

THE UNIVERSITY OF ARIZONA ELECTRIC SHOP TO TREE RING WOODSHOP RENOVATION AT BUILDING 45A NEW WORK PACKAGE

PROJECT LOCATION



B2 LOCATION MAP
SCALE: NONE

SHEET INDEX

GENERAL

- GI001 COVER SHEET
- GI111 CODE ANALYSIS

ARCHITECTURAL

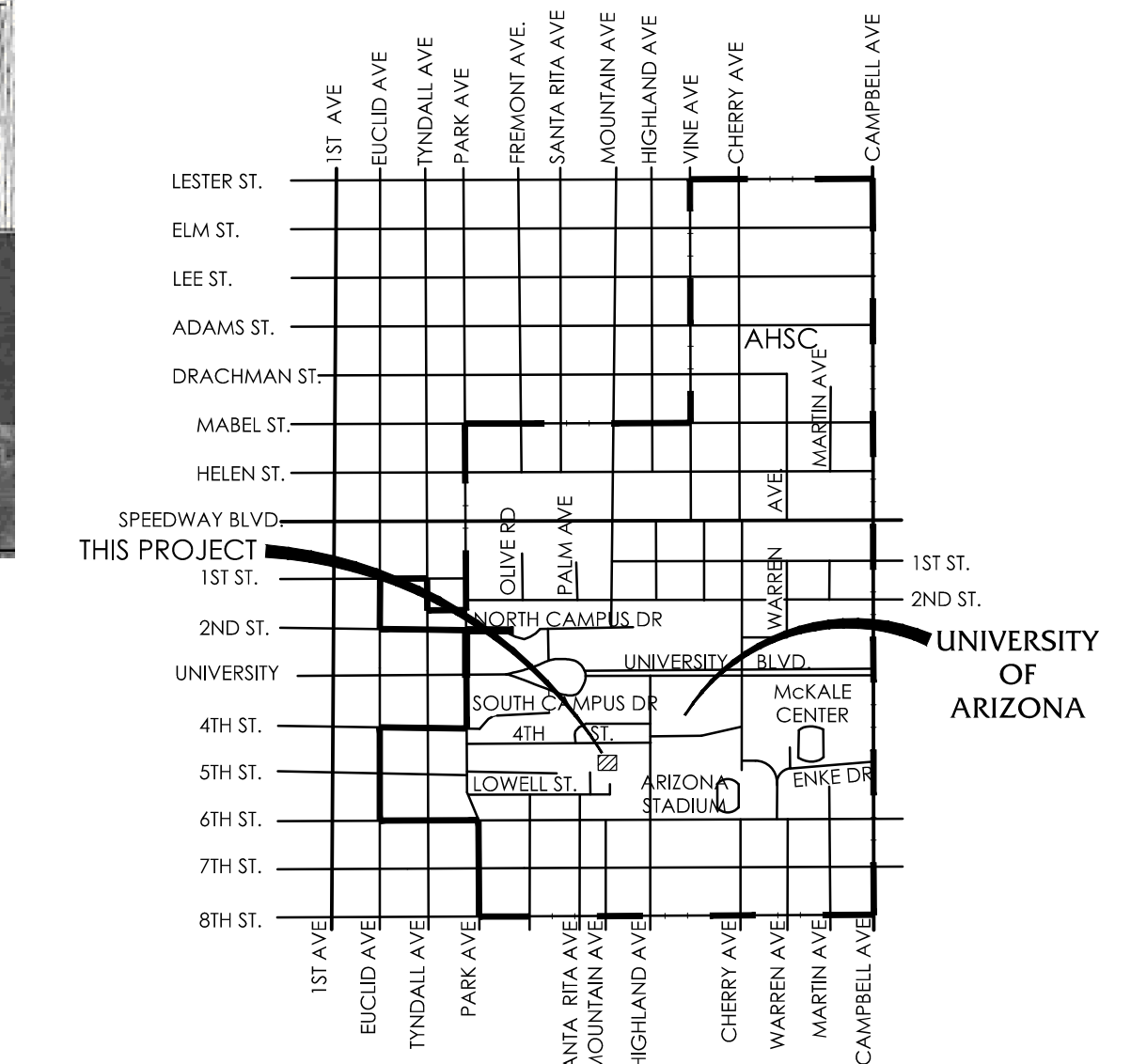
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- AF111 ARCHITECTURAL NEW WORK PLANS - FIRST FLOOR AND ROOF
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ELECTRICAL

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- EP701 ELECTRICAL SPECIFICATIONS



A8 VICINITY MAP
SCALE: 3"=1 MILE APPROX.

No.	REVISIONS / SUBMISSIONS	DATE



THE UNIVERSITY OF ARIZONA
ELECTRIC SHOP TO TREE RING WOOD SHOP
RENOVATIONS AT BUILDING 45A
COVER SHEET

GLHN
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U OF A NO. 08-8826
PROJECT NO. 0843.43
DESIGN BY: PMF
DRAWN BY: PMF
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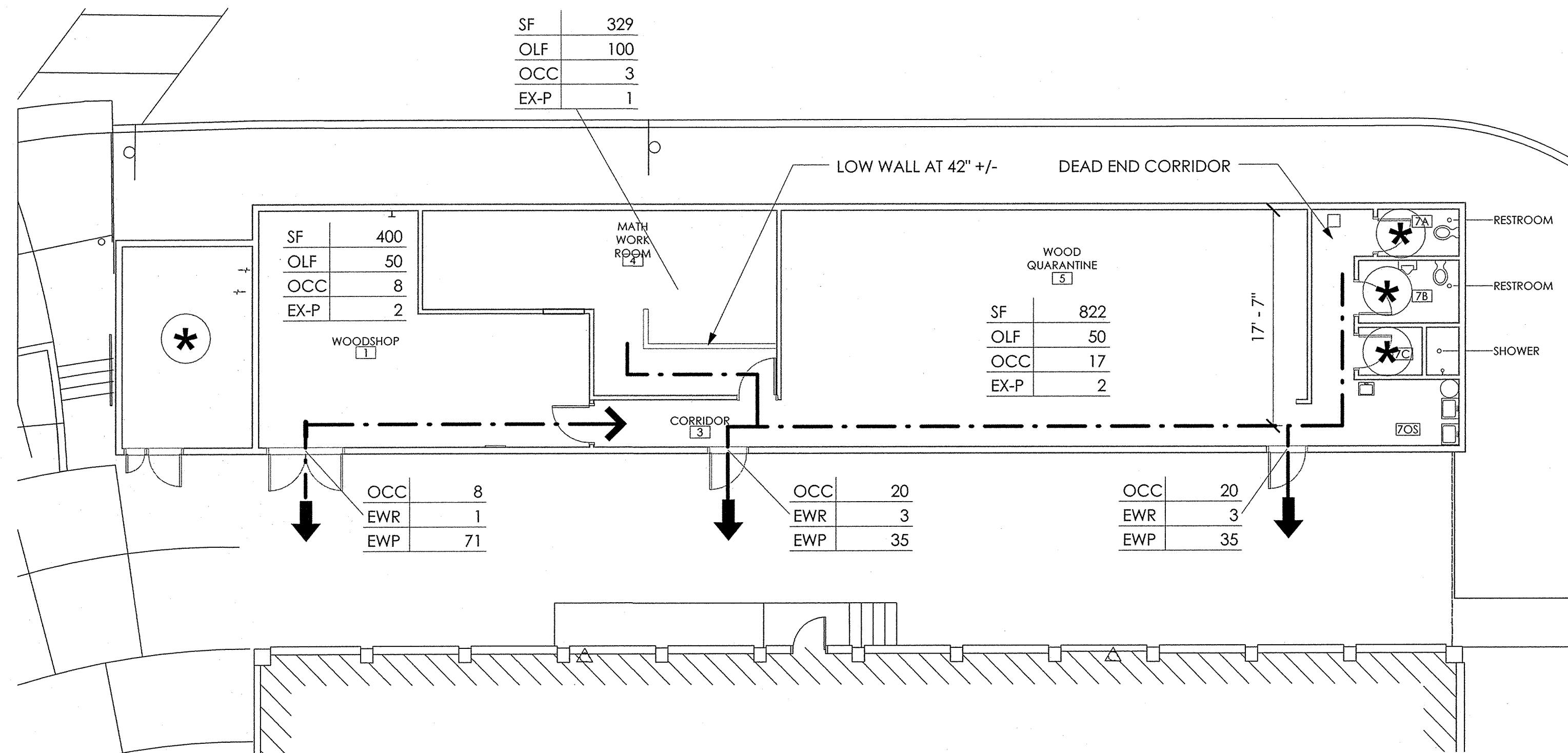
GI001
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Code Check - 2006 IBC

OCCUPANCY (chapter 3)	Occupancy Classification: Group "F-1" WOOD - WORKING / MACHINERY.	MEANS OF EGRESS (Chapter 10)	(Table 1004.1.1) Occupant Load Occupancy <u>SF/OCC.</u> <u>OCC. Load</u> Business 100 3 Education - Shop 50 25 Total Occupant Load: = 28
SPECIAL REQUIREMENTS based on Occupancy (chapter 4)	None		(Table 1005.1) Egress Width required : Exit: Business = 0.15 See Plan For additional information.
GENERAL BLDG. HEIGHTS & AREAS (chapter 5)	(Table 503) Construction Type: VB Basic Allowable Area: 8,500 SF. Increase for Sprinklers: (No Sprinklers) Single-story Building = 100% Total Allowable Area: 8,500 SF. Actual: First Floor 2,200 SF Allowable Bldg. Height (stories): 1Actual Bldg. Ht.: 1 stories Max. Bldg. Ht: 20 FT. Allowable Increase:Actual Bldg. Ht.: 9 FT.		1006.1 Exit Illumination Emergency egress lighting, see Electrical Lighting Plan. Egress lighting complies with 1006 for illumination level and emergency power supply. Provided in/at corridors, exterior egress components, interior discharge elements, and exterior landings. 1015.1 Means of Egress "F" Occupancy = 49 Maximum Occupant Load Occupancy load greater than 49 requires 2 exits. (Table 1016.1) Exit Access Travel Distance (Occupancy "F") : 200 feet max. allowed. Less than 100 feet max. provided. (Table 1017.1) Type "F" less than 30 occupant load - <u>Corridor Fire Resistance Rating:</u> 0 Hrs required. 1017.3 Dead ends: Not more than 20'- 0".
TYPE OF CONSTRUCTION (chapter 6)	(Table 601) Fire-Resistance Ratings: Type VB Structural Frame: 0HR Bearing Walls: 0 HR Non-Bearing Wall-Interior: 0 HR Floor Construction: 0 HR Roof Construction: 0 HR		
FIRE RESISTANCE RATED CONSTRUCTION (chapter 7)	None.		
FIRE PROTECTION SYSTEMS (chapter 9)	(903) Automatic Fire Sprinkler System: Not Required. PER 903.2.3		
		ACCESSIBILITY (chapter 11)	Accessible Parking spaces: Not applicable for this project, included in campus parking. Required: 2010 ADA Standards for Accessible Design. Accessibility provided

LEGEND

- EWR EXIT WIDTH REQUIRED IN INCHES
- EWP EXIT WIDTH PROVIDED IN INCHES
- EX-P TOTAL EXITS PROVIDED FROM SPACE/AREA
- OLF OCCUPANT LOAD FACTOR FOR ROOM/SPACE FROM IBC 2006 TABLE 1004.1.1
- OCC TOTAL OCCUPANTS
- SF SQUARE FEET
- PH PANIC HARDWARE
- NRE NOT A REQUIRED EXIT
- OAD OVERALL DIAGONAL
- OCC -
- EWR - EGRESS
- EWP - SUMMARY
- SF -
- OLF - ROOM
- OCC - SUMMARY
- EX-P -
- ➔ EXIT DISCHARGE
- ➔ ACCESSIBLE ROUTE
- * AREAS NOT INCLUDED IN OCCUPANCY CALC.
- FEC FIRE EXTINGUISHER CABINET
- FE WALL MOUNTED FIRE EXTINGUISHER
- NRE NOT REQUIRED EXIT
- AFES AUTOMATIC FIRE EXTINGUISHING SYSTEM IN ACCORDANCE WITH IBC CHAPTER 9
- TD TRAVEL DISTANCE
- ▨ 1-HR FIRE-RATED PARTITION



A1 CODE ANALYSIS FLOOR PLAN
SCALE: 1/8" = 1'-0"

DATE

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ELECTRIC SHOP TO TREE RING WOOD SHOP RENOVATIONS AT BUILDING 45A
CODE ANALYSIS

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ARCHITECTURAL ANNOTATION SYMBOLS

	DOOR TAG
	ROOM NAME
	KEYNOTE
	WINDOW TYPE
	PARTITION TYPE
	DATUM
	CENTER LINE
	MATCHLINE/VIEW REFERENCE TAG
	DETAIL CALLOUT
	BUILDING SECTION
	EXTERIOR ELEVATION
	GRID HEAD
	FIRST FLOOR 0'-0"
	FIRST FLOOR 0'-0"

ARCHITECTURAL ABBREVIATIONS

A.B.	ANCHOR BOLT
A.B.C.	AGGREGATE BASE COURSE
A/C	AIR CONDITIONING
AC(T)	ACOUSTICAL CEILING (TILE)
A.D.	ACCESS DOOR
ADJ	ADJACENT
AFC	ABOVE FINISH CEILING
AFF	ABOVE FINISH FLOOR
ALLOW	ALLOWANCE
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
A.O.	ACCESS OPENING
A.P.	ACCESS PANEL
@	AT
AUTO	AUTOMATIC
L	ANGLE
APPX.	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
BD	BOARD
B.L.	BUILDING LINE
BLDG.	BUILDING
BM	BEAM
B.M.	BENCH MARK
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
B.U.	BUILT UP
B.F.	BELOW FLOOR
B.G.	BELLOW GRADE
BLK(G)	BLOCK(ING)
BRG.	BEARING
CAB	CABINET
C.B.	CATCH BASIN
CEM	CEMENT
CEM PLAS	CEMENT PLASTER
CER	CERAMIC
CH	CHANNEL
C.F.C.I.	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFM	CUBIC FEET PER MINUTE
C.I.	CAST IRON
C.I.P.	CAST IN PLACE
CIR	CIRCUIT
C.J.	CONTROL JOINT
C.G.	CORNER GUARD
C.L.	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CPT	CARPET
CSK	COUNTERSINK
C.T.	CERAMIC TILE
C.W.	COLD WATER
CORR.	CORRIDOR
CORRUG.	CORRUGATED
DEMO	DEMOLISH (DEMOLITION)
DTL	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP.	DISPENSER
DN	DOWN
DO	DITTO
DR	DOOR
D.S.	DOWNSPOUT
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
E.F.	EACH FACE
E.J.	EXPANSION JOINT
ELEC.	ELECTRICAL
ELEV.	ELEVATION
ENT	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
E.W.	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

ARCHITECTURAL ABBREVIATIONS

F.A.	FIRE ALARM
F.D.	FLOOR DRAIN
F.C.O.	FLOOR CLEAN OUT
FDN	FOUNDATION
F.E.	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISHED FLOOR ELEVATION
FIN	FINISH
FIXT.	FIXTURE
FLSH	FLASHING
FLR	FLOOR
F.O.	FACE OF
F.S.	FLOOR SINK
FT	FEET, FOOT
FTG.	FOOTING
FURR	FURRING
FUT	FUTURE
FV	FIELD VERIFY
GA	GAUGE
GALV	GALVANIZED
GL	GLASS
GLB	GLUE LAMINATED BEAM
GND	GROUND
GWB	GYPSON WALL BOARD
GYP.	GYPSON
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDW	HARDWARE
H.M.	HOLLOW METAL
HORIZ	HORIZONTAL
H.P.	HORSEPOWER
HT	HEIGHT
H.W.	HOT WATER
HWR	HOT WATER RETURN
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH (ES)
INFO	INFORMATION
INS	INSULATION
INT	INTERIOR
J.B.	JUNCTION BOX
J.C.	JANITOR CLOSET
JST	JOIST
JT	JOINT
KIT.	KITCHEN
K.O.	KNOCK OUT
L	LONG, LENGTH
LAB	LABORATORY
LAV	LAVATORY
LBS	POUNDS
LIN. FT.	LINEAR FEET
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
M.B.	MACHINE BOLT
MC	MECHANICAL CONTRACTOR
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEMB	MEMBRANE
MFG	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MISC	MISCELLANEOUS
ML	METAL LATH
MO	MASONRY OPENING
MTD	MOUNTED
MTG	MOUNTING
MET	METAL
MUL	MULLION
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NO.	NUMBER
NTS	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
O.F.O.I.	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE

ARCHITECTURAL ABBREVIATIONS

P	PAVEMENT
P.C.	PULL CHAIN
PERIM.	PERIMETER
PERP.	PERPENDICULAR
PL	PLATE
P.L.	PROPERTY LINE
PLAS	PLASTER
PL GL	PLATE GLASS
PL. LAM.	PLASTIC LAMINATE
PLYWD	PLYWOOD
PNL	PANEL
PR	PAIR
PROJ	PROJECT
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PTD	PAINTED
POL.	POLISHED
Q.T.	QUARRY TILE
QTY	QUANTITY
R	RISER OR RADIUS
RA	RETURN AIR
R.C.P.	REFLECTED CEILING PLAN
RECEPT	RECEPTACLE
R.D.	ROOF DRAIN
REC	RECESSED
REF.	REFERENCE
REFRIG.	REFRIGERATOR
REG	REGISTER
REINF	REINFORCEMENT
REQD	REQUIRED
REV	REVISION
RFG	ROOFING
R.H.	RIGHT HAND
RM	ROOM
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
RWL	RAIN WATER LEADER
S.C.	SOLID CORE
SCHED	SCHEDULE
S.D.	STORM DRAIN
SECT.	SECTION
SQ. FT.	SQUARE FOOT
SHT.	SHEET
SIM.	SIMILAR
SLV	SHORT LEG VERTICAL
SHT MET	SHEET METAL
SPEC.	SPECIFICATION(S)
SPKR	SPEAKER
SQ.	SQUARE
S.S.	SERVICE SINK
S. STL	STAINLESS STEEL
ST	STATION
STD	STANDARD
STOR	STORAGE
STL	STEEL
STRUCT	STRUCTURAL
SUSP CLG	SUSPENDED CEILING
S.V.	SHEET VINYL
T	TREAD
T&G	TONGUE AND GROOVE
TEL	TELEPHONE
TEMP	TEMPERED
TH	THICK
THR	THRESHOLD
T.O.	TOP OF
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CURB
T.O.F.	TOP OF FOOTING
T.O.J.	TOP OF JOIST
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PARAPET
T.O.W.	TOP OF WALL
T.T.B	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP.	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
V	VENTILATION
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VT	VENT
VTR	VENT THROUGH ROOF
V.W.C.	VINYL WALL COVER
V.I.F	VERIFY IN FIELD
W/	WITH
W.C.	WATER CLOSET
WCO	WALL CLEAN OUT
WD	WOOD
WDW	WINDOW
WP	WATER PROOF
W.R.	WATER RESISTANT
WRGWB	WATER RESISTANT GYPSON
WSCT	WALL BOARD
WT	WAINSCOT
WWM	WEIGHT
YD.	WELDED WIRE MESH
YD.	YARD

DATE

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ELECTRIC SHOP TO TREE RING WOOD SHOP RENOVATIONS AT BUILDING 45A

ABBREVIATIONS AND STANDARD SYMBOLS

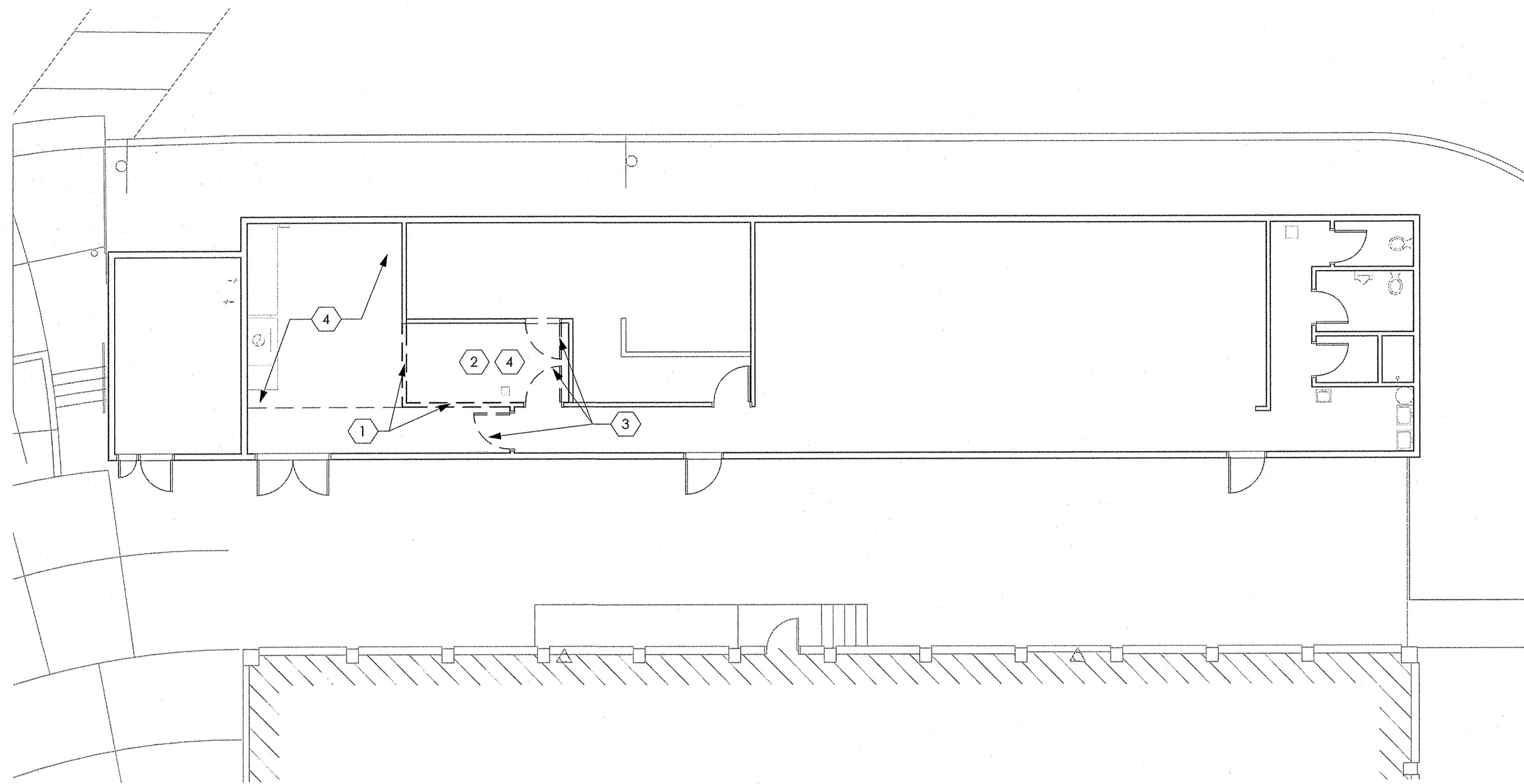
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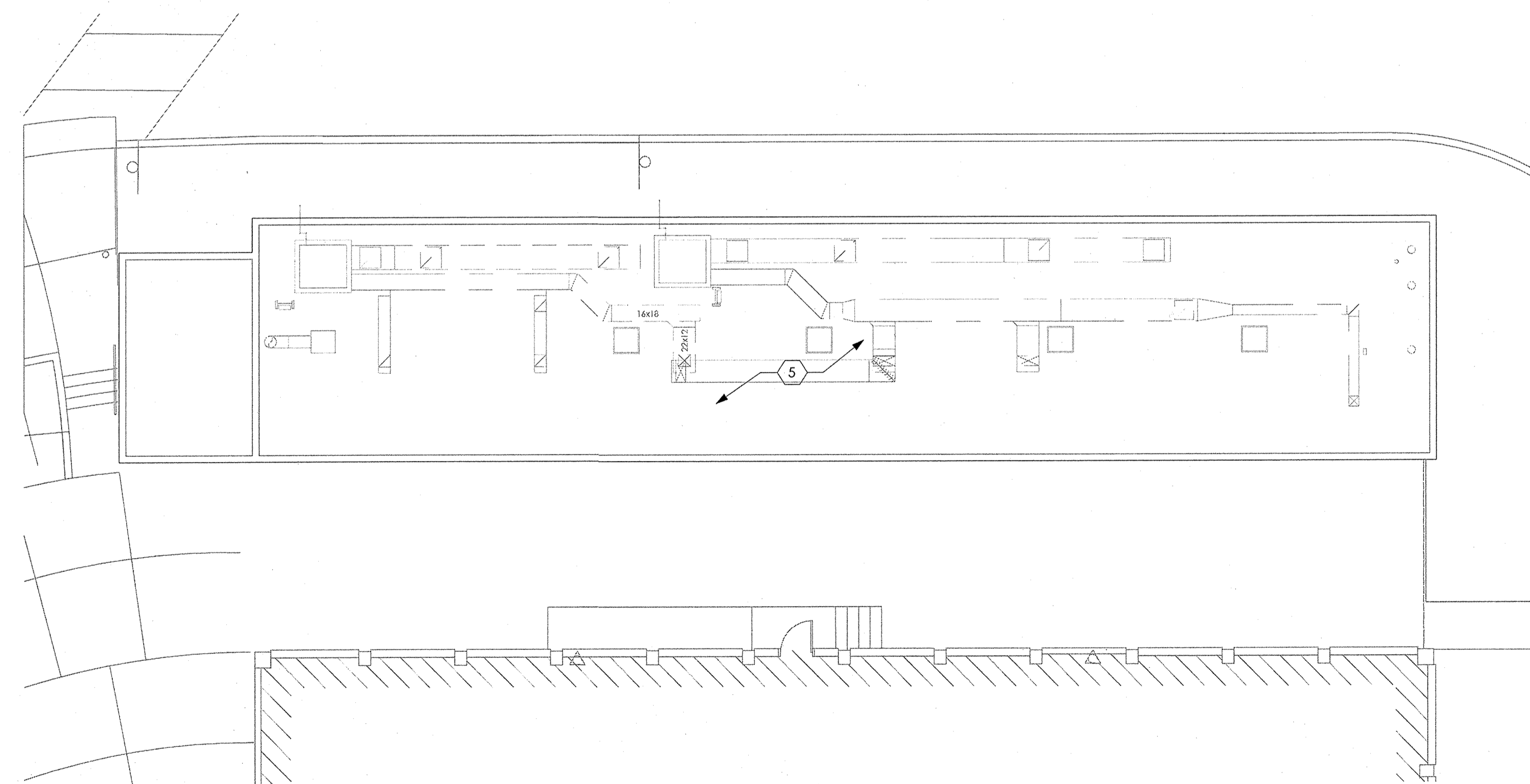
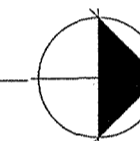
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26552
8/10/2012

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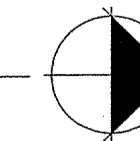
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PROJECT NO.	0843.43
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DRAWN BY:	DD
CHECKED BY:	BH
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E1 DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



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



GENERAL NOTES

- A. SEE STRUCTURAL FOR REQUIRED LINTELS AND SHORING REQUIRED FOR REMOVAL OF WALLS/OPENINGS.
- B. CONTRACTOR SHALL REVIEW THE PROJECT SITE AND SCOPE OF WORK. ANY EXPOSED ITEM THAT REQUIRES REMOVAL TO PERFORM THE NEW WORK, WHETHER SHOWN TO BE REMOVED OR NOT, SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
- C. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS REMOVED. CONTRACTOR SHALL DETERMINE WITH OWNER ITEMS TO BE SALVAGED AND SHALL PROTECT ALL SALVAGED ITEMS FROM DAMAGE UNTIL TURNED OVER TO THE OWNER.
- D. WHERE ITEMS ARE CALLED OUT TO BE REMOVED AND REINSTALLED, CONTRACTOR SHALL PROTECT FROM DAMAGE UNTIL REINSTALLED.
- E. REFER TO MECHANICAL, PLUMBING, ELECTRICAL AND STRUCTURAL FOR ADDITIONAL INFORMATION.

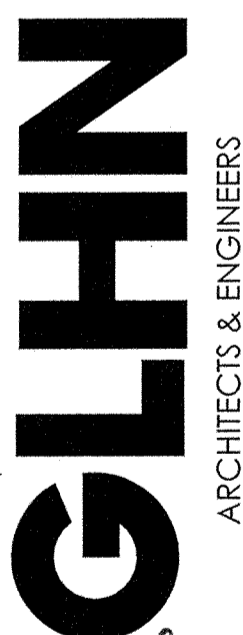
KEYNOTES

- 1. EXISTING WALLS TO BE DEMOLISHED.
- 2. EXISTING VCT FLOORING TO REMAIN.
- 3. DOORS AND FRAME TO BE DEMOLISHED.
- 4. EXISTING ACT CEILING AND GRID TO BE DEMOLISHED.
- 5. ROOFING TO BE CLEANED AND PREPPED FOR ELASTOMER COATING (MUST MEET OR EXCEED ASTM D-6083 AND ASTM E108). PATCH AND REPAIR AS NECESSARY AND RESEAL ROOF PENETRATIONS WITH PLASTIC CEMENT AND REINFORCEMENT FABRIC.

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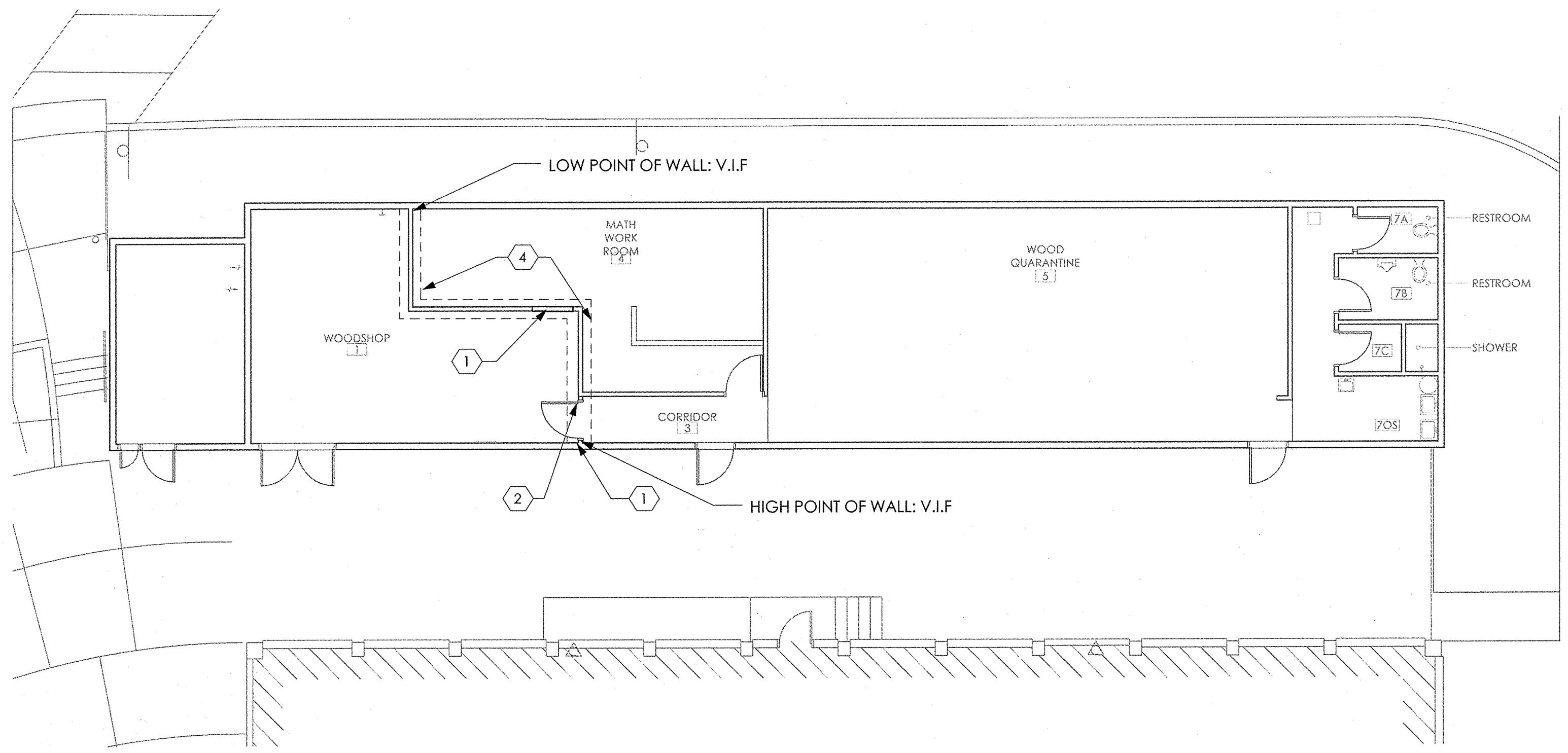
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SHOP RENOVATIONS AT BUILDING 45A
ARCHITECTURAL DEMOLITION PLANS-
FIRST FLOOR AND ROOF



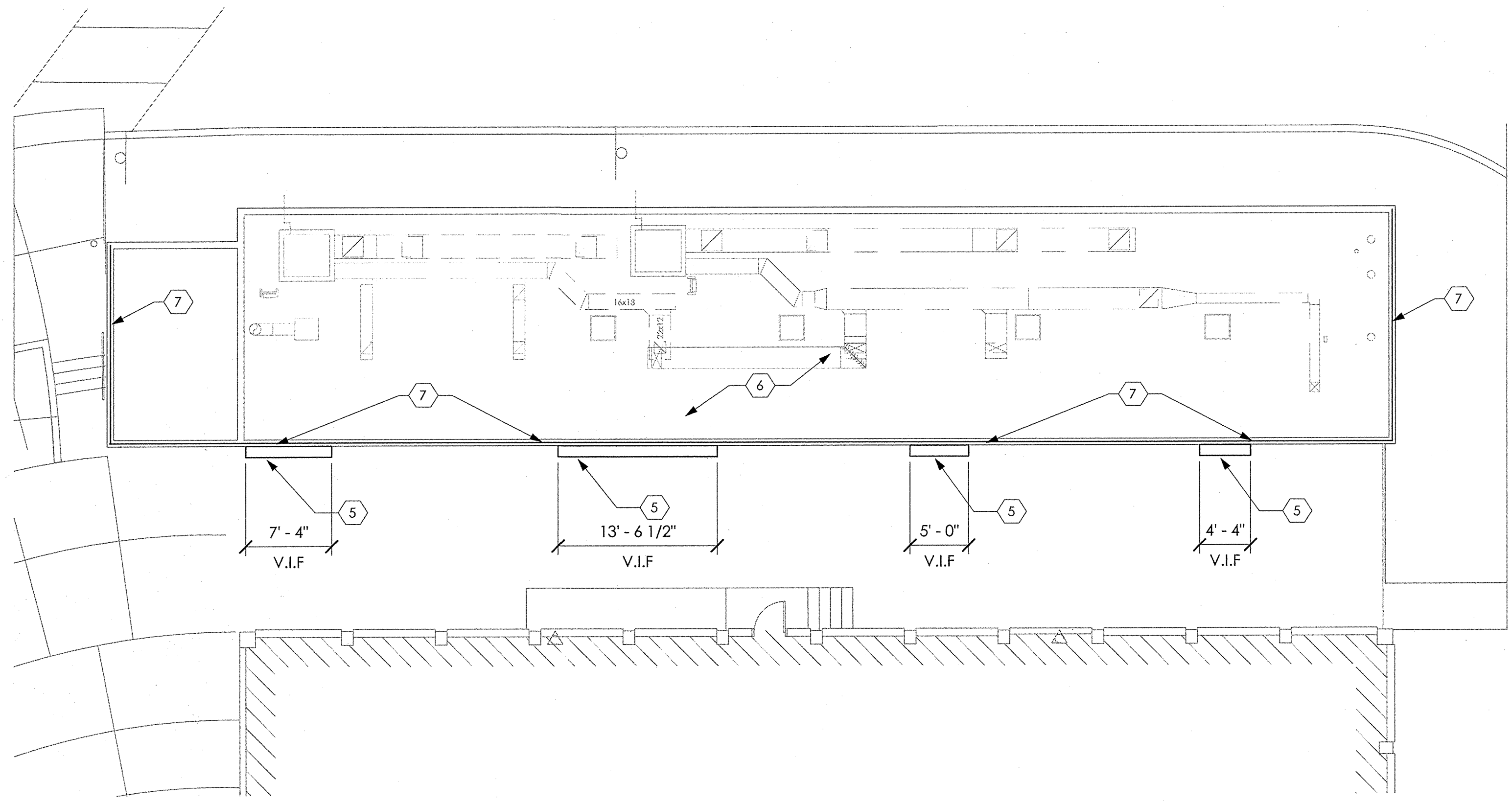
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E1 FLOOR PLAN
SCALE: 1/8" = 1'-0"



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

GENERAL NOTES

1. DRAWING SHALL NOT BE SCALED. IF THERE IS A QUESTION PERTAINING TO DIMENSIONS, CONTRACTOR SHALL NOTIFY THE ARCHITECT FOR CLARIFICATION.
2. DIMENSIONS BASE LOCATIONS ARE TAKEN FROM THE FOLLOWING LOCATIONS.
- c) **EXTERIOR WALL:**
 - i) EXTERIOR FACE OF STEM WALL EITHER CMU OR CONCRETE.
 - ii) OUTSIDE FACE OF PLYWOOD FOR METAL OR WOOD FRAMED WALLS.
- b) **INTERIOR WALL:**
 - i) FACE OF STUD AS INDICATED
 - ii) WHERE DIMENSIONS IS NOTED AS "CLEAR" (CLR) DIMENSIONS SHALL BE THE REMAINING DISTANCE AFTER ALL FINISHES HAVE BEEN APPLIED.
- c) **DOORS:**
 - i) GENERAL: PUSH/PULL CLEARANCES SHALL BE MAINTAINED PER ADA DIAGRAMS IN THESE DOCUMENTS. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS DURING LAYOUT/ PRIOR TO CONSTRUCTION OF ANY WALLS FOR RESOLUTION.
 - ii) INTERIOR: WHERE NO DIMENSION IS GIVEN DOORS, HINGE SIDE, SHALL BE 4" MINIMUM TO WALL PERPENDICULAR TO FRAME.
 - iii) EXTERIOR: DIMENSIONS SHALL BE TO INSIDE FACE OF DOOR JAMB OR CENTER OF DOOR AS INDICATED.
- d) **WINDOWS:**
 - i) EXTERIOR: DIMENSIONS SHALL BE TO OUTSIDE FACE OF JAMB OR CENTER OF WINDOW AS INDICATED.

KEYNOTES

1. INFILL WALL. 2 X 4 METAL STUD W/ 5/8" TYP X GYP BOTH SIDES. FINISHED AND ALIGNED TO MATCH EXISTING ADJACENT WALLS. IF INSULATION IS PROVIDED IN EXISTING WALL, INSULATION IS TO BE PROVIDED IN NEW WALL (V.I.F). COORDINATE WITH OWNER.
2. 3'-0" X 7'-0" SOLID CORE WOOD DOOR WITH HOLLOW METAL FRAME. DOOR TO BE FINISHED FROM FACTORY, AND FRAME TO BE FINISHED TO MATCH EXISTING.
 - LOCKSET: SARGENT LEVER
 - HINGES: STANLEY
 - SEALS: PEMKO
 - THRESHOLD: PEMKO
 - DOOR BOTTOM: PEMKO
3. 3 1/2" WOOD STUD W/ 5/8" TYP X GYP BOTH SIDES. FINISHED TO MATCH EXISTING ADJACENT WALLS.
4. NEW AND EXISTING WALLS TO EXTEND UP TO CEILING. ABOVE CEILING TO BE DUST SEALED BY CAULK/SEAL UP TO BOTTOM OF STRUCTURE.
5. NEW SHADING CANOPY TO BE INSTALLED ABOVE DOOR/WINDOW. SEE AJ511 FOR DETAILS
6. NEW ELASTOMER ROOF COATING APPLIED OVER EXISTING ROOF.
7. NEW 3' HIGH SAFETY BAR RAIL TO BE INSTALLED AT ROOF EDGE. **ALTERNATE:** 3' PERFORATED MESH SCREEN WALL TO MATCH ADJACENT TREE RING INSTALLATION.

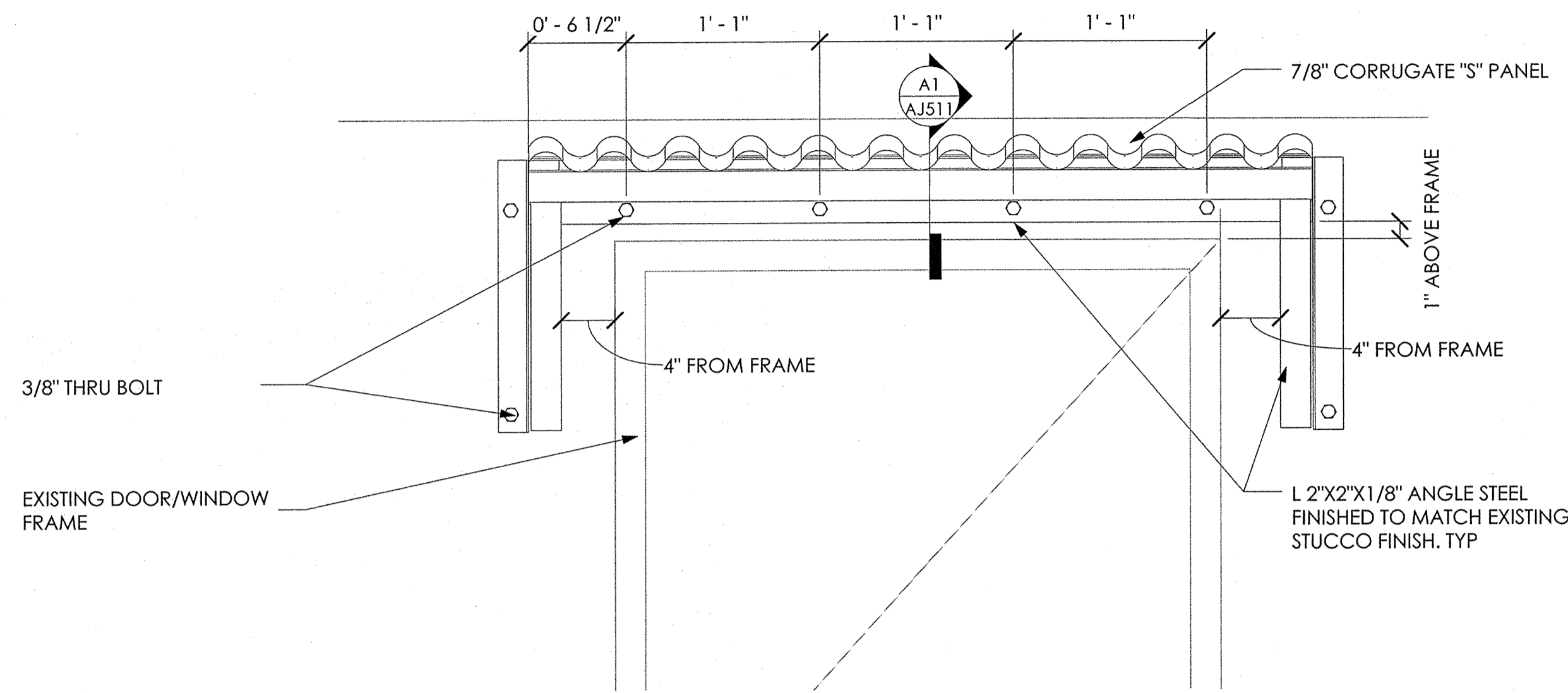
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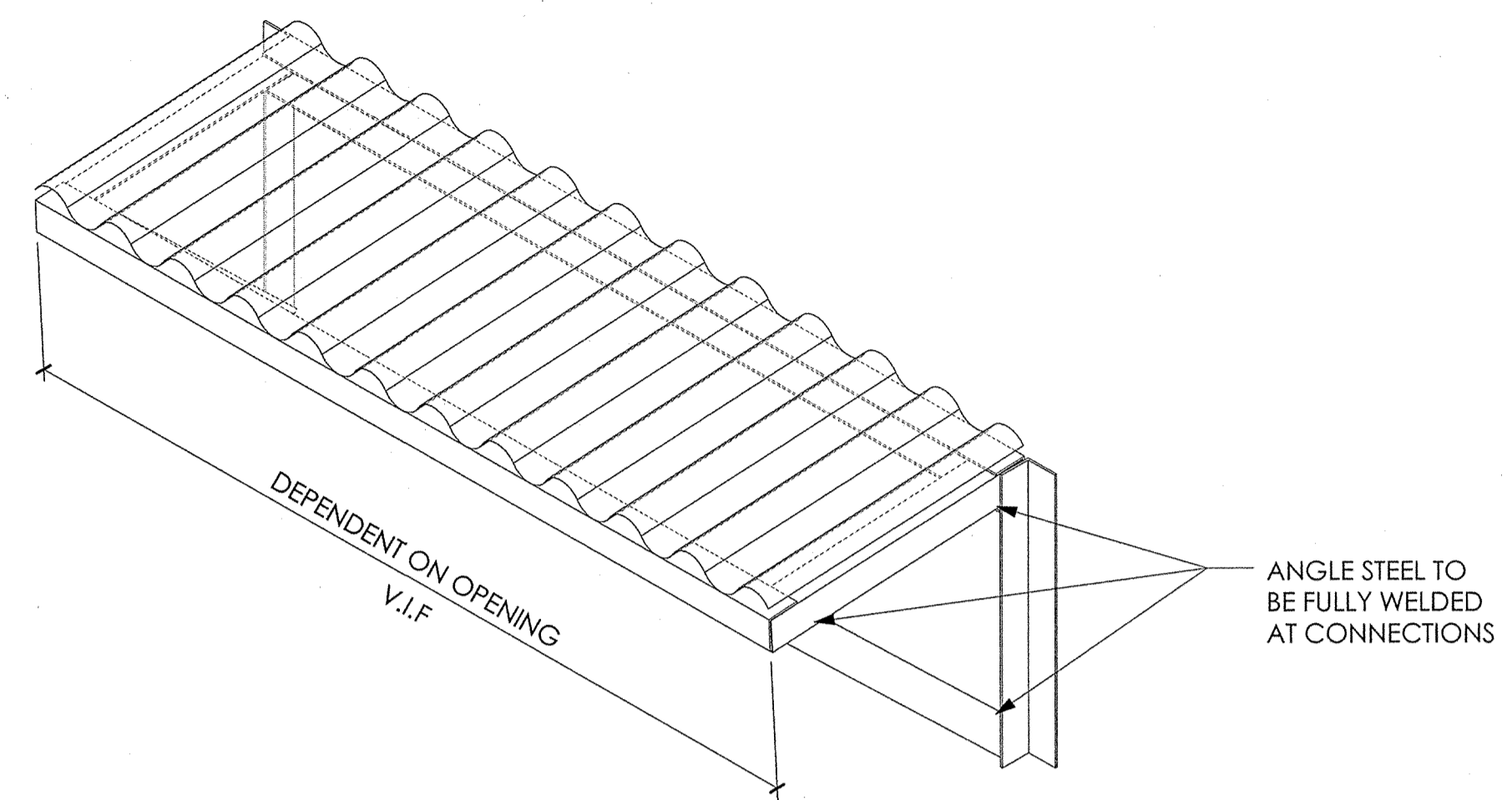
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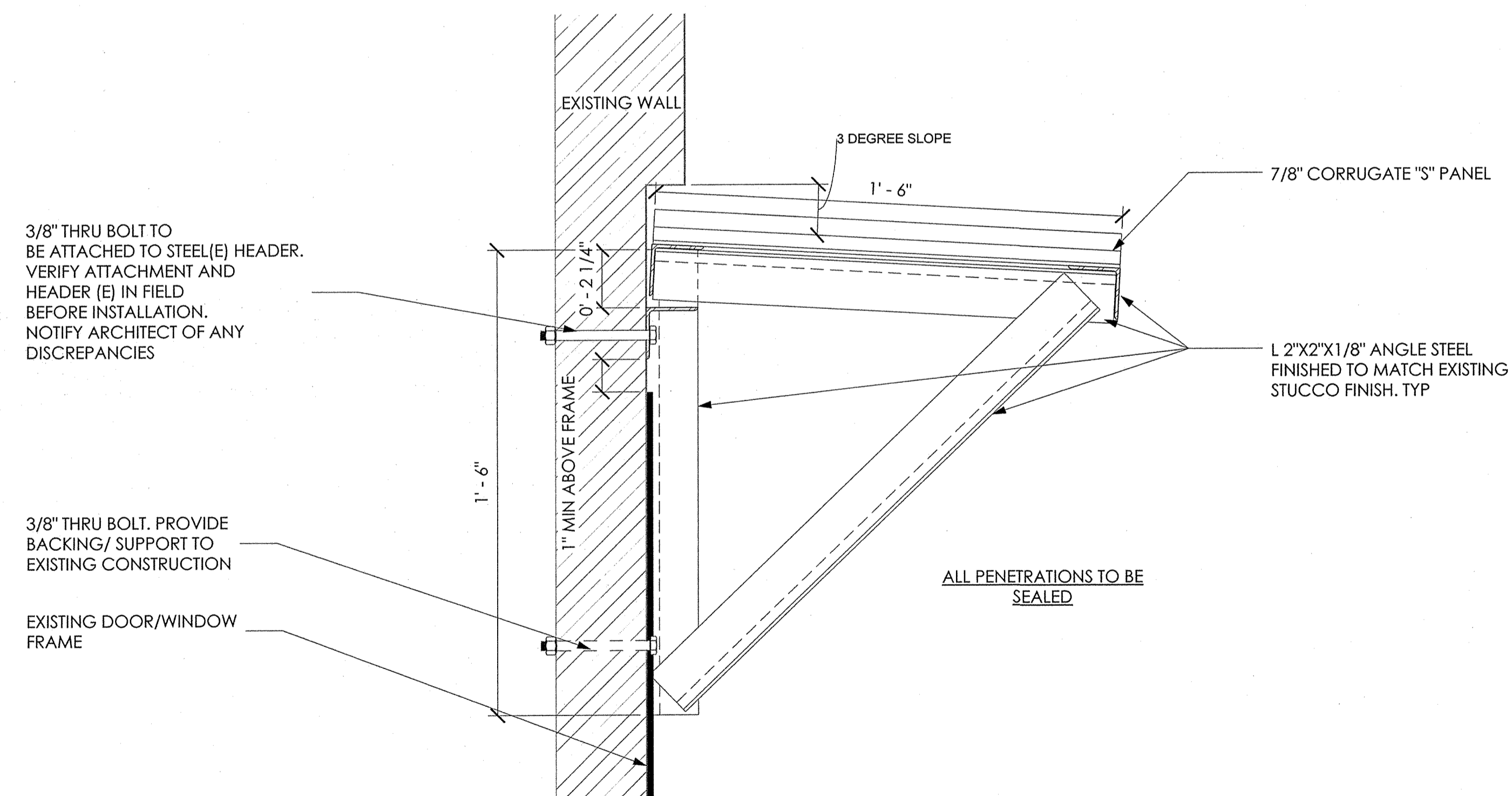
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E1 CANOPY ELEVATION
SCALE: 1 1/2" = 1'-0"



E6 CANOPY AXONOMETRIC
SCALE:



A1 CANOPY DETAIL
SCALE: 3" = 1'-0"

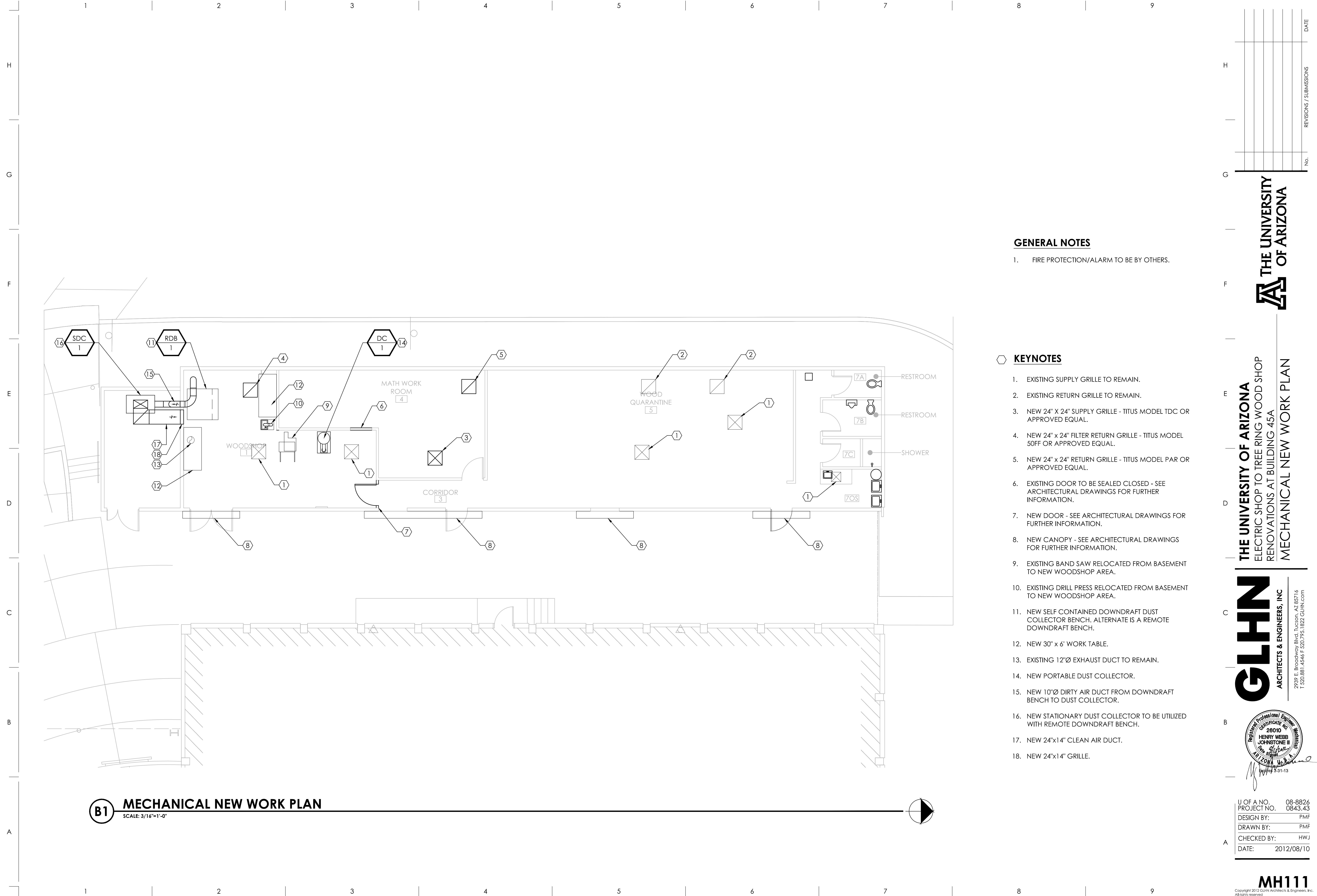
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B1 MECHANICAL NEW WORK PLAN
SCALE: 3/16"=1'-0"

GENERAL NOTES

1. FIRE PROTECTION/ALARM TO BE BY OTHERS.

KEYNOTES

1. EXISTING SUPPLY GRILLE TO REMAIN.
2. EXISTING RETURN GRILLE TO REMAIN.
3. NEW 24" x 24" SUPPLY GRILLE - TITUS MODEL TDC OR APPROVED EQUAL.
4. NEW 24" x 24" FILTER RETURN GRILLE - TITUS MODEL 50FF OR APPROVED EQUAL.
5. NEW 24" x 24" RETURN GRILLE - TITUS MODEL PAR OR APPROVED EQUAL.
6. EXISTING DOOR TO BE SEALED CLOSED - SEE ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.
7. NEW DOOR - SEE ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.
8. NEW CANOPY - SEE ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.
9. EXISTING BAND SAW RELOCATED FROM BASEMENT TO NEW WOODSHOP AREA.
10. EXISTING DRILL PRESS RELOCATED FROM BASEMENT TO NEW WOODSHOP AREA.
11. NEW SELF CONTAINED DOWNDRAFT DUST COLLECTOR BENCH. ALTERNATE IS A REMOTE DOWNDRAFT BENCH.
12. NEW 30" x 6' WORK TABLE.
13. EXISTING 12"Ø EXHAUST DUCT TO REMAIN.
14. NEW PORTABLE DUST COLLECTOR.
15. NEW 10"Ø DIRTY AIR DUCT FROM DOWNDRAFT BENCH TO DUST COLLECTOR.
16. NEW STATIONARY DUST COLLECTOR TO BE UTILIZED WITH REMOTE DOWNDRAFT BENCH.
17. NEW 24"x14" CLEAN AIR DUCT.
18. NEW 24"x14" GRILLE.

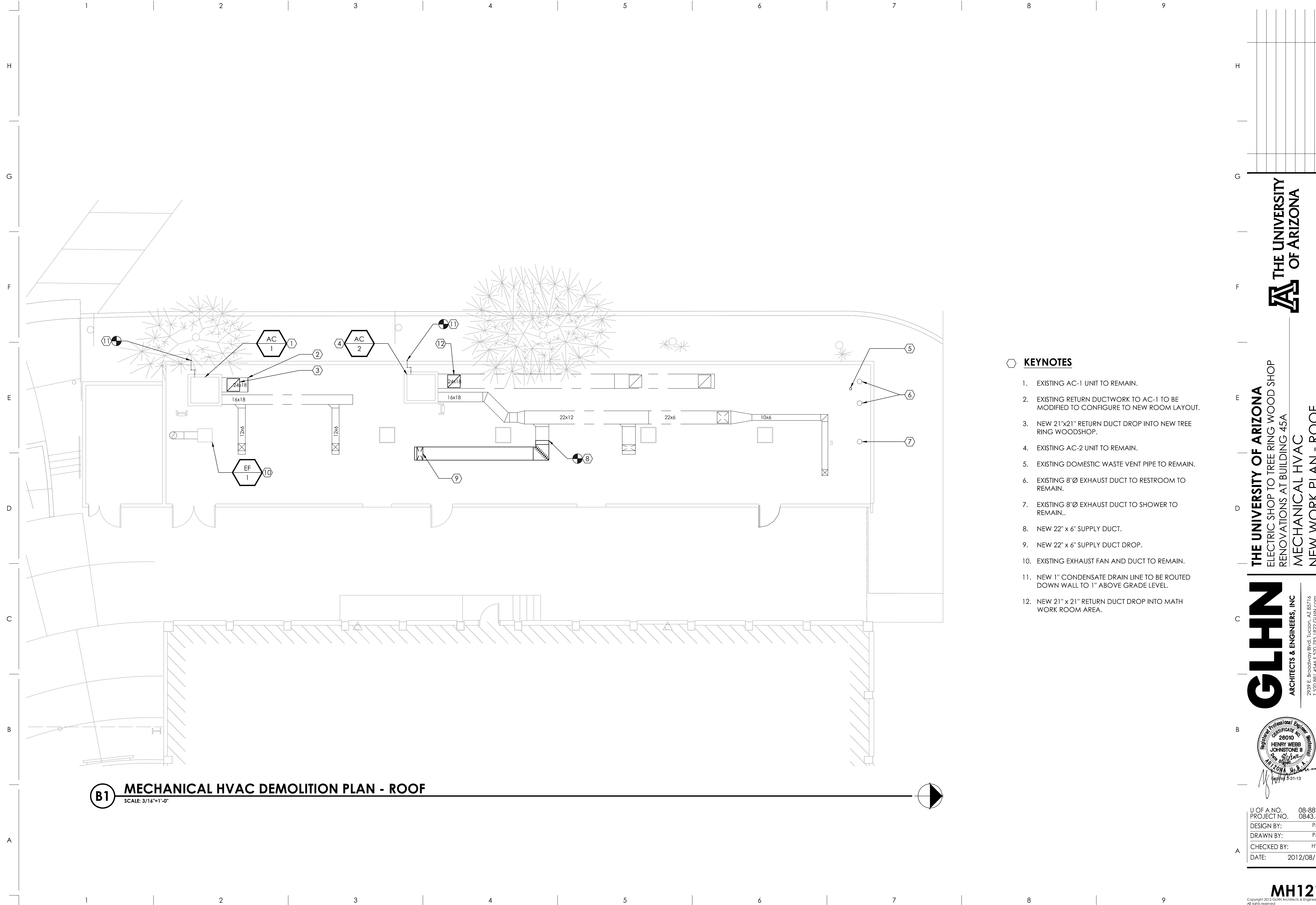
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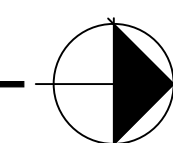
THE UNIVERSITY OF ARIZONA
ELECTRIC SHOP TO TREE RING WOOD SHOP
RENOVATIONS AT BUILDING 45A
MECHANICAL NEW WORK PLAN



U OF A NO.	08-8826
PROJECT NO.	0843.43
DESIGN BY:	PMF
DRAWN BY:	PMF
CHECKED BY:	HWJ
DATE:	2012/08/10



B1 MECHANICAL HVAC DEMOLITION PLAN - ROOF
SCALE: 3/16"=1'-0"



KEYNOTES

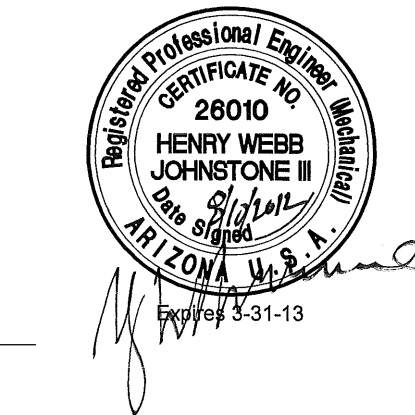
1. EXISTING AC-1 UNIT TO REMAIN.
2. EXISTING RETURN DUCTWORK TO AC-1 TO BE MODIFIED TO CONFIGURE TO NEW ROOM LAYOUT.
3. NEW 21"x21" RETURN DUCT DROP INTO NEW TREE RING WOODSHOP.
4. EXISTING AC-2 UNIT TO REMAIN.
5. EXISTING DOMESTIC WASTE VENT PIPE TO REMAIN.
6. EXISTING 8"Ø EXHAUST DUCT TO RESTROOM TO REMAIN.
7. EXISTING 8"Ø EXHAUST DUCT TO SHOWER TO REMAIN.
8. NEW 22" x 6" SUPPLY DUCT.
9. NEW 22" x 6" SUPPLY DUCT DROP.
10. EXISTING EXHAUST FAN AND DUCT TO REMAIN.
11. NEW 1" CONDENSATE DRAIN LINE TO BE ROUTED DOWN WALL TO 1" ABOVE GRADE LEVEL.
12. NEW 21" x 21" RETURN DUCT DROP INTO MATH WORK ROOM AREA.

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THE UNIVERSITY OF ARIZONA
ELECTRIC SHOP TO TREE RING WOOD SHOP
RENOVATIONS AT BUILDING 45A
MECHANICAL HVAC
NEW WORK PLAN - ROOF

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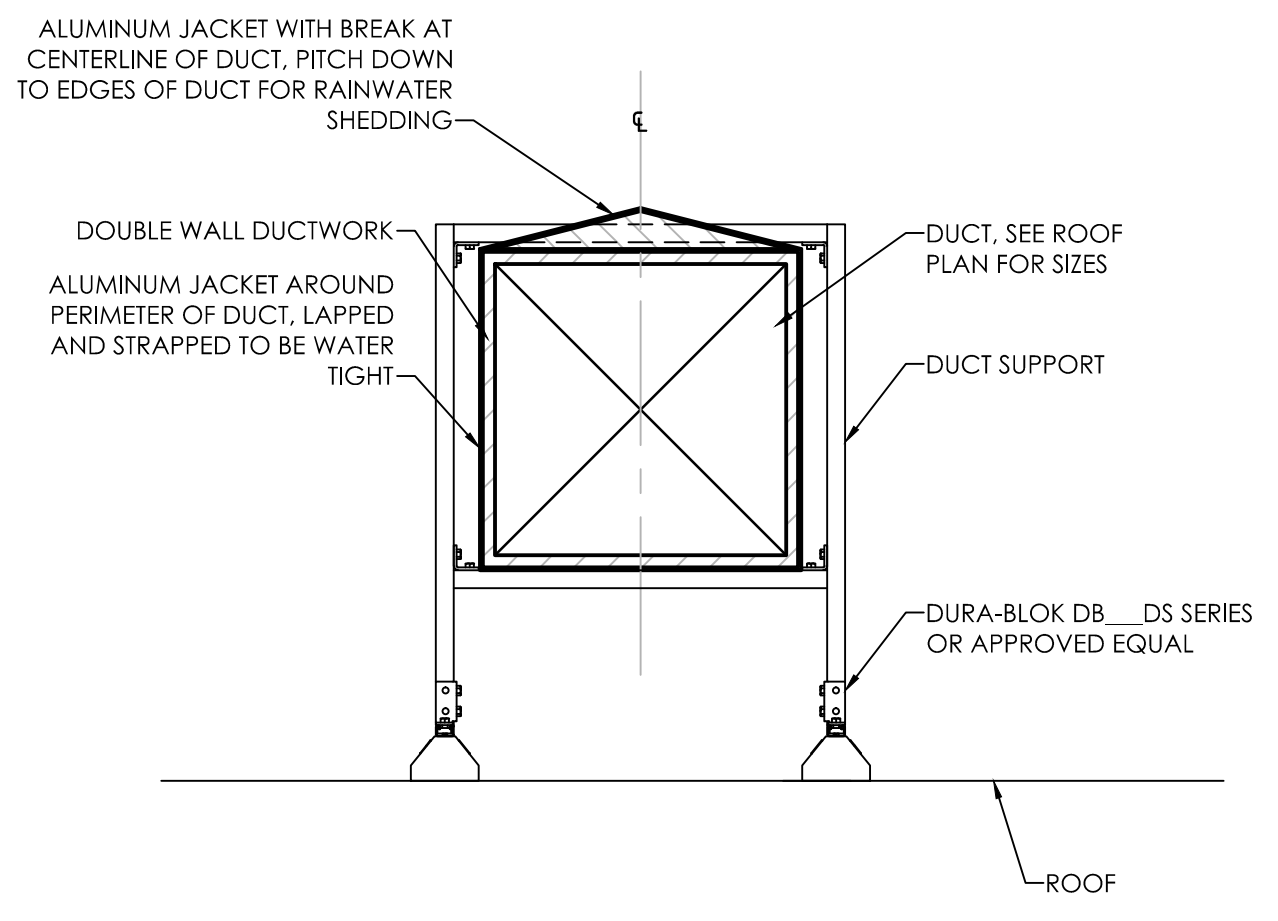
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REMOTE DOWNDRAFT BENCH						
MARK	LOCATION	OUTLET DIAMETER	FLOW RATE	MAX. LOAD PER SQ.FT. (LBS.)	SHIPPING WEIGHT (LBS.)	REMARKS
RDB-1	TREE RING WOODSHOP	10	2000 CFM	75	411	BASIS OF DESIGN IS DONALDSON TORIT MODEL RDB-2000

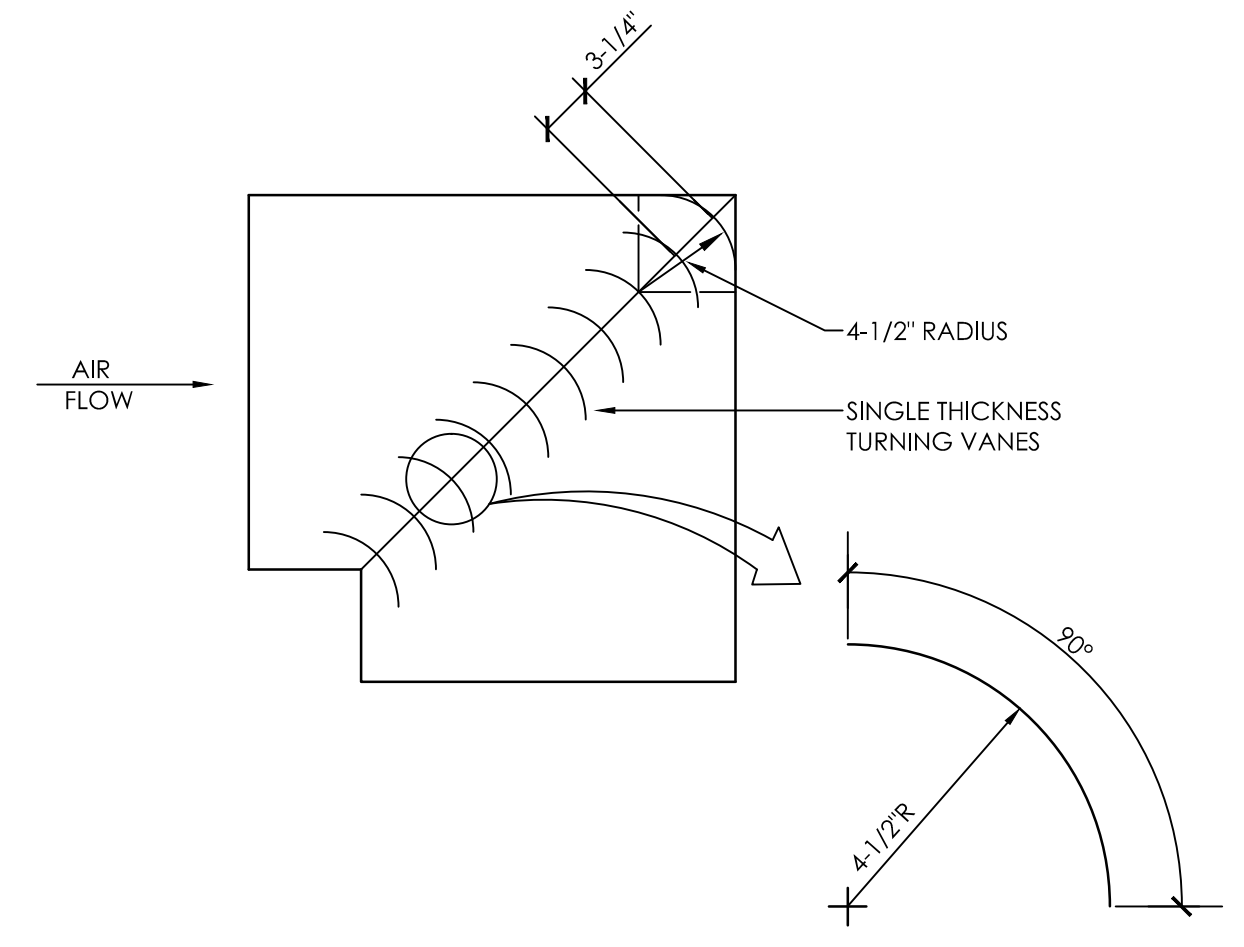
NOTES:
 FLUORESCENT LIGHT FIXTURE (2 BULBS SUPPLIED BY OWNER)
 LIGHT SWITCH AND POWER CORD (AVAILABLE WITH LIGHT FIXTURE)

PORTABLE DUST COLLECTOR												
MARK	LOCATION	SYSTEM AND/OR SERVICE	BAG DIAMETER (IN.)	FILTER BAG LENGTH (IN.)	CAPACITY (CU.FT.)	STATIC PRESSURE (W.G.)	IMPELLER MATERIAL	MOTOR				REMARKS
								POWER HP	VOLT	PHASE	AMPS	
DC-1	TREE RING LAB	DRILL PRESS/BAND SAW	20	25	5.3	11 1/2	STEEL	2	230	1	8	JET 710704K DC-1200VX-CK3 VORTEK DUST COLLECTOR

STATIONARY DUST COLLECTOR												
MARK	LOCATION	SYSTEM AND/OR SERVICE	QUANTITY	NOMINAL AIRFLOW RANGE	INLET DIAMETER (IN.)	NO. OF BINS/DRUMS	NO. OF FILTER BAGS	MOTOR				REMARKS
								POWER HP	VOLT	PHASE	HZ	
SDC-1	TREE RING WOODSHOP	REMOTE DOWNDRAFT BENCH	1	450-3,000	10	1	1	5	208	3	60	BASIS OF DESIGN: DONALDSON TORIT UMA 250



C1 SUPPORT ON ROOF FOR SQUARE/RECTANGULAR DUCT
 NTS



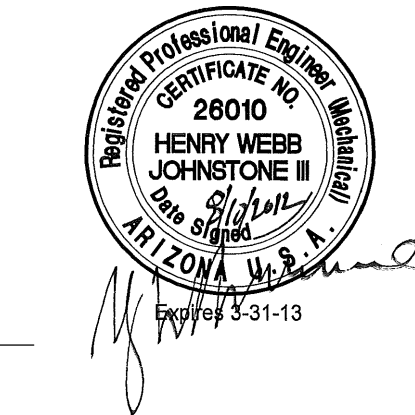
C4 MITER ELBOW W/TURNING VANES
 NTS

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THE UNIVERSITY OF ARIZONA
 ELECTRIC SHOP TO TREE RING WOOD SHOP
 RENOVATIONS AT BUILDING 45A
 MECHANICAL DETAILS
 AND SCHEDULES

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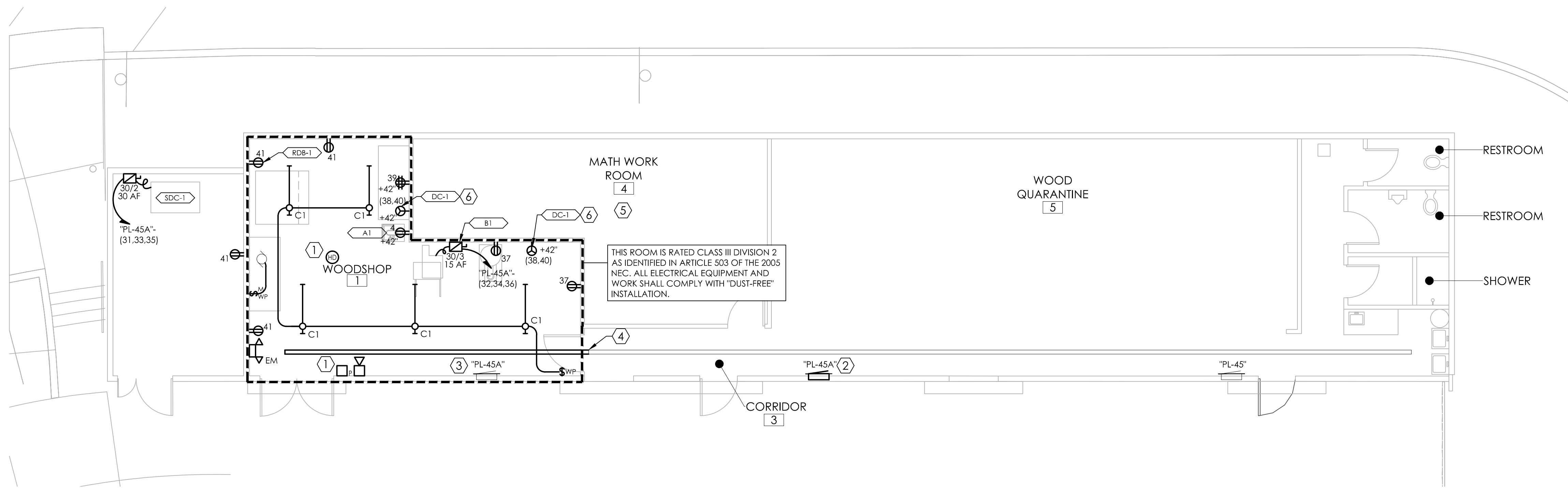
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GENERAL NOTES

- A. THE LOCKNUT-BUSHING AND DOUBLE-LOCKNUT TYPES OF CONTACTS SHALL NOT BE USED FOR BONDING PURPOSES. PROVIDE BONDING JUMPERS WITH PROPER FITTINGS OR OTHER APPROVED MEANS OF BONDING IN ACCORDANCE WITH NEC ARTICLE 503. BONDING SHALL APPLY TO ALL INTERVENING RACEWAY, FITTINGS, BOXES, ENCLOSURES BETWEEN CLASS III LOCATION AND THE POINT OF GROUNDING OF THE SEPARATELY DERIVED SYSTEM.
- B. FLEXIBLE CONDUIT SHALL BE INSTALLED WITH INTERNAL OR EXTERNAL BONDING JUMPERS IN PARALLEL WITH EACH CONDUIT.
- C. SIGNALING SYSTEM DEVICES SHALL BE ALTERED PER MANUFACTURERS REQUIREMENTS TO COMPLY WITH CLASS III DIVISION 2 REQUIREMENTS.
- D. ALL NEW CIRCUITRY THIS SHEET SHALL HOME RUN TO PANEL "PL-45A".
- E. ALL RECEPTACLES IN THE CLASS III DIV 2 SPACE SHALL BE PROVIDED WITH GASKETS AND "IN USE" COVERS.
- F. FUSIBLE DISCONNECT IN THE CLASS III DIV 2 SPACE SHALL BE NEMA 4X RATED.
- G. ALL FUSES FOR FUSIBLE DISCONNECTS SHALL BE SIZED PER THE NAMEPLATE DATA. REFER TO SPECIFICATIONS.

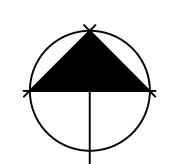
ELECTRICAL EQUIPMENT SCHEDULE								
EQUIP. No	DESCRIPTION	ELECTRICAL REQUIREMENTS					Remarks / Panel Ckt	
		VOLTS	PHASE	AMPS	MCA	Kw		HP
SDC-1	DUST COLLECTOR	208	3	15.2			5	
RDB-1	DOWN DRAFT BENCH (REMOTE)							POWER FOR LIGHT ONLY
DC-1	PORTABLE DUST COLLECTOR	230	1	12.0			2	COORDINATE NEMA "6-20R" RECEPTACLE WITH EQUIPMENT PRIOR TO ROUGH-IN
A1	DRILL PRESS	115	1	15.0			1	EQUIPMENT PROVIDED BY UNIVERSITY
B1	BAND SAW	230	3	9.6			2	EQUIPMENT PROVIDED BY UNIVERSITY



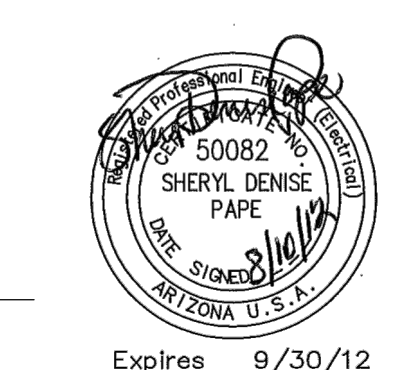
KEYNOTES

- 1. CONTACTOR SHALL CONTACT SIMPLEX FOR REPLACEMENT OF FIRE ALARM DEVICE TO COMPLY WITH THE CLASS III DIV 2 REQUIREMENTS. REFER TO GENERAL NOTES ABOVE. COORDINATE INSTALLATION REQUIREMENTS WITH UNIVERSITY OF ARIZONA INTEGRATED SYSTEMS GROUP (UAISG).
- 2. NEW PANELBOARD. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION. LOCATION OF PANEL IS TO PROVIDE FOR FUTURE EXPANSION OF THE WOOD SHOP.
- 3. EXISTING PANEL SHALL BE GUTTED. CONTRACTOR SHALL TAG EXISTING BRANCH CIRCUITRY TO REMAIN. EXTEND EXISTING TO REMAIN CIRCUITRY TO NEW PANELBOARD "PL-45A". PROVIDE NEW METAL COVER WITH GASKET TO COMPLY WITH THE CLASS III DIV 2 REQUIREMENTS.
- 4. CONTRACTOR SHALL REMOVE EXISTING WIREWAY COVERS FROM WITH THE WOOD SHOP UP TO APPROXIMATELY THIS LOCATION. PROVIDE NEOPRENE GASKET TO WIREWAY AND REATTACH. PROVIDE BAKELITE NAME PLATE WITH WHITE LETTERS ON EACH COVER REMOVED TO READ "WIREWAY SHALL BE DUST TIGHT". SILICONE SEAL ALL JOINTS.
- 5. THIS ROOM TO BE CONSIDERED PART OF THE WOOD SHOP IN THE FUTURE.
- 6. DEDICATED OUTLET FOR (1) PORTABLE DUST COLLECTOR.

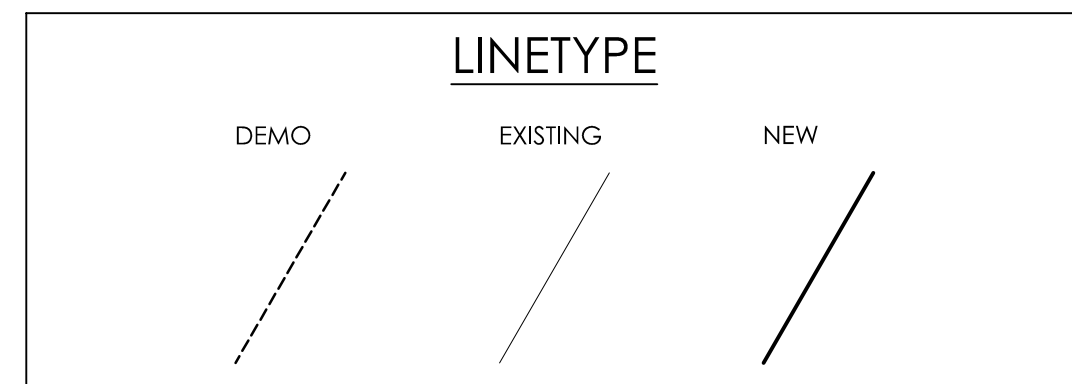
A2 ELECTRICAL POWER PLAN - NEW WORK
3/16" = 1'-0"



THE UNIVERSITY OF ARIZONA
ELECTRIC SHOP TO TREE RING WOOD SHOP
RENOVATIONS AT BUILDING 45A
ELECTRICAL POWER PLAN
FIRST FLOOR



U OF A NO.	08-8826
PROJECT NO.	0843.43
DESIGN BY:	JG3
DRAWN BY:	BW
CHECKED BY:	SDP
DATE:	2012/08/10



PLAN SYMBOLS

- S** WALL MOUNTED SWITCH. LETTER INDICATES AS FOLLOWS:
 - a - INDICATES SWITCH LEG
 - 3 - 3-WAY SWITCH
 - M - MANUAL MOTOR STARTER SWITCH. # OF POLES AS REQUIRED.
 - WP- WEATHERPROOF.
- JUNCTION BOX MOUNTED EXPOSED OR ABOVE CEILING. 4"x4"xDEPTH PER SPECIFICATIONS UON
- ◊** JUNCTION BOX MOUNTED FLUSH IN WALL UON 4"x4"xDEPTH PER SPECIFICATIONS W/ 2-GANG PLASTER RING UON. NUMBER INDICATES BRANCH CIRCUIT.
- CONDUIT & WIRE CONCEALED ABOVE CEILING OR IN WALLS. WIRE IS #12 CU. UON SEE 1-LINE DIAGRAM OR PANEL SCHEDULES.
- CONDUIT & WIRE HOME RUN TO PANEL SHOWN. WIRE IS #12 CU. UON.
- A** CEILING RECESSED FLUORESCENT OR HID FIXTURE. SEE FIXTURE SCHEDULE FOR TYPE. NUMBER INDICATES BRANCH CIRCUIT, LETTER INDICATE FIXTURE TYPE.
- CHANNEL OR STRIP TYPE FLUORESCENT FIXTURE. SEE FIXTURE SCHEDULE FOR TYPE. NUMBER INDICATES BRANCH CIRCUIT, LETTERS INDICATE FIXTURE TYPE.
- E** EMERGENCY BATTERY PACK W/ INCANDESCENT OR FLUORESCENT DIRECTIONAL LAMPS. SEE FIXTURE SCHEDULE FOR TYPE. NUMBER INDICATES BRANCH CIRCUIT, LETTERS INDICATE BRANCH CIRCUIT, LETTERS INDICATE FIXTURE TYPE.
- 1** DUPLEX RECEPTACLE, NEMA 5-20R UON. IN 4"x4" BOX W/ PLASTER RING. NUMBER INDICATES BRANCH CIRCUIT. MH=18" TO CENTER OF BOX UON.
- 1** GFI GF1 GF2 GF3 GF4 GF5 GF6 GF7 GF8 GF9 GF10 GF11 GF12 GF13 GF14 GF15 GF16 GF17 GF18 GF19 GF20 GF21 GF22 GF23 GF24 GF25 GF26 GF27 GF28 GF29 GF30 GF31 GF32 GF33 GF34 GF35 GF36 GF37 GF38 GF39 GF40 GF41 GF42 GF43 GF44 GF45 GF46 GF47 GF48 GF49 GF50 GF51 GF52 GF53 GF54 GF55 GF56 GF57 GF58 GF59 GF60 GF61 GF62 GF63 GF64 GF65 GF66 GF67 GF68 GF69 GF70 GF71 GF72 GF73 GF74 GF75 GF76 GF77 GF78 GF79 GF80 GF81 GF82 GF83 GF84 GF85 GF86 GF87 GF88 GF89 GF90 GF91 GF92 GF93 GF94 GF95 GF96 GF97 GF98 GF99 GF100
- 1** SPECIAL RECEPTACLE IN 4"x4" BOX W/ PLASTER RING. NUMBERS INDICATE BRANCH CIRCUIT & NEMA RECEPTACLE TYPE. MH=18" TO CENTER OF BOX UON
- 1** PANELBOARD, FLUSH MOUNTED. SEE SINGLE LINE DIAGRAM & PANEL SCHEDULES FOR VOLTAGE, SIZE, & POLES. MH=78" MAXIMUM TO TOP OF PANEL.
- 1** PANELBOARD, SURFACE MOUNTED. SEE SINGLE LINE DIAGRAM & PANEL SCHEDULES FOR VOLTAGE, SIZE, & POLES. MH=78" MAXIMUM TO TOP OF PANEL.
- 30/3** HEAVY DUTY NON-FUSED SAFETY SWITCH. NUMBER INDICATES AMPS/POLES.
- 30/3** HEAVY DUTY FUSED SAFETY SWITCH. NUMBER INDICATES AMPS/POLES.

DIAGRAM SYMBOLS

- ▽** PAD-MOUNTED UTILITY TRANSFORMER.
- T** DRY-TYPE TRANSFORMER. LETTERS DENOTE NAME; POWER RATING; PRIMARY/SECONDARY VOLTAGE; Ø & WIRES. SEE SPECIFICATIONS.
- PANEL A** CIRCUIT BREAKER PANELBOARDS. SEE SCHEDULES FOR NUMBER & SIZES OF BREAKERS, PANEL SIZE, VOLTAGE & INTERRUPTING DUTY.
- 30/3** NON-FUSED SWITCH. NUMBERS INDICATE AMPERES/POLES. SEE SPECIFICATIONS FOR TYPE.
- 30AF** FUSE. NUMBERS INDICATE AMPERE/TRIP RATING. SEE SPECIFICATIONS FOR TYPE.
- 30/3** CIRCUIT BREAKER. NUMBERS INDICATE TRIP RATING/POLES. SEE SPECIFICATIONS FOR TYPE.
- kw/kwh** METER & CURRENT TRANSFORMERS. SEE SPECIFICATIONS FOR SIZE & TYPE.
- ⊕** GROUND CONNECTION.

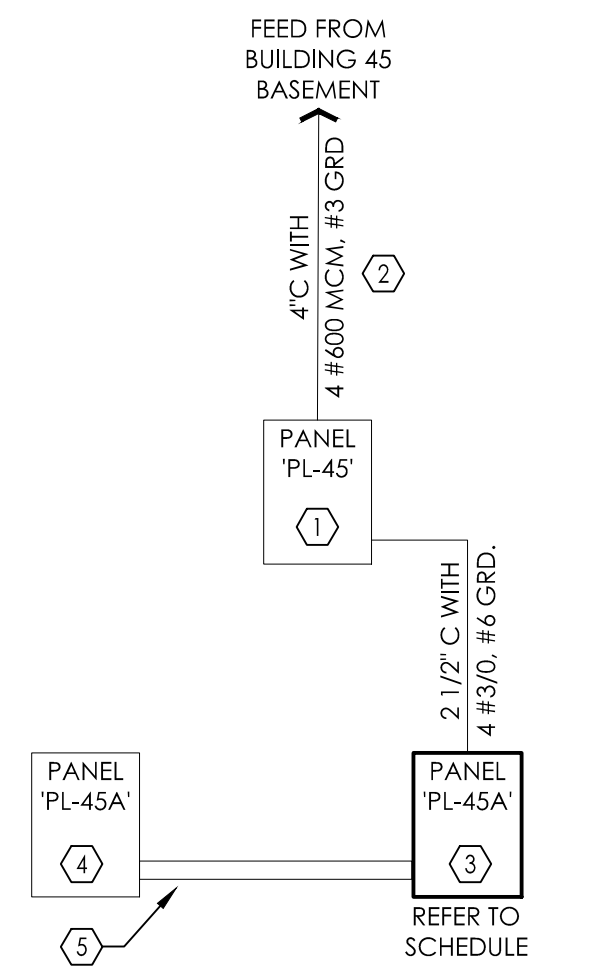
ABBREVIATIONS

- A, AMP AMPERE
- AF AMP FUSE
- ATS AUTOMATIC TRANSFER SWITCH
- AWG AMERICAN WIRE GAUGE
- C CONDUIT
- COT CITY OF TUCSON
- CU COPPER
- DIAG DIAGRAM
- DIST DISTRIBUTION
- DN DOWN
- DNW DRAWING
- EA EACH
- EM EMERGENCY
- EPO EMERGENCY POWER OFF
- (E) EXISTING
- FA FIRE ALARM
- FAAP FIRE ALARM ANNUNCIATOR PANEL
- FACP FIRE ALARM CONTROL PANEL
- G GROUND
- GA GAUGE
- GALV GALVANIZED
- GEN GENERATOR
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- GFP GROUND FAULT PROTECTOR
- GRS GALVANIZED RIGID STEEL CONDUIT
- HD HEAVY DUTY
- HP HORSEPOWER
- HZ HERTZ
- IEEE INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS
- J-BOX, JB JUNCTION BOX
- khz KILOHERTZ
- kVA, KVA KILOVOLT AMPERES
- kw, kW KILOWATTS
- kWh, kWh KILOWATT HOURS
- MAX MAXIMUM
- MCB MAIN CIRCUIT BREAKER
- MHz MEGAHERTZ
- MIN MINIMUM
- MLO MAIN LUGS ONLY
- N NEUTRAL
- N/A NOT APPLICABLE
- NEC NATIONAL ELECTRICAL CODE
- NEMA NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION
- NFPA NATIONAL FIRE PROTECTION ASSOCIATION
- NO. NUMBER
- NTS NOT TO SCALE
- OD OUTSIDE DIAMETER
- P POLE
- PH PHASE
- PNL PANEL
- PWR POWER
- RECP RECEPTACLE
- RGS RIGID GALVANIZED STEEL
- SES SERVICE ENTRANCE SECTION
- SPEC SPECIFICATION
- TBD TO BE DETERMINED
- TYP TYPICAL
- UL UNDER WRITERS LABORATORY
- UON UNLESS OTHERWISE NOTED
- V VOLT OR VOLTS
- VA VOLT AMPS
- W WATT OR WIRE
- WP WEATHERPROOF
- XFMR TRANSFORMER

TYPE:		'PL-45A'										BUS: 200 AMP						
SERVICE: 208Y/120 V 3 Ø, 4W		NEW										MAINS: 200 A MCB						
POLES: 42												NEUTRAL: FULL						
												A/C: MATCH EXISTING						
												NEMA 1						
**	ØA	ØB	ØC	Cond	Wire	Gnd	Load	CB	CKT	CB	Load	Cond	Wire	Gnd	ØA	ØB	ØC	**
							e) Load	20 /1	1 2	20 /1	e) Load							
							e) Load	20 /1	3 4	20 /1	e) Load							
							e) Load	20 /1	5 6	20 /1	e) Load							
							e) Load	20 /1	7 8	20 /1	e) Load							
							e) Load	20 /1	9 10	20 /1	e) Load							
							e) Load	20 /1	11 12	20 /1	e) Load							
								20 /1	13 14	20 /1								
								20 /1	15 16	20 /1								
								20 /1	17 18	20 /1								
								20 /1	19 20	20 /1								
								20 /1	21 22	20 /1								
								20 /1	23 24	20 /1								
								20 /1	25 26	20 /1								
								20 /1	27 28	20 /1								
								20 /1	29 30	20 /1								
3	2.0		3/4	#10	#10		Dust Collector SDC-1	30 /3	31 32	15 /3	Band Saw B1	3/4	#12	#12	0.9		3	
3		2.0		#10			"		33 34		"		#12		0.9		3	
3			2.0	#10			"		35 36		"		#12		0.9		3	
2	0.4		3/4	#12	#12		Recep General	20 /1	37 38	20 /2	Print Dust Collect DC-1	3/4	#12	#12	1.4		3	
2		0.4					Recep Counter	20 /1	39 40		"		#12		1.4		3	
2			0.7				Recep General	20 /1	41 42	25 /1	Drill Press A1	3/4	#10	#10	1.7		3	
** DEMAND FACTORS AS NOTED												LOAD SUMMARY						
1 LTG & CONTINUOUS LOAD												NON-CONTINUOUS LOAD @ 100%						
2 RECEPTACLE LOAD												LIGHTING & CONTINUOUS LOAD @ 125%						
3 MOTOR LOAD												RECEPTACLE LOAD PER NEC 220-13		0.4		0.4		
4 KITCHEN EQUIPMENT LOAD												MOTOR LOAD PER NEC 430-24		4.8		4.8		
5 SUBPANEL FEED AT 100%												KITCHEN EQPT LOAD PER NEC 220-20		5.1		5.9		
CIRCUIT BREAKER NOTES												TOTAL KVA		43		49		
A - HACR CIRCUIT BREAKER												TOTAL AMPS		43		49		
C - SOLENOID OPERATED CIRCUIT BREAKER												TOTAL LOAD [KVA]		16				
G - GFI CIRCUIT BREAKER																		
L - TO BE LOCKABLE IN OPEN POSITION																		
NOTES:																		

LUMINAIRE SCHEDULE							
TYPE	MANUFACTURER	CATALOG NO.	LAMP(S)		VOLTS	MOUNTING	REMARKS
			TYPE	NO			
C1	AZZ RAL Rig-A-Life	MHD2-265-4-2-U-F-1W	18	[32W]	2	120V	TO STRUCTURE
EM	Lithonia	Z1225N H1206	12W	/6V Halogen	2	120V	TO WALL

Note: basis of design or approved equal



A5 PARTIAL SINGLE LINE DIAGRAM

Tree Ring Building 45A 2,189 square feet			
Lighting	65 lamps, rated at 32watts each	2.1 kVA	
General use Receptacles	3 watts / sq foot per NEC 220-3(a)	6.5 kVA	
A/C #1	19.2 FLA at 208V, 3PH	6.9 kVA	
A/C #1	19.2 FLA at 208V, 3PH	6.9 kVA	
EF-1	1 1/2HP at 120V	2.4 kVA	
Dust Collector	5HP at 208V, 3PH	6.2 kVA	
Portable Dust Collector	2HP at 208V, 1PH	2.5 kVA	
Drill Press	1HP at 115V	1.8 kVA	
Band Saw	2HP at 208V, 3PH	1.8 kVA	
sub-Total		37.2 kVA	
25% largest motor (A/C #1)	19.2 x 1.25	24.0 kVA	
Total		61.2 kVA	
120/208V, 3PH, 4W		170 Amps	
existing building service sized adequate		400 Amps	

DATE

REVISIONS / SUBMISSIONS

No.

THE UNIVERSITY OF ARIZONA

ELECTRIC SHOP TO TREE RING WOOD SHOP RENOVATIONS AT BUILDING 45A

SINGLE LINE DIAGRAM, SCHEDULES, SYMBOLS, AND ABBREVIATIONS

GLHN
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Expires 9/30/12

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