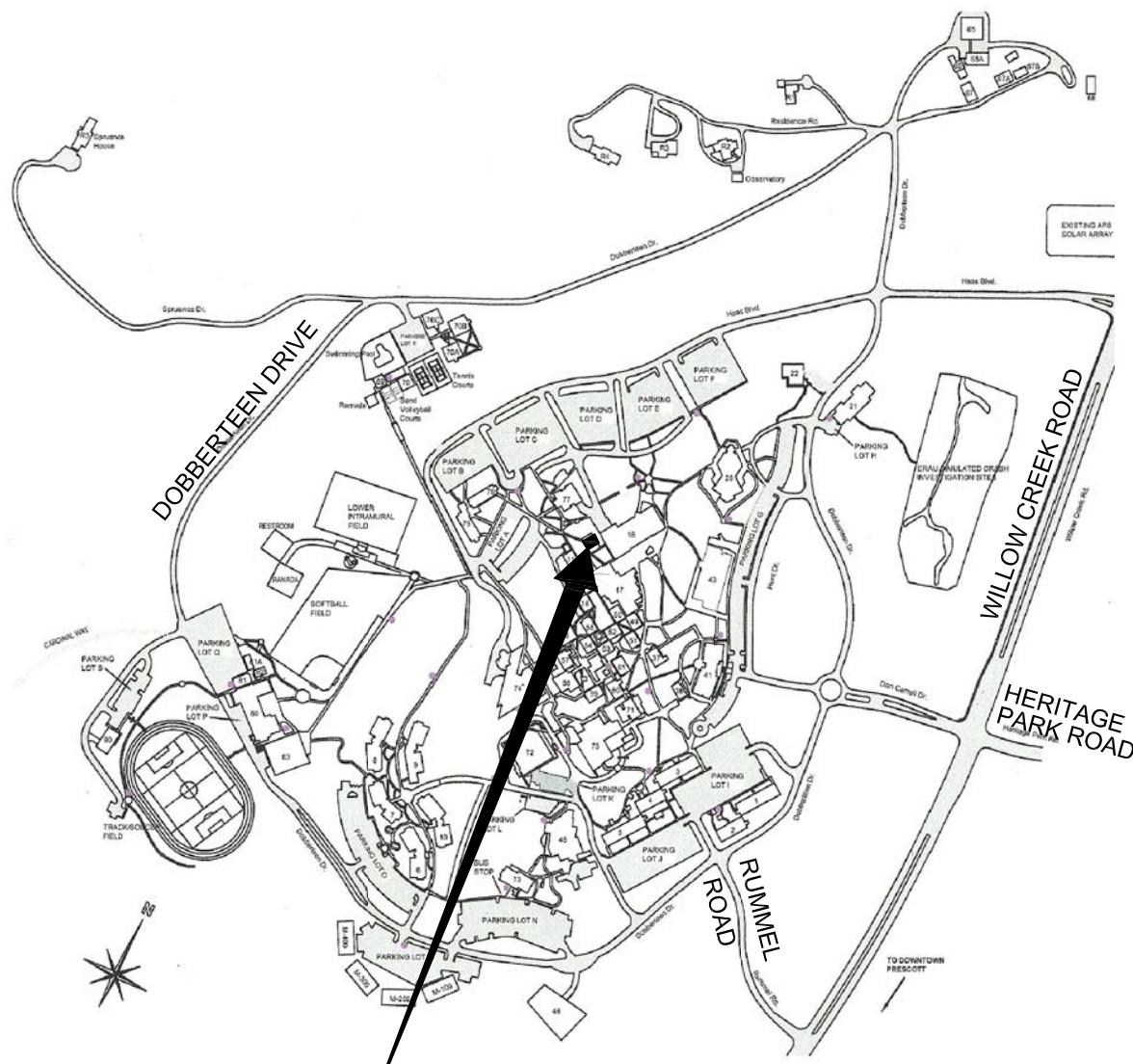


# Project Description

Embry-Riddle Aeronautical University intends to renovate building 19. The Chemistry Building will become a club meeting place. The HVAC will be upgraded as required for the new club meeting place usage as well as for the new offices. The existing ceiling, light fixtures, etc., will be removed and replaced to accommodate the new layout.

# Site / Vicinity Map



PROJECT  
BUILDING 19

# Graphic Standards

	NORTH ARROW INDICATOR		ELEVATION DESIGNATOR
	DETAIL DESIGNATOR		DEScriptive 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 19 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>	Classroom Renovation	
<b>PROJECT ADDRESS:</b>	3700 Willow Creek Road (Building 19) 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 19:</b>	Existing 1,911 SQUARE FEET	

<b>BUILDING CODES:</b>	2012 International Building Code (IBC) 2012 International Residential Code (IRC) 2012 International Mechanical Code (IMC) 2012 International Plumbing Code (IPC) 2011 National Electrical Code (NEC) 2012 International Fire Code (IFC) 2012 International Fuel Gas Code (IFGC) 2012 International Energy Conservation Code (IECC) Quad City Standard Details shall apply to this project
------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

# Sheet Index

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

<b>MECHANICAL</b>	
M1.0	Mechanical Floor and Roof Plan
M2.0	Mechanical Schedules & Specifications
M3.0	Mechanical Details

<b>PLUMBING</b>	
P1.0	Plumbing Plan

<b>ELECTRICAL</b>	
E1.0	Electrical Panel Schedule, Specifications, and Symbols with Notes
E1.1	Lighting Design & Demolition Floor Plan with Fixture Schedule and Notes.
E1.2	Power Design & Demolition Floor Plan with Notes.

# Architect:

## W. Alan Kenson & Associates, P.C.

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# ARCHITECTURE & PLANNING



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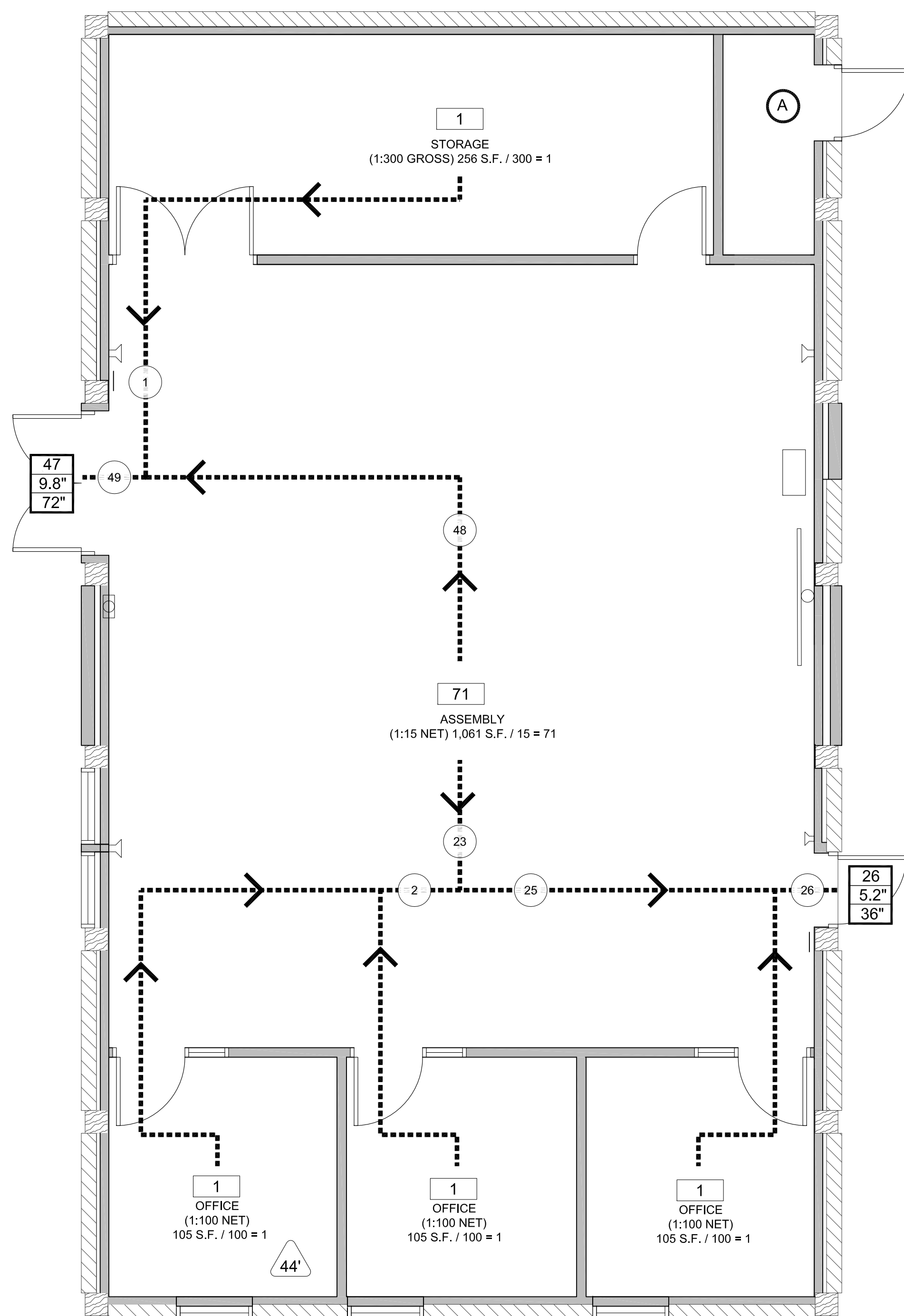
# ARCHITECTURE & PLANNING

**DRAWING:** Cover Sheet  
**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301  
**APN:** 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

# CS1





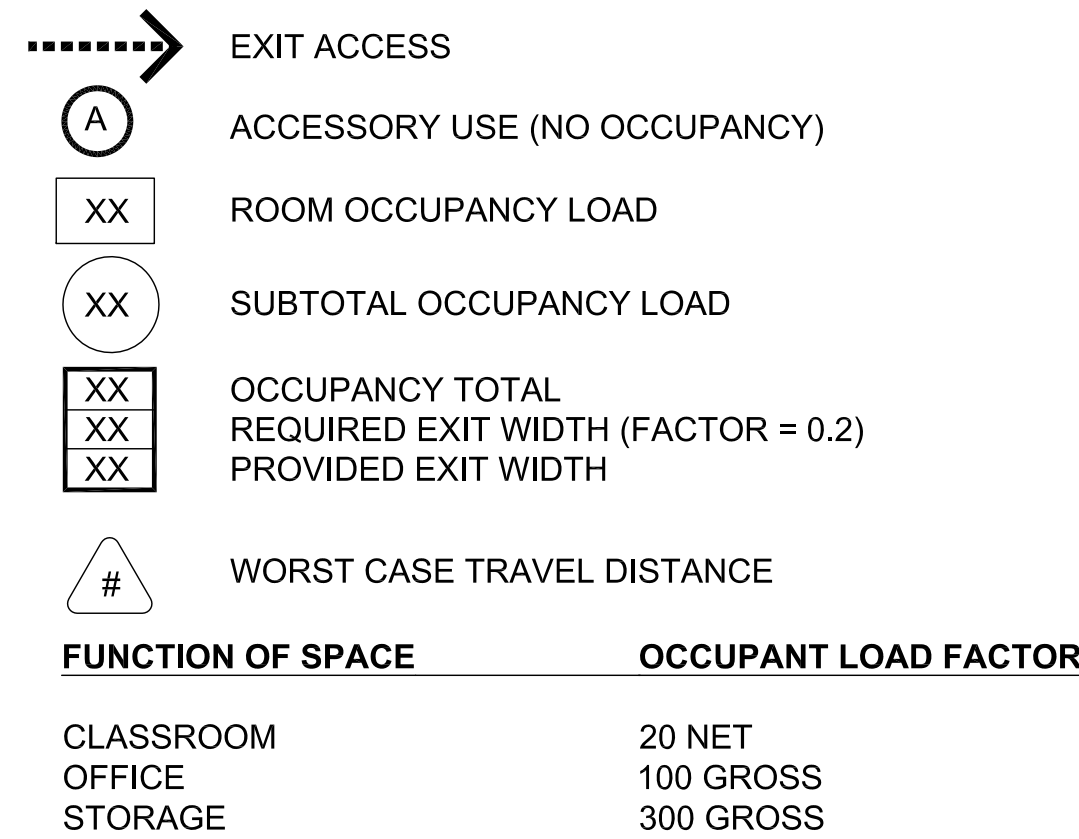
**NOTE:**

- 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

1. ACCESS TO THESE FACILITIES SHALL BE AT PRIMARY ENTRANCES.
2. THE SLOPE OF PUBLIC WALLS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 2%.
3. WALKING SURFACES GREATER THAN 2% SHALL BE SLIP RESISTANT.
4. PROVIDE A 44"x60" MINIMUM LANDING ON THE STRIKE SIDE OF THE ENTRANCE DOOR WITH 44" MINIMUM WIDTH IN THE DIRECTION OF TRAVEL.
5. WALLS SHALL EXTEND 18" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARDS THE OCCUPANT.
6. RAMPS SHALL HAVE A NON-SLIP SURFACE.
7. RAMPS SHALL BE A MINIMUM OF 36" WIDE.
8. 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.
9. 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.
10. MAXIMUM EFFORT TO OPERATE A DOOR SHALL NOT EXCEED 5 POUNDS.
11. THE BOTTOM 10 INCHES OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
12. 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:



## Occupant load

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

OFFICE AREA:	256 SQ. FT.	3 OCCUPANTS
ASSEMBLY:	1,038 SQ. FT	71 OCCUPANTS
STORAGE:	299 SQ. FT.	1 OCCUPANT
TOTAL:	1,593 SQ. FT.	75 OCCUPANTS

NOTE: SHARED BUILDING RESTROOMS ARE LOCATED APPROXIMATELY 50' AWAY IN THE STUDENT UNION / CAFE. ADDITIONAL TOILET FIXTURES ARE NOT REQUIRED.

REVISIONS	BY

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**HITECTURE & PLANNING**

# ARCHITECTURE & PLANNING

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

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ, 86301

**APN:** 106-03-004

DRAWN BY

CHECKED BY  
M.M.M.

DATE  
March 31st 2019

JOB NC  
700

SHEET

# CS2

Mar 21, 2018 - 10:42am



**A1** Construction Access / IT Site Plan  
Scale: 1"=20'-0"  
Plan North

**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. 6 SPACES AVAILABLE. CONTRACTOR TO PROVIDE SIGNAGE DESIGNATING SPACES FOR CONSTRUCTION PARKING.
5. 6' TALL TEMPORARY CHAIN LINK FENCING BY CONTRACTOR.
6. EXISTING RETAINING WALL.
7. PROVIDE 4" DB 120, I.T. CONDUIT. REFER TO ELECTRICAL PLANS. CONDUIT SHALL BE ROUTED FROM NEW I.T. CLOSET IN BUILDING 19 BELOW GRADE TO EXISTING I.T. JUNCTION BOX. CABLING SHALL BE INSTALLED IN ACCORDANCE WITH 'DATA / COMMUNICATIONS SCOPE OF WORK' INDICATED ON ELECTRICAL PLANS.
8. EXISTING ELECTRICAL TRANSFORMER.
9. EXISTING I.T. JUNCTION BOX.
10. EXISTING I.T. CONDUIT INTO BUILDING 16.
11. APPROXIMATE LOCATION OF I.T. ROOM IN BUILDING 16.

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

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

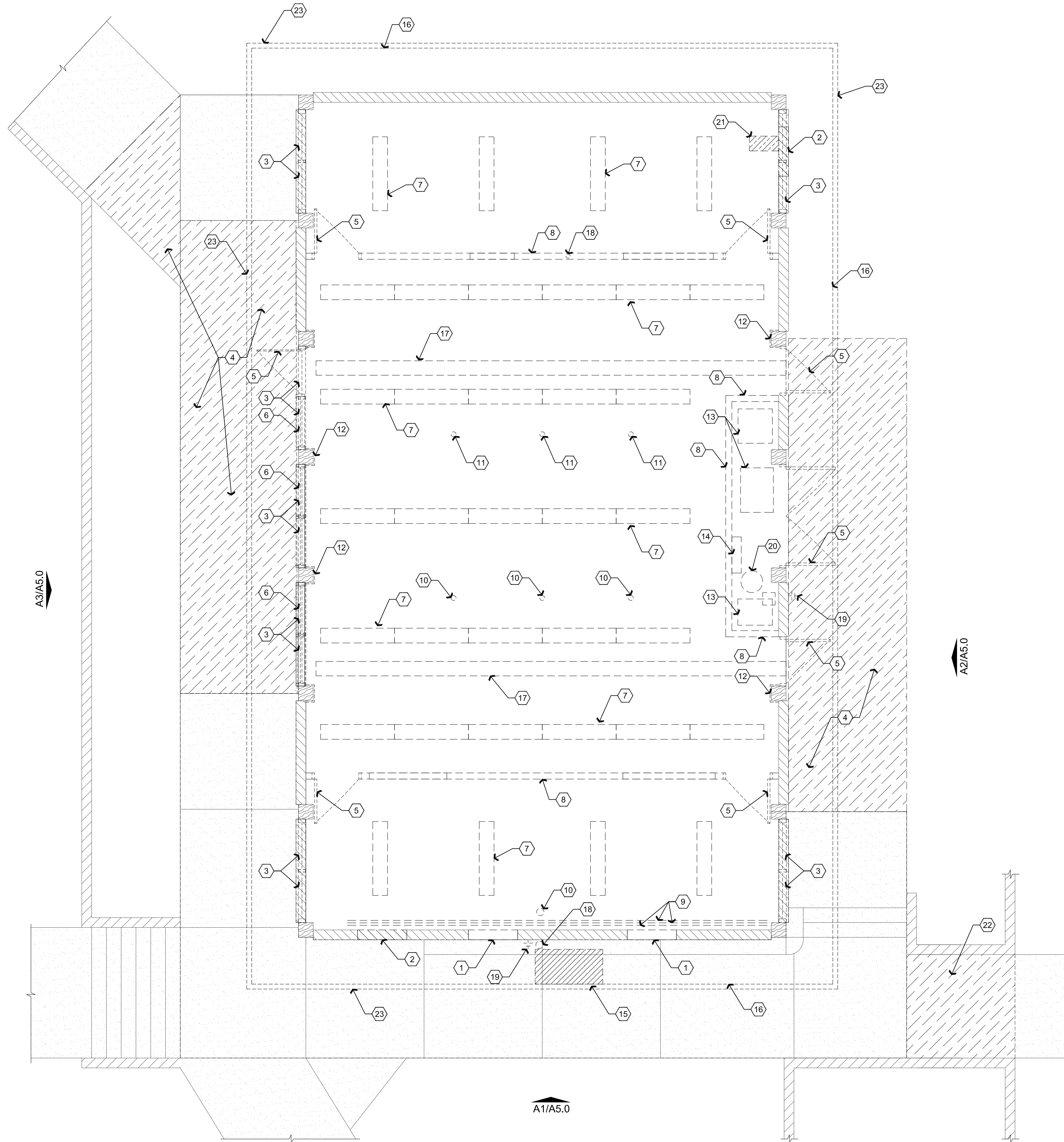
**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

**A0.0**

Mar 21, 2018 - 10:42am



## Descriptive Keynotes

1. REMOVE WOOD FRAMED WALL TO ACCOMMODATE INSTALLATION OF NEW WINDOW. REFER TO REFERENCE FLOOR PLAN.
2. REMOVE PORTION OF CMU WALL TO ACCOMMODATE INSTALLATION OF NEW WINDOW / DOOR. REFER TO REFERENCE FLOOR PLAN.
3. REMOVE EXISTING CLERESTORY WINDOW, TYPICAL.
4. REMOVE EXISTING CONCRETE AS REQUIRED TO PROVIDE NEW CONCRETE LANDING / SIDEWALK.
5. REMOVE EXISTING DOOR, FRAME AND HARDWARE, REFER TO DOOR AND HARDWARE SCHEDULES.
6. REMOVE EXISTING WINDOW AND ALL FRAMING.
7. REMOVE EXISTING LIGHTING, TYPICAL, REFER TO ELECTRICAL PLANS.
8. REMOVE EXISTING INTERIOR WALL, TYPICAL.
9. REMOVE EXISTING ELECTRICAL CONDUITS, GAS LINES, PLUMBING LINES, ETC., TYPICAL, REFER TO ELECTRICAL AND PLUMBING PLANS.
10. REMOVE EXISTING PLUMBING PIPING AND CAP OFF AT FLOOR, REFERENCE FLOOR PLAN.
11. REMOVE EXISTING SEWER RINGS TO CONCRETE FLOOR, CAP OFF.
12. REMOVE EXISTING COLUMN COVERING, TYPICAL.
13. REMOVE EXISTING DUCTWORK, HVAC, FILTRATION SYSTEM, ETC FROM THIS AREA.
14. EXISTING ELECTRICAL J-BOX TO BE REPLACED, REFER TO ELECTRICAL PLANS.
15. REMOVE PORTION OF DECAYED WOOD OVERHANG, (VERIFY IN FIELD) TO BE REPLACED.
16. ROOF LINE ABOVE.
17. REMOVE ALL DUCTWORK FROM THIS SPACE.
18. REMOVE PLUMBING VENT.
19. REMOVE HOSE BIB AND REPAIR WALL.
20. REMOVE WATER HEATER AND ALL ASSOCIATED PIPING.
21. SAWCUT AND REMOVE CONCRETE TO ACCOMMODATE IT CONDUIT, REFER TO ELECTRICAL PLAN.
22. REMOVE EXISTING CONCRETE TO ACCOMMODATE I.T. CONDUIT TRENCH, REFER TO I.T. SITE PLAN.
23. REMOVE EXISTING ROOF GUTTERS AND DOWNSPOUTS.

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Demolition Plan

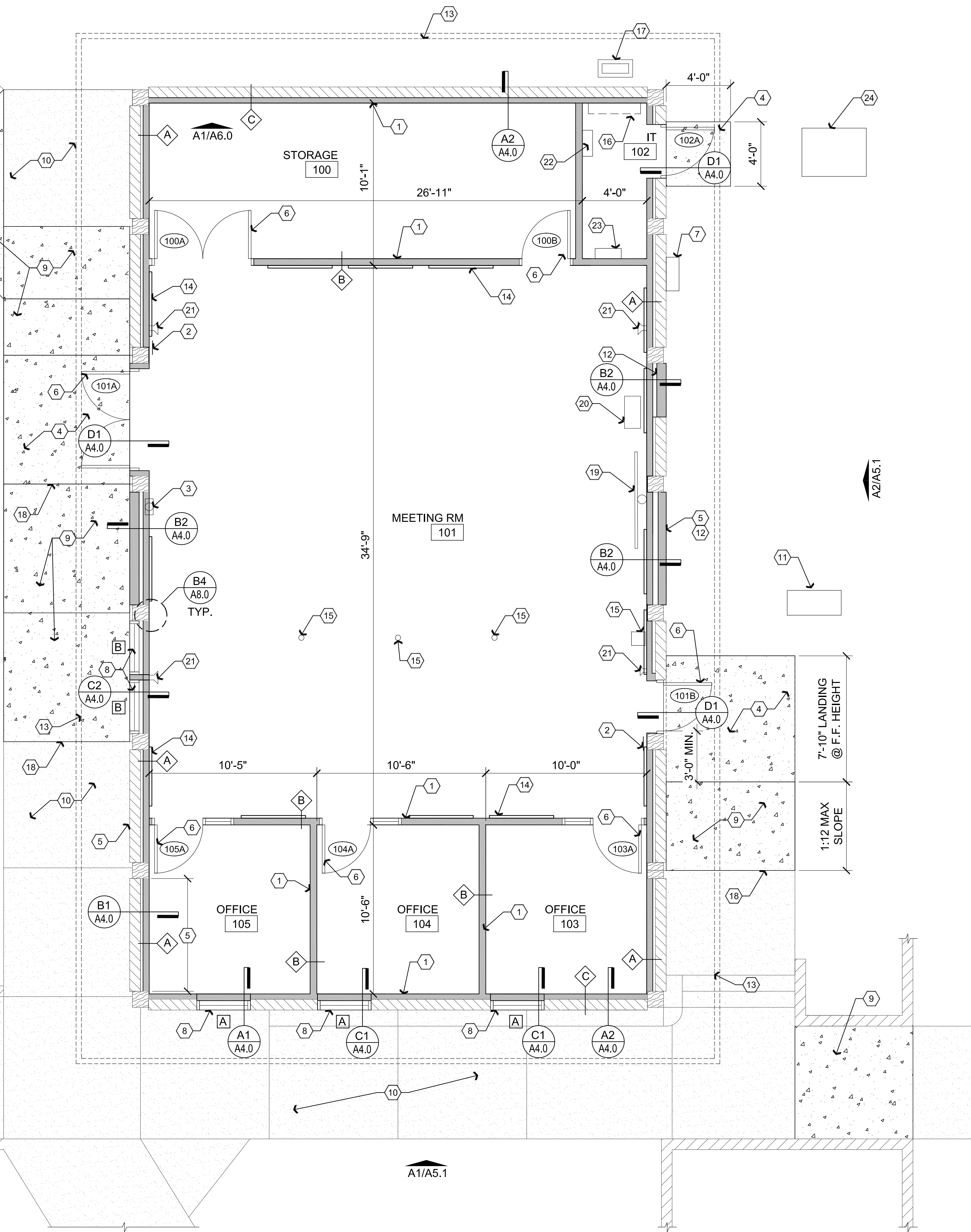
**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB. NO. 709
SHEET

# A1.0





**A1** Reference / Dimension / Wall Types Floor Plan

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



## Descriptive Keynotes

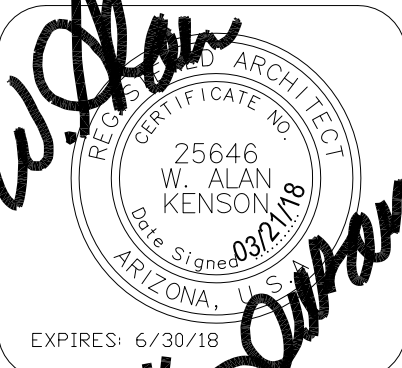
1. PROVIDE NEW WALL, REFER TO WALL TYPES.
2. PROVIDE A 6"x9" BLUE TACTILE 'EXIT' SIGN AS MANUFACTURED BY 'SIMPLY EXIT SIGNS' (#SE-1980) OR EQUAL COMPLYING WITH ICCA117.1 AND IBC 1011.3 ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. SIGN SHALL BE MOUNTED 60" A.F.F. TO THE CENTER OF THE SIGN.
3. PROVIDE TYPE 2A10BC FIRE EXTINGUISHER IN SEMI-RECESSED WALL CABINET.
4. PROVIDE NEW, SEALED, 4" CONCRETE LANDING W/ #3 @ 3'-0" O.C. EACH WAY, OVER 4" COMPACTED ABC WITH MAXIMUM 1/4":12" SLOPE. PROVIDE 8" TURNDOWN.
5. INFILL ALL OPENINGS ABOVE, WHERE THE CLERESTORY WINDOWS OR PANELS WERE REMOVED, REFER TO EXISTING / DEMOLITION AND PROPOSED EXTERIOR ELEVATIONS, TYPICAL FOR BOTH THE EAST AND WEST SIDES OF THE BUILDING.
6. PROVIDE DOOR, REFER TO DOOR SCHEDULE.
7. EXISTING ELECTRICAL SERVICE ENTRANCE SECTION, REFER TO ELECTRICAL PLANS.
8. PROVIDE NEW WINDOW, REFER TO WINDOW TYPES.
9. PROVIDE NEW, SEALED, 4" THICK CONCRETE SLAB / SIDEWALK W/ #3 @ 3'-0" O.C. EACH WAY OVER 4" COMPACTED A.B.C. PROVIDE 8" MINIMUM TURNDOWN ON EXPOSED SIDES.
10. EXISTING CONCRETE SIDEWALK.
11. EXISTING NATURAL GAS METER / REGULATOR, REFER TO PLUMBING PLANS.
12. IN-FILL OPENING WHERE DOOR WAS REMOVED.
13. LINE OF ROOF OVERHANG ABOVE.
14. PROVIDE 4'x6'x1 1/2" ACOUSTIC PANEL, TYPICAL. [AWP-1]
15. PROVIDE CONCRETE / GROUT INFILL AT EXISTING VOID IN CONCRETE SLAB. FINISH FLUSH WITH EXISTING SURFACE.
16. MINI-SPLIT HVAC UNIT, REFER TO MECHANICAL PLANS.
17. MINI-SPLIT CONDENSING UNIT, REFER TO MECHANICAL PLANS.
18. TYPICALLY INDICATES TOOLED CONCRETE CONTROL JOINT.
19. MONITOR, PROVIDED BY OWNER. PROVIDE ALL REQUIRED BACKING.
20. A/V RACK CABINET PROVIDED BY OWNER.
21. WALL MOUNTED SPEAKER, PROVIDED BY OWNER.
22. IT EQUIPMENT, REFER TO ELECTRICAL PLANS.
23. ENTRY DOOR ACCESS EQUIPMENT.
24. EXISTING ELECTRICAL TRANSFORMER.

## 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.
- C** INTERIOR PARTITION WALL AT EXISTING EXTERIOR WALL : EXISTING CMU WALL. PROVIDE NEW WALL TO BOTTOM OF BEAM, 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.

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Reference / Dimension / Wall Types Floor Plan

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

**A2.0**

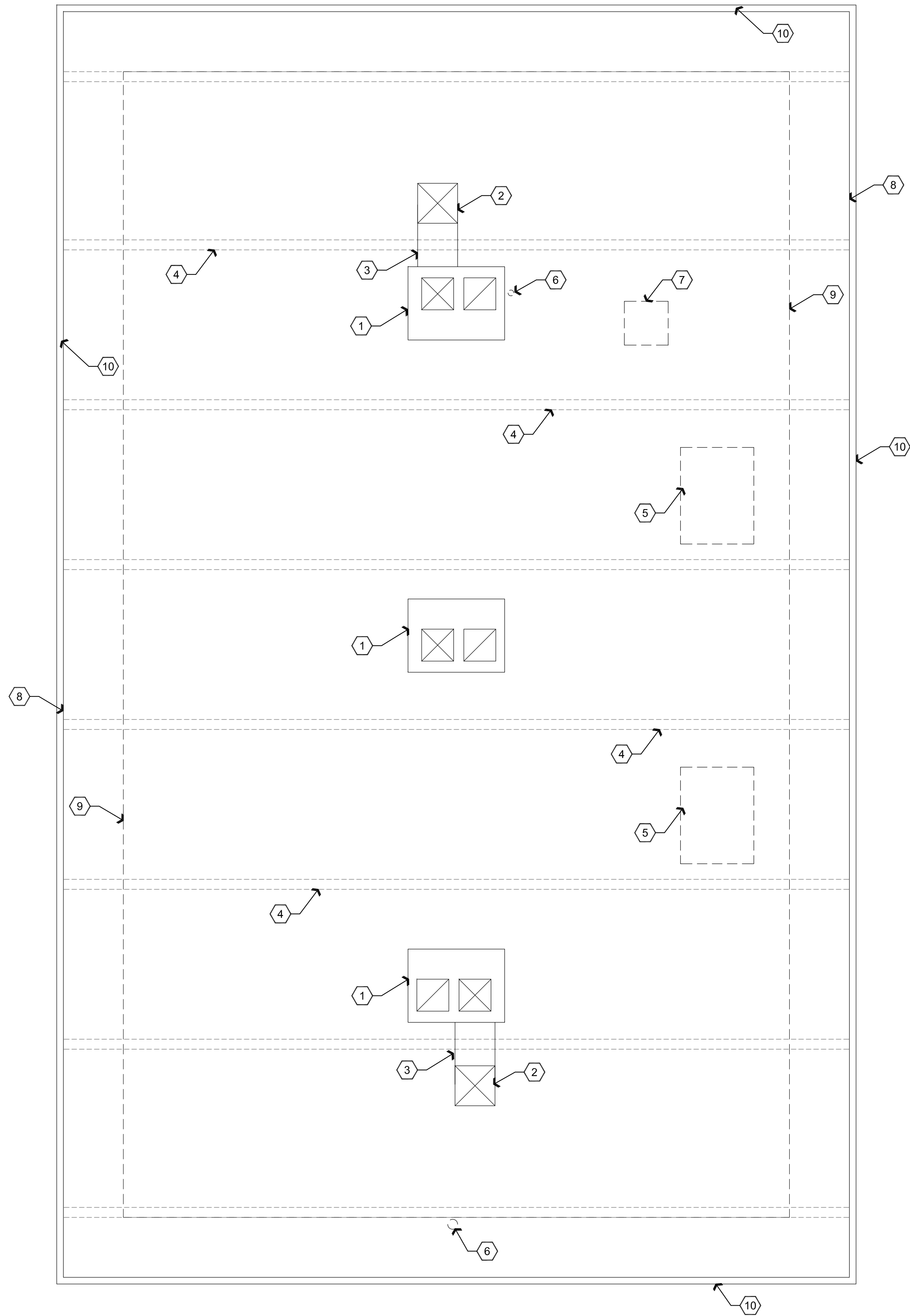
**NOTE:**  
ALL ROOF PENETRATIONS WILL BE MADE BY A CERTIFIED SOPREMA ROOF INSTALLER. NO OTHER CONTRACTOR OR ROOFING SYSTEM IS ACCEPTABLE. PROVIDE SOPREMA APPROVED ROOF JACK TO ROOFING CONTRACTOR FOR INSTALLATION.  
CONTACT SOPREMA ROOFING REPRESENTATIVE:  
WALT HITCHCOCK  
CELL: 480-694-3433  
EMAIL: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

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

## Descriptive Keynotes

### Roof Plan

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.
6. REMOVE PLUMBING VENT. REPAIR ROOF AS REQUIRED.
7. REMOVE DUCT. REPAIR ROOF AS REQUIRED.
8. EDGE OF EXISTING ROOF.
9. EDGE OF EXISTING EXTERIOR WALL.
10. PROVIDE NEW GUTTER AND DOWNSPOUTS. GT-1



**A1** Demolition and Proposed Roof Plan

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



## Descriptive Keynotes

### Reflected Ceiling Plan

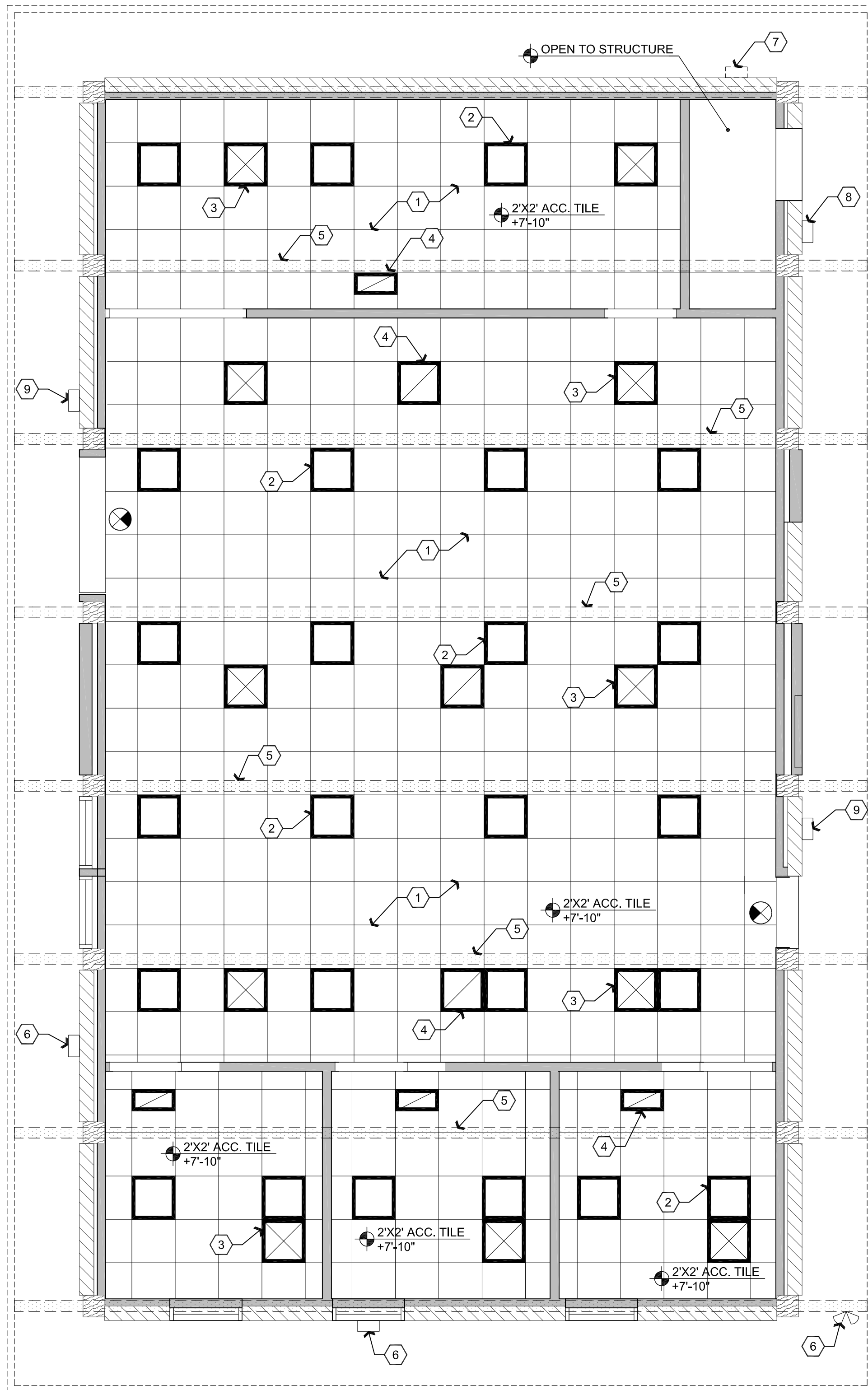
1. PROVIDE NEW SUSPENDED CEILING. GRID TO BE INSTALLED BELOW EXISTING WOOD BEAMS, TYPICAL. ACT-1
2. LIGHT FIXTURES SHOWN FOR QUANTITY AND LOCATION ONLY. REFER TO ELECTRICAL PLANS.
3. HVAC SUPPLY, TYPICAL. REFER TO MECHANICAL PLANS.
4. HVAC RETURN, TYPICAL. REFER TO MECHANICAL PLANS.
5. EXISTING WOOD BEAM @ 8'-0" TO BOTTOM OF BEAM.
6. EXTERIOR LIGHT TO REMAIN, REFER TO ELECTRICAL PLANS.
7. RELOCATE EXISTING LIGHT TO EAST SIDE OF BUILDING, REFER TO ELECTRICAL PLANS.
8. RELOCATED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS.
9. LIGHT FIXTURE BY OWNER, REFER TO ELECTRICAL PLANS.

## Legend

- 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 A/V WIRES SHALL BE RUN UNDER THE BEAMS, ABOVE THE CEILING. NO BEAMS SHALL HAVE HOLES DRILLED THROUGH THEM.



**B1** Reflected Ceiling Plan

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



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P.O. Box 11593  
Prescott, AZ 86304

**ARCHITECTURE & PLANNING**

**DRAWING:** Reflected Ceiling Plan and Roof Plan

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

**APN:** 106-03-004

**DRAWN BY**  
L.O.

**CHECKED BY**  
W.A.K.

**DATE**  
March 21st, 2018

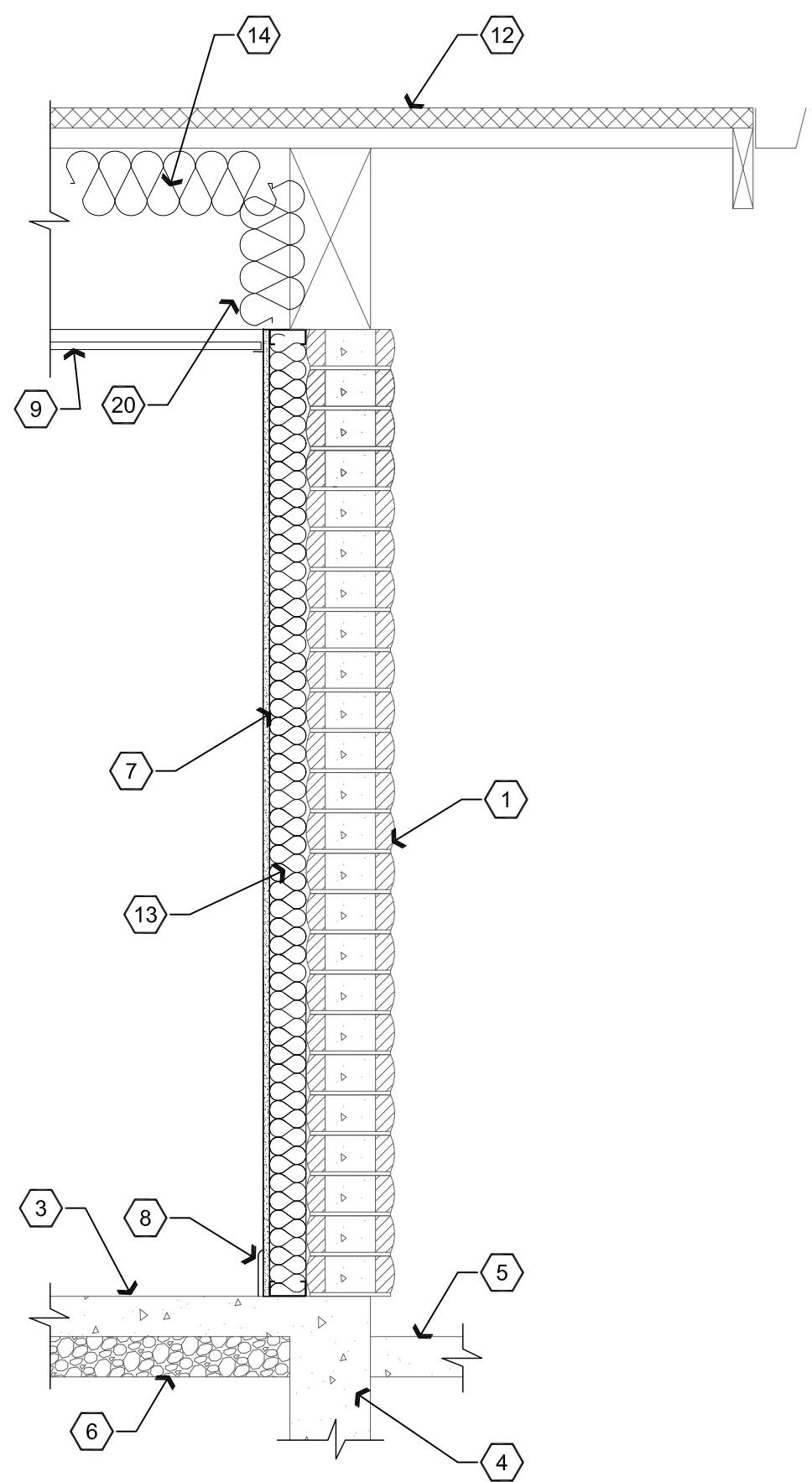
**JOB NO.**  
709

**SHEET**

**A3.0**

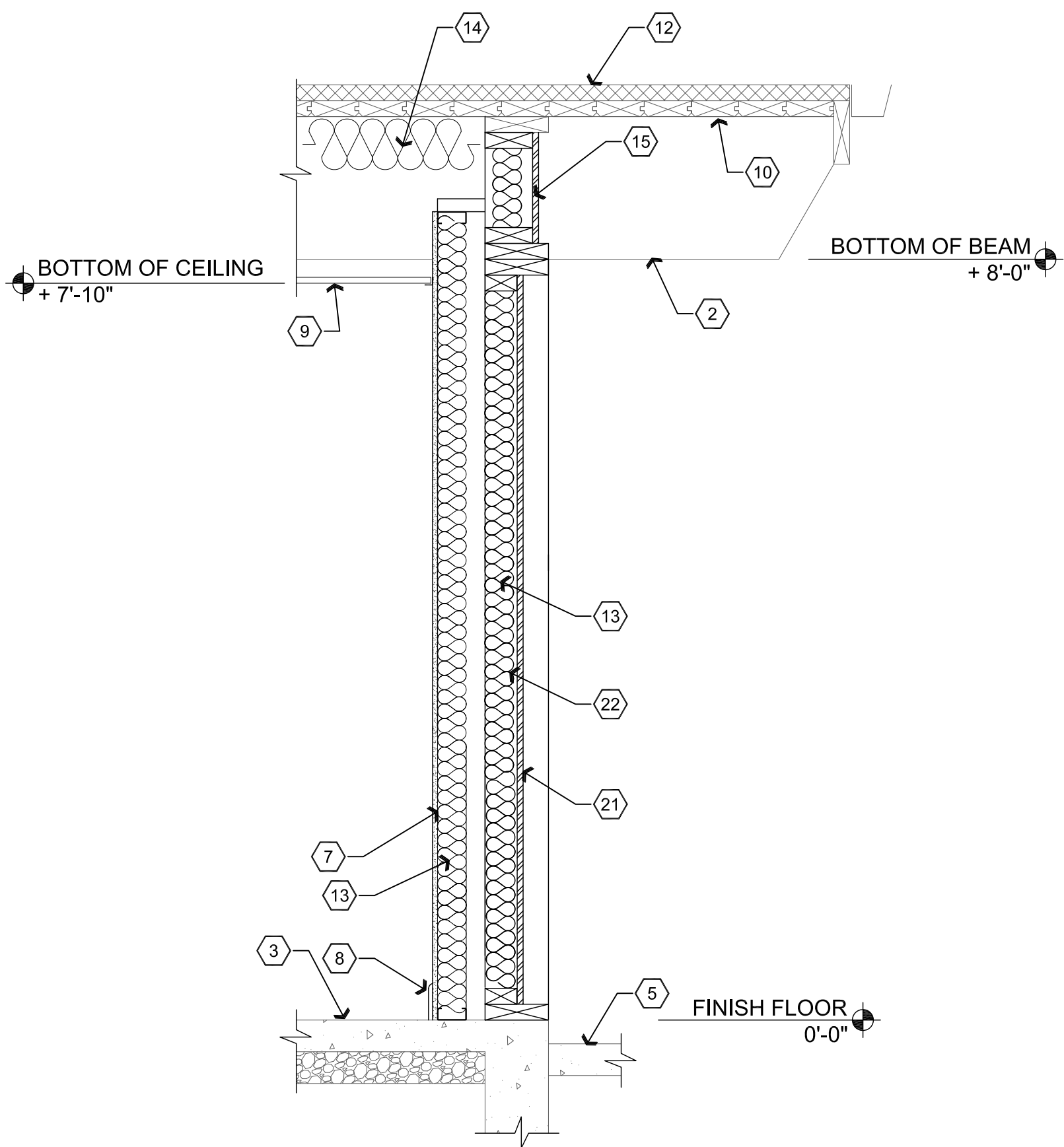


Mar 21, 2018 - 10:44am



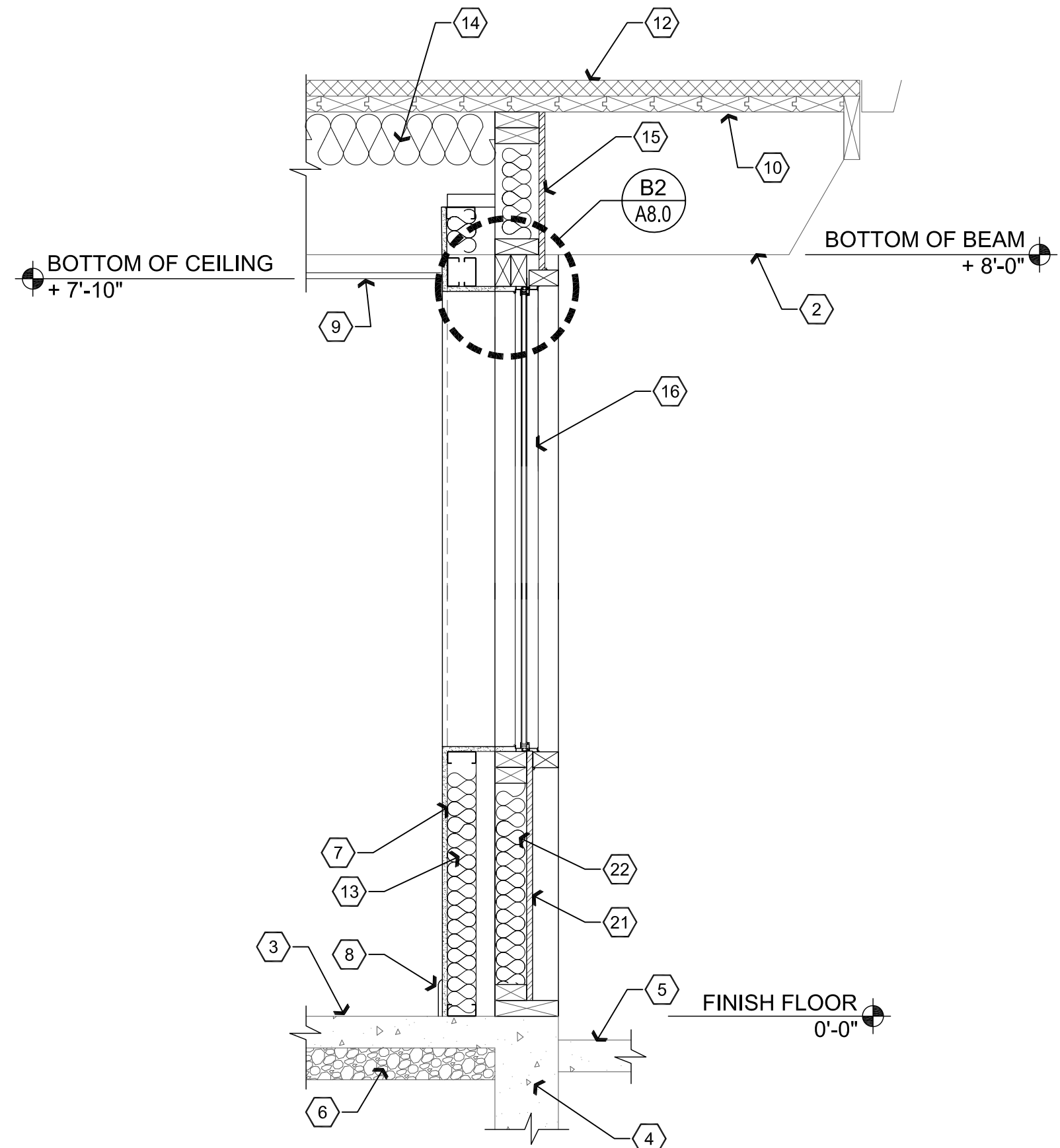
**A2** Wall Section

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



**B2** Wall Section

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

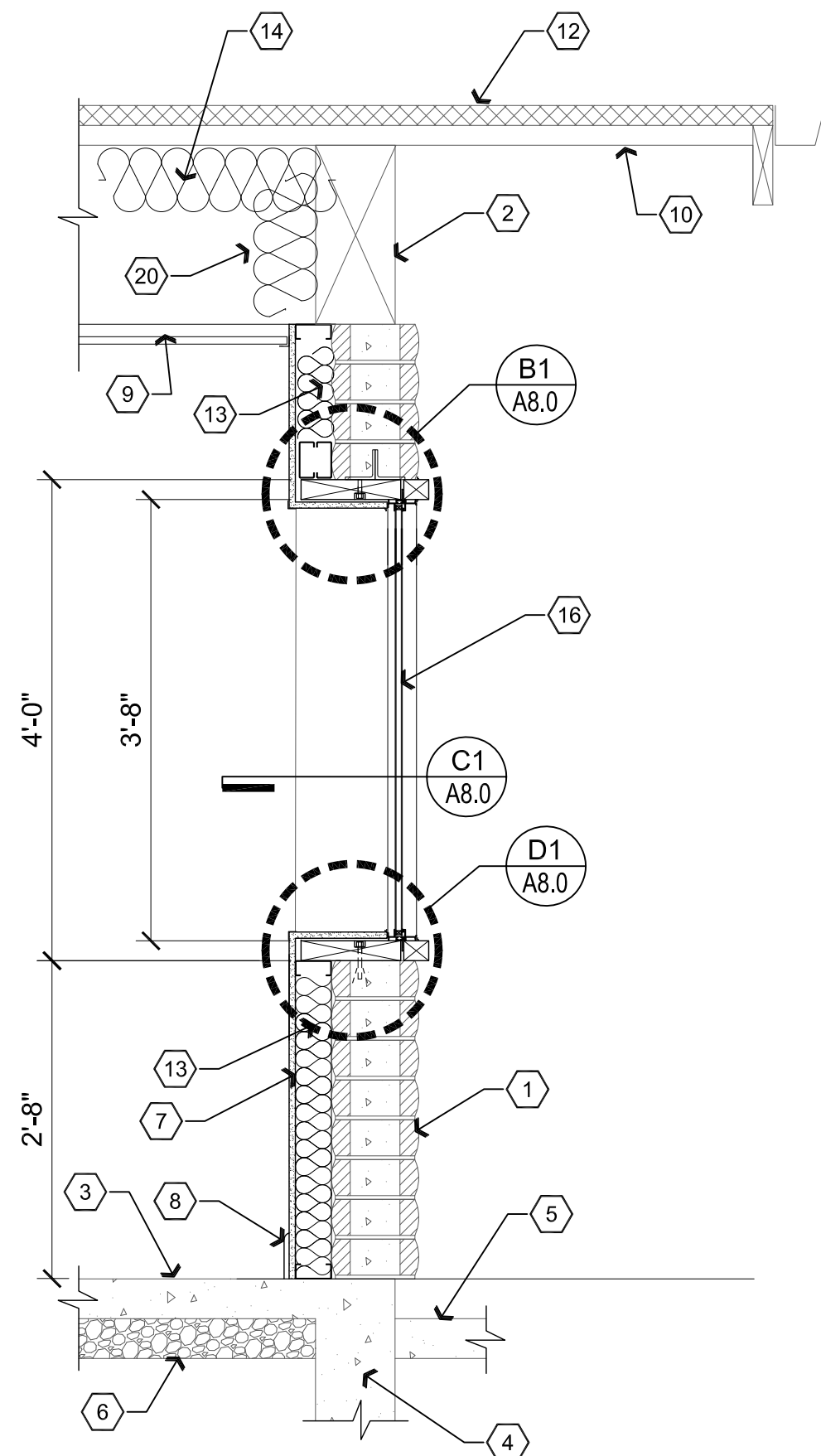


**C2** Wall Section

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

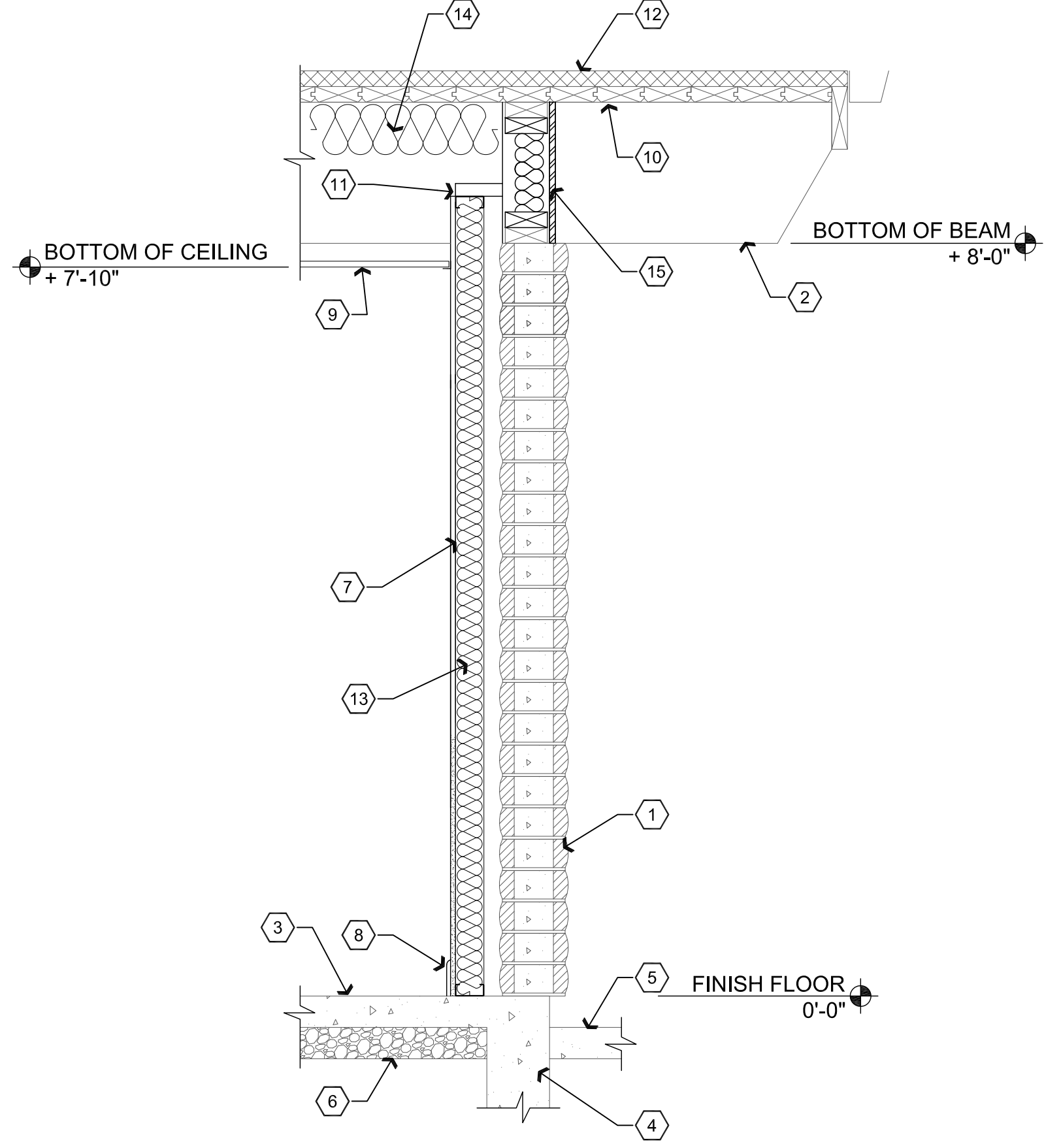
## Descriptive Keynotes

1. EXISTING 8"x4"x16" SLUMP BLOCK WALL.
2. EXISTING WOOD BEAM.
3. EXISTING CONCRETE SLAB.
4. EXISTING FOUNDATION.
5. EXISTING OR NEW EXTERIOR CONCRETE SLAB AS OCCURS.
6. EXISTING COMPACTED ABC.
7. NEW METAL STUD WALL. REFER TO WALL TYPES PLAN.
8. PROVIDE RUBBER BASE.
9. PROVIDE SUSPENDED ACOUSTICAL CEILING. REFER TO REFLECTED CEILING PLAN.
10. EXISTING 2x TONGUE AND GROOVE WOOD DECK.
11. PROVIDE STEEL STUD BRACING BACK TO WALL @ 4'-0" O.C.
12. EXISTING ROOFING.
13. PROVIDE R-11 UNFACED BATT INSULATION.
14. PROVIDE R-38 UNFACED BATT INSULATION WIRED IN PLACE.
15. INFILL OPENING WITH 2x6 WOOD STUDS @ 16" O.C., PROVIDE 5/8" 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.
16. PROVIDE WINDOW. REFER TO REFERENCE FLOOR PLAN AND WINDOW TYPES.
17. INTERIOR WALL, REFER TO WALL TYPES PLAN.
18. PROVIDE CONCRETE SLAB. REFER TO REFERENCE FLOOR PLAN.
19. PROVIDE HOLLOW METAL DOOR IN HOLLOW METAL FRAME. REFER TO REFERENCE FLOOR PLAN AND DOOR TYPES.
20. WRAP INSULATION ALONG BEAM TO WALL.
21. PROVIDE T-111 SHEATHING TO MATCH EXISTING.
22. PROVIDE 2x4 WOOD STUDS @ 16" O.C.



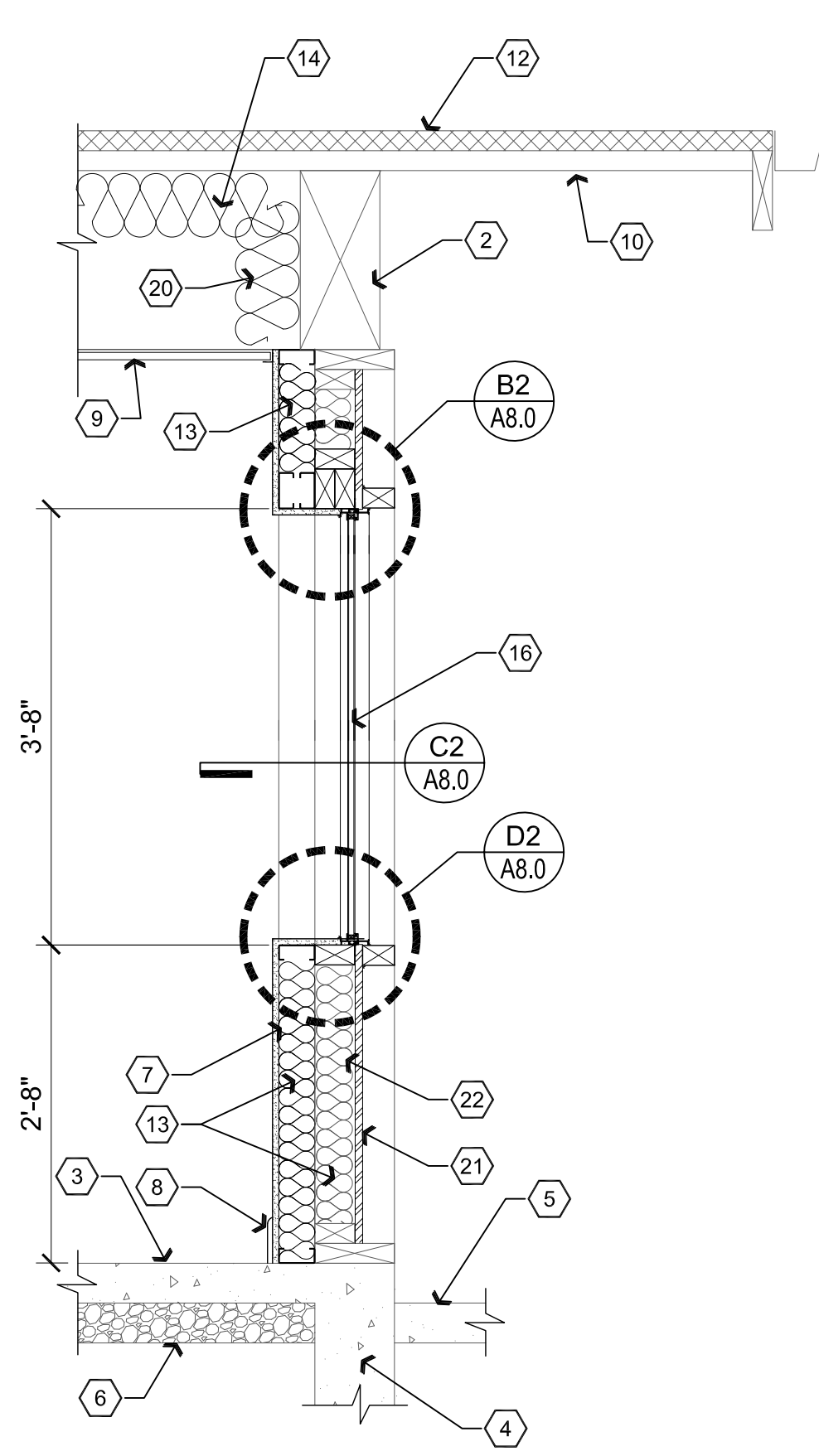
**A1** Wall Section

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



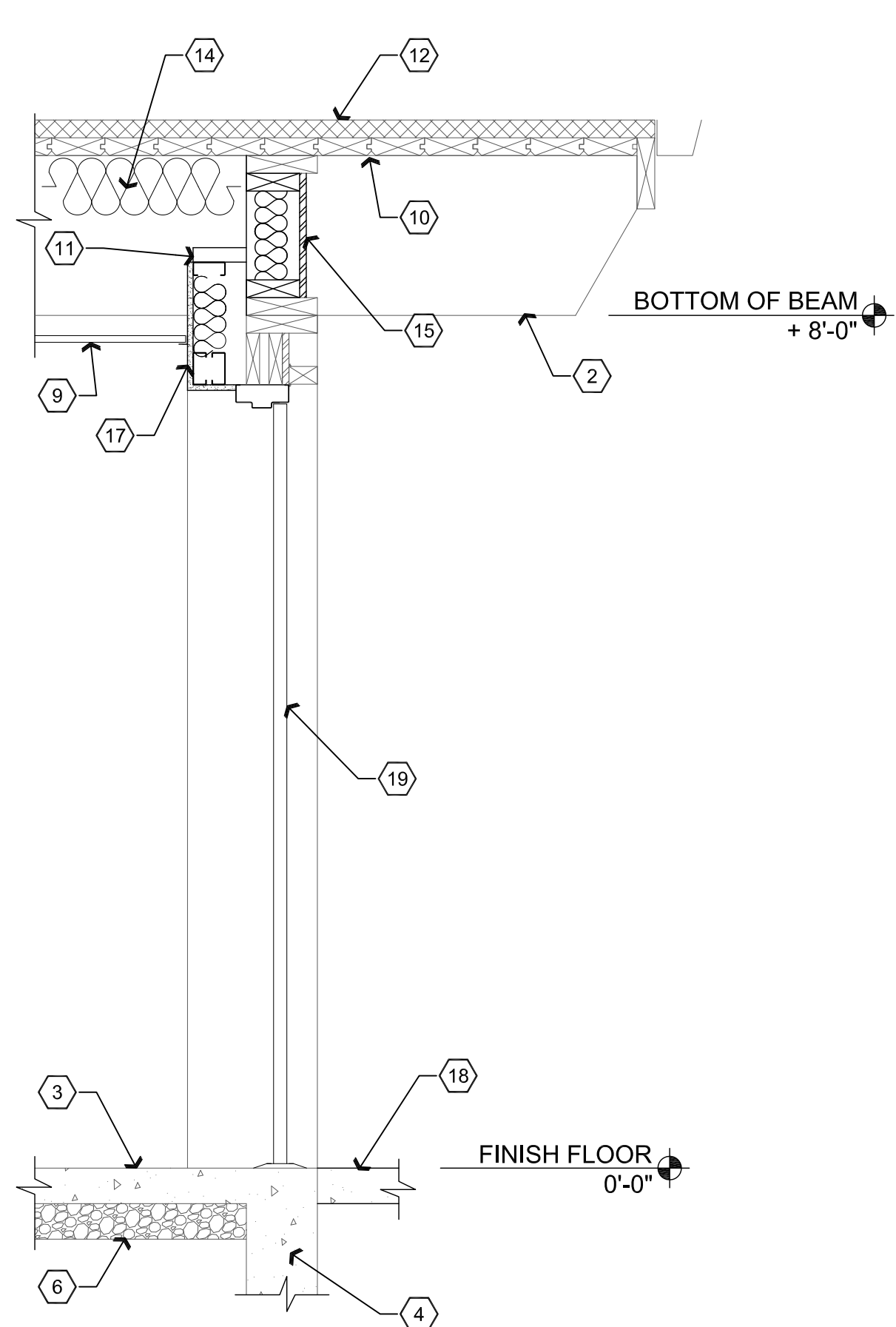
**B1** Wall Section

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



**C1** Wall Section

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

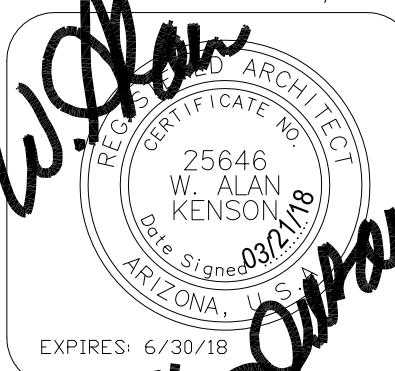


**D1** Wall Section

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

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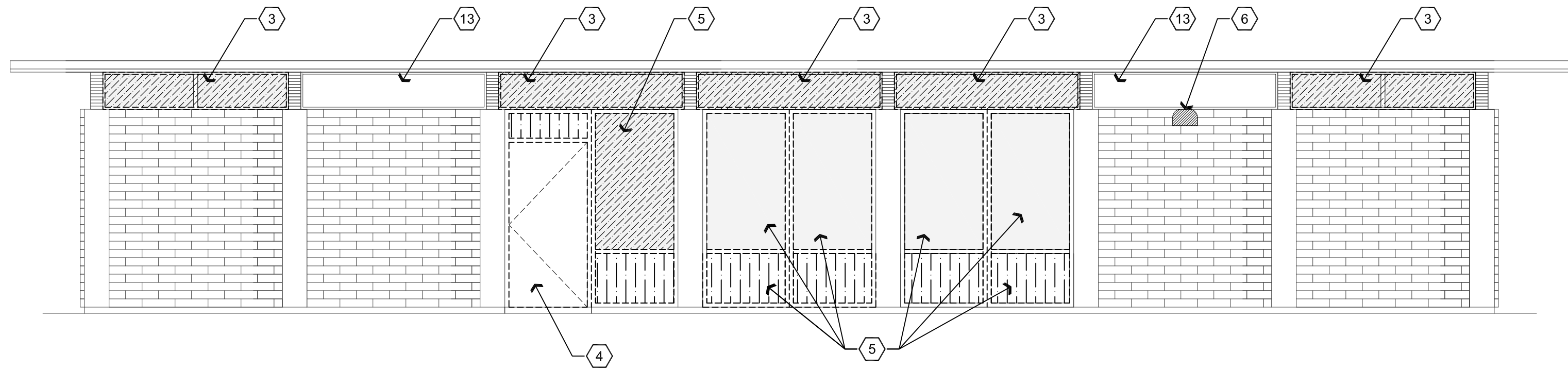
**W. Alan Kenson & Associates, P.C.**  
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**ARCHITECTURE & PLANNING**

**DRAWING:** Wall Sections  
**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301  
**APN:** 106-03-004

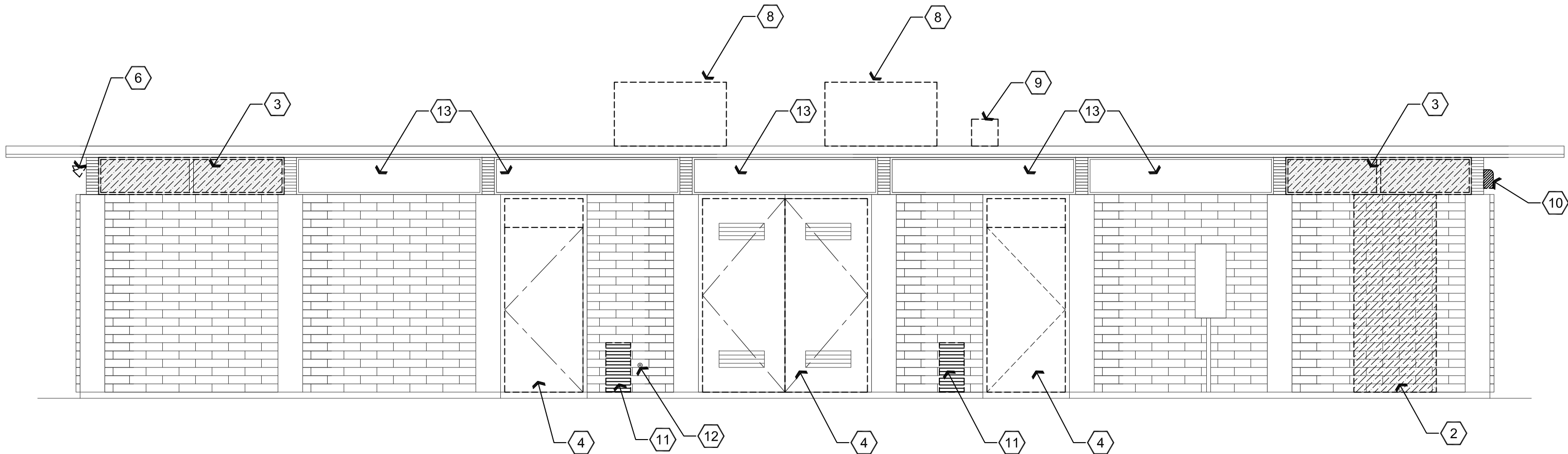
**DRAWN BY** L.O.  
**CHECKED BY** W.A.K.  
**DATE** March 21st, 2018  
**JOB NO.** 709  
**SHEET**

**A4.0**

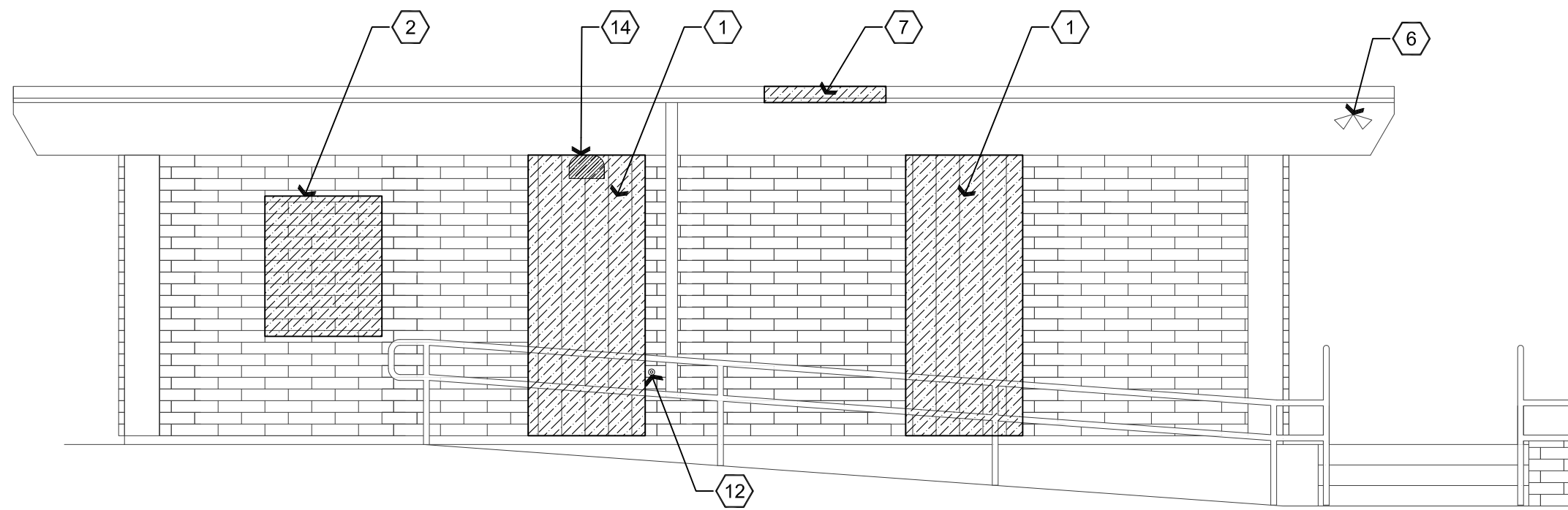
Mar 21, 2018 - 10:44am



**A3 Existing / Demolition West Elevation** Scale: 1/4"=1'-0"



**A2 Existing / Demolition East Elevation** Scale: 1/4"=1'-0"



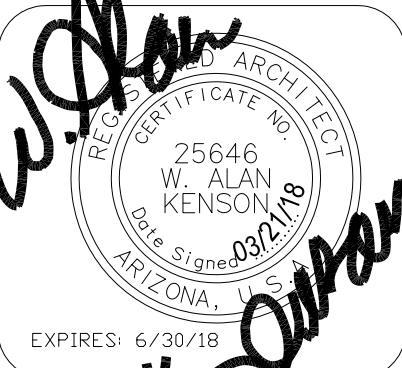
**A1 Existing / Demolition South Elevation** Scale: 1/4"=1'-0"

## Descriptive Keynotes

1. REMOVE WOOD FRAMED WALL TO ACCOMMODATE INSTALLATION OF NEW WINDOW AND WALL. REFER TO REFERENCE FLOOR PLAN.
2. REMOVE PORTION OF CMU WALL TO ACCOMMODATE INSTALLATION OF NEW WINDOW / DOOR. REFER TO REFERENCE FLOOR PLAN.
3. REMOVE EXISTING CLERESTORY WINDOW, TYPICAL.
4. REMOVE EXISTING DOOR, FRAME AND HARDWARE. REFER TO DOOR SCHEDULES.
5. REMOVE EXISTING WINDOW AND ALL FRAMING.
6. EXISTING LIGHTING TO REMAIN, REFER TO ELECTRICAL PLANS.
7. REMOVE PORTION OF DECAYED WOOD OVERHANG, (VERIFY IN FIELD) TO BE REPLACED.
8. REMOVE EXISTING HVAC ROOFTOP EQUIPMENT, REFER TO MECHANICAL PLANS.
9. REMOVE EXISTING DUCT, REFER TO MECHANICAL PLANS.
10. EXISTING LIGHT TO BE RELOCATED, REFER TO ELECTRICAL PLANS.
11. REMOVE EXISTING VENT AND REPAIR WALL.
12. REMOVE HOSE BIB AND REPAIR WALL.
13. EXISTING VOID SPACE.
14. REMOVE AND REINSTALL EXISTING LIGHT FIXTURE, REFER TO ELECTRICAL PLANS.

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Existing / Demolition Exterior Elevations

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

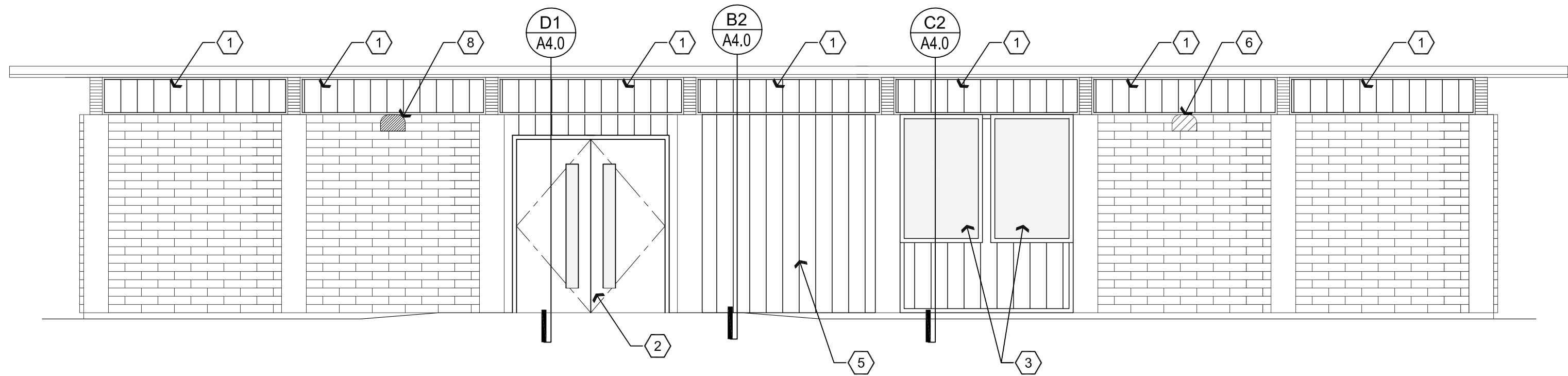
**APN:** 106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

**A5.0**

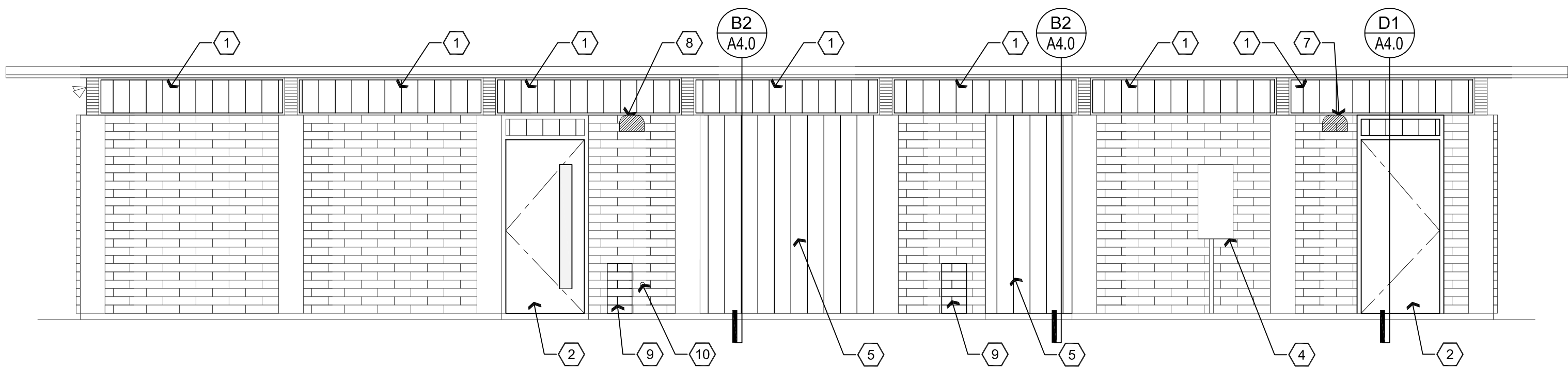


Mar 21, 2018 - 10:44am



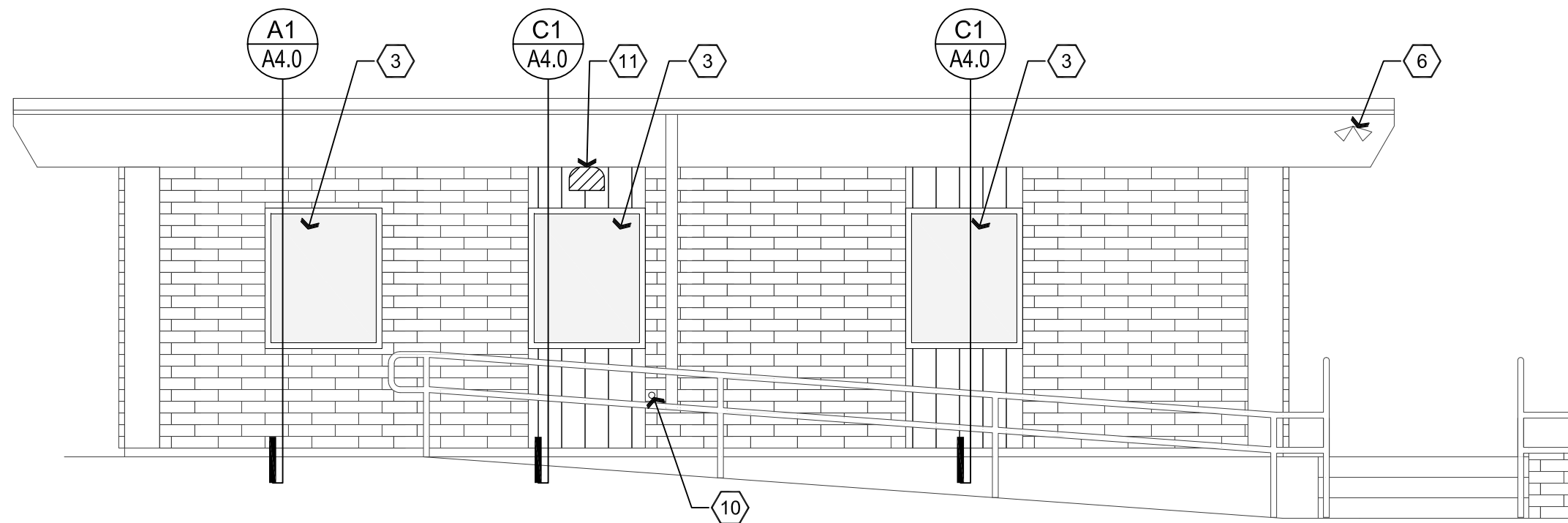
**A3** Proposed West Elevation

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



**A2** Proposed East Elevation

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



**A1** Proposed South Elevation

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

## Descriptive Keynotes

1. INFILL OPENING ABOVE WHERE THE CLERESTORY WINDOW OR PANEL WAS REMOVED.
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. EXISTING ELECTRIC SERVICE ENTRANCE SECTION.
5. IN-FILL OPENING WHERE DOOR OR WINDOW WAS REMOVED.
6. EXISTING LIGHT FIXTURE TO REMAIN, REFER TO ELECTRICAL PLANS.
7. RELOCATED LIGHT FIXTURE.
8. LIGHT FIXTURE BY OWNER, REFER TO ELECTRICAL PLANS.
9. REPAIR WALL WHERE VENT WAS REMOVED WITH CMU TO MATCH EXISTING. TOOTH CMU INTO EXISTING CMU.
10. REPAIR WALL WHERE HOSE BIB WAS REMOVED.
11. REINSTALLED LIGHT FIXTURE.

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

**DRAWING:** Proposed Exterior Elevations

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

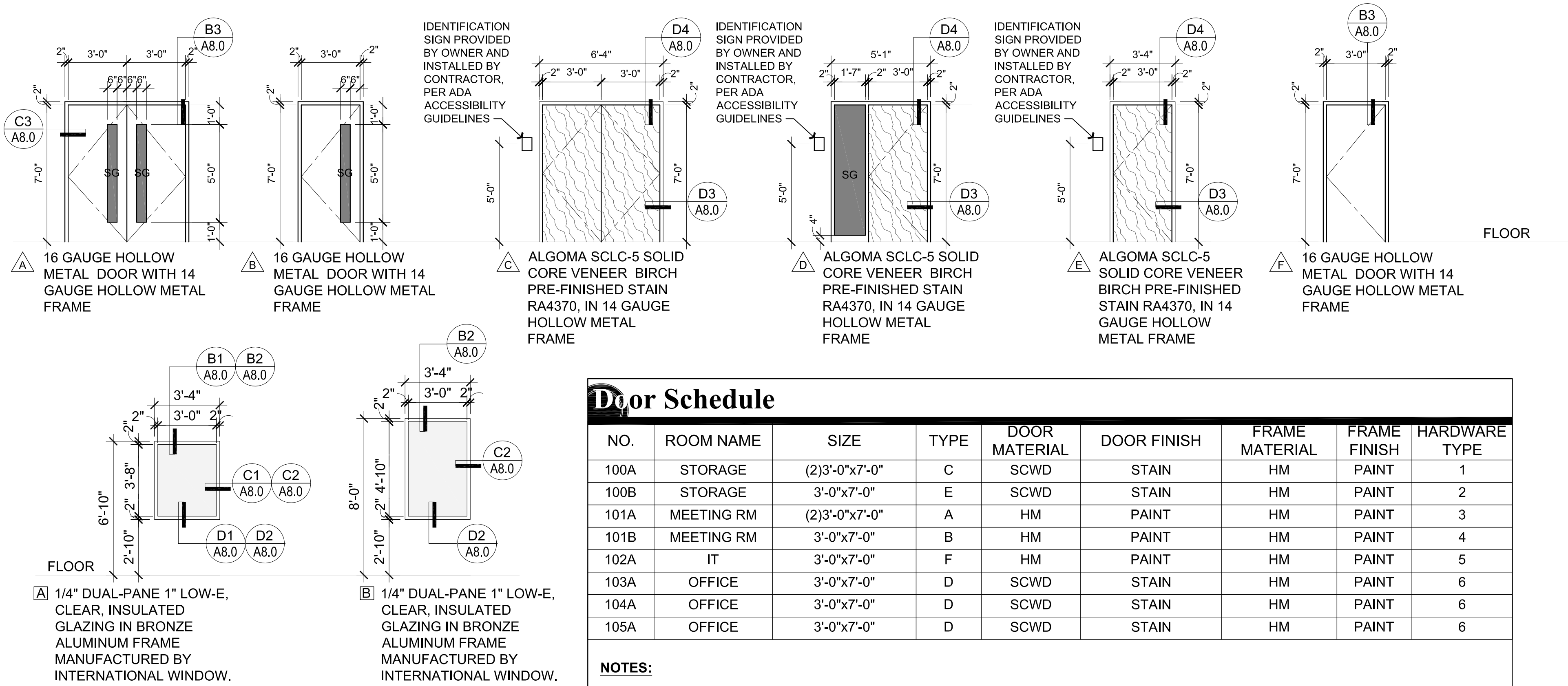
**APN:** 106-03-004

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DATE March 21st, 2018
JOB NO. 709
SHEET

**A5.1**



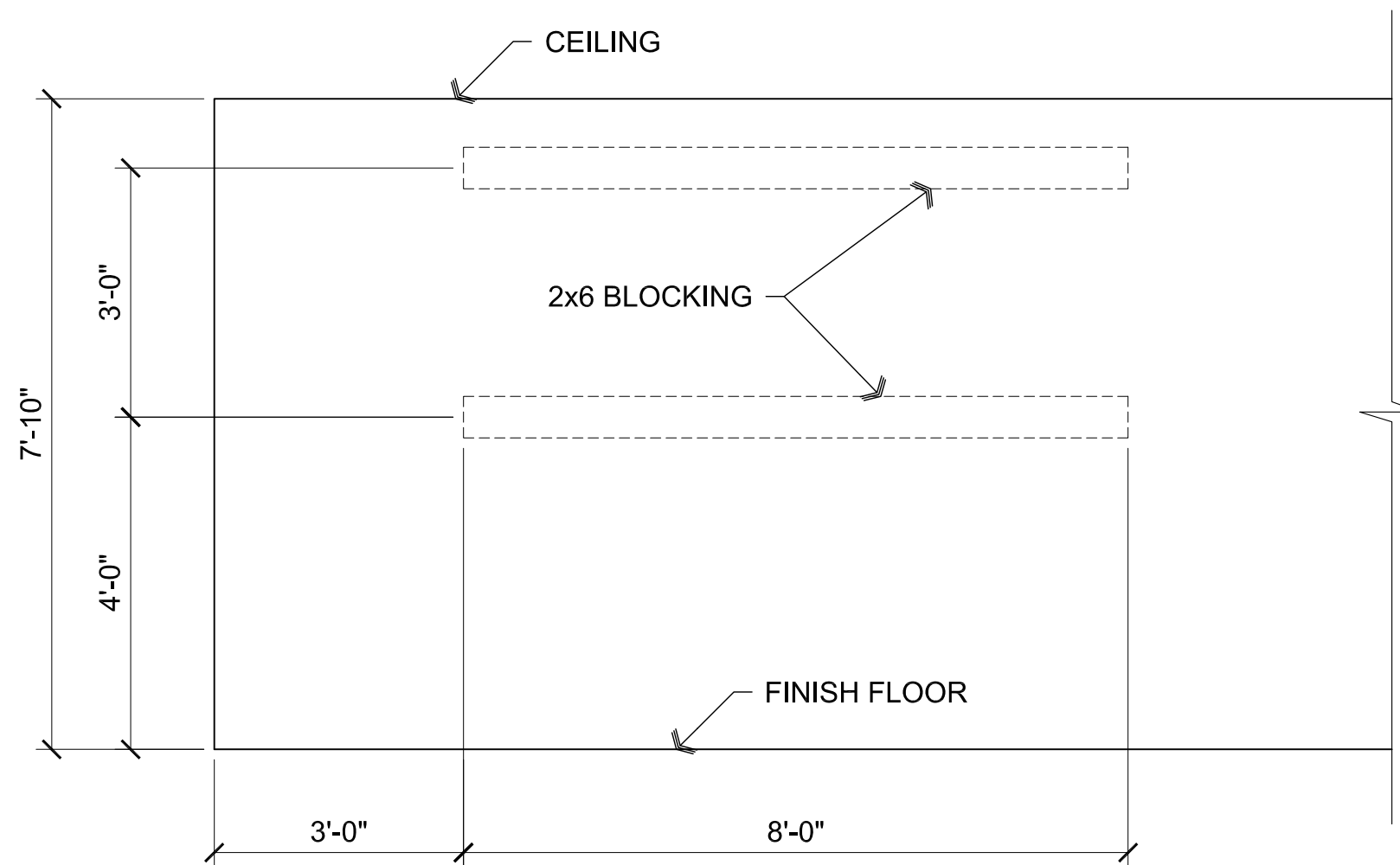
Hardware Schedule		
BRAU BUILDING 19 REMODEL		
DOOR HARDWARE SCHEDULE		
HW SET #1		
DOORS - 100A PAIR SCWD X HMD		
QTY	DESCRIPTION	MANUFACTURER
6	HINGE FBB179 4.5 X 4.5 626	STANLEY
1	STOREROOM 9K3 7D 15D S3 626	BEST
1	PERMANENT CORE BY ERAU	BEST
1	FLUSH BOLTS SET 458-12 626	IVES
2	SILENCERS SR64 GRV	IVES
HW SET #2		
DOORS - 100B SINGLE SCWD X HMF		
QTY	DESCRIPTION	MANUFACTURER
3	HINGE FBB179 4.5 X 4.5 626	STANLEY
1	STOREROOM 9K3 7D 15D S3 626	BEST
1	PERMANENT CORE BY ERAU	BEST
1	WALL STOP 236W 626	HAGER
3	SILENCERS SR64 GRV	IVES
HW SET #3		
DOORS - 101A PAIR HMD X HMF		
QTY	DESCRIPTION	MANUFACTURER
5	HINGE FBB168 4.5 X 4.5 NRP 626	STANLEY
1	POWER TRANSFER HINGE BALL BEARING HW 4.5 X 4.5 NRP 626	STANLEY
1	EXIT DEVICE CBL RX 99EO - 36" 626	VON DUPRIN
1	EXIT DEVICE 99EOL - 36" 626	VON DUPRIN
1	PULL TRIM 990NL 626	VON DUPRIN
1	REMOVEABLE MULLION KR4954 - 7'-0"	600 VONDUPRIN
1	RIM CYLINDER 12E72 S2 RP626	BEST
1	MORTISE CYLINDER 1E74 C4 RP3 626	BEST
2	PERMANENT CORES BY ERAU	BEST
1	ADA OPENER 4642 - 36"	ALUM LCN
1	WIRELESS ACTUATOR KIT	SECCO
1	ADDITIONAL WIRELESS RECEIVER	SECCO
1	CLOSER 4D40XP EDA X CUSH 689	LCN
1	HID RP40SE READER MOUNTED BY EXTERIOR ACTUATOR BUTTON	HID
1	MULLION SEAL 5110-10 31ACK	PEMKO
1	WEATHER STRIP 303AS 72 X 84	PEMKO
2	SWEEPS 315CN-36"	PEMKO
1	THRESHOLD 171A - 72" X 5" X 1/2" ALUM	PEMKO
HW SET #4		
DOORS - 101B SINGLE HMD X HMF		
QTY	DESCRIPTION	MANUFACTURER
3	HINGE FBB168 4.5 X 4.5 NRP 626	STANLEY
1	EXIT DEVICE 99EOL - 36" EXIT ONLY 626	VON DUPRIN
1	CLOSER 4D40XP EDA X CUSH 689	LCN
1	WEATHER STRIP 303AS 36 X 84	PEMKO
1	SWEEP 315CN - 36"	PEMKO
1	THRESHOLD 171A - 36" X 5" X 1/2" ALUM	STANLEY
HW SET #5		
DOORS - 102A SINGLE HMD X HMF		
QTY	DESCRIPTION	MANUFACTURER
3	HINGE FBB168 4.5 X 4.5 NRP 626	STANLEY
1	STOREROOM 9K3 7D 15D S3 630	BEST
1	ELECTRIC STRIKE 5200C 630	HES
1	PERM CORE BY ERAU	BEST
1	HID RP40SE READER	HID
1	REX SENSOR DS150I	BOSCH
1	DOOR CONTACT 1076D	SCHLAGE
1	LATCH GUARD LP-111 630	DON JO
1	CLOSER 4D40XP EDA X CUSH 689	LCN
1	WEATHER STRIP 303AS 36 X 84	PEMKO
1	SWEEP 315CN - 36"	PEMKO
1	THRESHOLD 171A - 36"	ALUM PEMKO
HW SET #6		
DOORS - 103A, 104A, 105A SINGLE SCWD X HMF		
QTY	DESCRIPTION	MANUFACTURER
3	HINGES FBB179 4.5 X 4.5 626	STANLEY
1	ENTRY 9K3 7AB 15D S3 626	BEST
1	PERM CORE BY ERAU	BEST
1	WALL STOP 236W 626	HAGER
3	SILENCERS SR64 GRV	IVES
HONEYWELL HEAD END:		
1 HONEYWELL PW6 SERIES NETWORK CONTROLLER		
1 HONEYWELL PW SERIES ENCLOSURE WALL MOUNT		
1 HONEYWELL PW6K1R2 DUAL READER BOARD		
1 ALTRONIX GAMP POWER SUPPLY W/ BATTERY BACKUP		



Door Schedule								
NO.	ROOM NAME	SIZE	TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HARDWARE TYPE
100A	STORAGE	(2)3'-0"x7'-0"	C	SCWD	STAIN	HM	PAINT	1
100B	STORAGE	3'-0"x7'-0"	E	SCWD	STAIN	HM	PAINT	2
101A	MEETING RM	(2)3'-0"x7'-0"	A	HM	PAINT	HM	PAINT	3
101B	MEETING RM	3'-0"x7'-0"	B	HM	PAINT	HM	PAINT	4
102A	IT	3'-0"x7'-0"	F	HM	PAINT	HM	PAINT	5
103A	OFFICE	3'-0"x7'-0"	D	SCWD	STAIN	HM	PAINT	6
104A	OFFICE	3'-0"x7'-0"	D	SCWD	STAIN	HM	PAINT	6
105A	OFFICE	3'-0"x7'-0"	D	SCWD	STAIN	HM	PAINT	6

**NOTES:**

- ALL EXIT DOORS & HARDWARE SHALL COMPLY WITH THE 2012 I.B.C.
- 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.
- ALL GLAZING IN DOORS SHALL BE SAFETY GLAZING.
- ALL INTERIOR DOORS SHALL BE OPERABLE FOR EMERGENCY EXITING PURPOSES WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE NOR EFFORT.
- ALL GLAZING WITHIN 24" OF OPENINGS SHALL BE SAFETY GLASS.
- 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.
- 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.
- 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.

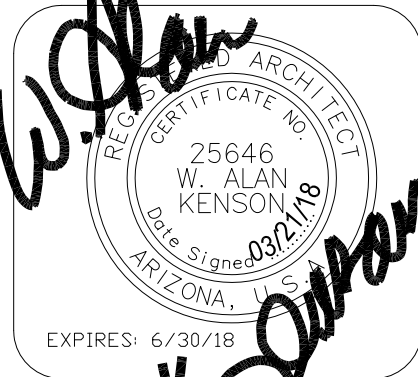


**A1** Blocking in wall

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

REVISIONS	BY

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**ARCHITECTURE & PLANNING**

Door Schedule, Door and Window Types, and Hardware Schedule

**DRAWING:**

**PROJECT:**

**APN:**

ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

**A6.0**



Approved Installers

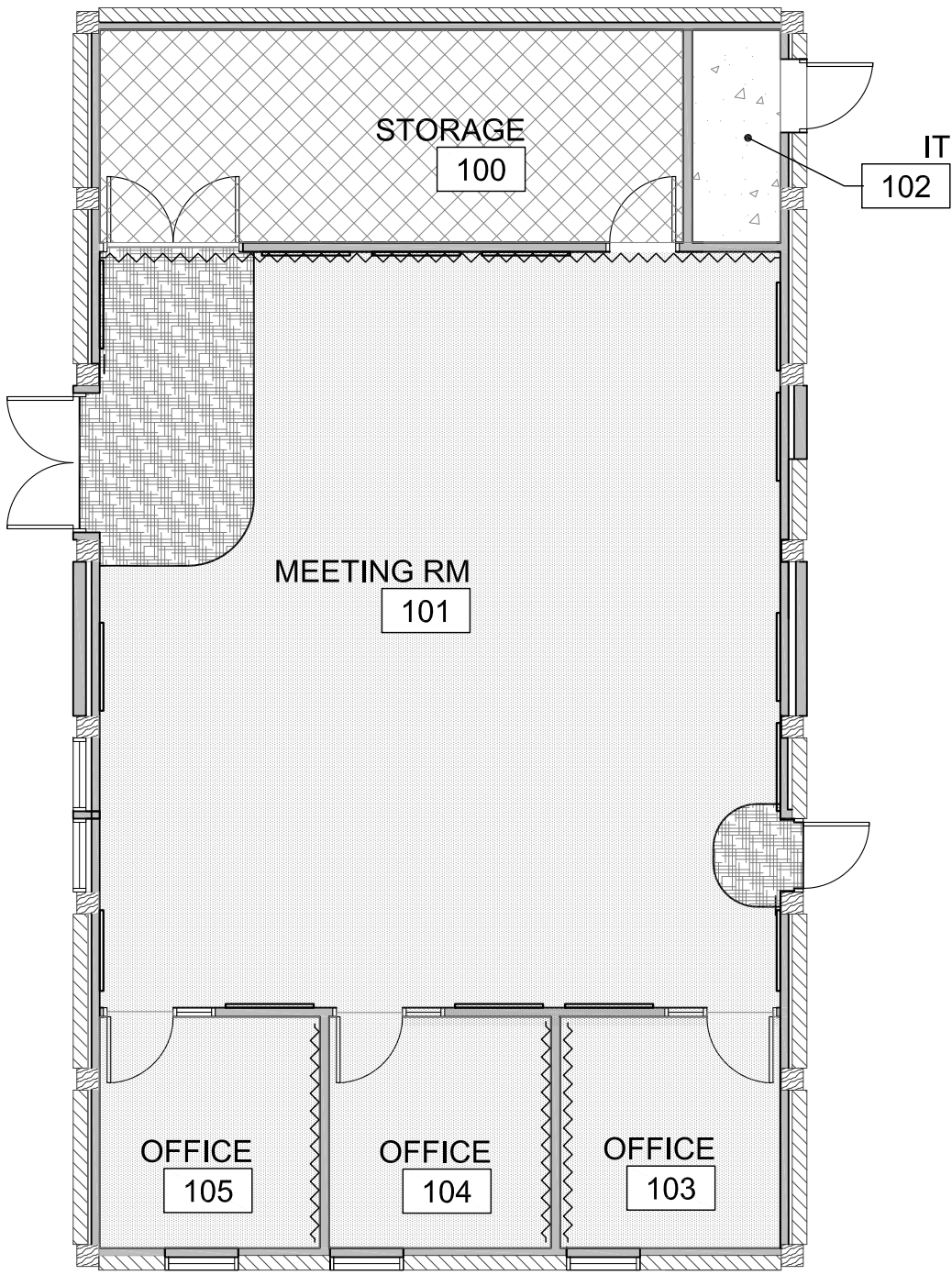
THE CARPET SHALL BE INSTALLED BY A TANDUS CERTIFIED CARPET INSTALLER; THE FOLLOWING ARE APPROVED INSTALLERS:  
(a) DIVERSIFIED FLOORING, 7898 E. ACOMA DR. SUITE 107, SCOTTSDALE, AZ 85260, 480-967-7600  
(b) SEBAGO FLOORING, PO BOX 12740, PRESCOTT, AZ 86304, 928-775-8991

A1 Room Finish Plan

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

Plan North

Materials schedule				
XX- #				
CODE	MATERIAL	LOCATION	MANUFACTURER	SPECIFICATION
ACT-1	ACOUSTIC CEILING TILE	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
AWP-1	ACOUSTIC WALL PANEL	WALLS IN MEETING ROOM	QTS Quiet Technology Systems	4'x6' 1 1/2" FABRIC ACOUSTIC PANEL
CPT-1	CARPET	OFFICES	TANDUS CENTIVA	CRAYON POWERBOND CUSHION RS PRECIOUS METAL #48010 (PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR)
GT-1	6" GALVALUME ROOF GUTTER	PERIMETER OF ROOF	ARIZONA SEAMLESS GUTTERS	COLOR AS SELECTED BY ARCHITECT / OWNER
PT-1	PAINT	INTERIOR WALLS	SHERWIN WILLIAMS	SW6098 PACER WHITE
PT-2	PAINT	INTERIOR TRIM (DOORS, FRAMES, WOOD TRIM)	SHERWIN WILLIAMS	SW6098 PACER WHITE
PT-3	PAINT	INTERIOR ACCENT WALL OFFICES	SHERWIN WILLIAMS	SW6093 FAMILIAR BEIGE
PT-4	PAINT	EXTERIOR METAL DOORS / TRIM	SHERWIN WILLIAMS	SW6153 PROTEGE BRONZE
PT-5	PAINT	EXTERIOR BODY	SHERWIN WILLIAMS	SW 6101 SANDS OF TIME
PT-6	PAINT	EXTERIOR TRIM	SHERWIN WILLIAMS	SW 6102 PORTABELLO
PT-7	PAINT	INTERIOR ACCENT WALL MEETING ROOM	SHERWIN WILLIAMS	SW6166 ECLIPSE
RB-1	RUBBER BASE		ARMSTRONG OR ROPPE	4" COVED WITH PRE-FORMED CORNERS, BLACK (PROVIDED AND INSTALLED BY CONTRACTOR)
WM-1	WALK-OFF-MAT	FRONT ENTRY	TANDUS CENTIVA	ABRASIVE ACTION POWER BOND CUSHION CHARCOAL #19100 (PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR)
VCT-1	VINYL COMPOSITION TILE WITH SEALED FINISH	STORAGE ROOM FLOOR	ARMSTRONG	IMPERIAL TEXTURE, STANDARD EXCELON, 51873 BRUSHED SAND WITH SEALED FINISH



Legend

CARPET CPT-1

VCT VCT-1

WALK-OFF-MAT WM-1

SEALED CONCRETE

ACOUSTIC WALL PANEL AWP-1

ACCENT PAINT PT-3 PT-7

Room Finish Schedule						
NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING	HEIGHT
100	STORAGE	F1	B1	W1	C1	7'-10"
101	MEETING RM	F2 /F3	B1	W1	C1	7'-10"
102	IT	F4	B1	W1	C2	±9'-6"
103	OFFICE	F2	B1	W1	C1	7'-10"
104	OFFICE	F2	B1	W1	C1	7'-10"
105	OFFICE	F2	B1	W1	C1	7'-10"

FLOOR:  
F1 VCT VCT-1

F2 CARPET CPT-1

F3 WALK-OFF-MAT WM-1

F4 SEALED CONCRETE

BASE:  
B1 RUBBER BASE RB-1

WALLS:  
W1 PAINTED GPDW PT-1 PT-2

CEILING:  
C1 2x2 SUSPENDED ACOUSTICAL PANELS ACT-1

C2 EXPOSED STRUCTURE

REVISIONS	BY

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ARCHITECTURE & PLANNING

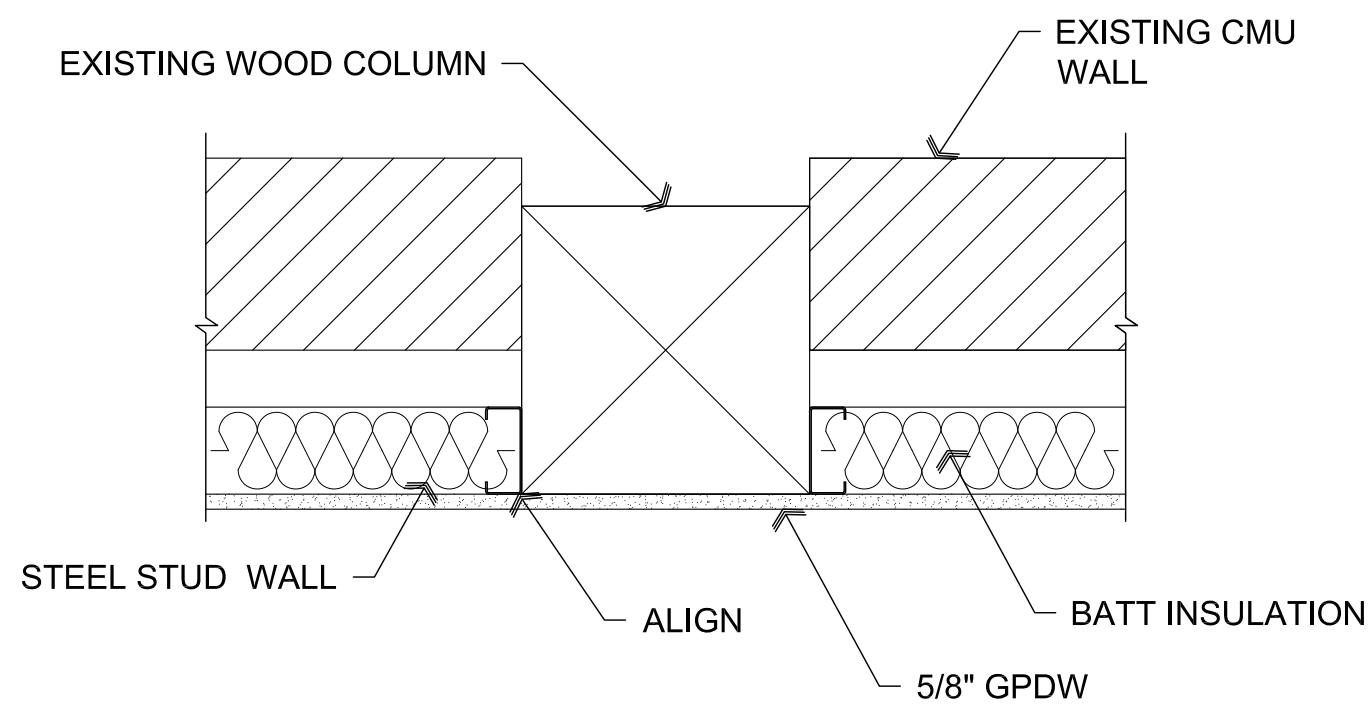
DRAWING: Room Finish Plan and Materials Schedule

PROJECT: ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

APN: 106-03-004

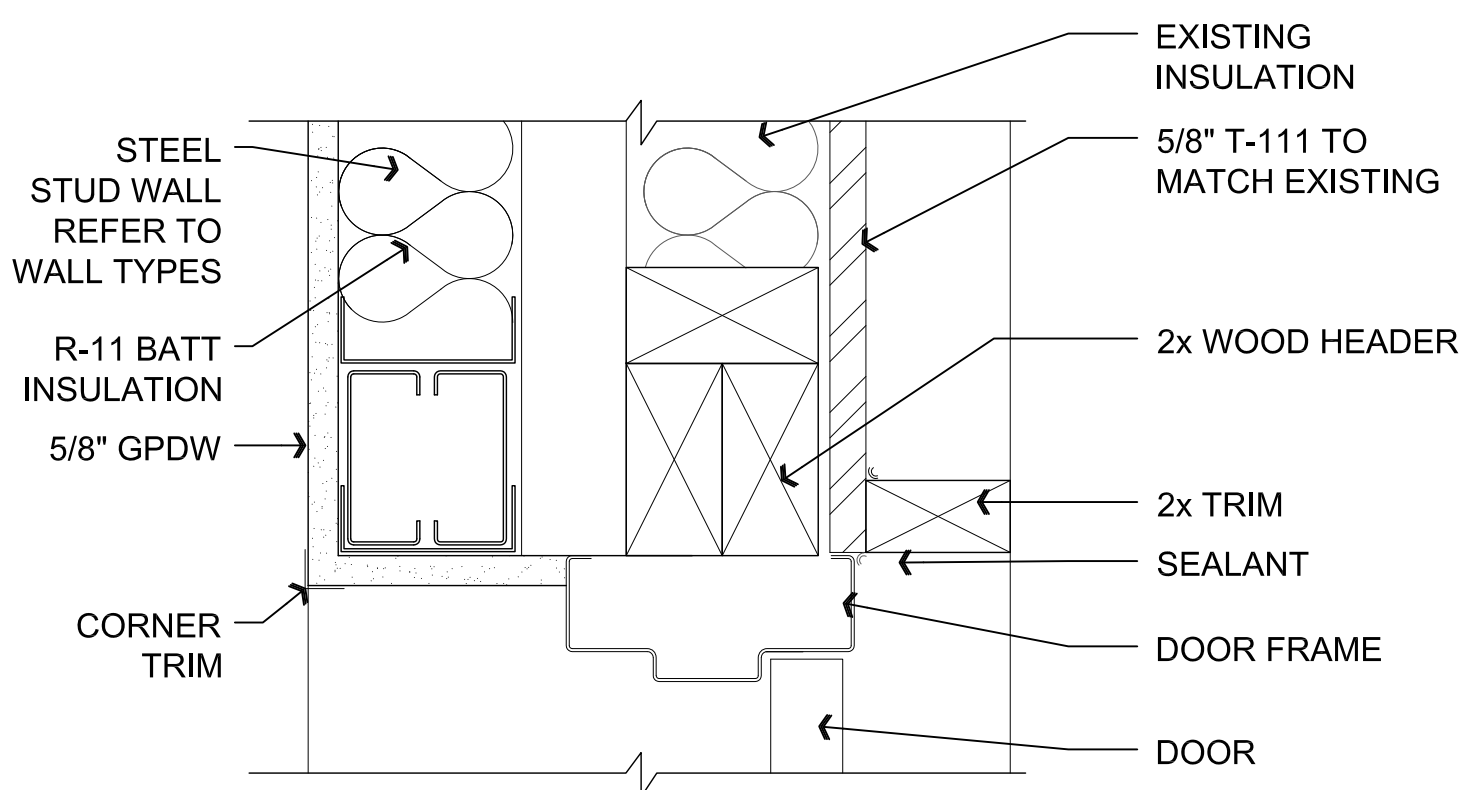
DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

Mar 21, 2018 - 10:45am



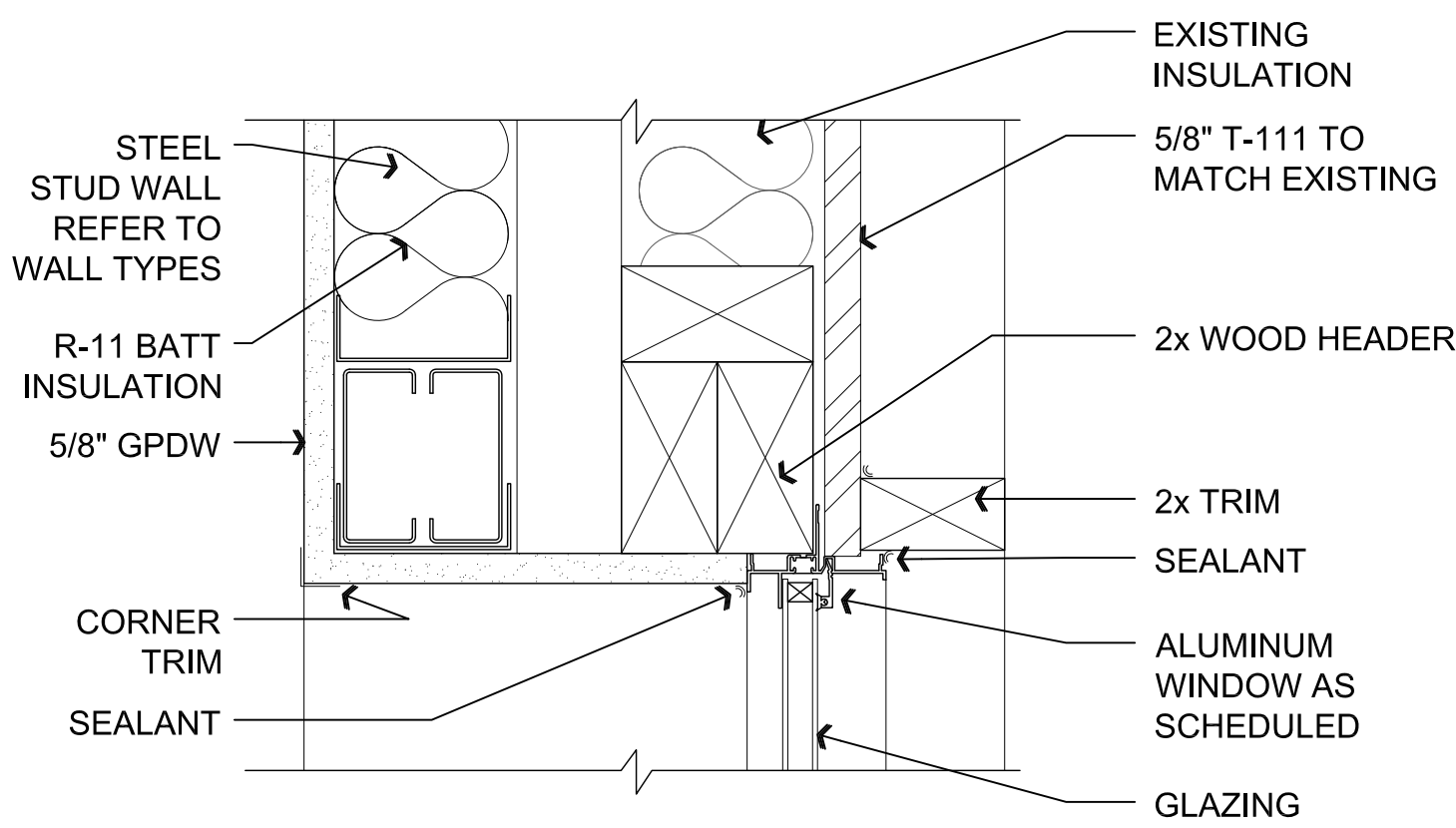
**B4** Wall at Column

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



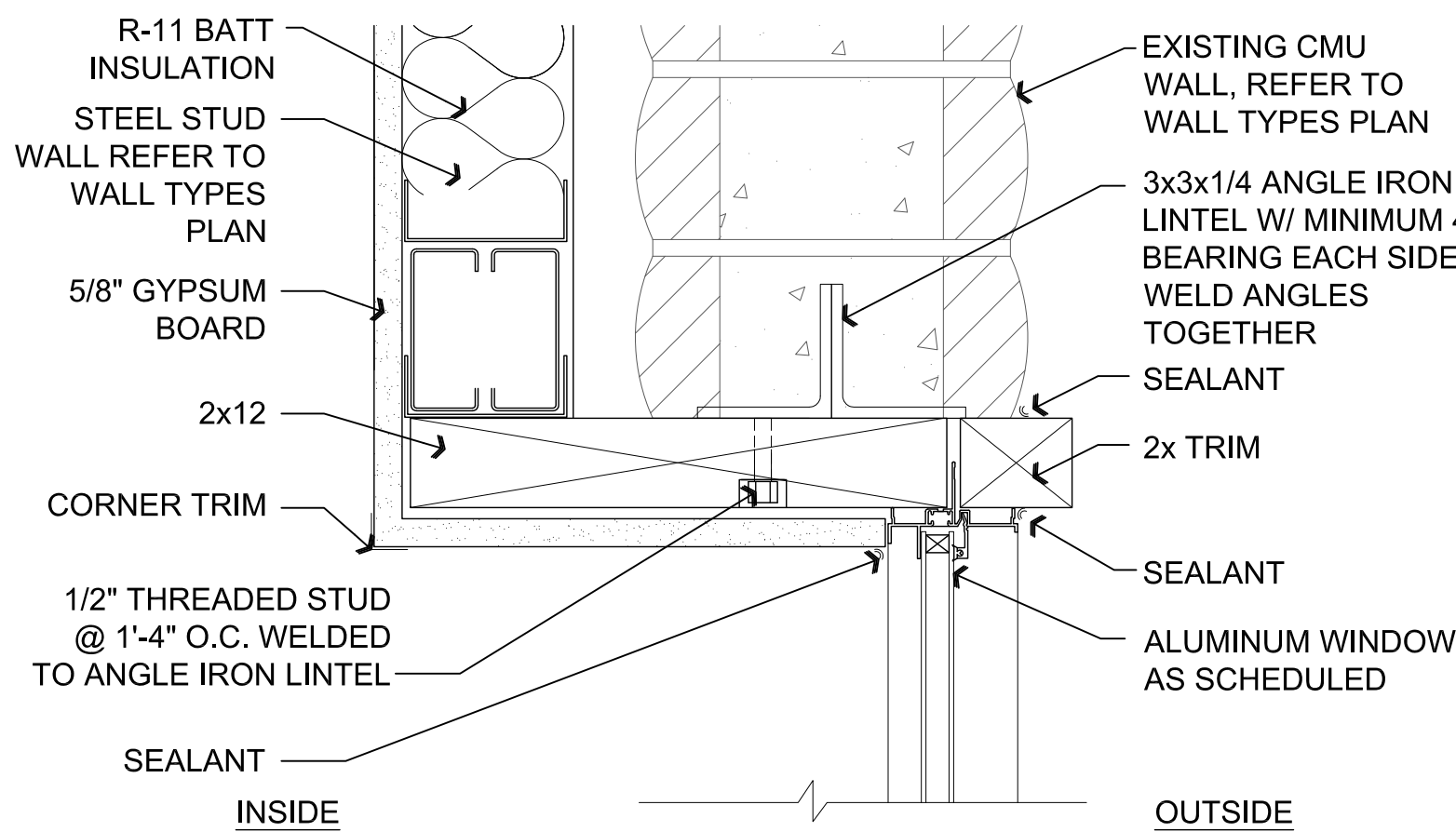
**B3** Door Head @ Framed Wall

SCALE: 3" = 1'-0"



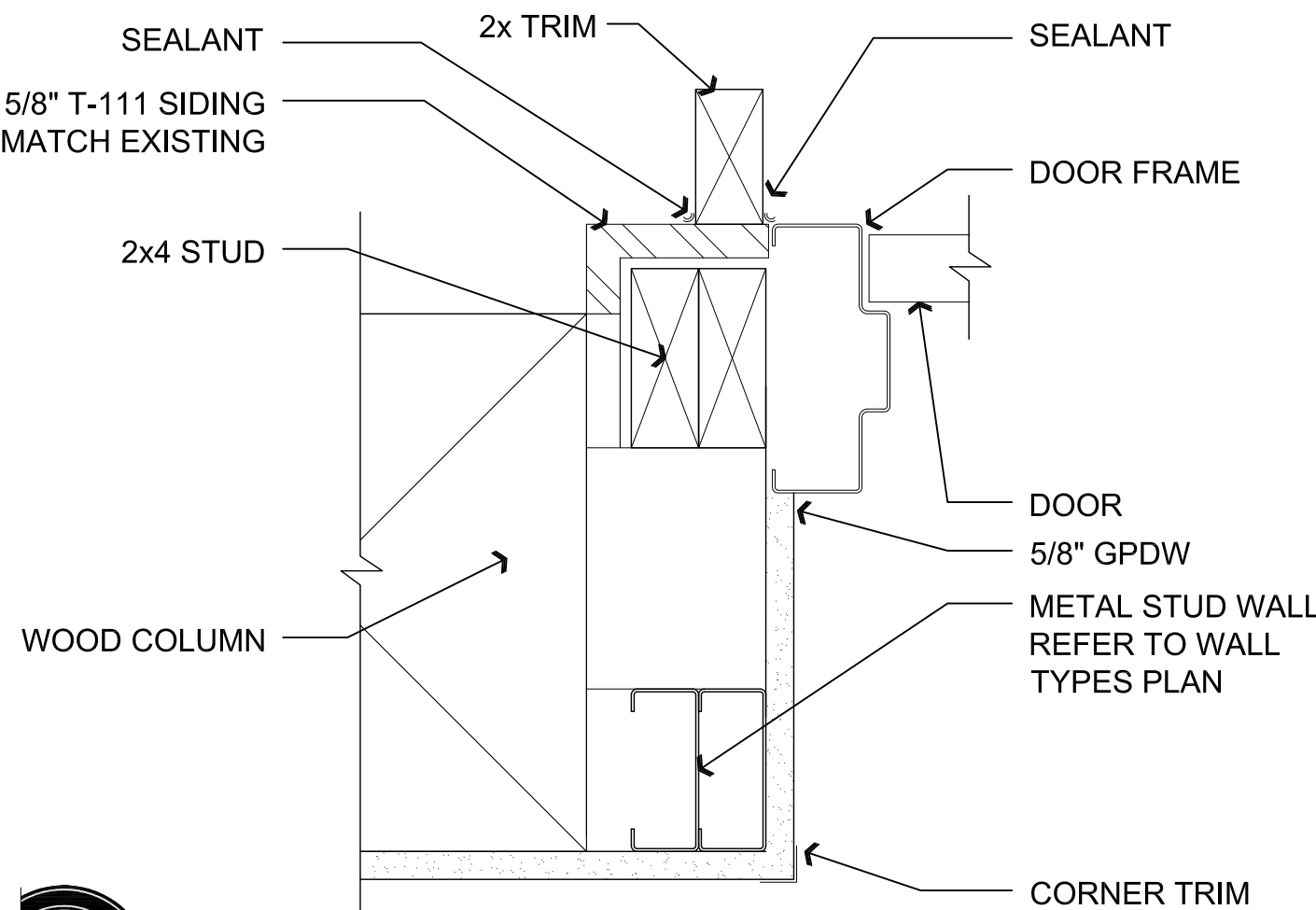
**B2** Window Head @ Framed Wall

SCALE: 3" = 1'-0"



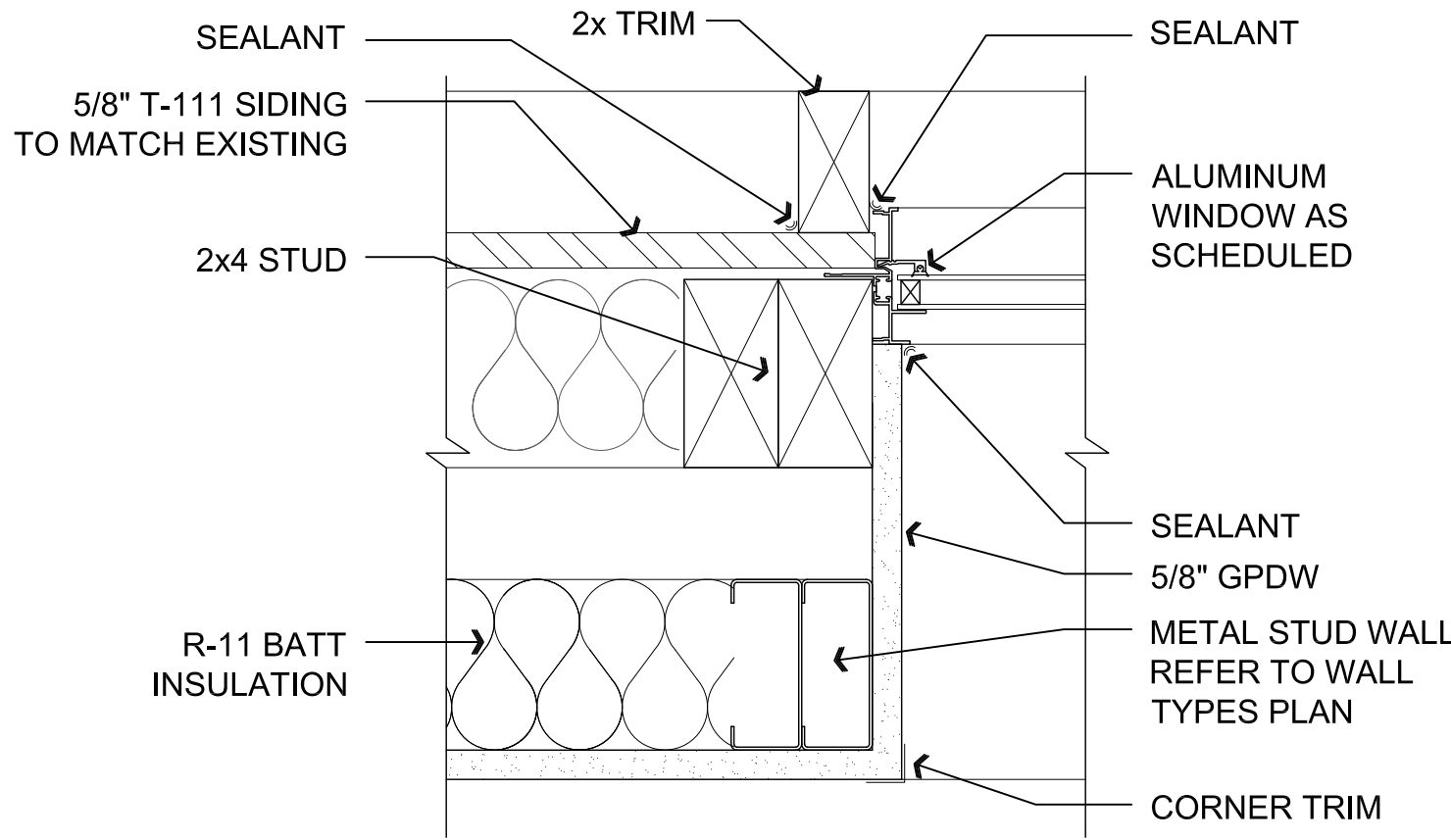
**B1** Window Head @ CMU

SCALE: 3" = 1'-0"



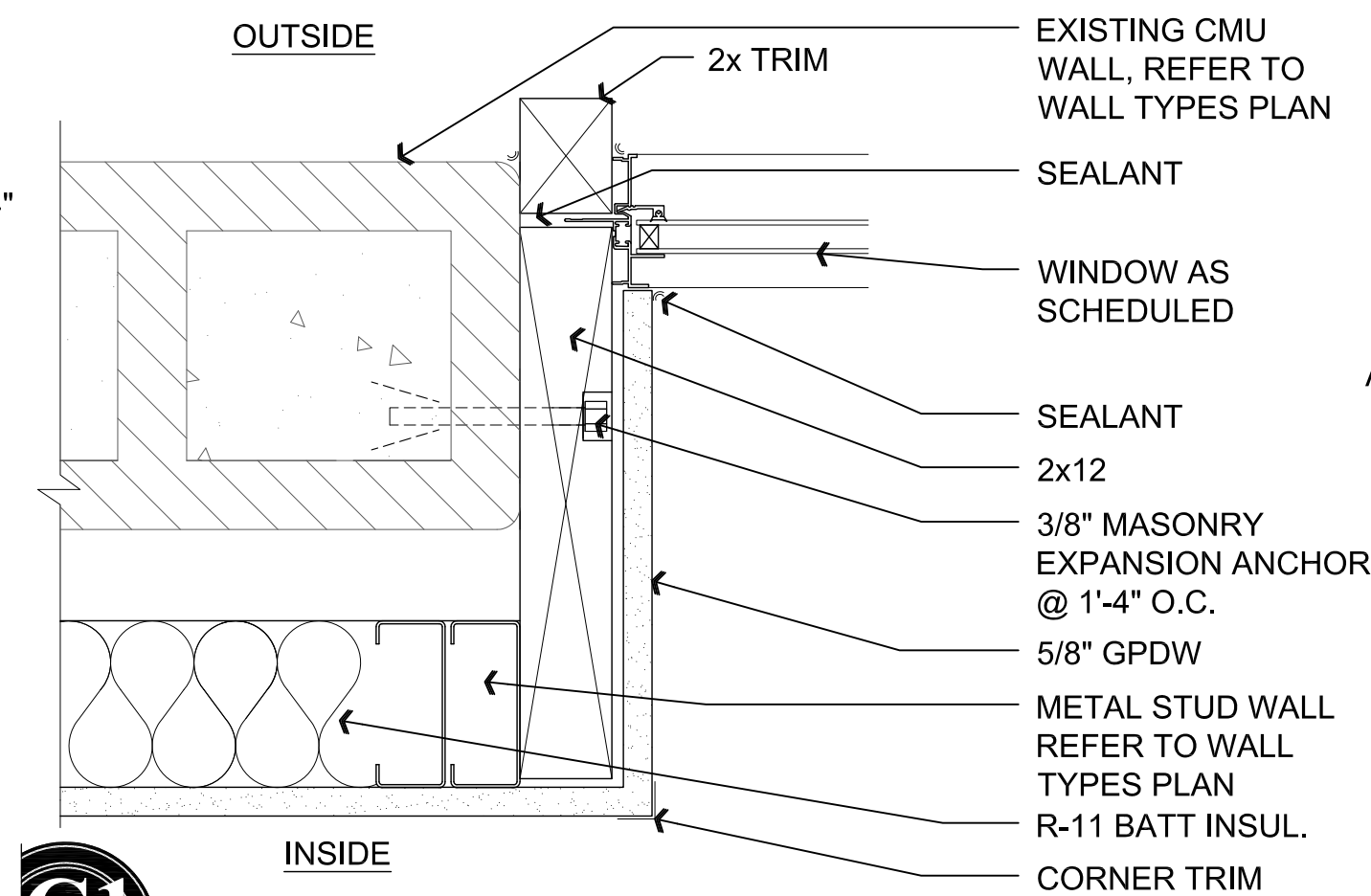
**C3** Door Jamb @ Framed Wall

SCALE: 3" = 1'-0"



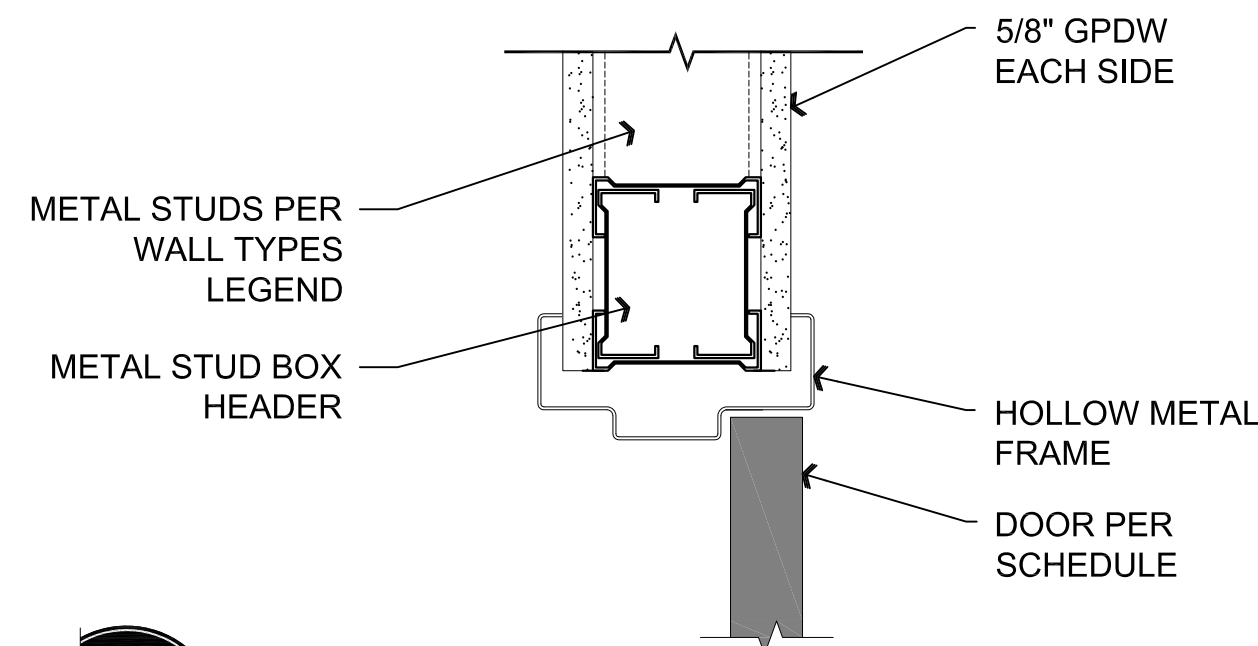
**C2** Window Jamb @ Framed Wall

SCALE: 3" = 1'-0"



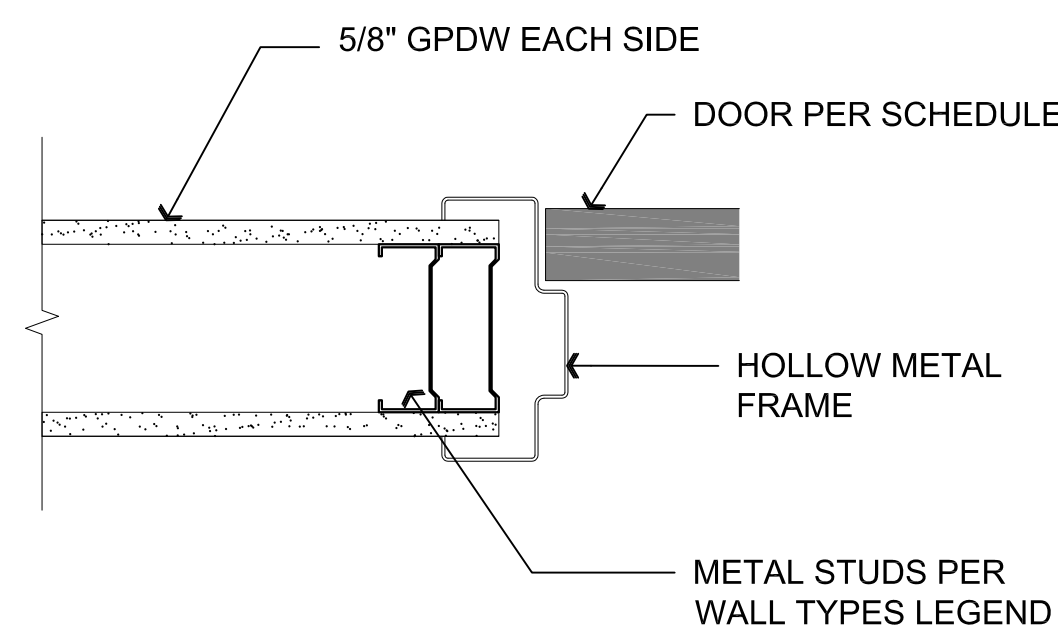
**C1** Window Jamb @ CMU

SCALE: 3" = 1'-0"



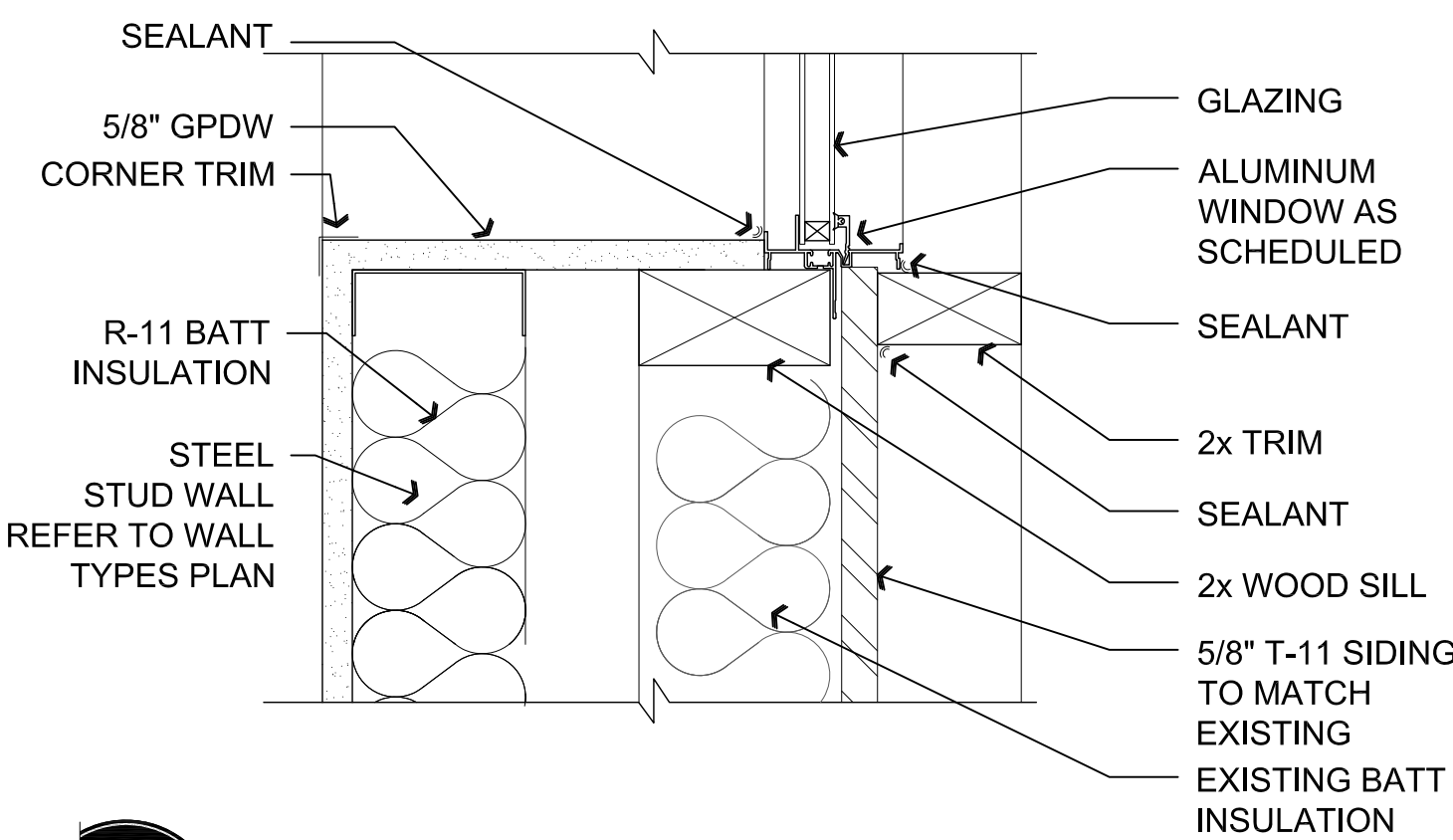
**D4** Door Head @ Framed Wall

SCALE: 3" = 1'-0"



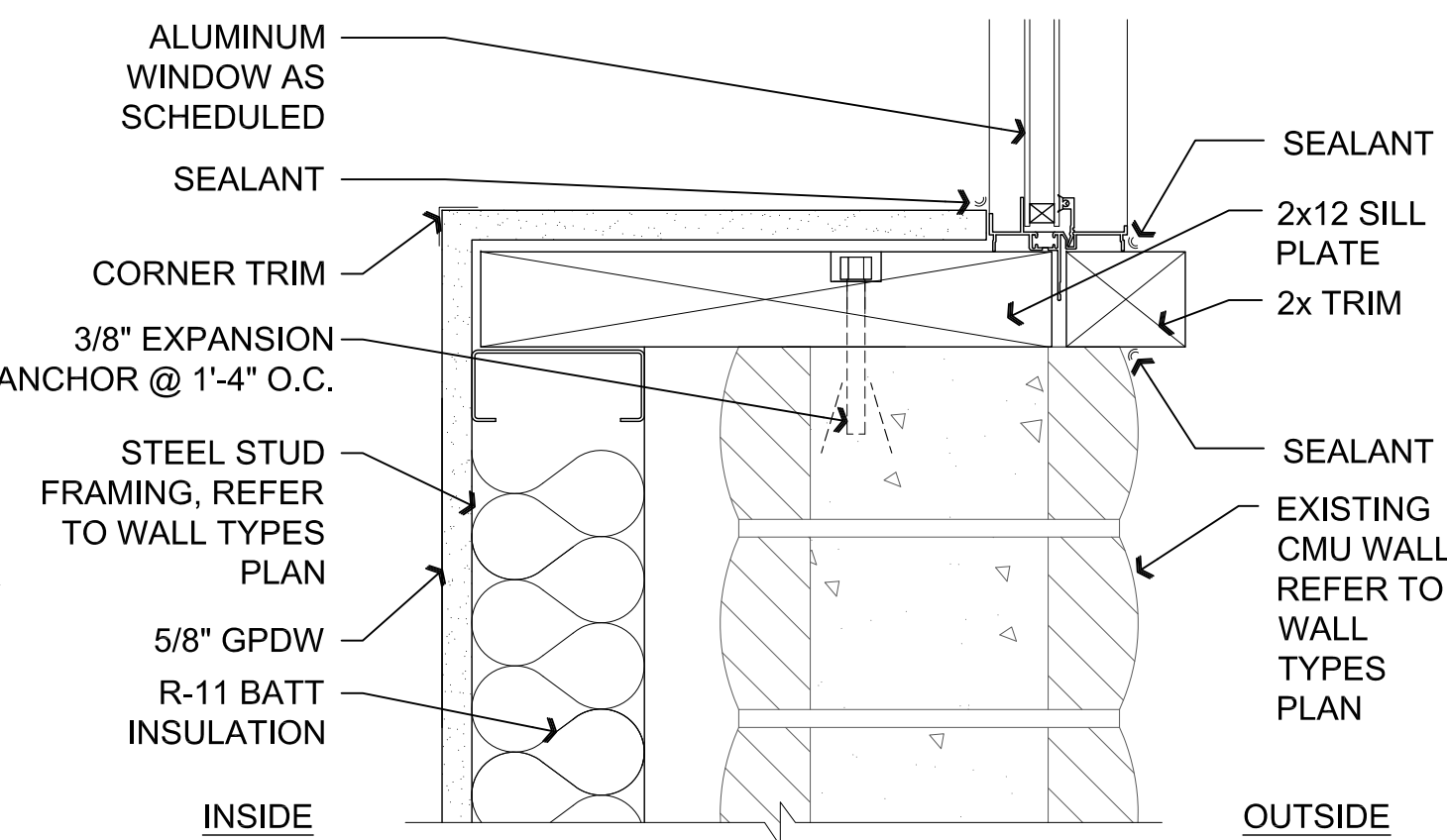
**D3** Door Jamb @ Framed Wall

SCALE: 3" = 1'-0"



**D2** Window Sill @ Framed Wall

SCALE: 3" = 1'-0"



**D1** Window Sill @ CMU

SCALE: 3" = 1'-0"

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**ARCHITECTURE & PLANNING**

Details

**DRAWING:**

**PROJECT:**

**APN:**

A7.0 ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301

106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

**A8.0**



Specifications	
00 - PROCUREMENT AND CONTRACTING REQUIREMENTS	
00 70 00 - GENERAL CONDITIONS	
	General Conditions of the Contract for Construction, AIA Document A201, 2007 Edition, is made a part of the Construction Documents by reference. A copy of the referenced document is available for inspection at the office of the Architect.
01 - GENERAL REQUIREMENTS	
01 30 00 - ADMINISTRATIVE REQUIREMENTS	
Shop Drawings	One (1) paper copy of Shop Drawings and/or Catalog Cut Sheets and one (1) electronic file are to be submitted to the Architect for review and approval. The Architect will review the shop drawings and affix a stamp to the electronic file, indicating the findings of the review and return to the Contractor. The Contractor shall correct and resubmit as necessary. Required for all products and samples and materials to be included in the project.
Meetings	Contractor shall hold construction progress meetings at jobsite every other week. Representatives from owner, architect, contractor, and any relative subcontractor or suppliers shall attend. Contractor shall take minutes of the meetings and distribute to all attendees.
Portable Toilet Facility	Contractor to maintain portable toilet facility throughout construction period.
Dumpster	Contractor to provide dumpster throughout construction period.
Samples	Three (3) samples of each color or style of the products to be submitted to the Architect.
01 50 00 - TEMPORARY FACILITIES AND CONTROLS	
Designated Areas	Owner shall provide designated areas for the contractor's employee parking, material storage and staging. Contractor shall control his employees, sub-contractors and material suppliers from parking in un-designated areas.
Protection	Contractor shall take All necessary precautionary measures to protect their work and ensure the safety of workmen, public and property. Neither the Owner nor Architect shall have any responsibility or control of construction means, methods, techniques, sequences or procedures affecting job-site safety, or for safety precautions and programs. contractor shall legally defend and hold harmless the Owner and Architect from all such claims.
Contractor's Responsibility	The Contractor shall supervise and direct the work, and be solely responsible for and have control over all methods, techniques and procedures necessary for the proper execution of the work. Where the work of this agreement affects owner's utilities, fire alarm, fire suppression or controls systems, the contractor shall give the owner a minimum of 24 hours advance notice. The Contractor shall supervise and direct the work, and be solely responsible for and have control over all methods, techniques and procedures necessary for the proper execution of the work. Where the work of this agreement affects owner's utilities, fire alarm, fire suppression or controls systems, the contractor shall give the owner a minimum of 24 hours advance notice. The Contractor shall be responsible to the owner for the acts and omissions of the Contractor's employees, agents, sub-contractors, and their agents, employees, and other persons performing portions of the work under a contract with the Contractor to the fullest extent permitted by law. The Contractor shall indemnify and hold harmless the Owner, the Owner's consultants, agents and employees of any of them from and against claims, damages, losses and expenses including but not limited to attorney's fees arising out of or resulting from performance of the work, provided that such claim damages, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury or destruction of tangible property other than the work itself, including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the contractor, a sub-contractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable regardless of whether or not such damage, claim, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this paragraph.

Material	The Contractor warrants that unless otherwise specified, all materials and equipment shall be new, free from defects, suitable for the intended purpose, and in conformance with laws in effect on the date of this agreement.
Substitution	Substitution of any materials or manufacturer requires prior approval by architect. Refer to owner's bidding general conditions for question timeline.
01 70 00 - EXECUTION REQUIREMENTS	
General	Contractor shall field verify all existing conditions and lay out all of the work prior to starting construction on any part of the work. As a minimum contractor shall verify: - all dimensions, both horizontal and vertical - Utility locations, buried and overhead - existing conditions affecting this project
Conflicts	If Contractor discovers an existing condition which differs from that shown (or is not shown), Contractor shall immediately notify the Architect.
Cutting and Demolition	In all cases, exercise extreme care in cutting operations and perform such operations under adequate supervision by competent mechanics skilled in the applicable trade. Openings shall be neatly cut and shall be kept as small as possible to avoid unnecessary damage. careless and/or avoidable cutting damage, etc. will not be tolerated and the contractor will be held responsible for such avoidable or willful damage.
Patching and Refinishing	All replacing, patching and repairing of materials and surfaces cut or damaged in the execution of the work shall be performed by experienced mechanics of the specific trades involved. Such repairing and/or patching shall be done with the applicable materials in a manner that all surfaces so replaced, etc. will, upon completion of the work, match the surrounding similar surfaces.
Locations	Walls - paint all affected walls, interior and exterior from corner to corner. (e.g. if you install a door in an existing frame, you need only to paint the door and frame, but if you install a door and frame, paint the entire wall to match existing) Gypsum wall board ceilings - Paint the entire ceiling of the room affected. (e.g. if anything is installed in/on/through the ceiling of a room, paint the ceiling of that room) Roofs - Replace portion of roof covering as required to flash new assembly. If roof warranty is still in effect, Contractor issuing warranty shall perform the required work. All patching and refinishing will be performed in a manner such that at the completion of the work, it shall not be obvious where an item was removed from, or added to.
Disposal	Remove all materials noted on the drawings and all miscellaneous materials which will be rendered useless with removal of the item noted. Unless specifically noted otherwise, materials shall become the property of the contractor and shall be removed from the site in a legal and safe manner. Patch and repair all adjacent surfaces such that at the completion of the work, it shall not be obvious where an item was removed from or added to. Final appearance shall be totally acceptable to the owner. Contractor shall provide and maintain his own trash receptacles, unless specifically directed otherwise. All surplus materials become the property of the contractor. Remove all trash, rubbish and surplus materials from the site and dispose of in a legal and safe manner.
As-Builts	Contractor shall maintain a clean set of drawings at the job site that is specifically set aside for recording: - all differences between the work as shown on the drawings and the work installed. - All work added or deleted during the course of construction - Exact measurements of all buried and/or concealed work (e.g. conduit below slab, conduit and data cable below raised platforms, conduit in walls etc.) All recordings shall be neat and legible. Stamp this set of drawings 'As-Built drawings' and list as a minimum, the name, address and telephone number of the General Contractor and all major sub-contractors. (e.g. electrical, HVAC, etc.) At the completion of the project as prerequisite for final payment, Contractor shall turn these as-builts over to the owner.

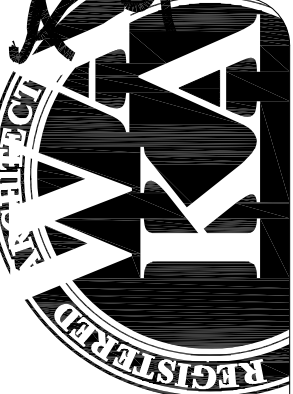
Final Cleaning	After the construction of each phase and before occupancy, thoroughly clean the space by dusting the sills, washing windows, vacuuming the carpet and replace all HVAC filters. Clean site areas of any refuse created in the scope of work.
03 - CONCRETE	
03 30 00 CAST-IN-PLACE-CONCRETE	
General	Refer to general structural notes on the engineering drawings. Shall supersede this section.
Mix Design	Concrete Mix # 160X109 in Winter and #160X149 in Summer as produced by Hanson products.
	Curing compound provided on all slabs per ACI and ASTM specifications.
Exterior Sealer	SPT (Surface Protection Treatment) as manufactured by Midcal, Inc.
04 - MASONRY	
General	Refer to structural plans
08 - OPENINGS	
08 11 00 - METAL DOORS & FRAMES	
General	Provide 16 gauge hollow metal doors with 14 gauge hollow metal frames as shown on the drawings per steel door institute standards.
09 - FINISHES	
09 29 00 - GYPSUM BOARD	
General	Installation and application of materials to be in accordance with the latest printed instructions of the U.S. gypsum company or approved equal. After finishing, make joints invisible. No gaps or voids between gypsum board units or between drywall and adjacent work unless otherwise detailed. Not more than 1/8" in 10'-0" deviation from true plane, plumb and level in finished work.
Gypsum Board	ASTM C 36; regular types except where special types are required. Minimum 5/8" thick. Texture: Light Skip Trowel.
09 68 00 - CARPET	
General	Refer to materials & finish schedule and floor finish plan for layout.
Preparation of Surfaces	Inspect surfaces to receive carpet, make tests recommended by manufacturer, take corrective action deemed necessary or notify owner in writing of any condition which could be detrimental to carpet installation. Remove all foreign and incompatible materials and vacuum clean surfaces immediately prior to installation of carpet. Fill cracks, construction joints and other surface imperfections with latex underlayment compound troweled level with adjacent surface. Commencement of work constitutes acceptance of surfaces and responsibility for them.
09 90 00 - PAINTING	
General	Painting products shall be specified from Sherwin Williams.
Paint Specification	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
Interior Concrete Sealer	Sherwin Williams General Polymers 4411 WB Polyurethane Satin Resin, two coats

REVISIONS	BY

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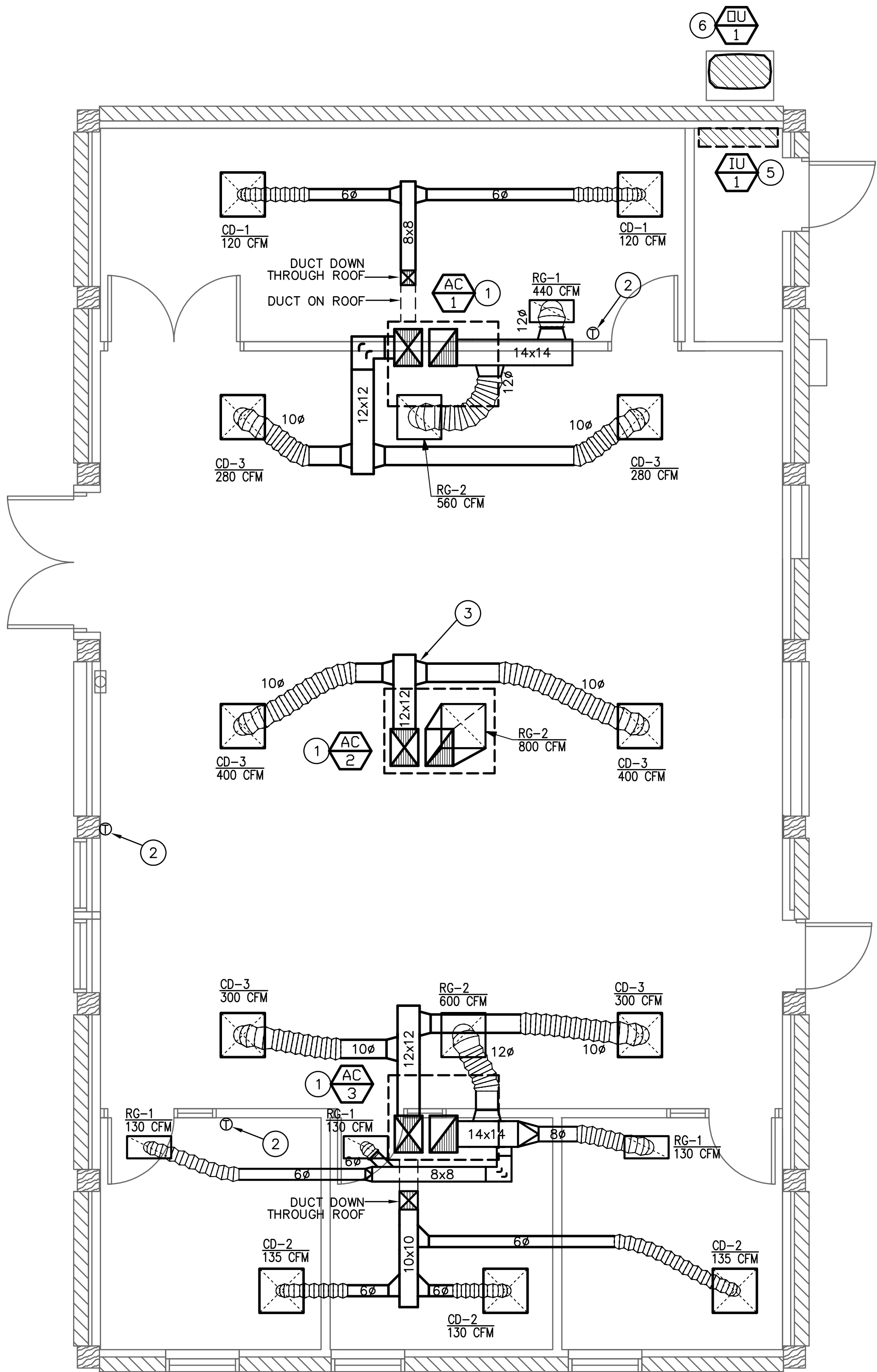
P 928-443-5812  
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ARCHITECTURE & PLANNING

ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ 86301  
106-03-004

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE March 21st, 2018
JOB NO. 709
SHEET

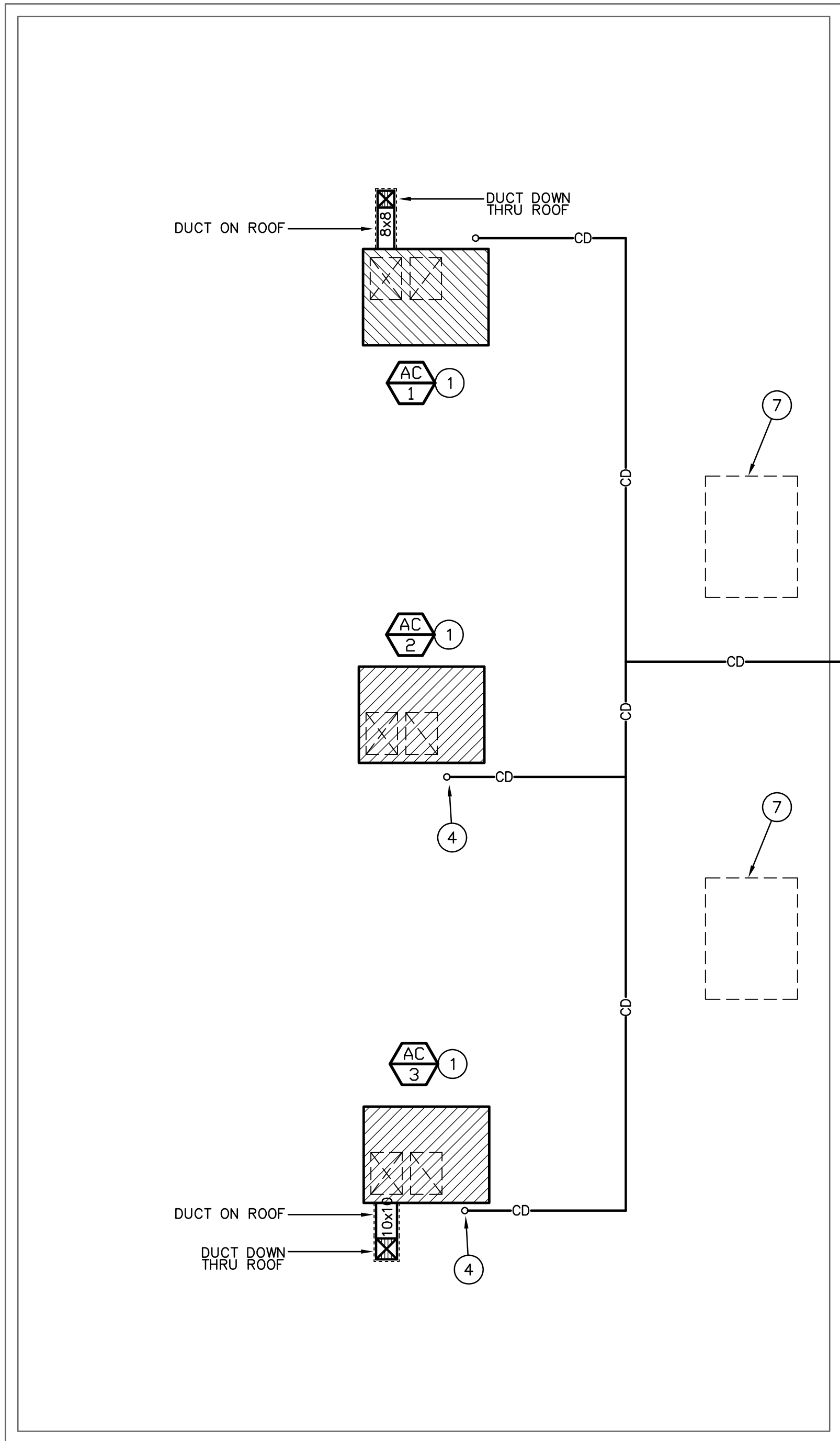
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Feb 08, 2018 - 8:26am



## Mechanical Floor Plan

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



## Mechanical Roof Plan

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



## 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 AND FLEX DUCT RUNOUT TO DIFFUSER. 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 MINI SPLIT FAN COIL UNIT MOUNTED ON WALL AT APPROX. 84" A.F.F. EXTEND CONDENSATE DRAIN DOWN THROUGH WALL AND TO EXTERIOR.
- 6 MINI SPLIT CONDENSING UNIT MOUNTED ON PRE MANUFACTURED PAD. SLEEVE REFRIGERANT PIPING THROUGH WALL TO FAN COIL.
- 7 REMOVE AND DISPOSE EXISTING ROOFTOP UNIT AND 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.



611 West Delano Ave  
Prescott, AZ 86301  
(928) 443-7353

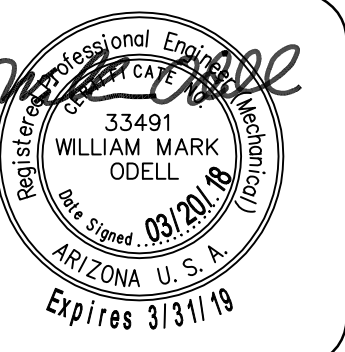
Project

18009

11759 N. 143rd Ave.  
Surprise, AZ 85378  
(623) 444-6143

REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Mechanical Floor and Roof Plan

PROJECT: ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ, 86301

APN: 106-03-004

DRAWN BY

CHECKED BY

DATE

JOB NO.

709

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 MORE THAN 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 I 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 MANUFACTURE, 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)	WB (F)	AMB. TEMP	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	4YCY5024	800	131	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 #BAYFLTR201B FILTER FRAME AND 2 SETS OF FILTERS.								
②	EXTEND FULL SIZE TYPE "M" COPPER CONDENSATE DRAIN FROM UNIT AND SLOPE @ 1/8" PER FT. ON ROOF TO GUTTER.										⑦	PROVIDE WITH #BAYLOAM105A LOW AMBIENT CONTROL.								
③	PROVIDE CLEARANCES AS PER MANUFACTURERS REQUIREMENTS.										⑧	PROVIDE WITH #BAYCCHT102S CRANK CASE HEATER.								
④	PROVIDE WITH #BAYECON14A ECONOMIZER W/ BAROMETRIC RELIEF WITH #BAYENTH001A ENTHALPY CONTROL.										⑨	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.								
⑤	PROVIDE TRANE #TCONT800 TOUCHSCREEN, PROGRAMMABLE, THERMOSTAT.										⑩	OWNER SHALL PROVIDE, AND CONTRACTOR SHALL INSTALL HIGH ALTITUDE ORIFICE KIT.								



## DUCT FREE SPLIT SYSTEM

OUTDOOR UNIT									INDOOR UNIT						
EQUIP. NO.	MANUFACTURER	MODEL NO.	TYPE	MCA ①	VOLTS/ PHASE	TOTAL COOLING CAPACITY @95° F	SENSIBLE COOLING CAPACITY @95° F	WEIGHT	EQUIP. NO.	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY BTUH	VOLTS/ PHASE	WEIGHT	REMARKS
OU-1	MITSUBISHI	MUY-GE12NA	A/C	12.0	208/230, 1ø	13,600	11,500	77 LBS	IU-1	MITSUBISHI	MSY-GE12NA	24,000	208/203, 1ø	22 LBS	②③④
① COMBINED INDOOR/OUTDOOR UNIT AMPS.									③ SIZE AND INSTALL REFRIGERANT LINES AS RECOMMENDED BY MANUFACTURER'S WRITTEN INSTRUCTIONS. INSULATE PIPING WITH 1" INSULATION, PER IECC.						
② PROVIDE LOW AMBIENT KIT FOR OPERATIONS DOWN TO 20°F.									④ PROVIDE REMOTE MOUNTED T-STAT.						

### NOTE:

UPON RECIEPT 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.

## GRILLES/REGISTERS/DIFFUSERS SCHEDULE

MARK	DESCRIPTION	MODULE SIZE	TYPE	OBD	FRAME	MATERIAL	FINISH	MANUF.	MODEL	REMARKS
CD-1	SUPPLY DIFFUSER	24" x 24"	PERFORATED FACE	NO	T-BAR	STEEL	WHITE	TITUS	TMS	8ø NECK
CD-2	SUPPLY DIFFUSER	24" x 24"	PERFORATED FACE	NO	T-BAR	STEEL	WHITE	TITUS	TMS	10ø NECK
RG-1	FILTER RETURN GRILLE	24" x 12"	PERFORATED FACE FILTER RETURN	NO	T-BAR	STEEL	WHITE	TITUS	8FF	W/ HINGED 1" FILTER FRAME
RG-2	FILTER RETURN GRILLE	24" x 24"	PERFORATED FACE FILTER RETURN	NO	T-BAR	STEEL	WHITE	TITUS	8FF	W/ HINGED 1" FILTER FRAME
NOTES:										
1. NECK SIZE SHOWN ON PLANS AND CORRESPONDS TO DUCT CONNECTION SIZE.				3. MOUNTING HEIGHT OF GRILLES AND EXACT LOCATION OF ALL DIFFUSERS TO FIELD COORDINATED AND APPROVED BY OWNER.						
2. CONTRACTOR SHALL PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED FOR INSTALLATION.				4. VERIFY MAKE, MODEL AND COLOR OF ALL DEVICES WITH OWNER.						

## 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 and Specs

PROJECT:

ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ, 86301

APN:

106-03-004

DRAWN BY

CHECKED BY

DATE

JOB NO.

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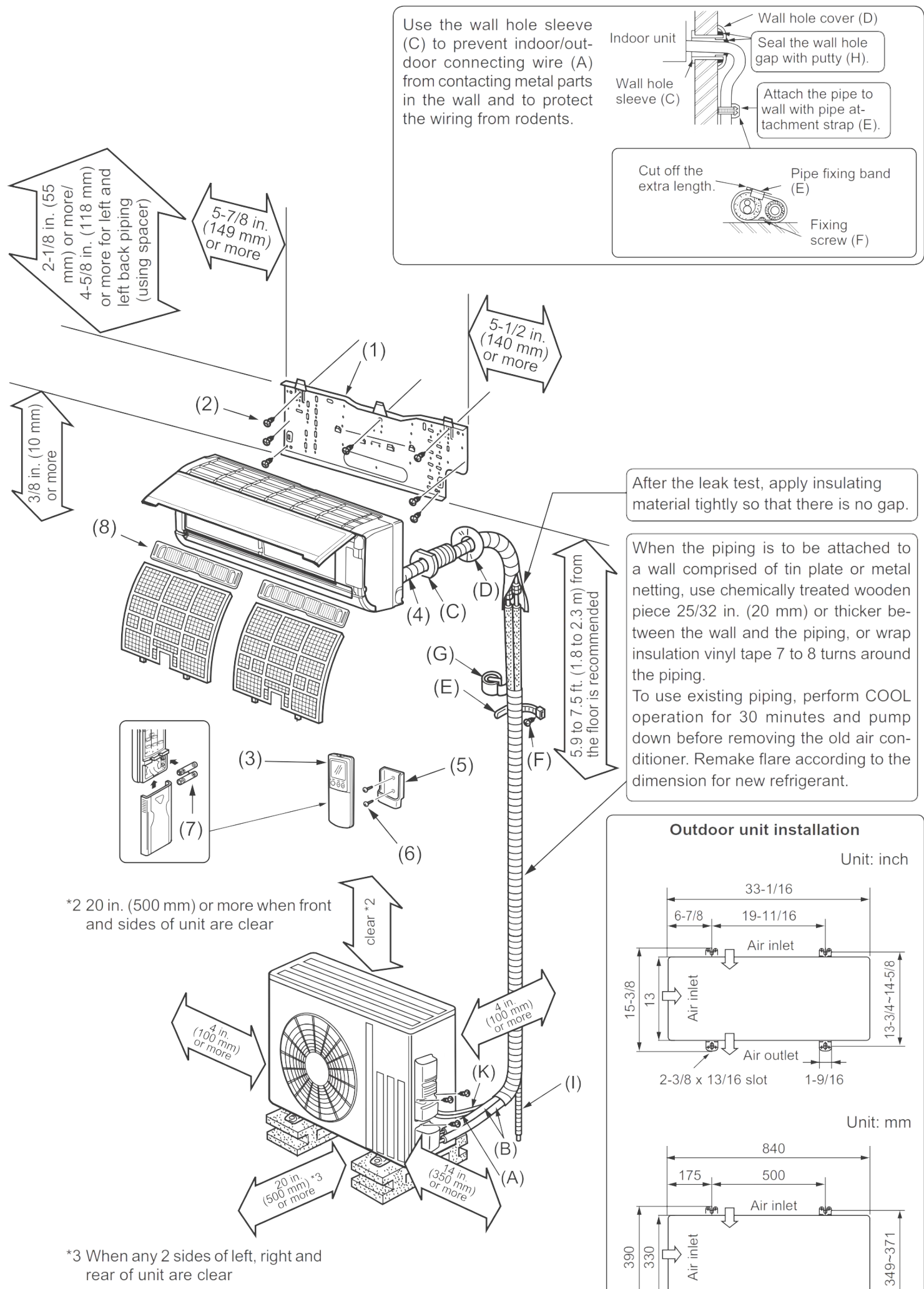
ACCESSORIES  
Check the following parts before installation.  
-Indoor unit-

(1)	Installation plate	1
(2)	Attachment screws for the installation plate 4 x 25 mm	7
(3)	Wireless remote controller	1
(4)	Felt tape (For left or left-rear piping)	1
(5)	Remote controller holder	1
(6)	Screws for the remote controller holder 3.5 x 16 mm (Black)	2
(7)	Battery (AAA) for (6)	2
(8)	Air cleaning filter	2

FIELD-SUPPLIED PARTS

(A)	Indoor/outdoor unit connecting wire *1	1
(B)	Extension pipe	1
(C)	Wall hole sleeve	1
(D)	Wall hole cover	1
(E)	Pipe attachment strap	2 to 5
(F)	Screw for (E) 4 x 20 mm	2 to 5
(G)	Piping tape	1
(H)	Putty	1
(I)	Drain hose (or soft PVC hose, 19/32 in. [15 mm] inner diameter or hard PVC pipe VP16)	1 or 2
(J)	Refrigerant oil	1
(K)	Power supply cord *1	1

Note:  
\*1 Place indoor/outdoor unit connecting wire (A) and power supply cord (K) at least 3 ft. (1 m) away from the TV antenna wire.

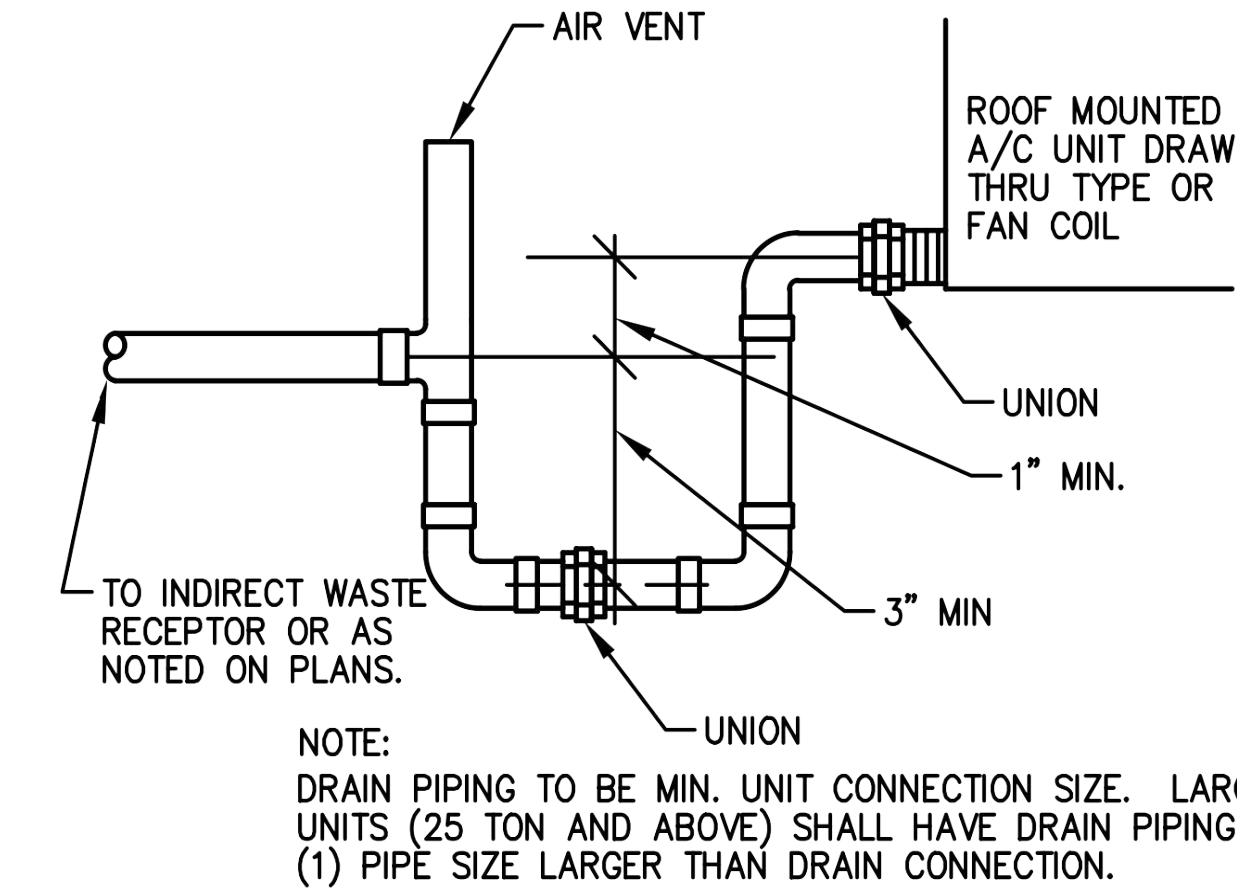


WALL MOUNTED MINI SPLIT DETAIL

NOT TO SCALE

7

M3.0

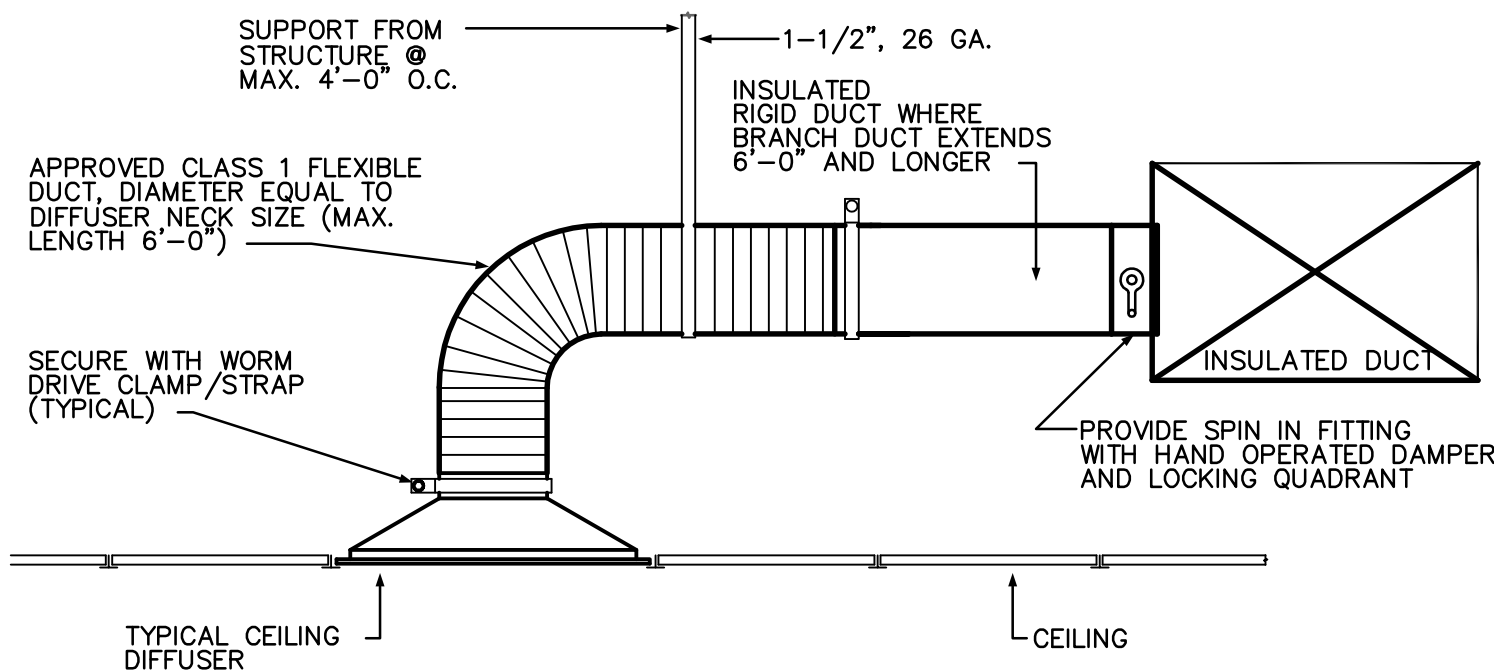


CONDENSATE DRAIN TRAP

NOT TO SCALE

4

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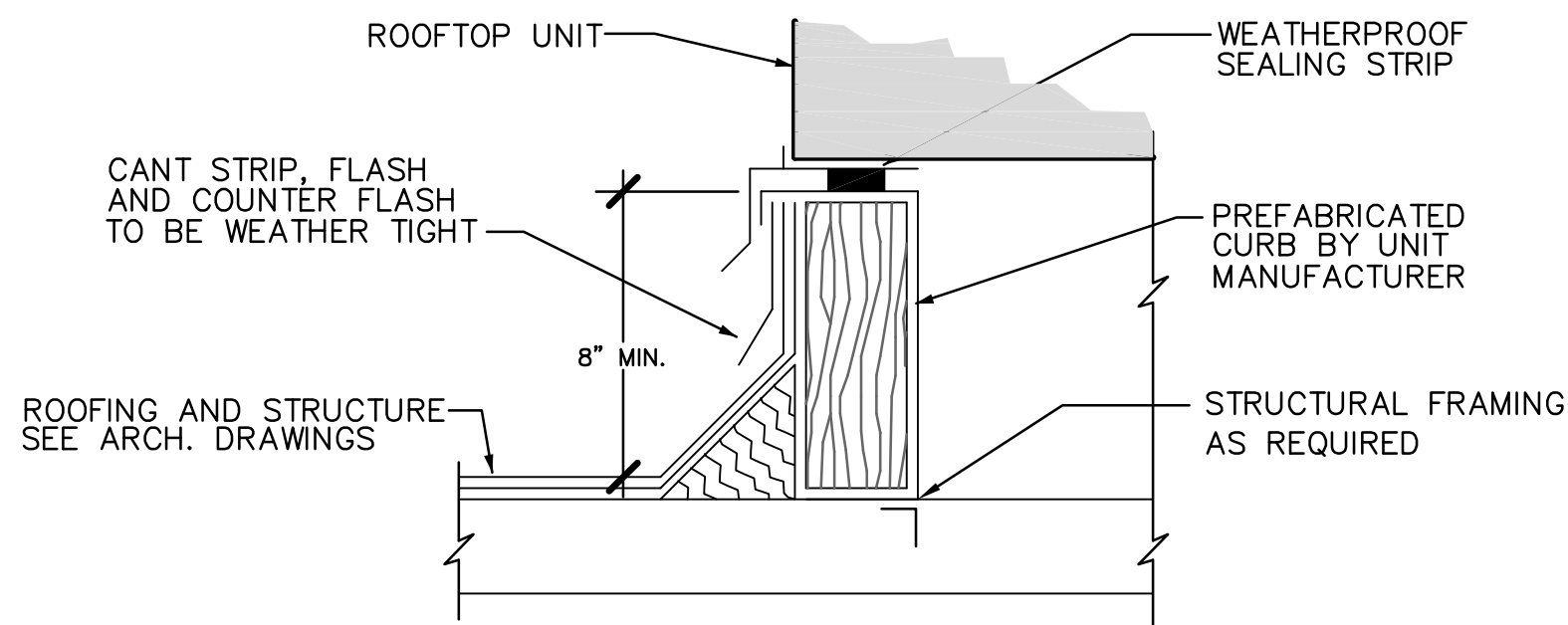


BRANCH DUCT TAKE-OFF DETAIL

NOT TO SCALE

5

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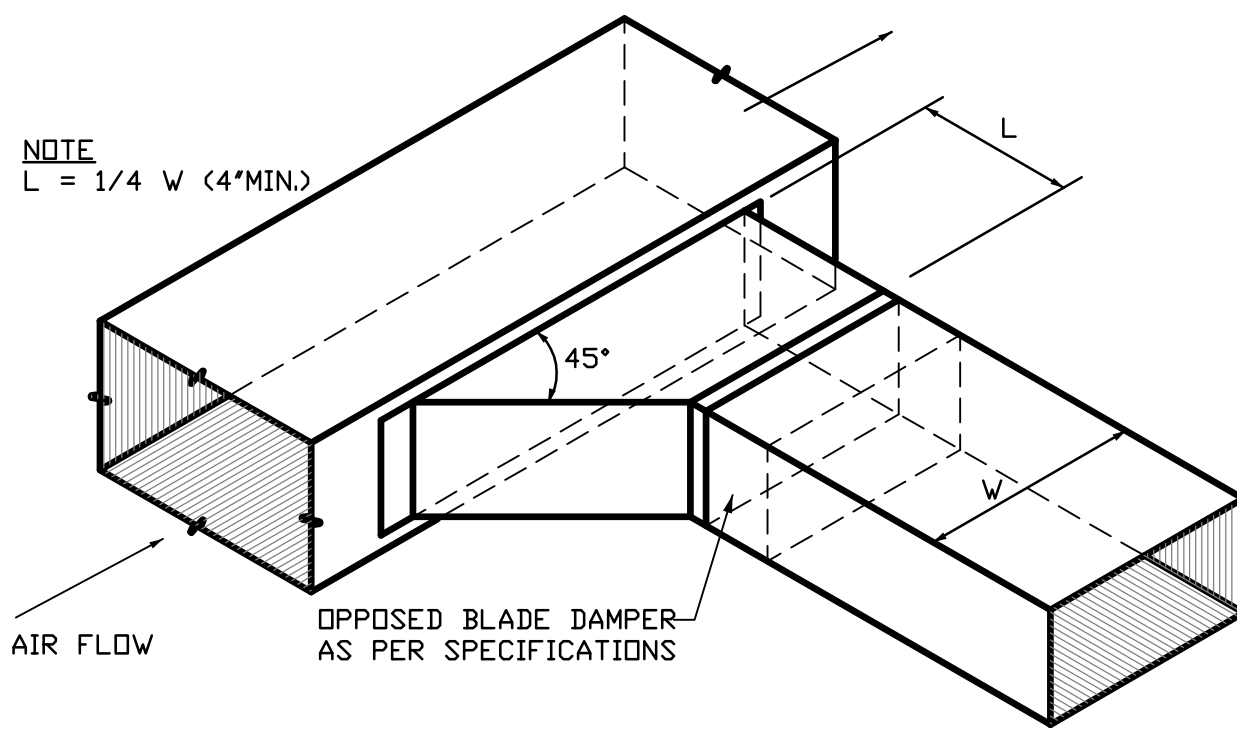


HEAT PUMP UNIT MOUNTING DETAIL

NOT TO SCALE

1

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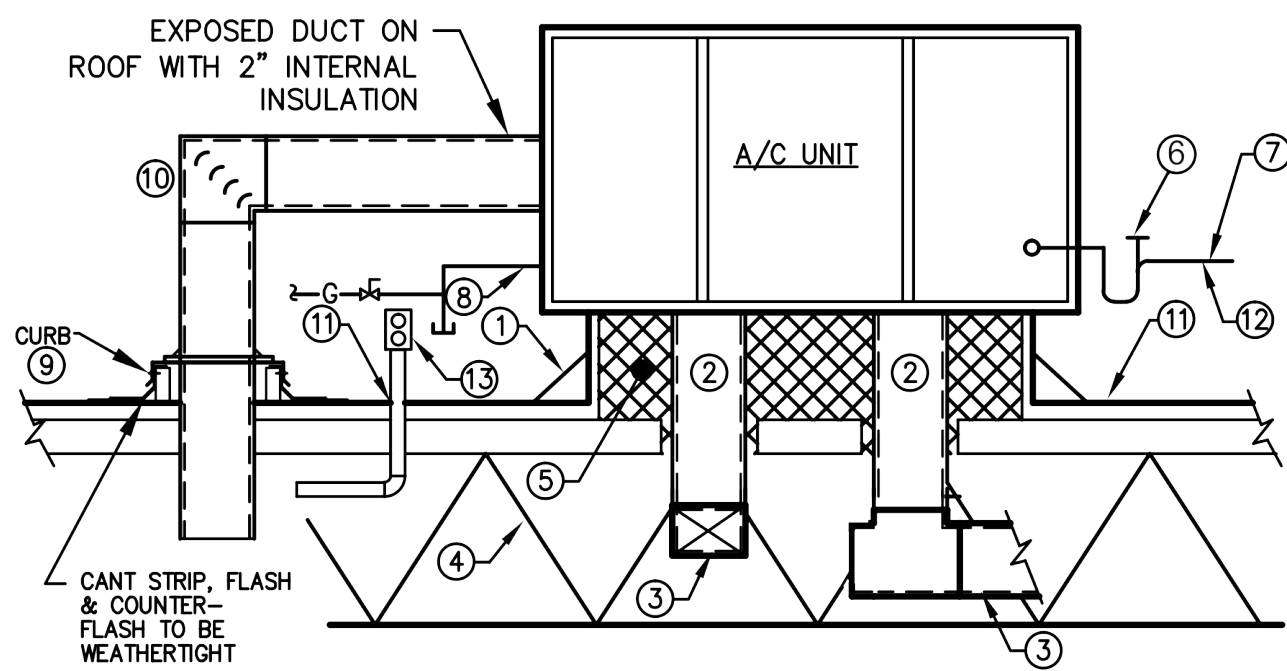


BRANCH DUCT TAKE-OFF DETAIL

NOT TO SCALE

2

M3.0



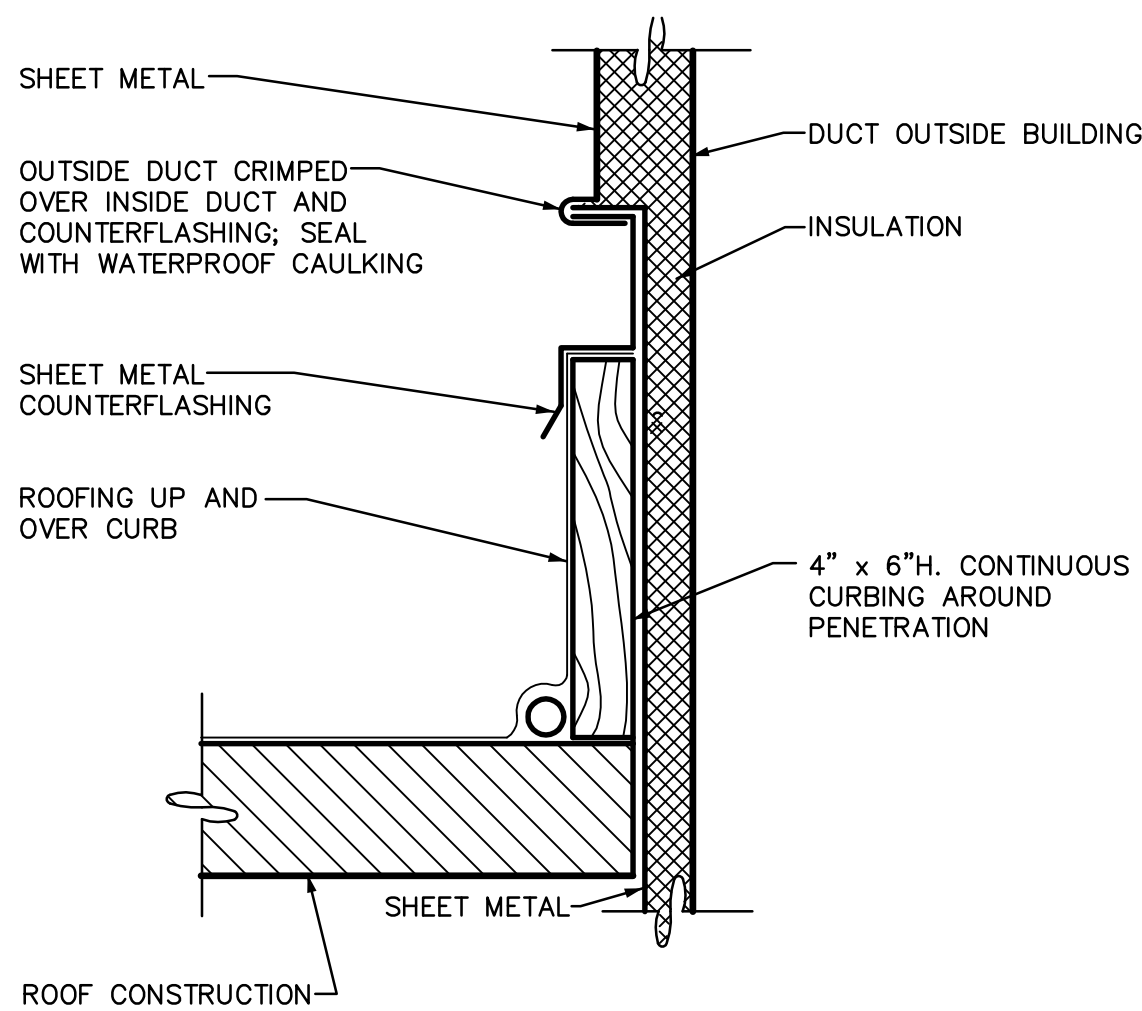
ROOFTOP A/C

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 CONTERFLASH 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



DUCT THRU ROOF DETAIL

NOT TO SCALE

3

M3.0

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ARCHITECTURE & PLANNING

DRAWING: Mechanical Details

PROJECT: ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ, 86301

APN: 106-03-004

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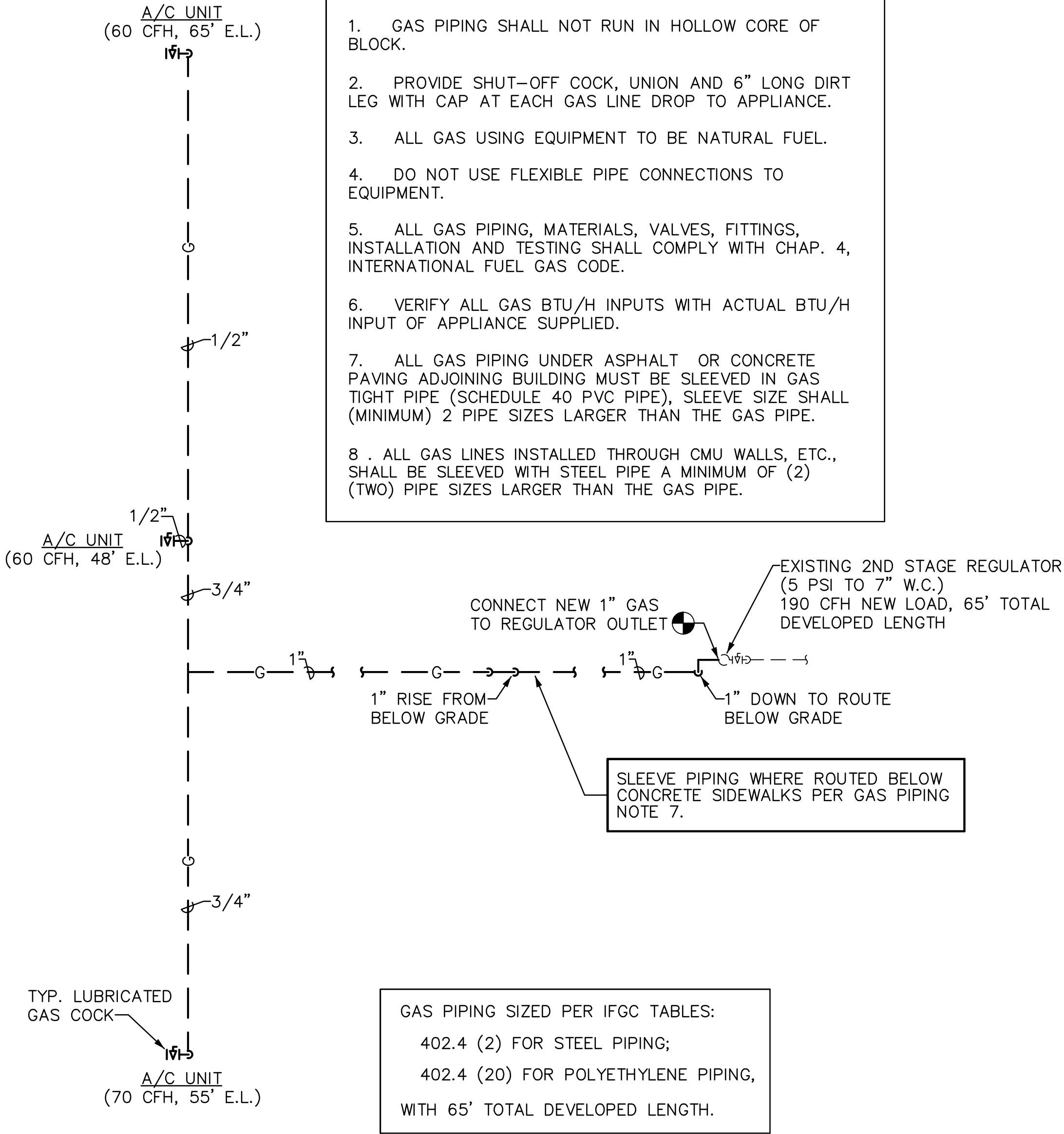


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GAS PIPING NOTES:

1. GAS PIPING SHALL NOT RUN IN HOLLOW CORE OF BLOCK.
2. PROVIDE SHUT-OFF COCK, UNION AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
3. ALL GAS USING EQUIPMENT TO BE NATURAL FUEL.
4. DO NOT USE FLEXIBLE PIPE CONNECTIONS TO EQUIPMENT.
5. ALL GAS PIPING, MATERIALS, VALVES, FITTINGS, INSTALLATION AND TESTING SHALL COMPLY WITH CHAP. 4, INTERNATIONAL FUEL GAS CODE.
6. VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.
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 LINES INSTALLED THROUGH CMU WALLS, ETC., SHALL BE SLEEVED WITH STEEL PIPE A MINIMUM OF (2) (TWO) PIPE SIZES LARGER THAN THE GAS PIPE.



GAS PIPING DIAGRAM

NTS

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

- 2.1.1 Gas Piping:
  - 2.1.1.1 (Above grade, exterior): All pipe sizes, black steel pipe, Schedule 40, wrought steel butt welded fittings.
  - 2.1.1.2 (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 butt welded fittings.
- 2.2 Valves:
  - 2.2.1 Gas Valves, 1/2" and Smaller: Milwaukee BB-1-102.
  - 2.2.2 Gas Valves, 1" to 1-1/2": Rockwell-Nordstrom #142 with #555 lubricant for natural gas service.
  - 2.2.3 Gas Valves, 2" and Larger: Rockwell-Nordstrom #143 with #555 lubricant for natural gas service.

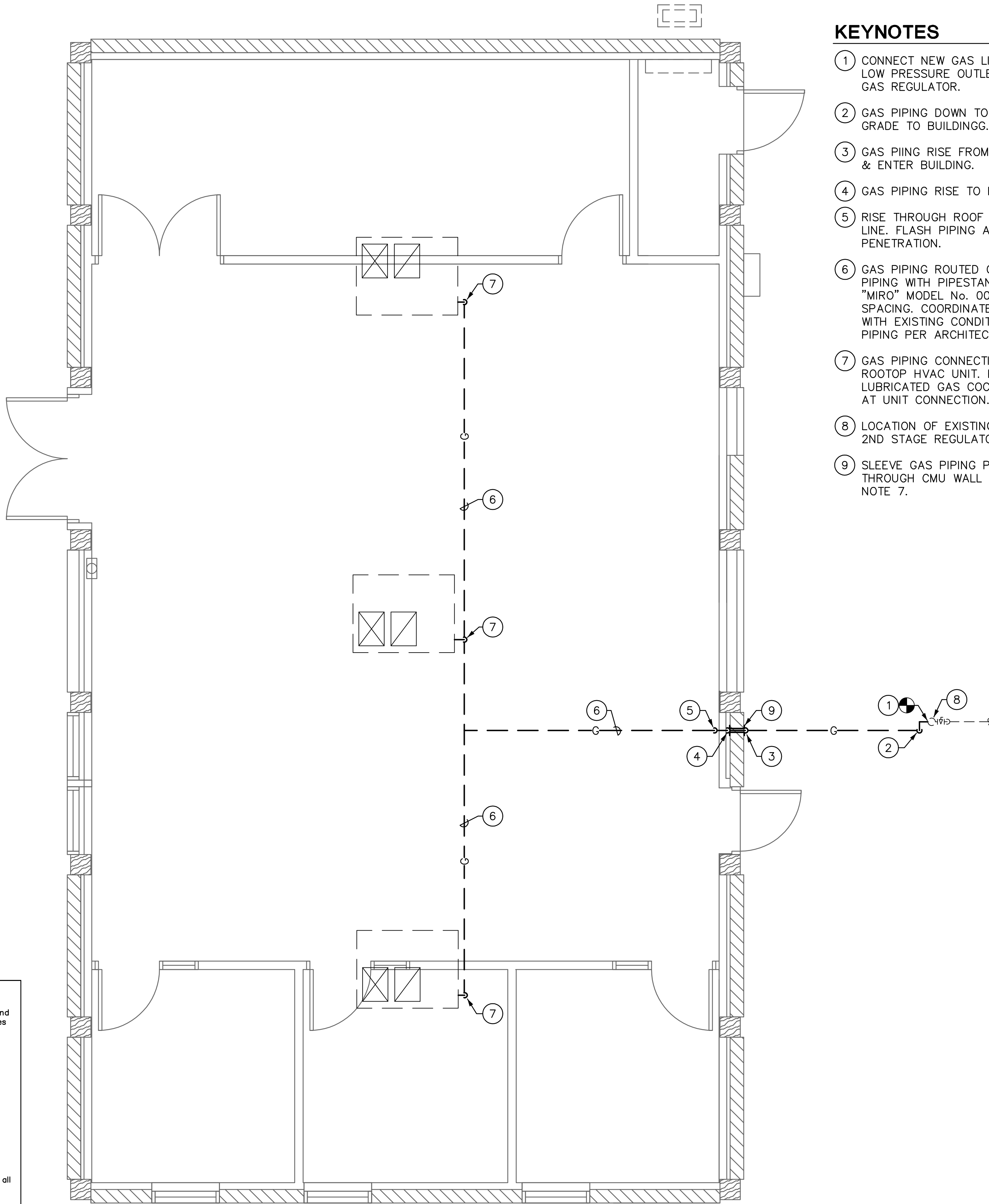
2.4 Pipe Hangers and Supports: Fee & Mason Figure 103 clevis hanger for insulated pipe and Figure 104 clevis hanger for cast iron pipe. Install #500 Trisolators on uninsulated copper lines at all hangers and wall penetrations.

2.5 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:

- Valves: Milwaukee, Rockwell-Nordstrom, Butterball.
- Hangers: Grinnell, Fee & Mason, Elcen, Kin-Line, F & S, B-Line, Michigan.
- Drains and Cleanouts: J. R. Smith, Zurn, Josam, Wade, Western.

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



Plumbing Plan

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



PLUMBING LEGEND		
SYMBOL	ABBR.	DESCRIPTION
	SOC	SHUTOFF COCK
	G	NATURAL GAS PIPING
		POINT OF CONNECTION- NEW TO EXISTING



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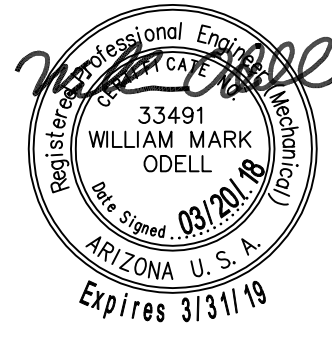
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KEYNOTES

1. CONNECT NEW GAS LINE TO EXISTING LOW PRESSURE OUTLET OF EXISTING GAS REGULATOR.
2. GAS PIPING DOWN TO ROUTE BELOW GRADE TO BUILDING.
3. GAS PING RISE FROM BELOW GRADE & ENTER BUILDING.
4. GAS PIPING RISE TO ROUTE AT CEILING.
5. RISE THROUGH ROOF WITH NEW GAS LINE. FLASH PIPING AT ROOF PENETRATION.
6. GAS PIPING ROUTED ON ROOF, SUPPORT PIPING WITH PIPESTANDS, EQUAL TO "MIRO" MODEL No. 002, AT 10' O.C. SPACING. COORDINATE PIPE ROUTING WITH EXISTING CONDITIONS. PAINT PIPING PER ARCHITECT.
7. GAS PIPING CONNECTION TO NEW ROOFTOP HVAC UNIT. PROVIDE LUBRICATED GAS COCK & 6" DIRT LEG AT UNIT CONNECTION.
8. LOCATION OF EXISTING NATURAL GAS 2ND STAGE REGULATOR.
9. SLEEVE GAS PIPING PENETRATION THROUGH CMU WALL PER GAS PIPING NOTE 7.

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ARCHITECTURE & PLANNING

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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
- I

FLUORESCENT STRIP FIXTURE.
- O-H

CEILING OR WALLMOUNTED FIXTURE.
- O-PC

PORCELAIN PULL CHAIN FIXTURE
- J

JUNCTION BOX
- J-F

JUNCTION BOX WITH FLEX CONNECTION.
- ⊗

SINGLE FACE EXIT SIGN- NOT SWITCHED
- ⊕

DOUBLE FACED EXIT SIGN- NOT SWITCHED.
- ⊕-B

TWO HEAD EMERGENCY LIGHT WITH BATTERY.
- S

SINGLE POLE SWITCH, + 48" A.F.F. (20A-120/277V)
- S3

THREE WAY SWITCH, + 48" A.F.F. (20A-120/277V)
- S4

4-WAY SWITCH +48" AFF (20A-120/277V)
- Sp

SWITCH AND PILOT LIGHT (20A-120-/277V)
- SK

SINGLE POLE SWITCH, KEY OPERATED (20A)
- ⊗-W

WALL OR CEILING MOUNTED MOTION SENSOR MANUFACTURE BY LAMTON
- ⊗-D

DIMMER CONTROL, + 48" A.F.F. TYPE, RATING AS NOTED
- ⊗-D

DUPLEX RECEPTACLE, + 18" A.F.F. (20A)
- ⊗-D

DUPLEX RECEPTACLE ABOVE COUNTER, VERIFY HEIGHT. (20A)
- ⊗-D

FOURPLEX RECEPTACLE, + 18" A.F.F. (20A)
- ⊗-D

HALF SWITCHED DUPLEX RECEPTACLE (20A)
- ⊗-D

SPECIAL RECEPTACLE - SIZE & TYPE AS NOTED
- ⊗-D

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.
- T—

TELEPHONE SYSTEM CONDUIT HOMERUN WITH NYLON PULLWIRE (1"C MIN UNO)
- TV-H

CLOSED CIRCUIT TV (CCTV) OUTLET SAME AS CATV OUTLET
- ⊗-R

REMOTE CONTROL STATION ⊗ +48" AFF
- ⊗-R

DISCONNECT SWITCH, FUSE PER EQUIPMENT MANUFACTURERS RECOMMENDATION. OUTSIDE NEMA 3R - N.F. = NON-FUSED.
- ⊗-R

COMBINATION STARTER AND FUSIBLE DISCONNECT SWITCH SIZE AS NOTED
- ⊗-R

EQUIPMENT TERMINATION CONNECTION POINT VERIFY EXACT LOCATION LOAD AND VOLTAGE AS NOTED
- ⊗-R

MOTOR
- SM

THERMAL PROTECTED SWITCH
- ⊗-R

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

SPECIFICATIONS

1.

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.
2.

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.
3.

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.
4.

PRIOR TO ROUGH-IN AND FINAL CONNECTION, VERIFY ELECTRICAL CHARACTERISTICS AND EXACT LOCATION OF EQUIPMENT.
5.

GROUT AND SEAL ALL CONDUIT PENETRATIONS OF WALLS AND FLOOR SLABS TO PRESERVE FIRE RATING AND WATERTIGHT INTEGRITY.
6.

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.
7.

ALL WIRING TO BE INSTALLED IN RACEWAYS. TYPE OF RACEWAY SHALL BE AS REQUIRED BY CODE. MINIMUM CONDUIT SIZE SHALL BE 1/2".
8.

PROVIDE CODE SIZED BOND WIRE IN ALL EMT, FLEXIBLE CONDUIT
9.

ALL ELECTRICAL EQUIPMENT SHALL BE NEW , U.L. APPROVED AND COMMERCIAL GRADE.
10.

WIRE RATED FOR 150° CENTIGRADE SHALL BE USED FOR ALL INCANDESCENT LIGHTING FIXTURES.
11.

ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL CODE, (N.E.C.), AND ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
12.

PROVIDE TYPEWRITTEN DESCRIPTIVE PANEL DIRECTORIES

(EXISTING)

PANELBOARD B19 SCHEDULE									
MAINS: 225A MCB					LOCATION: SEE PLAN				
VOLTAGE: 120/208V, 3ø, 4W					MOUNTING: SURFACE (NEMA 3R)				
TYPE: SIEMENS (EXISTING)					MIN. A.I.C.: EXISTING				
CIRCUIT DESCRIPTION		BKR.	QIR NO.	ØA	ØB	ØC	QIR NO.	BKR.	CIRCUIT DESCRIPTION
LIGHTS	20	1	1234				20	1	RECEPT'S.
LIGHTS - EXTERIOR		3	1080		380			4	
SPARE		5			1080			6	
RECEPT'S. - I.T. ROOM		7	360					8	
		9	900					10	
		11			360			12	
RECEPT'S. - ROOF MOUNTED		13	540					14	SPARE
SPARE		15						16	SPARE
MINI-SPLIT A/C UNIT CU-1	30	17				1778	30		PACKAGE A/C UNIT AC-2
17.1 MCA, 208V, 1ø		19	1778			1913	18		18.4 MCA, 208V, 1ø
PACKAGE A/C UNIT AC-1	30	21		1913		2204	20	2	PACKAGE A/C UNIT AC-3
18.4 MCA, 208V, 1ø		23				1913	22		21.2 MCA, 208V, 1ø
SPARE	60	25				2204	24	2	SPARE
		27					26		
		29					28		
		3					30	3	
TOTAL LOAD PER PHASE:			7805	6657	10148		H# 10148	/ 120 =	84.6 AMPS

NOTE TO ELEC. CONTRACTOR:  
ELECTRICAL CONTRACTOR MAY REUSE EXISTING BREAKERS FOR NEW EQUIPMENT FROM EXISTING PANEL FIELD VERIFY ALL REQUIREMENTS PRIOR TO ROUGH-IN.

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/ NEW LOAD
- △

NEW BREAKER W/ NEW LOAD

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.

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

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

1.

RETURN REMOVED MATERIAL DEEMED SALVAGEABLE TO OWNER'S REPRESENTATIVE. MATERIALS DEEMED NOT SALVAGEABLE SHALL BE REMOVED FROM THE PREMISES.
2.

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.
3.

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.
4.

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.
5.

REMOVED OR DAMAGED CONDUIT, WIRE AND FITTINGS SHALL NOT BE RE-USED
6.

WORK REQUIRED FOR EXISTING EQUIPMENT NOTED AS "EXISTING TO BE REMOVED" SHALL INCLUDE:

A.

SALVAGING OR DISPOSING OF ALL MATERIAL OR EQUIPMENT AS DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE.

B.

REMOVAL OF FEEDER OR CABLING FROM EQUIPMENT TO POINT OF FEED.

C.

REMOVAL OR RE-CIRCUITING (AS REQUIRED OR AS NOTED ON PANELS) OF ALL BRANCH CIRCUITING.

D.

REMOVAL OF ALL FITTINGS, SUPPORTS, BRACKETS, ETC.

E.

REPAIR AND PATCHING OF WALLS, FLOORS AND CEILINGS TO MATCH EXISTING OR PER ARCHITECT'S INSTRUCTIONS.

F.

CAPPING OF IN-SLAB FEEDER CONDUITS FLUSH WITH THE FINISHED FLOOR.

G.

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.

H.

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.

I.

EXISTING FEEDER CONDUITS SHALL BE REMOVED OR CUT OFF AND ABANDONED IF FOUND TO BE UNSALVAGEABLE BY THE OWNER, ARCHITECT OR ENGINEER.
7.

EXISTING EQUIPMENT NOT IMPICITLY SHOWN ON THE DRAWINGS IS INTENDED TO BE "EXISTING TO REMAIN," UNLESS NOTED OTHERWISE.

JOB# 18-06

ELECTRICAL DESIGN & CADD SERVICES INC.

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Angelo Ossanna

7450 ANGELLO OSSANNA

EXPIRES 12/30/2018

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ARCHITECTURE & PLANNING

DRAWING:

Electrical Panel Schedule, Specs's., Symbols With Notes

PROJECT:

ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ, 86301

APN:

108-03-004

DRAWN BY

CHECKED BY

DATE

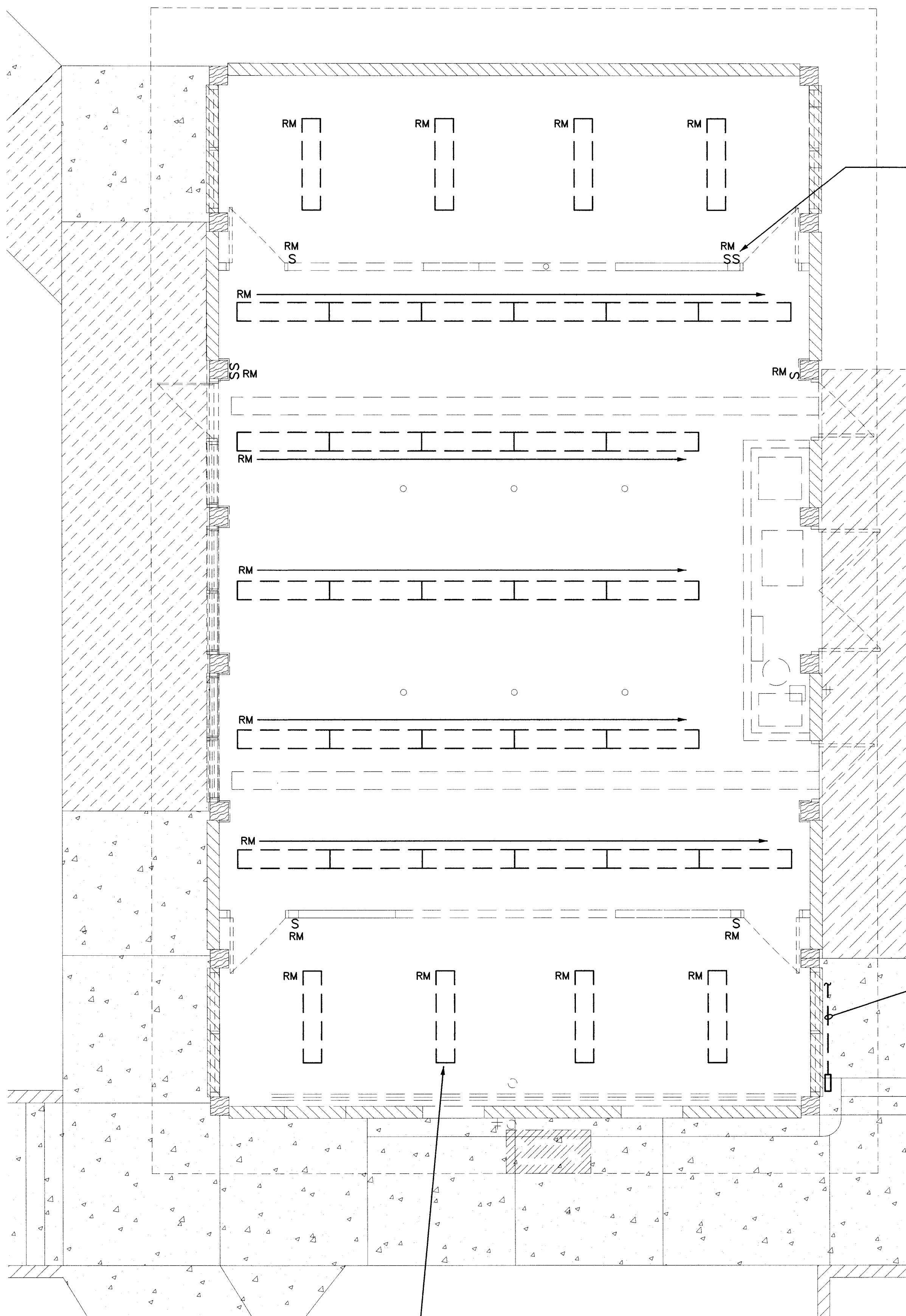
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GENERAL NOTE:  
ELECTRICAL CONTRACTOR SHALL  
REMOVE ALL EXISTING LIGHT FIXTURES  
AND REPLACE WITH NEW AS INDICATED  
(TYPICAL)

### Demo Lighting Floor Plan

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



GENERAL NOTE:  
ELECTRICAL CONTRACTOR SHALL  
REMOVE ALL EXISTING LIGHT SWITCHES  
AND REPLACE WITH NEW MOTION SENSORS  
AS INDICATED. (TYPICAL)

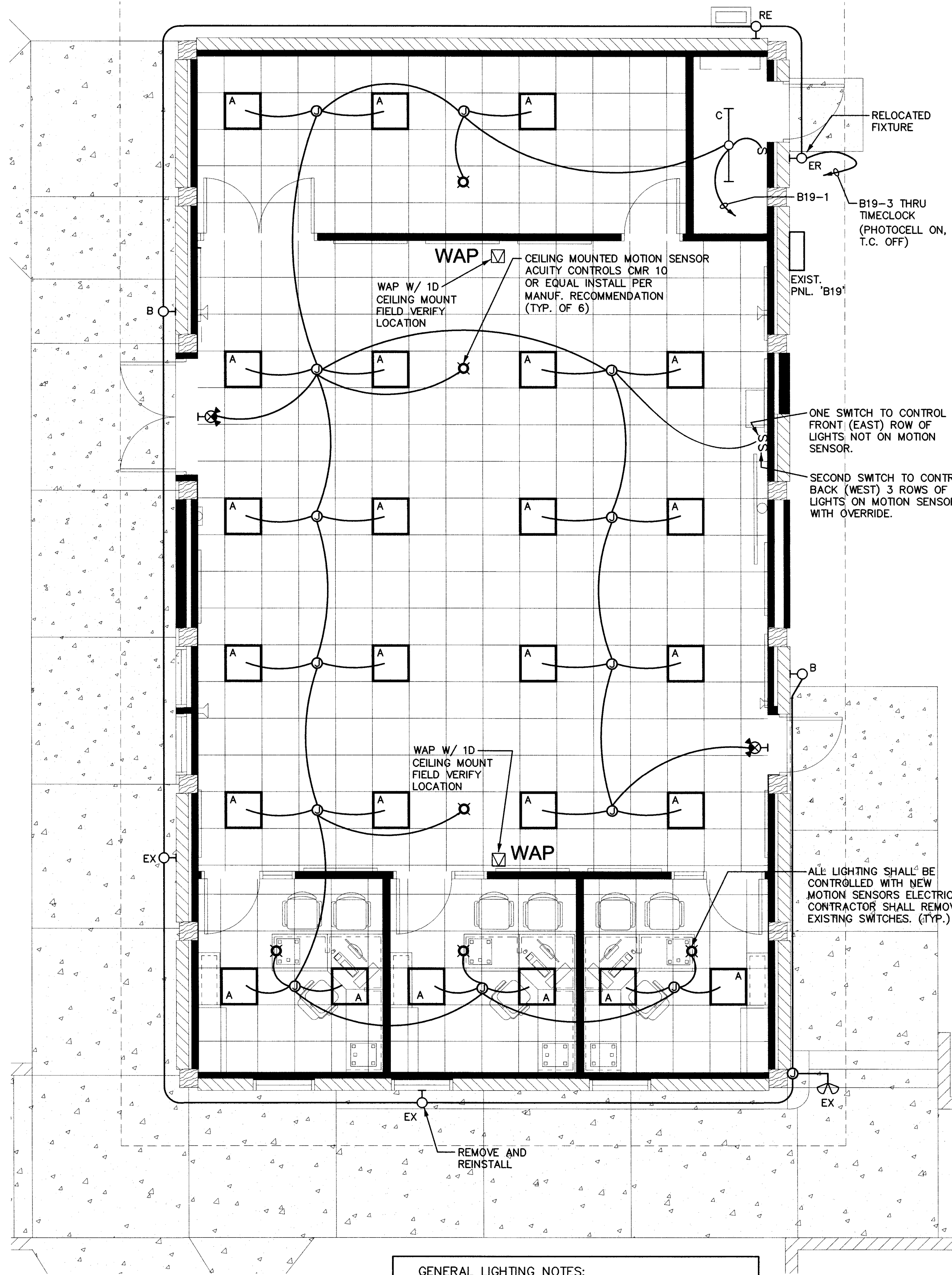
#### ABBREVIATIONS

EX EXISTING LIGHT OR DEVICE TO REMAIN  
RE EXISTING LIGHT OR DEVICE TO BE  
REPLACED OR RELOCATED EXTEND  
CIRCUITING AS REQUIRED IF NOT SHOWN.  
ER REPLACED OR RELOCATED LIGHT OR DEVICE  
RM REMOVED LIGHT OR DEVICE  
A.F.F. ABOVE FINISHED FLOOR (  $\phi$  OF OUTLET )  
A.F.G. ABOVE FINISHED GRADE (  $\phi$  OF OUTLET )  
E.C. EMPTY CONDUIT  
UNO UNLESS OTHERWISE NOTED  
FBO FURNISHED BY OTHERS  
NL NIGHT LIGHT  
TYP TYPICAL

ELECTRICAL CONTRACTOR  
TO REMOVE EXISTING  
CONDUIT & WIRING NOT  
REQUIRED FIELD VERIFY.

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.)					
C	LITHONIA ZLIN L48 3000LM L/LENS	120	LEDS - 33 WATT 35K CR1	CEILING MOUNTED SURFACE	STANDARD	LED STRIP FIXTURE
	LITHONIA LHQM S W 1 R 120 H	120	LED & (2) 6W HAL. FURN'D. WITH UNIT	WALL- 12" ABOVE DOOR	WHITE HOUSING RED LETTER	COMBINATION EMERGENCY/EXIT LIGHT WITH LEAD-CAL. BATTERY

NOTES: ① VERIFY ALL FINAL MOUNTING HEIGHTS WITH ARCHITECT.



#### GENERAL LIGHTING NOTES:

- CONTRACTOR SHALL VERIFY ALL MOUNTING HEIGHTS  
EXACT LOCATION AND REQUIREMENTS OF ALL LIGHTING  
FIXTURES AND SWITCHES WITH OWNER PRIOR TO ROUGH-IN.
- NIGHT LIGHTS (NL), EMERGENCY & EXIT LIGHT FIXTURES  
SHALL BE CONNECTED TO UNSWITCHED LEG OF CIRCUIT.
- ROMAX IS NOT ALLOWED.

### Lighting Floor Plan

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



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ARCHITECTURE & PLANNING

**DRAWING:** Lighting Design & Demo Floor Plan  
With Fixture Schedule & Notes

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ, 86301

**APN:** 106-03-004

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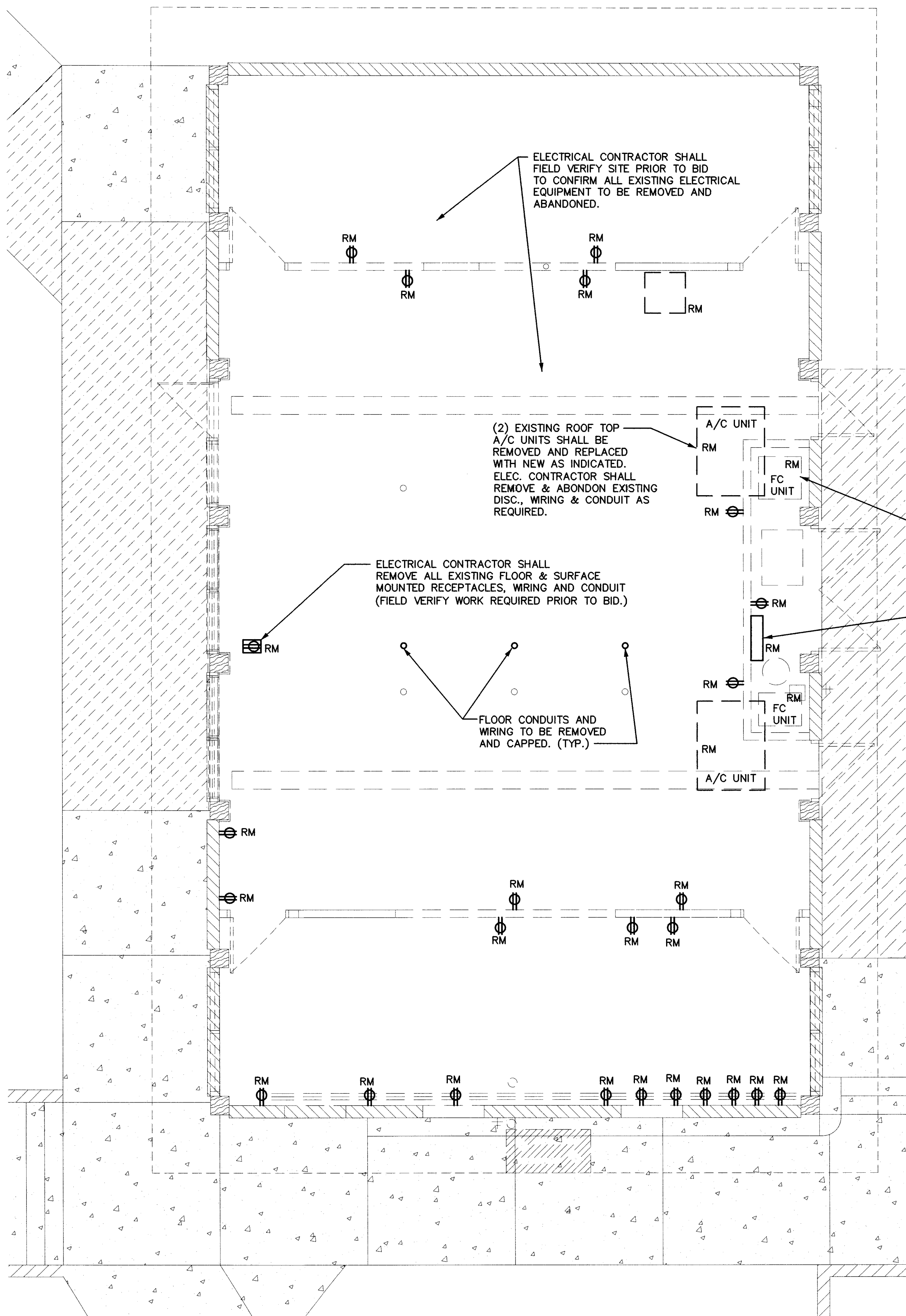
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### Demo Power Floor Plan

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



**GENERAL NOTE:**  
ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED OR UNUSED CONDUIT & WIRING ETC. BACK TO PANEL.

#### DATA / COMMUNICATIONS: (SCOPE OF WORK)

##### OUTSIDE PLAN (OSP) COPPER & FIBER

- INSTALL 6SM SYSTIMAX TERASPEED (OR APPROVED EQUIVALENT) FIBER FROM NEW 1U RACK MOUNTED LIU IN BLDG-16 RM-110 TO NEW WALL MOUNTED LIU IN BLDG-16 RM-102.
- INSTALL 4-PR OSP RATED COPPER CABLE FROM EXISTING PATCH PANEL IN BLDG-16 RM-110 TO NEW CAT6 PATCH PANEL IN BLDG-19 RM-102. INSTALL NEW 4-PAIR LIGHTNING PROTECTORS BETWEEN OSP & PATCH PANELS IN EACH BUILDING.
- TERMINATE ALL FIBERS WITH LC CONNECTORS.
- SUPPLY QTY-4 1M LC-LC SM AND QTY-4 3M LC-LC SM DUPLEX FIBER PATCH CORDS.

##### HORIZONTAL COPPER

- PULL, TERMINATE, AND TEST A TOTAL OF 20 NEW DATA CABLES PER REMODEL PROGRAM.
- TERMINATE HORIZONTAL DATA CABLES TO NEW 48-PORT CAT6 PATCH PANEL IN NEW WALL MOUNT IN BLDG-19 ROOM 102.
- SUPPLY 15FT AND 2FT BLUE CAT6 PATCH CABLES. QUANTITY OF EACH LENGTH PATCH CABLES SUPPLIED SHALL EQUAL THE TOTAL NUMBER OF DATA PORTS INSTALLED.

##### GENERAL

- INSTALL 1-4" CONDUIT WITH 4-1" INNER DUCT BETWEEN BLDG-19 RM-102 AND EXISTING JUNCTION BOX IN BLDG-16.
- USE BLUE COLORED CAT6 CABLE AND JACKS FOR DATA PORTS.
- INTERNAL BUILDING CABLES SHALL BE ROUTED IN FRAMED WALLS AND ABOVE CEILING. CABLES MAY BE NEATLY SUSPENDED IN ENCLOSED CEILING AREAS USING CABLE HANGERS. CABLE MOLDING AND/OR SURFACE MOUNTED CONDUIT IS ACCEPTABLE IF THE CABLEING CAN NOT BE ROUTED IN WALLS AND/OR ABOVE CEILING. MATCH EXISTING WALL COLORS WITH ALL SURFACE MOUNTED ITEMS.
- IT HEAD END EQUIPMENT WILL BE OWNER SUPPLIED.

J-BOX FOR AUTOMATIC DOOR OPENER. ELECTRICAL CONTRACTOR SHALL VERIFY REQUIREMENTS WITH DOOR MANUFACTURER/ARCHITECT PRIOR TO ROUGH-IN.

(2) EXISTING FURNACES UNITS SHALL BE REMOVED. FIELD VERIFY EXACT REQUIREMENTS.

ELECTRICAL CONTRACTOR SHALL REMOVE EXISTING J-BOX, WIRING, & CONDUIT, CAP AS REQUIRED. FIELD VERIFY PRIOR TO BID.

#### NOTE:

THE LOW VOLTAGE CONTRACTOR MUST BE SYSTIMAX CERTIFIED. THE FOLLOWING ARE APPROVED LOW VOLTAGE SUBCONTRACTORS:

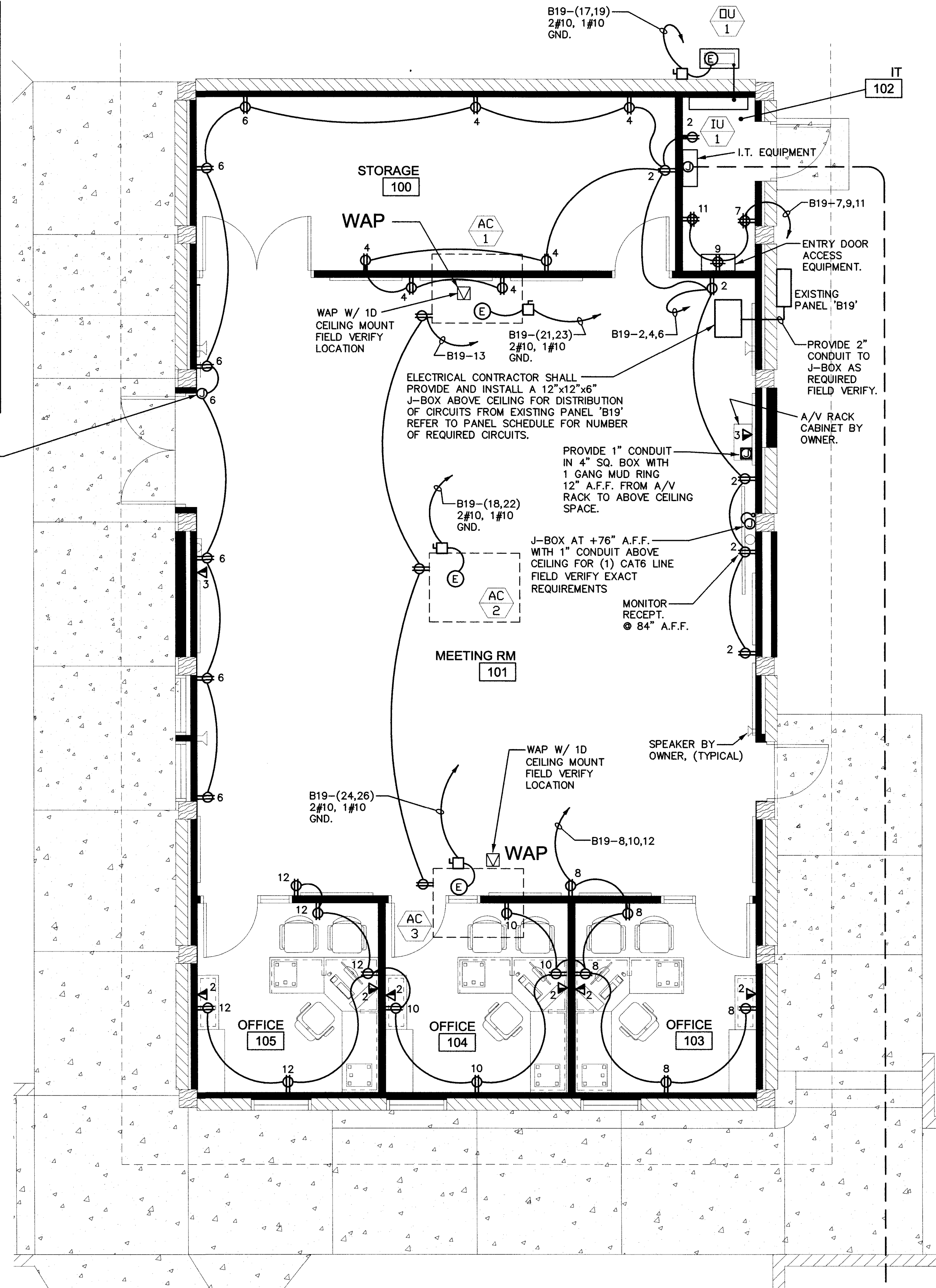
- ASPEN COMMUNICATIONS, 7 Kiji DAVA CIRCLE SUITE A, PRESCOTT AZ. 86301 (928)774-0992
- CABLE SOLUTIONS, LLC 2461 N. ARIZONA AVE. CHANDLER, AZ. 85255 (623)826-4527
- IES COMMUNICATIONS, 2801 S. FAIR LANE TEMPE, AZ. 85282 (480)379-6297

#### ABBREVIATIONS

EX	EXISTING LIGHT OR DEVICE TO REMAIN
RE	EXISTING LIGHT OR DEVICE TO BE REPLACED OR RELOCATED EXTEND CIRCUITING AS REQUIRED IF NOT SHOWN.
ER	REPLACED OR RELOCATED LIGHT OR DEVICE
RM	REMOVED LIGHT OR DEVICE
A.F.F.	ABOVE FINISHED FLOOR ( ¢ OF OUTLET )
A.F.G.	ABOVE FINISHED GRADE ( ¢ OF OUTLET )
E.C.	EMPTY CONDUIT
UNO	UNLESS OTHERWISE NOTED
FBO	FURNISHED BY OTHERS
NL	NIGHT LIGHT
TYP	TYPICAL

#### GENERAL POWER NOTES:

- CONTRACTOR SHALL VERIFY ALL MOUNTING HEIGHTS. EXACT LOCATION AND REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT AND DEVICES WITH ENG., OWNER OR ARCHITECT PRIOR TO ROUGH-IN.
- ELECTRICAL CONTRACTOR SHALL RE-USE EXISTING CIRCUITS WHENEVER POSSIBLE.
- ALL RECEPTACLES IN AREAS WITH-IN 6'-0" OF A SINK SHALL BE GFCI TYPE PER NEC
- EXTERIOR & ROOF MOUNTED MAINT. RECEPT'S. SHALL BE WP, GFCI TYPE PER NEC
- VERIFY THE EXACT LOCATIONS OF ALL TELEPHONE OUTLETS, DATA OUTLETS AND SPECIAL SYSTEMS OUTLETS WITH THE ARCHITECT/OWNER PRIOR TO ROUGH-IN.
- ELECTRICAL CONTRACTOR SHALL PROVIDE COVER PLATES FOR ALL UNUSED OUTLETS, DATA OUTLETS AND SPECIAL SYSTEMS OUTLETS. FIELD VERIFY DEVICE NOT USED
- ELECTRICAL CONTRACTOR SHALL VERIFY MECHANICAL EQUIPMENT REQUIREMENTS BREAKER, DISC. & WIRE SIZE WITH MANUFACTURER PRIOR TO ROUGH-IN.



### Power Floor Plan

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



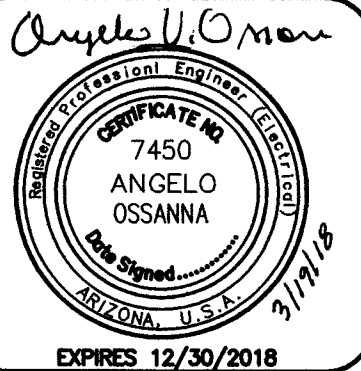
ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NEW 4" EMPTY CONDUIT FOR DATA REQUIREMENTS. REFER TO I.T. SITE PLAN ON ARCHITECTURAL PLANS.

JOB# 18-06

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**ARCHITECTURE & PLANNING**

**DRAWING:** Power Design & Demo Floor Plan  
With Notes

**PROJECT:** ERAU Building 19 Remodel  
3700 Willow Creek Road  
Prescott, AZ. 86301

106-03-004

**APN:**

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