO VERIFY CONDITIONS, EXTENT OF PAINTING, ETC.
5. REFER TO DRAWING SHEET A.0 FOR A SUMMARY OF ALTERNATES
6. ANY EXISTING FIRE PROOFING DAMAGED BY CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR IN COMPLIANCE WITH CHAPTER 7 OF THE IBC.

DOORS & FRAMES



KEYNOTE LEGEND

1A

3 - CONCRETE:

- 3A SEE STRUCTURAL FOR INFORMATION REGARDING CRANE COLUMN FOOTINGS, QUANTITY, AND LAYOUT
- 3B FILL AND PATCH SLAB AREA WHERE REMOVED - SEE DEMO PLAN
- 3C CLEAN EXISTING EXPANSION JOINTS IN FLOOR AND FILL WITH POURABLE SEALANT

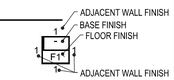
8 - DOORS AND WINDOWS:

- 8A SCHEDULED DOOR
- 8B REUSE / REINSTALL EXISTING DOOR - SEE DETAIL B4/A.3. PROVIDE NEW FRAMED WALL TO MATCH ADJACENT FOR NEW DOOR LOCATION AS SHOWN

9 - FINISHES

- 9A THOROUGHLY CLEAN FLOOR - PREP AND SEAL WITH PENETRATING SEALER. - SEE ALTERNATE #2 ON A.0
- 9B PAINT DOOR AND FRAME ON BOTH SIDES - SEE PAINT SCHEDULE
- 9C PAINT EXISTING DUCTWORK (INCLUDING FLEXIBLE DUCTS) - SEE PAINT SCHEDULE
- 9D PAINT EXISTING WINDOW FRAMES - SEE PAINT SCHEDULE
- 9E PAINT EXISTING WELDING BOOTH - SEE PAINT SCHEDULE
- 9F PATCH, FILL, AND PAINT WHERE DOOR REMOVED AND AT STRUCTURAL REINFORCEMENT AT DOOR HEAD.
- 9G PAINT EXSTING FUME HOODS - SEE PAINT SCHEDULE

FINISH LEGEND



WALL: 1. SEE BELOW FOR FIELD COLOR, TRIM AND ACCENT COLORS THROUGHOUT. THE FIELD COLOR ALSO APPLIES TO THE OPEN JOIST CEILING, MECHANICAL UNITS AT THE CEILING AND OTHER CEILING ELEMENTS NOT SCHEDULED FOR OTHER FINISHES.

FLOOR: F1 THOROUGHLY CLEAN EXISTING CONCRETE FLOORS - DO NOT SEAL. AT (3) LOCATIONS - FILL LARGE 12"X12" VOIDS WITH EPOXY/CONCRETE.

BASE: NO BASE

1. MATERIALS ARE NOT KEYNOTED AT EVERY OCCURRENCE. IF NOT SPECIFICALLY INDICATED USE NEAREST FINISH SYMBOL.
2. ALL EXISTING CONSTRUCTION ELEMENTS NOT SCHEDULED FOR DEMOLITION SHALL BE PROTECTED DURING CONSTRUCTION OR REPLACED IF DAMAGED.
3. NO DRY-FALL PAINT IS TO BE USED.
4. EXSTING COLOR CODEDED PIPING AND NATURAL METALS (GALVANIZED, ALUMINUM, STAINLESS & ETC.) ARE NOT TO BE PAINTED.
5. ALL CMU BLOCK IS TO BE PAINTED.
6. DO NOT PAINT NATURAL CONCRETE (ELEVATED SLABS AND ETC.).

PAINT SCHEDULE:

FIELD COLOR: WHITE/OFF-WHITE

TRIM COLOR: PPG TrueFinish - ACE 007 CATERPILLAR SLATE GRAY
- WELDING BOOTH FRAMES
- DOORS AND FRAMES BOTH SIDES (INCLUDING OFFICE DOORS
- WINDOW FRAMES SHOP SIDE
- STRIP ALUMINUM TRIM AT WELDING BOOTHS AND PAINT THIS COLOR

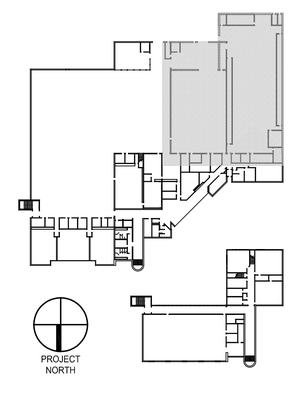
ACCENT COLOR A: PPG TrueFinish - ACE 025 WHEATLAND YELLOW
- EXTERIOR OF PANELS ON WELDING BOOTHS (MASK TO LEAVE ALUMINUM NATURAL)

ACCENT COLOR B: PPG TrueFinish - ACE 046 FORD TRACTOR BLUE
- ALL DUCTWORK ((INCLUDING FLEX DUCT)
- HOODS
- VERTICAL COLUMNS IN CENTER OF SHOP

ACCENT COLOR C: PPG TrueFinish - ACE004 GENIE GRAY
- INTERIORS OF WELDING BOOTHS (ALL SURFACES FROM THE FLOOR TO THE TOP OF THE WELDING BOOTH. DRYWALL AT THE INTERIORS OF THE WELDING BOOTHS WILL REQUIRE SIGNIFICANT PATCH, FILL & PREP. BEFORE PAINTING.
- AT THE WALL BEHIND THE GRINDER, FILL IN VOIDS IN BLOCK THEN PAINT WITH THIS COLOR TO 8'-0" A.F.F. VERIFY LOCATION AND HEIGHT.

PAINT COLORS DO NOT DENOTE A SPECIFIC PAINT OR MANUFUACTURER. REFER TO SPECIFICAITONS FOR PAINT TYPES BASED ON SUBSTRATES. ALL FERROUS METALS (PAINT BOOTHS, DOORS & FRAMES, & ETC.) SHALL RECEIVE A PAINT SYSTEM COMPARABLE TO 'PPG TrueFinish Industrial Coatings' (PER SPECIFICATION REQUIREMENTS).

KEY PLAN



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NO.	REVISIONS	DATE	BY	APPROVED
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TITLE: **METALS BUILDING UPGRADE**
OGDEN-WEBER TECHNOLOGY COLLEGE
ARCHITECTURAL FLOOR PLAN

	BY	DATE
DRAFTING	BY	08-19-09
DRAWN	AT	08-19-09
CHECKED		
ENGINEERING		
ENGINEERED		
APPROVED		

SCALE: AS NOTED

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2828 NORTH STREET PARK DR. SALT LAKE CITY, UT 84121
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www.axisarchitects.com

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CADFILE 451-004M2
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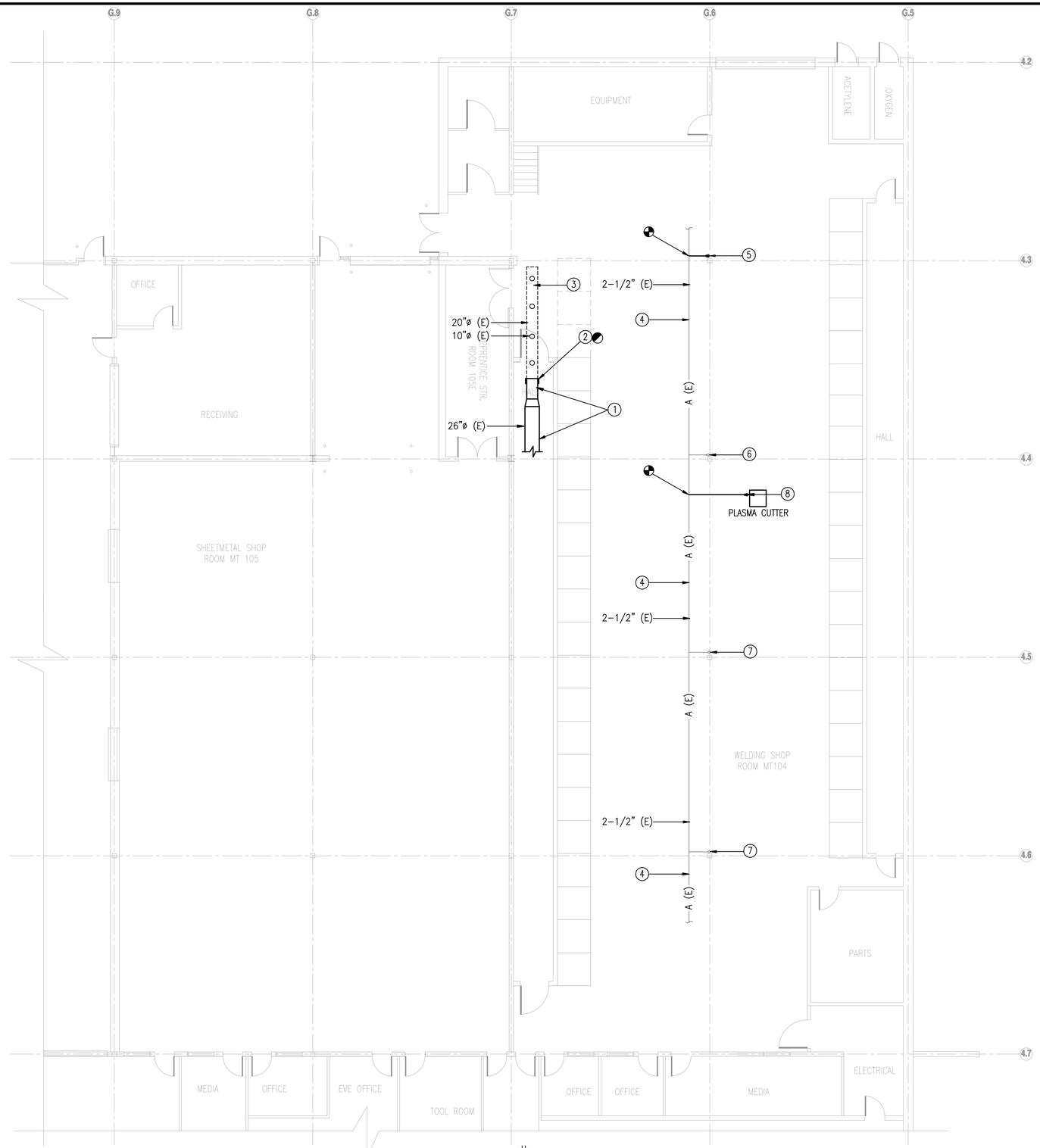
REVISION 0



NORTH

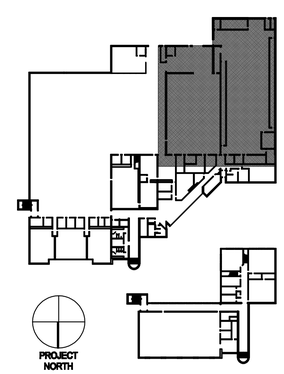
SHOP MECHANICAL PLAN

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

Keyed Notes

1. EXISTING DUCT TO REMAIN.
2. CAP EXISTING DUCT AT THIS APPROXIMATE LOCATION.
3. REMOVE AND DEMOLISH EXISTING DUCT, HANGERS AND ASSOCIATED COMPONENTS.
4. EXISTING AIR LINE TO REMAIN. FIELD VERIFY SIZE AND LOCATION.
5. NEW 3/4" AIR LINE DROP AT COLUMN TO 5' A.F.F. PROVIDE WITH SHUT-OFF VALVE AND QUICK DISCONNECT.
6. EXISTING 3/4" AIR LINE DROP AT COLUMN.
7. EXTEND EXISTING 3/4" AIR LINE DROP FROM EXISTING SHUT-OFF VALVE TO 5' A.F.F. PROVIDE WITH QUICK DISCONNECT.
8. NEW 3/4" AIR LINE DROP TO PLASMA CUTTER. FIELD VERIFY LOCATION. PROVIDE WITH SHUT-OFF VALVE AND QUICK DISCONNECT.

KEY PLAN



NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY – NOT FOR CONSTRUCTION	08-27-09	ERK	
0	CONSTRUCTION SET	10-22-09	ERK	
1	DCFM COMMENTS	12-16-09	ERK	

TITLE: **METALS BUILDING UPGRADE**
OGDEN-WEBER TECHNOLOGY COLLEGE
SHOP MECHANICAL PLAN

	BY	DATE
DRAFTING DRAWN	ERK	10/22/09
DRAFTING CHECKED	CMY	10/22/09
ENGINEERING ENGINEERED		10/22/09
ENGINEERING APPROVED		10/22/09

SCALE: AS NOTED

EDIT BY:

JOB NO. 451-004

CADFILE 451-004M1

DRAWING M-1

REVISION 1

General Notes

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FULLY AWARE OF THE EXISTING CONDITIONS. VERIFY DIMENSIONS AND EQUIPMENT LOCATION. BY SUBMITTING A BIC FOR THIS WORK, THE ELECTRICAL CONTRACTOR ACKNOWLEDGES THAT HE IS FULLY AWARE OF THE INTENT OF THESE DRAWINGS AND WILL PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. ALL WORK AND MATERIALS ARE TO BE PROVIDED UNDER THIS BID.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING, PAINTING, AND REPAIR OF SURFACES DAMAGED, REMOVED OR MODIFIED AS A RESULT OF THE INSTALLATION.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2008 NEC.
4. ALL 600V WIRE SHALL BE THHN/THWN COPPER: #12 & #10 – SOLID, #8 & LAGER – STRANDED.
5. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE RUN IN ALL CONDUITS SIZED IN ACCORDANCE WITH NEC TABLE 250–122. GROUND WIRES IN CONDUITS SHALL BE INSULATED, COLOR – GREEN.
6. WORKING SPACE AROUND ELECTRICAL EQUIPMENT SHALL BE PROVIDED IN ACCORDANCE WITH NEC TABLE 110.26(A)(1), 151–600V CATEGORY (208V & 480V). THIS EQUIPMENT INCLUDES:
   - PANELBOARDS
   - SAFETY SWITCHES
   - CONTROL PANELS
7. ALL ELECTRICAL CIRCUITS TO EQUIPMENT SHALL COME FROM ABOVE. NO UNDERGROUND.
8. EMT IS ACCEPTABLE INSIDE THE BUILDING.
9. RGS SHALL BE USED IN UTILITY TUNNEL AND OUTDOORS.
10. SCHEDULE 40 PVC SHALL BE USED UNDERGROUND WITH RGS ELBOWS WRAPPED WITH VINYL TAPE.
11. FOR ANCHORS IN CONCRETE, USE STEEL DROP–IN. NO PLASTIC ANCHORS ALLOWED
12. SEAL ALL PENETRATIONS THROUGH OUTSIDE WALLS WEATHERTIGHT.
13. WHERE INSTALLING WIRE & CABLE IN EXISTING CONDUIT, PULL A MANDREL OR PLUG CLOSELY APPROXIMATING THE INNER DIAMETER OF THE CONDUIT, TO LOOSEN BURRS AND LOCATE OBSTRUCTIONS. FOLLOW THIS WITH A SWAB TO CLEAN OUT ANY REMAINING DIRT OF FOREIGN MATTER.
14. PROVIDE TO ENGINEER SEVEN COPIES OF SUBMITTALS FOR ALL ITEMS ON EQUIPMENT LIST.
15. MAINTAIN A MARKED–UP SET OF DRAWINGS, SHOWING ANY CHANGES MADE ON PROJECT, AND SUBMIT MARKED–UP DRAWINGS TO ENGINEER AT COMPLETION OF PROJECT SO AS–BUILTS CAN BE MADE.

Equipment List

(A) 225A, 480V, 3P BREAKER, 50 kaic, FOR INSTALLATION IN GE AV LINE SWITCHBOARD. FOR NEW PANEL Q.

(B) 225A, 208V, 3P BREAKER FOR INSTALLATION IN GE TYPE CCB PANELBOARD. FOR NEW PANEL P.

(C) PANEL P: 3 PHASE 4 WIRE, 120/208V, 225A COPPER BUS, 42 CIRCUITS, NEMA 1, SURFACE MOUNTED W/DOOR, BOLT–ON BREAKERS, 22 kaic, TOP FEED, GE TYPE AQ. SEE PANEL SCHEDULE FOR BRANCH BREAKER SIZES.

(D) PANEL Q: 3 PHASE 4 WIRE, 277/480V, 225A COPPER BUS, 42 CIRCUITS, NEMA 1, SURFACE MOUNTED W/DOOR, BOLT–ON BREAKERS, 25 kaic, TOP FEED, GE TYPE AE. SEE PANEL SCHEDULE FOR BRANCH BREAKER SIZES.

(E) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 480V, 60A, 3P WITH GROUND BAR, GE #TH3362. SEE KEYED NOTES FOR FUSE SIZES.

(F) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 480V, 60A, 2P WITH GROUND BAR, GE #TH2262DC. SEE KEYED NOTES FOR FUSE SIZES.

(G) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 480V, 30A, 3P WITH GROUND BAR, GE TH3361. SEE KEYED NOTES FOR FUSE SIZES.

(H) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 480V, 30A, 2P WITH GROUND BAR, GE #TH2261DC. SEE KEYED NOTES FOR FUSE SIZES.

(I) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 208V, 60A, 3P WITH GROUND BAR, GE #TH4322. SEE KEYED NOTES FOR FUSE SIZES.

(J) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 208V, 60A, 2P WITH GROUND BAR, GE #TH3222. SEE KEYED NOTES FOR FUSE SIZES.

(K) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 208V, 30A, 3P WITH GROUND BAR, GE #TH4321. SEE KEYED NOTES FOR FUSE SIZES.

(L) SAFETY SWITCH. HEAVY DUTY, FUSIBLE, NEMA 1, 208V, 30A, 2P WITH GROUND BAR, GE #TH3221. SEE KEYED NOTES FOR FUSE SIZES.

(M) RECEPTACLE. 3P 4W GROUNDING, 30A, 480V, 3 PHASE, MELTRIC #63–34043 & BOX #61–3A053–080–34. INLET. #6338043 & HANDLE #61–3A013.

(N) RECEPTACLE. 3P 4W GROUNDING, 60A, 480V, 3 PHASE, MELTRIC #63–64043 & BOX #61–6A053–080–34. INLET #63–68043 & HANDLE #61–6A013.

(O) RECEPTACLE. 2P 3W GROUNDING, 30A, 480V, 1 PHASE, MELTRIC #63–34042 & BOX #61–3A053–080–34. INLET. #63–38042 & HANDLE #61–6A013.

(P) RECEPTACLE. 2P 3W GROUNDING, 60A, 480V, 1 PHASE, MELTRIC #63–64042 & BOX #61–6A053–080–34. INLET. #63–68042 & HANDLE #61–6A013.

(Q) RECEPTACLE. TWIST–LOCK NEMA L15–30R, 3P 4W GROUNDING, 30A, 250V, 3 PHASE, HUBBELL #HBL2720.

(R) RECEPTACLE. TWIST–LOCK NEMA L6–30R, 2P 3W GROUNDING, 30A, 250V, 1 PHASE, HUBBELL #HBL2620.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
$ 3	THREE–WAY SWITCH, 48" A.F.F.
	DUPLEX RECEPTACLE, 18" A.F.F.
	SPECIAL PURPOSE OUTLET, 24" A.F.F.
F	FUSED DISCONNECT SWITCH

NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY – NOT FOR CONSTRUCTION	08–27–09	CJH	
0	CONSTRUCTION SET	10–22–09	CJH	
1	UFCM COMMENTS	12–10–09	CJH	

TITLE: **METALS BUILDING UPGRADE**
OGDEN–WEBER TECHNOLOGY COLLEGE
ELECTRICAL NOTES AND LEGEND

	BY	DATE
DRAFTING DRAWN	RF	10/22/09
DRAFTING CHECKED	CJH	10/22/09
ENGINEERING ENGINEERED		10/22/09
ENGINEERING APPROVED		10/22/09

SCALE: AS NOTED

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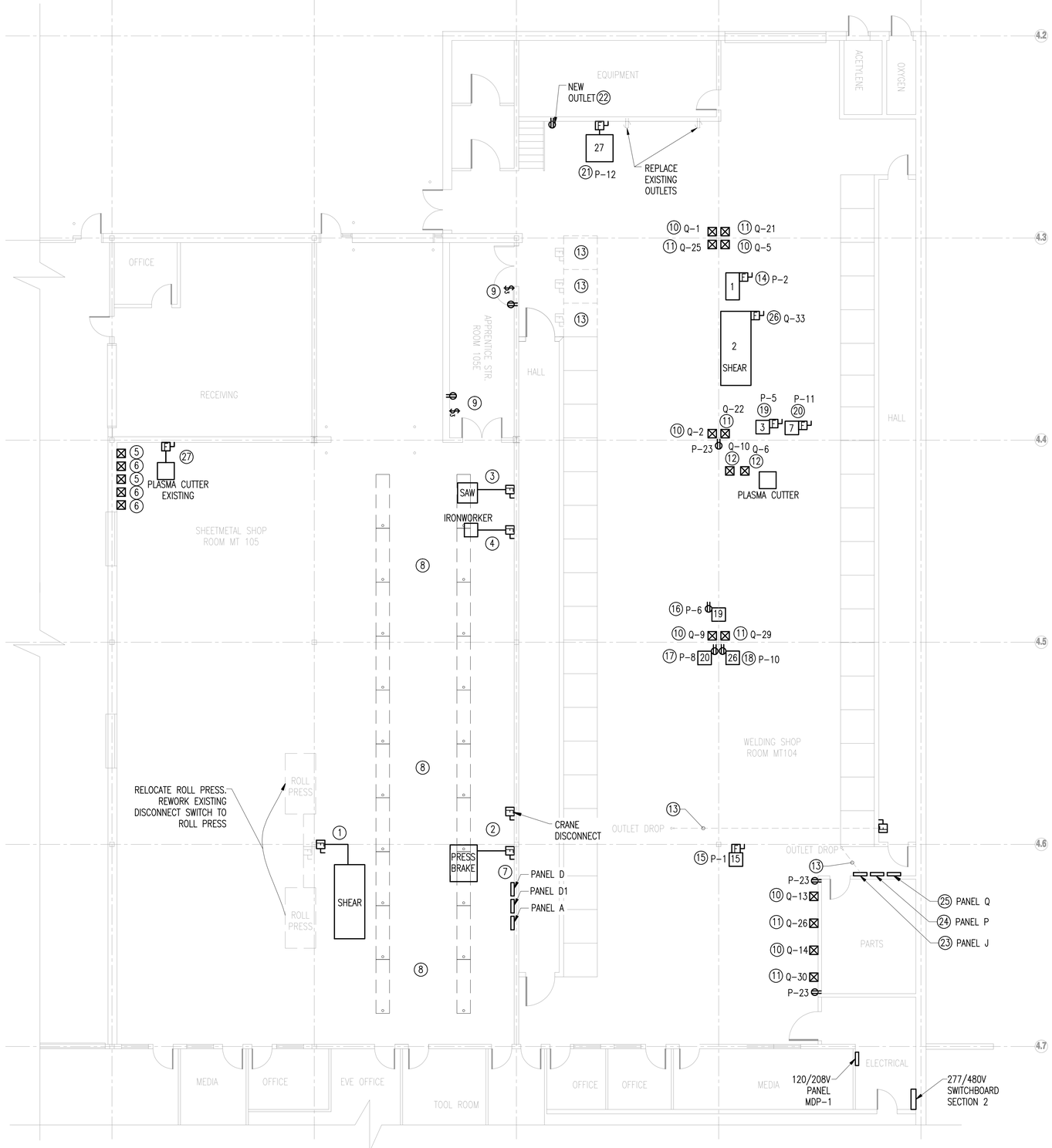
JOB NO. 451–004

CADFILE 451–004E1

DRAWING E–1

REVISION 1



NORTH

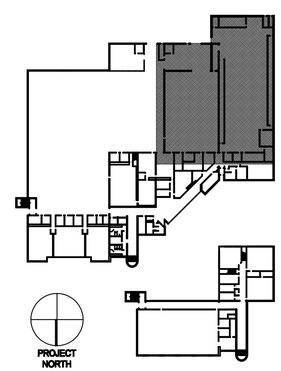
SHOP ELECTRICAL PLAN

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

Keyed Notes

1. RELOCATE SHEAR FROM SOUTHWEST CORNER OF ROOM MT 105 TO NEW LOCATION. RE-USE CONDUIT, WIRE, SAFETY SWITCH AND FUSES AS SHOWN. AFTER WIRING IS COMPLETE, TEST, AND MAKE SURE EQUIPMENT FUNCTIONS PROPERLY.
2. RELOCATE PRESS BRAKE FROM SOUTHWEST CORNER OF ROOM MT 105 TO NEW LOCATION. RE-USE CONDUIT, WIRE, SAFETY SWITCH AND FUSES AS SHOWN. AFTER WIRING IS COMPLETE, TEST AND MAKE SURE EQUIPMENT FUNCTIONS PROPERLY.
3. RELOCATE SAW FROM SOUTH END OF ROOM MT 104 TO NEW LOCATION. RE-USE SAFETY SWITCH AND FUSES AND INSTALL ON WALL AS SHOWN. RUN NEW 3/4"C, 4#10 TO EXISTING PANEL D AND CONNECT TO BREAKER #37.
4. RELOCATE IRONWORKER FROM SOUTH END OF ROOM MT 104 TO NEW LOCATION. RE-USE SAFETY SWITCH AND FUSES AND INSTALL ON WALL AS SHOWN. RUN NEW 3/4"C, 4#10 TO EXISTING PANEL D AND CONNECT TO BREAKER #38.
5. INSTALL TWO 480V, 60A, 2P DISCONNECT SWITCH WITH FRS 60 FUSES AND 60A, 480V, 2P, 3W GROUNDING RECEPTACLE. RUN 3/4"C, 2 #6, #10G CIRCUITS TO EXISTING PANEL A AND CONNECT TO NEW BREAKERS #30 AND #33.
6. INSTALL THREE 480V, 30A, 2P DISCONNECT SWITCH WITH FRS 30 FUSES AND 30A, 480V, 2P, 3W GROUNDING RECEPTACLE. RUN 3/4"C, 3 #10 CIRCUITS TO EXISTING PANEL A AND CONNECT TO NEW BREAKERS #25, #26 AND #29.
7. INSTALL 30A, 3P, 480V DISCONNECT WITH FRS 20 FUSES FOR BRIDGE CRANE. RUN 3/4"C, 4 #10 TO CRANE ELECTRIC RAILS. CONNECT TO BREAKER #34 IN EXISTING PANEL A.
8. RAISE LIGHTS TO 1" BELOW LOWEST PIPE-CRANE AREA ONLY.
9. REMOVE ONE LIGHT SWITCH AND ONE TEL/COM OUTLET IN ROOM 105E. INSTALL TWO-3-WAY SWITCHES AS SHOWN AND RELOCATE TWO RECEPTACLES AS SHOWN. USE SAME EXISTING CIRCUITS.
10. INSTALL 30A, 2P, 480V DISCONNECT WITH FRS30 FUSES ON COLUMN/WALL. INSTALL 2P, 3W, 480V GROUNDING RECEPTACLE ON LOAD SIDE AND BELOW DISCONNECT SWITCH. USE 3/4"C, 2#10, #10G.
11. INSTALL 60A, 2P, 480V DISCONNECT WITH FRS60 FUSES ON COLUMN/WALL. INSTALL 2P, 3W, 480V GROUNDING RECEPTACLE ON LOAD SIDE AND BELOW DISCONNECT SWITCH. USE 3/4"C, 2 #6, #10G.
12. INSTALL 30A, 2P, 480V DISCONNECT WITH FRS30 FUSES ON PLASMA TABLE. INSTALL 2P, 3W, 480V GROUNDING RECEPTACLE ON LOAD SIDE OF DISCONNECT. USE 3/4"C, 2 #10, #10G.
13. DEMO OUTLET DROPS.
    DEMO 3 SAFETY SWITCHES AND 3 CIRCUITS BACK TO PANELBOARD FOR 3 WELDING CUBICLES THAT ARE BEING REMOVED.
14. INSTALL 30A, 2P, 250V DISCONNECT SWITCH WITH FRN 30 FUSES.
15. INSTALL 30A, 2P, 250V DISCONNECT SWITCH WITH FRN 10 FUSES.
16. INSTALL 30A, 2P, 250V DISCONNECT SWITCH WITH ONE FRN 30 FUSE, AND ONE SLUG.
17. INSTALL 30A, 2P, 250V DISCONNECT SWITCH WITH ONE FRN 15 FUSE, AND ONE SLUG.
18. INSTALL 30A, 2P, 250V DISCONNECT SWITCH WITH ONE FRN 30 FUSE, AND ONE SLUG.
19. INSTALL 60A, 3P, 250V DISCONNECT SWITCH WITH FRN 35 FUSES.
20. INSTALL 30A, 3P, 250V DISCONNECT SWITCH WITH FRN 25 FUSES.
21. INSTALL 30A, 3P, 250V DISCONNECT SWITCH WITH FRN 25 FUSES.
22. CONNECT RECEPTACLE TO LOCAL CIRCUIT.
23. EXISTING PANEL J.
24. REPLACE 12 CIRCUIT LOAD CENTER WITH NEW 120/208V PANEL P. RECONNECT TWO 3 PHASE SWAMP COOLERS IN NEW PANEL.
25. INSTALL NEW 277/480V PANEL Q.
26. INSTALL 30A,3P,480V DISCONNECT WITH FRS 20 FUSES.
27. INSTALL 30A, 2P, 250V DISCONNECT SWITCH WITH FRN 30 FUSES & 2P 3W, 250V GROUNDING RECEPTACLE FOR EXISTING PLASMA CUTTER. RUN 3/4"C, 3#10 TO EXISTING PANEL D AND CONNECT TO BREAKER #30.

KEY PLAN



NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY - NOT FOR CONSTRUCTION	08-27-09	CJH	
0	CONSTRUCTION SET	10-26-09	CJH	
1	BPCM COMMENTS	12-10-09	CJH	

TITLE: METALS BUILDING UPGRADE
OGDEN-WEBER TECHNOLOGY COLLEGE
SHOP ELECTRICAL PLAN

	BY	DATE
DRAFTING	RF	10/22/09
DRAWN	CJH	10/22/09
CHECKED		
ENGINEERING		
ENGINEERED		
APPROVED		

SCALE: AS NOTED

EDIT BY:

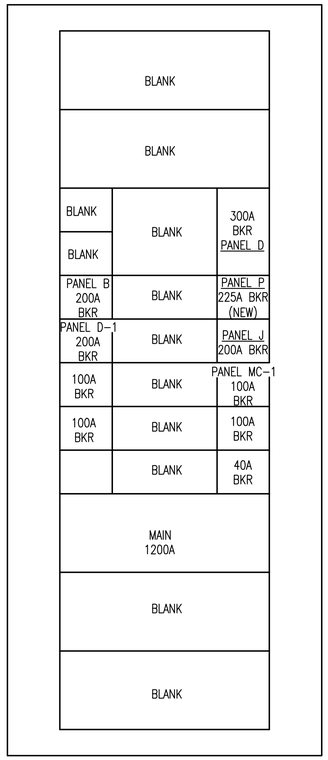
JOB NO. 451-004

CADFILE 451-004E1

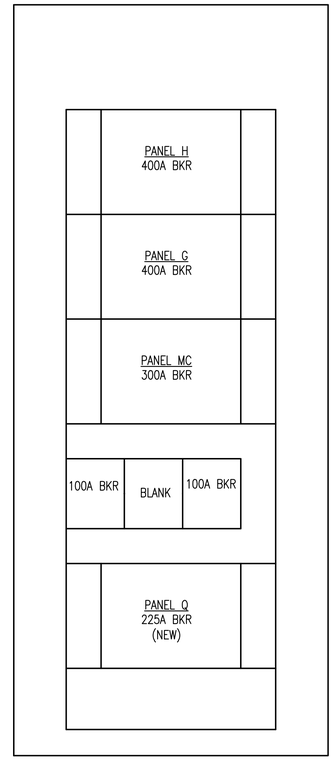
DRAWING E-2

REVISION 1

PANEL MDP-1
120/208V 3ø. 4W
GE TYPE CCB
(EXISTING)



GE AV LINE SWITCHBOARD
SECTION 2 480/277V, 2000A
50kaic
(EXISTING)



NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY - NOT FOR CONSTRUCTION	08-27-09	CJH	
0	CONSTRUCTION SET	10-22-09	CJH	
1	DFCM COMMENTS	12-10-09	CJH	

TITLE:
METALS BUILDING UPGRADE
OGDEN-WEBER TECHNOLOGY COLLEGE
AL LINE SWITCHBOARD
DISTRIBUTION PANEL MDP-1

ENGINEERING	BY	DATE	DRAFTING	BY	DATE
ENGINEERED	CJH	10/22/09	DRAWN	RF	10/22/09
APPROVED		10/22/09	CHECKED	CJH	10/22/09

SCALE: NONE

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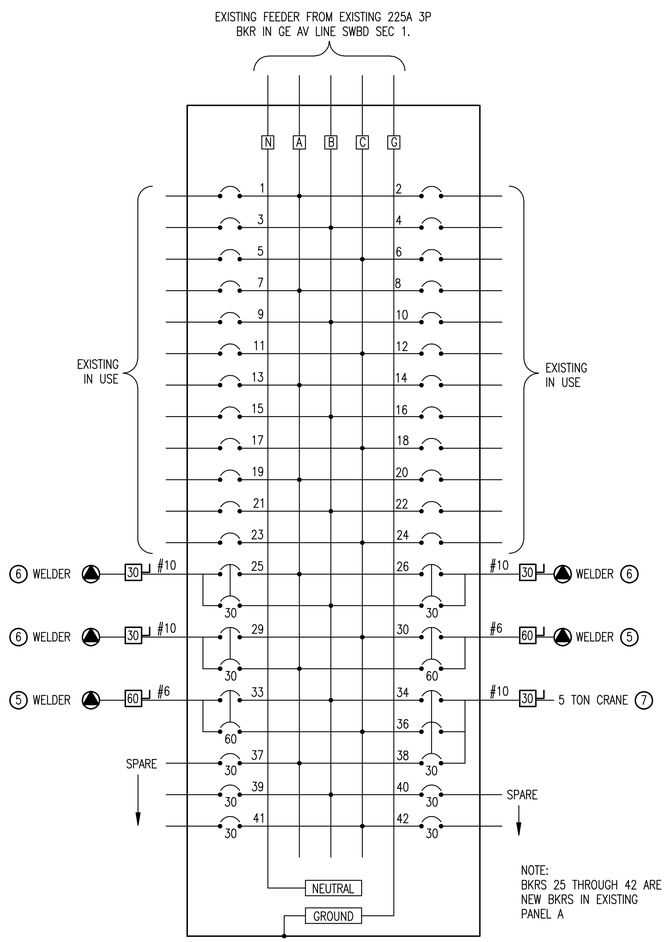
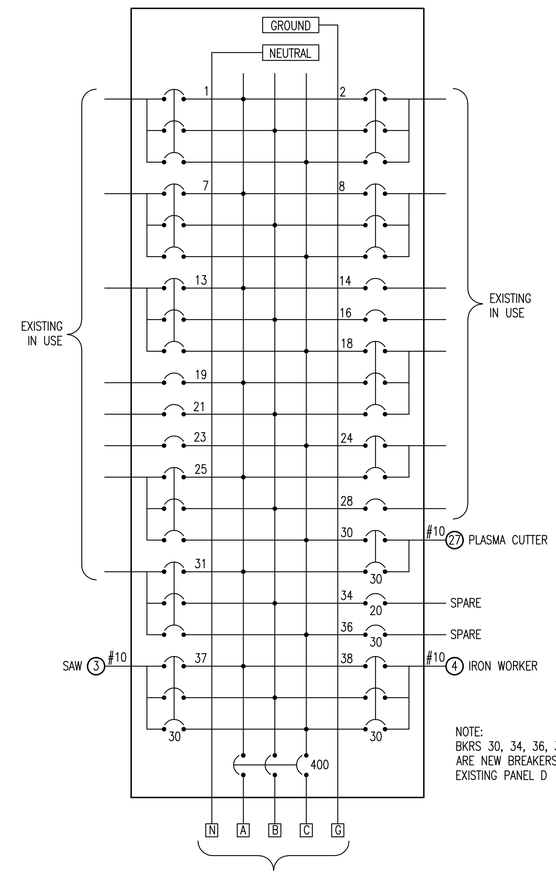
CADFILE 451-004E1
DRAWING E-3
REVISION 1



NOTE:
BKRS 25 THROUGH 42 ARE NEW BKRS IN EXISTING PANEL A

EXISTING PANEL A, 480/277V, 3 PHASE, 225A MAINS
NEMA 1 SURFACE MOUNTED W/DOOR.



NOTE:
BKRS 30, 34, 36, 37 & 38 ARE NEW BREAKERS IN EXISTING PANEL D

EXISTING FEEDER FROM EXISTING 300A BKR IN EXISTING 120/208V POWER DISTRIBUTION PANEL MDP1.

EXISTING PANEL D, 120/208V, 3 PHASE, 400A MAINS
NEMA 1 SURFACE MOUNTED W/DOOR.

NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY – NOT FOR CONSTRUCTION	08-27-09	CJH	
0	CONSTRUCTION SET	10-22-09	CJH	
1	DFCM COMMENTS	12-10-09	CJH	

TITLE:
METALS BUILDING UPGRADE
OGDEN-WEBER TECHNOLOGY COLLEGE
PANEL SCHEDULES A & D

	BY	DATE
DRAFTING		
DRAWN	AA	10/22/09
CHECKED	CJH	10/22/09

	BY	DATE
ENGINEERING		
ENGINEERED		10/22/09
APPROVED		10/22/09

SCALE: NONE

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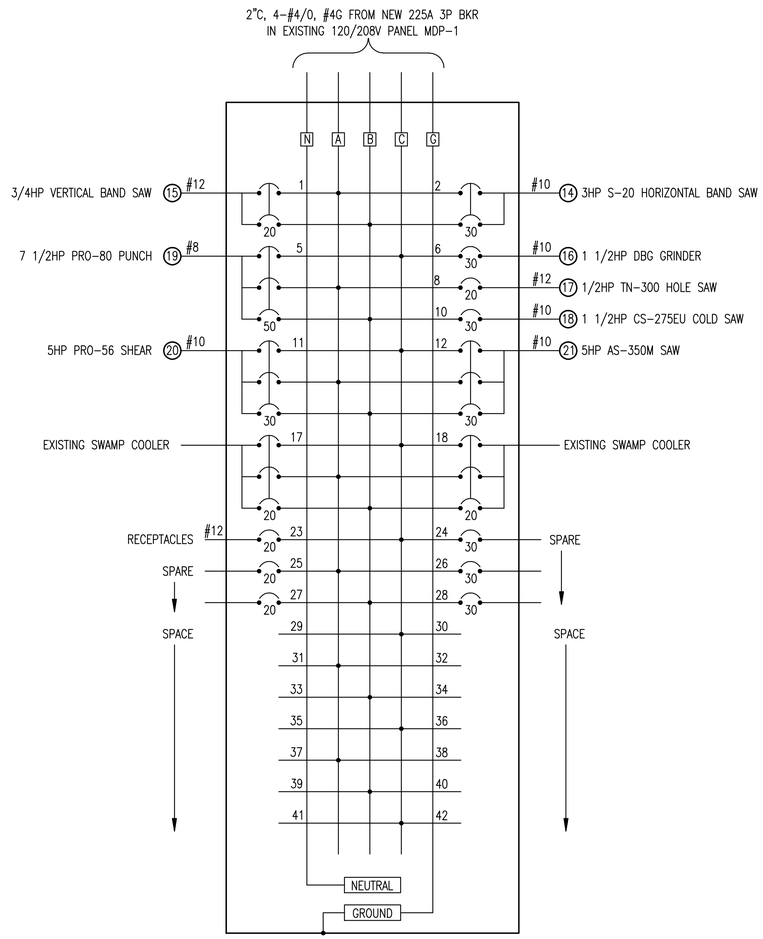
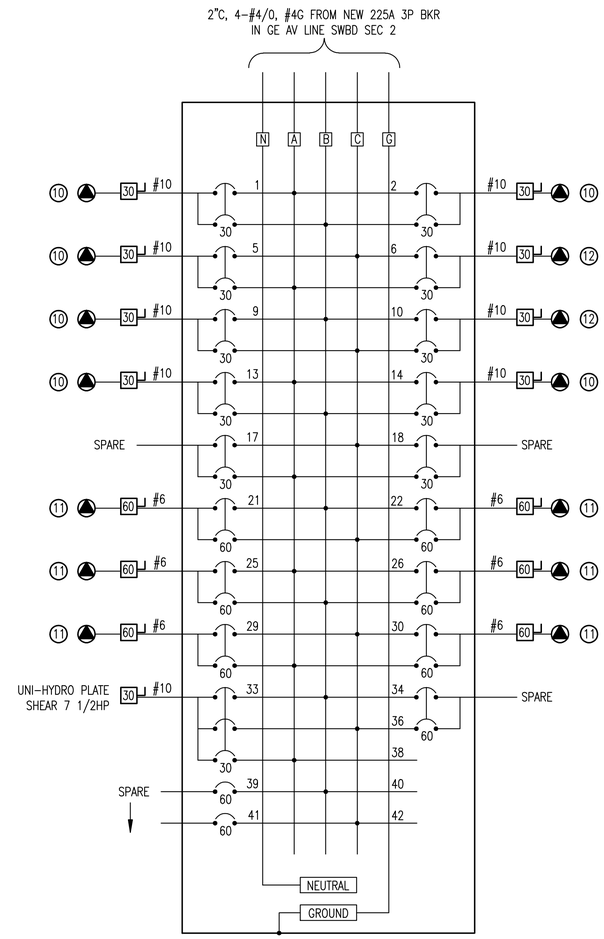
CADFILE 451-004E1
DRAWING E-4
REVISION 1



NEW PANEL P, 120/208V, 3 PHASE, 225A MAINS
NEMA 1 SURFACE MOUNTED W/DOOR



NEW PANEL Q, 480/277V, 3 PHASE, 225A MAINS
NEMA 1 SURFACE MOUNTED W/DOOR

NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY - NOT FOR CONSTRUCTION	08-27-09	CJH	
0	CONSTRUCTION SET	10-22-09	CJH	
1	DFCM COMMENTS	12-10-09	CJH	

TITLE: METALS BUILDING UPGRADE
OGDEN-WEBER TECHNOLOGY COLLEGE
PANEL SCHEDULES P & Q

ENGINEERING	BY	DATE	DRAFTING	BY	DATE
ENGINEERED		10/22/09	DRAWN	AA	10/22/09
APPROVED		10/22/09	CHECKED	CJH	10/22/09

SCALE: NONE

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JOB NO. 451-004
CADFILE 451-004E1
DRAWING E-5
REVISION 1

CONCRETE NOTES

1. CONCRETE MATERIALS, CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO ACI 318–05, ACI 301 AND INTERNATIONAL BUILDING CODE, 2006 EDITION.

2. MATERIAL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

   A. CONCRETE AGGREGATE – ASTM C33 (MAXIMUM SIZE 1")
   B. REINFORCING STEEL (REBAR) – ASTM A615, GRADE 60
   C. CEMENT – PORTLAND CEMENT, ASTM C150, TYPE II OR III, TRICALCIUM ALUMINATE – 8% MAXIMUM
   D. FLY ASH – ASTM C618, CLASS C OR F, 15% MAXIMUM AS CEMENT REPLACEMENT
   E. COMPRESSIVE STRENGTH AT 28 DAYS – 4000 PSI MINIMUM
   F. SLUMP – 4" MINIMUM
   G. WATER TO CEMENT RATIO – 0.4 MAXIMUM
   H AIR ENTRAINMENT – 3.5% TO 6.5%
   J. CONCRETE WEIGHT – NORMAL
   K. CHEMICAL ADMIXTURES – ASTM C494
   M. CALCIUM CHLORIDE – NONE ALLOWED

3. PROVIDE MINIMUM COVER FOR REBAR CONFORMING TO ACI 318, CHAPTER 7 AS FOLLOWS UNO:

   A. CONCRETE DEPOSITED DIRECTLY AGAINST GROUND – 3"
   B. CONCRETE EXPOSED TO WEATHER OR GROUND – 2"
   C. CONCRETE NOT EXPOSED TO WEATHER OR GROUND, 1½" FOR COLUMNS, BEAMS AND GIRDERS AND ¾" FOR OTHERS

4. REBAR SPLICES SHALL CONFORM TO ACI 318, SECTIONS 12.2 AND 12.15, WITH LENGTHS (IN INCHES) AS FOLLOWS:

BAR SIZE	TOP BARS	OTHER BARS	BAR SIZE	TOP BARS	OTHER BARS
#4	32	25	#8	80	61
#5	40	31	#9	90	69
#6	48	37	#10	101	78
#7	70	53	#11	112	86

   TOP BARS – HORIZONTAL WITH GREATER THAN 12" OF CONCRETE CAST BELOW BAR.
   REBAR SPACING MINIMUM – CLEAR DISTANCE GREATER THAN TWICE REBAR DIAMETER.

5. REBAR SHALL BE DETAILED CONFORMING WITH THE ACI DETAILING MANUAL, 2004 EDITION, AND REBAR SHALL BE CONTINUOUS AT STRUCTURE CORNERS AND INTERSECTIONS.

6. EXPOSED CONCRETE FINISH SHALL BE AS FOLLOWS, UNO:

   A. EXTERIOR SLABS – LIGHT BROOM
   B. INTERIOR SLABS – SMOOTH TROWEL TO MATCH EXISTING
   C. OTHER HORIZONTAL – WOOD FLOAT
   D. VERTICAL – SMOOTH WITHOUT HONEYCOMBING OR FORM MARKS

7. EXPOSED CORNERS SHALL HAVE A ¾" x 45° CHAMFER.

8. CONCRETE WORK PERFORMED DURING HOT WEATHER (ABOVE 90°F) SHALL CONFORM TO ACI STANDARD 305. EVAPORATION RETARDANT SHALL BE USED IN TEMPERATURES ABOVE 80°F.

9. CONCRETE WORK PERFORMED DURING COLD WEATHER (BELOW 40°F) SHALL CONFORM TO ACI STANDARD 306.

10. EXPOSED (NON–FORMED) CONCRETE SURFACES SHALL HAVE SEVEN DAY MOIST CURE OR CURING COMPOUND APPLIED CONFORMING TO THE FOLLOWING:

    A. ASTM C309 AND ASTM C1315
    B. 30% MINIMUM SOLIDS BY WEIGHT
    C. APPLIED AT 200 SQ FT PER GALLON

11. ANCHOR RODS (BOLTS) SHALL BE STEEL CONFORMING TO ASTM F1554, GR 36, HAVE A WASHER AND NUT EXPOSED AND HAVE A HEAD OR NUT ON EMBEDDED END. EXPOSED EMBEDDED ITEMS SHALL BE GALVANIZED PER ASTM A123. ANCHOR RODS LESS THAN 1¼" IN DIAMETER MAY BE SUBSTITUTED WITH "AC100 PLUS" ADHESIVE ANCHOR SYSTEM BY POWERS FASTENERS WITH AN EMBEDDED DEPTH OF 9 ANCHOR DIAMETERS.

12. SLABS ON GRADE CONTROL JOINTS SHALL HAVE SIKAFLEX 2c SEALANT BY SIKA OR THC 900 OR 901 SEALANT BY TREMCO. EXPANSION JOINTS SHALL BE ½" THICK AND CONFORM TO ASTM D1751, D1752, OR D2628. CONCRETE JOINT LOCATIONS NOT SHOWN ON DRAWINGS SHALL BE APPROVED.

13. COLD JOINT SURFACES SHALL HAVE A ¼" PROFILE MINIMUM.

14. ANCHOR ROD PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:

    LOCATION – ±⅛" AT TOP OF ROD AND TOP OF CONCRETE
    PROJECTION – +¼", –0"
    PLUMB – ±1⁄16"/FOOT OF LENGTH

15. DO NOT APPLY LOADINGS UNTIL ALL CONCRETE IS PLACED AND REACHED F'c, UNLESS APPROVED. WALL FORMS MAY BE REMOVED AFTER 3 DAYS AND CONCRETE HAS REACHED ⅔ OF F'c.

16. CONCRETE SHALL BE PLACED AND CONSOLIDATED PER ACI REQUIREMENTS WITH THE USE OF INTERNAL VIBRATION.

17. CONCRETE SLABS PLACED ON GRADE SHALL REST ON FIRM, UNDISTURBED SOIL OR APPROVED GRANULAR FILL COMPACTED TO 95% PER ASTM D1557 IN 8" LOOSE LIFTS.

1

QUALITY CONTROL INSPECTION REQUIREMENTS

ACTIVITY	IBC REQUIREMENTS	OTHER REQUIREMENTS / COMMENTS
GENERAL	SECTIONS 1704.1 & 10704.2	
STEEL CONSTRUCTION ELEMENTS	SECTION 1704.3 TABLE 1704.3	AISC
WELDING	SECTION 1704.3 TABLE 1704.3	AISC
HIGH STRENGTH BOLTS	SECTION 1704.3 TABLE 1704.3	AISC
CONCRETE CONSTRUCTION	SECTION 1704.4 TABLE 1704.4	AC1
MASONRY	SECTION 1704.5 TABLE 1704.5.1	AC1 530, LEVEL 1
SOILS (FILL >12" DEEP TOTAL)	SECTION 1704.7 TABLE 1704.7	
POST INSTALLED ANCHORS		ACI REPORT 193 OR 308 OR MANUFACTURERS RECOMMENDATIONS
SIESMIC RESISTIVE ELEMENTS	SECTIONS 1705.1, 1705.2 & 1705.3	PROJECT SEISMIC QUALITY ASSURANCE PLAN
PILE FOUNDATIONS	SECTION 1704.8 TABLE 1704.8	
PIER FOUNDATIONS	SECTION 1704.9 TABLE 1704.9	

ABBREVIATIONS

AROD	ANCHOR ROD
ABOLT	ANCHOR BOLT
APPROX	APPROXIMATE
BC	BOLT CIRCLE
BOT	BOTTOM
B/	BOTTOM OF
C/C	CENTER TO CENTER
CF	CONCRETE FOOTING
CHKD PL	CHECKERED PLATE
CLR	CLEARANCE
COL	COLUMN
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CJ	CONTROL JOINT
CONST JT	CONSTRUCTION JOINT
DIA	DIAMETER
DN	DOWN
DL	DEAD LOAD
DWG	DRAWING
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL
EMBED	EMBEDMENT
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
FAB	FABRICATOR
FDN	FOUNDATION
F/S	FAR SIDE
FOF	FACE OF FLANGE
FIN	FINISHED
FLR	FLOOR
GL	GIRT LINE
G/RAIL	GUARD RAIL
GRTG	GRATING
H/RAIL	HANDRAIL
HEX	HEXAGONAL
HP	HIGH POINT
ID	INSIDE DIAMETER
JT	JOINT
KB	KNEE BRACE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MFR	MANUFACTURER
MAX	MAXIMUM
MCC	MECHANICAL CONTROL CENTER
MIN	MINIMUM
MISC	MISCELLANEOUS
MC	MOMENT CONNECTION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
N/S	NEAR SIDE
OD	OUTSIDE DIAMETER
OPNG	OPENING
PL	PLATE
PR	PAIR
PLATF	PLATFORM
PT	POINT
PROJ	PROJECTION
QTY	QUANTITY
RAD	RADIUS
REF	REFERENCE
R	RISER
REV	REVISION
SCHED	SCHEDULE
SH	SHEET
SIM	SIMILAR
SP	SPACE
SQ	SQUARE
SPEC	SPECIFICATION
STD	STANDARD
SS	STAINLESS STEEL
STL	STEEL
STIFF	STIFFENER
SYMM	SYMMETRICAL
T & B	TOP AND BOTTOM
T/	TOP OF
T	TREAD
TYP	TYPICAL
UN	UNLESS NOTED
VERT	VERTICAL
XFMR	TRANSFORMER
WMS	WIRE MESH SCREEN
WP	WORK POINT
WT	WEIGHT
W	WIDE FLANGE
WWF	WELDED WIRE FABRIC
W/	WITH

2

SPECIAL INSPECTION AND TESTING UNDER THE PROVISIONS OF IBC 1704 AND FOR MISCELLANEOUS AREAS

Indicate required Special inspections for project by checking the appropriate boxes and provide specific instructions as to the inspection requirements and the expectations of the architect, engineer and owner:

FABRICATORS (IBC 1704.2)

☐ Approved Fabricator	Fabricators Name:
x Unapproved Fabricator	Fabricators Name: Overhead Cranes International

In-plant inspections
X Steel Construction X Welding X Details

STEEL (IBC 1704.3)

Item			Detailed Instructions and Frequencies
High Strength Bolting(1704.3.3)	x Continuous	☐ Periodic	
WELDING (1704.3.1)			
Details (1704.3.2)			
Complete & partial penetration groove welds	X Continuous	☐ Periodic	
Multipass fillet welds	X Continuous	☐ Periodic	
Single-pass fillet welds > 5/16"	X Continuous	☐ Periodic	
Single-pass fillet welds ≤ 5/16"	☐ Continuous	X Periodic	
Floor & roof deck welds	☐ Continuous	☐ Periodic	N/A
REINFORCEMENT STEEL	☐ Continuous	X Periodic	
Verification of weldability	☐ Continuous	X Periodic	
Shear wall and shear reinforcement	☐ Continuous	☐ Periodic	N/A
Other reinforcement	☐ Continuous	X Periodic	
Steel frame joint details	☐ Continuous	☐ Periodic	N/A

CONCRETE CONSTRUCTION (IBC 1704.4)

Item			Detailed Instructions and Frequencies
Materials (1704.4.1)	☐ Continuous	X Periodic	
Steel placement	☐ Continuous	X Periodic	
Steel welding	☐ Continuous	X Periodic	
Bolts prior & during placement	X Continuous	Periodic	
Use of required design mix	☐ Continuous	X Periodic	
Concrete sampling for strength test, slump, air content, and temperature of concrete	☐ Continuous	X Periodic	
Concrete & shotcrete placement	☐ Continuous	X Periodic	
Curing temperature and techniques	☐ Continuous	X Periodic	
Pre-stressed concrete	☐ Continuous	☐ Periodic	N/A
Pre-cast concrete	☐ Continuous	☐ Periodic	N/A
Posttensioned concrete	☐ Continuous	☐ Periodic	N/A
Form work	☐ Continuous	X Periodic	

MASONRY CONSTRUCTION (IBC 1704.5)

Item			Detailed Instructions and Frequencies
As masonry construction begins:			
Site prepared mortar	☐ Continuous	☐ Periodic	N/A
Construction of mortar joints	☐ Continuous	☐ Periodic	N/A
Location of reinforcement, connectors, pre-stressing tendons and anchorages	☐ Continuous	☐ Periodic	N/A
Pre-stressing technique	☐ Continuous	☐ Periodic	N/A
Grade and size of pre-stressing tendons and anchorages	☐ Continuous	☐ Periodic	N/A
Inspection program verify:			
Size and location of structural elements	☐ Continuous	X Periodic	
Type, size and location of anchors	☐ Continuous	X Periodic	
Size, grade and type of reinforcement	☐ Continuous	X Periodic	
Welding of reinforcement	☐ Continuous	X Periodic	
Cold and hot weather protection	☐ Continuous	X Periodic	
Application and measurement of pre-stressing force	☐ Continuous	☐ Periodic	N/A
Prior to grouting verify			
Clean grout space	☐ Continuous	X Periodic	
Placement of reinforcement	☐ Continuous	X Periodic	
Grout mix	☐ Continuous	X Periodic	
Mortar joints	☐ Continuous	X Periodic	
Grout placement	☐ Continuous	X Periodic	
Grout and mortar specimens and prisms	☐ Continuous	☐ Periodic	N/A
Construction and submittal compliance verification	☐ Continuous	X Periodic	
Empirical masonry – Cat. I-III (1708.1.1)	☐ Continuous	☐ Periodic	N/A
Empirical masonry – Cat. IV (1708.1.1)	☐ Continuous	☐ Periodic	N/A
Engineered masonry – Cat. I-III 1708.1.1	☐ Continuous	☐ Periodic	N/A
Engineered masonry – Cat. IV (1708.1.1)	☐ Continuous	☐ Periodic	N/A
Engineering & pre-stressing steel (1708.3)	☐ Continuous	☐ Periodic	N/A
Structural steel (1708.4)	☐ Continuous	X Periodic	
Qualification of mechanical & electrical equipment (1708.5)	☐ Continuous	X Periodic	
Seismically isolated structures (1708.6)	☐ Continuous	X Periodic	
Testing for seismic resistance is	☐ Continuous	☐ Periodic	N/A

WOOD CONSTRUCTION (IBC 1704.6)

Item			Detailed Instructions and Frequencies
Prefabricated elements & assembly	☐ Continuous	X Periodic	

SOILS CONSTRUCTION (IBC 1704.7)

Item			Detailed Instructions and Frequencies
Site preparation	☐ Continuous	X Periodic	
Structural fill material	☐ Continuous	☐ Periodic	N/A
Structural fill lift thickness	☐ Continuous	☐ Periodic	N/A
Structural fill soil densities	☐ Continuous	☐ Periodic	N/A
Backfill soils materials	☐ Continuous	☐ Periodic	N/A
Backfill soil densities	☐ Continuous	☐ Periodic	N/A

PILE FOUNDATIONS (IBC 1704.8)

Item			Detailed Instructions and Frequencies
Observe driving operation and reporting	☐ Continuous	☐ Periodic	N/A
Verify placement & installation data	☐ Continuous	☐ Periodic	N/A

PIER FOUNDATIONS (IBC 1704.9)

Item			Detailed Instructions and Frequencies
Observe drilling operation and reporting	☐ Continuous	☐ Periodic	N/A
Verify placement & installation data	☐ Continuous	☐ Periodic	N/A

SPRAYED FIRE-RESISTANT MATERIALS (IBC 1704.10)

Item			Detailed Instructions and Frequencies
Structural member surface conditions	☐ Continuous	X Periodic	
Material application	☐ Continuous	X Periodic	
Material thickness	☐ Continuous	X Periodic	
Material density	☐ Continuous	X Periodic	
Bonding strength	☐ Continuous	X Periodic	

MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS (IBC 1704.11)

Item			Detailed Instructions and Frequencies
Material and installation	☐ Continuous	X Periodic	

EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) (IBC 1704.12)

Item			Detailed Instructions and Frequencies
Material and installation	☐ Continuous	X Periodic	

ALTERNITIVE CONSTRUCTION METHODS OR MATERIALS (IBC 1704.13)

Item			Detailed Instructions and Frequencies
Material and installation	☐ Continuous	X Periodic	

EPOXY (IBC 1704.13)

Item			Detailed Instructions and Frequencies
Material and installation (specify locations)	X Continuous	☐ Periodic	

SMOKE CONTROL (IBC 1704.14)

Item			Detailed Instructions and Frequencies
Material	☐ Continuous	X Periodic	

Installation	☐ Continuous	X Periodic	

Special inspection for seismic resistance (IBC 1707)

Item			Detailed Instructions and Frequencies
Structural Steel (1707.2)	☐ Continuous	X Periodic	
Structural Wood (1707.3)	☐ Continuous	☐ Periodic	N/A
Cold–formed steel framing (1707.4)	☐ Continuous	X Periodic	
Pier foundations (1707.5)	☐ Continuous	☐ Periodic	N/A
Storage racks & access floors (1707.6)	☐ Continuous	☐ Periodic	N/A
Architectural components (1707.7)	☐ Continuous	☐ Periodic	N/A
Mechanical & electrical items (1707.8)	☐ Continuous	X Periodic	
Designated systems verification (1707.9)	☐ Continuous	X Periodic	
Seismic isolation systems (1707.10)	☐ Continuous	☐ Periodic	N/A

MISCELLANEOUS AREAS — Detailed Instructions and Frequencies
These inspections are recommended by the Architect/Engineer and approved by DFCM.

Suspended Ceiling Grid Clips	☐ Continuous	☐ Periodic	N/A
Suspended Ceiling wire spacing (Seismic)	☐ Continuous	☐ Periodic	N/A
Soils backfill (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Soils for curb and gutter (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Soils for parking lots (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Soils for utility trench backfill	☐ Continuous	☐ Periodic	N/A
Reinforcement for slab on grade sidewalks and drive approaches (specify locations and frequency)	☐ Continuous	X Periodic	
Reinforcement for interior slab on grade (specify locations and frequency)	☐ Continuous	X Periodic	
Concrete testing for slab on grade sidewalks and drive approaches (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Concrete testing for interior slab on grade (specify locations and frequency)	☐ Continuous	X Periodic	
Masonry Veneer (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Asphalt inspection (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Asphalt testing (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Inspection of seismic resistance (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Steam and water line welding (specify locations and frequency)	☐ Continuous	☐ Periodic	N/A
Seismic supports for duct work and sealing of joints for duct work	☐ Continuous	X Periodic	
Seismic supports for electrical raceways, cable trays and lights	☐ Continuous	X Periodic	
Seismic supports for plumbing lines including gas, water and steam and condensation	☐ Continuous	X Periodic	
Seismic bracing for mechanical units both on slab and suspended	☐ Continuous	X Periodic	
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A
	☐ Continuous	☐ Periodic	N/A

Special Inspectors Shall:
- Be approved by the Building Official prior to performing any duties;
- Provide proof of licensure as a special inspector by the State of Utah for each type of inspection;
- Inspection reports are to meet the requirements of IBC 1704.1.2 and DFCM standards;
- Inspection reports are to be submitted to the code consultant, architect, DFCM project manager, and the State of Utah Building Official within 48 hrs. of inspections;
- A final inspection report shall be submitted following completion of the project documenting the types of special inspections performed and a statement indicating that the structure is in compliance with the drawings, specifications and applicable codes. IBC 1704.1.2

Updated October 8, 2009

NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY – NOT FOR CONSTRUCTION	08-27-09	TRP	
0	CONSTRUCTION SET	10-22-09	TRP	
1	DFCM COMMENTS	12-10-09	TRP	
2	DFCM COMMENTS	01-12-10	TRP	

TITLE: **METALS BUILDING UPGRADE**
OGDEN–WEBER TECHNOLOGY COLLEGE
CRANE FOUNDATIONS
GENERAL CONCRETE NOTES

DRAFTING	BY	DATE
DRAWN	TRP	10/22/09
CHECKED	NRH	10/22/09

ENGINEERING	BY	DATE
ENGINEERED	NRH	10/22/09
APPROVED		
SCALE: NONE		

Intermountain Consumer Professional Engineers, Inc.
CONSULTING ENGINEERS
1145 E. SOUTH UNION AVE.
MIDVALE, UTAH 84047
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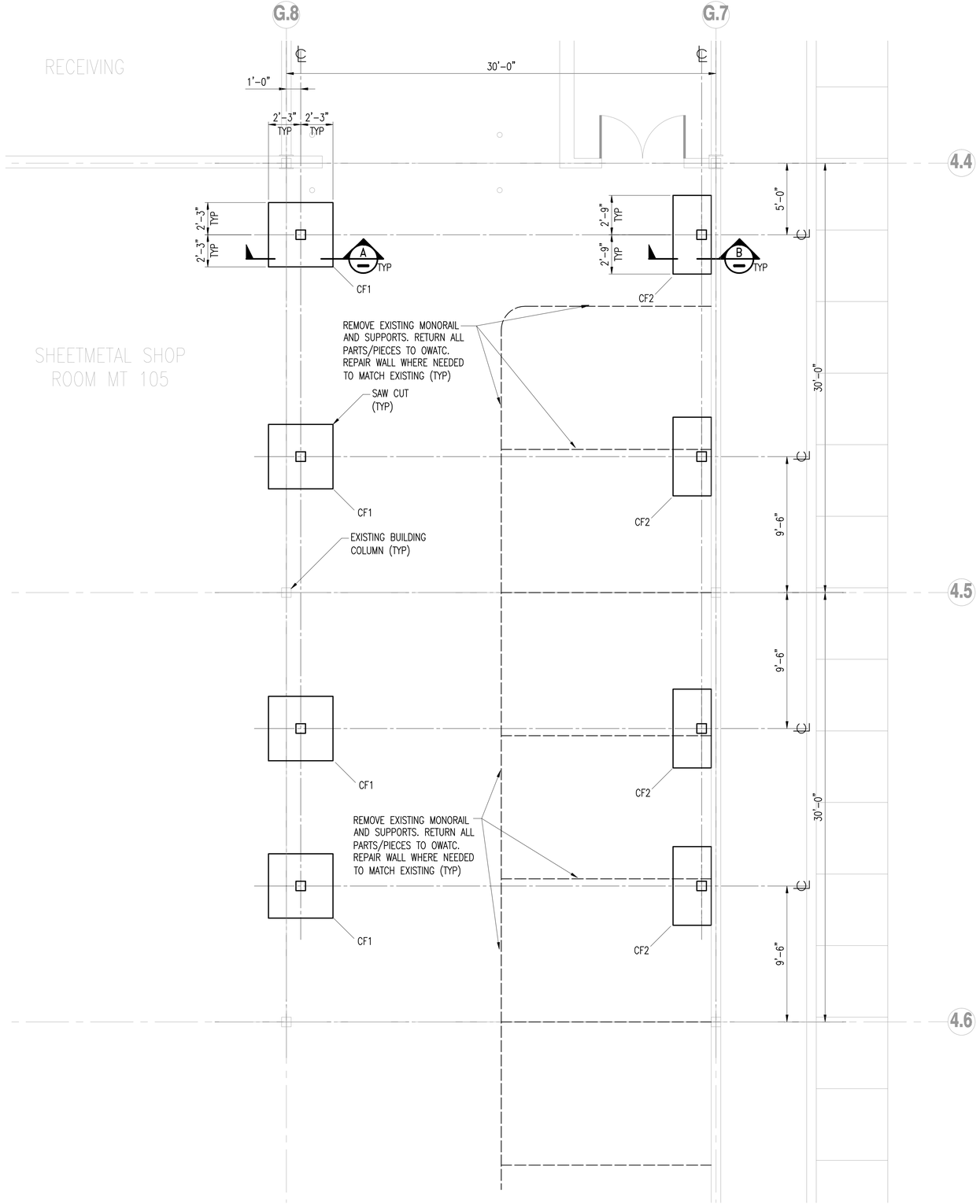
EDIT BY

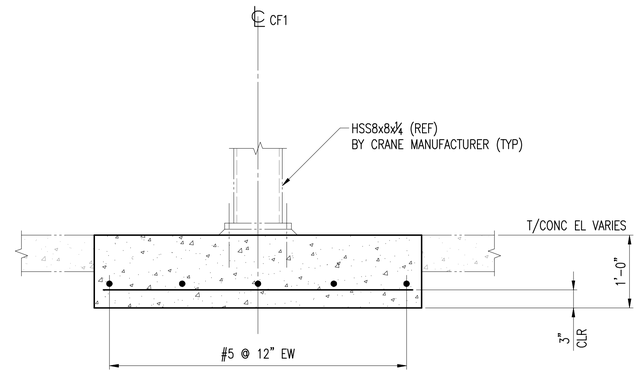
JOB NO. 451–004
CADFILE 451–004C0
DRAWING C–0
REVISION 2



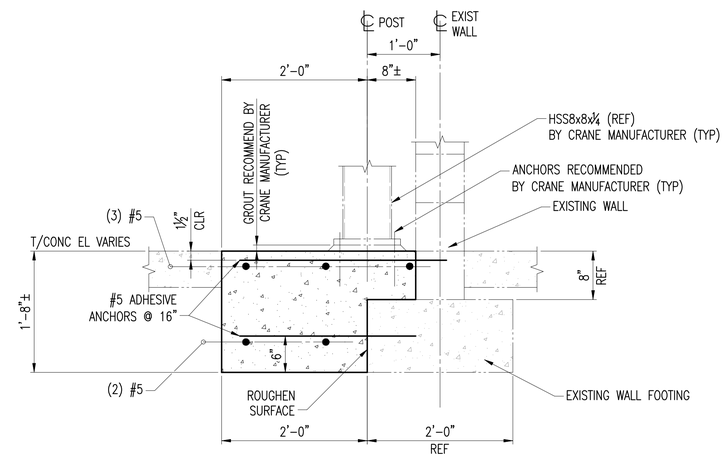
NORTH

CRANE FOUNDATION LOCATION PLAN

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



SECTION A
SCALE: 1" = 1'-0"
(TYP OF CF-1)

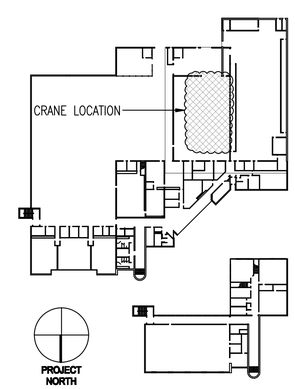


SECTION B
SCALE: 1" = 1'-0"
(TYP OF CF-2)

NOTES

1. FOR GENERAL CONCRETE NOTES SEE DWG C-001.
2. OVER SAW CUT TO BE FILLED WITH GROUT TO MATCH EXISTING.

KEY PLAN



NO.	REVISIONS	DATE	BY	APPROVED
A	PRELIMINARY – NOT FOR CONSTRUCTION	08-27-09	TRP	
0	CONSTRUCTION SET	10-22-09	TRP	
1	DFCM COMMENTS	12-10-09	TRP	

TITLE: **METALS BUILDING UPGRADE**
OGDEN-WEBER TECHNOLOGY COLLEGE
CRANE FOUNDATIONS
FOUNDATION LOCATION PLAN & SECTIONS

	BY	DATE
DRAFTING:	TRP	10/22/09
DRAWN	NRH	10/22/09
CHECKED		
ENGINEERING:	BY:	DATE:
ENGINEERED	NRH	10/22/09
APPROVED		
SCALE: 1/4" = 1'-0"		UN

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JOB NO. 451-004
CADFILE 451-004C1
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REVISION 1