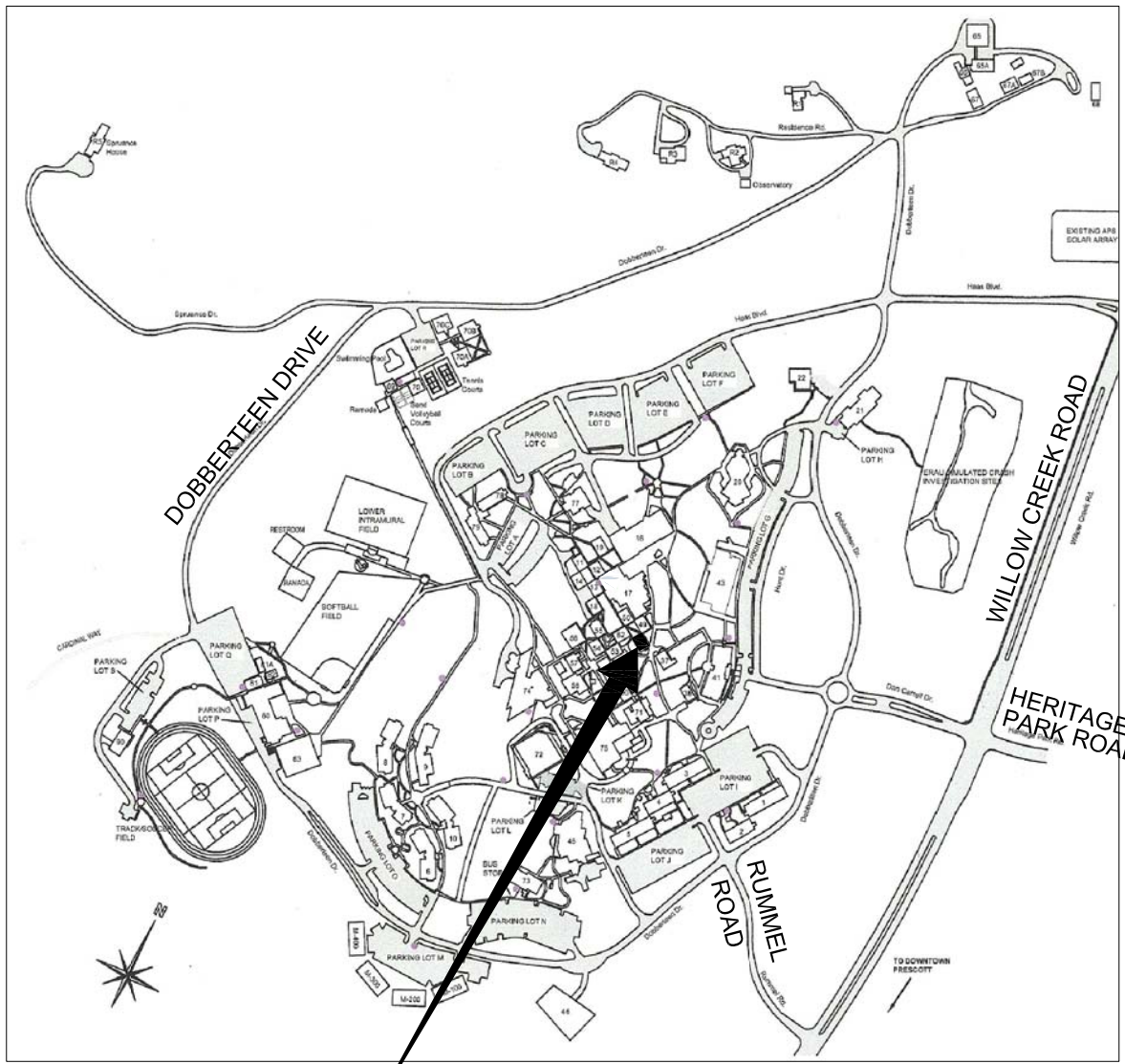


# Project Description

Embry-Riddle Aeronautical University intends to remodel building 51. The existing interior of the building will be completely demolished including lighting, electrical, walls, plumbing etc. The new layout will include offices, storage, break room and a reception room. The roof mounted HVAC will be upgraded as required. New ceiling and light fixtures will be added throughout to accommodate the new layout. Plumbing will be added in the break room for the proposed sink.

# Site / Vicinity Map



PROJECT  
BUILDING 51

# Graphic Standards

	NORTH ARROW INDICATOR		ELEVATION DESIGNATOR
	DETAIL DESIGNATOR		DESRIPTIVE NOTE DESIGNATOR
	BUILDING SECTION DESIGNATOR		ROOM NUMBER / FINISH DESIGNATOR
	REVISION DESIGNATOR		DOOR NUMBER DESIGNATOR
	TYPICALLY INDICATES EXISTING DOOR & FRAME TO BE REMOVED		DOOR TYPE DESIGNATOR
	TYPICALLY INDICATES EXISTING DOOR & FRAME TO REMAIN		WINDOW TYPE DESIGNATOR
			GRID LINE DESIGNATOR
			TYPICALLY INDICATES PROPOSED DOOR & FRAME - REFER TO DOOR SCHEDULE



# IMPROVEMENTS FOR EMBRY-RIDDLE BUILDING 51 REMODEL

# Project Information

<b>OWNER:</b>	Embry-Riddle Aeronautical University 3700 Willow Creek Road Prescott, AZ 86301	PH: 928-777-6600 FAX: 928-777-3950 CONTACT: Carl Beumer beumerc@erau.edu
<b>PREPARED BY:</b>	W. Alan Kenson & Associates, P.C. P.O. Box 11593 Prescott, AZ 86304	PH: 928-443-5812 FAX: 928-443-5815 CONTACT: Alan Kenson waka@cableone.net
<b>CONTRACTOR:</b>	To be determined	
<b>SCOPE OF WORK:</b>	Office Renovation	
<b>PROJECT ADDRESS:</b>	3700 Willow Creek Road (Building 51) Prescott, AZ 86301 (APN: 106-03-004)	
<b>ZONE:</b>	BG - PAD	
<b>OCCUPANCY:</b>	B (Educational Facility for students above the 12th grade) , Non-Separated	
<b>CONSTRUCTION TYPE:</b>	V-B Non Sprinklered	
<b>ACTUAL AREA</b>		
<b>BUILDING 51:</b>	Existing 1,644 SQUARE FEET	



- NOTE:
- RESTROOMS ARE EXISTING AND SUFFICIENT.
  - RESTROOMS ARE WITHIN 150' OF THIS BUILDING.

# Sheet Index

<b>ARCHITECTURAL</b>	
CS1	Cover Sheet
CS2	Code Summary
A0.0	Construction Access / IT Site Plan
A1.0	Demolition plan
A2.0	Reference / Dimension / Wall Types Floor Plan
A3.0	Demolition and Proposed Reflected Ceiling Plan
A4.0	Roof Plan
A5.0	Wall Sections
A6.0	Room Finish Plan and Interior Elevations
A7.0	Door Schedule, Window Types and Materials Schedule
A8.0	Existing / Demolition Exterior Elevations
A8.1	Proposed Exterior Elevations
A9.0	Details
A10.0	Specifications
A10.1	Specifications
A10.2	Specifications

<b>MECHANICAL</b>	
M1.0	Mechanical Floor Plan
M2.0	Mechanical Schedules
M3.0	Mechanical Details

<b>PLUMBING</b>	
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P2.0	Plumbing Schedules and Details

<b>ELECTRICAL</b>	
E1.0	Electrical Symbols, Specifications, Panel Schedules with Notes
E1.1	Lighting & Power Floor Plan with Notes

# Architect:

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# ARCHITECTURE & PLANNING



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ARCHITECTURE & PLANNING

DRAWING: Cover Sheet

PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

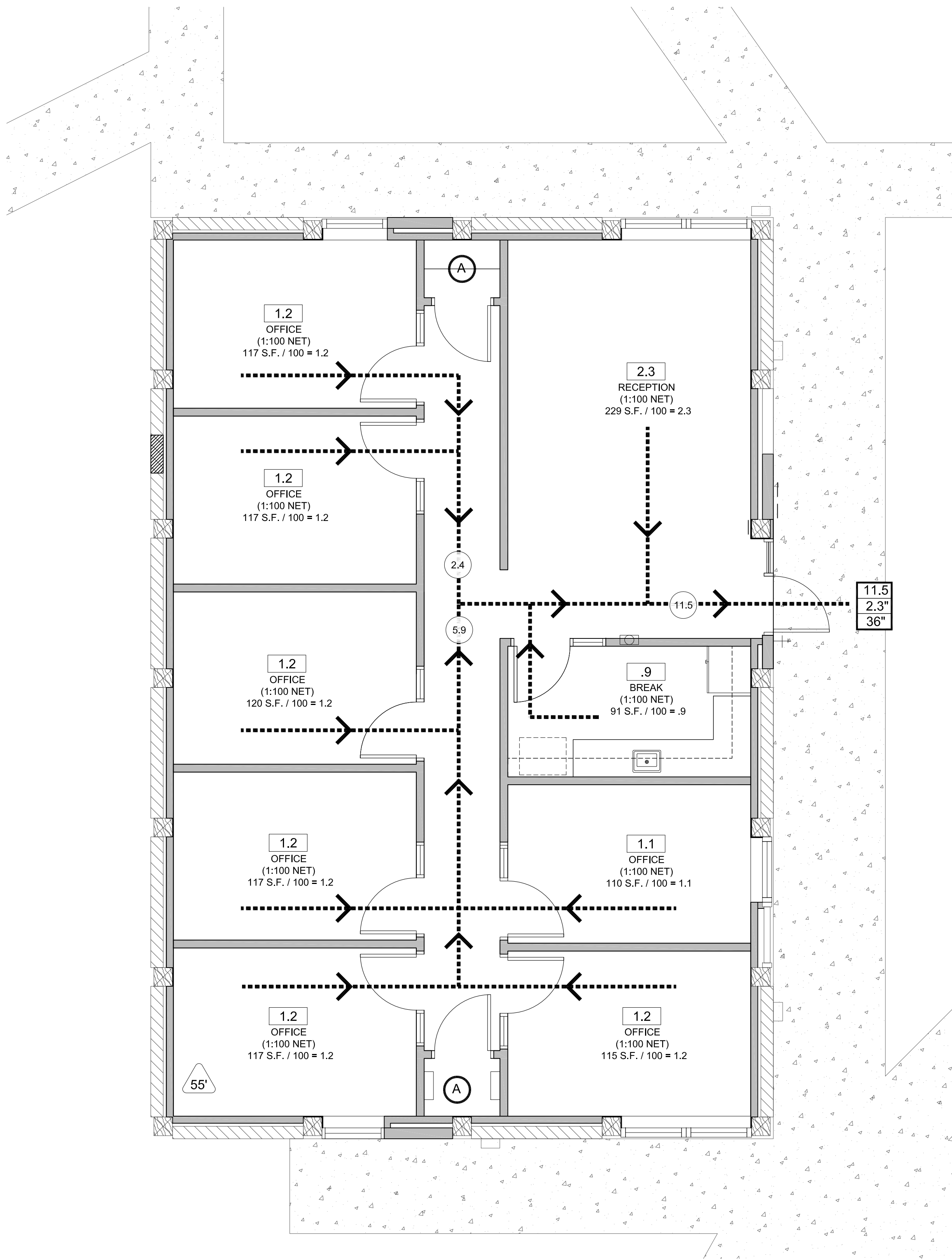
APN: 106-03-004

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DATE March 14th, 2019
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# CS1



Mar 15, 2019 - 9:30am



**NOTE:**

- PROVIDE A 6"x9" BLUE TACTILE 'EXIT' SIGN AS MANUFACTURED BY 'SIMPLY EXIT SIGNS (#SE-1980)' OR EQUAL COMPLYING WITH ICCA117.1 AND IBC 1011.3 ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. SIGN SHALL BE MOUNTED 60" A.F.F. TO THE CENTER OF THE SIGN.

### Accessibility Notes

- ACCESS TO THESE FACILITIES SHALL BE AT PRIMARY ENTRANCES.
- THE SLOPE OF PUBLIC WALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 2%.
- WALKING SURFACES GREATER THAN 2% SHALL BE SLIP RESISTANT.
- PROVIDE A 44"x60" MINIMUM LANDING ON THE STRIKE SIDE OF THE ENTRANCE DOOR WITH 44" MINIMUM WIDTH IN THE DIRECTION OF TRAVEL.
- WALLS SHALL EXTEND 18" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARDS THE OCCUPANT.
- RAMPS SHALL HAVE A NON-SLIP SURFACE.
- RAMPS SHALL BE A MINIMUM OF 36" WIDE.
- EVERY REQUIRED EXIT DOORWAY SHALL BE SIZED FOR A DOOR NOT LESS THAN 36" WIDE BY NOT LESS THAN 6'-8" HIGH CAPABLE OF OPENING 90 DEGREES AND MOUNTED SO THE CLEAR WIDTH OF THE EXIT WAY IS 32" MINIMUM.
- THRESHOLDS TO BE A MAXIMUM OF 1/4" ABOVE ADJACENT FLOOR FINISH. ONE-HALF INCH THRESHOLD MAY BE USED IF BEVELED PER A.D.A. STANDARDS.
- MAXIMUM EFFORT TO OPERATE A DOOR SHALL NOT EXCEED 5 POUNDS.
- THE BOTTOM 10 INCHES OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
- PROVIDE LEVER TYPE HARDWARE, PANIC BARS, PUSH AND PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. (30" TO 44" A.F.F.)

### Egress Legend:

- EXIT ACCESS
- ACCESSORY USE (NO OCCUPANCY)
- ROOM OCCUPANCY LOAD
- SUBTOTAL OCCUPANCY LOAD
- OCCUPANCY TOTAL
- REQUIRED EXIT WIDTH (FACTOR = 0.2)
- PROVIDED EXIT WIDTH
- WORST CASE TRAVEL DISTANCE

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
OFFICE	100 GROSS

### Occupant load

**NOTE:**  
GROSS SQUARE FOOTAGE LISTED BELOW DOES NOT INCLUDE ACCESSORY AREAS.

OFFICE AREA: 1,133 SQ. FT. 11 OCCUPANTS

NOTE: SHARED BUILDING RESTROOMS ARE LOCATED APPROXIMATELY 150' AWAY. NEW TOILET FIXTURES ARE NOT REQUIRED.

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**ARCHITECTURE & PLANNING**

**DRAWING:** Code Summary & Occupancy/Egress Floor Plan

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

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CS2

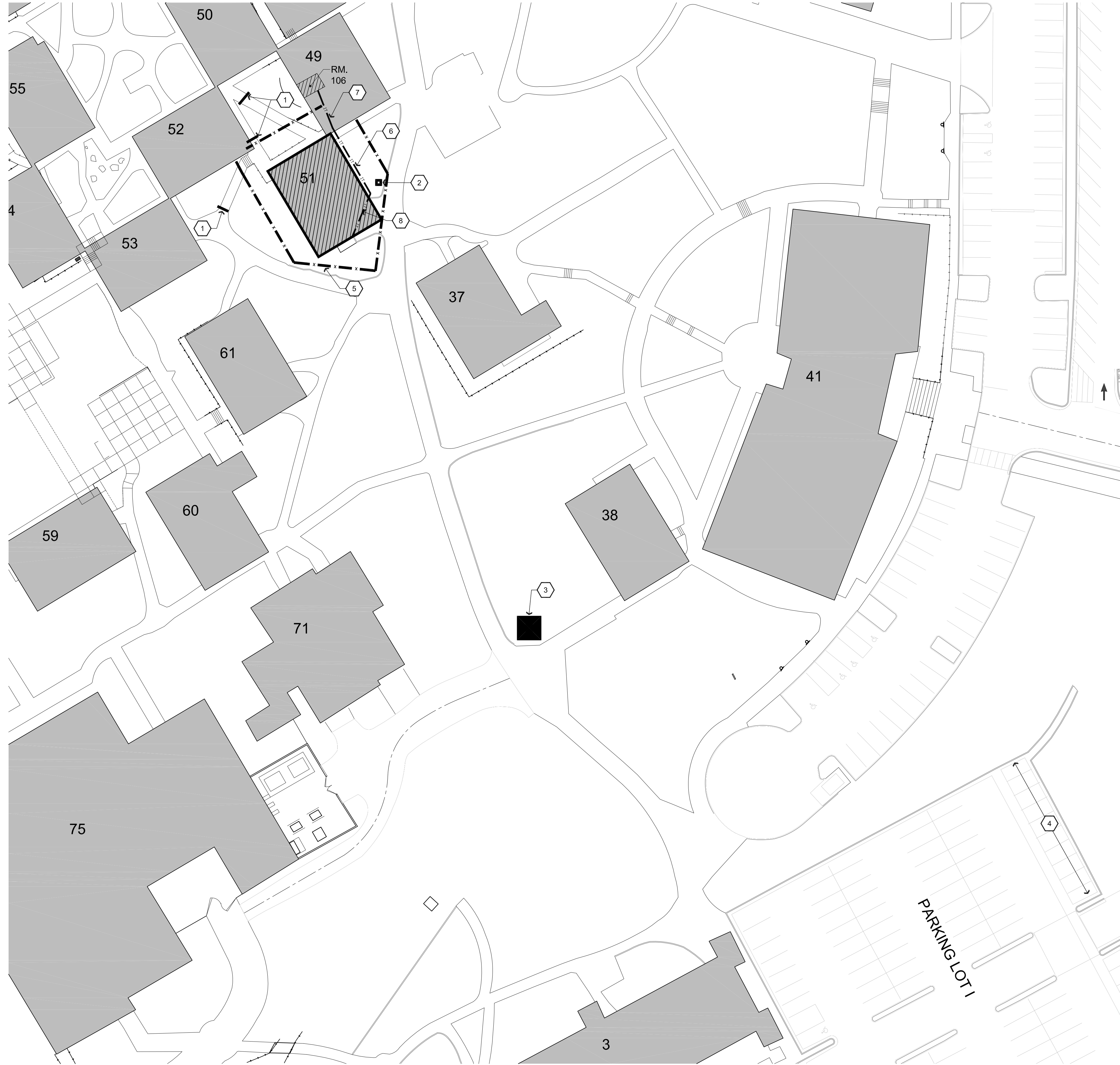
### Occupancy / Egress Floor Plan

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

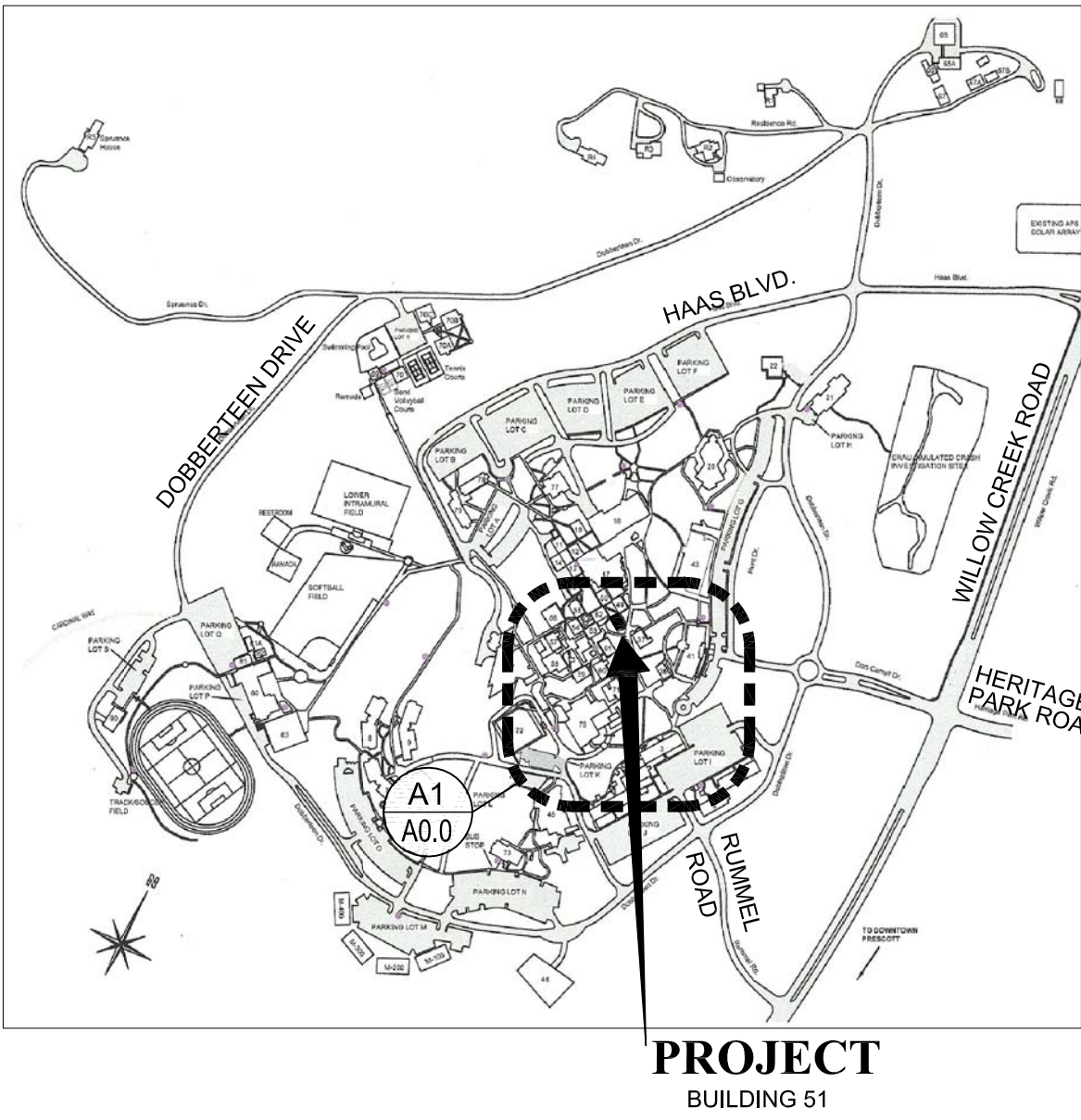




Mar 13, 2019 - 2:05pm



- Descriptive Keynotes**
1. PROVIDE BARRICADES WITH SIGNAGE FOR SIDEWALK CLOSURE.
  2. LOCATION FOR J-JON.
  3. LOCATION OF 6 YARD TRASH DUMPSTER PROVIDED BY CONTRACTOR.
  4. CONTRACTOR PARKING AREA. 10 SPACES AVAILABLE. CONTRACTOR TO PROVIDE SIGNAGE DESIGNATING SPACES FOR CONSTRUCTION PARKING.
  5. 6' TALL TEMPORARY CHAIN LINK FENCING BY CONTRACTOR.
  6. EXISTING IT CONDUIT TO BE RE-USED UNDER EAVE OF BUILDING 51.
  7. EXISTING IT WIRING ROUTE IN ATTIC SPACE OF BUILDING 49. NO CONDUIT REQUIRED.
  8. NEW IT WIRING ROUTE IN ATTIC SPACE IN BUILDING 51. NO CONDUIT REQUIRED.



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**ARCHITECTURE & PLANNING**

**DRAWING:** Construction Access / IT Site Plan

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

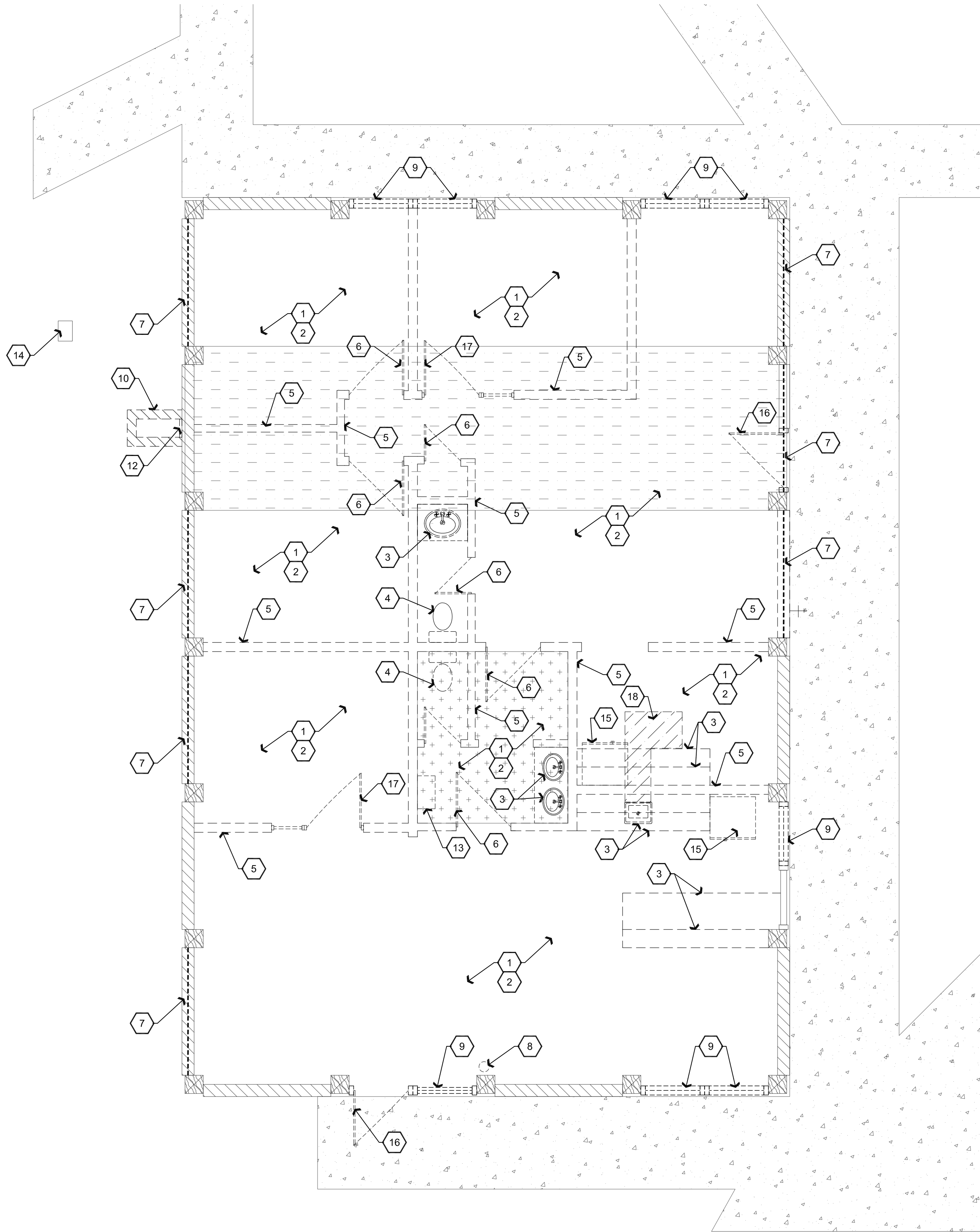
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Mar 13, 2019 - 2:05pm

**A1 Demolition Floor Plan**

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

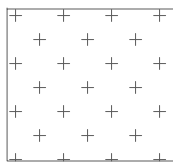


**Descriptive Keynotes**

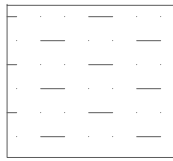
1. REMOVE EXISTING FURNITURE AND EQUIPMENT, AND RETURN TO ERAU MATERIALS MANAGEMENT, TYPICAL.
2. REMOVE EXISTING VCT / CARPET FLOOR COVERING, TYPICAL
3. REMOVE EXISTING LAVATORY, SINKS AND CABINETRY, SALVAGE AND RETURN TO ERAU MATERIALS MANAGEMENT. INFILL CONCRETE AS REQUIRED.
4. REMOVE EXISTING TOILET REPAIR CONCRETE AS REQUIRED.
5. REMOVE EXISTING WALL.
6. REMOVE EXISTING DOOR AND FRAME.
7. REMOVE EXISTING CLERESTORY WINDOW.
8. REMOVE FIRE EXTINGUISHER AND RE-INSTALL IN SEMI RECESSED CABINET AS MANUFACTURED BY LARSON OR EQUAL IN NEW LOCATION, REFER TO REFERENCE FLOOR PLAN, TYPICAL.
9. REMOVE EXISTING WINDOW AND WALL FRAMING, TO BE REPLACED.
10. REMOVE EXISTING CMU ENCLOSURE AT EXISTING ELECTRICAL SERVICE.
11. NOT USED.
12. REMOVE AND RELOCATE ELECTRICAL PANEL, REFER TO ELECTRICAL PLANS.
13. REMOVE / RELOCATE IT CABINET, REFER TO ELECTRICAL PLANS.
14. EXISTING IT BELOW GRADE IT BOX.
15. REMOVE AND RETURN REFRIGERATORS, MICROWAVES, ETC. TO ERAU MATERIALS MANAGEMENT.
16. REMOVE AND SALVAGE DOOR AND ONITY LOCK, RETURN TO ERAU MATERIALS MANAGEMENT.
17. SALVAGE DOOR AND JAMB TO REUSE. RETURN TO ERAU MATERIALS MANAGEMENT.
18. REMOVE CONCRETE TO ACCOMMODATE PLUMBING WASTE LINE. CONFIRM AMOUNT OF DEMOLITION IN FIELD. REFER TO PLUMBING PLANS.

GENERAL NOTE: INTERIOR FINISHES, GPDW, GRID CEILINGS, MECHANICAL SYSTEM, PLUMBING SYSTEM, ELECTRICAL SYSTEM SHALL BE REMOVED IN THEIR ENTIRETY UNLESS NOTED OTHERWISE. EXTERIOR WALLS, ROOF ASSEMBLY, SUPPORT COLUMNS AND BEAMS TO REMAIN UNLESS NOTED OTHERWISE.

**Legend**



INDICATES THAT THE VINYL FLOORING IN THIS AREA WILL BE REMOVED BY ASBESTOS ABATEMENT CONTRACTOR UNDER SEPARATE CONTRACT PRIOR TO DEMOLITION CONTRACTOR STARTING WORK.



INDICATES THAT DRYWALL ON CEILINGS IN THIS AREA WILL BE REMOVED BY ASBESTOS ABATEMENT CONTRACTOR UNDER SEPARATE CONTRACT PRIOR TO DEMOLITION CONTRACTOR REMOVING THE FRAMING.

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**ARCHITECTURE & PLANNING**

**DRAWING:** Demolition Floor Plan

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

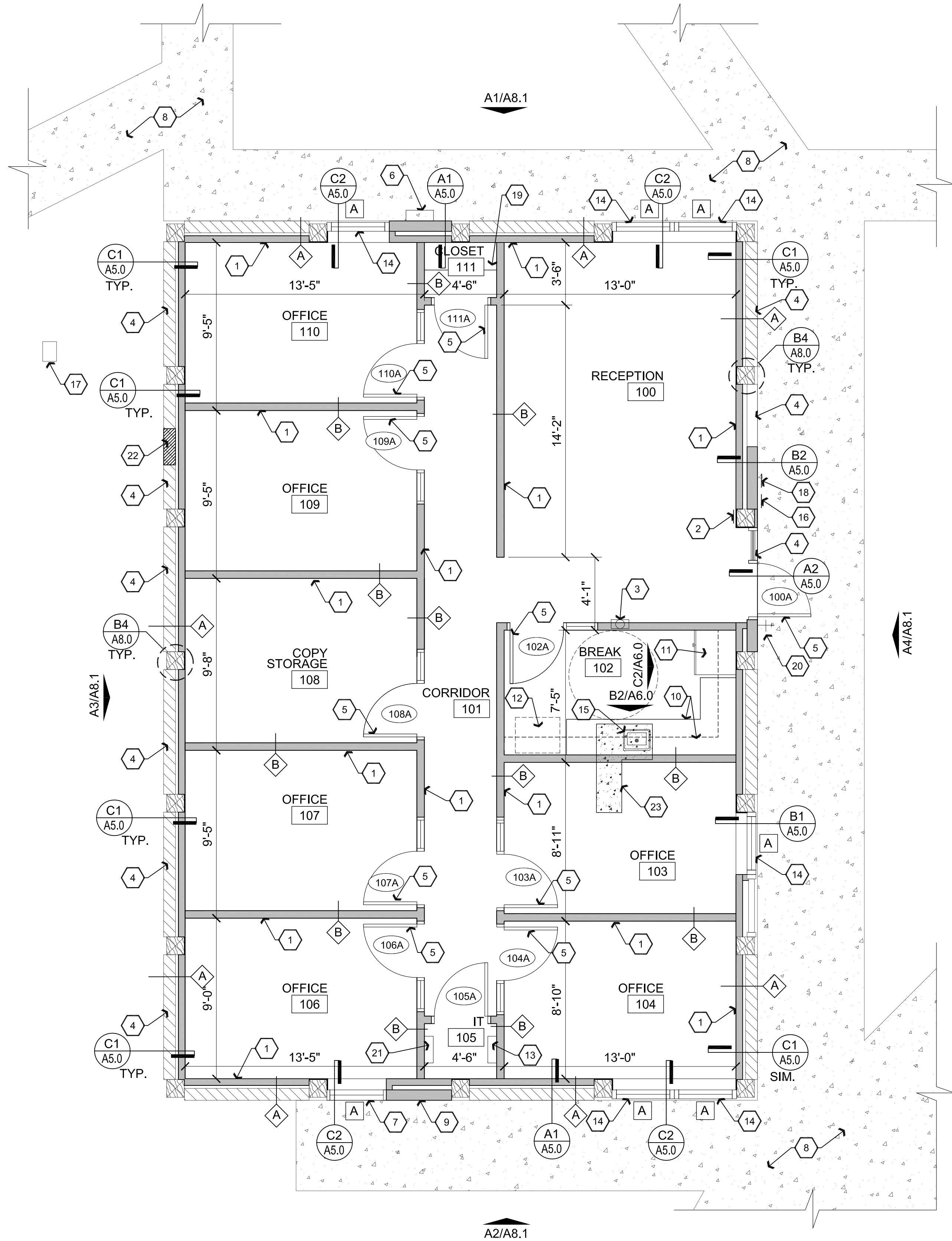
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DATE March 14th, 2019
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**A1.0**



Mar 13, 2019 - 2:24pm



**A1** Reference Floor Plan

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



## Descriptive Keynotes

1. PROVIDE NEW WALL. REFER TO WALL TYPES.
2. PROVIDE A 6"x9" BLUE TACTILE 'EXIT' SIGN AS MANUFACTURED BY 'SIMPLY EXIT SIGNS (#SE-1980)' OR EQUAL COMPLYING WITH ICCA117.1 AND IBC 1011.3 ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. SIGN SHALL BE MOUNTED 60" A.F.F. TO THE CENTER OF THE SIGN.
3. REINSTALL FIRE EXTINGUISHER IN SEMI RECESSED CABINET AS MANUFACTURED BY LARSON OR EQUAL.
4. INFILL OPENING ABOVE WHERE THE CLERESTORY WINDOW WAS REMOVED, TYPICAL.
5. PROVIDE DOOR, REFER TO DOOR SCHEDULE.
6. NEW LOCATION FOR ELECTRICAL SERVICE PANEL, REFER TO ELECTRICAL PLANS.
7. PROVIDE NEW WINDOW WHERE DOOR WAS REMOVED, REFER TO WINDOW TYPES.
8. EXISTING CONCRETE SIDEWALK.
9. INFILL OPENING WHERE WINDOW WAS REMOVED.
10. PROVIDE UPPER AND LOWER CABINETRY.
11. REFRIGERATOR SPACE (REFRIGERATOR PROVIDED BY OWNER).
12. LOCATION OF COPIER PROVIDED AND INSTALLED BY OWNER.
13. PROVIDE ENTRY DOOR ACCESS EQUIPMENT.
14. PROVIDE NEW WINDOW, REFER TO WINDOW TYPES.
15. PROVIDE SINK, REFER TO PLUMBING PLANS.
16. PROVIDE ADA DOOR OPENER.
17. EXISTING IT BELOW GRADE JUNCTION BOX.
18. PROVIDE ENTRY ACCESS CARD READER.
19. PROVIDE ADJUSTABLE SHELVING @ 18" O.C.
20. PROVIDE HOSE BIBB, REFER TO PLUMBING PLANS.
21. IT EQUIPMENT, REFER TO ELECTRICAL PLANS.
22. REPAIR 8X4X16 CMU SLUMP BLOCK AS REQUIRED WHERE ELECTRICAL PANEL / VAULT WAS REMOVED.
23. PROVIDE 4" THICK CONCRETE OVER 4" ABC WHERE CONCRETE WAS REMOVED FOR PLUMBING WASTE LINE, REFER TO PLUMBING PLANS.

## Wall Types

- A** INTERIOR PARTITION WALL AT EXISTING  
EXTERIOR WALL : EXISTING CMU WALL.  
PROVIDE NEW WALL CONSISTING OF  
3-5/8" 25 GAUGE METAL STUDS AT 2'-0"  
O.C. WITH 5/8" GPDW ON EXPOSED SIDE.  
PROVIDE R-11 UNFACED BATT  
INSULATION. ALIGN EDGE OF STUD  
FLUSH, OR AS CLOSE AS POSSIBLE,  
WITH EXISTING WOOD COLUMNS.
- B** INTERIOR PARTITION WALL: PROVIDE  
TO 6" ABOVE CEILING 3-5/8" 25 GA. STEEL  
STUDS AT 2'-0" O.C. WITH 5/8" GPDW ON  
EXPOSED SIDES. PROVIDE R-11  
UNFACED BATT INSULATION.

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**ARCHITECTURE & PLANNING**

**DRAWING:** Reference Floor Plan

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

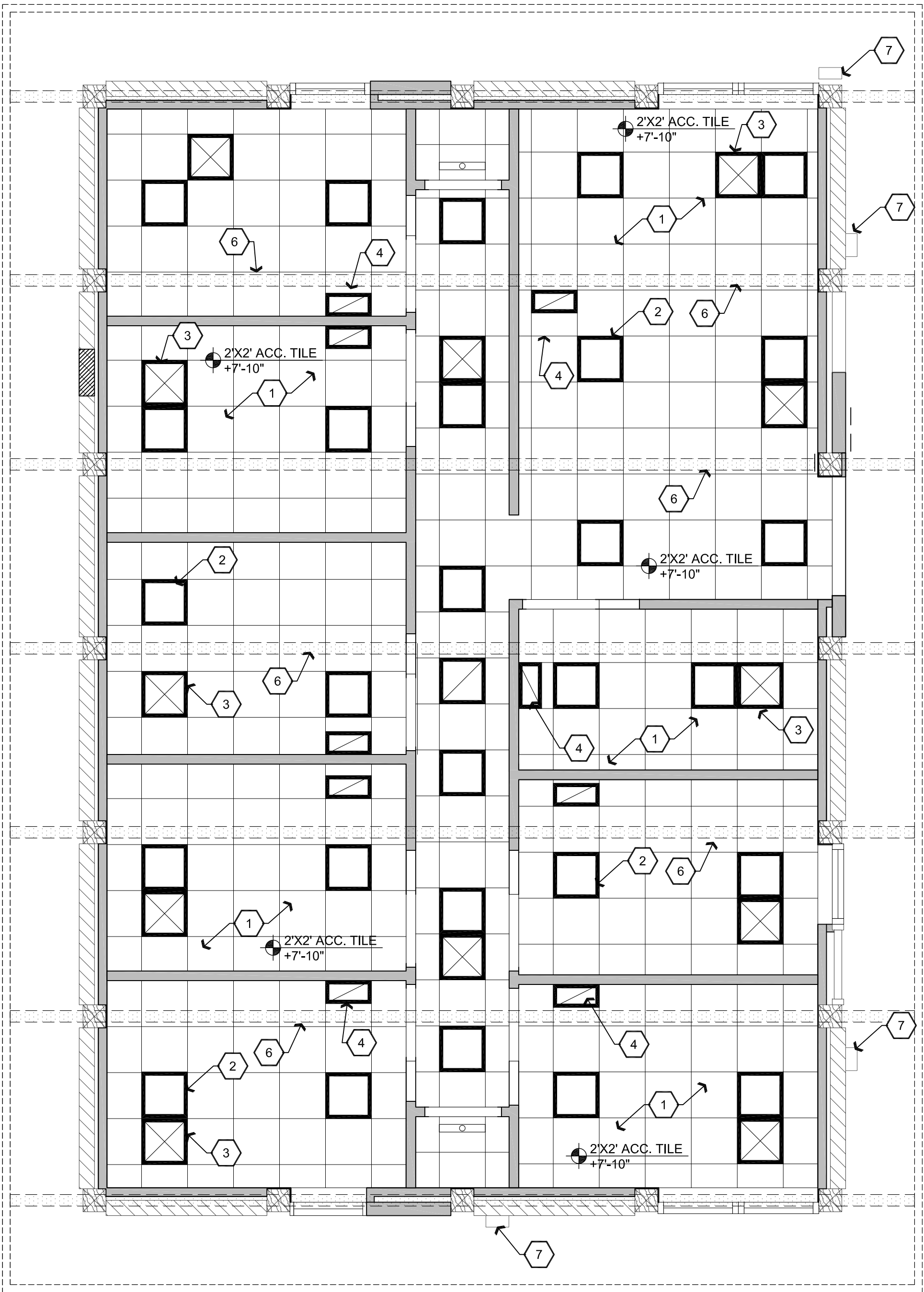
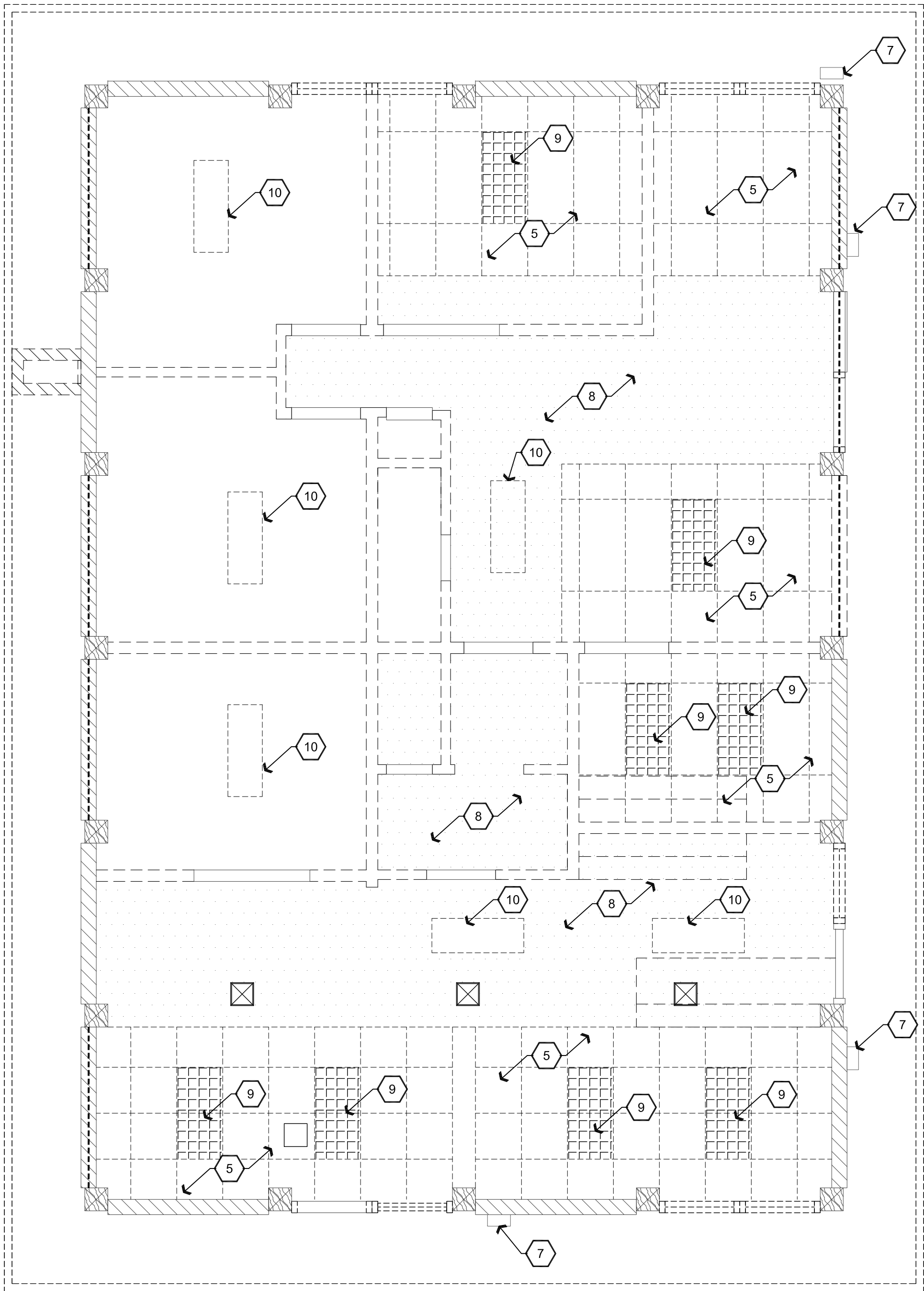
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**A2.0**



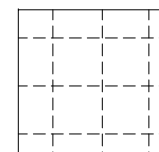
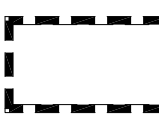

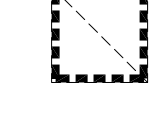
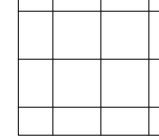
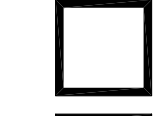
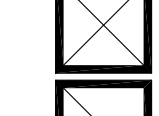
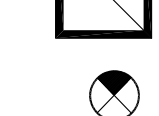
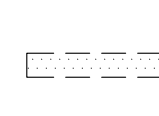
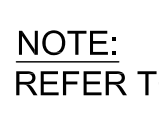
Mar 13, 2019 - 2:24pm



## Descriptive Keynotes

1. PROVIDE NEW SUSPENDED CEILING. GRID TO BE INSTALLED BELOW EXISTING WOOD BEAMS, TYPICAL. ACT-1
2. LIGHT FIXTURES SHOWN FOR QUANTITY AND LOCATION ONLY. REFER TO ELECTRICAL PLANS.
3. HVAC SUPPLY, TYPICAL. REFER TO MECHANICAL PLANS.
4. HVAC RETURN, TYPICAL. REFER TO MECHANICAL PLANS.
5. REMOVE ENTIRE SUSPENDED CEILING THIS AREA, INCLUDING ALL MECHANICAL, ELECTRICAL, & LOW VOLTAGE. EXISTING WOOD BEAMS TO REMAIN.
6. EXISTING WOOD BEAM ABOVE CEILING GRID. BOTTOM OF WOOD BEAM @ 8'-0".
7. EXISTING EXTERIOR LIGHT TO REMAIN.
8. REMOVE CEILING FRAMING IN THIS AREA, INCLUDING ALL MECHANICAL, ELECTRICAL, & LOW VOLTAGE. EXISTING WOOD BEAMS TO REMAIN. DRYWALL CEILING IN THIS AREA IS TO BE REMOVED BY OTHERS.
9. REMOVE EXISTING PARABOLIC LIGHTING, TYPICAL, SALVAGE AND RETURN TO ERAU MATERIALS MANAGEMENT.
10. REMOVE EXISTING LIGHTING.

## Legend

-  2'x2' ACOUSTICAL PANEL CEILING AND GRID TO BE REMOVED
-  2'x4' TROFFER LIGHT FIXTURE TO BE REMOVED
-  2'x2' HVAC SUPPLY DIFFUSER TO BE REMOVED
-  2'x2' HVAC RETURN TO BE REMOVED
-  NEW 2'x2' ACOUSTIC PANEL CEILING ACT-1
-  NEW 2'x2' LED TROFFER LIGHT FIXTURE
-  NEW 2'x2' HVAC SUPPLY DIFFUSER
-  NEW 2'x2' HVAC RETURN
-  EMERGENCY EXIT SIGN WITH BATTERY BACK-UP
-  EXISTING WOOD BEAM ABOVE CEILING GRID, BOTTOM OF WOOD BEAM @ 8'-0" A.F.F.

NOTE:  
REFER TO ELECTRICAL AND MECHANICAL PLANS.



NOTE:  
ELECTRIC, DATA AND AV WIRES SHALL BE RUN UNDER THE BEAMS, ABOVE THE CEILING. NO BEAMS SHALL HAVE HOLES DRILLED THROUGH THEM.

NOTE:  
ALL REMOVED ITEMS ARE TO BE DELIVERED TO OWNER AT OWNER'S DISCRETION. ITEMS ARE TO BE DELIVERED TO THE FACILITIES MANAGEMENT DEPARTMENT ON CAMPUS.

REVISIONS	BY

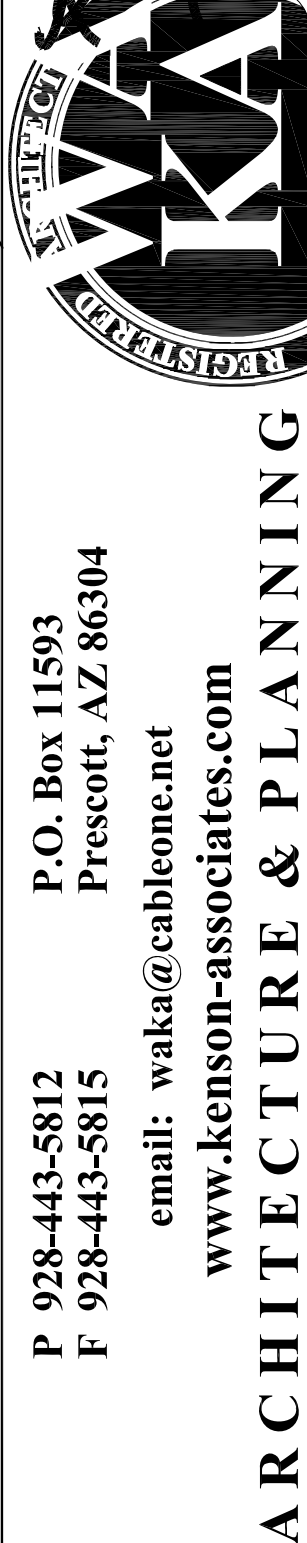
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P.O. Box 11593  
Prescott, AZ 86304



**DRAWING:** Demolition and Proposed Reflected Ceiling Plans

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

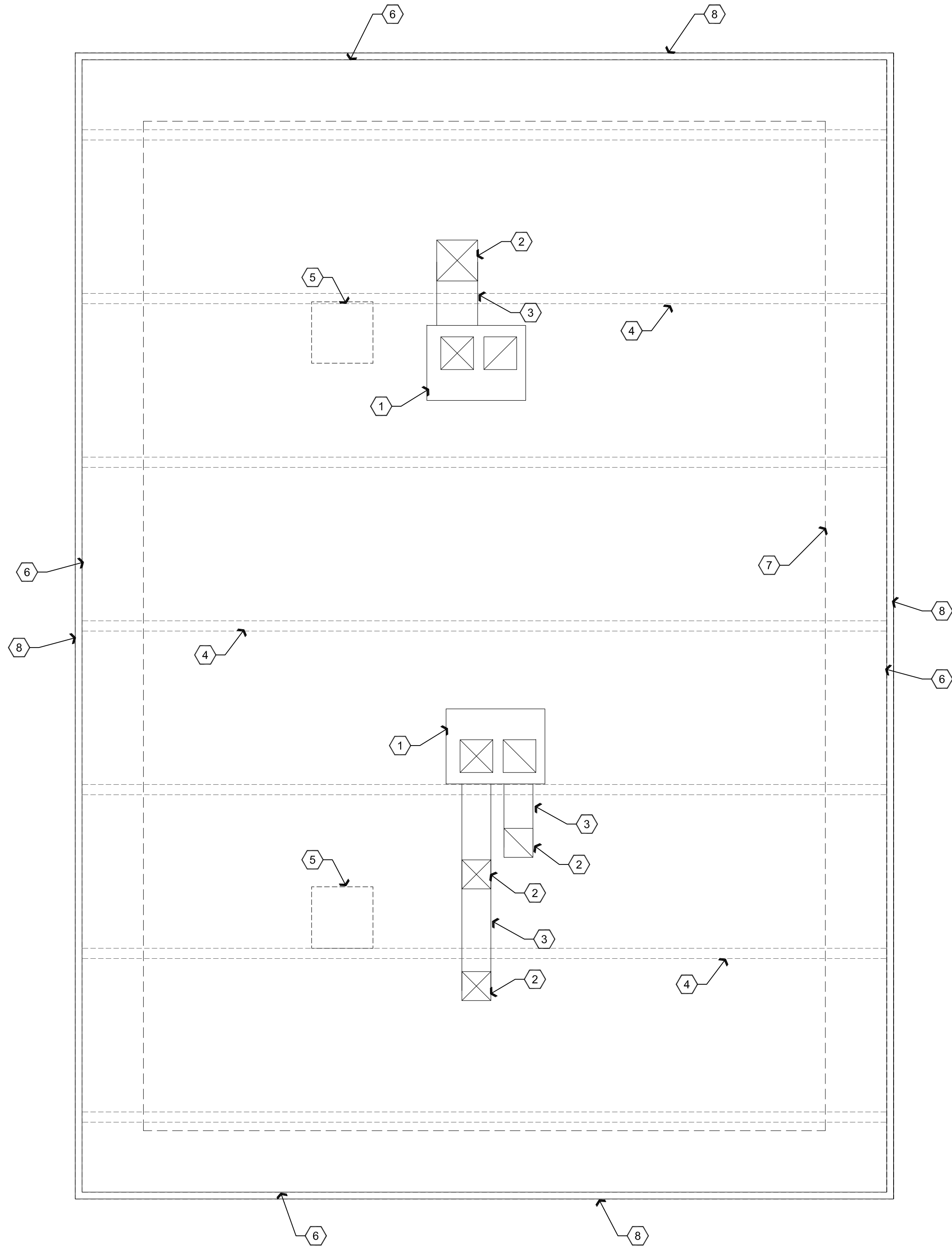
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DATE March 14th, 2019
JOB. NO. 729
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**A3.0**



Mar 13, 2019 - 2:24pm



### Descriptive Keynotes

1. INSTALL OWNER PROVIDED HVAC UNIT AND OWNER PROVIDED ROOF CURB. STENCIL HVAC UNIT NUMBER ON UNIT HOUSING IN ACCORDANCE WITH OWNER'S REQUEST. REFER TO MECHANICAL PLANS. REPAIR ROOF AS REQUIRED.
2. PROVIDE NEW DUCT THROUGH ROOF. DUCTWORK SHALL BE PRIMED AND PAINTED WHITE TO MATCH ROOF. REFER TO MECHANICAL PLANS. REPAIR ROOF AS REQUIRED.
3. PROVIDE NEW DUCT ON ROOF. REFER TO MECHANICAL PLANS.
4. EXISTING BEAM BELOW ROOF, TYPICAL.
5. REMOVE EXISTING HVAC UNIT ELECTRICAL, GAS PIPING AND RELATED EQUIPMENT SUPPORTS. REPAIR ROOF AS REQUIRED. SALVAGE HVAC UNIT AND RETURN TO ERAU MATERIALS MANAGEMENT IN UNDAMAGED WORKING ORDER.
6. EDGE OF EXISTING ROOF.
7. EDGE OF EXISTING EXTERIOR WALL.
8. REMOVE AND REPLACE EXISTING GUTTER WITH NEW 6" GALVALUME GUTTER FROM 'ARIZONA SEAMLESS GUTTERS'. REMOVE AND REPLACE EXISTING DOWNSPOUTS WITH NEW 3"x4" GALVALUME DOWNSPOUTS FROM 'ARIZONA SEAMLESS GUTTERS'.

NOTE:  
EXISTING ROOF STRUCTURE IS ADEQUATE TO  
SUPPORT NEW HVAC UNITS.

NOTE:  
ELECTRIC WIRES SHALL BE RUN UNDER THE BEAMS,  
ABOVE THE CEILING. NO BEAMS SHALL HAVE NEW  
HOLES DRILLED THROUGH THEM.

NOTE:  
ALL ROOF PENETRATIONS WILL BE MADE BY A  
CERTIFIED SOPREMA ROOF INSTALLER. NO  
OTHER CONTRACTOR OR ROOFING SYSTEM IS  
ACCEPTABLE. PROVIDE SOPREMA APPROVED  
ROOF JACK TO ROOFING CONTRACTOR FOR  
INSTALLATION.  
CONTACT SOPREMA ROOFING  
REPRESENTATIVE:  
WALT HITCHCOCK  
CELL: 480-694-3433  
EMAIL: WHITCHCOCK@SOPREMA.US

**Roof Plan**

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



REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Roof Plan

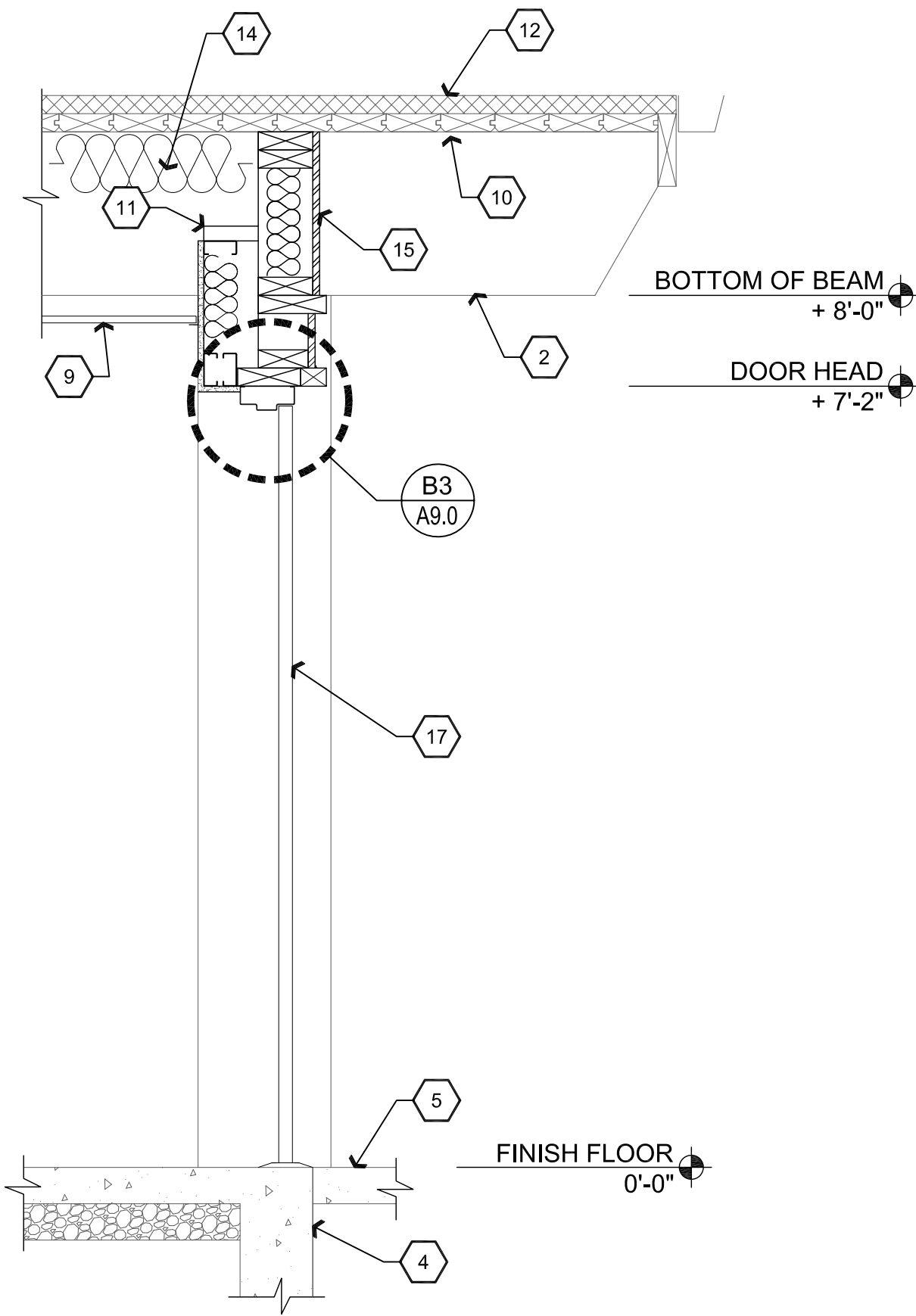
**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 14th, 2019
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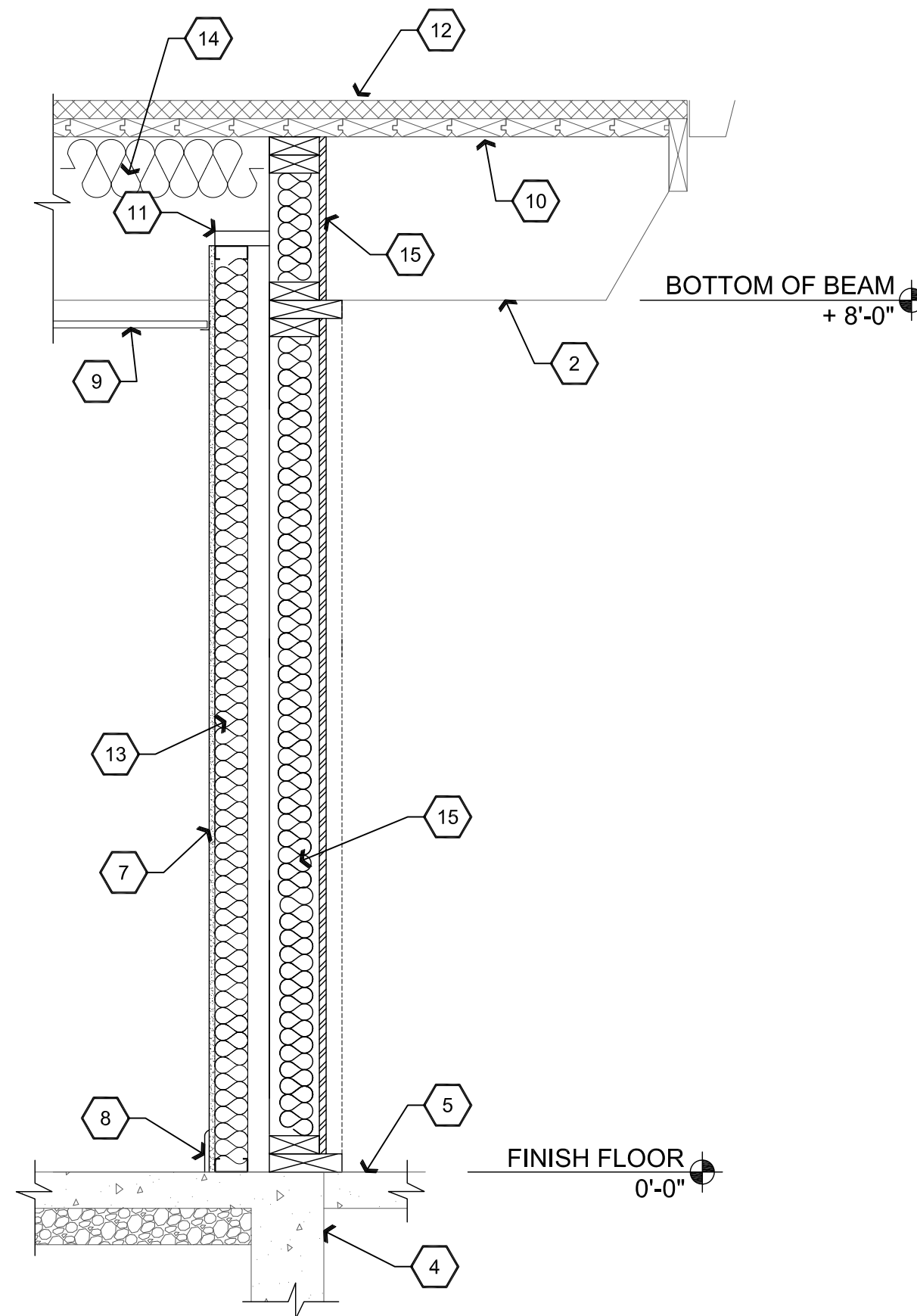
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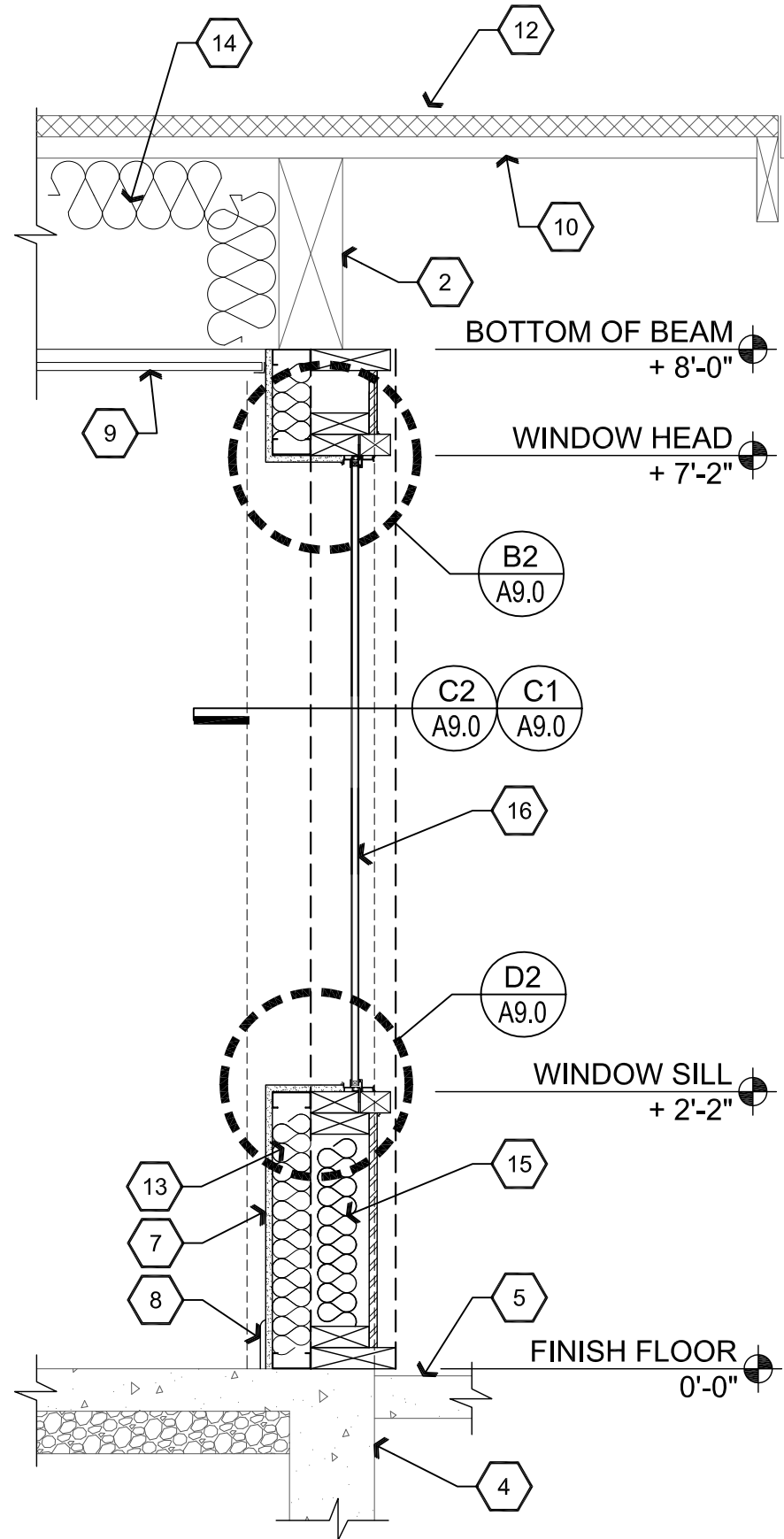
**A2** Wall Section

Scale: 3/4"=1'-0"



**B2** Wall Section

Scale: 3/4"=1'-0"



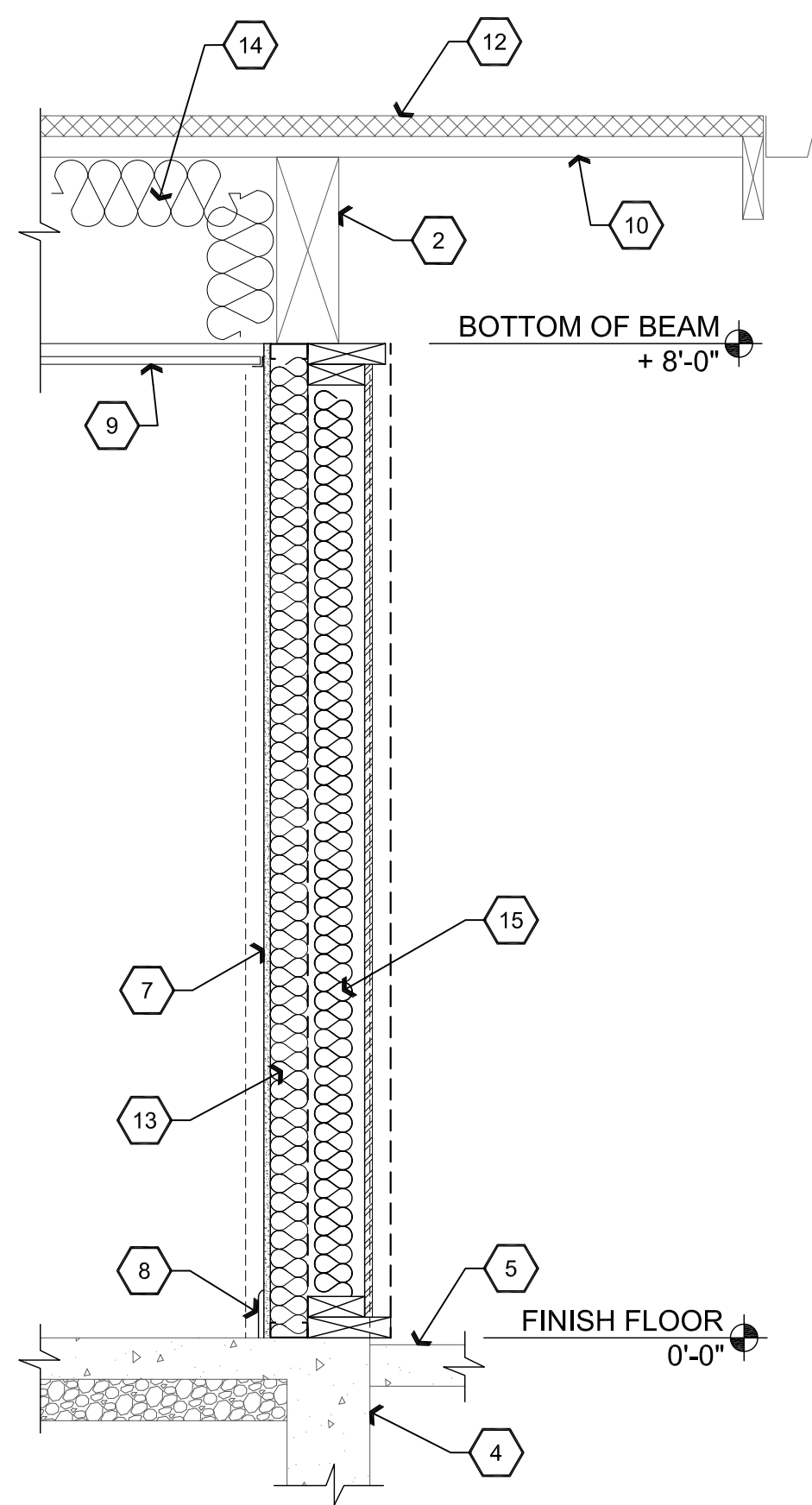
**C2** Wall Section

Scale: 3/4"=1'-0"

## Descriptive Keynotes

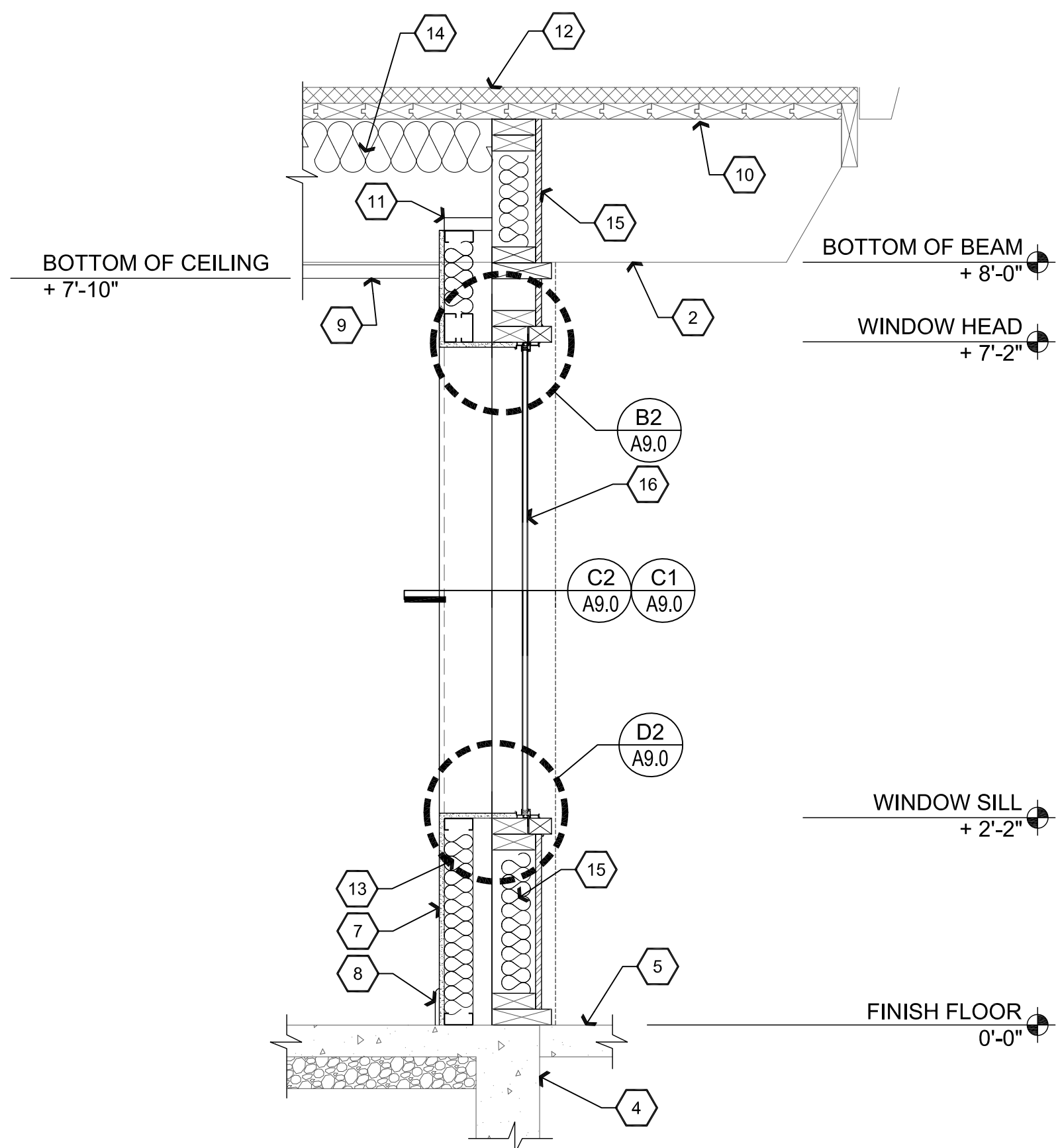
- EXISTING 8"x4"x16" SLUMP BLOCK INFILL WALL.
- EXISTING WOOD BEAM.
- NOT USED.
- EXISTING FOUNDATION.
- EXISTING EXTERIOR CONCRETE SLAB WHERE OCCURS.
- NOT USED.
- NEW METAL STUD WALL. REFER TO WALL TYPES PLAN.
- PROVIDE RUBBER BASE.
- PROVIDE SUSPENDED ACOUSTICAL CEILING, REFER TO REFLECTED CEILING PLAN.
- EXISTING 2x TONGUE AND GROOVE WOOD DECK.
- PROVIDE STEEL STUD BRACING BACK TO WALL @ 4'-0" O.C.
- EXISTING ROOFING.
- PROVIDE R-11 UNFACED BATT INSULATION.
- PROVIDE R-38 UNFACED BATT INSULATION WIRED IN PLACE.
- INFILL OPENING WITH 2x6 WOOD STUDS @ 16" O.C., PROVIDE 5/8" ROUGH SAWN, T-111 INSET SHEATHING TO MATCH EXISTING. PROVIDE SEALANT AT ALL EDGES WHERE SHEATHING MEETS OUTER FRAME. PAINT SHEATHING TO MATCH EXISTING AT EXTERIOR. PROVIDE R-19 FRICTION FIT BATT INSULATION AT EACH STUD CAVITY. SECURE WOOD INFILL FRAME TO EXISTING FRAMING.
- PROVIDE WINDOW. REFER TO REFERENCE FLOOR PLAN AND WINDOW TYPES.
- NEW HOLLOW METAL DOOR AND FRAME, REFER TO REFERENCE FLOOR PLAN AND DOOR SCHEDULE.

NOTE:  
WALL SECTIONS HAVE BEEN TO ATTEMPT TO MATCH EXISTING CONSTRUCTION METHODS. WHERE DISCREPANCIES OCCUR, MATCH EXISTING CONSTRUCTION.



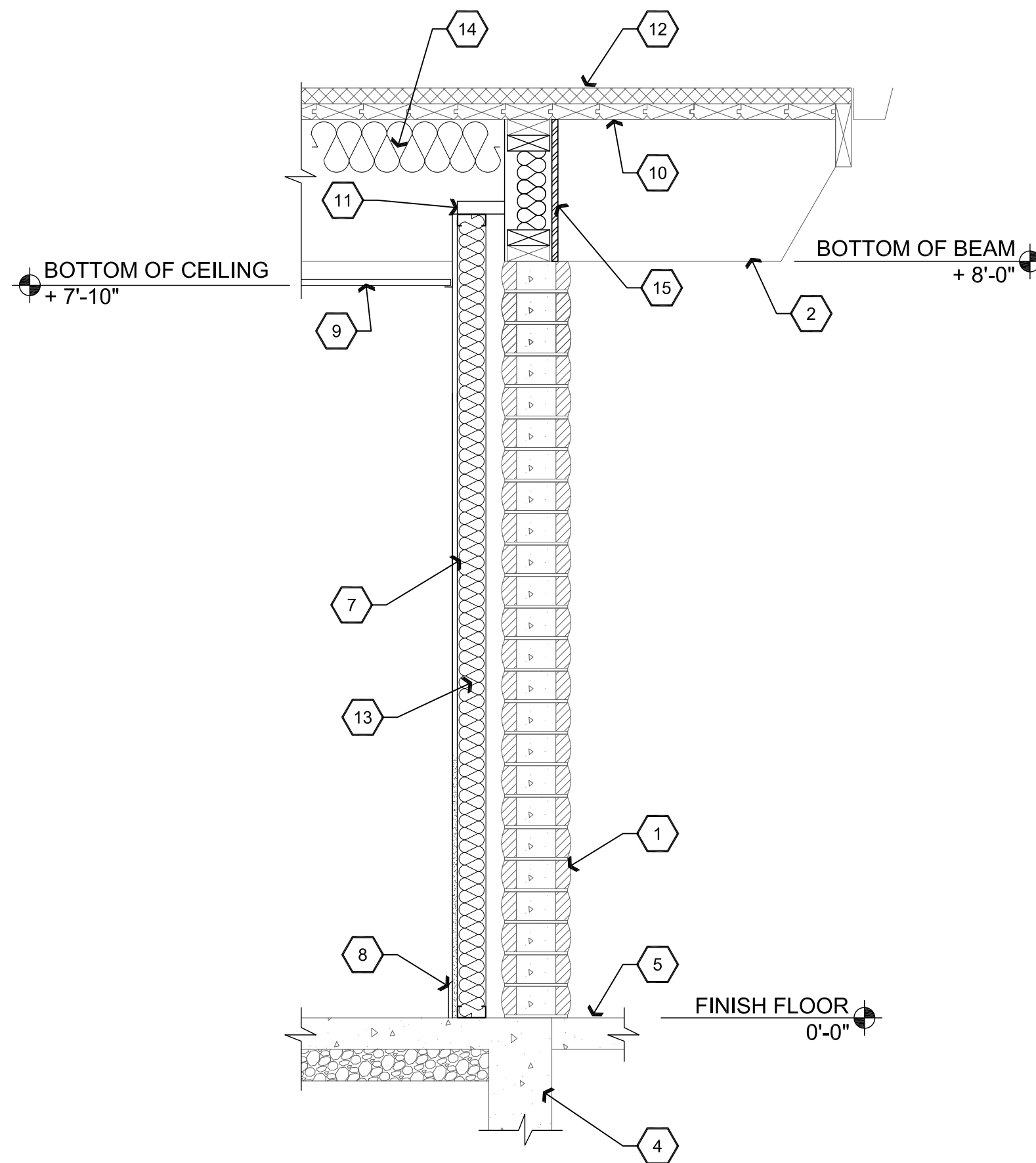
**A1** Wall Section

Scale: 3/4"=1'-0"



**B1** Wall Section

Scale: 3/4"=1'-0"

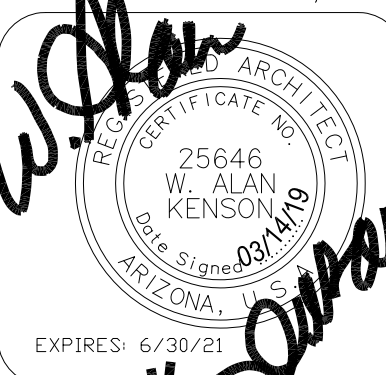


**C1** Wall Section

Scale: 3/4"=1'-0"

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**ARCHITECTURE & PLANNING**

DRAWING: Wall Sections

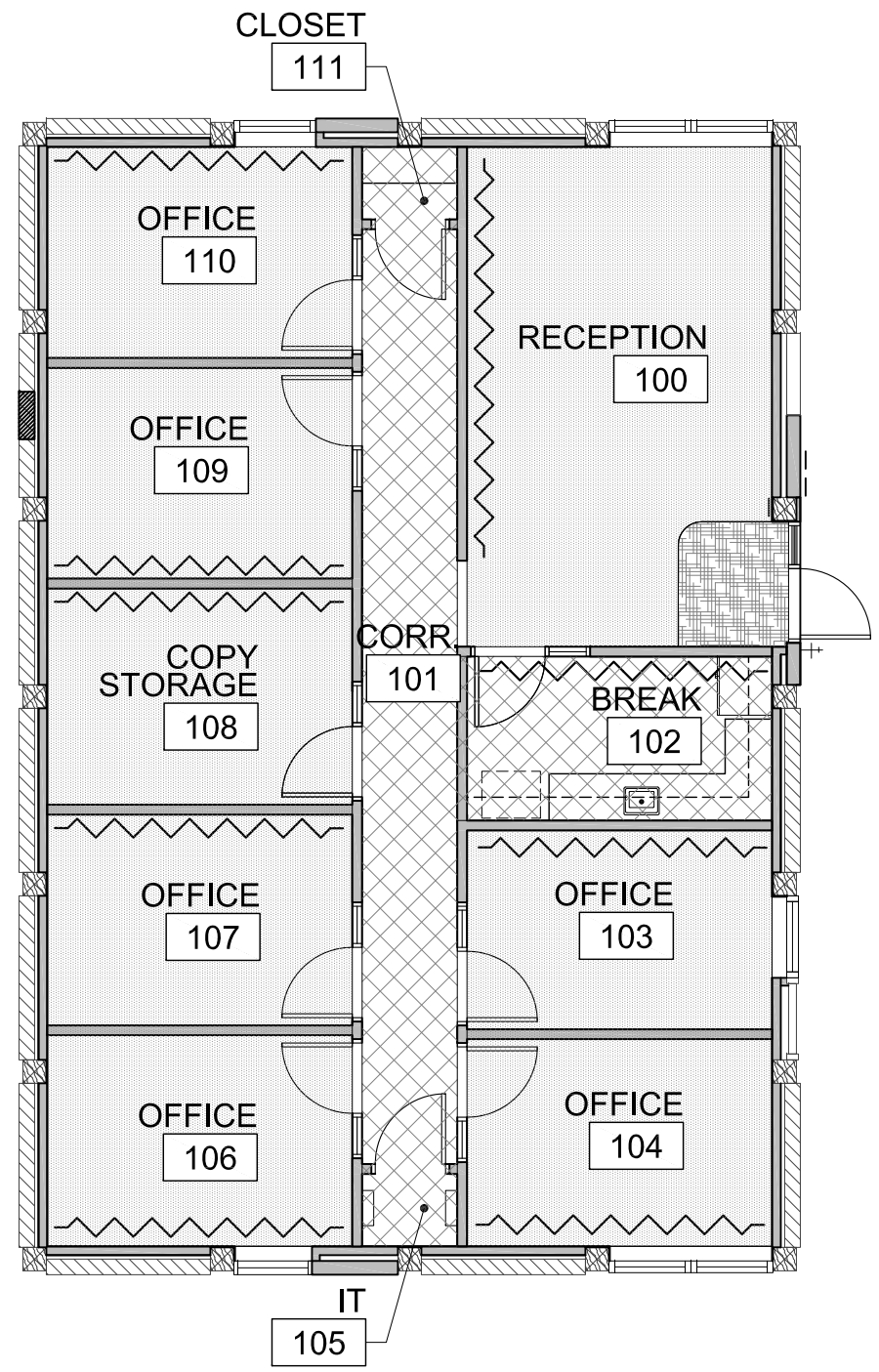
PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

APN: 106-03-004

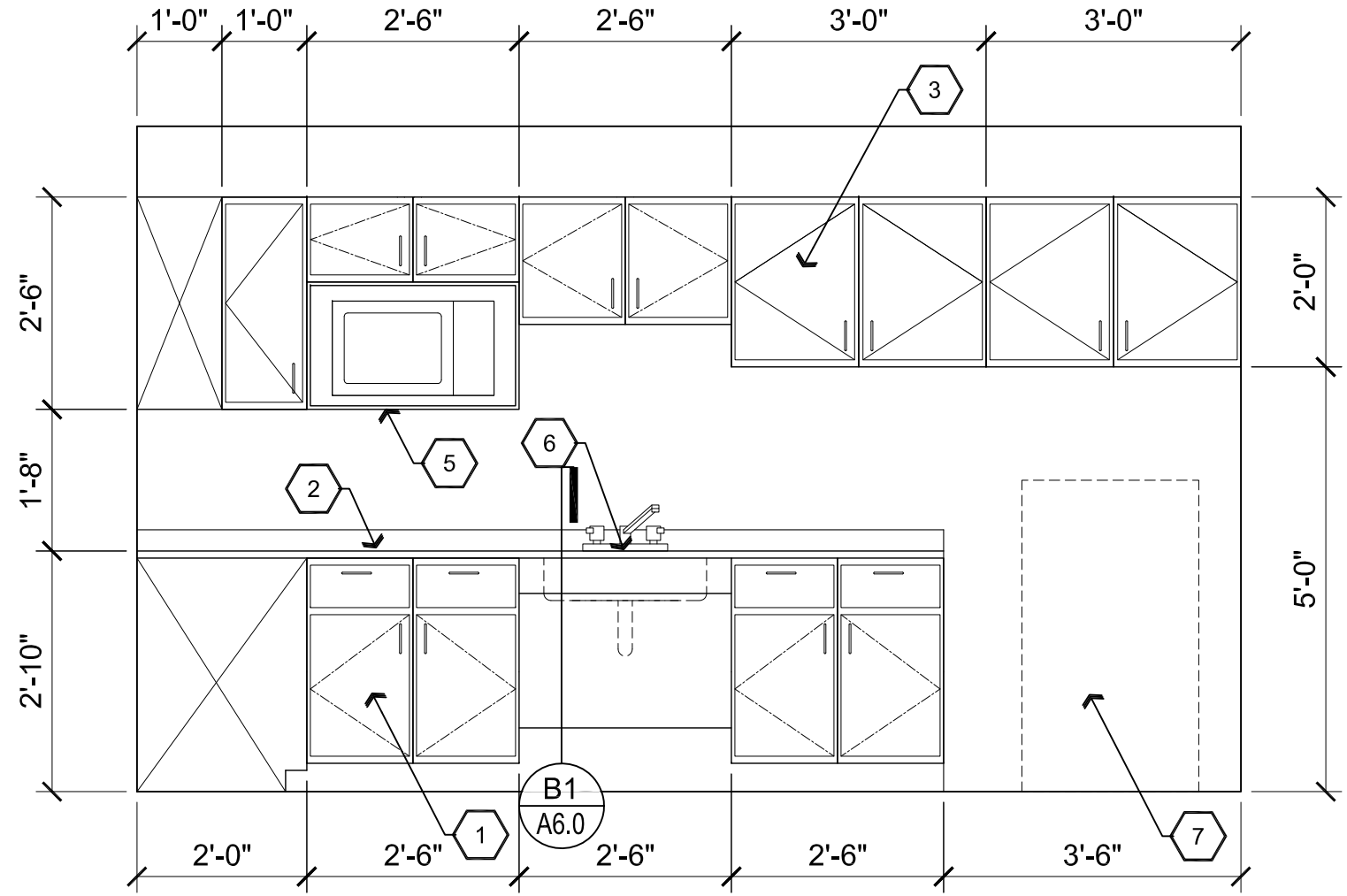
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**A5.0**

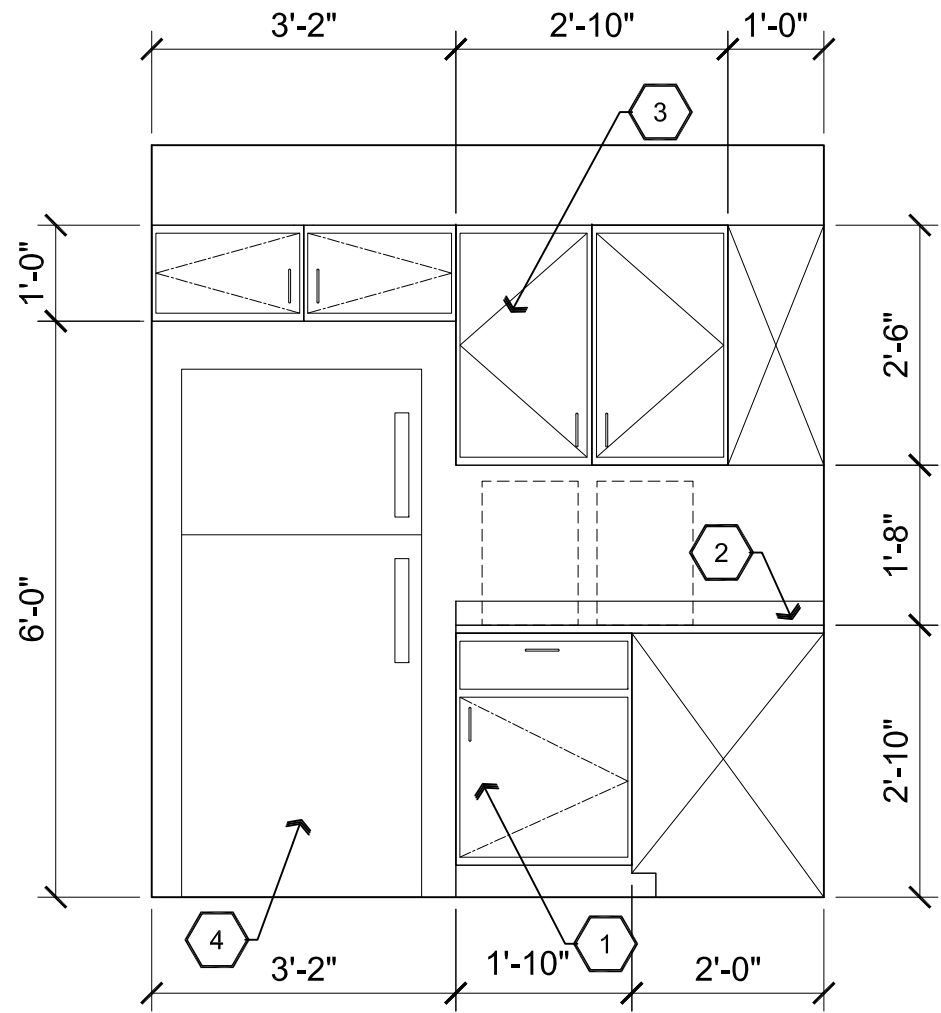




**A2 Room Finish Plan**  
Scale: 1/8"=1'-0"

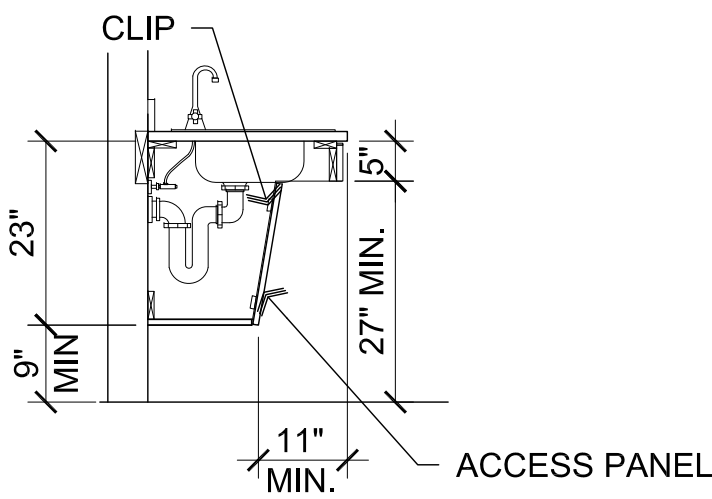


**B2 South Elevation**  
Scale: 1/2"=1'-0"



**C2 East Elevation**  
Scale: 1/2"=1'-0"

- Descriptive Keynotes**
1. PLASTIC LAMINATE LOWER CABINETS. PL-1
  2. PLASTIC LAMINATE COUNTERTOP WITH EDGE BANDING AND 4" BACKSPLASH. PL-2
  3. PLASTIC LAMINATE UPPER CABINET. PL-1
  4. REFRIGERATOR BY OWNER.
  5. MICROWAVE SHELF, PLATFORM BASE TO EXTEND 6" BEYOND FACE OF CABINETY. (MICROWAVE SUPPLIED BY OWNER)
  6. PROVIDE SINK AND FAUCET, REFER TO PLUMBING PLANS.
  7. SPACE FOR COPIER (PROVIDED BY OWNER).



**B1 ADA Cabinet Section**  
Scale: 1/2"=1'-0"

**Room Finish Schedule**

NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING	HEIGHT
100	RECEPTION	F2/F3	B1	W1	C1	7'-10"
101	CORRIDOR	F1	B1	W1	C1	7'-10"
102	BREAK	F1	B1	W1	C1	7'-10"
103	OFFICE	F2	B1	W1	C1	7'-10"
104	OFFICE	F2	B1	W1	C1	7'-10"
105	IT	F1	B1	W1	C1	7'-10"
106	OFFICE	F2	B1	W1	C1	7'-10"
107	OFFICE	F2	B1	W1	C1	7'-10"
108	COPY/STORAGE	F2	B1	W1	C1	7'-10"
109	OFFICE	F2	B1	W1	C1	7'-10"
110	OFFICE	F2	B1	W1	C1	7'-10"
111	CLOSET	F1	B1	W1	C1	7'-10"

FLOOR:  
F1 LVT LVT-1  
F2 CARPET CPT-1  
F3 WALK-OFF-MAT WM-1  
BASE:  
B1 RUBBER BASE RB-1  
WALLS:  
W1 PAINTED GPDW PT-1  
ACCENT WALL PT-4  
CEILING:  
C1 2x2 SUSPENDED ACT-1  
ACOUSTICAL PANELS

**Legend**

- LVT LVT-1  
 CARPET CPT-1  
 WALK-OFF-MAT WM-1  
 ACCENT WALL PT-4

**Materials schedule**

CODE	MATERIAL	LOCATION	MANUFACTURER	SPECIFICATION
ACT-1	ACOUSTIC CEILING TILE AND GRID	REFER TO REFLECTED CEILING PLAN	ARMSTRONG	ASTM C 36; 2'x2' #770 NON DIRECTIONAL SQUARE LAY-IN TILE, WHITE SUSPENDED GRIDS; 15/16" METAL WHITE
CPT-1	CARPET	OFFICES	TANDUS CENTIVA	CRAYON POWERBOND CUSHION RS PRECIOUS METAL #48010 (PROVIDED BY OWNER, INSTALLED BY CONTRACTOR)
LVT-1	LUXURY VINYL TILE	CORRIDOR, CLOSET, IT	TANDUS	18"x18" VENUE VA 5135 QU SE(PROVIDED BY OWNER, INSTALLED BY CONTRACTOR)
PL-1	PLASTIC LAMINATE	VERTICAL CABINETY	WILSONART	SLATE GREY D91-60
PL-2	PLASTIC LAMINATE	COUNTERTOPS	WILSONART	INK VESTA 4979K-07
PT-1	PAINT	WALL, INTERIOR DOORS AND TRIM	SHERWIN WILLIAMS	PACER WHITE 6098 PROMAR 200 EGGSHELL
PT-4	PAINT	ACCENT	SHERWIN WILLIAMS	BLONDE 6128 PROMAR 200 EGGSHELL
PT-5	PAINT	EXTERIOR METAL DOORS/TRIM	SHERWIN WILLIAMS	RAINSTORM 6230
PT-6	PAINT	EXTERIOR BODY SIDING	SHERWIN WILLIAMS	SANDS OF TIME 6101
PT-7	PAINT	EXTERIOR TRIM	SHERWIN WILLIAMS	PORTABELLO 6102
RB-1	RUBBER BASE	ALL FLOORS	ARMSTRONG OR ROPPE	4" COVED WITH PRE-FORMED CORNERS, BLACK (PROVIDED AND INSTALLED BY CONTRACTOR)
WM-1	WALK-OFF MAT	INTERIOR ENTRY	TANDUS CENTIVA	ABRASIVE ACTION POWER BOND CUSHION CHARCOAL #19100 (PROVIDED BY OWNER, INSTALLED BY CONTRACTOR)

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Room Finish Plan, Interior Elevations and Materials Schedule  
**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301  
**APN:** 106-03-004

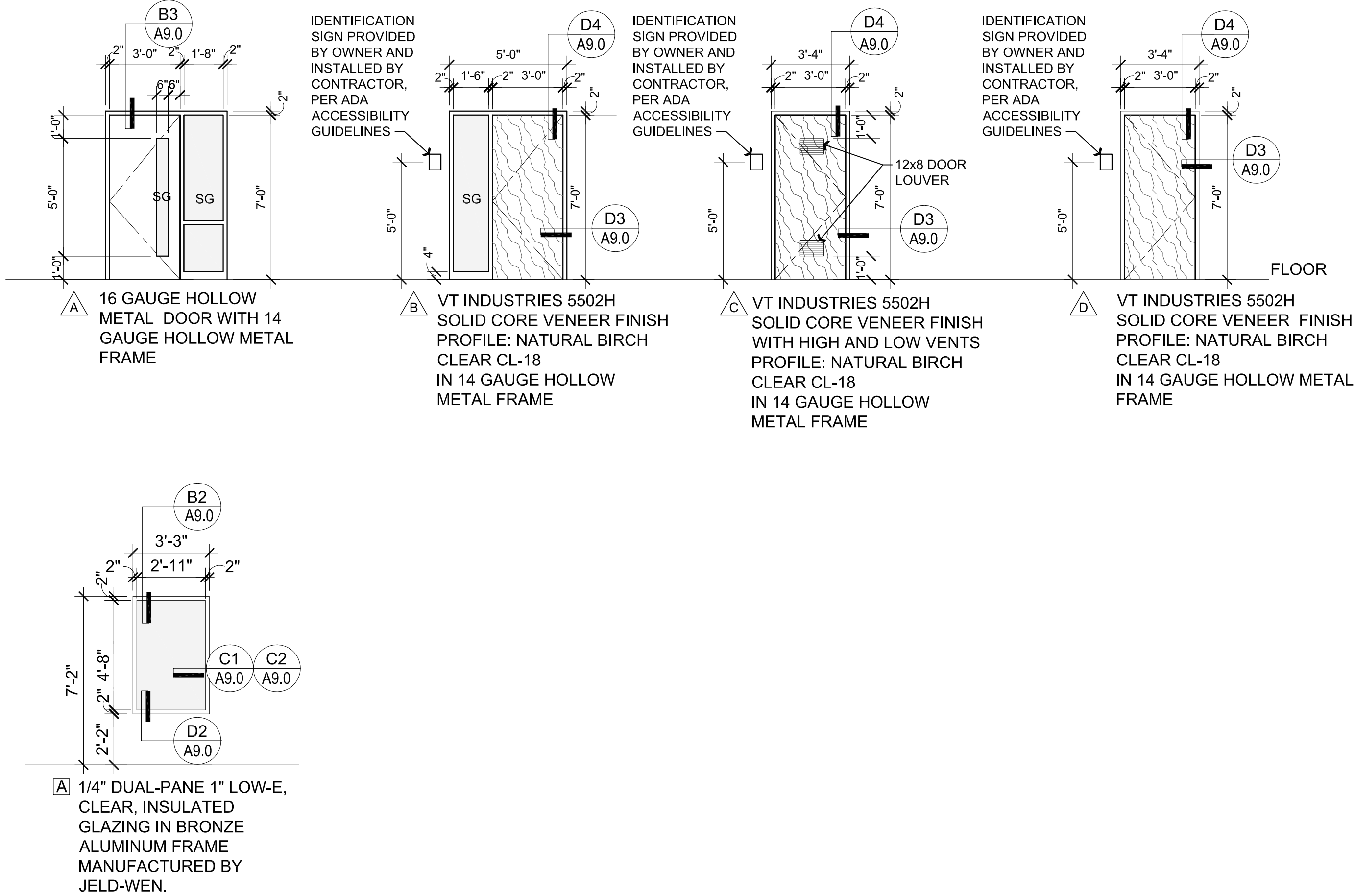
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**A6.0**



Hardware Schedule			
DOOR HARDWARE SCHEDULE ERAU BUILDING 51 REMODLE			
HARDWARE SET 1: SINGLE DOOR DOOR: TAG # 100A EACH DOOR TO HAVE			
QTY	DESCRIPTION		MANUFACTURER
3	HINGE FBB168 4.5 X 4.5	626	STANLEY
1	EXIT 99EO LD - 36"	626	VON DUPRIN
1	TRIM 990NL	626	VON DUPRIN
1	RIM CYLINDER 12E72 S2 RP LSFIC	626	BEST
1	ELECTRIC STRIKE 9600	630	HES
1	ADA OPENER 4642 - 36"	ALUM	LCN
1	WIRELESS ACTUATOR KIT		SEDCO
1	ADDITIONAL WIRELESS RECIEVER		SEDCO
1	READER RP40SE		HID
1	REX SENSOR DS150		BOSCH
1	DOOR CONTACT 679-05		SCHLAGE
1	WEATHER STRIP 303AS 36 X 84	CLR	PEMKO
1	SWEEP 315CN-36"	CLR	PEMKO
1	THRESHOLD 171A-36" X 5" X 1/2"	ALUM	PEMKO
PERMANENT CORES BY ERAU			
HARDWARE SET 2: SINGLE DOOR DOOR: TAG # 103A, 104A, 106A, 107A, 108A, 109A, 110A EACH DOOR TO HAVE			
QTY	DESCRIPTION		MANUFACTURER
3	HINGE FBB179 4.5 X 4.5	626	STANELY
1	ENTRY 9K3 7AB 15D S3 LSFIC	626	BEST
1	WALL STOP 236W	626	HAGER
3	SILENCERS SR64	GRY	IVES
PERMANENT CORES BY ERAU			
HARDWARE SET 3: SINGLE DOOR DOOR: TAG # 105A, EACH DOOR TO HAVE			
QTY	DESCRIPTION		MANUFACTURER
3	HINGES FBB179 4.5 X 4.5	626	STANLEY
1	STOREROOM 9K3 7D 15D S3 LSFIC	626	BEST
1	OVERHEAD STOP 454S	626	GLYNN-JOHNSON
3	SILENCERS SR64	GRY	IVES
PERMANENT CORES BY ERAU			
HARDWARE SET 4: SINGLE DOOR DOOR: TAG # 102A, 111A EACH DOOR TO HAVE			
QTY	DESCRIPTION		MANUFACTURER
3	HINGE FBB179 4.5 X 4.5	626	STANLEY
1	PASSAGE SET 9K3 0N 15D S3	626	BEST
1	WALL STOP 236W	626	HAGER
3	SILENCERS SR64	GRY	IVES
HONEYWELL HEAD END SYSTEM			
1- HONEYWELL PW6 SERIES NETWORK CONTROLLER			
1- HONEYWELL PW SERIES ENCLOSURE WALL MOUNT			
1- HONEYWELL PW6K1R2 DUAL READER BOARD			
1- HONEYWELL 6 AMP POWER SUPPLY W/BATTERY BACK UP			

Door Schedule								
NO.	ROOM NAME	SIZE	TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HARDWARE TYPE
100A	RECEPTION	3'-0"x7'-0"	A	HM	PAINT	HM	PAINT	1
102A	BREAK RM	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	4
103A	OFFICE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
104A	OFFICE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
105A	IT	3'-0"x7'-0"	C	SCWD	STAIN	HM	PAINT	3
106A	OFFICE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
107A	OFFICE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
108A	COPY/STORAGE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
109A	OFFICE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
110A	OFFICE	3'-0"x7'-0"	B	SCWD	STAIN	HM	PAINT	2
111A	CLOSET	3'-0"x7'-0"	D	SCWD	STAIN	HM	PAINT	4
NOTES:  1. ALL EXIT DOORS & HARDWARE SHALL COMPLY WITH THE 2012 I.B.C. 2. DOOR THRESHOLDS SHALL HAVE A MAX HEIGHT OF 1/2" FOR H.C. ACCESSIBILITY. THRESHOLD SHALL HAVE A MAXIMUM RISE OF 1/4" AND 1/2" RISE WHEN BEVELED WITH MAXIMUM 1:2 SLOPE. 3. ALL GLAZING IN DOORS SHALL BE SAFETY GLAZING. 4. ALL INTERIOR DOORS SHALL BE OPERABLE FOR EMERGENCY EXITING PURPOSES WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE NOR EFFORT. 5. ALL GLAZING WITHIN 24" OF OPENINGS SHALL BE SAFETY GLASS. 6. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR. 7. DOOR HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. HARDWARE REQUIRED FOR DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISH FLOOR. 8. DOOR OPENING FORCE SHALL BE: 5lbf MAX INTERIOR HINGED, SLIDING OR FOLDING DOORS; FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.								



## A1 Window & Door Types

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

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ARCHITECTURE & PLANNING

DRAWING: Door Schedule and Door/Window Types

PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

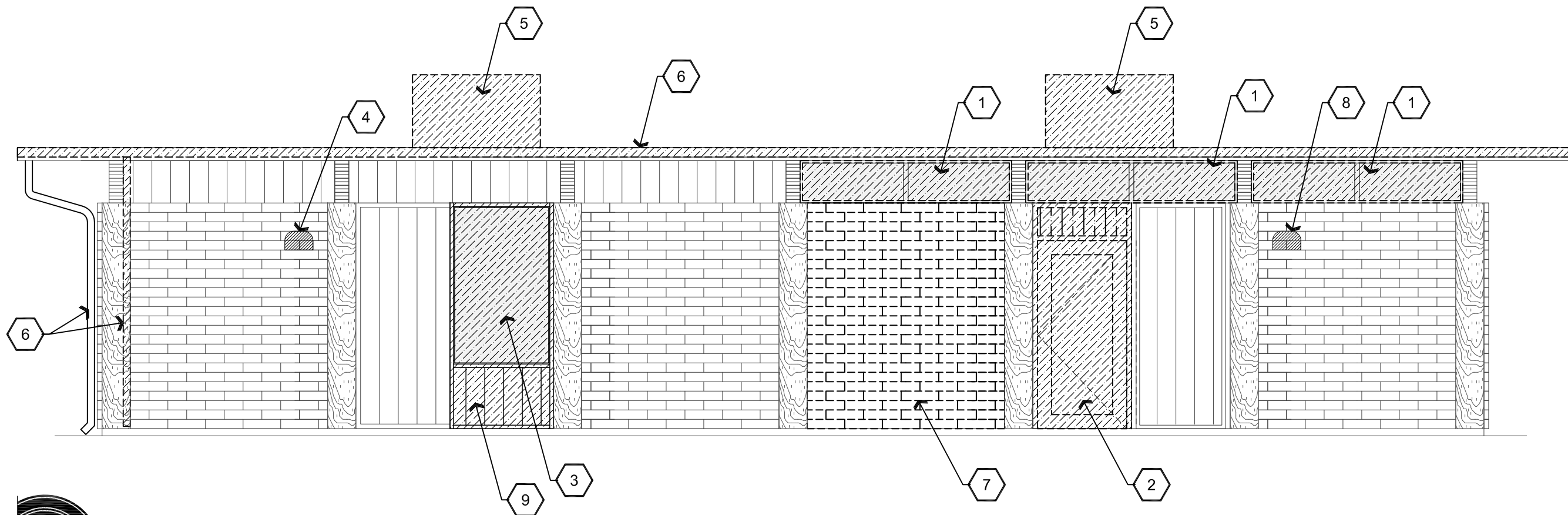
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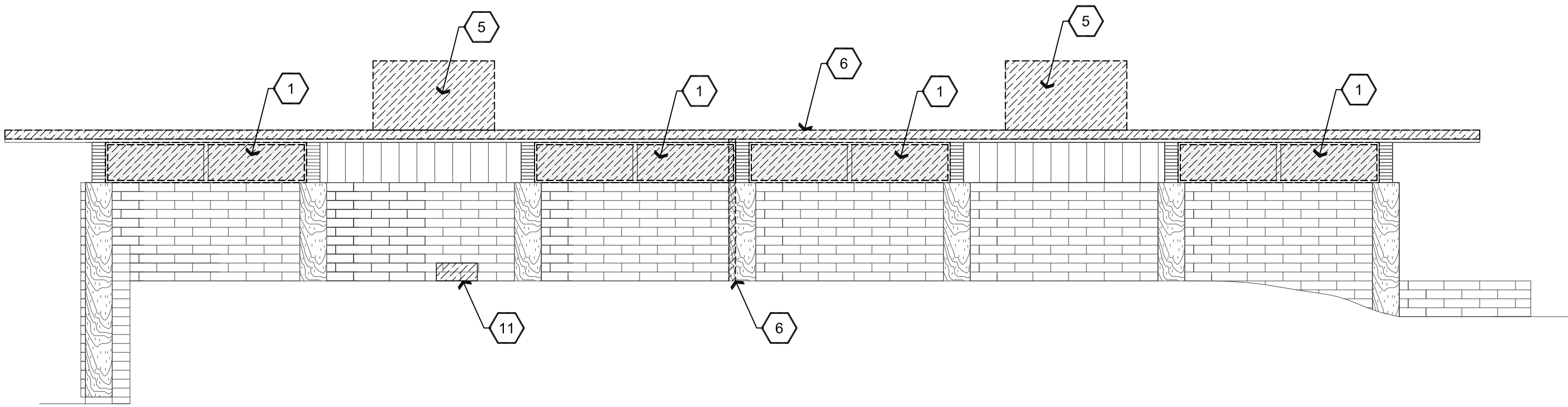


Mar 13, 2019 - 2:49pm



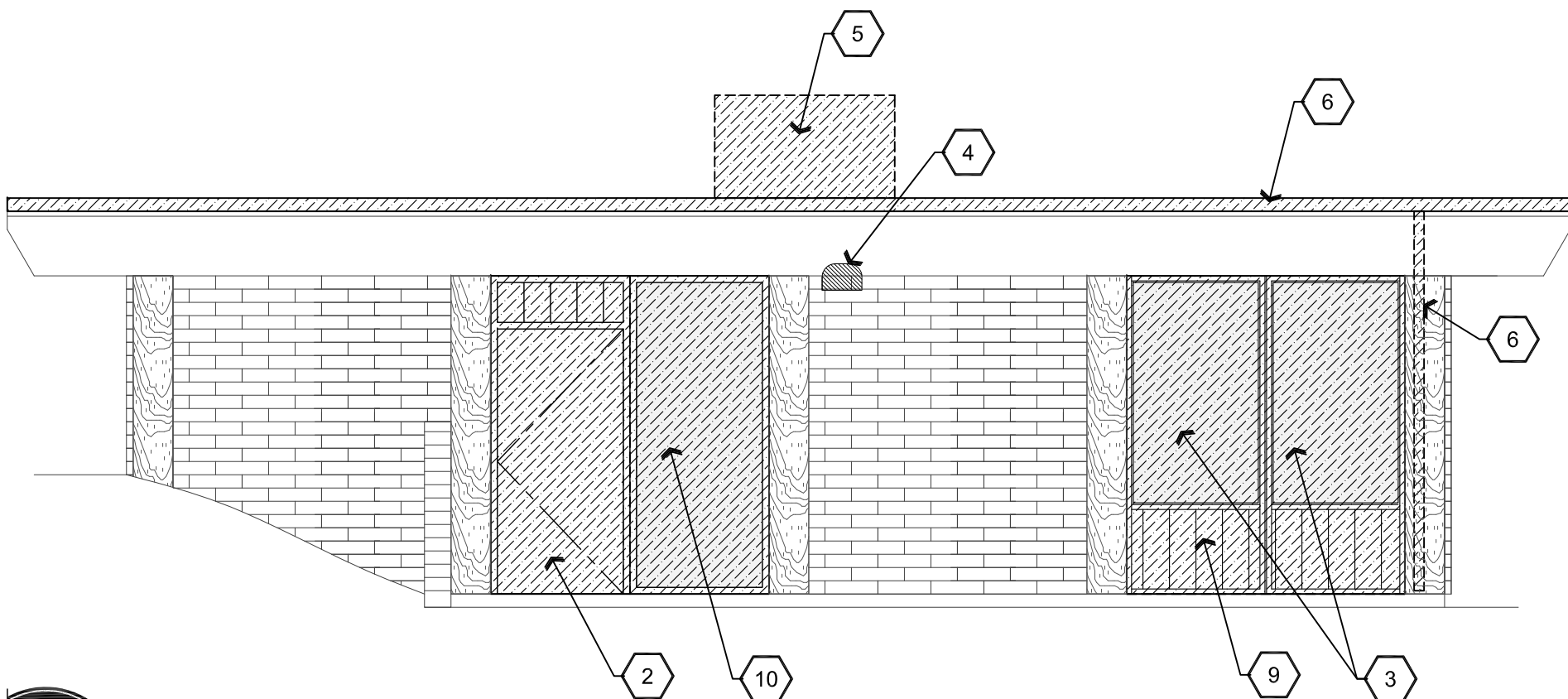
**A4** Demolition East Elevation

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



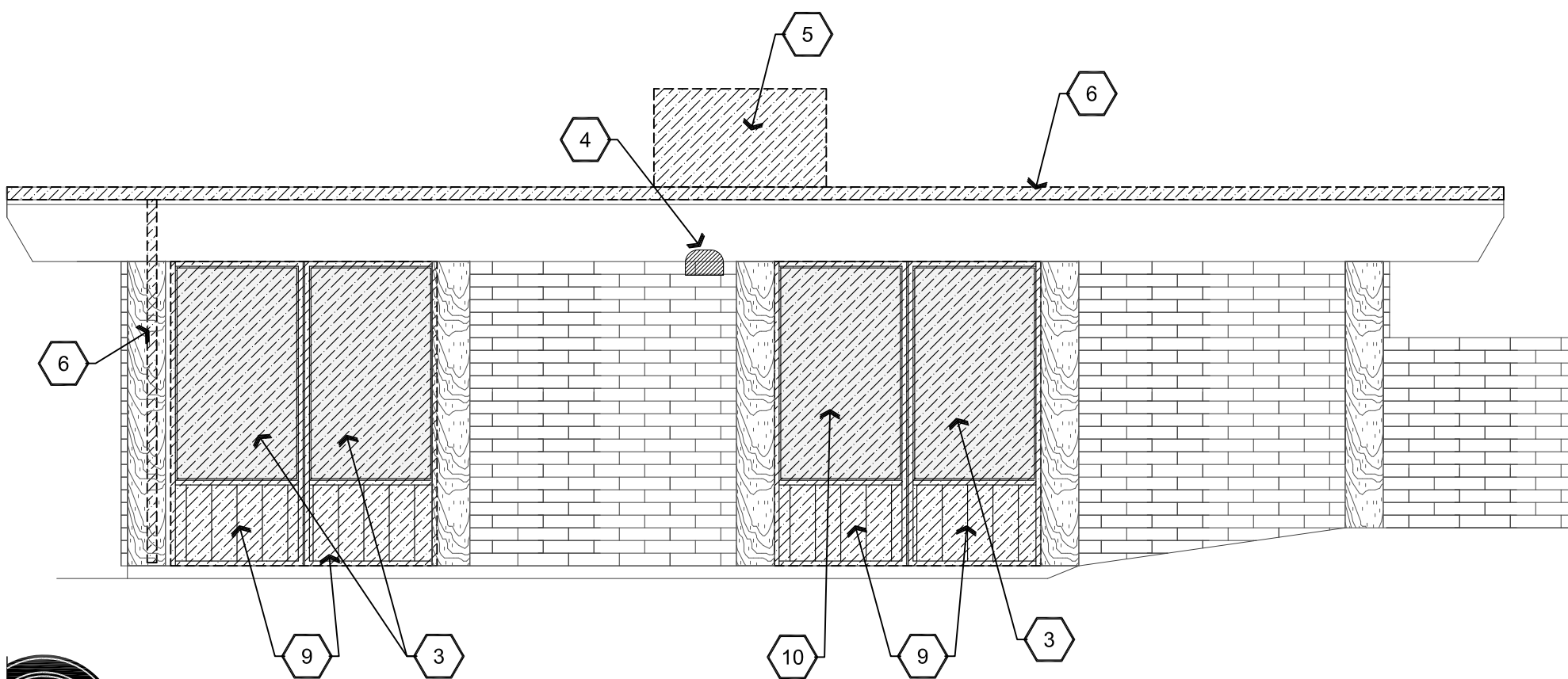
**A3** Demolition West Elevation

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



**A2** Demolition South Elevation

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



**A1** Demolition North Elevation

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

### Descriptive Keynotes

1. REMOVE EXISTING CLERESTORY WINDOW, TYPICAL.
2. REMOVE EXISTING DOOR, FRAME AND HARDWARE, REFER TO DOOR SCHEDULES.
3. REMOVE EXISTING WINDOW AND ALL FRAMING, TO BE REPLACED WITH NEW WINDOW AND FRAMING.
4. EXISTING LIGHTING TO REMAIN, REFER TO ELECTRICAL PLANS.
5. REMOVE EXISTING HVAC ROOFTOP EQUIPMENT, REFER TO MECHANICAL PLANS. RETURN TO ERAU MATERIALS MANAGEMENT IN UNDAMAGED WORKING ORDER.
6. REMOVE EXISTING GUTTERS AND DOWNSPOUTS.
7. REMOVE PORTION OF CMU WALL.
8. REMOVE EXISTING LIGHT, TO BE RELOCATED.
9. REMOVE EXTERIOR SIDING AND FRAMING, TO BE REPLACED.
10. REMOVE EXISTING WINDOW AND FRAME, TO BE INFILLED.
11. REMOVE EXISTING CMU VAULT ENCLOSURE.

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**ARCHITECTURE & PLANNING**

**DRAWING:** Existing / Demolition Exterior Elevations

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

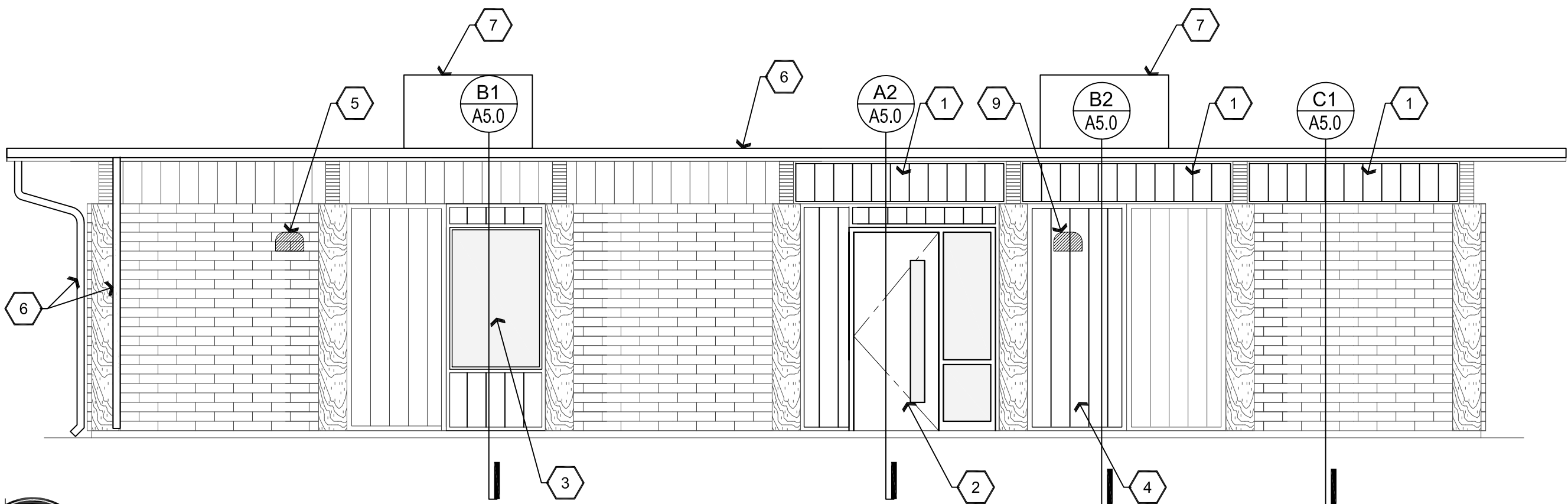
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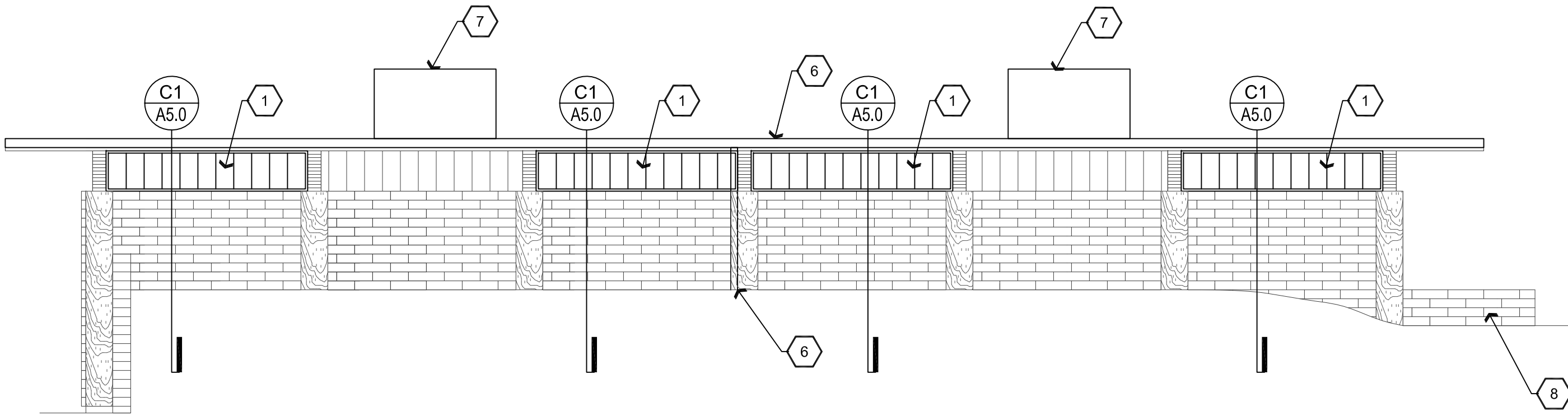


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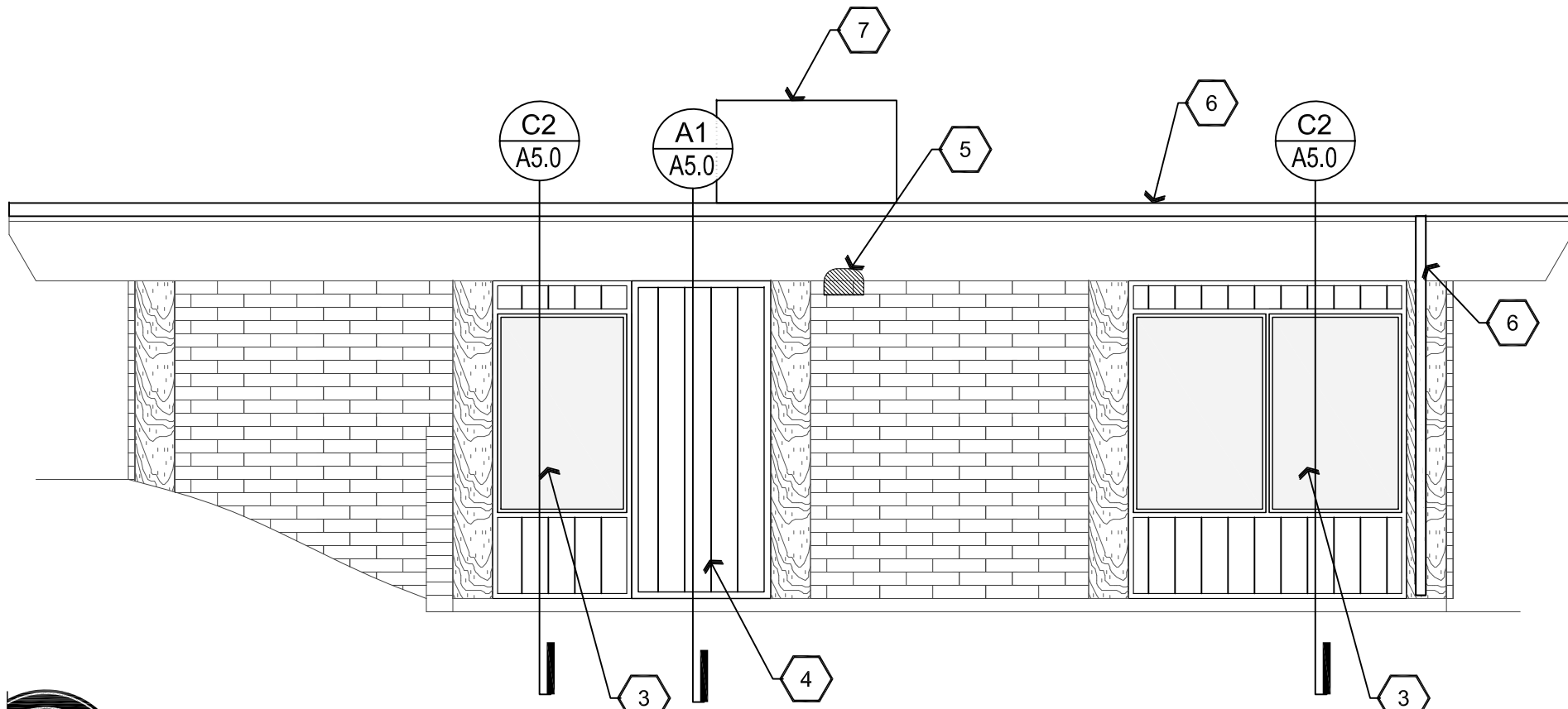
**A4** Proposed East Elevation

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



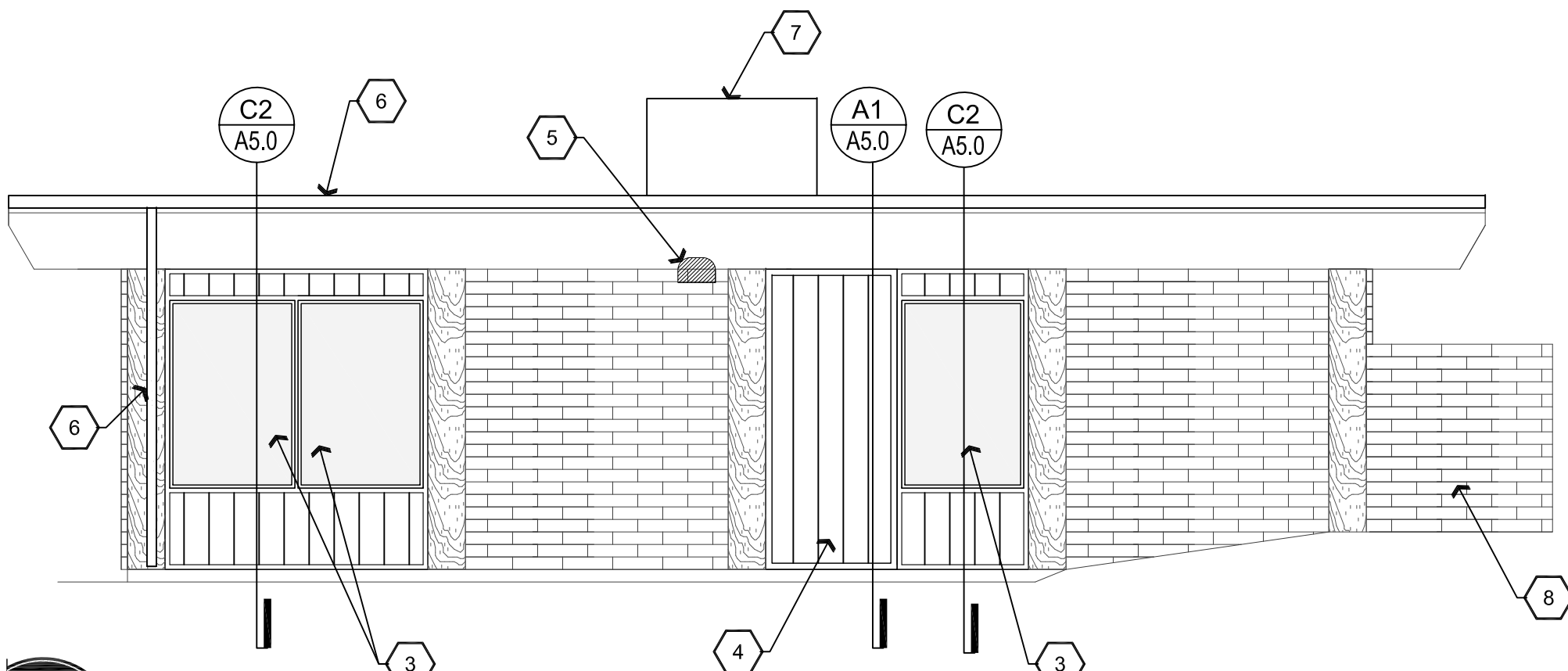
**A3** Proposed West Elevation

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



**A2** Proposed South Elevation

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



**A1** Proposed North Elevation

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

## Descriptive Keynotes

1. INFILL OPENING ABOVE WHERE THE CLERESTORY WINDOW OR PANEL WAS REMOVED, TYPICAL.
2. PROVIDE NEW DOOR AND FRAME, REFER TO REFERENCE PLAN AND DOOR SCHEDULE.
3. PROVIDE NEW WINDOW AND FRAME, REFER TO REFERENCE PLAN AND WINDOW TYPES.
4. IN-FILL OPENING WHERE DOOR OR WINDOW WAS REMOVED.
5. EXISTING LIGHT FIXTURE TO REMAIN, REFER TO ELECTRICAL PLANS.
6. REMOVE AND REPLACE EXISTING GUTTER WITH NEW 6" GALVALUME GUTTER FROM 'ARIZONA SEAMLESS GUTTERS'. REMOVE AND REPLACE EXISTING DOWNSPOUTS WITH NEW 3"x4" GALVALUME DOWNSPOUTS FROM 'ARIZONA SEAMLESS GUTTERS'.
7. PROVIDE NEW HVAC UNITS AND ASSOCIATED DUCTWORK, REFER TO MECHANICAL PLANS.
8. EXISTING CMU WALL TO REMAIN.
9. RELOCATED LIGHT, REFER TO ELECTRICAL PLANS.

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**ARCHITECTURE & PLANNING**

**DRAWING:** Proposed Exterior Elevations

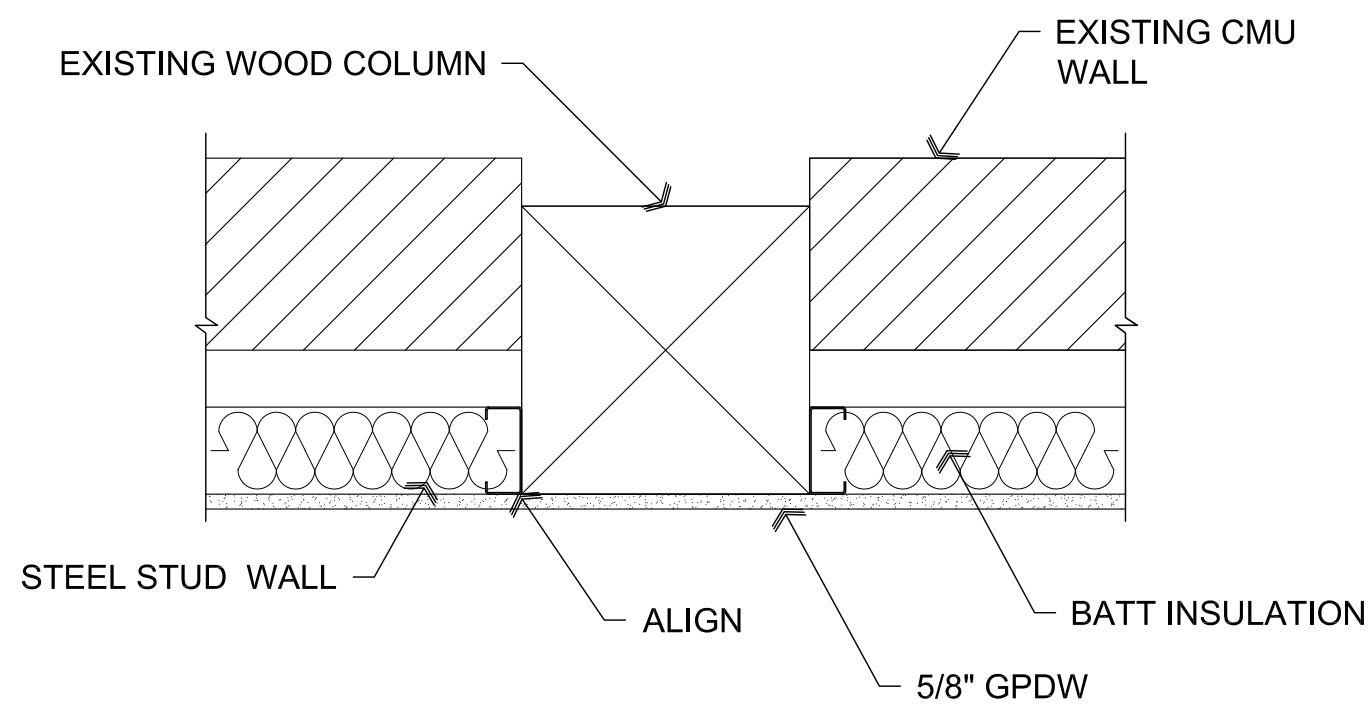
**PROJECT:** ERAU Building 51 Remodel  
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Prescott, AZ 86301

**APN:** 106-03-004

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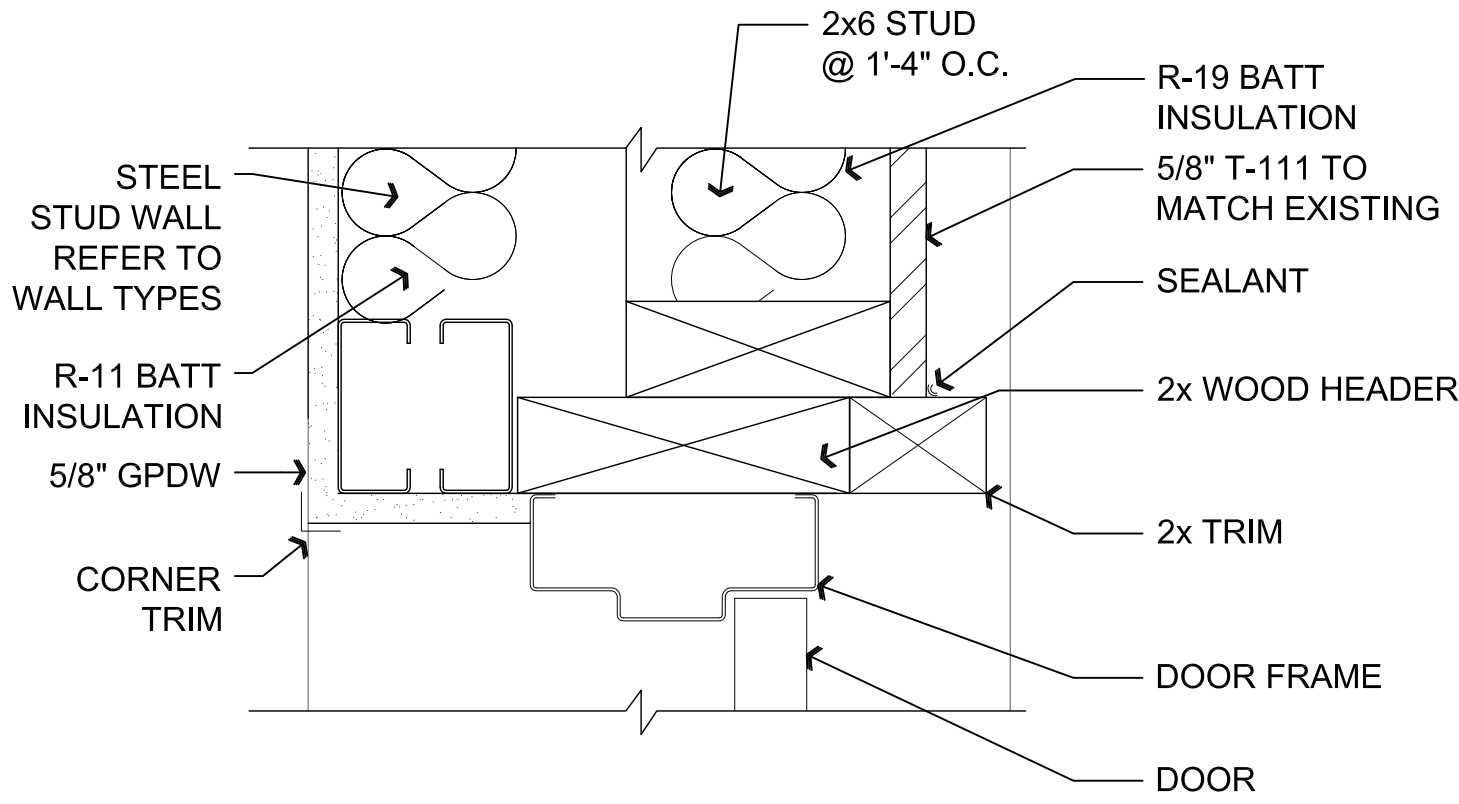
**A8.1**

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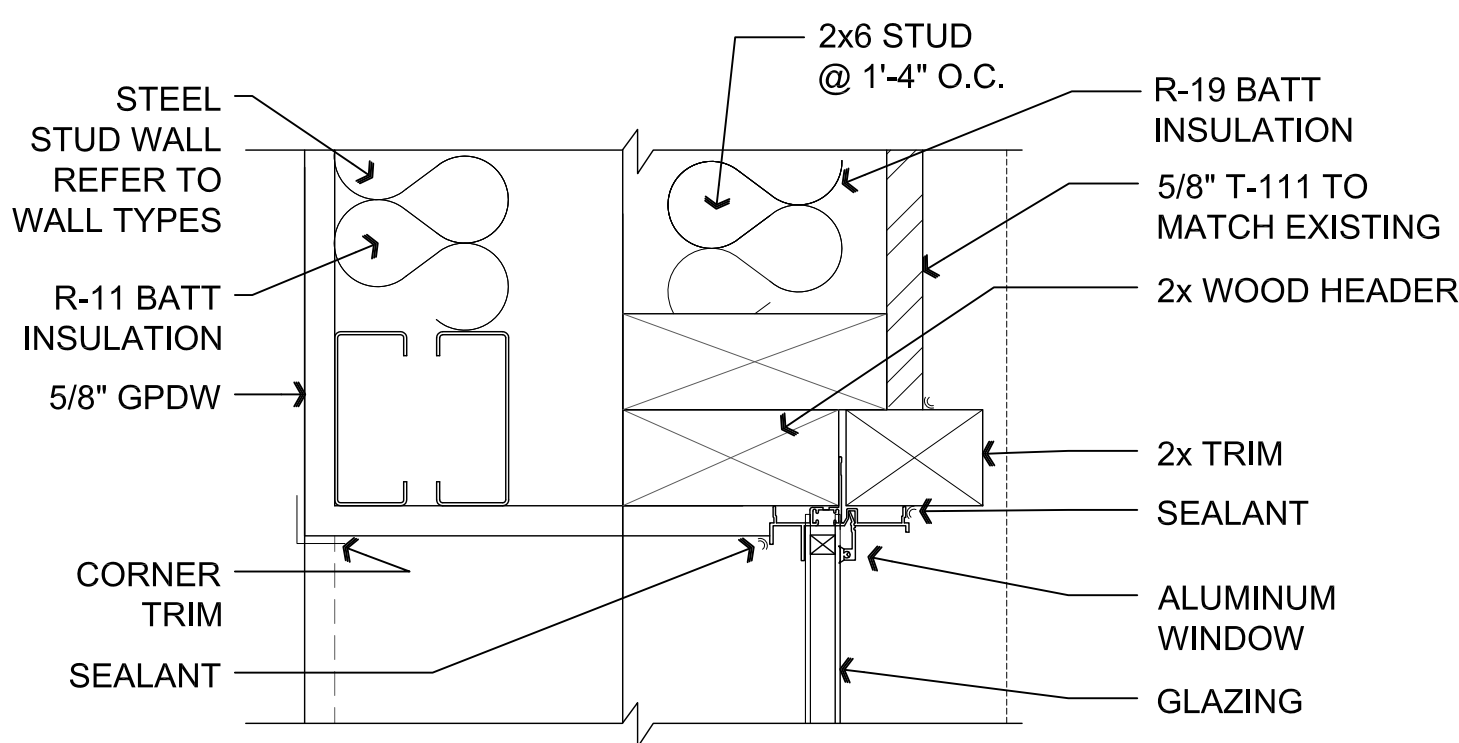
**B4** Wall at Column

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



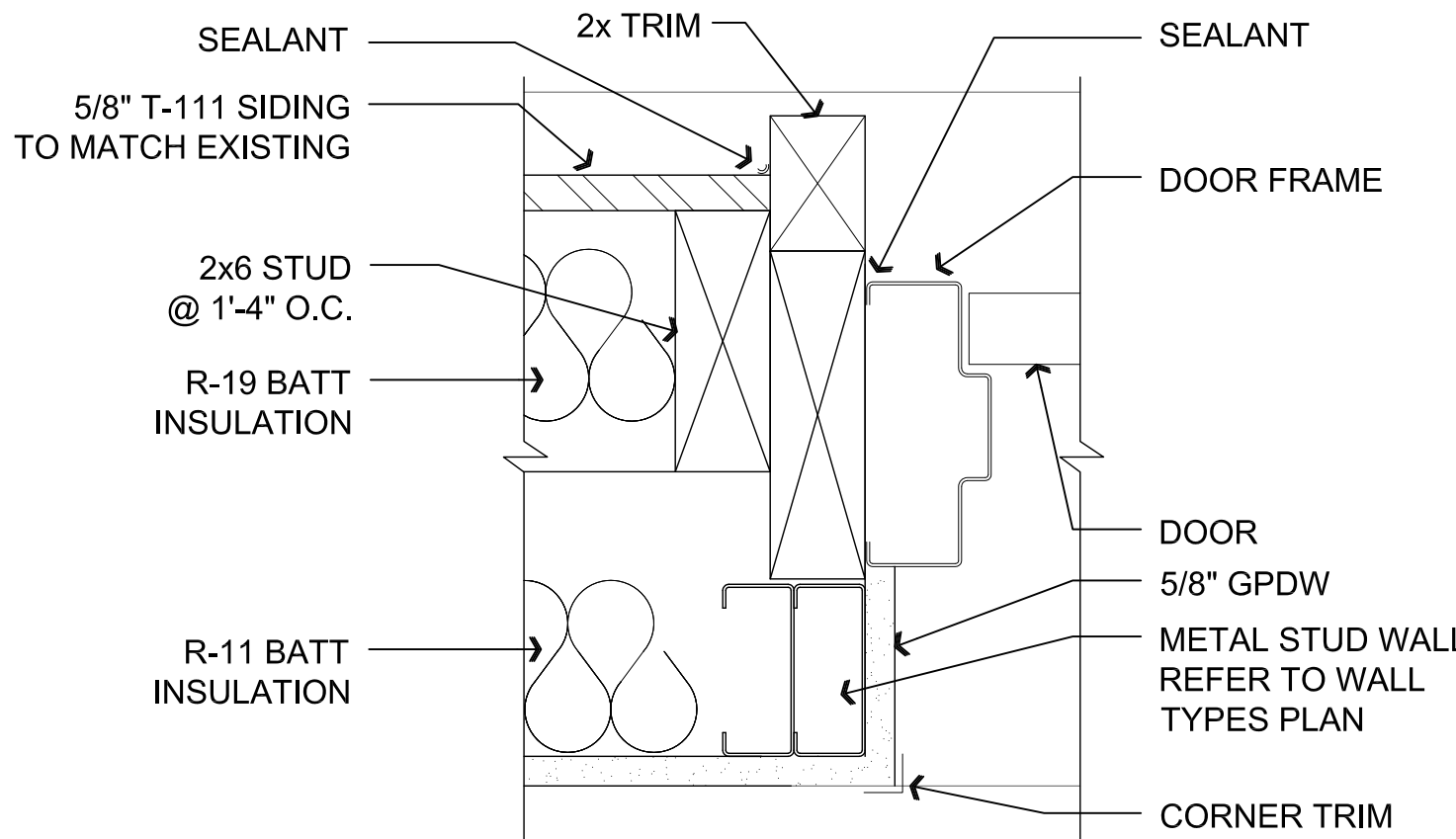
**B3** Door Head @ Framed Wall

SCALE: 3" = 1'-0"



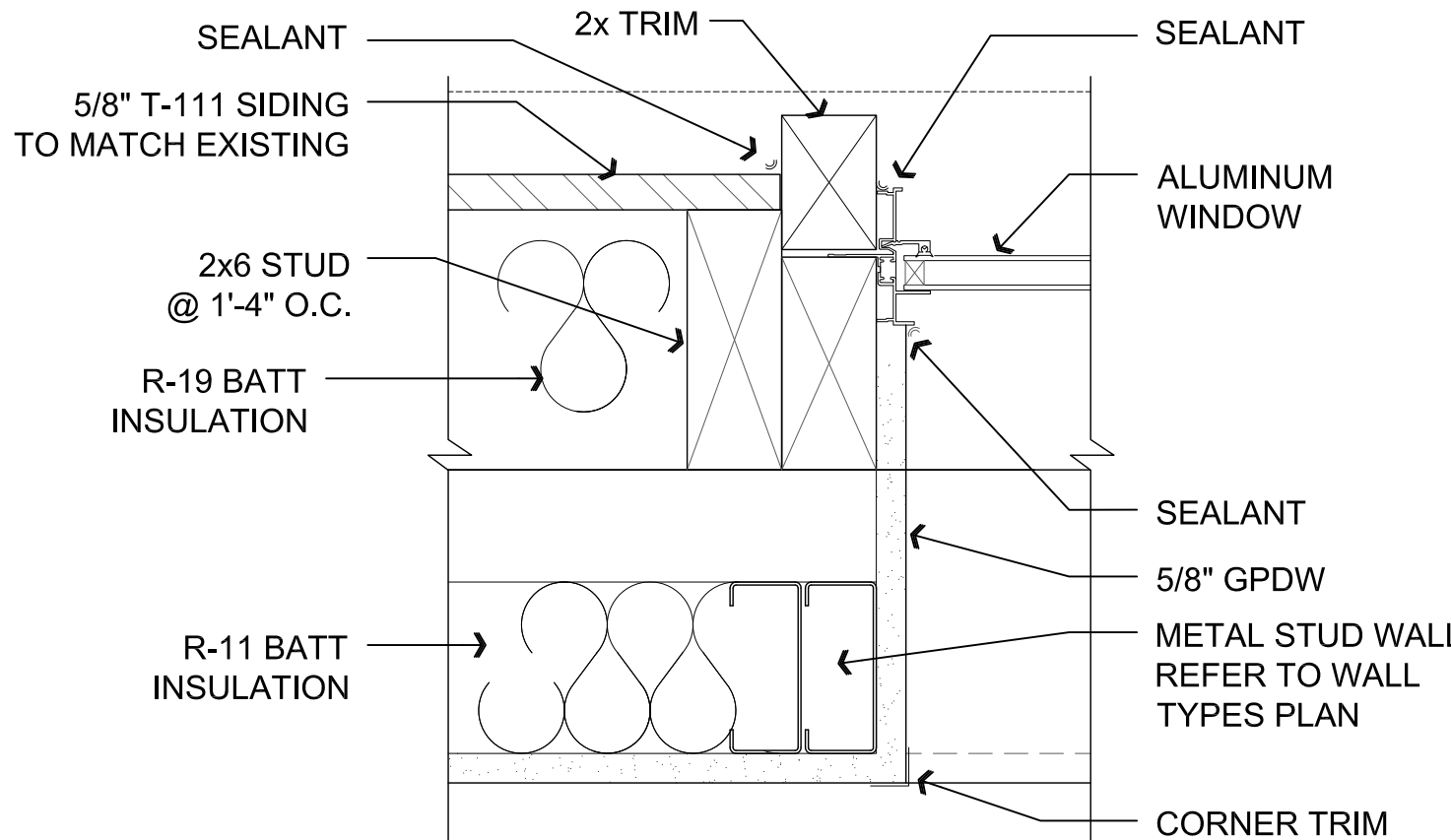
**B2** Window Head @ Framed Wall

SCALE: 3" = 1'-0"



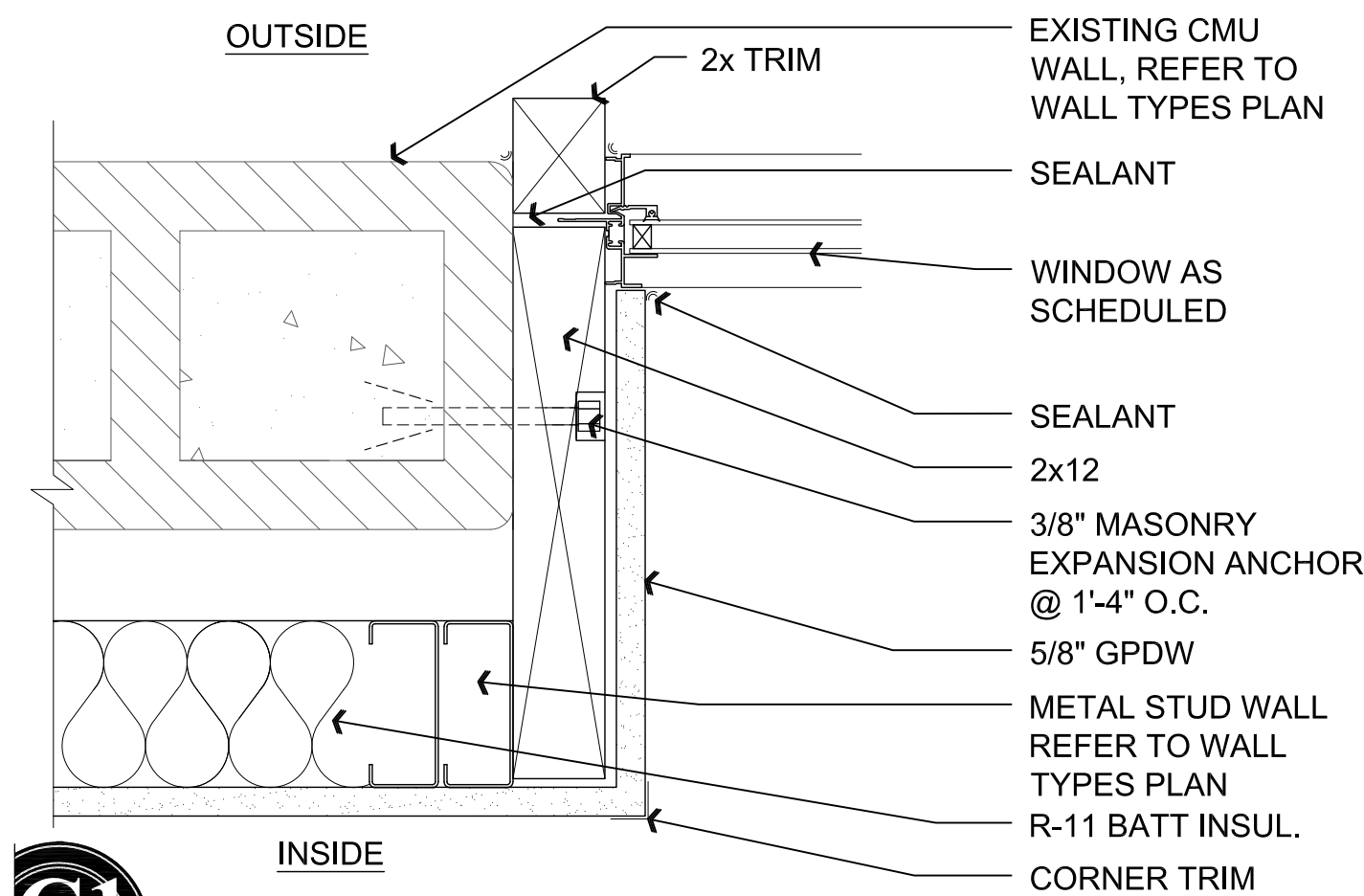
**C3** Door Jamb @ Framed Wall

SCALE: 3" = 1'-0"



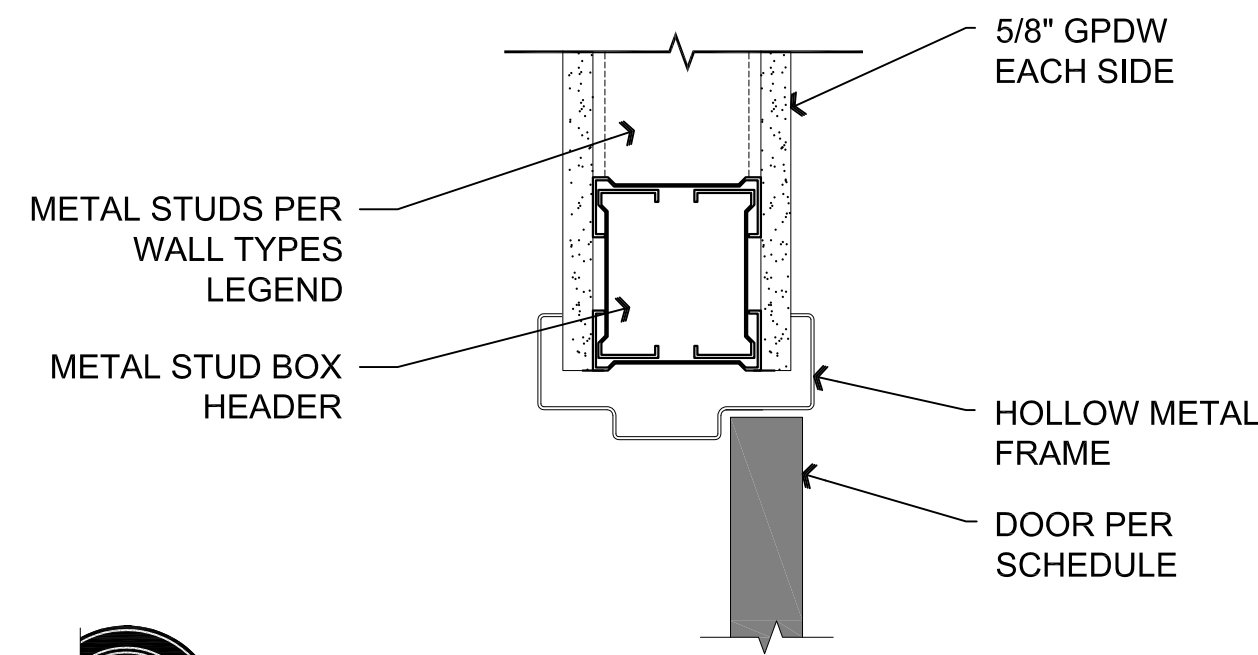
**C2** Window Jamb @ Framed Wall

SCALE: 3" = 1'-0"



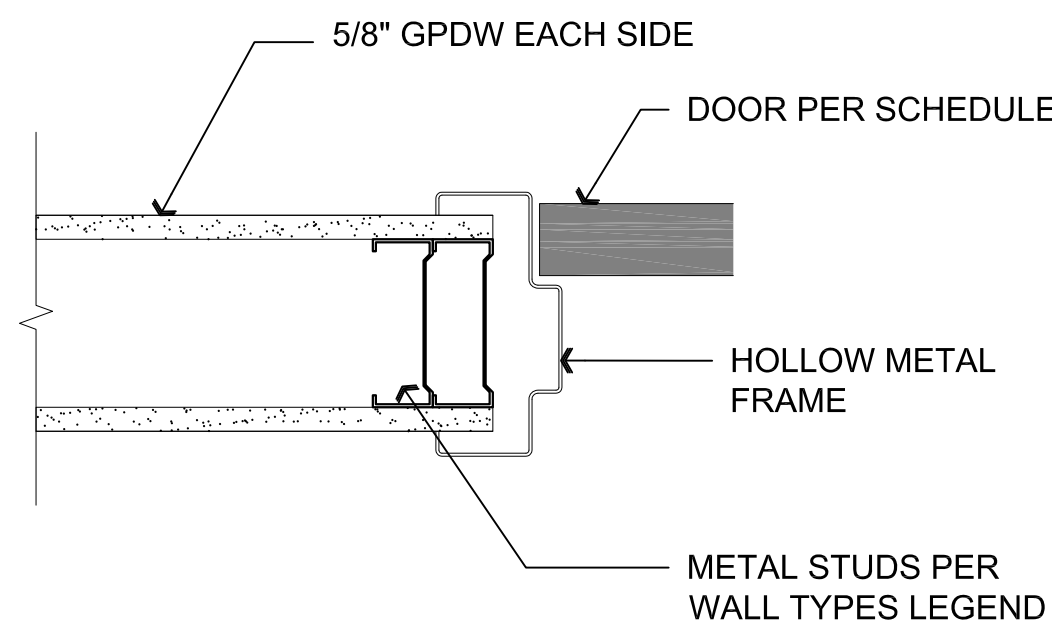
**C1** Window Jamb @ CMU

SCALE: 3" = 1'-0"



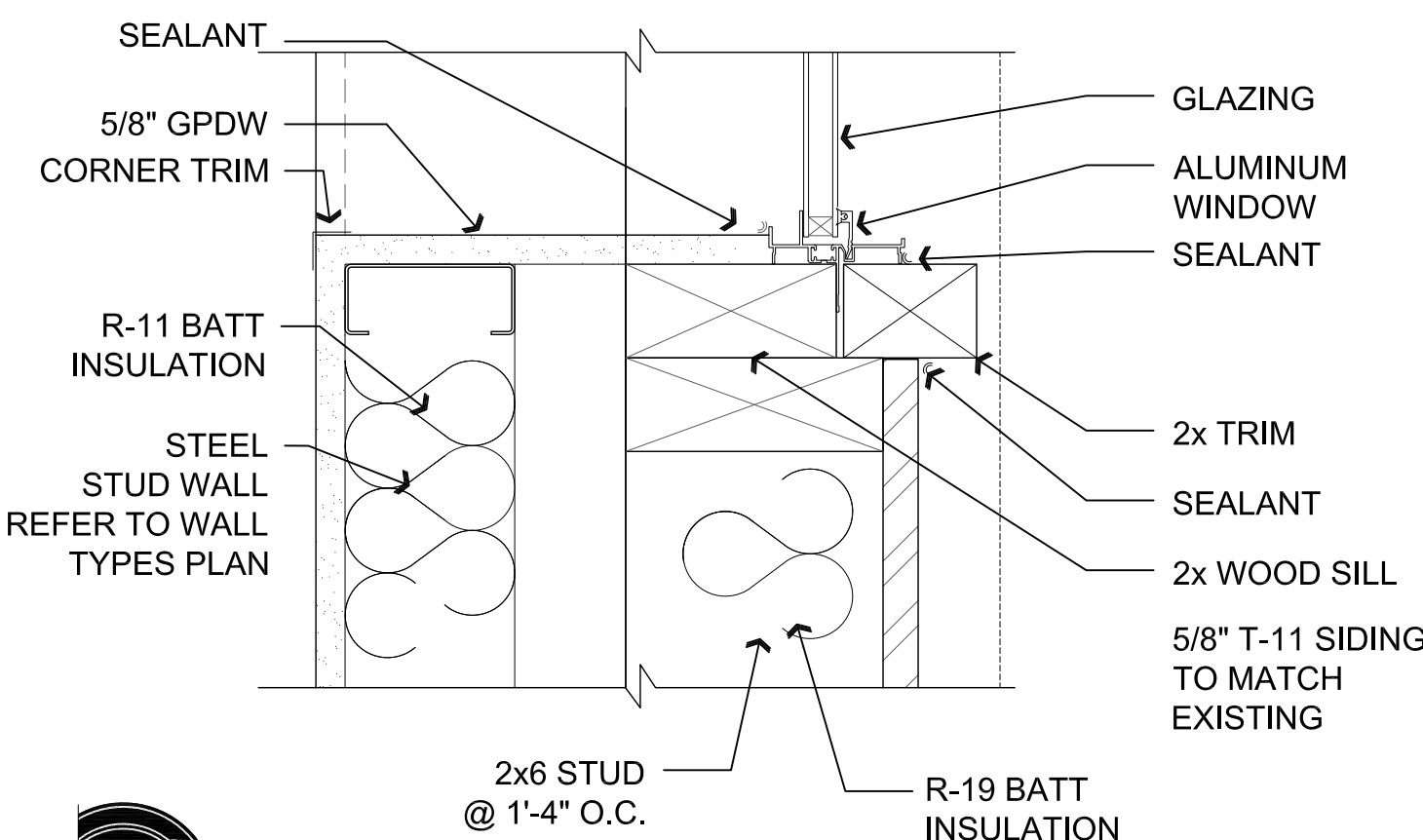
**D4** Door Head @ Framed Wall

SCALE: 3" = 1'-0"



**D3** Door Jamb @ Framed Wall

SCALE: 3" = 1'-0"



**D2** Window Sill @ Framed Wall

SCALE: 3" = 1'-0"

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106-03-004

DRAWING: Details

PROJECT:

APN:

DRAWN BY  
L.O.  
CHECKED BY  
W.A.K.  
DATE  
March 14th, 2019  
JOB NO.  
729  
SHEET

A9.0

ARCHITECTURE & PLANNING

RECEIVED ARCHITECT  
25646  
W. ALAN  
KENSEN  
03/14/19  
EXPIRES: 6/30/21

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Mar 13, 2019 - 2:54pm

## Specifications

### DIVISION 1 - GENERAL REQUIREMENTS

#### SECTION 01000 - DEFINITIONS

- DRAWING PLAN CLARIFICATION: AN ANSWER FROM THE ARCHITECT, IN RESPONSE TO AN INQUIRY FROM THE CONTRACTOR, INTENDED TO MAKE SOME REQUIREMENT(S) OF THE DRAWINGS OR PLANS CLEARLY UNDERSTOOD. DRAWING/PLAN CLARIFICATIONS MAY BE SKETCHES, DRAWINGS OR IN NARRATIVE FORM AND WILL NOT CHANGE ANY REQUIREMENTS OF THE DRAWINGS OR PLANS, RESPONSES TO CONTRACTOR INQUIRIES SHALL BE AS OUTLINED IN SECTION 01005.
- PROJECT COMMUNICATIONS: ROUTINE WRITTEN COMMUNICATIONS BETWEEN THE ARCHITECT AND THE CONTRACTOR SHALL BE IN LETTER, FIELD MEMO, OR EMAIL FORMAT. SUCH COMMUNICATIONS SHALL NOT BE IDENTIFIED AS REQUESTS FOR INFORMATION NOR SHALL THEY SUBSTITUTE FOR ANY OTHER WRITTEN REQUIREMENT PURSUANT TO THE PROVISIONS OF THE CONTRACT DOCUMENTS.
- REQUEST FOR INFORMATION: A REQUEST FROM THE CONTRACTOR OR ONE OF THEIR SUBCONTRACTORS, TO THE ARCHITECT, SEEKING AN INTERPRETATION OR A CLARIFICATION OF SOME REQUIREMENT OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL CLEARLY AND CONCISELY SET FORTH THE ISSUE FOR WHICH THEY SEEK CLARIFICATION OR INTERPRETATION AND WHY A RESPONSE IS NEEDED FROM THE ARCHITECT. THE CONTRACTOR SHALL, IN THE WRITTEN REQUEST, SET FORTH ITS INTERPRETATION OR UNDERSTANDING OF THE CONTRACT'S REQUIREMENTS ALONG WITH REASONS WHY IT HAS REACHED SUCH AN UNDERSTANDING. RESPONSES FROM THE ARCHITECT WILL NOT CHANGE ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS. RESPONSES TO CONTRACTOR INQUIRIES SHALL BE AS OUTLINED IN SECTION 01005

#### SECTION 01005 - REQUEST FOR INFORMATION (RFI) PROCEDURES

- ALL RFIS SHALL BE SUBMITTED TO ARCHITECT VIA EMAIL IN WORD DOCUMENT (.DOC) OR ADOBE (.PDF) FORMATS ONLY. EMAIL ADDRESS IS WAKA@CABLEONE.NET. ANY OTHER TYPE OF SUBMITTAL PROCESS OR PROCEDURE WILL NOT BE RESPONDED TO.
- IN THE EVENT THAT THE CONTRACTOR OR SUBCONTRACTOR, AT ANY TIME, DETERMINES THAT SOME PORTION OF THE DRAWINGS, SPECIFICATIONS, OR OTHER CONTRACT DOCUMENTS REQUIRES CLARIFICATION OR INTERPRETATION BY THE ARCHITECT, THE CONTRACTOR SHALL SUBMIT AN RFI TO THE ARCHITECT. RFIS MAY ONLY BE SUBMITTED BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL CLEARLY AND CONCISELY SET FORTH THE ISSUE OF WHICH CLARIFICATION OR INTERPRETATION IS SOUGHT AND WHY A RESPONSE IS NEEDED FROM THE ARCHITECT. IN THE RFI, THE CONTRACTOR SHALL SET FORTH THEIR INTERPRETATION OR UNDERSTANDING OF THE REQUIREMENT ALONG WITH REASONS WHY SUCH AN UNDERSTANDING WAS REACHED.
- THE ARCHITECT ACKNOWLEDGES THAT THIS IS A COMPLEX PROJECT BASED UPON THE ARCHITECT'S PAST EXPERIENCE WITH PROJECTS OF SIMILAR COMPLEXITY.
- THE ARCHITECT WILL REVIEW ALL PROPERLY SUBMITTED RFIS TO DETERMINE WHETHER THEY ARE RFIS WITHIN THE MEANING OF THIS TERM. IF THE ARCHITECT DETERMINES THAT THE DOCUMENT IS NOT AN RFI, IT WILL BE RETURNED TO THE CONTRACTOR, UN-REVIEWED AS TO CONTENT, FOR RE-SUBMITTAL IN THE PROPER FORM.
- RESPONSES TO RFIS SHALL BE ISSUED WITHIN SEVEN (7) WORKING DAYS OF RECEIPT OF THE REQUEST FROM THE CONTRACTOR UNLESS THE ARCHITECT DETERMINES THAT A LONGER TIME IS NECESSARY TO PROVIDE AN ADEQUATE RESPONSE. IF A LONGER TIME IS DETERMINED NECESSARY BY THE ARCHITECT, THE ARCHITECT WILL WITHIN FIVE (5) WORKING DAYS OF RECEIPT OF THE REQUEST, NOTIFY THE CONTRACTOR OF THE ANTICIPATED RESPONSE TIME. IF THE CONTRACTOR SUBMITS AN RFI ON AN ACTIVITY WITH SEVEN(7) WORKING DAYS OR LESS OF FLOAT ON THE CURRENT PROJECT SCHEDULE THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY TIME EXTENSION DUE TO THE TIME IT TAKES THE ARCHITECT TO RESPOND TO THE REQUEST PROVIDED THAT THE ARCHITECT RESPONDS WITHIN THE SEVEN (7) WORKING DAYS SET FORTH ABOVE.
- ARCHITECT WILL RESPOND TO ALL RFIS VIA EMAIL TO ONE CONTACT IN THE CONTRACTOR'S OFFICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FORWARDING THIS RESPONSE EMAIL TO ALL PERTINENT PERSONNEL, SUBCONTRACTORS AND SUPPLIERS.
- RESPONSES FROM THE ARCHITECT WILL NOT CHANGE ANY REQUIREMENT OF THE CONTRACT DOCUMENTS. IN THE EVENT THE CONTRACTOR BELIEVES THAT A RESPONSE TO AN RFI WILL CAUSE A CHANGE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENT, THE CONTRACTOR SHALL GIVE WRITTEN NOTICE T THE ARCHITECT STATING THAT THE CONTRACTOR CONSIDERS THE RESPONSE TO BE A CHANGE ORDER. FAILURE TO GIVE SUCH WRITTEN NOTICE SHALL WAIVE THE CONTRACTOR'S RIGHT TO SEEK ADDITIONAL TIME OR COST.

#### SECTION 01010 - SUMMARY OF WORK

- THE AIA "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" (FORM A201-2017) SHALL BE A PART OF THE CONTRACT DOCUMENTS, ALONG WITH THESE DRAWINGS AND SPECIFICATIONS.
- IN THE PREPARATION OF THESE SPECIFICATIONS AN EFFORT HAS BEEN MADE TO SEGREGATE THE VARIOUS BRANCHES OF THE WORK UNDER HEADINGS, BY TRADES. THIS IS DONE ONLY FOR CONVENIENCE AND SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING EVERY ITEM INDICATED OR SPECIFIED WHETHER PROPERLY SEGREGATED OR NOT.

- THE MISPLACEMENT, ADDITION OR OMISSION OF ANY LETTER, WORD OR PUNCTUATION MARK, OR LACK OF CAPITALIZATION OF A WORD, SHALL IN NO WAY DAMAGE THE TRUE SPIRIT, INTENT, OR MEANING OF THESE SPECIFICATIONS.
- CONTRACTOR SHALL COMPLY WITH, AND REQUIRE ALL SUBCONTRACTORS TO COMPLY WITH, STATE AND CITY CONTRACTOR'S LICENSE LAWS AND BE DULY REGISTERED AND LICENSED THEREUNDER.
- WHERE SPECIFIC INSTRUCTIONS IN THESE SPECIFICATIONS REQUIRE THAT A PARTICULAR PRODUCT AND/OR MATERIAL(S) BE INSTALLED AND/OR APPLIED BY AN APPROVED APPLICATOR OF THE MANUFACTURER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ANY SUBCONTRACTORS USED FOR SUCH WORK BE AN APPROVED APPLICATOR.

#### SECTION 01015 - PROJECT COORDINATION

- THE GENERAL CONTRACTOR SHALL COORDINATE CONSTRUCTION OPERATIONS INCLUDED IN VARIOUS SECTIONS OF THESE SPECIFICATIONS TO ASSURE EFFICIENT COORDINATION AND ORDERLY INSTALLATION OF EACH PART OF THE WORK. THE GENERAL CONTRACTOR SHALL ALSO COORDINATE CONSTRUCTION OPERATIONS INCLUDED UNDER DIFFERENT SECTIONS THAT DEPEND ON EACH OTHER FOR PROPER INSTALLATION, CLEARANCES, CONNECTIONS, AND OPERATIONS.
- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THE OWNER'S VENDOR'S WORKS.
- THE VENDOR'S THAT WILL SUPPLY AND INSTALL THESE ITEMS HAS NOT BEEN CHOSEN YET. AS SOON AS THE VENDOR'S ARE DETERMINED THE CONTRACTOR WILL BE NOTIFIED OF ALL CONTACT INFORMATION.
- THE PROJECT SUPERINTENDENT AND THE PROJECT MANAGER SHALL HAVE A MEETING WITH THE FOREMEN OF THE MECHANICAL, ELECTRICAL, FIRE SPRINKLER, AND PLUMBING SUBCONTRACTORS PRIOR TO THE INSTALLATION OF ANY OF THEIR MATERIALS AND EQUIPMENT IN THE BUILDING. THE PURPOSE OF THIS MEETING SHALL BE TO REQUIRE ALL OF THESE SUBCONTRACTORS TO COORDINATE THEIR INSTALLATION LOCATIONS OF THEIR MATERIALS AND EQUIPMENT SO THAT THERE ARE NO CONFLICTS IN THE FIELD. ALL OF THESE SUBCONTRACTORS MATERIALS AND EQUIPMENT SHALL BE INSTALLED AS HIGH AS IS POSSIBLE WITHIN THE STRUCTURAL FRAMING SYSTEMS AND IS NOT TO BE INSTALLED ANY LOWER THAN THE BOTTOM OF THE STRUCTURAL ROOF AND FLOOR SYSTEMS UNLESS APPROVED IN ADVANCE IN WRITING BY THE ARCHITECT. SHOULD THERE END UP BEING A CONFLICT BETWEEN THE SUBCONTRACTORS MATERIALS AND EQUIPMENT, THEN THE CONFLICTING MATERIALS AND EQUIPMENT SHALL BE REMOVED AND PROPERLY REINSTALLED AT NO ADDITIONAL COST TO THE OWNER.

#### SECTION 01017 - SUPERINTENDENT

- THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT AND NECESSARY ASSISTANTS WHO SHALL BE IN ATTENDANCE AT THE PROJECT SITE DURING PERFORMANCE OF THE WORK.
- THE SUPERINTENDENT SHALL REPRESENT THE CONTRACTOR, AND COMMUNICATIONS GIVEN TO THE SUPERINTENDENT SHALL BE AS BINDING IF GIVEN TO THE CONTRACTOR. IMPORTANT COMMUNICATIONS SHALL BE CONFIRMED IN WRITING. OTHER COMMUNICATIONS SHALL BE SIMILARLY CONFIRMED ON WRITTEN REQUEST IN EACH CASE.

#### SECTION 01025 - APPLICATIONS FOR PAYMENT

- SUBMIT APPLICATIONS FOR PAYMENT TO OWNER IN ACCORD WITH THE SCHEDULE ESTABLISHED BY CONDITIONS OF THE CONTRACT AND AGREEMENT BETWEEN OWNER AND CONTRACTOR.
- NO PROJECTIONS IN PAYMENTS WILL BE ALLOWED.
- SUBMIT ITEMIZED APPLICATIONS TYPED ON AIA DOCUMENT G702-92, "APPLICATIONS AND CERTIFICATE FOR PAYMENT" AND CONTINUATION SHEETS G703-92.
- CONTRACTOR SHALL SUBMIT ROUGH DRAFT OF THE APPLICATIONS FOR PAYMENT TO ARCHITECT FOR AN ON-SITE REVIEW FOLLOWING END OF DRAW PERIOD; THEN SUBMIT ONE (1) FINAL COPY AT THE TIMES STIPULATED IN THE AGREEMENT.

#### SECTION 01040 - CONTRACTOR'S CONSTRUCTION SCHEDULES

- THE CONTRACTOR SHALL PREPARE A CONSTRUCTION SCHEDULE, FOR THE WORK, WITHIN 7 CALENDAR DAYS OF BEING AWARDED THE CONTRACT AND SUBMIT IT FOR THE OWNER'S AND ARCHITECT'S INFORMATION.
- THE SCHEDULE SHALL BE A CRITICAL PATH METHOD SCHEDULE AND SHALL DEMONSTRATE A REALISTIC, EXPEDITIOUS PLAN FOR COMPLETING THE WORK WITHIN THE PARAMETERS OF THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL CONFORM TO THE MOST RECENT SCHEDULE.
- THE SCHEDULE SHALL NOT EXCEED TIME LIMITS CURRENT UNDER THE CONTRACT DOCUMENTS.
- THE SCHEDULE SHALL BE REVISED AT APPROPRIATE INTERVALS AS REQUIRED BY THE CONDITIONS OF THE WORK AND PROJECT, SHALL BE RELATED TO THE ENTIRE PROJECT TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS AND SHALL PROVIDE FOR EXPEDITIOUS AND PRACTICABLE EXECUTION OF THE WORK.

#### SECTION 01045 - SUBCONTRACTORS

- THE CONTRACTOR SHALL FURNISH TO THE OWNER THROUGH THE ARCHITECT THE NAMES OF PERSONS OR ENTITIES (INCLUDING THOSE WHO ARE TO FURNISH MATERIALS OR EQUIPMENT FABRICATED TO A SPECIAL DESIGN) PROPOSED FOR EACH PRINCIPAL PORTION OF THE WORK.
- THE ARCHITECT WILL PROMPTLY REPLY TO THE CONTRACTOR STATING WHETHER OR NOT THE OWNER OR THE ARCHITECT, AFTER DUE INVESTIGATION, HAS REASONABLE OBJECTIONS TO ANY SUCH PROPOSED PERSON OR ENTITY.

- FAILURE OF THE OWNER OR ARCHITECT TO REPLY PROMPTLY SHALL CONSTITUTE NOTICE OF NO REASONABLE OBJECTION.
- THE CONTRACTOR SHALL NOT CONTRACT WITH A PROPOSED PERSON OR ENTITY TO WHOM THE OWNER OR ARCHITECT HAS MADE REASONABLE AND TIMELY OBJECTION. THE CONTRACTOR SHALL NOT BE REQUIRED TO CONTRACT WITH ANYONE TO WHOM THE CONTRACTOR HAS MADE REASONABLE OBJECTION.

#### SECTION 01050 - FIELD ENGINEERING

- CONTRACTOR SHALL VERIFY LOCATION OF ALL MONUMENTS AND BENCHMARKS SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL:
  - PROVIDE FIELD PROFESSIONAL ENGINEERING SERVICES AS SPECIFIED OR REQUIRED TO EXECUTE CONTRACTOR CONSTRUCTION METHOD.
  - DEVELOP AND MAKE ALL DETAIL SURVEYS AND MEASUREMENT NEEDED FOR CONSTRUCTION, INCLUDING ALL WORKING LINES AND ELEVATION.
  - PROVIDE ALL MATERIAL REQUIRED FOR BENCHMARKS, CONTROL POINTS, BATTER BOARDS, GRADE STAKES AND OTHER ITEMS.
  - BE SOLELY RESPONSIBLE FOR ALL LOCATIONS, DIMENSIONS AND LEVELS. NO DATA OTHER THAN WRITTEN ORDERS OF THE ARCHITECT SHALL JUSTIFY DEPARTURE FROM THE DIMENSIONS AND LEVELS REQUIRED BY THE DRAWINGS.

#### SECTION 01340 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- SHOP DRAWINGS ARE DRAWINGS, DIAGRAMS, SCHEDULES AND OTHER DATA SPECIALLY PREPARED FOR THE WORK BY THE CONTRACTOR OR A SUBCONTRACTOR, SUB-SUBCONTRACTOR, MANUFACTURER, SUPPLIER OR DISTRIBUTOR TO ILLUSTRATE SOME PORTION OF THE WORK.
- PRODUCT DATA ARE ILLUSTRATIONS, STANDARD SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, BROCHURES, DIAGRAMS AND OTHER INFORMATION FURNISHED BY THE CONTRACTOR TO ILLUSTRATE MATERIALS OR EQUIPMENT FOR SOME PORTION OF THE WORK.
- SAMPLES ARE PHYSICAL EXAMPLES, WHICH ILLUSTRATE MATERIALS, EQUIPMENT OR WORKMANSHIP AND ESTABLISH STANDARDS BY WHICH THE WORK WILL BE JUDGED.
- THE CONTRACTOR SHALL PREPARE AND KEEP CURRENT, FOR THE ARCHITECT'S APPROVAL, A SCHEDULE OF SUBMITTALS WHICH IS COORDINATED WITH THE CONTRACTOR'S CONSTRUCTION SCHEDULE AND ALLOWS THE ARCHITECT REASONABLE TIME TO REVIEW SUBMITTALS. THIS SCHEDULE OF SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT WITH THE CONTRACTOR'S CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL CONFORM TO THE MOST RECENT SCHEDULE.
- THE PURPOSE FOR THESE SUBMITTALS IS TO DEMONSTRATE FOR THOSE PORTIONS OF THE WORK FOR WHICH SUBMITTALS ARE REQUIRED THE WAY THE CONTRACTOR PROPOSES TO CONFORM TO THE INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL REVIEW, APPROVE AND SUBMIT TO THE ARCHITECT SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS REQUIRED BY THE CONTRACT DOCUMENTS WITH REASONABLE PROMPTNESS AND IN SUCH SEQUENCE AS TO CAUSE NO DELAY IN THE WORK OR IN THE ACTIVITIES OF THE OWNER OR OF SEPARATE CONTRACTORS.
- SUBMITTALS MADE BY THE CONTRACTOR, WHICH ARE NOT REQUIRED BY THE CONTRACT DOCUMENTS, MAY BE RETURNED WITHOUT ACTION.
- THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK REQUIRING SUBMITTAL AND REVIEW OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNTIL THE ARCHITECT HAS APPROVED THE RESPECTIVE SUBMITTAL. SUCH WORK SHALL BE IN ACCORDANCE WITH APPROVED SUBMITTALS.
- BY APPROVING AND SUBMITTING SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS, THE CONTRACTOR REPRESENTS THAT THE CONTRACTOR HAS DETERMINED AND VERIFIED MATERIALS, FIELD MEASUREMENTS AND FIELD CONSTRUCTION CRITERIA RELATED THERETO OR WILL DO SO, AND HAS CHECKED AND COORDINATED THE INFORMATION CONTAINED WITHIN SUCH SUBMITTALS WITH THE REQUIREMENTS OF THE WORK AND OF THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT'S APPROVAL THEREOF.
- THE CONTRACTOR SHALL DIRECT SPECIFIC ATTENTION, IN WRITING OR ON RESUBMITTED SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS, TO REVISIONS OTHER THAN THOSE REQUESTED BY THE ARCHITECT ON PREVIOUS SUBMITTALS.
- THE CONTRACTOR SHALL CHECK, APPROVE, AND SUBMIT WITH SUCH PROMPTNESS AS TO CAUSE NO DELAY IN HIS WORK, ONE (1) ELECTRONIC COPY AND ONE (1) PAPER COPY OF ALL SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS AS CALLED FOR IN THE VARIOUS SECTIONS, DETAILS, AND PARTS TO BE USE IN THE WORK.

#### SECTION 01350 - SUBSTITUTIONS

- THE CONTRACTOR SHALL BASE HIS PROPOSAL ON THE EXACT BRANDS, SYSTEMS, METHODS, AND MATERIALS SHOWN, IF THE CONTRACTOR DESIRES TO MAKE SUBSTITUTIONS, HE SHALL LIST THEM WITH HIS BID AND IN HIS CONTRACT. THE LISTING SHALL BE IN SUFFICIENT DETAIL TO AFFORD THE OWNER MEANS OF COMPARISON AND MUST INCLUDE THE MONETARY DIFFERENCE IN CONTRACT PRICE IF THE SUBSTITUTION IS ACCEPTED. SUBSTITUTIONS AFTER SIGNING THE CONTRACT SHALL BE BY CHANGE ORDER ONLY.

#### SECTION 01360 - RECORD DRAWINGS

- THE WORK OF THE FOLLOWING TECHNICAL SECTIONS SHALL BE MARKED ON A CLEAN SET OF PLANS, SHOWING THE EXACT LOCATIONS OF THE VARIOUS PARTS OF THE WORK IF DIFFERENT FROM DRAWINGS: MECHANICAL, PLUMBING, AND ELECTRICAL.

#### SECTION 014000 - QUALITY CONTROL

- ALL COSTS INCURRED FOR TESTING LABORATORY SERVICES SHALL BE PAID BY THE CONTRACTOR.
- TESTING LABORATORY SHALL REPORT THE RESULTS OF ALL TESTS, IN WRITING, VIA EMAIL, SIMULTANEOUSLY TO THE FOLLOWING: ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR.

#### SECTION 01410 - ERRORS AND OMISSIONS

- IF ANY ERRORS OR OMISSIONS APPEAR IN THE DRAWINGS, SPECIFICATIONS, OR OTHER DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF SUCH OMISSIONS OR ERRORS PRIOR TO PROCEEDING WITH ANY WORK WHICH APPEARS IN QUESTION.
- IN THE EVENT OF THE CONTRACTOR'S FAILURE TO GIVE SUCH NOTICE, HE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS OR OMISSIONS AND THE COST OF RECTIFYING IT.
- THE CONTRACTOR SHALL HAVE ALL ITEMS OR DETAILS CLARIFIED WITH ARCHITECT PRIOR TO SUBMITTING A BID; OTHERWISE ARCHITECTS INTERPRETATION SHALL BE FINAL.
- IF THERE IS A CONFLICT BETWEEN THESE SPECIFICATIONS AND THE DRAWINGS THEN THE ARCHITECT WILL MAKE A WRITTEN INTERPRETATION WHICH SHALL BE FINAL AND BINDING UPON THE CONTRACTOR. THE ARCHITECT'S INTERPRETATION SHALL BE REASONABLE AND CONSISTENT WITH THE INTENT EXPRESSED IN THE CONTRACT DOCUMENTS.

#### SECTION 015000 - CONST. FACILITIES & TEMPORARY UTILITIES

- THE CONTRACTOR SHALL MAINTAIN AT THE SITE FOR THE OWNER, ONE RECORD COPY OF THE DRAWINGS, SPECIFICATIONS, ADDENDA, CHANGE ORDERS, RFIS, PROPOSAL REQUESTS, AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED CURRENTLY TO RECORD CHANGES AND SELECTIONS MADE DURING CONSTRUCTION, AND IN ADDITION APPROVED SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR REQUIRED SUBMITTALS. THESE SHALL BE AVAILABLE TO THE ARCHITECT AND SHALL BE DELIVERED TO THE ARCHITECT FOR SUBMITTAL TO THE OWNER UPON COMPLETION OF THE WORK.
- THE CONTRACTOR SHALL PROVIDE THE OWNER AND ARCHITECT ACCESS TO THE WORK IN PREPARATION AND PROGRESS WHEREVER LOCATED.
- OWNER SHALL PROVIDE TEMPORARY ADEQUATE LIGHT AND POWER SUPPLY FOR CONSTRUCTION.
- OWNER SHALL PROVIDE TEMPORARY ADEQUATE WATER SUPPLY FOR CONSTRUCTION.
- PROVIDE A CELLULAR JOB TELEPHONE FOR THE DURATION OF THE PROJECT.
- PROVIDE PROPER SANITARY AND ADEQUATE TOILET FACILITIES FOR THE USE OF ALL WORKMEN EMPLOYED ON THE PROJECT, LOCATED WHERE DIRECTED, AND ENFORCE THEIR USE BY ALL PERSONNEL ON THE PROJECT. ENCLOSE AND WEATHERPROOF TOILETS AND KEEP IN A SANITARY CONDITION AT ALL TIMES. ALSO PROVIDE A TRASH BIN.
- PROVIDE ADEQUATE FIRE EXTINGUISHERS ON THE PREMISES DURING THE COURSE OF CONSTRUCTION. OF THE TYPE AND SIZES RECOMMENDED BY THE NFPA TO CONTROL FIRES RESULTING FROM THE PARTICULAR WORK BEING PERFORMED.
- PROVIDE 6 FOOT HIGH WOVEN WIRE TEMPORARY FENCING AROUND THE CONSTRUCTION AREA. FENCING SHALL BE ERECTED AND SECURED IN A MANNER TO WITHSTAND THE FORCES TO WHICH IT MAY BE SUBJECTED.
- PROTECT ALL ELEMENTS OF CONSTRUCTION FROM ANY DANGER OF DAMAGE FROM WIND, RAIN, DUST, FROST, FREEZING TEMPERATURES, OR OTHER INFILTRATION OF WEATHER.
- EXERCISE ALL POSSIBLE CARE TO CONTROL EXCESSIVE NOISE AND DUST DURING THE CONSTRUCTION TO KEEP THESE PROBLEMS TO A MINIMUM. TRAFFIC OR CONSTRUCTION AREAS SHALL BE SPRINKLED WITH WATER OR CHEMICALS REQUIRED AND IN ACCORDANCE WITH APPLICABLE COUNTY REQUIREMENTS. CONTRACTOR SHALL SECURE APPROPRIATE DUST PERMITS PRIOR TO SITE WORK BEGINNING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF CONSTRUCTION, CONSTRUCTION MATERIALS AND EQUIPMENT ON THE SITE.
- NO SIGNS SHALL BE PERMITTED ON PROJECT WITHOUT EXPRESS APPROVAL OF OWNER, EXCEPT FOR SAFETY SIGNS.

REVISIONS	BY

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APN:

106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 14th, 2019
JOB NO. 729
SHEET

A10.0



Specifications Continued

SECTION 016000 - MATERIAL AND EQUIPMENT

- 1. DELIVER ALL MANUFACTURED MATERIALS IN THE ORIGINAL PACKAGES, CONTAINERS OR BUNDLES (WITH THE SEALS UNBROKEN) BEARING THE NAME OR IDENTIFICATION MARK OF THE MANUFACTURER.
- 2. STORE ALL MATERIALS IN SUCH MANNER AS NECESSARY TO PROPERLY PROTECT IT FROM DAMAGE. MATERIALS OR EQUIPMENT DAMAGED BY HANDLING, WEATHER, DIRT OR FROM ANY OTHER CAUSE WILL NOT BE ACCEPTABLE.
- 3. STORE MATERIAL SO AS TO CAUSE NO OBSTRUCTIONS, STORED OFF SIDEWALKS, ROADWAYS AND UNDERGROUND SERVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL MATERIAL AND EQUIPMENT FURNISHED UNDER THE CONTRACT.
- 4. WHERE NOT MORE SPECIFICALLY DESCRIBED IN ANY OF THE VARIOUS SECTIONS OF THESE SPECIFICATIONS, WORKMANSHIP SHALL CONFORM TO ALL OF THE METHODS AND OPERATIONS OF BEST STANDARDS AND ACCEPTED PRACTICES OF THE TRADE OR TRADES INVOLVED, AND SHALL INCLUDE ALL ITEMS OF FABRICATION, CONSTRUCTION OR INSTALLATION REGULARLY FURNISHED OR REQUIRED FOR COMPLETION.
- 5. ALL WORK SHALL BE EXECUTED BY MECHANICS SKILLED IN THEIR RESPECTIVE LINES OF WORK.
- 6. WHEN A SPECIFIC MANUFACTURER, TRADE NAME OR MATERIAL IS SPECIFIED, OR INDICATED, IT IS TO ESTABLISH A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. IF THE CONTRACTOR DESIRES TO USE A MANUFACTURER, TRADE NAME OR MATERIAL OTHER THAN THAT SPECIFIED, HE SHALL REQUEST APPROVAL OF SUCH SUBSTITUTION, IN WRITING, TO THE ARCHITECT. ALL SUCH REQUESTS SHALL BE SUBMITTED PRIOR TO ORDERING MATERIALS.

SECTION 017000 - PROJECT CLOSE-OUT

- 1. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS WHICH SHALL CLEARLY SHOW ALL DIFFERENCES BETWEEN THE CONTRACT WORK AS DRAWN AND AS INSTALLED FOR ALL WORK, AS WELL AS WORK ADDED TO THE CONTRACT WHICH IS NOT SHOWN ON THE CONTRACT DRAWINGS.
- 2. CONTRACTOR SHALL SUBMIT A FULLY EXECUTED "CERTIFICATE OF SUBSTANTIAL COMPLETION", AIA DOCUMENT G704 (LATEST EDITION) FOR OWNER'S AND ARCHITECT'S SIGNATURES.
- 3. UPON COMPLETION OF THE INSTALLATION OF ALL WORK, AND PRIOR TO FINAL INSPECTION, FURNISH ELECTRONIC COPIES OF OWNER'S CLOSE-OUT MANUAL. THE OWNER'S MANUAL SHALL INCLUDE: 1) ALL SUBCONTRACTOR'S NAMES, ADDRESS, PHONE NUMBER AND CONTACT, 2) GENERAL SUBCONTRACTOR'S ONE YEAR WARRANTY, 3) ALL SUBCONTRACTOR'S WARRANTIES, 4) COPY OF THE FINAL CERTIFICATE OF OCCUPANCY, 5) MANUFACTURER'S CUT SHEETS AND PARTS LISTS OF ALL LIGHT FIXTURES, ELECTRICAL GEAR, MECHANICAL AND PLUMBING EQUIPMENT, 6) MECHANICAL CONTRACTOR'S TEST AND BALANCE REPORT, PROVIDE A TABLE OF CONTENTS AND INDEX TABS FOR EACH HEADING.
- 4. INSTRUCT OWNER'S PERSONNEL IN OPERATION, ADJUSTMENT, AND MAINTENANCE OF EQUIPMENT AND SYSTEMS.
- 5. SUBMIT ALL REQUIRED GUARANTEES TO THE OWNER. PROVIDE WRITTEN GUARANTEE IN ACCORDANCE WITH SUBPARAGRAPH 13.2.2 OF THE GENERAL CONDITIONS. IN ADDITION, PROVIDE ALL WRITTEN GUARANTEES OR CERTIFICATES REQUIRED AS SPECIFIED IN THESE SPECIFICATIONS.
- 6. NEITHER FINAL PAYMENT NOR ANY REMAINING RETAINED PERCENTAGE WILL BE PAID TO CONTRACTOR UNTIL ALL OF THE ABOVE PROVISIONS ARE MET AND ALL REQUIREMENTS AS OUTLINED IN THE "GENERAL CONDITION OF THE CONTRACT FOR CONSTRUCTION" AIA DOCUMENT A201 (LATEST EDITION), PARAGRAPH 9.10.2

SECTION 01710 - CLEANING

- 1. SAFETY AND INSURANCE STANDARDS: MAINTAIN PROJECT IN ACCORDANCE WITH THE FOLLOWING SAFETY AND INSURANCE STANDARDS:  
STATE INDUSTRIAL COMMISSION (OF ARIZONA) OSHA
- 2. FIRE PROTECTION STORE VOLATILE WASTE IN COVERED METAL CONTAINERS, AND REMOVE FROM PREMISES DAILY.
- 3. POLLUTION CONTROL: CONDUCT CLEAN-UP AND DISPOSAL OPERATIONS TO COMPLY WITH LOCAL ORDINANCES AND ANTI-POLLUTION LAWS. BURNING OR BURYING OF RUBBISH AND WASTE MATERIAL ON THE PROJECT SITE IS NOT PERMITTED DISPOSAL OF VOLATILE FLUID WASTE (SUCH AS MINERAL SPIRITS, OIL, OR PAINT THINNER) IN STORM OR SANITARY SEWER SYSTEMS OR INTO STREAMS OR WATERWAYS IS NOT PERMITTED.
- 4. USE ONLY CLEANING MATERIALS RECOMMENDED BY MANUFACTURER OF SURFACE TO BE CLEANED.
- 5. THE CONTRACTOR SHALL KEEP THE PREMISES AND SURROUNDING AREA FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY OPERATIONS UNDER THE CONTRACT. AT COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM AND ABOUT THE PROJECT WASTE MATERIALS, RUBBISH, THE CONTRACTOR'S TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIALS.
- 6. IF THE CONTRACTOR FAILS TO CLEAN UP AS PROVIDED IN THE CONTRACT DOCUMENTS, THE OWNER MAY DO SO AND THE COST THEREOF SHALL BE CHARGED TO THE CONTRACTOR.
- 7. PROVIDE FOR THE DISPOSAL OF ALL WASTE PRODUCTS, TRASH, DEBRIS, ETC., AND MAKE NECESSARY ARRANGEMENT FOR LEGAL DISPOSAL OF IT OFF THE SITE.

- 8. MAKE BUILDINGS READY FOR OCCUPANCY IN ALL RESPECTS. LAY HEAVY BUILDING PAPER IN MAIN CIRCULATION AREAS TO PROTECT THE FLOORS UNTIL FINAL INSPECTION AND ACCEPTANCE.
- 9. ALL EXISTING IMPROVEMENTS, INSIDE OR OUTSIDE THE PROPERTY WHICH ARE DISTURBED, DAMAGED OR DESTROYED BY THE WORK UNDER THE CONTRACT SHALL BE RESTORED TO THE CONDITION IN WHICH THEY ORIGINALLY WERE, OR TO THE SATISFACTION OF THE ARCHITECT.
- 10. CONTRACTORS AND THEIR EMPLOYEES WILL NOT BE ALLOWED TO PARK ON CONCRETE FLOORS OR SLABS. IF ANY CONTRACTOR OR HIS EMPLOYEE DOES SO, THEY SHALL BE RESPONSIBLE FOR THE COST OF CLEANING THE SLAB TO THE FULL SATISFACTION OF THE OWNER AND AT NO COST TO THE OWNER.

DIVISION 2 - SITEWORK

SECTION 02075 DUST (PARTICULATE MATTER) CONTROL

- 1. THE GENERAL CONTRACTOR AND ALL OF THEIR SUBCONTRACTORS SHALL MEET ALL LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS AND SHALL BE SOLELY RESPONSIBLE FOR DUST CONTROL ON THE SITE FOR THE ENTIRE DURATION OF CONSTRUCTION AND SHALL STRICTLY CONFORM TO THESE REGULATIONS.

DIVISION 6 - WOOD & PLASTIC

SECTION 06100 - ROUGH CARPENTRY

- 1. AT ALL GRAB BARS THE CONTRACTOR SHALL PROVIDE AND INSTALL 2x6 SOLID WOOD BLOCKING, WHICH SHALL BE SECURELY SCREWED OFF TO THE STEEL WALL STUDS.

SECTION 06600 - ARCHITECTURAL MILLWORK

- 1. ALL MILLWORK SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 400/1600 'CUSTOM GRADE' OF QUALITY STANDARDS AS ESTABLISHED BY THE ARCHITECTURAL WOODWORKERS INSTITUTE.
- 2. ALL CASEWORK MEMBERS ARE TO BE 3/4" THICK UNLESS NOTED OTHERWISE.
- 3. ALL CASEWORK TO HAVE HIGH PRESSURE LAMINATE FINISH WITH REVEAL OVERLAY DESIGN, UNLESS DETAILED OTHERWISE ON PLANS. ALL EXTERIOR EXPOSED SURFACES TO BE NEMA LD-3, GRADE GP-28, UNLESS DETAILED OTHERWISE ON PLANS. BACKING SHEET TO BE NEMA LD-3, GRADE CL-20. ALL CONCEALED INTERIORS SHALL BE WHITE MELAMINE.
- 4. ALL COUNTERTOPS SHALL BE SOLID SURFACE MATERIAL, 3/4" THICK. PROVIDE ALL AVAILABLE SAMPLES TO OWNER FOR APPROVAL. LEADING EDGES ARE TO BE SQUARE, 1 1/2" THICK.
- 5. DRAWER BOX SIDES ARE TO BE 1/2" WHITE MELAMINE. DRAWER BOX BOTTOMS ARE TO BE 1/4" WHITE MELAMINE.
- 6. SHELVES UNDER 36" WIDE SHALL HAVE 3/4" SHELVES. CABINETS OVER 36" WIDE SHALL HAVE 1" SHELVES.
- 7. HARDWARE:
  - 7.1 DRAWER AND CABINET PULLS ARE TO BE WIRE CHROME PLATED (MATT) WITH 4" HOLE SPACING. PROVIDE A SINGLE PULL AT EACH DRAWER OR DOOR.
  - 7.2 HINGES ARE TO BE BLUM 'CLIP TOP' 120° SELF CLOSING CONCEALED HINGE WITH DULL CHROME FINISH. PROVIDE 2 HINGES PER DOOR.
  - 7.3 SHELF SUPPORTS SHALL BE 5MM DUAL PIN LOCKING FOR 3/4" TO 1" SHELF. CLEAR COLOR, RATED FOR 500 LBS.
  - 7.4 DRAWER GUIDES AT FILE DRAWERS SHALL BE ACCURIDE NO. AC3832-20, FULL EXTENSION, 100 LB CAPACITY, BOX DRAWER SLIDES. DRAW GUIDES AT ALL OTHER DRAWERS IS TO BE BLUM 230M5000 BOTTOM MOUNTED, SELF-CLOSING, 75 LB. CAPACITY, 3/4 EXTENSION.
  - 7.5 TRASH GROMMETS SHALL BE MODEL NO. TM1PSS AS MANUFACTURED BY DOUG MOCKETT & COMPANY INC. GROMMET IS 6" DIAMETER x 1" POLISHED STAINLESS STEEL.
  - 7.6 PLASTIC COUNTERTOP GROMMETS: TO BE MODEL #91041 AS MANUFACTURED BY ROCKLER, WHITE. EXACT LOCATION OF GROMMETS IS TO BE DETERMINED BY OWNER IN FIELD AFTER COUNTERTOP IS INSTALLED.
- 8. FURNISH AND INSTALL ALL ITEMS OF CASEWORK HARDWARE, INCLUDING PULLS, DRAWER GUIDES, PIVOT HINGES, SHELF STANDARDS AND LOCKS.
- 9. ARCHITECTURAL WOODWORK SHALL BE DELIVERED TO THE JOBSITE ONLY AFTER ALL PAINTING, WET WORK, GRINDING, AND SIMILAR OPERATIONS ARE COMPLETED.
- 10. CONTRACTOR SHALL EMAIL PDF SHOP DRAWINGS OF ALL MILLWORK AND COUNTERTOPS WITH FULL DETAILS, HARDWARE CUT SHEETS, SAMPLES, AND SPECIFICATIONS TO ARCHITECT FOR REVIEW PRIOR TO ORDERING MATERIALS.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07210 - BUILDING INSULATION

- 1. INSULATION MATERIALS SHALL BE FLEXIBLE FIBERGLASS BATTS OR BLANKETS, WITH OR WITHOUT FACINGS, AS CALLED OUT ON PLANS. ALL COMPOSITE MATERIALS SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS AS TESTED IN ACCORDANCE WITH ASTM E84 U.L. 723
- 2. PROVIDE INSULATION AS FOLLOWS:
  - 2.1 REFER TO WALL TYPES SCHEDULE AND BUILDING SECTIONS / DETAILS.
- 3. CUT AND FIT INSULATION MATERIALS AROUND PIPES, CONDUITS, OUTLET BOXES, ETC., AS NECESSARY TO MAINTAIN THE INTEGRITY OF THE INSULATION. WHERE PIPES ARE INSTALLED IN SPACES TO RECEIVE INSULATION, PLACE INSULATION BETWEEN EXTERIOR WALL AND THE PIPE, COMPRESSING INSULATION AS NECESSARY.
- 4. AT WALL AND CEILING AREAS INSTALL INSULATION BETWEEN FRAMING MEMBERS WITH FLANGES CONTINUOUSLY TIGHT AGAINST FRAMING MEMBERS AND ENDS TIGHTLY BUTTED.

SECTION 07600 - SHEET METAL FLASHINGS & COUNTERFLASHINGS

- 1. PROVIDE AND INSTALL ALL FLASHINGS AND COUNTERFLASHINGS, AS REQUIRED TO MAKE ALL ROOFING SYSTEMS WATERTIGHT.
- 2. QUALITY, PROCEDURES AND METHODS SHALL BE AS RECOMMENDED BY SMACNA ARCHITECTURAL SHEET METAL MANUAL, 3rd EDITION.
- 3. MATERIALS:
  - 3.1 GALVANIZED SHEET METAL ASTM A-525, 24-GAUGE MINIMUM, UNLESS DETAILED OTHERWISE.
  - 3.2 SOLDER: ASTM B-32, 50% TIN AND 50% LEAD, USED WITH ROSIN FLUX.
  - 3.3 PLASTIC CEMENT: FS SS-C-153, TYPE I, AND ASTM D-2822.
  - 3.4 CAULKING: FS TT-S-00227E, 2-PART RUBBER BASE SEALANT.
  - 3.5 REGLETS & COUNTERFLASHING: AS MANUFACTURED BY FRY-REGLET CORPORATION, TYPE SM.
- 4. PROVIDE FOR THERMAL EXPANSION OF RUNNING TRIM FLASHING AND OTHER ITEMS EXPOSED FOR MORE THAN 15 FEET CONTINUOUS LENGTH. MAINTAIN A WATERTIGHT INSTALLATION AT EXPANSION SEAMS.
- 5. PROVIDE THE FOLLOWING SHEET METAL ITEMS:
  - FRY REGLET COUNTERFLASHINGS
  - EDGE DRIP FLASHING

SECTION 07720 - ROOF ACCESSORIES

- 1. ROOF HATCH, REFER TO MATERIALS SCHEDULE

SECTION 07900 - CAULKING AND SELANTS

- 1. ALL NEW EXTERIOR AND INTERIOR SEALANT SHALL BE DOW CORNING 795, UNLESS NOTED OTHERWISE.
- 2. PRIMER: WHERE REQUIRED, SHALL BE USED AS PER DOW CORNING'S WRITTEN INSTRUCTIONS. THE PRIMER SHALL HAVE BEEN TESTED FOR NON-STAINING CHARACTERISTICS AND DURABILITY ON SAMPLES OF ACTUAL SURFACES TO BE SEALED.
- 3. CONTRACTOR SHALL USE CLOSED CELL POLYETHYLENE BACKER RODS AS A JOINT BACKING TO CONTROL DEPTH OF SEALANT BEAD. WHERE DEPTH OF JOINT WILL PREVENT USE OF JOINT BACKING, AN ADHESIVE BACKED POLYETHYLENE TAPE (BOND BREAKER TAPE) SHALL BE INSTALLED TO PREVENT THREE SIDED ADHESION. JOINT BACKING SHALL BE DRY AT THE TIME OF SEALANT APPLICATION.
- 4. SURFACES MUST BE SOUND, CLEAN AND DRY. ALL RELEASE AGENTS, EXISTING WATERPROOFING, DUST, LOOSE MORTAR, LAITANCE, PAINTS, OR OTHER FINISHES MUST BE REMOVED. THIS SHALL BE ACCOMPLISHED WITH A THOROUGH WIRE BRUSHING, GRINDING, SANDBLASTING OR SOLVENT WASHING, DEPENDING ON THE CONTAMINATION.
- 5. PROVIDE CAULKING AT THE FOLLOWING LOCATIONS. THIS SCHEDULE IS NOT TO BE CONSTRUED TO BE COMPLETE. PROVIDE CAULKING AT OTHER AREAS AS INDICATED.
  - 5.1 PERIMETER OF ALL DOOR AND WINDOW FRAMES, INTERIOR AND EXTERIOR. COLOR TO MATCH DOOR FRAME COLOR.
  - 5.2 PERIMETER OF ALL ALUMINUM SECTIONS, INTERIOR AND EXTERIOR. COLOR TO MATCH ALUMINUM FRAME COLOR.
  - 5.3 AT BASE OF WATER CLOSETS AT FLOOR, COLOR TO BE WHITE TO MATCH WATER CLOSET.
  - 5.4 AT ALL WALL HUNG PLUMBING FIXTURES, COLOR TO BE WHITE TO MATCH FIXTURE.
  - 5.5 ALL NEW JOINTS AT ABUTTING DISSIMILAR BUILDING MATERIALS.
  - 5.6 JOINTS IN EXPOSED MASONRY SURFACES, INTERIOR AND EXTERIOR.
  - 5.7 TOP EDGE OF ALL FRY-REGLET COUNTERFLASHING ASSEMBLIES.
  - 5.8 CONTROL, COLD, EXPANSION AND SAW JOINTS IN CONCRETE SURFACES, INTERIOR AND EXTERIOR. INSTALL SEALANT AT ALL INTERIOR CONCRETE FLATWORK JOINTS WHICH DO NOT RECEIVE A FLOOR COVERING.

DIVISION 8 - DOORS, WINDOWS, GLASS

SECTION 08110 - HOLLOW METAL FRAMES

- 1. FRAMES TO MEET SPECIFIED REQUIREMENTS OF SDI AND/OR NAAMM FOR UNIT WELDED FRAMES.
- 2. CONTRACTOR SHALL ORDER ALL FRAMES FOR MASONRY WALLS IN A TIMELY MANNER SO THAT FRAME CAN BE INSTALLED WHILE MASONRY WALLS ARE BEING BUILT. FRAMES INSTALLED LATER WITH EXPANSION BOLTS WILL NOT BE ALLOWED.
- 3. ALL EXTERIOR FRAMES, WHERE OCCUR, SHALL BE 14 GAUGE GALVANIZED STEEL WITH CORNERS MITERED AND WELDED.
- 4. ALL INTERIOR FRAMES SHALL BE 14 GAUGE SHEET STEEL WITH CORNERS MITERED AND WELDED.
- 5. ALL HOLLOW METAL FRAMES IN MASONRY WALLS ARE TO BE SOLIDLY GROUTED.
- 6. PREPARE FRAMES TO RECEIVE MORTISED TYPE HARDWARE AND PROVIDE HARDWARE REINFORCING AS REQUIRED BY SDI.
- 7. INSTALL METAL FRAMES AT LOCATION INDICATED, SET SQUARE AND PLUMB WITH THE BUILDING LINES, ANCHORING SECURELY TO CONSTRUCTION.
- 8. ANCHOR EACH JAMB LEG WITH SILL CLIP WITH EXPANSION BOLT OR 'RAMSET' FASTENERS.
- 9. ANCHOR EACH JAMB WITH 3 ANCHORS AT MASONRY AND 4 ANCHORS AT GYPSUM BOARD.

SECTION 08115 - HOLLOW METAL DOORS

- 1. DOORS TO MEET SPECIFIED REQUIREMENTS OF SDI AND/OR NAAMM.
- 2. EXTERIOR STEEL DOORS SHALL BE FLUSH EXTRA HEAVY DUTY, 16 GAUGE GALVANIZED STEEL, 1-3/4" THICK, AND PRIME PAINTED. TOP AND BOTTOM OF EXTERIOR DOORS SHALL BE FLUSH.

- 3. U-FACTOR OF DOORS SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 100 BY AN ACCREDITED, INDEPENDENT LABORATORY, AND LABELED AND CERTIFIED BY THE MANUFACTURER, PER 2012 IECC, SECTION C303.1.3. PROVIDE MANUFACTURER'S WRITTEN DOCUMENTATION TO ARCHITECT THAT THE DOORS MEET THIS CODE REQUIREMENT. CORE SHALL BE POLYISOCYANURATE INSULATION WITH A U-FACTOR OF 0.08.
- 4. INTERIOR STEEL DOORS SHALL BE FLUSH HEAVY DUTY, 16 GAUGE COLD ROLLED STEEL, 1-3/4" THICK, AND PRIME PAINTED.
- 5. PROVIDE SOLID DRIP CAP AT TOP OF ALL EXTERIOR OUT-SWINGING DOORS.
- 6. PROVIDE FOR GLAZING IN DOORS AS SCHEDULED. NON-REMOVABLE MINIMUM 20 GAUGE GLAZING STOPS SHALL OCCUR ON THE OUTSIDE OF EXTERIOR DOORS AND ON THE REVERSE SIDE OF INTERIOR DOORS. GLAZING BEADS ON THE INSIDE OF GLASS PANELS SHALL BE REMOVABLE.
- 7. DOORS TO BE THOROUGHLY CLEANED, BONDERIZED AND PRIMED WITH SHOP COAT OF LIGHT GRAY ZINC CHROMATE RUST INHIBITIVE PRIMER, BAKED ON.
- 8. INSTALL DOORS COMPLETELY AND ACCURATELY, COMPLETE WITH ALL FINISH HARDWARE. INSTALL FINISH HARDWARE IN A NEAT WORKMANLIKE MANNER IN ACCORDANCE WITH THE HARDWARE SCHEDULE USING ONLY MECHANICS SKILLED IN THIS TYPE OF WORK. DO NOT INSTALL HARDWARE UNTIL PAINTING IS COMPLETED. KEEP ALL HARDWARE FREE FROM SCRATCHES, DENTS OR OTHER DEFAACEMENTS.

SECTION 08200 - WOOD DOORS

- 1. PROVIDE WOOD DOORS AND RELATED ITEMS IN ACCORDANCE WITH AIA 'QUALITY STANDARDS', SECTION 1300 AND COMMERCIAL STANDARDS CS-236. REFER TO MATERIALS SCHEDULE AND DETAILS.
- 2. FURNISH MANUFACTURER'S STANDARD 'LIFE OF THE INSTALLATION' GUARANTEE FOR ALL INTERIOR DOORS.
- 3. SOLID CORE WOOD DOORS: FLUSH CHERRY VENEER, CUSTOM GRADE, FOR AN OPAQUE FINISH. CORE TO BE TYPE PC-7, GRADE 1-L-1 PARTICLE BOARD.
- 4. STORE DOORS FLAT ON A LEVEL SURFACE IN A CLEAN, DRY, WELL-VENTILATED AREA, PROTECTED FROM SUNLIGHT. DOORS SHALL BE CONDITIONED TO THE AVERAGE PREVAILING HUMIDITY OF THE JOBSITE BEFORE INSTALLATION. HANDLE DOORS WITH CLEAN GLOVES. DO NOT DRAG DOORS ACROSS ONE ANOTHER OR ACROSS OTHER SURFACES.
- 5. INSTALLATION:
  - 5.1 INSTALL DOORS IN FRAMES WHERE INDICATED. HINGE DOORS WITH CLEARANCE OF NOT MORE THAN 3/32" AT EACH SIDE, AND HEAD; CLEARANCE AT BOTTOM 1/2" OR AS REQUIRED FOR CARPETING OR THRESHOLD. MORTISE, DRILL OR OTHERWISE WORK DOORS FOR FINISH HARDWARE AS SCHEDULED, BEVELING LOCK EDGE TO ALLOW FOR PROPER CLEARANCE IN OPENING AND CLOSING DOORS. REMOVE DOORS AFTER FITTING FOR FINISHING. RE-HANG AFTER FINISHING.
  - 5.2 INSTALL FINISH HARDWARE IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE HARDWARE SCHEDULE, USING ONLY MECHANICS SKILLED IN THIS TYPE OF WORK. DO ALL MORTISING FOR HARDWARE BEFORE PAINTING. DO NOT INSTALL HARDWARE UNTIL FINISHING OF DOOR IS COMPLETED. KEEP ALL HARDWARE FREE FROM SCRATCHES, DENTS OR OTHER DEFAACEMENTS.
  - 5.3 THE FINISH HARDWARE SHALL BE ACCURATELY, FITTED AND INSTALLED ON PROPERLY PREPARED SURFACES IN CONFORMITY WITH THE MANUFACTURER'S INSTRUCTIONS AND TEMPLATES. UPON COMPLETION, THE FINISH HARDWARE SHALL BE IN PERFECT CONDITION AND IN PERFECT WORKING ORDER.

SECTION 08700 - FINISH HARDWARE

- 1. THE MAXIMUM DOOR-OPENING FORCE (IN POUNDS-FORCE) FOR PUSHING OR PULLING OPEN INTERIOR HINGED DOOR SHALL BE 5 LBF.
- 2. ALL HARDWARE SHALL MEET HANDICAPPED ACCESSIBILITY REQUIREMENTS OF AMERICANS WITH DISABILITIES ACT.
- 3. LOCKSETS AND LATCHSETS SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISH FLOOR.
- 4. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- 5. STRIKES SHALL BE EXTENDED LIPS WHERE REQUIRED TO PROTECT TRIM FROM BEING MARRED BY LATCH BOLT. WROUGHT BOXES SHALL BE FURNISHED WITH ALL STRIKES.
- 6. KEYS AND KEYING:
  - 6.1 ALL CYLINDERS FOR THIS PROJECT TO BE SET TO NEW MASTER KEY.
  - 6.2 ALL CYLINDERS TO BE CONSTRUCTION MASTER KEYED.
  - 6.3 MASTER KEY SETS AND INDIVIDUAL KEYING OF LOCKS WILL BE DETERMINED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING WITH THE OWNER'S REPRESENTATIVE TO DETERMINE THE EXACT KEYING THAT WILL BE REQUIRED.
  - 6.4 FURNISH 6 EACH CONSTRUCTION MASTER KEYS TO BE DELIVERED WITH LOCKSETS TO CONTRACTOR. FURNISH 3 EACH MASTER KEY SETS. FURNISH 3 EACH CHANGE KEYS FOR EACH CYLINDER AND LOCKSET.
  - 6.5 ALL GRAND MASTER, MASTER, AND CHANGE KEYS SHALL BE PROPERLY TAGGED FOR EASY IDENTIFICATION AND DELIVERED TO AN AUTHORIZED RECIPIENT AS DIRECTED BY THE ARCHITECT.
- 7. PROVIDE A WRITTEN GUARANTEE FOR ALL HARDWARE FOR A PERIOD OF 2 YEARS FROM DATE OF CERTIFICATE OF OCCUPANCY. DEFECTS IN MATERIALS AND/OR WORKMANSHIP OCCURRING DURING THE GUARANTEE PERIOD SHALL BE CORRECTED AT NO EXPENSE TO THE OWNER.

REVISIONS	BY

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CHECKED BY W.A.K.
DATE March 14th, 2019
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A10.1



Specifications Continued

SECTION 08800 - GLASS AND GLAZING

- GLASS AND GLAZING SHALL CONFORM TO CHAPTER 24 OF THE 2012 IBC, AND TO LOCAL CODE REQUIREMENTS. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- U-FACTOR OF GLASS SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 100 BY AN ACCREDITED, INDEPENDENT LABORATORY, AND LABELED AND CERTIFIED BY THE MANUFACTURER. MANUFACTURER SHALL PROVIDE THIRD PARTY LABORATORY CERTIFICATION TO ARCHITECT, PRIOR TO MANUFACTURING GLASS UNITS.
- THE SOLAR HEAT GAIN COEFFICIENT (SHGC) AND VISIBLE TRANSMITTANCE (VT) OF GLASS SHALL BE DETERMINED IN ACCORDANCE WITH NFRC 200 BY AN ACCREDITED, INDEPENDENT LABORATORY, AND LABELED AND CERTIFIED BY THE MANUFACTURER. MANUFACTURER SHALL PROVIDE THIRD PARTY LABORATORY CERTIFICATION TO ARCHITECT, PRIOR TO MANUFACTURING GLASS UNITS.
- WATERTIGHT AND AIRTIGHT INSTALLATION OF EACH PIECE OF GLASS IS REQUIRED. EACH INSTALLATION MUST WITHSTAND NORMAL TEMPERATURE CHANGES, WIND LOADING AND IMPACT LOADING.
- THE MAXIMUM PROBABLE BREAKAGE LEVEL SHALL BE 8 LITES PER THOUSAND FOR A 1-MINUTE UNIFORM WIND LOAD DURATION.
- INTERIOR REGULAR PLATE GLASS: CLEAR 1/4" THICK COMPLYING WITH FS-DD-G-451, TYPE 1, CLASS 1, QUALITY Q-3, PLATE OR FLOAT.
- INTERIOR TEMPERED GLASS: CLEAR 1/4" THICK FULLY TEMPERED PLATE GLASS, PERMANENTLY ETCH EACH LIGHT WITH MANUFACTURER'S NAME AND HIS COMPLIANCE WITH ANSI Z97.1.
- EXTERIOR CLEAR LOW-E INSULATING GLASS UNITS: AT ALL (UNLESS NOTED OTHERWISE) WINDOW TYPES AND ALL ALUMINUM/GLASS DOORS PROVIDE PPG INSULATED UNITS, COMPRISED OF AN OUTER LAYER OF 6MM STARPHIRE (TEMPERED WHERE REQUIRED) SOLARBAN 70XL (2) AND AN INNER LAYER OF 6MM (TEMPERED WHERE REQUIRED) CLEAR GLASS, SEPARATED BYA 1/2" AIR SPACE. INSULATING GLASS UNITS SHALL HAVE A SHADING COEFFICIENT OF 0.32 A SHGC OF 0.27 AND A U-VALUE OF 0.26. LABEL EACH UNIT TO SHOW WHICH FACE IS TO BE EXPOSED TO EXTERIOR. PLACE LABEL ON INSIDE FACE. SUBMIT 2 SAMPLES TO ARCHITECT FOR APPROVAL PRIOR TO ORDERING GLASS UNITS.
- INTERIOR GLAZING COMPOUND TO BE POLYMERIZED BUTYL RUBBER AND INERT FILLERS (PIGMENTS), SOLVENT BASED WITH MINIMUM 75% SOLIDS, NON-SAG CONSISTENCY, TACK-FREE TIME OF 24 HOURS OR LESS, PAINTABLE NON-STAINING.
- SETTING BLOCKS TO BE NEOPRENE, EPDM, OR OTHER RESILIENT BLOCKS OF 85 SHORE A DUROMETER HARDNESS, MINIMUM LENGTH 4"
- EXTERIOR GLAZING COMPOUND TO CONFORM TO ASTM C-920, TYPE S, GRADE NS, CLASS 25, USE G.
- GLAZING INSTALLATION IS TO COMPLY WITH THE GANA 'GLAZING MANUAL', 50th ANNIVERSARY EDITION.

DIVISION 9 - FINISHES

SECTION 09110 - COLD-FORMED LIGHT GAUGE FRAMING

- THE INSTALLATION AND CONSTRUCTION OF COLD-FORMED STRUCTURAL AND NON-STRUCTURAL STEEL FRAMING SHALL CONFORM TO THE 'STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS' AS PUBLISHED BY THE AMERICAN IRON AND STEEL INSTITUTE THROUGH THE STEEL FRAMING ALLIANCE.
- ALL MEMBERS SHALL BE MANUFACTURED BY THE CURRENT MEMBERS OF THE STEEL STUD MANUFACTURER'S ASSOCIATION.
- ALL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN IRON AND STEEL INSTITUTE, AISI, 'SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS'.
- METAL STUDS SHALL BE ROLL FORMED CHANNEL TYPE STUDS, PER ICC EVALUATION SERVICE REPORT NO. ER-4943P.
- INTERIOR WALLS SHALL BE CONSTRUCTED OF STEEL STUDS AS FOLLOWS:

MAXIMUM WALL HEIGHT	PRODUCT NO.	STUD SPACING
12'-5"	362S125-18	16" O.C. (U.N.O.)
15'-6"	362S125-33	16" O.C. (U.N.O.)
16'-11"	362S125-43	16" O.C. (U.N.O.)
23'-0"	600S125-30	16" O.C. (U.N.O.)
- YIELD STRENGTH IS TO BE 33 KSI. CONTRACTOR SHALL USE MINIMUM 362S125-33 FOR WALLS THAT RECEIVE CERAMIC TILE. PROVIDE METAL FLOOR AND CEILING RUNNERS DESIGNED TO ACCOMMODATE THE SPECIFIED STUD GAUGES AND SIZES.
- ALL INTERIOR WALLS SHALL GO FULL HEIGHT AND ATTACH TO THE ROOF STRUCTURE ABOVE, UNLESS THEY HAVE A SUSPENDED CEILING ON BOTH SIDES OF WALL.
- PROVIDE AND INSTALL A SLIP-TRACK AT TOP OF ALL INTERIOR FULL HEIGHT WALLS. TO BE 20 GAUGE AND TO MATCH THE SIZE OF THE WALL STUDS. TO ALLOW FOR 1" VERTICAL MOVEMENT. PROVIDE WAFER-HEAD SCREWS TO POSITIVELY ATTACH THE STEEL STUDS THROUGH THE VERTICAL SLOTS IN THE SLIP-TRACK. VERTICAL SLOTS TO BE 1/4" WIDE x 1-1/2" LONG AND SPACED EVERY 1" O.C.
- ATTACH BOTTOM STEEL TRACKS TO CONCRETE FLOORS WITH RAMSET/RED HEAD POWDER-ACTUATED POWER POINT FASTENERS @ 32" O.C. FASTENERS TO HAVE A SHANK DIAMETER OF 0.150", HEAD DIAMETER OF .0300" AND LENGTH OF 0.75". INSTALL FASTENERS PER I.C.B.O. EVALUATION REPORT NO. ER-1639 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

SECTION 09250 - GYPSUM WALL BOARD

- ASTM C-840 AND C-754, AND GA-216, INSOFAR AS ANY PORTIONS ARE APPLICABLE, ARE HEREBY MADE A PART OF THIS SPECIFICATION AS THOUGH REPEATED HEREIN. IN CASE OF CONFLICTS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
- GYPSUM WALLBOARD:
  - REGULAR WALLBOARD: TO COMPLY WITH ASTM C-36; OR FS SS-L-30D, TYPE III, 5/8" THICKNESS, TAPERED EDGE.
  - MOISTURE-RESISTANT WALLBORAD: TO COMPLY WITH ASTM C-630, GRADE REGULAR, 5/8" THICKNESS, TAPERED EDGE. USE WR BOARD FULL HEIGHT, ON ALL WALLS IN ALL RESTROOMS AND JANITOR'S CLOSET.
- WALLBOARD ACCESSORIES:
  - CORNER BEAD REINFORCEMENT: USG DUR-A-BEAD, SIZE AS REQUIRED.
  - METAL EDGE REINFORCEMENT: USG NO. 200-B.
  - CONTROL JOINTS: USG #093.
- FASTENERS: SELF DRILLING, SELF TAPPING, BUGLE HEAD SCREWS, FOR USE WITH POWER DRIVEN TOOL TYPE S FOR APPLICATION TO LIGHT GAUGE METAL FRAMING, MINIMUM 1", TYPE 9-12 FOR APPLICATION TO HEAVY GAUGE METAL FRAMING (ASTM C-646.
- INSTALLATION - SUSPENDED CEILINGS:
  - EXCEPT WHERE OTHERWISE INDICATED, PROVIDE 1-1/2" MAIN RUNNER CHANNELS SPACED ON 4 FOOT CENTERS AND METAL FURRING CHANNELS SPACED ON NOT OVER 16" CENTERS. MAIN RUNNER CHANNELS TO HAVE HANGER WIRES SPACED 48" O.C. ALONG ITS LENGTH AND WITHIN 6" OF ENDS. WIRE HANGERS SHALL BE OF SUCH LENGTH SO THAT THE LOWER ENDS MAY BE SADDLE TIED OR WRAPPED AROUND THE MAIN RUNNERS SO AS TO PREVENT TURNING OR TWISTING OF THE RUNNERS.
  - SECURELY CLIP METAL FURRING CHANNELS TO MAIN RUNNERS USING FURRING CHANNEL CLIPS OR SADDLE TIE WITH 2 STRANDS OF 16 GAUGE TIE WIRE. INSTALL FURRING CHANNEL CLIPS ON ALTERNATIVE SIDES OF THE MAIN RUNNER CHANNEL.
  - AT LIGHTS OR OTHER OPENINGS THAT INTERRUPT THE MAIN RUNNER OR FURRING CHANNELS REINFORCE GRILLAGE WITH 3/4" COLD-ROLLED CHANNELS. WIRE TIED ATOP AND PARALLEL TO THE MAIN RUNNER CHANNELS.
  - APPLY WALLBOARD WITH LONG DIMENSION AT RIGHT ANGLES TO THE FURRING CHANNELS, WITH ALL ABUTTING ENDS AND EDGES OCCURRING OVER THE WEB SURFACE OF THE FURRING CHANNEL. INSTALL WALLBOARD WITH 5/8" SCREWS SPACED 8" O.C. IN THE FIELD OF THE BOARD, AT ALL BEARINGS, AND ALONG ABUTTING EDGES. INSTALL CONTROL JOINTS AT A MAXIMUM OF 20'-0" O.C., IN EACH DIRECTION.
- INSTALLATION - INTERIOR WALLS:
  - APPLY WALLBOARD WITH LONG DIMENSION AT RIGHT ANGLES TO FRAMING OR FURRING MEMBERS WITH ALL ABUTTING ENDS AND EDGES OCCURRING OVER STUD FLANGES. CUT WALLBOARD NEATLY TO FIT AROUND ALL OPENINGS. WALLBOARD TO EXTEND TO WITHIN 1/4" OF THE FLOOR.
  - WHEREVER WALLBOARD TERMINATES AGAINST DISSIMILAR MATERIALS OR WHERE EDGES OF WALLBOARD ARE EXPOSED, INSTALL METAL EDGE REINFORCEMENT AS SPECIFIED. AT ALL OUTSIDE CORNERS INSTALL METAL CORNER BEAD REINFORCEMENT AS SPECIFIED.
  - INSTALL CONTROL JOINT OVER FACE OF WALLBOARD PANELS. CUT END JOINTS SQUARE, BUTT TOGETHER AND ALIGN TO PROVIDE NEAT FIT. ATTACH CONTROL JOINT TO WALLBOARD PER USG RECOMMENDATIONS. LOCATE CONTROL JOINTS AT MAXIMUM 50'-0" O.C. AND IN ACCORDANCE WITH USG GYPSUM CONSTRUCTION HANDBOOK, LATEST EDITION.
  - AT METAL STUDS APPLY WALLBOARD USING SCREWS SPACED A MAXIMUM OF 12" O.C. IN THE FIELD OF THE BOARD AND 12" O.C. ALONG THE ABUTTING END JOINTS.
  - WHERE W/R WALLBOARD IS USED, COAT ALL CUT EDGES AND FASTENER HEADS WITH USG SHEETROCK W/R SEALANT. TREAT ALL CUT EDGES, UTILITY HOLES, AND JOINTS, INCLUDING THOSE AT ANGLE INTERSECTIONS PRIOR TO INSTALLATION.
  - PROVIDE PERIMETER RELIEF WHERE NON-LOAD-BEARING WALLBOARD PARTITIONS ABUT STRUCTURAL DECKS OR CEILINGS OR VERTICAL STRUCTURAL ELEMENTS. ALLOW NOT LESS THAN 1/4", NOR MORE THAN 1/2" GAP BETWEEN WALLBOARD AND STRUCTURE. FINISH EDGES OF WALLBOARD FACE LAYER WITH SQUARE-NOSE METAL CASING BEAD AND CAULK SPACE BETWEEN CASING BEAD AND STRUCTURE WITH CONTINUOUS SEALANT BEAD. ATTACH WALLBOARD TO STUDS NOT LESS THAN 1/2" BELOW BOTTOM EDGE OF CEILING TRACK FLANGES AND TO FIRST STUD ADJACENT TO VERTICAL TRACKS. DO NOT ATTACH WALLBOARD DIRECTLY TO TRACKS.
  - WHERE WALLBOARD PARTITIONS INTERSECT MASONRY WALLS, PROVIDE CONTROL JOINT NO LESS THAN 1/4", NOR MORE THAN 3/8" WIDE BETWEEN WALLBOARD AND MASONRY. FINISH EXPOSED EDGES OF WALLBOARD WITH SQUARE-NOSE METAL CASING BEAD AND CAULK SPACE BETWEEN CASING BEAD AND MASONRY WITH CONTINUOUS SEALANT BEAD.
  - INSTALL DRYWALL FULL HEIGHT AT ALL WALLS THAT GO FULL HEIGHT TO ROOF STRUCTURE.

- FINISHING:
  - ALL GYPSUM BOARD IS TO BE FINISHED PER GYPSUM ASSOCIATION PUBLICATION GA 216-96., 'RECOMMENDED LEVELS OF GYPSUM BOARD FINISH'.
  - GYPSUM BOARD FINISH IS TO BE LEVEL 3, LIGHT SKIP TROWEL TEXTURE.
  - APPLY WALL TEXTURE TO ALL EXPOSED WALLS, UPON COMPLETION OF FINISHING SPECIFIED ABOVE, SURFACES SHALL BE FREE OF DUST, DIRT AND OIL BEFORE APPLICATION. CONTRACTOR SHALL VERIFY WITH OWNER WHICH WALLS ARE TO RECEIVE WALL COVERING, IF ANY.
  - FINISH SHALL BE A LIGHT SKIP TROWEL TEXTURE. FURNISH A 3'x3' FINISH SAMPLE FOR OWNER'S APPROVAL BEFORE MATERIALS ARE ORDERED.

SECTION 09500 - ACOUSTICAL TREATMENT - LAY IN

- USE TILE UNITS AS INDICATED IN MATERIALS SCHEDULE.
- SUSPENSION SYSTEMS IS TO BE ARMSTRONG PRELUDE XL, 15/16", GRID SYSTEM, FLAT WHITE. WHERE SUSPENSION SYSTEM METES WALLS USE SHADOW MOLDING, FLAT WHITE. SYSTEM SHALL CONFORM TO THE INTERMEDIATE DUTY CLASSIFICATION OF ASTM C-635.
- CONTRACTOR SHALL LEAVE OWNER WITH THREE UNOPENED CARTONS OF CEILING TILES.
- INSTALL THE CEILING SUSPENSION SYSTEM PER THE RECOMMENDATIONS OF ASTM C-636. THE 2012 IBC AND ICC REPORT NO. ESR-1308. LOADING OF ANY COMPONENT MAY NOT CAUSE DEFLECTION OF MORE THAN 1/360 OF THE SPAN. INSTALL 2 PROPER TYPE HOLD DOWN CLIPS PER LOCKING CROSS TEE.
- ALL LIGHTING FIXTURES WEIGHING LESS THAN 56 POUNDS SHALL HAVE TWO NO. 12 GAGE HANGERS CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.

SECTION 09662 - RESILIENT RUBBER BASE

- MOLDED RUBBER COVE BASE (TOP SET OR CARPET) SHALL BE 4" HIGH X 1/8" THICK.
- AFTER PREPARATION OF WALL SURFACES, APPLY ADHESIVE TO BACK OF BASE LEAVING TOP 1/4" FREE OF ADHESIVE. PRESS BASE FIRMLY AGAINST THE WALLS SLIDING HORIZONTALLY INTO PLACE, MAKING SURE TOE IS TIGHT TO THE FLOOR AND AGAINST THE WALL. ROLL THE ENTIRE SURFACE OF THE BASE WITH A HAND ROLLER, AND PRESS THE TOP OF THE BASE AGAINST THE WALL WITH A STRAIGHT EDGE. REMOVE EXCESS ADHESIVE IMMEDIATELY. INSTALL PRE-FORMED CORNERS AT ALL OUTSIDE CORNERS. COPE AT INTERNAL CORNERS. WHERE BASE TERMINATES AT PROJECTIONS, INSTALL END CAPS.

SECTION 09663 - ALUMINUM FLOOR TRANSITION STRIPS

- ALUMINUM FLOOR TRANSITION STRIPS ARE TO BE MANUFACTURED BY SCHLUTER.
- TO BE AS FOLLOWS:

CERAMIC TILE TO CONCRETE	RENO-RAMP/K WITH AE FINISH
CERAMIC TILE TO VCT OR VINYL	RENO-U
- INSTALL TRANSITION STRIPS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

SECTION 09900 - PAINTING

- PROVIDE ALL PAINTING AND FINISHING REQUIRED FOR ALL INTERIOR AND EXTERIOR UNFINISHED SURFACES. ALSO PAINT ALL BACKFLOW PREVENTION DEVICES AND SERVICE ENTRANCE SECTIONS, TO MATCH MAIN BUILDING COLOR.
- CONTRACTOR SHALL PROVIDE OWNER WITH ONE UNOPENED 5 GALLON BUCKET OF EACH TYPE AND COLOR OF PAINT USED IN THE PROJECT. BUCKETS ARE TO BE CLEARLY MARKED AS TO PAINT TYPE AND COLOR.
- PREPARE A COMPLETE SCHEDULE SHOWING THE MATERIALS PROPOSED TO BE USED FOR EACH SURFACE AND SUBMIT SAME FOR REVIEW/APPROVAL BY ARCHITECT BEFORE PAINTING BEGINS.
- DELIVER ALL PAINT TO SITE IN MANUFACTURER'S LABELED AND SEALED CONTAINERS LABELS SHALL GIVE MANUFACTURER'S NAME, BRAND, TYPE, BATCH NUMBER, COLOR OF PAINT AND INSTRUCTIONS FOR REDUCING. THIN ONLY IN ACCORDANCE WITH PRINTED DIRECTIONS OF MANUFACTURER.
- BEFORE PAINTING, REMOVE HARDWARE, ACCESSORIES, PLATES, LIGHTING FIXTURES AND SIMILAR ITEMS OR PROVIDE AMPLE PROTECTION OF SUCH ITEMS. ON COMPLETION OF EACH SPACE, REPLACE ABOVE ITEMS. PROTECT ADJACENT SURFACES AS REQUIRED OR DIRECTED.
- PREPARATION, APPLICATION, WORKMANSHIP, COMPLETION, AND ACCEPTANCE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE PROVISIONS OF 'PAINTING SPECIFICATION MANUAL' BY P.D.C.A. FOR TYPE 1 STANDARD JOB. PERFORM ALL WORK USING ONLY EXPERIENCED, COMPETENT PAINTERS. HAND BRUSH OR ROLL WORK EXCEPT WHERE OTHERWISE PERMITTED OR DIRECTED. WHEN COMPLETED, THE PAINTING SHALL REPRESENT A FIRST-CLASS WORKMANLIKE APPEARANCE. APPLY ALL PAINT MATERIALS UNDER ADEQUATE ILLUMINATION.
- ALL COATINGS MUST COMPLY WITH APPLICABLE LOCAL AND FEDERAL REGULATIONS GOVERNING VOLATILE ORGANIC COMPOUNDS. IF THESE SPECIFICATIONS DO NOT MEET THESE STANDARDS THEN CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY.

- PAINT ONLY WHEN SURFACES ARE CLEAN, DRY, SMOOTH AND ADEQUATELY PROTECTED FROM DAMPNESS. EACH COAT OF PAINT SHALL BE WELL BRUSHED ON, WORKED OUT EVENLY AND ALLOWED TO DRY AT LEAST 24 HOURS BEFORE THE SUBSEQUENT COAT IS APPLIED. FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, SMOOTH AND FREE FROM RUNS, SAGS, CLOGGING OR EXCESSIVE FLOODING. MAKE EDGES OF PAINT ADJOINING OTHER MATERIALS OR COLORS SHARP AND CLEAN, WITHOUT OVERLAPPING. WHERE HIGH GLOSS ENAMEL IS USED, LIGHTLY SAND UNDERCOATS TO OBTAIN A SMOOTH FINISH COAT.
- ALL EXPOSED WATER, GAS, AIR, SPRINKLER, WASTE PIPING, EXPOSED CONDUIT, LIGHTING PANELS, AND TELEPHONE TERMINAL BOXES. EXPOSED DUCTWORK DOES NOT NEED TO BE PAINTED.
- FOR EXTERIOR COLORS REFER TO MATERIALS SCHEDULE.
- AL EXTERIOR MASONRY BUILDING AND SITE WALLS ARE TO BE SEALED PER SECTION 07170.

PAINTING SCHEDULES:

- THE FOLLOWING SCHEDULES ARE BASED ON SHERWIN WILLIAMS EXTERIOR:

PAINT SYSTEM 1 - GALVANIZED METAL (SEMI-GLOSS):
PRETREATMENT - SUPREME CHEMICAL, METAL CLEAN AND ETCH (ME 01)
1 COAT GALV-ALUM PREMIUM (GAPR00)
2 COATS OF EVERSIELD (EVSH50)
- INTERIOR DRYWALL:

1. PRIMER TO BE ONE COAT OF PVA DRYWALL PRIMER AND SEALER, WHITE
2. FINISH TO BE TWO COATS OF PROMAR 200 ZERO VOC INTERIOR LATEX, EGGSHELL
- HOLLOW METAL DOOR AND FRAMES:

1. PRIMER TO BE ONE COAT OF B66W00310-PRO INDUSTRIAL PRO-CRYL UNIVERSAL ACRYLIC PRIMER, OFF WHITE
2. FINISH TO BE TWO COATS OF A76W00051 SOLO INT/EXT 100% ACRYLIC SEMI-GLOSS

DIVISION 10 - SPECIALTIES

SECTION 10400 - IDENTIFYING DEVICES

- EXTERIOR EXITS SHALL HAVE TACTILE EXIT SIGNS AS INDICATED ON THE PLANS.

SECTION 10522 - FIRE EXTINGUISHERS & CABINETS

- PROVIDE FIRE EXTINGUISHERS AT LOCATIONS AS REQUIRED BY 2012 IBC, IFC, AND NFPA 10, AND APPROVED BY THE PRESCOTT FIRE DEPARTMENT
- THE MAXIMUM TRAVEL DISTANCE TO A FIRE EXTINGUISHER SHALL NOT EXCEED 75 FEET.
- FIRE EXTINGUISHERS ARE TO BE BY LARSEN'S MANUFACTURING COMPANY, MP5 SERIES (2A-10B:C) WITH #818 WALL BRACKETS. WALL BRACKET MOUNTING IS TO ONLY TO BE USED IN ALL AREAS THAT ARE NOT ACCESSIBLE AND/OR VISIBLE TO THE GENERAL PUBLIC.
- AT ALL AREAS THAT ARE ACCESSIBLE AND/OR VISIBLE TO THE GENERAL PUBLIC THE CONTRACTOR SHALL PROVIDE RECESSED FIRE EXTINGUISHER CABINETS, PROVIDED BY LARSEN'S MANUFACTURING COMPANY. CABINETS ARE TO BE ARCHITECTURAL SERIES, MODEL #2409-R1 WITH FULL GLASS DOOR. WALL PROJECTION SHALL NOT EXCEED 2-1/2".
- FIRE EXTINGUISHERS AND CABINETS ARE TO BE MOUNTED SO THAT THEIR TOP IS NOT MORE THAN 5 FEET ABOVE THE FLOOR.

DIVISION 22 - PLUMBING

- REFER TO PLUMBING PLANS

DIVISION 23 - HEATING, VENTILATION AND AIR CONDITIONING

- REFER TO MECHANICAL PLANS

DIVISION 26 - ELECTRICAL

- REFER TO ELECTRICAL PLANS

REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Specifications

PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

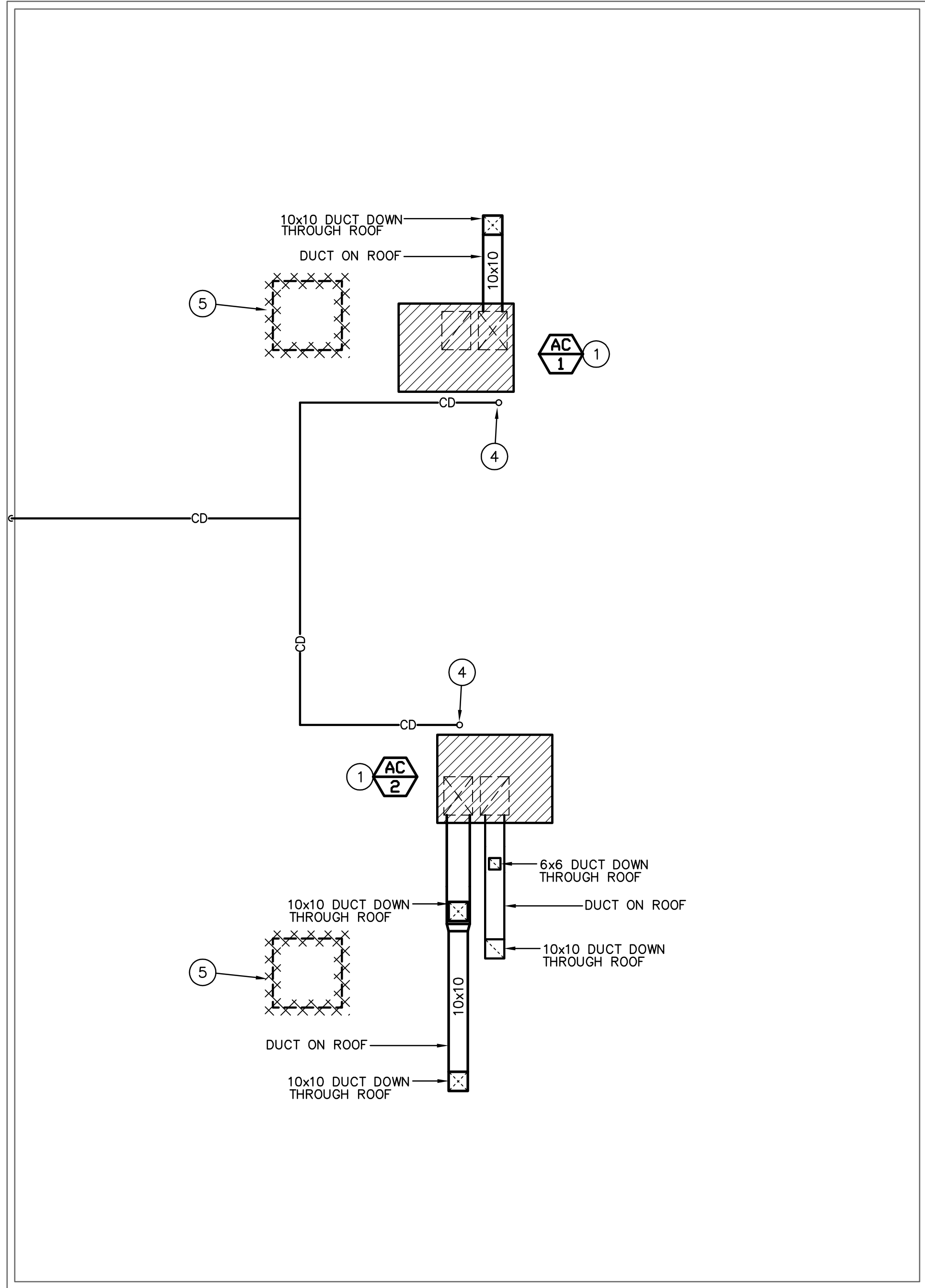
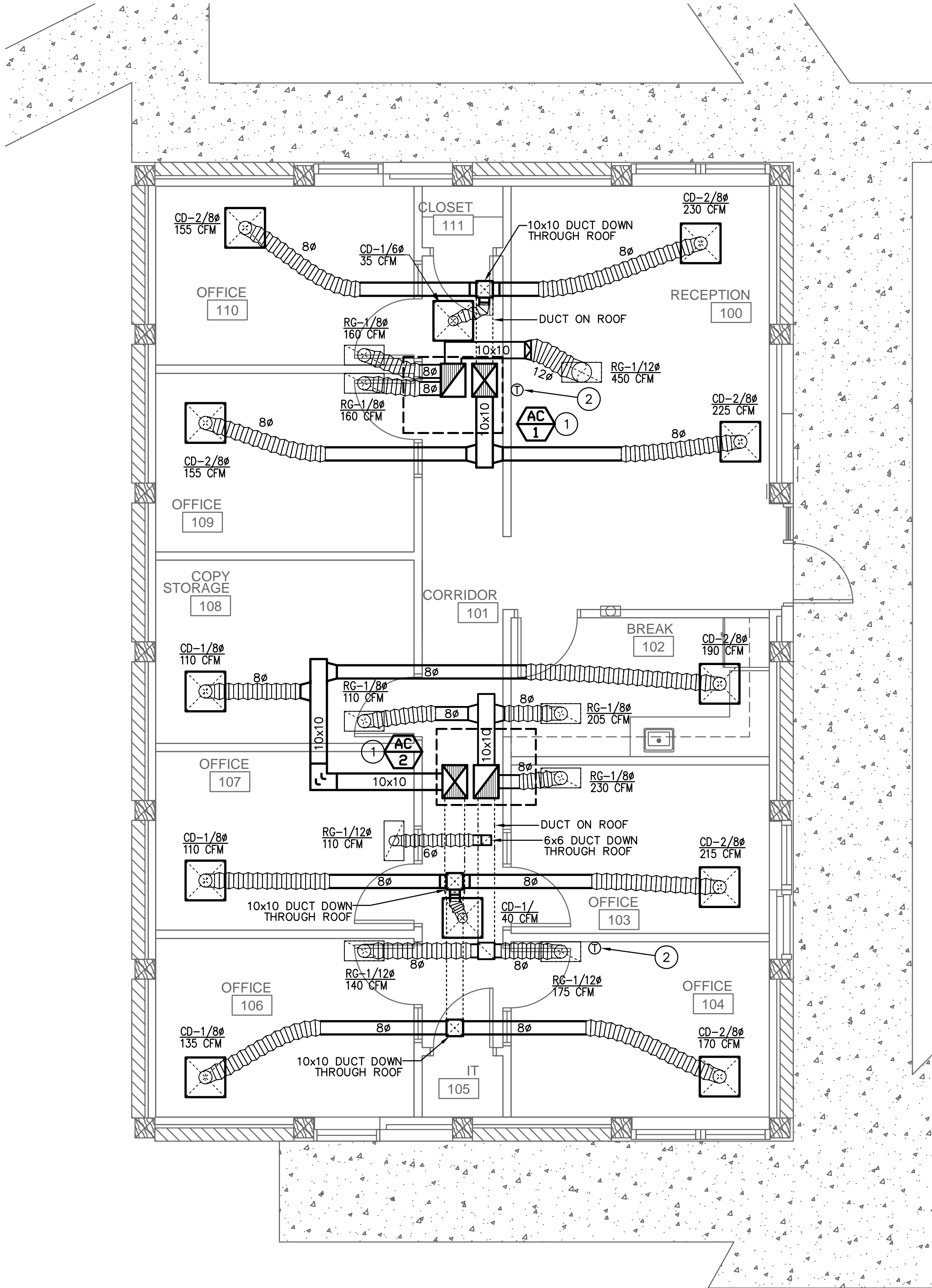
APN: 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 14th, 2019
JOB NO. 729
SHEET

A10.2



Jan 28, 2019 - 7:53am



## KEYNOTES

- 1 ROOF MOUNTED PACKAGED A/C UNIT ON NEW 8" ROOF CURB. EXTEND SUPPLY AND RETURN AIR DUCTS DOWN THROUGH ROOF OR HORIZONTALLY ON ROOF AS SHOWN. PROVIDE CLEARANCES PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH EXISTING CONDITIONS AND ARCHITECT PRIOR TO COMMENCING WORK.
- 2 HEATING/COOLING PROGRAMMABLE THERMOSTAT ON WALL AT 48" ABOVE FINISHED FLOOR. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT/OWNER.
- 3 BRANCH TAKE-OFFS ABOVE CEILING SHALL HAVE SPIN-IN FITTINGS WITH BALANCING DAMPER, FLEX DUCT RUNOUT AND SHEET METAL ELBOW AT DIFFUSER CONNECTION TO PREVENT KINKING IN DUCT. BALANCE TO CFM SHOWN. FLEX DUCT SHALL NOT EXCEED 8'-0" IN LENGTH. SIZE TO CORRESPOND WITH INLET NECK OF DIFFUSER. (TYPICAL).
- 4 EXTEND NEW 3/4" TYPE 'M' COPPER CONDENSATE DRAIN PIPING FROM UNIT DRAIN CONNECTION. ROUTE PIPING AT 1/8" PER FOOT ON ROOF TO ROOF DRAIN GUTTER.
- 5 SALVAGE AND RETURN EXISTING ROOFTOP UNIT TO ERAU MATERIALS MANAGEMENT. REPAIR ROOF AS REQUIRED.

### NOTE:

ALL ROOF PENETRATIONS WILL BE MADE BY A CERTIFIED SOPREMA ROOF INSTALLER. NOT OTHER CONTRACTOR OR ROOFING SYSTEM IS ACCEPTABLE. PROVIDE SOPREMA APPROVED ROOF JACK TO ROOFING CONTRACTOR FOR INSTALLATION.

### CONTACT SOPREMA ROOFING REPRESENTATIVE:

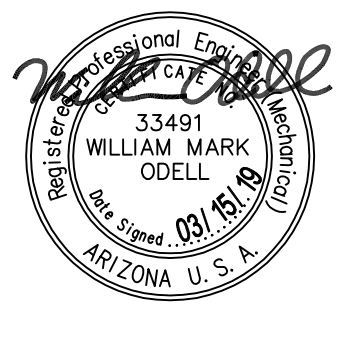
WALT HITCHCOCK  
CELL: 480-694-3433  
EMAIL: WHITCHCOCK@SOPREMA.US

### NOTE:

A COPY OF THE AIR BALANCE REPORT, SIGNED BY MECHANICAL CONTRACTOR, SHALL BE PROVIDED TO THE ARCHITECT FOR FINAL APPROVAL.

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Mechanical Floor Plan

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

DRAWN BY
CHECKED BY
DATE Jan. 24th, 2019
JOB NO. 729
SHEET

**M1.0**



# MECHANICAL SPECIFICATIONS

**GENERAL REQUIREMENTS**  
GENERAL PROVISIONS WHICH MAKE SPECIFIC REFERENCE TO ELECTRICAL DIVISION ONLY ARE INCLUDED HEREIN FOR CLARITY AND SIMPLIFICATION OF SPECIFICATIONS WRITING AND ARE NOT PART OF THE MECHANICAL WORK. THE WORK OF DIVISION 15, MECHANICAL, IS SUBJECT TO THE CONDITIONS OF THE CONDITIONS OF THE CONTRACT, DIVISION 1, GENERAL REQUIREMENTS, AND APPLICABLE REQUIREMENTS OF OTHER PORTIONS OF THE CONTRACT DOCUMENTS. EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS AND COORDINATE THE MECHANICAL WORK ACCORDINGLY.

**INTENT**  
IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER. SHALL THERE APPEAR TO BE DISCREPANCIES OR QUESTIONS OF INTENT IN THE CONTRACT DOCUMENTS, REFER THE MATTER TO THE ARCHITECT FOR HIS DECISION BEFORE ORDERING ANY MATERIALS OR EQUIPMENT OR BEFORE THE START OF ANY RELATED WORK. THE DECISION OF THE ARCHITECT SHALL BE FINAL, CONCLUSIVE AND BINDING.

**DRAWINGS AND DATA**  
DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE OF WORK AND TO INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTS, CONDUITS, PIPING AND FIXTURES. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET OR FITTINGS OR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING INSTALLATION OF THE WORK. LOCATION OF ALL ITEMS NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. EXACT LOCATIONS NECESSARY TO SECURE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT PROJECT AND SHALL HAVE OVAL OF ARCHITECT BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS. IF SO DIRECTED BY ARCHITECT, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF WORK. INCLUDE MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION AND OPERATION OF A SYSTEM OR PIECE OF EQUIPMENT IN BID PRICE.

**CODES**  
INCLUDE IN WORK, WITHOUT EXTRA COST TO OWNER, LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS) REQUIRED TO COMPLY WITH APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS. DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, ORDINANCES, STANDARDS AND STATUTES. CODES, ORDINANCES, STANDARDS AND STATUTES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH DRAWINGS OR SPECIFICATIONS. FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS AND CODES ARE MINIMUM REQUIREMENTS:

A. APPLICABLE CITY, COUNTY, AND STATE MECHANICAL, ELECTRICAL, GAS, PLUMBING, HEALTH AND SANITARY CODES, LAWS AND ORDINANCES.  
B. 2012 INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS.  
C. REGULATIONS, PERMITS, INSPECTIONS: COMPLY WITH ALL APPLICABLE CODED, RULES AND REGULATIONS. ALL MATERIALS, EQUIPMENT AND WORK MUST CONFORM TO THE UNIFORM MECHANICAL CODE. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES WHEN REQUIRED BY CODE. ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES.

**GENERAL**  
MATERIALS AND EQUIPMENT STANDARD PRODUCTS OF A REPUTABLE MANUFACTURER REGULARLY ENGAGED IN MANUFACTURE OF THE SPECIFIED ITEMS WHERE THE ONE UNIT IS REQUIRED OF ANY ITEM, FURNISHED BY THE SAME MANUFACTURER, EXCEPT WHERE SPECIFIED OTHERWISE. INSTALL MATERIAL AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SHOULD VARIANCE BETWEEN PLANS AND SPECIFICATIONS OCCUR WITH THESE, CONTACT ARCHITECT IMMEDIATELY SO THAT VARIATIONS IN INSTALLATION CAN BE KNOWN BY ALL PARTIES CONCERNED. PROVIDE EQUIPMENT FROM MANUFACTURER WHOSE PRODUCTS HAVE LOCAL REPRESENTATION.

**EXECUTION**  
PROTECT EXISTING ACTIVE SERVICES (WATER, GAS, SEWER, ELECTRIC) WHEN ENCOUNTERED, AGAINST DAMAGE FROM CONSTRUCTION WORK. DO NOT PREVENT OR DISTURB OPERATION OF ACTIVE SERVICES WHICH ARE TO REMAIN. IF WORK MAKES TEMPORARY SHUTDOWNS OF SERVICES UNAVOIDABLE, CONSULT WITH OWNER AS TO DATES, PROCEDURES, AND ESTIMATED DURATION OF AT LEAST 10 WORKING DAYS IN ADVANCE OF DATE WHEN WORK IS TO BE PERFORMED. ARRANGE WORK FOR CONTINUOUS PERFORMANCE TO ASSURE THAT EXISTING OPERATING SERVICES WILL BE SHUT DOWN ONLY DURING THE TIME REQUIRED TO MAKE NECESSARY CONNECTIONS. IF A SYSTEM CANNOT SHUT DOWN, INSTALL TEMPORARY BYPASSES OR JUMPERS UNTIL CONNECTIONS ARE COMPLETE. CONTRACTOR RESPONSIBLE FOR ALL COSTS INCURRED BY ABOVE SHUTDOWNS, INCLUDING BYPASS OR JUMPER INSTALLATIONS, FOR WORK PERFORMED UNDER THIS SECTION. IF EXISTING ACTIVE UTILITY SERVICES ARE ENCOUNTERED WHICH REQUIRE RELOCATION, MAKE REQUEST TO PROPER AUTHORITIES FOR DETERMINATION OF PROCEDURES. PROPERLY TERMINATE EXISTING SERVICES TO BE ABANDONED IN CONFORMANCE WITH REQUIREMENTS OF AUTHORITIES. WHERE CONNECTIONS OR DISRUPTIONS ARE MADE TO EXISTING SYSTEMS, REACTIVATE, REFILL, AND RECHARGE ALL COMPONENTS AND RESTORE SYSTEMS TO OPERATING CONDITIONS AT TIME OF DISRUPTION.

**GUARANTEE**  
EACH COMPLETE SYSTEM GUARANTEED BY CONTRACTOR FOR A PERIOD OF ONE YEAR, FROM DATE OF ACCEPTANCE OF WORK BY OWNER IN WRITING, TO BE FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP, AND TO PERFORM SATISFACTORILY UNDER ALL CONDITIONS OF LOAD OR SERVICE. THE GUARANTEES PROVIDE THAT ANY ADDITIONAL CONTROLS, PROTECTIVE DEVICES, OR EQUIPMENT BE PROVIDED AS NECESSARY TO MAKE THE SYSTEM OF EQUIPMENT OPERATE SATISFACTORILY AND THAT ANY FAULTY MATERIALS OR WORKMANSHIP BE REPLACED OR REPAIRED. ON FAILURE OF GUARANTOR TO DO THE ABOVE AFTER WRITTEN NOTICE FROM OWNER, THE OWNER MAY HAVE THE WORK DOWN AT THE COST OF GUARANTOR. LOSS OF REFRIGERANT IS CONSIDERED A DEFECT IN WORKMANSHIP AND/OR EQUIPMENT, TO BE CORRECTED AS REQUIRED AT NO EXTRA COST TO THE OWNER.

PROVIDE EXTENDED FIVE (5) YEAR FACTORY PARTS & LABOR WARRANTY ON ALL AIR CONDITIONING COMPRESSORS.

**AIR CONDITIONING, HEATING AND VENTILATING**

**SCOPE**  
WORK UNDER THIS SECTION INCLUDES FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE REMODELING, INSTALLATION AND PLACING INTO OPERATION THE HEATING, VENTILATING AND AIR CONDITIONING WORK AS SPECIFIED HEREIN AND INDICATED ON THE DRAWINGS.

**VERIFICATION OF DIMENSIONS:**  
SCALED AND FIGURED DIMENSIONS ARE APPROXIMATE ONLY. BEFORE PROCEEDING WITH WORK, CAREFULLY CHECK AND VERIFY AT THE SITE, AND RESPONSIBLE FOR PROPERLY FITTING EQUIPMENT AND MATERIALS TOGETHER AND TO THE STRUCTURE IN SPACES PROVIDED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND MANY OFFSETS, BENDS, SPECIAL FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED. CAREFULLY STUDY DRAWINGS AND PREMISES IN ORDER TO DETERMINE BEST METHODS, EXACT LOCATIONS, ROUTES AND BUILDING OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.

**CUTTING AND PATCHING:**  
CUT EXISTING WORK AND PATCH AS NECESSARY TO PROPERLY INSTALL THE NEW WORK. AS THE WORK PROGRESSES, LEAVE NECESSARY OPENINGS, HOLES AND CHASES, ETC., IN THEIR CORRECT LOCATIONS. IF THE REQUIRED OPENINGS, HOLES AND CHASES ETC., ARE NOT IN THEIR CORRECT LOCATIONS, MAKE THE NECESSARY CORRECTIONS AT NO COST TO THE OWNER. AVOID EXCESSIVE CUTTING AND DO NOT CUT STRUCTURAL MEMBERS WITHOUT CONSENT OF ARCHITECT.

**REGULATIONS, PERMITS & INSPECTIONS**  
COMPLY WITH ALL APPLICABLE CODES, RULES AND REGULATIONS. ALL MATERIALS, EQUIPMENT AND WORK MUST CONFORM TO THE INTERNATIONAL MECHANICAL CODE. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES WHEN REQUIRED BY CODE. ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES.

**DUCTWORK**  
ALL DUCTWORK FABRICATED AS PER LATEST INTERNATIONAL MECHANICAL CODE REQUIREMENTS AND SMACNA MANUAL. EXTENSION OF EXISTING DUCTWORK SHALL BE MADE WITH SOME MATERIAL. DUCTWORK SHALL BE CONSTRUCTED OF NEW HOT-DIPPED GALVANIZED SHEET METAL ASTM A-120 FOR EACH SIDE, WITH 1", 1 1/2 LB. DENSITY DUCT LINER. TAPE ALL CROSS-JOINTS IN SHEET METAL DUCT WITH HARDCAST. TAKE-OFF FITTINGS SHALL BE CONICAL SPIN-IN WITH QUADRANT DAMPER. TURNING VANES SHALL BE INSTALLED IN ALL MITERED ELBOWS.

**FLEXIBLE DUCT**  
FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTION TO AIR DISTRIBUTION DEVICES, BUT SHALL NOT EXCEED 6 FEET IN LENGTH. FLEXIBLE DUCT SHALL HAVE A MINIMUM R-8 INSULATION VALUE.

**DUCT INSULATION**  
DUCT SIZES ON DRAWINGS ARE "CLEAR INSIDE." INCREASE SHEET METAL SIZES ACCORDINGLY FOR LINED DUCTWORK. ADHESIVE AND INSULATING MATERIALS SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS MAXIMUM 25 FOR FLAME SPREAD AND 50 FOR SMOKE DEVELOPED. ADHESIVES SHALL BE WATERPROOF.

**DUCT INSULATION SCHEDULE:**  
CONCEALED RECTANGULAR LINED  
CONCEALED ROUND LINED

**DUCTS IN CONDITIONED SPACE OR UNCONDITIONED SPACE SEPARATED FROM BUILDING EXTERIOR:**  
RECTANGULAR LINED DUCTWORK — SEMI-RIGID GLASS FIBER INSULATION, 1 1/2 PCF,  
1 1/2" THICK, THERMAL CONDUCTIVITY AT 75° MAXIMUM 0.17 BTU/IN./SQ. FT./DEG./HR. MINIMUM "R-VALUE" SHALL BE 6.0.

**DUCTS IN UNCONDITIONED SPACE OR EXTERIOR:**  
LINED DUCTWORK — SEMI-RIGID GLASS FIBER INSULATION, 1 1/2 PCF, 2" THICK, THERMAL CONDUCTIVITY AT 75° MAXIMUM 0.13 BTU/IN./SQ. FT./DEG./HR. MINIMUM "R-VALUE" SHALL BE 8.0.

EXTERIOR DUCT SHALL BE SEALED WATER TIGHT.

**ACCEPTABLE MANUFACTURERS**  
THE FOLLOWING IS A LIST OF MANUFACTURERS WHOSE EQUIPMENT AND HVAC MATERIALS ARE ACCEPTABLE, SUBJECT TO CONFORMANCE WITH CONTRACT DOCUMENTS. VERIFY THAT THE EQUIPMENT WILL MEET ALL CAPACITIES, SPACE ALLOCATIONS, AND THAT THE WEIGHTS WILL NOT EXCEED STRUCTURAL DESIGN LOADS.

PACKAGED A/C: TRANE  
GRILLES, REGISTERS, DIFFUSERS: KRUEGER, METAL-AIRE, TITUS, FLEXIBLE DUCT: GENFLEX, THERMAFLEX, OR EQUIVALENT.  
DUCT AND PIPE INSULATION: KNAUF, OWENS-CORNING, MANVILLE, CERTAIN-TEED, PPG.

**AIR SYSTEM BALANCING**  
AIR SYSTEMS AND AIR DISTRIBUTION TEST AND BALANCE: THE CONTRACTOR SHALL INCLUDE IN HIS BID THE BALANCING AND TESTING OF HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS TO BALANCE, ADJUST AND TEST AIR MOVING EQUIPMENT AND AIR DISTRIBUTING OR EXHAUSTING SYSTEMS AS HEREIN SPECIFIED. PROVIDE CERTIFIED REPORT.

**INSTRUCTIONS/O&M MANUAL**  
THE CONTRACTOR SHALL INSTRUCT THE OWNER IN THE PROPER OPERATION AND MAINTENANCE OF ALL INSTALLED HVAC EQUIPMENT. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO (2) BOUND OPERATING AND MAINTENANCE MANUALS TO THE OWNER AT THE COMPLETION OF THE PROJECT. THE MANUAL SHALL INCLUDE: CONTROL AND/OR INTERLOCK WIRING DIAGRAMS, SEQUENCE OF OPERATION, PREVENTATIVE MAINTENANCE ITEMS, AND A PARTS LIST WITH THE NOMENCLATURE, MAINTENANCE SCHEDULE, AND NAME, ADDRESS AND PHONE NUMBER OF THE LOCAL PRODUCT REPRESENTATIVE.

PACKAGE ROOFTOP A/C W/ GAS HEAT SCHEDULE (SUPPLIED BY OWNER)																					
EQUIP. NO.	MANUFACTURER	NOMINAL TONS	MODEL NO.	CFM	OSA CFM	FAN HP	COOLING CAPACITY				HEATING (NAT. GAS)			VOLTS/ PHASE	MCA	MAX FUSE	MIN. SEER	WEIGHT LBS.	REMARKS		
							TOTAL MBH	SENS. MBH	ENT. AIR TEMP DB (F)	TEMP WB (F)	INPUT	OUTPUT	A.F.U.E.								
AC-1	TRANE	2	4YCY5024	800	146	1/2	23.7	16.8	80	67	95	60	48	81%	208-230/1	18.4	25	15	355	①②③④⑤⑥⑦⑧	
AC-2	TRANE	2.5	4YCY5030	1000	157	1/2	29.1	20.2	80	67	95	70	56	81%	208-230/1	21.2	30	15	385	①②③④⑤⑥⑦⑧	
①	PROVIDE WITH #BAYCURB051A FULL PERIMETER ROOF CURB SLOPED TO MATCH ROOF SLOPE.										⑥	PROVIDE WITH #BAYLOAM105A LOW AMBIENT CONTROL.									
②	EXTEND FULL SIZE TYPE "M" COPPER CONDENSATE DRAIN FROM UNIT AND SLOPE @ 1/8" PER FT. ON ROOF TO GUTTER.										⑦	PROVIDE WITH #BAYCCHT102S CRANK CASE HEATER.									
③	PROVIDE CLEARANCES AS PER MANUFACTURERS REQUIREMENTS.										⑧	OWNER SHALL PURCHASE AND HAVE MECHANICAL EQUIPMENT THAT IS MANUFACTURED BY TRANE OR AMERICAN STANDARD DELIVERED TO JOBSITE. MECHANICAL CONTRACTOR SHALL CONFIRM EQUIPMENT TO BE PURCHASED PRIOR TO ORDERING.									
④	PROVIDE TRANE #TCONT800 TOUCHSCREEN, PROGRAMMABLE, THERMOSTAT.										⑨	OWNER SHALL PROVIDE, AND CONTRACTOR SHALL INSTALL HIGH ALTITUDE ORIFICE KIT.									
⑤	PROVIDE WITH #BAYFLTR201B FILTER FRAME AND 2 SETS OF FILTERS.																				

NOTE:  
UPON RECEIPT OF OWNER PROVIDED HVAC EQUIPMENT AND ACCESSORIES BY THE GENERAL CONTRACTOR AND HVAC CONTRACTOR, THESE CONTRACTORS WILL TAKE FULL RESPONSIBILITY FOR THESE ITEMS. ANY OWNER PROVIDED EQUIPMENT AND/OR ACCESSORIES THAT ARE LOST, STOLEN, DAMAGED OR DESTROYED WILL BE REPLACED BY THE CONTRACTORS AT THEIR OWN EXPENSE.

## ASHRAE 62.1 OUTSIDE AIR CALCULATION

### Outside Air for Unit AC-1

Space	Area	Occ Density	Rp	Pz	Ra	Az	Vbz
Office	234	5	5	1.17	0.06	234	19.9
Corridor	87	0	0	0	0.06	87	5.2
Reception	278	30	5	8.34	0.06	278	58.4
Balance AC-1 to 83 CFM OSA							Total Net OSA Required 83

### Outside Air for Unit AC-2

Space	Area	Occ Density	Rp	Pz	Ra	Az	Vbz
Office	579	5	5	2.895	0.06	579	49.2
Break	91	25	5	2.275	0.06	91	16.8
Corridor	104	0	0	0	0.06	104	6.2
Reception	0	30	5	0	0.06	0	0.0
Balance AC-2 to 72 CFM OSA							Total Net OSA Required 72

**6.2.2.1 Breathing Zone Outdoor Airflow.** The design outdoor airflow required in the *breathing zone* of the occupiable space or spaces in a *zone*, i.e., the *breathing zone outdoor airflow* ( $V_{bz}$ ), shall be determined in accordance with Equation 6-1.

$$V_{bz} = R_p \cdot P_z + R_a \cdot A_z \quad (6-1)$$

where

$A_z$  = zone floor area: the net occupiable floor area of the zone  $m^2$  ( $ft^2$ )

$P_z$  = zone population: the largest number of people expected to occupy the zone during typical usage. If the number of people expected to occupy the zone fluctuates,  $P_z$  may be estimated based on averaging approaches described in Section 6.2.6.2

**Note:** If  $P_z$  cannot be accurately predicted during design, it shall be an estimated value based on the zone floor area and the default occupant density listed in Table 6-1.

$R_p$  = outdoor airflow rate required per person as determined from Table 6-1

**Note:** These values are based on adapted occupants.

$R_a$  = outdoor airflow rate required per unit area as determined from Table 6-1

## DUCT CONSTRUCTION NOTES

1 – ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH "ASHRAE GUIDE" AND "SMACNA STANDARDS" AND IN CONFORMANCE WITH REQUIREMENTS OF LOCAL BUILDING, MECHANICAL AND ENERGY CONSERVATION CODES. WHERE MORE THAN ONE REGULATION OR CODE APPLIES, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

2 – FLEXIBLE DUCTWORK SHALL COMPLY WITH THE CLASS I REQUIREMENTS OF THE NFPA BULLETIN NO. 90A AND SHALL BE INSULATED WITH 1" FIBERGLASS, SUPPORTED BY HELICALLY WOUND STEEL WIRE WITH REINFORCED METALIZED OUTER JACKET RATED FOR USE IN PLENUMS. ATTACHMENT SHALL BE WITH WORM DRIVE CLAMPS. LENGTH SHALL NOT EXCEED 10'-0", EXCEPT AS APPROVED BY ARCHITECT.

3 – PROVIDE MANUAL BALANCING DAMPER AT EACH BRANCH DUCT TAKE OFF.

4 – ALL DUCTWORK JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTION ON DUCTWORK SHALL BE LISTED AND LABELED BY UL 181A OR 181B TAPES AND MASTICS.

5 – ALL AIR SUPPLY AND RETURN DUCTS LOCATED IN CONDITIONED SPACES OR UNCONDITIONED SPACES SEPARATED FROM BUILDING EXTERIOR SHALL HAVE A MIN. R-5 INSULATION VALUE. ALL AIR SUPPLY AND RETURN DUCTS LOCATED IN UNCONDITIONED SPACES NOT SEPARATED FROM BUILDING EXTERIOR SPACES OR EXTERIOR DUCTS SHALL HAVE A MIN. R-8 INSULATION.

6 – PROVIDE RADIUS ELBOWS, TURNING VANES, AND SPLITTER DAMPERS IN BRANCHES AND EXTRACTORS WHERE APPLICABLE.

7 – TURNING VANES SHALL BE INSTALLED IN ALL MITERED ELBOWS.

8 – BRANCH DUCT SERVING DIFFUSERS SHALL BE SIZE AS INDICATED. PROVIDE INCREASER OR SHEET METAL PLENUM TO CONNECT TO DIFFUSER AS REQUIRED.

9 – ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS. IF DUCT LINER IS USED FOR INSULATION, CONTRACTOR SHALL INCREASE DUCT SIZE ACCORDINGLY.

10 – HANGERS FOR SHEET METAL DUCTWORK SHALL BE INSTALLED AS REQUIRED BY 2012 IMC.

## COORDINATION NOTES

1 – COORDINATE OPENING'S FOR GRILLES, REGISTERS, DIFFUSERS AND DUCTWORK WITH FRAMING CONTRACTOR PRIOR TO ROUGH-IN.

2 – COORDINATE EXACT LOCATION OF ALL GRILLES, REGISTERS AND DIFFUSERS WITH ARCHITECTURAL PLANS.

3 – LIGHTING & SPRINKLER HEADS TAKE PRECEDENCE OVER DIFFUSER LOCATION. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS TO DIFFUSERS TO AVOID ANY CONFLICT WITH LIGHTING LAYOUT & SPRINKLER HEADS.

4 – CONTRACTOR TO COORDINATE THERMOSTAT LOCATIONS WITH OWNER & ARCHITECT PRIOR TO MOUNTING.

5 – ALL THERMOSTATS ARE TO BE MOUNTED AT A HEIGHT OF 48" TO 54" ABOVE THE FLOOR LEVEL FOR DISABLED ACCESS.

## GENERAL REQUIREMENTS

1 – PROVIDE CLEARANCES AS PER MANUFACTURER'S RECOMMENDATIONS.

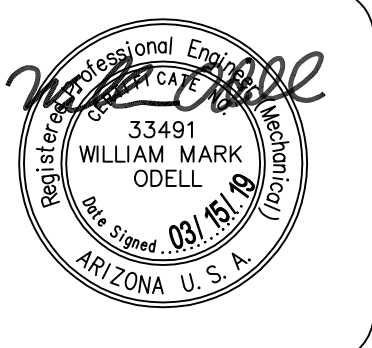
2 – PITCH CONDENSATE DRAIN LINE 1/8" PER 12" RUN TOWARDS TERMINATION. INSULATE IN CONDENSATE DRAIN LINE WITH 3/8" CLOSED CELL "ARMIFLEX" TUBE INSULATION, TO PREVENT CONDENSATE DRIP.

3 – PRIOR TO THE CONTRACTOR ORDERING OR SETTING ANY AIR CONDITIONING EQUIPMENT, DUCTWORK, OR AIR DEVICE, HE SHALL VERIFY LOCATION OF PLACEMENT WITH STRUCTURAL DRAWINGS AND CONFIRM WEIGHTS, DISCHARGE CONFIGURATION, SIZES, ELECTRICAL CHARACTERISTICS AND ANY OTHER DIMENSIONAL DATA WHICH MIGHT AFFECT THE SUCCESSFUL INSTALLATION OF THE EQUIPMENT.

4 – KEEP ALL VENTS THROUGH ROOF AND EXHAUST DISCHARGE DUCTS A MINIMUM OF 10'-0" FROM OUTSIDE AIR INTAKES OR WINDOWS AND FROM ALL VERTICAL PORTIONS OF THE BUILDING.

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ARCHITECTURE & PLANNING

DRAWING: Mechanical Schedules

PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY
CHECKED BY
DATE Jan. 24th, 2019
JOB NO. 729
SHEET



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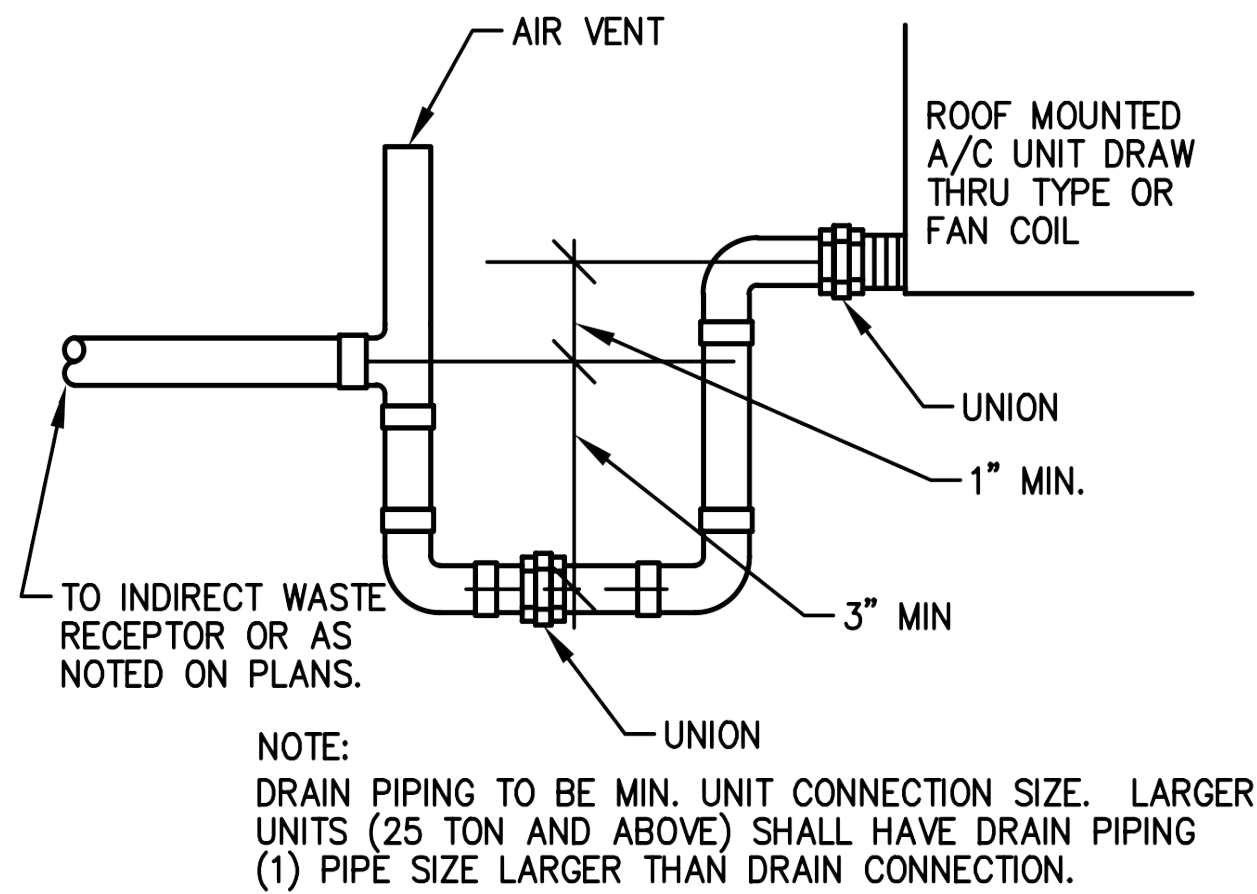
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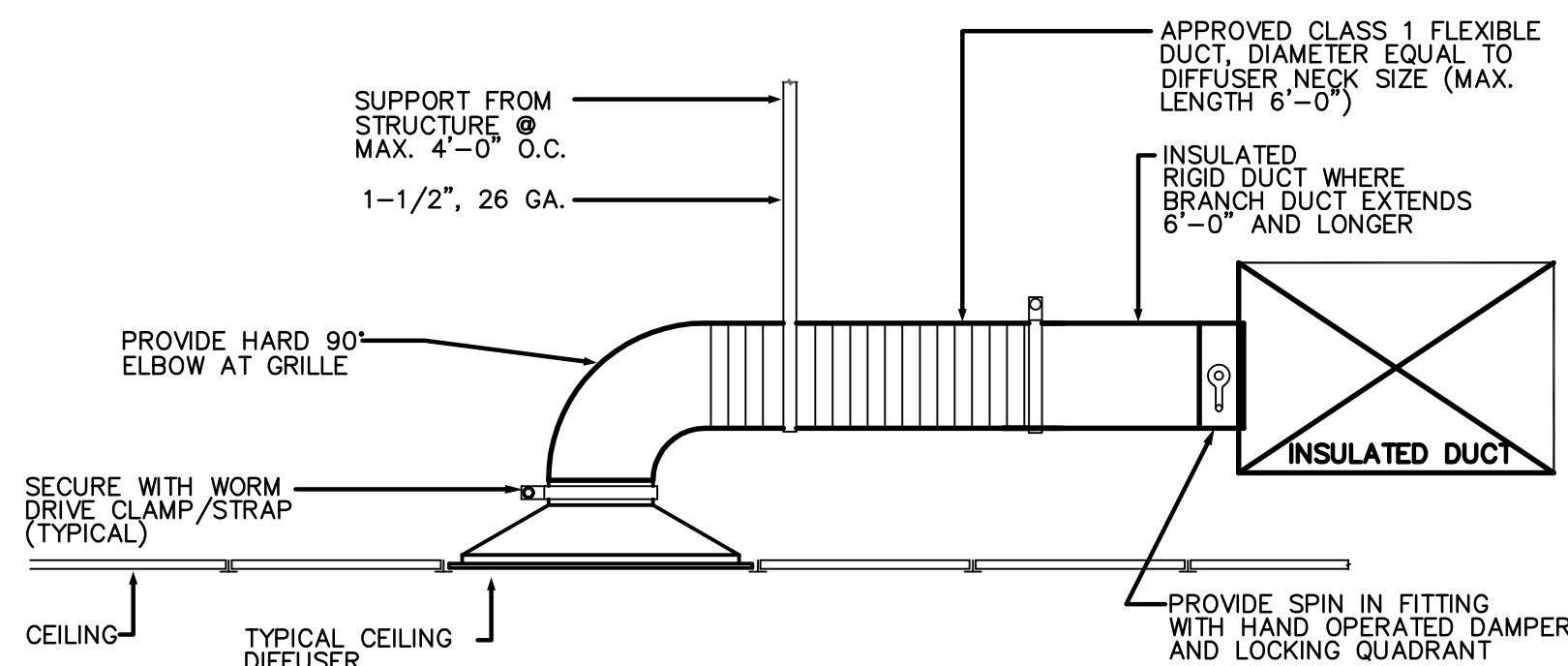


#### CONDENSATE DRAIN TRAP

NOT TO SCALE

4

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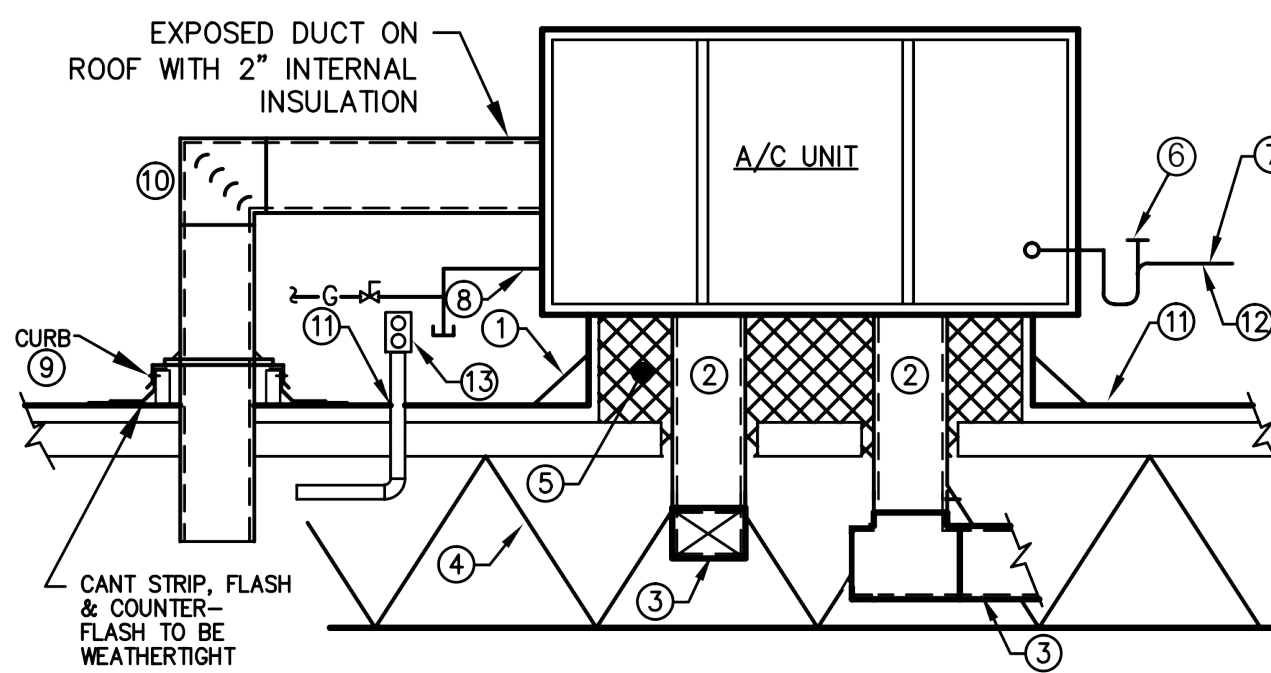


#### BRANCH DUCT TAKE-OFF DETAIL

NOT TO SCALE

5

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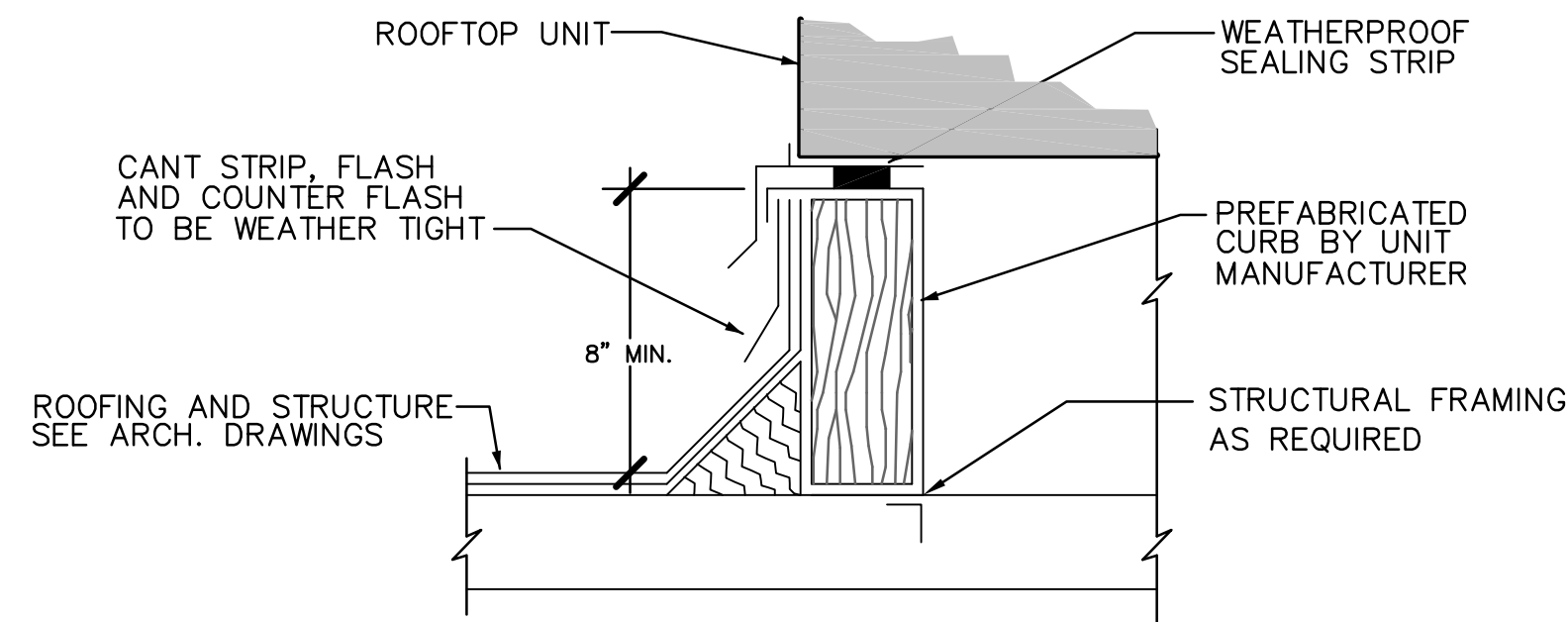
#### ROOFTOP A/C

NOT TO SCALE

6

M3.0

- 1 SET OWNER PROVIDED ROOF CURB ON ROOF DECK - SHIM DEAD DEAD LEVEL SECURE ROOF CURB TO DECK AND A/C UNIT TO ROOF CURB.
- 2 TRANSITION TO CONNECTION SIZES IN DUCT RISER (FIELD VERIFY EXACT SIZE)
- 3 NEW TRUNK LINE
- 4 REFER TO STRUCTURAL DRAWINGS FOR JOIST LOCATIONS, SIZES, AND DIRECTION.
- 5 PACK OPENING BETWEEN ROOF DECK AND DUCTS & ENTIRE CURB CAVITY W/ FIBER-GLASS INSULATION. PROVIDE SHEET MTL. ENCLOSURE AT DUCT PENETRATION OF ROOF DECK TO COVER UP & HOLD INSULATION IN PLACE.
- 6 NEW COND. TRAP SEE COND. TRAP DETAIL
- 7 COPPER CONDENSATE DRAIN W/ CLEANOUT & 4" DEEP SEAL TRAP PER MFR'S REQUIREMENTS.
- 8 EXISTING GAS CONNECTION PROVIDE NEW VALVE WITH DIRT LEG
- 9 SEE ROOF PLAN DETAILS
- 10 TURNING VANES - (TYP)
- 11 FLASH AND COUNTERFLASH PIPE THRU ROOF.
- 12 3/4" COPPER CONDENSATE SLOVE AT 1/8" PER FOOT. TERMINATE AT ROOF GUTTER
- 13 120V. GFCI SERVICE RECEPTACLE REFER TO ELECTRICAL PLANS

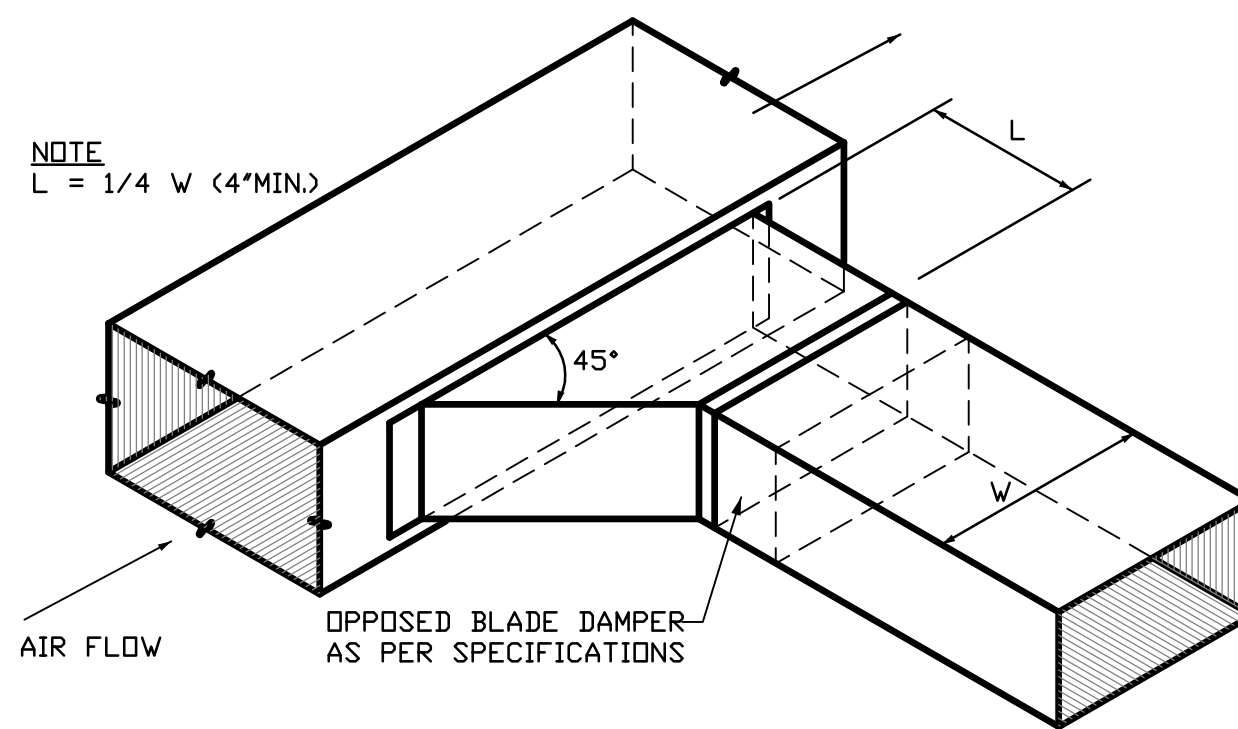


#### HEAT PUMP UNIT MOUNTING DETAIL

NOT TO SCALE

1

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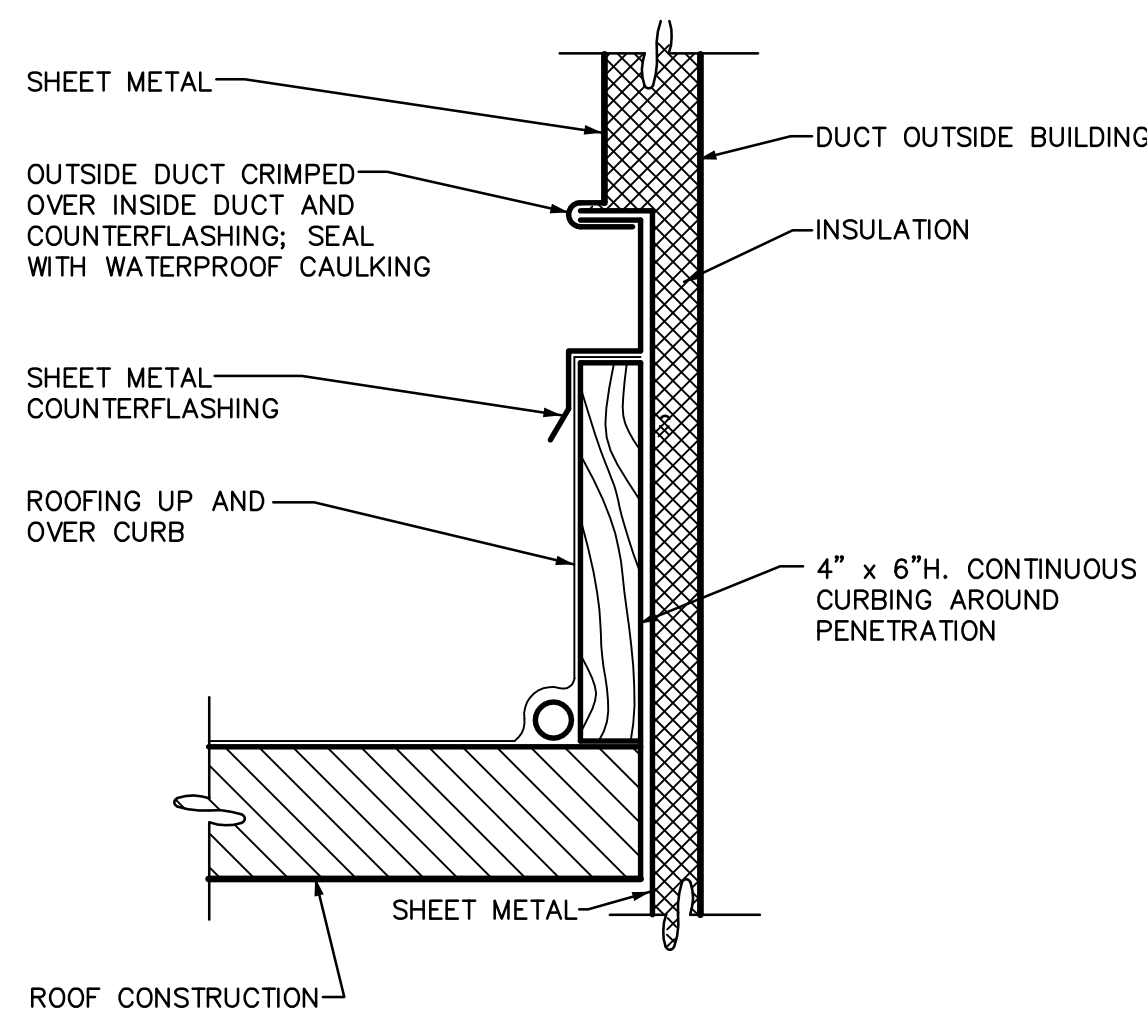


#### BRANCH DUCT TAKE-OFF DETAIL

NOT TO SCALE

2

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#### DUCT THRU ROOF DETAIL

NOT TO SCALE

3

M3.0

**OSE**  
Design Group, LLC  
Consulting Engineers

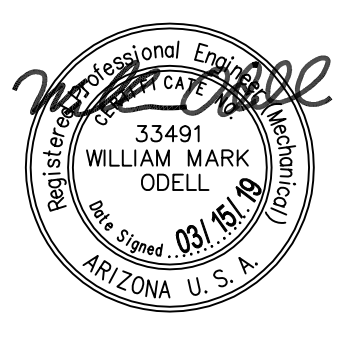
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ARCHITECTURE & PLANNING

DRAWING: Mechanical Details

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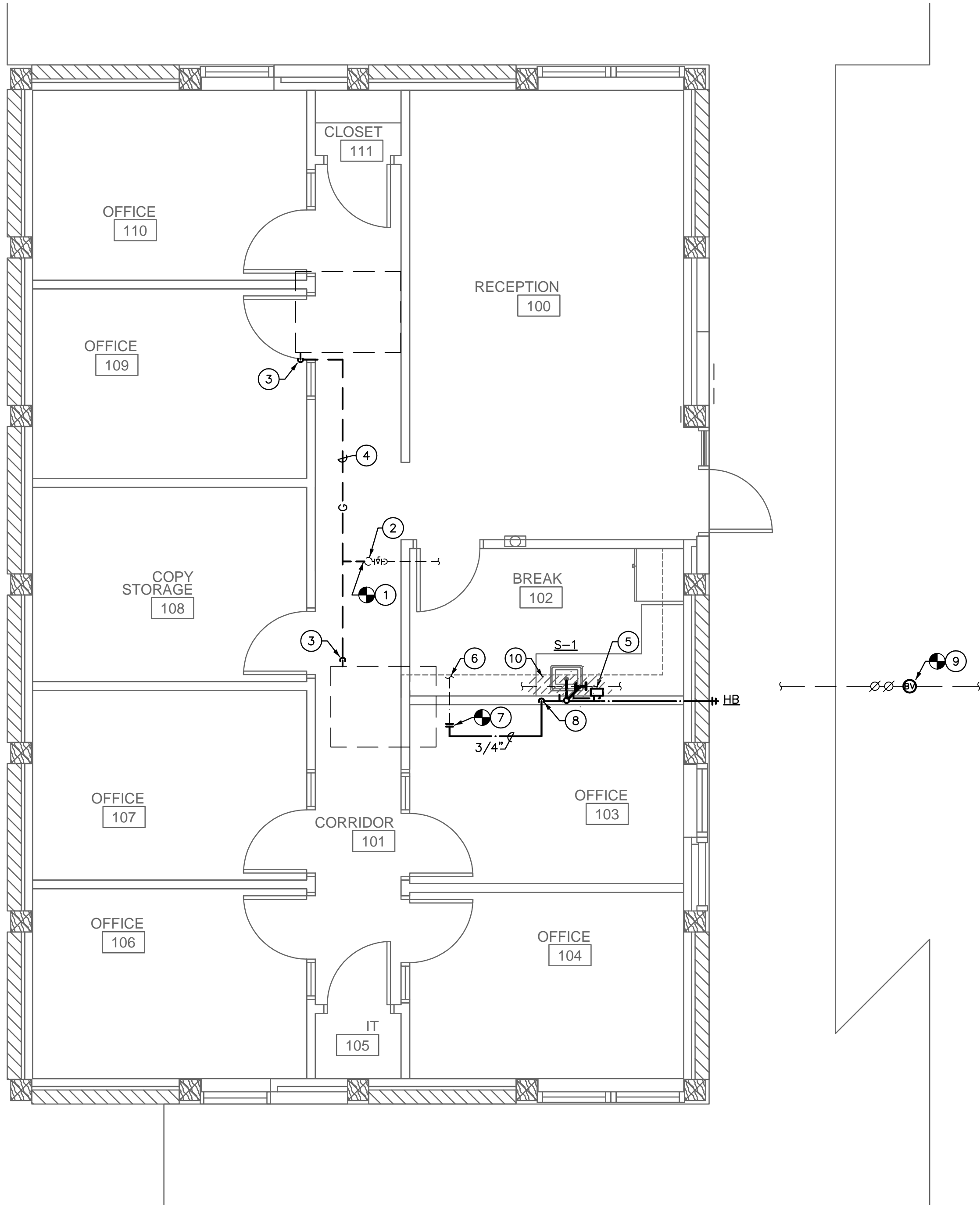
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PLUMBING GENERAL NOTES:

1. ALL PLUMBING WORK SHALL COMPLY WITH THE MOST STRINGENT OF APPLICABLE CODES, ORDINANCES, OR THE SPECIFICATIONS.
2. ALL FIXTURES SHALL BE PROPERLY VENTED TO THE ATMOSPHERE.
3. COORDINATE LOCATION OF ALL PLUMBING LINES WITH DUCTWORK AND ELECTRICAL SERVICES.
4. WATER PIPING INSTALLED UNDER CONCRETE SLAB SHALL BE LOOPED IN PARTITION WALLS WITH NO JOINTS UNDER SLAB & WITH PLASTIC SLEEVE FOR EACH PENETRATION THROUGH SLAB.
5. INSTALL APPROVED DIELECTRIC ISOLATORS AT ALL CONNECTIONS OF DISSIMILAR METALS.
6. LOCATE ALL VENTS THROUGH ROOF 10'-0" FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
7. SOLDERS AND FLUX HAVING A LEAD CONTENT IN EXCESS OF TWO-TENTHS OF ONE PERCENT SHALL NOT BE USED IN THE INSTALLATION OR REPAIR OF PLUMBING PROVIDING WATER FOR HUMAN CONSUMPTION.
8. CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
9. LOCATE ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER EQUIPMENT REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENTS, INSPECTION, REMOVAL OR REPLACEMENT SO AS TO BE ACCESSIBLE WITH REFERENCE TO THE FINISHED BUILDING.
10. REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL LINE SIZES.
11. WHERE POSSIBLE, TIE VENTS TOGETHER SO THAT A MINIMUM NUMBER TERMINATE THROUGH ROOF.
12. PRIOR TO SUBMITTING BID, CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS & INCLUDE IN HIS BID AN AMOUNT TO FURNISH & INSTALL ANY FIXTURES SHOWN IN ADDITION TO PLUMBING DRAWINGS.



**A1 Plumbing Plan**

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



KEYNOTES

1. CONNECT NEW 3/4" GAS TO EXISTING REGULATOR. EXTEND NEW GAS PIPING ON ROOF TO NEW A/C UNITS.
2. EXISTING 2ND STAGE REGULATOR ON ROOF.
3. GAS PIPING CONNECTION TO NEW ROOTOOP HVAC UNIT. PROVIDE LUBRICATED GAS COCK & 6" DIRT LEG AT UNIT CONNECTION.
4. NEW GAS PIPING ROUTED ON ROOF, SUPPORT PIPING ON PIPE STANDS, EQUAL TO "MIRO" MODEL No. 002, AT 10' O.C. SPACING. COORDINATE PIPE ROUTING WITH EXIST. CONDITIONS. PAINT PIPING PER ARCHITECT.
5. NEW TANKLESS ELETRIC WATER HEATER (WH) MOUNTED ON WALL BELOW COUNTER. EXTEND 1/2" HW FROM UNIT TO SINK.
6. APPROX. LOCATION OF EXISTING CW SUPPLY, 3/4" MINIMUM SIZE, AT LOCATION OF DEMOLISHED TOILET ROOMS. FIELD VERIFY EXACT SIZE & LOCATION.
7. CONNECT NEW 3/4" CW TO EXISTING WATER SUPPLY. EXTEND ABOVE CEILING OVER TO DROP IN WALL.
8. 3/4" CW DOWN TO 3/4" HEADER, WITH 1/2" TO SINK, 1/2" TO WATER HEATER & 3/4" TO HOSE BIBB.
9. PROVIDE NEW BACKWATER VALVE, LINE SIZE, ON EXISTING BUILDING SEWER TO COMPLY WITH CITY OF PRESCOTT REQUIREMENTS. PROVIDE WITH TRAFFIC RATED COVER.
10. REMOVE CONCRETE SLAB, REFER TO ARCHITECTURAL DEMOLITION PLANS.

NOTE: CONNECT NEW VENTS TO EXISITING VENTS THROUGH ROOF WHERE PRACTICAL.

NOTE: LOCATIONS AND SIZES FOR ALL ITEMS ARE BASED ON THE BEST INFORMATION AVAILABLE. SOME ITEMS SHOWN ARE TO INDICATE THE INTENT OF THE PLUMBING SYSTEMS BUT MAY NOT NECESSARILY REFLECT THE EXACT ROUTING AND LOCATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL LOCATIONS AND SIZES OF THOSE ITEMS REQUIRING MODIFICATIONS.

PLUMBING NOTES:

1. WATER PIPING LOCATED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE BUILDING INTERIOR SIDE OF THE BLDG. INSULATION.
2. EXTERIOR WATER PIPING SHALL BE INSTALLED BELOW FROST LINE.

NOTE ON SLOPE OF WASTE PIPING:

SLOPE ALL HORIZONTAL WASTE PIPING AS FOLLOWS:

FOR PIPE SIZES UP THROUGH 3", SLOPE AT 1/4" PER FT.

FOR PIPE SIZES 4" & ABOVE, SLOPE AT 1/8" PER FT.

PLUMBING LEGEND

SYMBOL	ABBR.	DESCRIPTION
---	W	DRAIN OR WASTE PIPING
- - - -	V	VENT PIPING
- . - .	CW	COLD WATER PIPING
- - - -	HW	HOT WATER PIPING
- x - x	GV	GATE VALVE
- o - o	BV	BALL VALVE
- G -	G	NATURAL GAS PIPING
- D -	D	DRAIN PIPING
- FCO, SCO	FCO, SCO	FLOOR OR SURFACE CLEANOUT
- WCO	WCO	WALL CLEANOUT
- JL	VTR	VENT THRU ROOF



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ARCHITECTURE & PLANNING

DRAWING: Plumbing Floor Plan

PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY  
CHECKED BY  
DATE  
Jan. 24th, 2019  
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PLUMBING SPECIFICATIONS:

1. GENERAL

1.1 Scope: Work under this section includes coordinating and furnishing all labor and material necessary to install a complete plumbing system as shown and specified and in accordance with the codes. Contractor shall pay for all permits, meters, fees, city inspections, legal notices, etc., as required.

1.2 Submittals: Within 15 days after award of contract, submit 8 copies of all items.

1.3 Record Drawings: Provide a set to the Architect at completion of project.

1.4 Instructions: Provide maintenance manual and instruct Owner in the proper operation and maintenance of the equipment.

1.5 Guarantee: One year on labor, material and equipment.

2. PRODUCTS

2.1 Piping:

2.1.1 Water Lines:

2.1.1.1 Copper: Type "L" hard drawn, conforming to ASTM B88, for all water pipe not set under concrete or in the ground.

2.1.1.2 Copper: Type "K" soft drawn, conforming to ASTM B88, for water pipe set in or under concrete. Wrap lines below concrete floors with 20 mils of polykon tape.

2.1.1.3 Fittings: Wrought copper conforming to ANSI B16.22.

2.1.1.4 Plastic: Schedule 40 PVC piping conforming to ASTM D1785-06, for all water piping installed below grade and not under concrete. Fittings: Schedule 40 PVC fittings conforming to ASTM D2466-06.

2.1.2 Sanitary Waste and Vent Piping:

2.1.2.1 Cast Iron conforming to CISPI Standard 301-95 and ASTM A-888 for all no-hub pipe and fittings installed above and below grade.

2.1.2.2 Galvanized Iron: Standard weight, Schedule 40 galvanized iron conforming to ASTM A-120 for all vent lines 2-1/2" or smaller.

2.1.2.3 Fittings (Waste and Vent System, no-hub cast iron): No-hub cast iron drainage pattern fittings conforming to CISPI #301-95.

2.1.2.4 Fittings (Waste and Vent, galvanized steel): Threaded cast iron fittings conforming to ANSI B16.4.

2.1.2.5 Couplings (Waste and Vent, above and below grade): Double band, stainless steel couplings conforming to CISPI 310-95, with neoprene gasket conforming to ASTM Standard C564 (NOTE: Screened stainless shield is not approved).

2.1.2.6 Plastic: Subject to Architect approval, PVC piping conforming to ASTM D-2665-88 is acceptable for sanitary waste piping installed below grade or slab. Fittings: Drainage fittings to match pipe.

2.1.3 Gas Piping:

2.1.3.1 (Underground): All pipe, tubing, and fittings shall be polyethylene 2306/2406 conforming to ASTM D-1248 and D-3350 for P.E. 2306/2406.

2.1.3.2 (Above grade, exterior): All pipe sizes, black steel pipe, Schedule 40, wrought steel buttwelded fittings.

2.1.3.3 (Above grade, inside building): Schedule 40 black steel. Pipe fittings shall conform to the following:

Pipe 2" and Smaller: Malleable iron threaded fittings.

Pipe 2-1/2" and Larger: Wrought steel buttwelded fittings.

2.1.3.4 Risers: All risers in the system from below grade shall be pre-manufactured anodeless type as manufactured by Central Manufacturing Co., Shawnee, OK, or approved equal.

2.1.4 Tracer Wire: Provide approved 14 gage copper (orange covered) tracer wire along all non metallic underground piping.

2.2 Pipe Hangers and Supports: Fee & Mason Figure 103 clevis hanger for insulated pipe and Figure 104 clevis hanger for cast iron pipe. Install #500 Trisolators on uninsulated copper lines at all hangers and wall penetrations.

2.3 Not used.

2.4 Valves:

2.4.1 Gate Valves: Milwaukee 115, 125#, bronze body, solder type gate valve with nonrising stem for all lines up through 3" size.

2.4.2 Check Valves: Milwaukee #1509, 125#, bronze body, solder joint check valve with horizontal bronze disc for all valves up to 2" size. Milwaukee #2974, 125#, iron body, bronze trimmed, flanged horizontal check valve for all valves larger than 2" size.

2.4.3 Shutoff Valve: Milwaukee BB1-350 bronze body, solder joint valve for all lines up through 2".

2.5 Cleanouts:

2.5.1 Concrete and Tile Floors: J.R. Smith 4023, with scoriated nickel-bronze top.

2.5.2 Cleanouts (exposed vertical piping): J.R. Smith 4512 cast iron branch cleanout tee with bronze plug.

2.5.3 Interior Finished Walls: J.R. Smith 4532.

2.5.4 Exterior Surface Cleanouts: J.R. Smith 4253. Provide 18" x 18" x 6" concrete pad at landscape areas; provide concrete ring below grade at asphalt areas.

2.5.5 Provide all cleanouts with heavy threaded bronze plugs.

2.6 Plumbing Fixtures: Use polished chrome-plated, adjustable brass P-traps with wall escutcheons at all exposed locations. Use polished chrome-plated faucets with removable trim, brass body and brass handles. Fixtures and supply fitting shall be of one manufacturer. Provide diaphragm type, polished chrome-plated flush valves with integral vacuum breakers and screwdriver stops. Provide fixture stops or valves ahead of all equipment or fixtures. After fixtures are set in place and secured to walls, caulk all around between fixtures and wall with either Dow Corning #780 or G.E. Construction Sealant white silicone caulking compound.

2.7 Acceptable Manufacturers: The following is a list of manufacturers whose equipment is acceptable as to manufacturer, subject to conformance with all drawings, specifications and addenda items:

- Stainless Steel Sinks: Just, Eljay, Moen.
- Tankless Electric Water Heaters: Stiebel Eltron, Eemax.
- Hose Bibbs: Woodford, Zurn.
- Valves: Crane, Kennedy, Stockham, Grinnell, Milwaukee, Wolverine.
- Supplies, Stops: Eastman, Kohler, Eljer, Brasscraft, McGuire.
- P-Traps: Crane, Kohler, Eljer, Frost, McGuire.
- Drains and Cleanouts: J. R. Smith, Zurn, Josam, Wade, Western.
- Hangers: Grinnell, Fee & Mason, Elcen, Kin-Line, F & S, B-Line, Michigan.

3. EXECUTION

3.1 Tests and Inspections:

3.1.1 All work to be tested and approved before covering as directed by Architect. Remake all leaking joints.

3.1.2 Water System: 125 psi hydrostatic pressure held for four hours.

3.1.3 Sanitary Waste and Vent System: Fill with water to highest point in the system and let stand without loss for two hours.

3.1.4 Gas System: Hold at 50 psi pneumatic for four hours with no pressure loss.

3.1.6 Sterilization (Domestic Water System): After tests have been completed, the entire domestic water distribution system shall be thoroughly flushed with water until all entrained dirt and mud have been removed, and shall be sterilized with solutions of either liquid chlorine conforming to Federal Specification BB-B-120 or hypochlorite conforming to Fed. Spec. O-C-114, Type II, Grade G, or Fed. Spec. O-S-602, Grade A or B. The chlorinating material shall provide a dosage of less than 50 parts per million and shall be introduced into the system in an approved manner, and retained in the system for 8 hours before flushing.

3.2 Flashing, Sleeves and Escutcheon Plates:

3.2.1 Flashing: Supply flashing for all vent pipe and other types of piping through roof to be installed with roofing. Flash vents with Stoneman S1300-4 or with sheet lead weighing not less than 4 pounds per square foot or equal. Extend flashing into roofing at least 10" from vent and turn flashing over and down into vent opening.

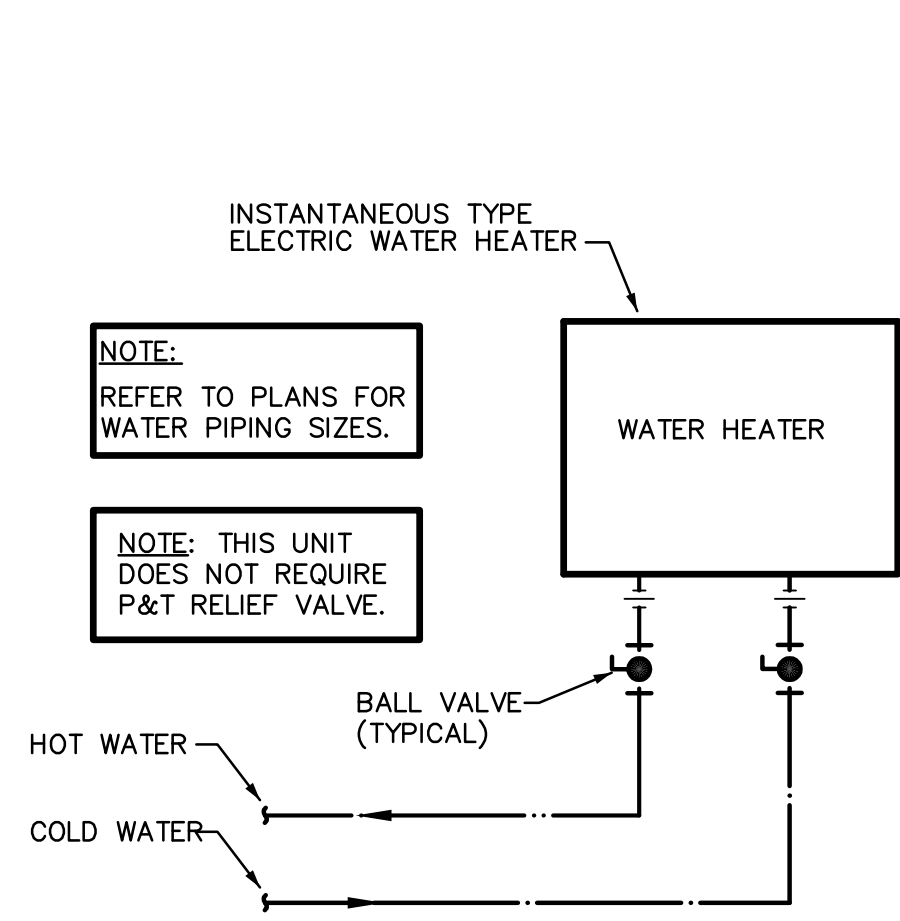
3.2.2 Sleeves: Use 20 gauge galvanized steel sleeves around pipes passing through masonry walls and concrete slabs.

3.2.3 Escutcheon Plates: Install cast brass split ring with setscrew at all locations where exposed pipes pass through walls, floors and/or ceilings. Provide polished chrome-plated escutcheons in finished rooms, all others polished brass.

3.3 Underground Water Piping: Bury all underground water piping a minimum of 24" below finished grade. Install copper lines below concrete floors so that no joints occur below floor and wrap with 20 mils of polyethylene tape with a minimum of 50% overlap.

PLUMBING FIXTURE SPECIFICATIONS	
SYMBOL	DESCRIPTION
S-1	SINK (ADA COMPLIANT): FIXTURE: JUST MODEL No. SL-ADA-17519-A-GR, 17-1/2" x 19" x 5-1/2" DEEP, 18 GAUGE TYPE 304 STAINLESS STEEL, ADA COMPLIANT SELF RIMMING SINGLE COMPARTMENT SINK, THREE-HOLE PUNCHING AND RIGHT REAR DRAIN OUTLET. FAUCET: DELTA B2310LF, TWO HANDLE DECK MOUNT ADA FAUCET. SUPPLIES: EASTMAN CSRC-20-LK, 1/2" x 3/8" ANGLE STOPS WITH FLEXIBLE TUBE RISERS. STRAINER: JUST J-35 BASKET STRAINER WITH 1-1/2" TAILPIECE. TRAP: 1-1/2" x 1-1/2" PVC P-TRAP WITH CLEANOUT PLUG AND ESCUTCHEON. INSULATE ALL EXPOSED UNDERCOUNTER WATER AND WASTE PIPING WITH PLUMBEREX 2003W "HANDY-SHIELD MAXX" INSULATION COMPLYING WITH ASTM E 84-07/UL 723 CLASS A AND BE LISTED WITH AND MEET UPC/IAPMO. INSULATION MATERIAL SHALL BE U/V INHIBITED WITH ANTIMICROBIAL AND ANTIFUGAL PROPERTIES.
IWH	INSTANTANEOUS WATER HEATER: STEIBEL ELTRON MODEL DHC 8-2, 7.2 KW, 240 VOLT, SINGLE PHASE, UL LISTED INSTANTANEOUS TYPE WATER HEATER, COMPLETE WITH FLOW SWITCH.
HB	HOSE BIBB: WOODFORD MODEL No. 65, NON-FREEZE TYPE, CHROME PLATED FINISH, 3/4" HOSE CONNECTION WITH INTEGRAL VACUUM BREAKER, LOOSE TEE KEY HANDLE.

FIXTURE CONNECTION SCHEDULE							
MARK	DESCRIPTION	TRAP SIZE	W	V	CW	HW	REMARKS
S-1	SINK (ADA)	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	SINGLE COMPARTMENT, STAINLESS STEEL
HB	HOSE BIBB	-	-	-	3/4"	-	FREEZE PROOF WITH INTEGRAL VACUUM BREAKER

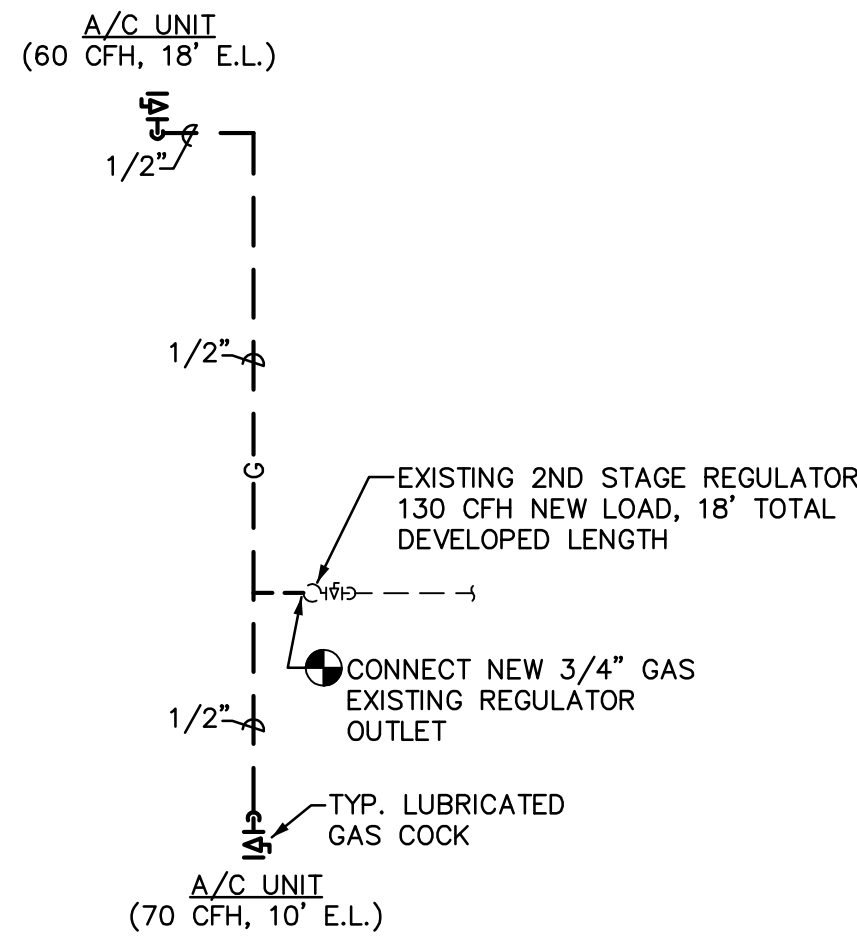


WATER HEATER DETAIL

NTS

GAS PIPING NOTES:

1. MINIMUM DEPTH OF GAS PIPING TO BE 18" BELOW GRADE.
2. GAS PIPING SHALL NOT BE INSTALLED IN OR ON THE GROUND UNDER ANY BUILDING.
3. GAS PIPING SHALL NOT RUN IN HOLLOW CORE OF BLOCK.
4. PROVIDE SHUT-OFF COCK, UNION AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
5. ALL GAS USING EQUIPMENT TO BE NATURAL FUEL.
6. DO NOT USE FLEXIBLE PIPE CONNECTIONS TO EQUIPMENT.
7. ALL GAS PIPING UNDER ASPHALT OR CONCRETE PAVING ADJOINING BUILDING MUST BE SLEEVED IN GAS TIGHT PIPE (SCHEDULE 40 PVC PIPE), SLEEVE SIZE SHALL (MINIMUM) 2 PIPE SIZES LARGER THAN THE GAS PIPE.
8. ALL GAS PIPING, MATERIALS, VALVES, FITTINGS, INSTALLATION AND TESTING SHALL COMPLY WITH CHAP. 4, INTERNATIONAL FUEL GAS CODE.
9. VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.
10. ALL GAS LINES INSTALLED THROUGH CMU WALLS, ETC., SHALL BE SLEEVED WITH STEEL PIPE A MINIMUM OF (2) (TWO) PIPE SIZES LARGER THAN THE GAS PIPE.
11. EXTERIOR GAS PIPING SHALL RECEIVE ONE COAT EACH OF A RUST AND WEATHER RESISTANT PRIMER AND TOP COAT. COORDINATE WITH ARCHITECT FOR COLOR.

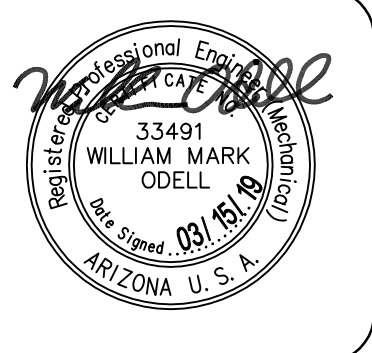


GAS PIPING DIAGRAM

NTS

REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Plumbing Details

PROJECT: ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY
CHECKED BY
DATE Jan. 24th, 2019
JOB NO. 729
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## ELECTRICAL SYMBOLS

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT

- A** FLUORESCENT FIXTURE, WITH FIXTURE DESIGNATED BY LETTER. SMALL LETTER INDICATES SWITCH LEG
- NL** NIGHT LIGHT- NOT SWITCHED OR EMERGENCY
- FLUORESCENT STRIP FIXTURE.
- CEILING OR WALLMOUNTED FIXTURE.
- PORCELAIN PULL CHAIN FIXTURE
- JUNCTION BOX
- JUNCTION BOX WITH FLEX CONNECTION.
- SINGLE FACE EXIT SIGN- NOT SWITCHED
- DOUBLE FACED EXIT SIGN- NOT SWITCHED.
- TWO HEAD EMERGENCY LIGHT WITH BATTERY.
- S** SINGLE POLE SWITCH, + 48" A.F.F. (20A-120/277V)
- S<sub>3</sub>** THREE WAY SWITCH, + 48" A.F.F. (20A-120/277V)
- S<sub>4</sub>** 4-WAY SWITCH +48" AFF (20A-120/277V)
- S<sub>P</sub>** SWITCH AND PILOT LIGHT (20A-120-/277V)
- S<sub>K</sub>** SINGLE POLE SWITCH, KEY OPERATED (20A)
- WALL OR CEILING MOUNTED MOTION SENSOR MANUFACTURE BY LAVITON
- DIMMER CONTROL, + 48" A.F.F. TYPE, RATING AS NOTED
- DUPLEX RECEPTACLE, + 18" A.F.F. (20A)
- DUPLEX RECEPTACLE ABOVE COUNTER, VERIFY HEIGHT. (20A)
- FOURPLEX RECEPTACLE, + 18" A.F.F. (20A)
- HALF SWITCHED DUPLEX RECEPTACLE (20A)
- SPECIAL RECEPTACLE - SIZE & TYPE AS NOTED
- POWER / PHONE / DATA FLUSH FLOOR OUTLET
- TELEPHONE OUTLET PLASTER RING AT + 18" A.F.F. HUBBELL #P12 COVERPLATE. 3/4" C TO CEILING SPACE UNLESS SHOWN WITH HOMERUNS.
- DATA SYSTEM OUTLET. 4" SQUARE BOX AND COVERPLATE. 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUN, + 18" A.F.F.
- TELE/DATA COMBO OUTLET. 4" SQUARE BOX AND COVERPLATE. 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUN, + 18" A.F.F.
- CABLE TELEVISION (CATV) OUTLET PLASTER RING AT + 18" A.F.F. U.N.O. HUBBELL COVERPLATE. 3/4" C TO CEILING SPACE UNLESS SHOWN WITH HOMERUNS.
- TELEPHONE SYSTEM CONDUIT HOMERUN WITH NYLON PULLWIRE (1" MIN UNO)
- CLOSED CIRCUIT TV (CCTV) OUTLET SAME AS CATV OUTLET
- REMOTE CONTROL STATION @ +48" AFF
- DISCONNECT SWITCH, FUSE PER EQUIPMENT MANUFACTURERS RECOMMENDATION. OUTSIDE NEMA 3R - N.F. = NON-FUSED.
- COMBINATION STARTER AND FUSIBLE DISCONNECT SWITCH SIZE AS NOTED
- EQUIPMENT TERMINATION CONNECTION POINT VERIFY EXACT LOCATION LOAD AND VOLTAGE AS NOTED
- MOTOR
- S<sub>M</sub>** THERMAL PROTECTED SWITCH
- MOTOR STARTER - SHADING INDICATES F.B.O.
- DISTRIBUTION PANELBOARD.
- BRANCH CIRCUIT PANELBOARD.
- CONDUIT BELOW FLOOR OR UNDERGROUND
- CONDUIT IN WALL OR ABOVE CEILING
- HOMERUN TO PANEL
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT STUB-OUT, MARK AND CAP AS DIRECTED
- GROUND WIRE (SIZE AS NOTED) EXTENDED AND CONNECTED TO APP'D GROUND

ALL WIRING #6 AWG AND LARGER SHALL BE XHHW COPPER. #8 AWG AND SMALLER SHALL BE THHN/THWN COPPER

## SPECIFICATIONS

- PRIOR TO SUBMITTING BID, SUBCONTRACTORS SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND VISIT THE CONSTRUCTION SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH HE WILL HAVE TO OPERATE AND WHICH IN ANY WAY AFFECTS THE WORK UNDER HIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
- THE SUBCONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND /OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THE CONTRACT. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS AND BUILDING DETAILS. VERIFY LOCATION OF ALL OUTLETS, SWITCHES, AND WALL MOUNTED LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS AND ACTUAL CONDITIONS. VERIFY ALL CEILING TYPES WITH ARCHITECTURAL DRAWINGS BEFORE ORDERING FIXTURES.
- PRIOR TO ROUGH-IN AND FINAL CONNECTION, VERIFY ELECTRICAL CHARACTERISTICS AND EXACT LOCATION OF EQUIPMENT.
- GROUT AND SEAL ALL CONDUIT PENETRATIONS OF WALLS AND FLOOR SLABS TO PRESERVE FIRE RATING AND WATERTIGHT INTEGRITY.
- BRANCH CIRCUIT WIRING SHALL BE THHN/THWN INSULATION. PANEL FEEDERS SHALL BE TYPE XHHW. ALL WIRE SHALL BE COPPER. MINIMUM WIRE SIZE SHALL BE #12.
- ALL WIRING TO BE INSTALLED IN RACEWAYS. TYPE OF RACEWAY SHALL BE AS REQUIRED BY CODE. MINIMUM CONDUIT SIZE SHALL BE 1/2".
- PROVIDE CODE SIZED BOND WIRE IN ALL EMT, FLEXIBLE CONDUIT
- ALL ELECTRICAL EQUIPMENT SHALL BE NEW , U.L. APPROVED AND COMMERCIAL GRADE.
- WIRE RATED FOR 150° CENTIGRADE SHALL BE USED FOR ALL INCANDESCENT LIGHTING FIXTURES.
- ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL CODE, (N.E.C.), AND ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- PROVIDE TYPEWRITTEN DESCRIPTIVE PANEL DIRECTORIES

### FIRE WALL/FLOOR PENETRATION

ALL PENETRATIONS OF FIRE RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAIL THAT CONFORM TO UNDERWRITERS LABORATORY'S LISTINGS FOR THROUGH PENETRATION FIRESTOP SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS WHICH SHOW COMPLETE CONFORMANCE WITH THE LISTING TO THE ARCHITECT AND SUCH DRAWINGS SHALL BE AVAILABLE TO THE LOCAL GOVERNING INSPECTORS. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED.

### OUTLET MOUNTING HEIGHTS PER AMERICAN DISABILITY ACT

SWITCHES +48" (MAX)  
RECEPTACLES +18" (MIN)  
TELEPHONE/DATA +18" (MIN)  
SIDE REACH +54" (MAX)

### GENERAL ELECTRICAL DEMOLITION NOTES

- RETURN REMOVED MATERIAL DEEMED SALVAGEABLE TO OWNER'S REPRESENTATIVE. MATERIALS DEEMED NOT SALVAGEABLE SHALL BE REMOVED FROM THE PREMISES.
- THE CONTRACTOR WILL EXAMINE THE PREMISES AND SATISFIED HIMSELF AS TO EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO PERFORM HIS WORK. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND THE CONTRACTOR SHALL FIELD VERIFY ALL DETAILS OF DEMOLITION.
- REMOVE ALL EXISTING WIRING DEVICES, LIGHT FIXTURES, WIRE, CONDUIT, DISCONNECTS, ETC., AS NOTED OR INDICATED WITHIN DEMOLITION AREA. (ALL ITEMS MAY NOT BE SHOWN.) REWORK AS NECESSARY ALL CIRCUITING WHICH REQUIRES CONTINUATION THROUGH THE AREA.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED TO REMOVE/RELOCATE ANY EXISTING ELECTRICAL EQUIPMENT SUCH THAT ELECTRIC SHOCK HAZARDS TO WORKMEN ARE ELIMINATED DURING DEMOLITION AND NEW CONSTRUCTION.
- REMOVED OR DAMAGED CONDUIT, WIRE AND FITTINGS SHALL NOT BE RE-USED
- WORK REQUIRED FOR EXISTING EQUIPMENT NOTED AS "EXISTING TO BE REMOVED" SHALL INCLUDE:
  - SALVAGING OR DISPOSING OF ALL MATERIAL OR EQUIPMENT AS DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE.
  - REMOVAL OF FEEDER OR CABLING FROM EQUIPMENT TO POINT OF FEED.
  - REMOVAL OR RE-CIRCUITING (AS REQUIRED OR AS NOTED ON PANELS) OF ALL BRANCH CIRCUITING.
  - REMOVAL OF ALL FITTINGS, SUPPORTS, BRACKETS, ETC.
  - REPAIR AND PATCHING OF WALLS, FLOORS AND CEILINGS TO MATCH EXISTING OR PER ARCHITECT'S INSTRUCTIONS.
  - CAPPING OF IN-SLAB FEEDER CONDUITS FLUSH WITH THE FINISHED FLOOR.
  - CAPPING OF FEEDER CIRCUITS AT 6" ABOVE OR BELOW THE FLOOR OR CEILING FOR IN-SLAB CONDUITS LOCATED UP NEXT TO A WALL OR FOR CEILING AREA CONDUITS.
  - THE OPPOSITE END LOCATION OF ALL EMPTY FEEDER CONDUITS AT SWITCHBOARDS, PANELBOARDS, ETC., SHALL BE MARKED USING AN ENGRAVED BRASS TAG ATTACHED TO THE CONDUIT.
  - EXISTING FEEDER CONDUITS SHALL BE REMOVED OR CUT OFF AND ABANDONED IF FOUND TO BE UNSALVAGEABLE BY THE OWNER, ARCHITECT OR ENGINEER.
- EXISTING EQUIPMENT NOT IMPLICITLY SHOWN ON THE DRAWINGS IS INTENDED TO BE "EXISTING TO REMAIN," UNLESS NOTED OTHERWISE.

## LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL NO.	VOLTS	LAMPS	MOUNTING	FINISH	REMARKS
A	RAB LIGHTING PANEL 2'x2' - 41N 4000K	120	39.5 WATT LEDS	LAY-IN	STANDARD	PANEL 2' x 2' LED - 4000 COLOR TEMP.
B	(FIXTURE TYPE 'B' SHALL BE PROVIDED BY OWNER ERAU AND INSTALLED BY ELECTRICAL CONTRACTOR.)					
	LITHONIA ZLIN L48 3000LM L/LENS	120	LEDS - 33 WATT 35K CR1	CEILING MOUNTED SURFACE	STANDARD	4' LED STRIP FIXTURE
C1	LITHONIA ZLIN L24 3000LM L/LENS	120	LEDS - 18 WATT 35K CR1	CEILING MOUNTED SURFACE	STANDARD	2' LED STRIP FIXTURE
	LITHONIA LHQM S W 1 R 120 H	120	LED & (2) 6W HAL FURN'D. WITH UNIT	CLG. OR WALL- 12" ABOVE DOOR	WHITE HOUSING RED LETTER	COMBINATION EMERGENCY/EXIT LIGHT WITH LEAD-CAL. BATTERY
	LITHONIA ELM627 H1206 N	120	(2) 12W/6V/MR24	WALL- 8'-0" A.F.F.	STANDARD WHITE	EMERGENCY LIGHT WITH NI-CAD BATTERY

NOTES: ① VERIFY ALL FINAL MOUNTING HEIGHTS WITH ARCHITECT.

(NOTE: EXISTING PANEL TO BE REPLACED WITH NEW PANEL AND BREAKERS AS INDICATED ON SCHEDULE.)

PANELBOARD				B51		SCHEDULE			
MAINS: 200A MCB				LOAD-VA				LOCATION: SEE PLAN	
VOLTAGE: 120/240V, 1Ø, 3W								MOUNTING: SURFACE	
TYPE: GE, EATON, SQ. D OR EQUAL				MIN. A.I.C.: 10,000					
CIRCUIT DESCRIPTION			BKR.	CIR. NO.	ØA	ØB	CIR. NO.	BKR.	CIRCUIT DESCRIPTION
* LIGHTS		20	1	1500 720			20	1	RECEPT'S. -
* LIGHTS - EXTERIOR			3		400 720		4		
SPARE			5	720			6		
RECEPT'S. - CARD READER SYSTEM			7		360 720		8		
- I.T. EQUIPMENT			9	360 720			10		
- MICROWAVE			11		1500 540		12		
- ABOVE COUNTER			13	180 720			14		
- ABOVE COUNTER			15			720	16		
- REFRIGERATOR			17		180		18		- ROOF MOUNTED
- COPY MACHINE			19		540 720		20		
			21	1200 900			22		
TANKLESS WATER HEATER		40	23		3600		24		SPARE
7.2 KW, 240V, 1Ø		2	25	3600			26		SPARE
PACKAGE A/C UNIT AC-1		30	27		2200		28		SPARE
18.4 MCA, 240V, 1Ø		2	29	2200			30		SPARE
PACKAGE A/C UNIT AC-2		30	31		2544		32		SPACE
21.2 MCA, 240V, 1Ø		2	33	2544			34		
SPACE			35				36		
			37				38		
			39				40		
			41				42		
TOTAL LOAD PER PHASE:				14652	14572	H# 14652 / 120V = 122.1 AMPS			

### PANELBOARD SYMBOLS

- \* CONTINUOUS DUTY/LARGEST MOTOR @ 125%
- PROVIDE BREAKER W/ HANDLE "LOCK-ON" DEVICE
- ◆ CIRCUIT VIA TIMECLOCK
- ▲ CIRCUIT VIA PHOTOCELL
- HACR TYPE CIRCUIT BREAKER
- EXISTING BREAKER W/ NEW LOAD
- EXISTING BREAKER W/ EXISTING LOAD
- △ NEW BREAKER W/ NEW LOAD

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**ARCHITECTURE & PLANNING**

**DRAWING:** Electrical Symbols, Spec's., Panel & Fixture Schedule & Notes

**PROJECT:** ERAU Building 51 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

DRAWN BY R.A.
CHECKED BY A.O.
DATE Jan. 24th, 2019
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