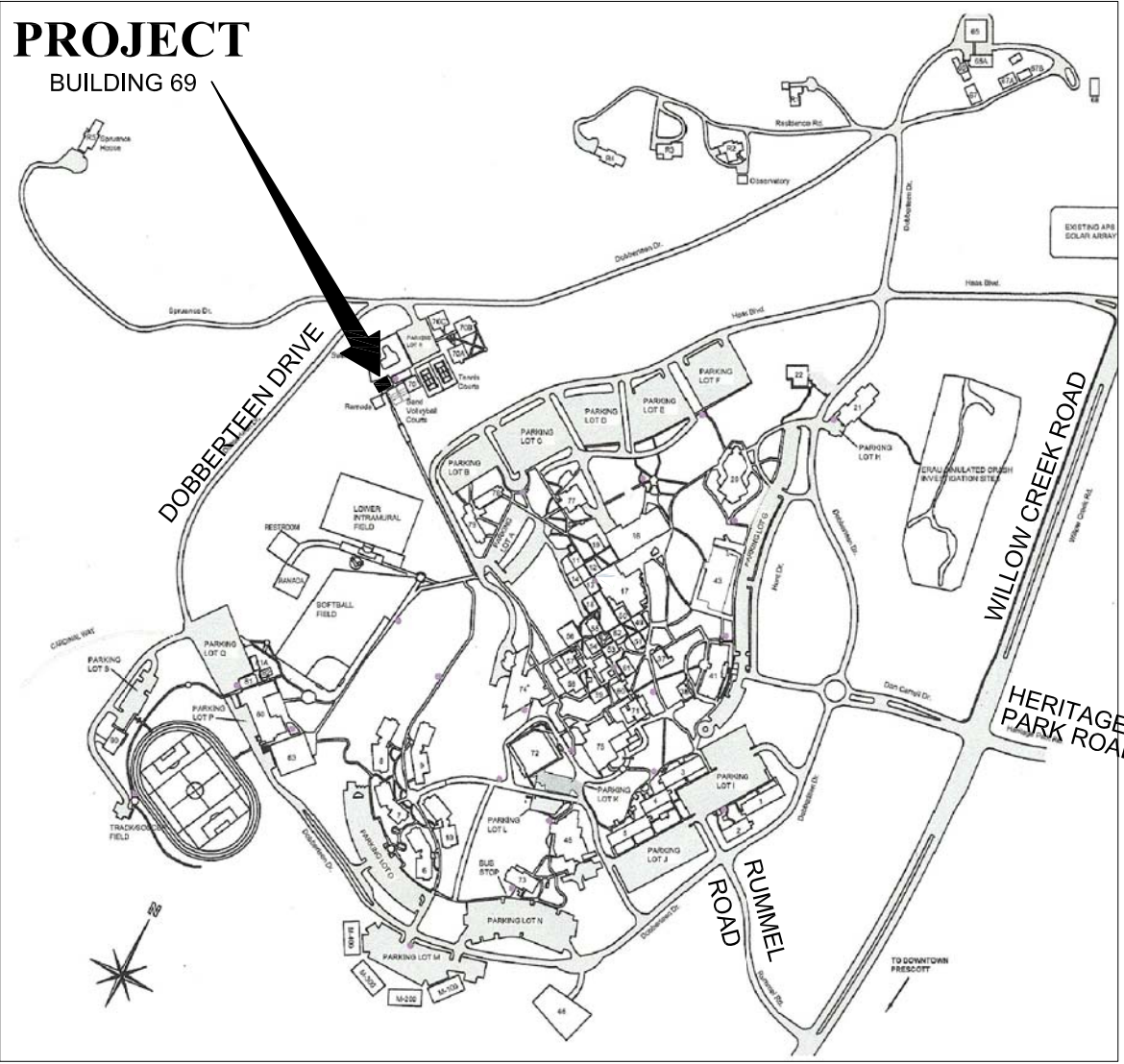


Project Description

Embry-Riddle Aeronautical University intends to renovate the restrooms / locker room in existing building 69. All existing fixtures will be removed. The restroom will be renovated to comply with ADA, adding new ADA compliant water closet stalls and shower stalls. The men's and women's restrooms will be reversed having the men's restroom on the West side (plan) and the Women's restroom on the East side (plan). A new ceiling and lighting will also be added. A new rooftop HVAC unit will be installed.

Site / Vicinity Map



Graphic Standards

NORTH ARROW INDICATOR

DETAIL DESIGNATOR

BUILDING SECTION DESIGNATOR

REVISION DESIGNATOR

TYPICALLY INDICATES EXISTING DOOR & FRAME TO BE REMOVED

TYPICALLY INDICATES EXISTING DOOR & FRAME TO REMAIN

#/SHEET

ROOM NUMBER / FINISH DESIGNATOR

DOOR NUMBER DESIGNATOR

DOOR TYPE DESIGNATOR

WINDOW TYPE DESIGNATOR

GRID LINE DESIGNATOR

TYPICALLY INDICATES PROPOSED DOOR & FRAME - REFER TO DOOR SCHEDULE

IMPROVEMENTS FOR EMBRY-RIDDLE RESTROOM REMODEL BUILDING 69

Project Information

OWNER:

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

PREPARED BY:

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P.O. Box 11593
Prescott, AZ 86304

PH: 928-443-5812
FAX: 928-443-5815
CONTACT: Alan Kenson
waka@cableone.net

CONTRACTOR:

To Be Determined

SCOPE OF WORK:

Restroom / Locker Room Renovation

PROJECT ADDRESS:

3700 Willow Creek Road (Building 69)
Prescott, AZ 86301 (APN: 106-03-004)

ZONE:

BG - PAD

OCCUPANCY:

B (Educational Facility for students above the 12th grade) ,
Non-Separated

CONSTRUCTION TYPE:

V-B Non Sprinklered

BUILDING AREA

1,300 SQUARE FEET

Sheet Index

ARCHITECTURAL

CS Cover Sheet

A0.0 Construction Access Plan

A1.0 Demolition plan and Reference /
Dimension / Wall Types plan

A2.0 Demolition & Proposed Reflected
Ceiling plan and Building Section

A3.0 Interior Elevations, Schedules
and Finish Plan

A4.0 Door Schedule & Details and Roof Plan

A5.0 Specifications

MECHANICAL

M1.1 Mechanical Plans

M2.1 Mechanical Schedules and Details

PLUMBING

P1.1 Plumbing Demolition Plan and Floor Plan

P2.1 Plumbing Schedules and Details

ELECTRICAL

E1.1 Lighting and Power Demo Floor Plan,
Symbols, One-Line Diagram, Panel
Schedules & Notes

E1.2 Lighting & Power Floor Plan,
Specifications, fixture Schedule and Notes



Architect:

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ARCHITECTURE & PLANNING

DRAWING: Cover Sheet

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

APN:

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L.O.

CHECKED BY
W.A.K.

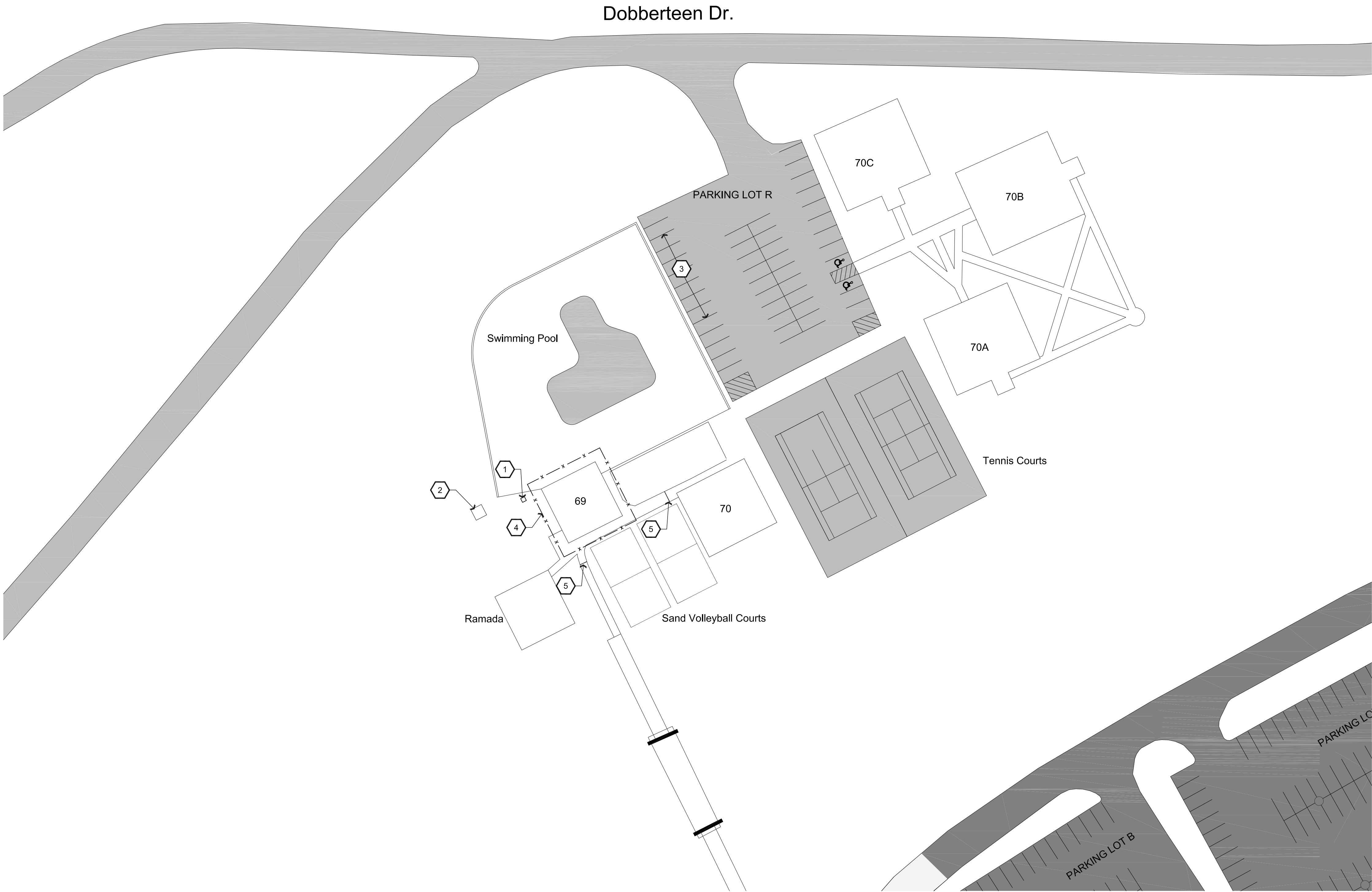
DATE
February 13th, 2017

JOB NO.
696

SHEET

CS

Feb 13, 2017 - 8:30am



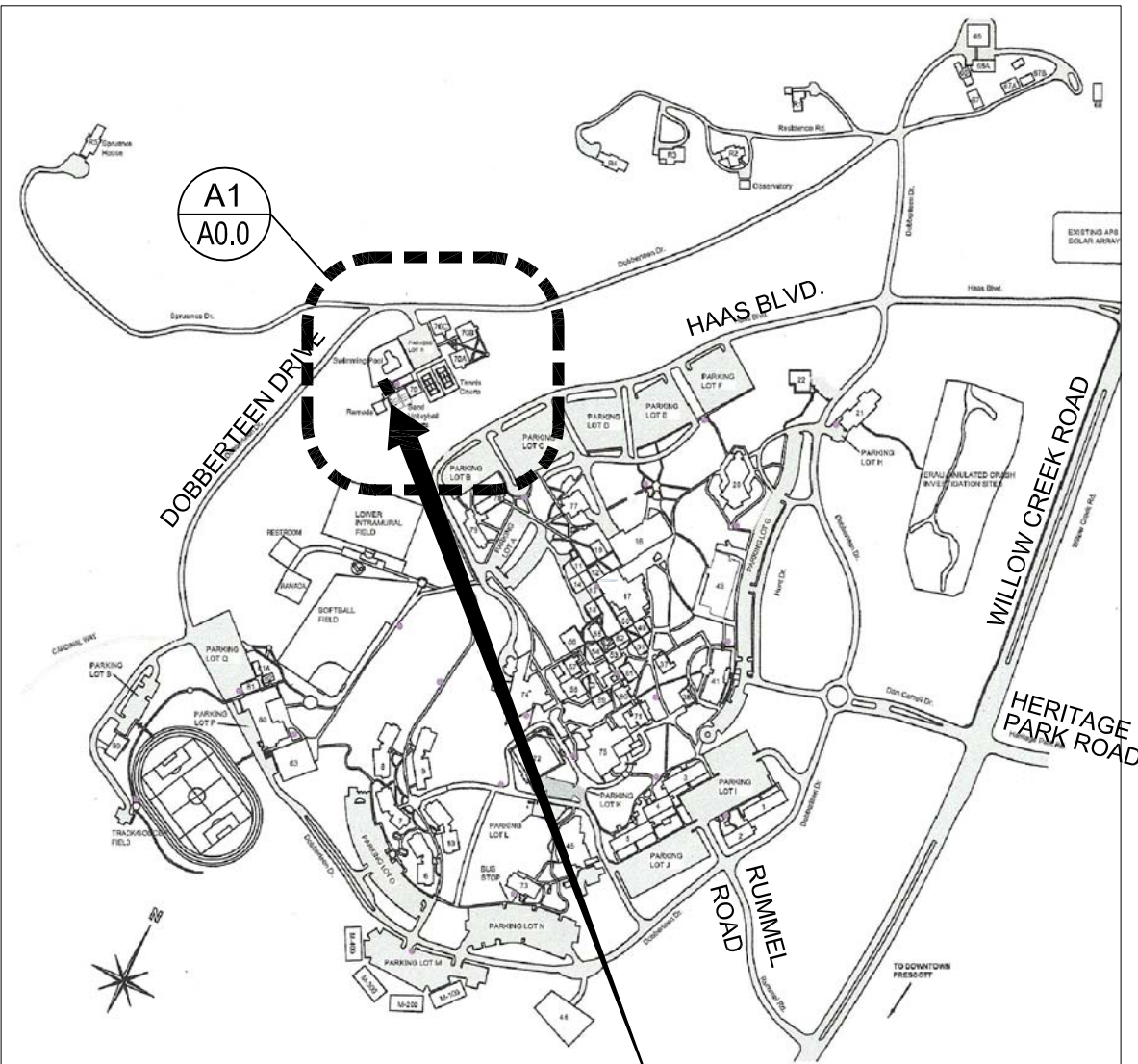
A1 Construction Access Plan

Scale: 1"=30'-0"



Descriptive Keynotes

1. LOCATION FOR J-JON.
2. LOCATION OF 6 YARD TRASH DUMPSTER PROVIDED BY OWNER.
3. CONTRACTOR PARKING AREA. 7 SPACES AVAILABLE. CONTRACTOR TO PROVIDE SIGNAGE DESIGNATING SPACES FOR CONSTRUCTION PARKING.
4. 6' TALL TEMPORARY CHAIN LINK FENCING BY CONTRACTOR.
5. PROVIDE SIGNAGE AND BARRICADES FOR SIDEWALK CLOSURE.



B1 Vicinity Map

Scale: N.T.S.



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ARCHITECTURE & PLANNING

DRAWING: Construction Access Plan

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

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CHECKED BY W.A.K.
DATE February 13th, 2017
JOB NO. 696
SHEET

A0.0

Descriptive Keynotes

Demolition Plan

1. TYPICALLY INDICATES EXISTING WALL TO BE REMOVED.
2. TYPICALLY INDICATES EXISTING DOOR AND FRAME TO BE REMOVED.
3. TYPICALLY INDICATES PLUMBING FIXTURES, TOILET PARTITIONS, FLOOR DRAIN, ACCESSORIES, ETC. TO BE REMOVED. REFER TO PLUMBING PLANS.
4. REMOVE EXISTING BASEBOARD HEATERS, TYPICAL, REFER TO MECHANICAL PLANS.
5. REMOVE LOCKERS AND BENCHES, RETURN TO OWNER FOR RE-USE.
6. REMOVE PORTION OF EXTERIOR MASONRY WALL FOR NEW DOOR LOCATION.
7. SAWCUT AND REMOVE CONCRETE FLOOR TO ACCOMMODATE PLUMBING WASTE LINE AND SHOWER PAN. REFER TO PLUMBING PLANS.
8. REMOVE PORTION OF CMU AS REQUIRED TO ACCOMMODATE DOOR OPENING.
9. RELOCATE EMERGENCY TELEPHONE, REFER TO ELECTRIC PLANS.
10. REMOVE PORTION OF EXTERIOR MASONRY WALL.
11. EXISTING FLOOR DRAIN TO BE ABANDONED, REFER TO PLUMBING PLANS.
12. REMOVE PORTION OF PLUMBING WALLS AS REQUIRED FOR REMOVAL OF CONCRETE. PROVIDE SUPPORT FOR ROOF STRUCTURE AS REQUIRED DURING REMOVAL.

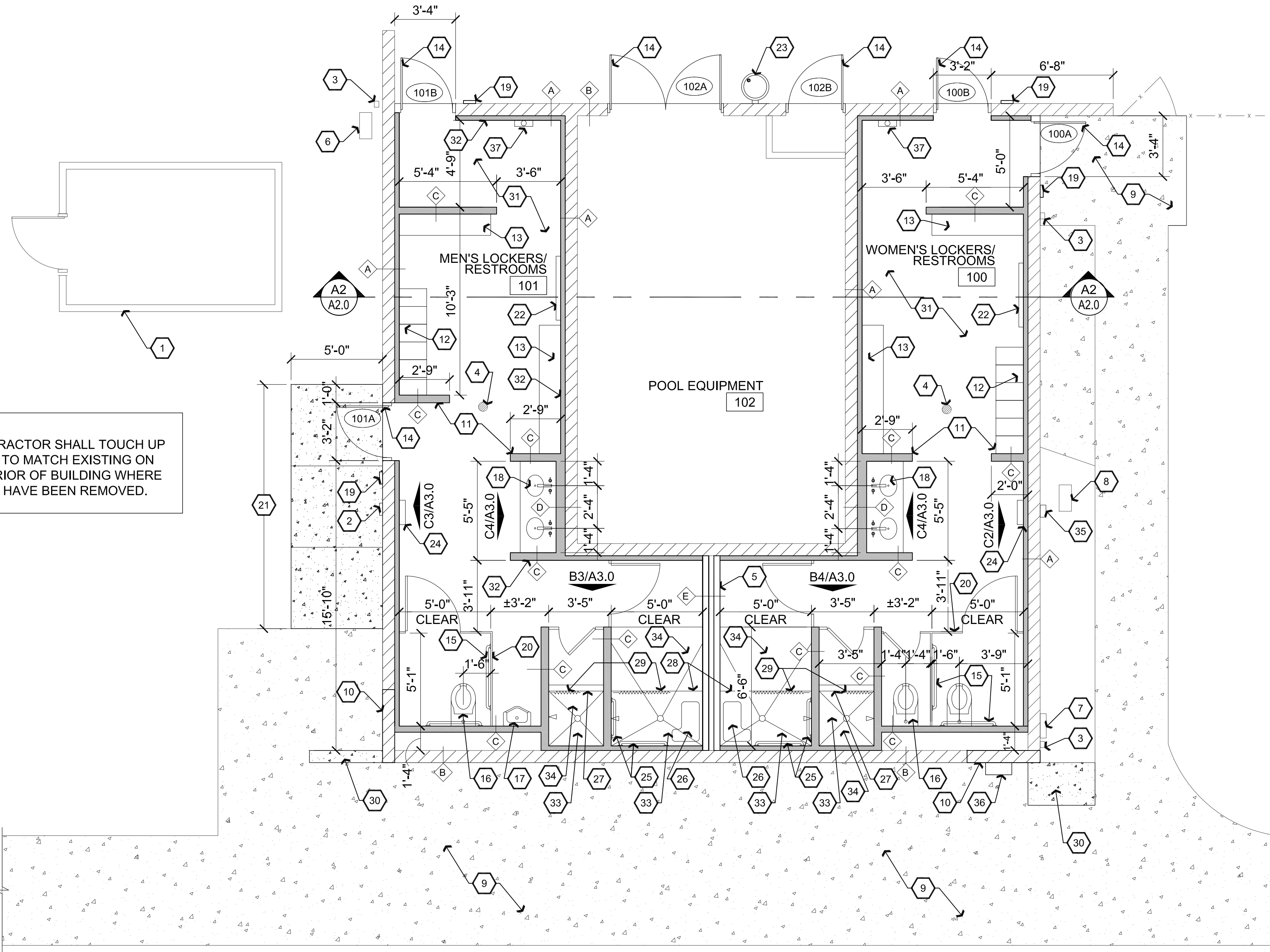
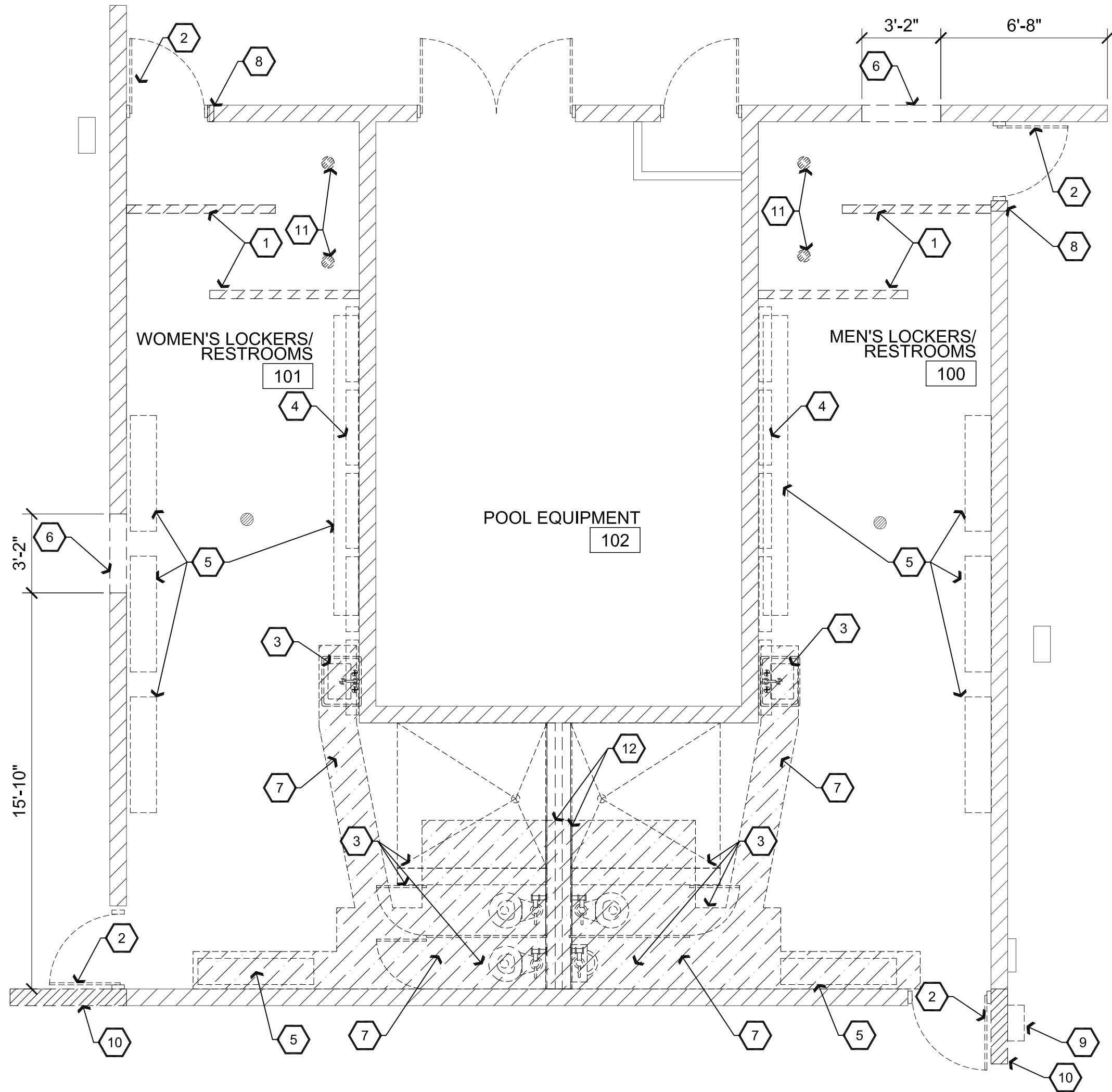
Wall Types Legend

- A** EXTERIOR / INTERIOR CMU WALL CONSTRUCTION: EXISTING CMU WALL WITH 2-1/2" 20 GAUGE METAL STUDS AT 1'-4" O.C. WITH 5/8" GPDW AT LOCATIONS WITHOUT PORCELAIN TILE, AND 5/8" DENSSHIELD AT LOCATIONS WITH PORCELAIN TILE ON INTERIOR SIDE. PROVIDE R-8 UNFACED BATT INSULATION IN WALL CAVITY.
- B** EXISTING: 8" WIDE CMU WALL.
- C** INTERIOR PARTITION WALL CONSTRUCTION: 3-5/8" 20 GAUGE METAL STUDS AT 1'-4" O.C. WITH 5/8" GPDW AT LOCATIONS WITHOUT PORCELAIN TILE, AND 5/8" DENSSHIELD AT LOCATIONS WITH PORCELAIN TILE.
- D** INTERIOR PLUMBING WALL: 6" 20 GAUGE METAL STUDS AT 1'-4" O.C. WITH 5/8" GPDW AT LOCATIONS WITHOUT PORCELAIN TILE, AND 5/8" DENSSHIELD AT LOCATIONS WITH PORCELAIN TILE.
- E** INTERIOR BEARING / PLUMBING WALLS: 2x4 WOOD STUDS @ 1'-4" O.C. WITH 5/8" DENSSHIELD ON EXPOSED SIDES.

Descriptive Keynotes

Reference Floor Plan

1. EXISTING STORAGE SHED TO REMAIN..
2. EXISTING LANDSCAPE TIMER, REFER TO ELECTRICAL PLANS.
3. 4x3 DOWNSPOUT, REFER TO ROOF PLAN.
4. EXISTING FLOOR DRAIN TO REMAIN, REFER TO PLUMBING PLANS.
5. PROVIDE WOOD STUD WALLS, REFER TO WALL TYPES.
6. EXISTING GAS METER.
7. EXISTING ELECTRIC SERVICE ENTRANCE SECTION TO REMAIN. REFER TO ELECTRICAL PLANS.
8. EXISTING LANDSCAPE IRRIGATION SYSTEM BACKFLOW PREVENTION DEVICE.
9. EXISTING CONCRETE SIDEWALK TO REMAIN.
10. FILL IN OPENING WITH 'TOOTHED IN' CMU TO MATCH EXISTING. SOLID GROUT WITH #4 VERTICALS @ 1'-4" O.C. EPOXIED INTO SLAB.
11. TYPICALLY INDICATES PROPOSED METAL STUD PARTITION WALL. REFER TO WALL TYPES LEGEND.
12. LOCKERS TO BE PROVIDED BY OWNER.
13. BENCHES TO BE PROVIDED BY OWNER.
14. INSTALL NEW DOOR AND HOLLOW METAL FRAME, REFER TO DOOR SCHEDULE, TYPICAL.
15. PROVIDE 1-1/2" DIAMETER GRAB BARS PER A.D.A. REQUIREMENTS. 42" LONG AT SIDE OF WATER CLOSET / 36" LONG AT REAR OF WATER CLOSET, PROVIDE SOLID
16. BLOCKING, REFER TO TOILET ACCESSORY SCHEDULE.
17. PROVIDE WALL HUNG WATER CLOSET, TYPICAL, REFER TO PLUMBING DRAWINGS.
18. PROVIDE WALL HUNG URINAL, REFER TO PLUMBING PLANS.
19. PROVIDE SELF-RIMMING LAVATORY IN SOLID SURFACE COUNTER TOP, REFER TO PLUMBING DRAWINGS.
20. PROVIDE ACCESSIBILITY SIGNAGE MOUNTED PER A.D.A. REQUIREMENTS.
21. PROVIDE HEAD RAIL-BRACED METAL TOILET PARTITION.
22. PROVIDE 4" THICK CONCRETE SIDEWALK W/ #3 @ 3'-0" O.C. EACH WAY OVER 4" A.B.C. PROVIDE 8" TURNDOWN
23. PROVIDE ADA COMPLIANT BABY CHANGING TABLE, INSTALL PER MANUFACTURER INSTRUCTIONS, PROVIDE SOLID BLOCKING.
24. PROVIDE A.D.A ACCESSIBLE ELECTRIC DRINKING FOUNTAIN, MAXIMUM HEIGHT OF SPOUT OUTLET TO BE 36" FROM FLOOR. REFER TO PLUMBING PLANS.
25. PAPER TOWEL DISPENSER SUPPLIED BY OWNER, INSTALLED BY CONTRACTOR.
26. PROVIDE 1-1/2" DIAMETER GRAB BARS PER A.D.A. REQUIREMENTS, 24" LONG AT SIDE OF SHOWER ENCLOSURE / 30" LONG AT BACK OF SHOWER ENCLOSURE, REFER TO TOILET ACCESSORY SCHEDULE.
27. WITH GRAB BAR, REFER TO TOILET ACCESSORY SCHEDULE.
28. PROVIDE SHOWER CURB - REFER TO DETAIL C1 / A3.0.
29. PROVIDE SHOWER ROD AND CURTAIN, REFER TO TOILET ACCESSORY SCHEDULE.
30. PATCH AND REPAIR CONCRETE AS REQUIRED TO MATCH EXISTING CONCRETE SIDEWALK WHERE CMU WALL WAS REMOVED.
31. INSTALLATION METHOD FOR PORCELAIN FLOOR TILE TO BE IN ACCORDANCE WITH TCNA METHOD F205-16. EXISTING CONCRETE FLOOR IS SLOPED IN SOME AREAS AND REQUIRES SOME LEVELING.
32. INSTALLATION METHOD FOR PORCELAIN WALL TILE TO BE IN ACCORDANCE WITH TCNA METHOD W245-16.
33. INSTALLATION METHOD FOR PORCELAIN SHOWER TILE TO BE IN ACCORDANCE WITH TCNA METHOD B420-16.
34. PROVIDE NEW 4" THICK CONCRETE FLOOR IN SHOWER AREAS RECESSED 2-1/2" BELOW EXISTING AND NEW CONCRETE FLOOR.
35. RELOCATED LANDSCAPE IRRIGATION TIMER BY OWNER.
36. RELOCATED EMERGENCY TELEPHONE.
37. PROVIDE TYPE 2A10BC FIRE EXTINGUISHER IN SURFACE MOUNTED WALL CABINET.



NOTE:
CONTRACTOR SHALL TOUCH UP
PAINT TO MATCH EXISTING ON
EXTERIOR OF BUILDING WHERE
ITEMS HAVE BEEN REMOVED.

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ARCHITECTURE & PLANNING

DRAWING: Demolition Plan and Reference / Dimension / Wall Types Floor Plan

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

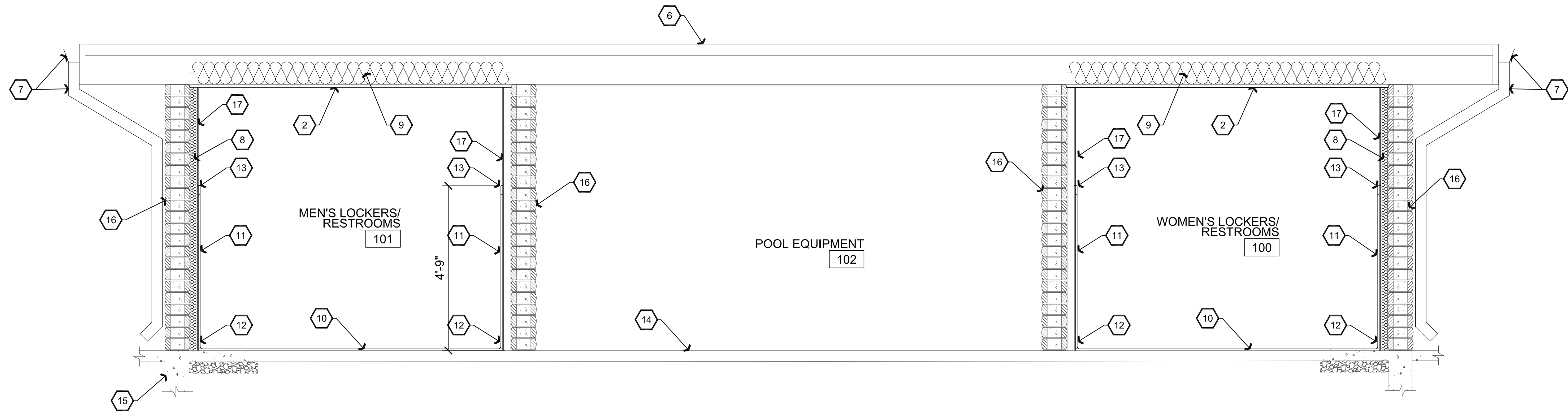
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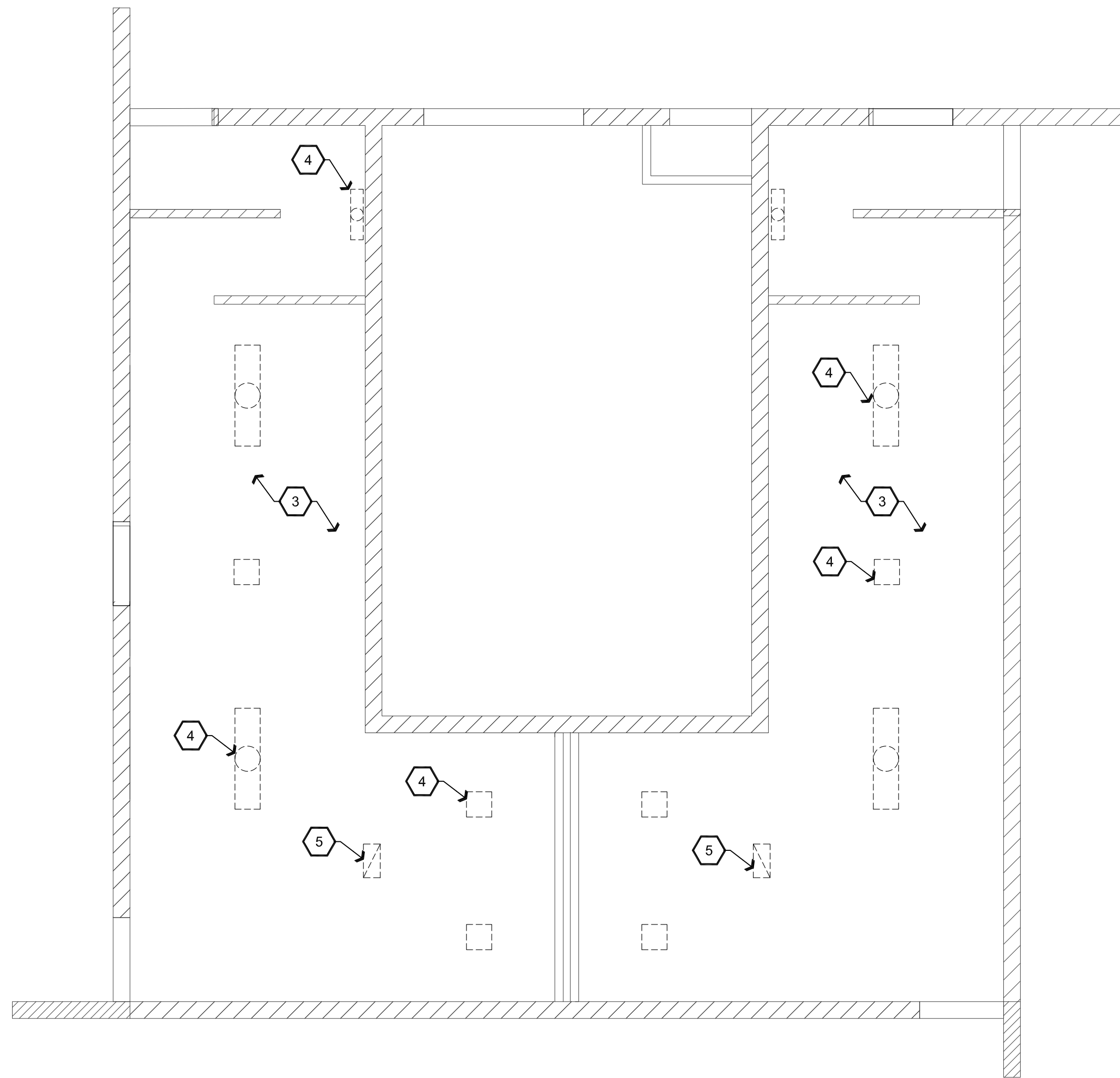


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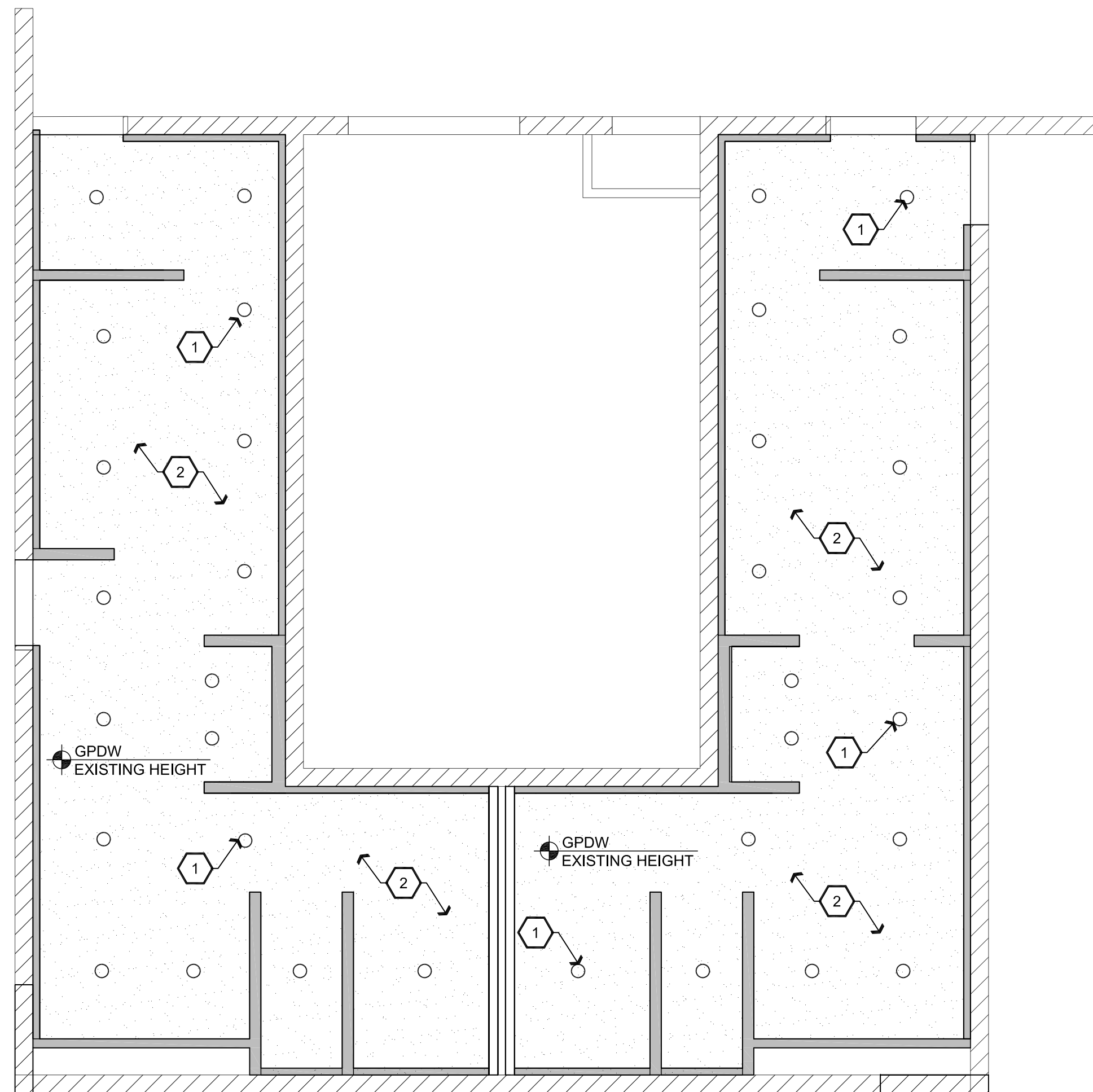
A2 Building Section

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



A1 Demolition Reflected Ceiling Plan

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



B1 Reflected Ceiling Plan

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



Descriptive Keynotes

1. LIGHT FIXTURE(S) SHOWN FOR QUANTITY AND LOCATION ONLY. REFER TO ELECTRICAL PLANS.
2. PROVIDE 5/8" GPDW CEILING.
3. EXISTING EXPOSED ROOF FRAMING.
4. REMOVE LIGHT FIXTURE AND ASSOCIATED WIRING, TYPICAL.
5. REMOVE EXHAUST FAN AND ASSOCIATED DUCTWORK, TYPICAL.
6. EXISTING ROOF.
7. REMOVE AND REPLACE EXISTING ROOF GUTTER AND DOWNSPOUTS. REFER TO ROOF PLAN.
8. PROVIDE R-8 BATT INSULATION.
9. PROVIDE R-30 BATT INSULATION ABOVE CEILING.
10. PROVIDE 2x2 FLOOR TILE. [CT-1]
11. PROVIDE 12" X 24" WALL TILE OVER 5/8" DENSSHIELD. [CT-4]
12. PROVIDE 6" X 12" COVE BASE TILE. [CT-2]
13. PROVIDE 3" BULLNOSE TILE. [CT-3]
14. EXISTING CONCRETE SLAB.
15. EXISTING CONCRETE FOUNDATION.
16. EXISTING CMU WALL.
17. PROVIDE 5/8" TYPE X GPDW .

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ARCHITECTURE & PLANNING

DRAWING: Demolition & Proposed Reflected Ceiling Plan and Building Section

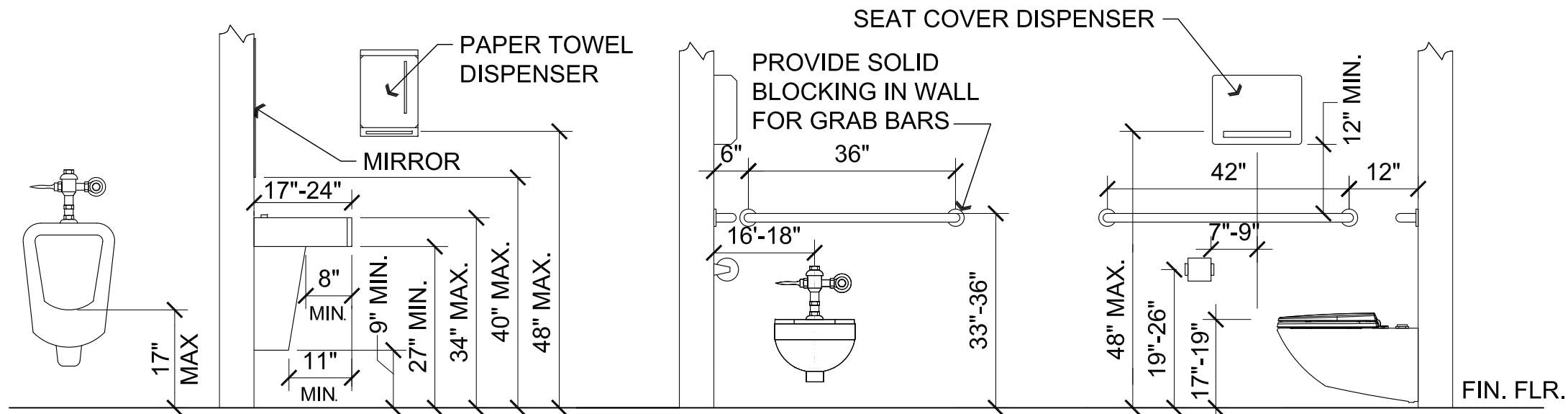
PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

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A2.0

Toilet Accessory Schedule				
FIXTURE	MANUFACTURER	MODEL	COLOR	CONTACT
BABY CHANGING STATION	KOALA KARE	KB200-01	GREY	WWW.KOALABEAR.COM
HAND SOAP DISPENSER				PROVIDED BY OWNER
PAPER TOWEL DISPENSER				PROVIDED BY OWNER
TOILET PAPER DISPENSER				PROVIDED BY OWNER
TOILET SEAT COVER DISPENSER				PROVIDED BY OWNER
SANITARY NAPKIN RECEPTACLE				PROVIDED BY OWNER
GRAB BARS 36" & 42" TOILET	GAMCO	1505x36, 1505x42		WWW.GAMCOUSA.COM
GRAB BARS 24" & 30" SHOWER	GAMCO	1505x24, 1505x30		WWW.GAMCOUSA.COM
FOLDING SHOWER SEAT	GAMCO	5181	IVORY PHENOLIC	WWW.GAMCOUSA.COM
SHOWER CURTAIN WITH GROMETS	GAMCO	100SC 72x72	WHITE	WWW.GAMCOUSA.COM
SHOWER HOOKS	GAMCO	100CHSS		WWW.GAMCOUSA.COM
SHOWER ROD, EXTRA HEAVY DUTY	GAMCO	SR SERIES E		WWW.GAMCOUSA.COM

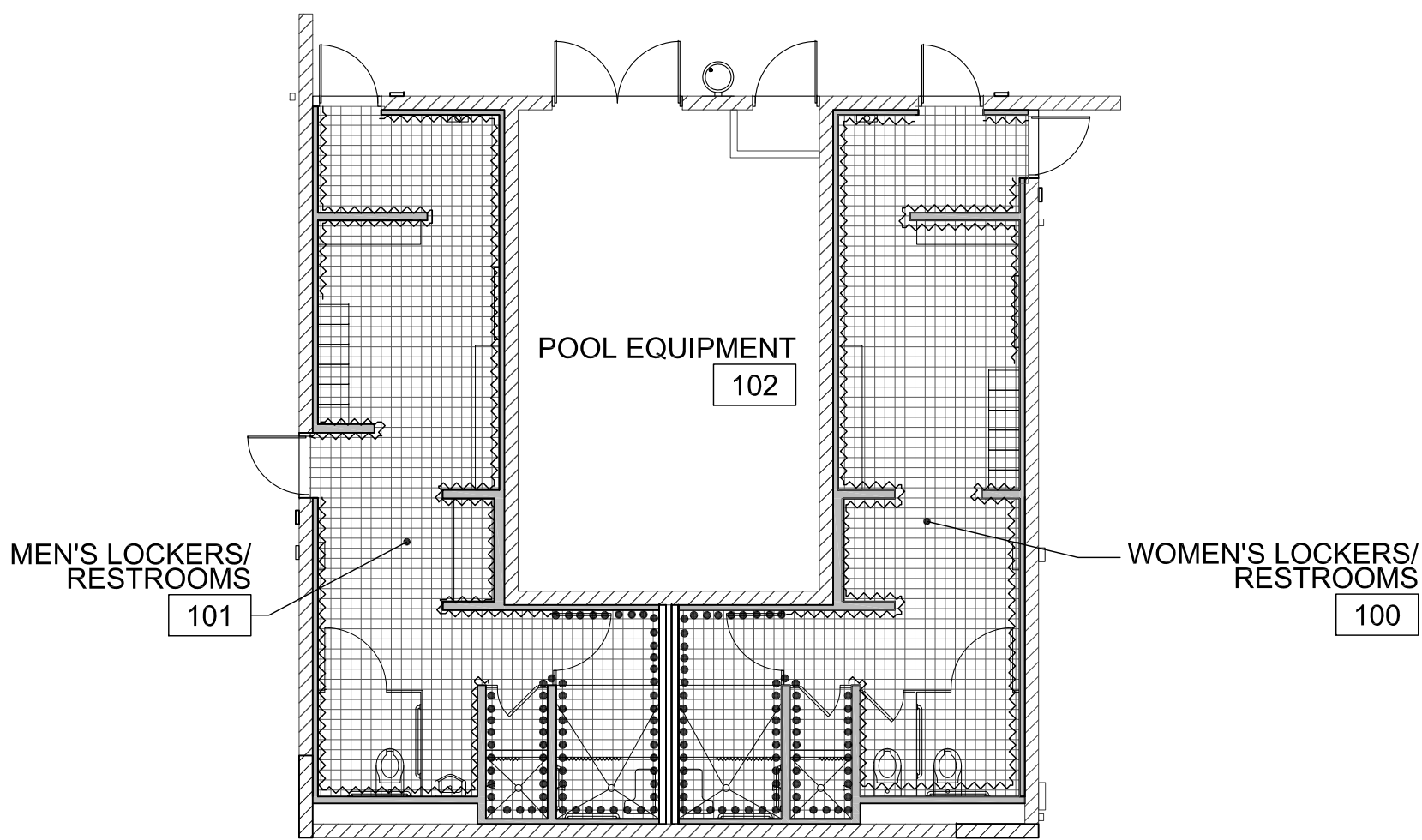


A3 Typical Fixture Mounting Heights for ADA

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

Materials and Finish Schedule (interior and exterior)

CODE	MATERIAL	LOCATION	MANUFACTURER	SPECIFICATION
CT-1	CERAMIC TILE	RESTROOM FLOORS	DALTILE	2x2, FABRIQUE, GRIS LINEN P690, 1/4 TURN, TCNA INSTALLATION METHOD F205-16 IN RESTROOMS AND B420-16 IN SHOWER
CT-2	CERAMIC TILE COVE BASE	RESTROOM WALLS	DALTILE	6x12 COVE BASE, HAUT MONDE, ELITE GREY HM05 LIGHT POLISHED
CT-3	CERAMIC TILE BULLNOSE	RESTROOM WALLS	DALTILE	3x12, BULLNOSE, HAUT MONDE, ELITE GREY HM05 LIGHT POLISHED
CT-4	CERAMIC WALL TILE	RESTROOM WALLS	DALTILE	12x24, HAUT MONDE, ELITE GREY HM05 LIGHT POLISHED, TCNA INSTALLATION METHOD W245-16 AND B420-16 IN SHOWER
CT-5	CERAMIC OUTSIDE CORNER WALL TILE	RESTROOM WALLS	DALTILE	1x6, COVE BASE OUTCORNER, HAUT MONDE, ELITE GREY HM05 LIGHT POLISHED
GR-1	EPOXY GROUT	WALLS AND FLOORS	CUSTOM	NEW TAUPE #185
PT-1	PAINT	INTERIOR CEILINGS & WALLS ABOVE TILE	SHERWIN WILLIAMS	PACER WHITE SW6098
PT-3	PAINT	EXTERIOR TRIM	SHERWIN WILLIAMS	PORTABELLO SW6102 (MATCH EXISTING)
PT-4	PAINT	EXTERIOR OF EXTERIOR DOOR & FRAME	SHERWIN WILLIAMS	PROTÉGÉ BRONZE SW6153
PT-5	PAINT	INTERIOR OF EXTERIOR DOOR & FRAME	SHERWIN WILLIAMS	PACER WHITE SW6098
SS-1	SOLID SURFACE	RESTROOM COUNTERTOPS	LG SURFACES	HI-MACS G042 VENETIAN SAND
TC-1	POWDER COATED STEEL TOILET PARTITIONS	RESTROOMS	METPAR	PLATINUM 715



A1 Finish Plan

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



Room Finish Legend

- PORCELAIN TILE FLOOR
- TILE WAINSCOT TO 4'-9" HIGH
- TILE TO CEILING

- NOTES:
- TILE WAINSCOT IS NOT TO BE APPLIED BEHIND LOCKERS.
 - TILE TO BE FULL HEIGHT TO CEILING IN SHOWERS.
 - EXISTING CONCRETE FLOOR TO BE LEVELED AT ABANDONED FLOOR DRAINS AND THROUGHOUT THE ENTIRE ROOM.

Room Finish Schedule

NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING	HEIGHT
100	WOMEN'S RESTROOM	F1	B1	W1/W2	C1	±7'-8"
101	MEN'S RESTROOM	F1	B1	W1/W2	C1	±7'-8"
102	POOL EQUIPMENT	F2	B2	W3	C2	±7'-8"

FLOOR:

- F1 PORCELAIN TILE ☐ CT-1
F2 EXISTING CONCRETE

BASE:

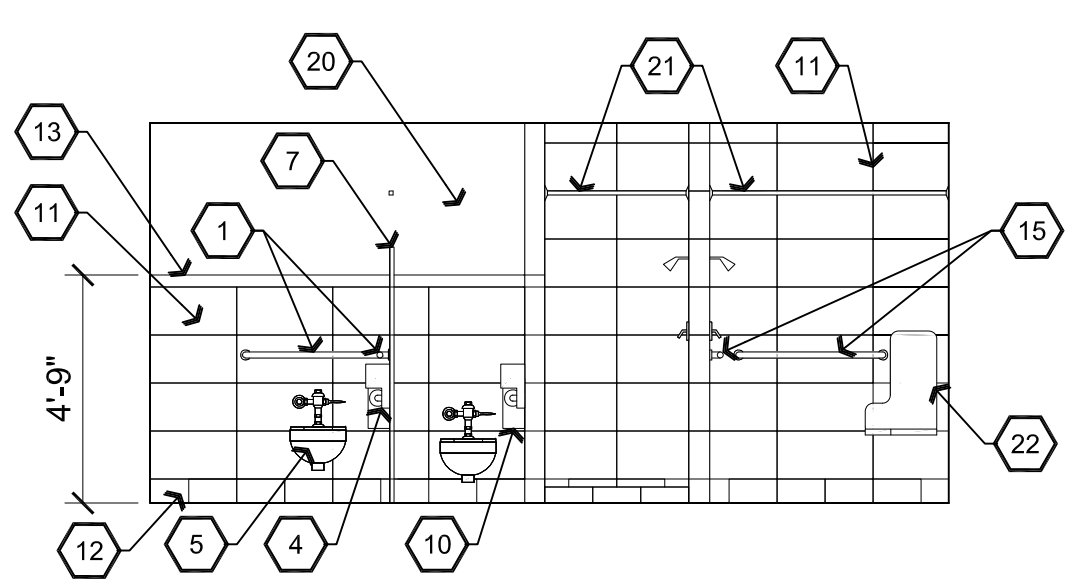
- B1 CERAMIC TILE ☐ CT-2 ☐ CT-5
B2 EXISTING

WALLS:

- W1 CERAMIC TILE ☐ CT-2 ☐ CT-3 ☐ CT-4 ☐ CT-5
W2 PAINTED GPDW ☐ PT-1
W3 EXISTING CMU

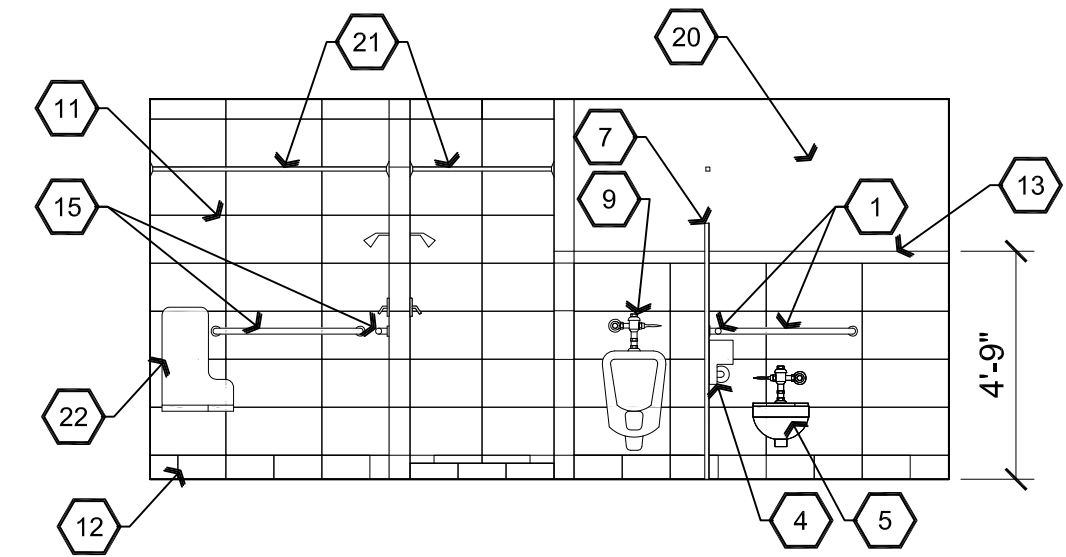
CEILING:

- C1 PAINTED GPDW ☐ PT-1
C2 EXISTING



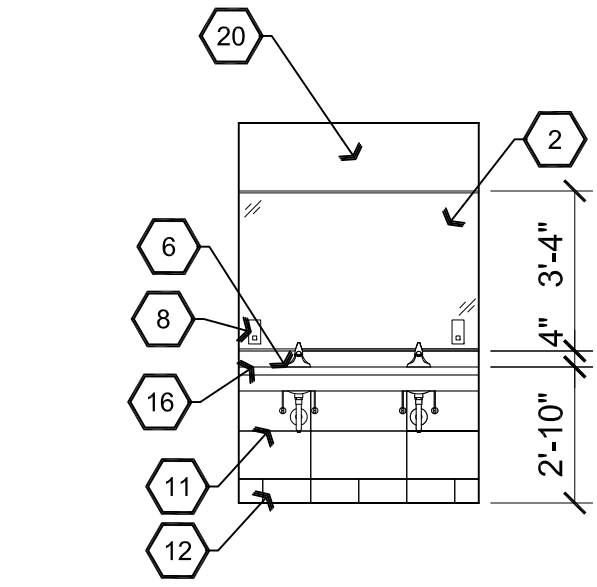
B4 South Elevation (100)

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



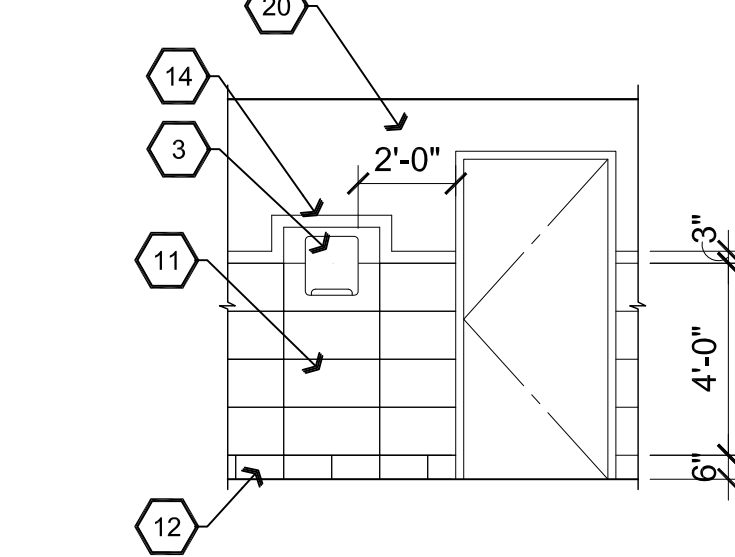
B3 South Elevation (101)

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



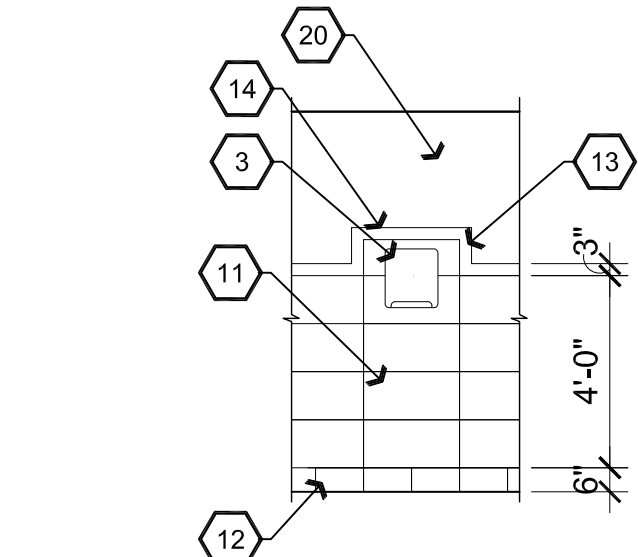
C4 Elevation

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



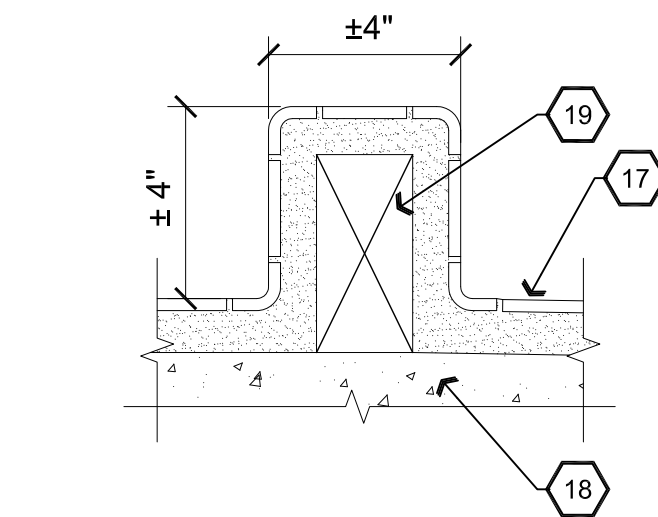
C3 West Elevation (101)

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



C2 East Elevation (100)

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



C1 Shower Curb

Scale: 3"=1'-0"

Descriptive Keynotes

- PROVIDE 1-1/2" DIAMETER GRAB BARS PER A.D.A. REQUIREMENTS, 42" LONG AT SIDE OF WATER CLOSET / 36" LONG AT REAR OF WATER CLOSET. PROVIDE SOLID BLOCKING.
- PROVIDE 1/4" PLATE MIRROR FULL LENGTH OF WALL ABOVE VANITY TOP.
- PAPER TOWEL DISPENSER PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
- TOILET PAPER HOLDER PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
- PROVIDE WALL HUNG WATER CLOSET, REFER TO PLUMBING DRAWINGS.
- PROVIDE SELF-RIMMING LAVATORY IN SOLID SURFACE COUNTER TOP, WITH 4" BACK SPLASH. INSULATE PIPES, REFER TO PLUMBING DRAWINGS.
- PROVIDE HEAD RAIL-BRACED TOILET PARTITION. ☐ TC-1
- SOAP DISPENSER PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
- PROVIDE WALL HUNG URINAL, REFER TO PLUMBING PLANS.
- SANITARY NAPKIN DISPOSAL PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
- PROVIDE 12" X 24" WALL TILE. ☐ CT-4
- PROVIDE 6" X 12" COVE BASE TILE. ☐ CT-2
- PROVIDE 3" BULLNOSE TILE. ☐ CT-3
- MODIFY TILE AT PAPER TOWEL DISPENSER LOCATION, SO THE ENTIRE PAPER TOWEL DISPENSER IS FLUSH WITH THE TILE.
- PROVIDE 1-1/2" DIAMETER GRAB BARS PER A.D.A. REQUIREMENTS, 24" LONG AT SIDE OF SHOWER ENCLOSURE / 30" LONG AT BACK OF SHOWER ENCLOSURE, REFER TO TOILET ACCESSORY SCHEDULE. PROVIDE SOLID BLOCKING.
- PROVIDE SOLID SURFACE COUNTERTOP WITH 4" BACKSPLASH. ☐ SS-1
- THICK SET CERAMIC TILE OVER PAN, MAXIMUM SLOPE 1:50.
- CONCRETE SLAB.
- PRE-MANUFACTURED FLOOR CURB.
- PAINTED GPDW.
- PROVIDE SHOWER ROD AND CURTAIN, REFER TO TOILET ACCESSORY SCHEDULE.
- PROVIDE FOLDING SHOWER SEAT, REFER TO TOILET ACCESSORY SCHEDULE.

REVISIONS	BY

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ARCHITECTURE & PLANNING

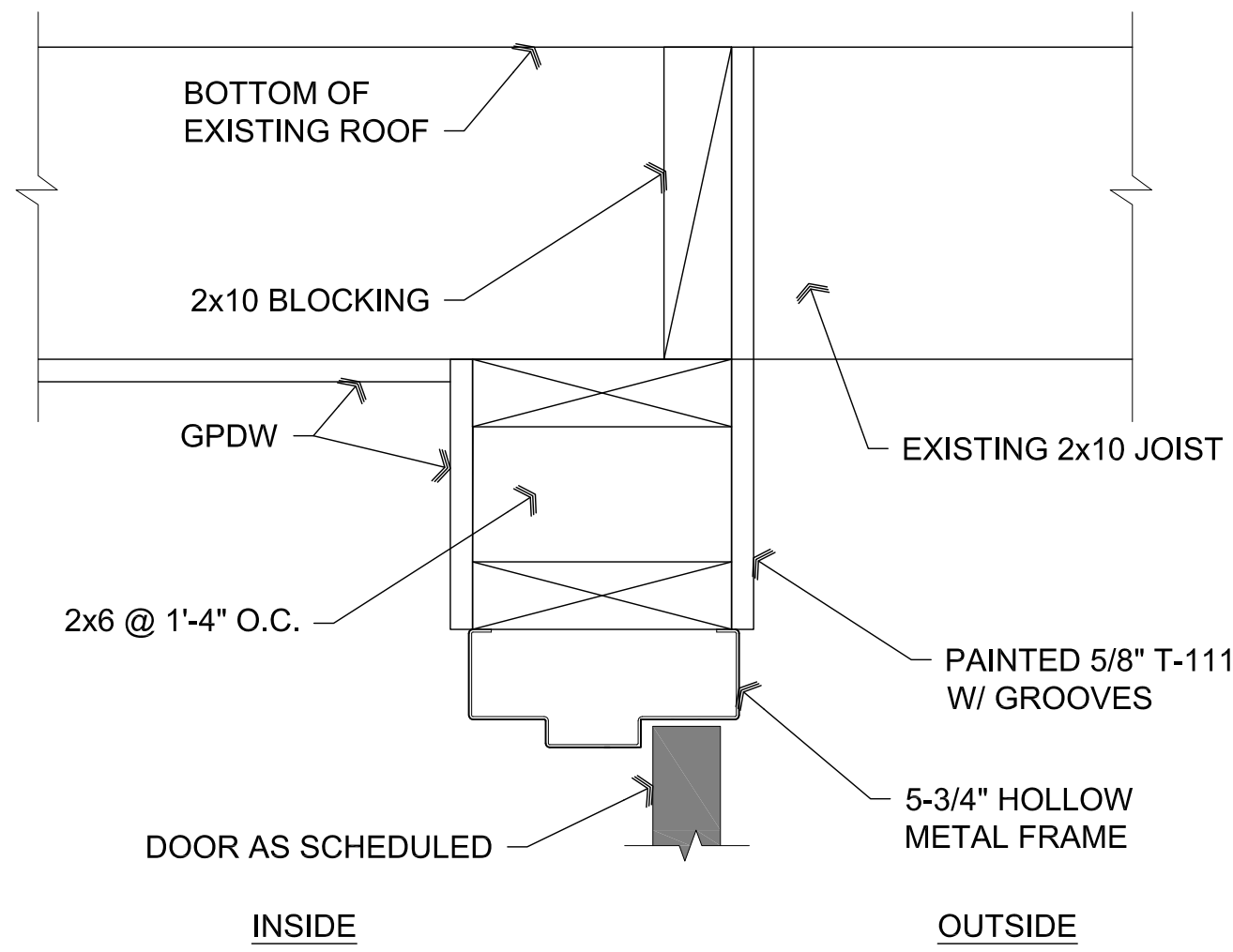
DRAWING: Interior Elevations, Schedules and Finish Plan

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

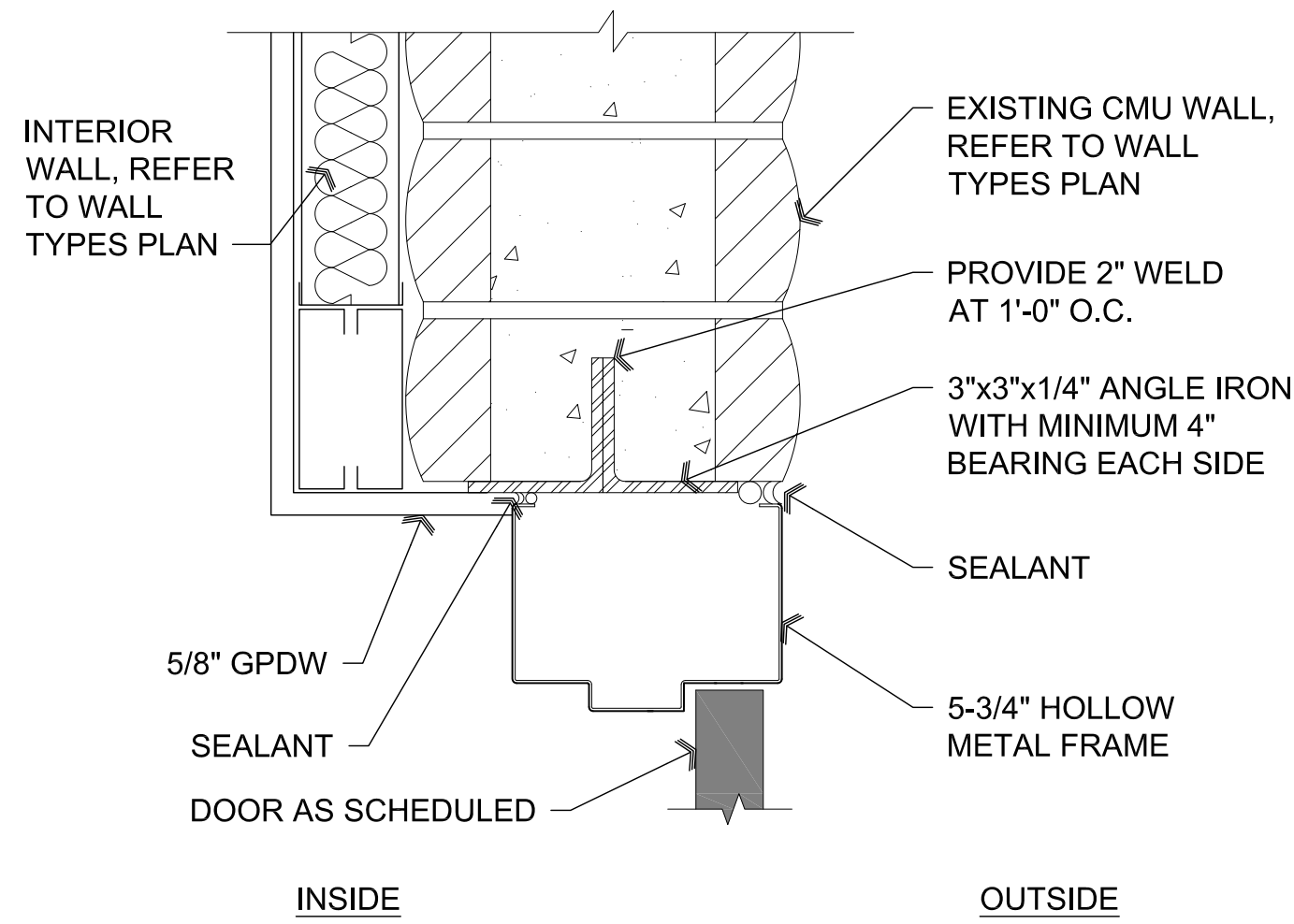
APN:

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE February 13th, 2017
JOB NO. 696
SHEET

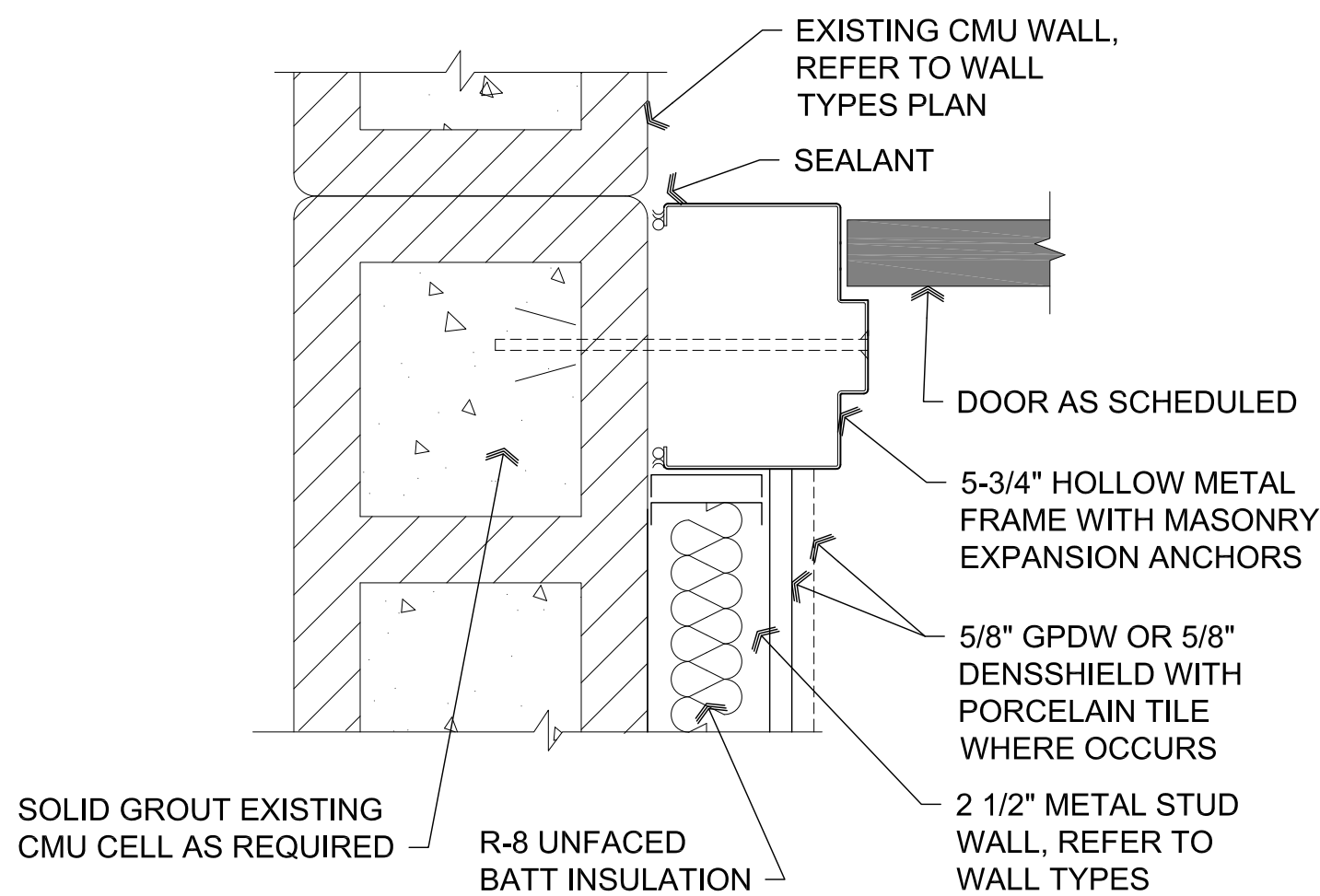
A3.0



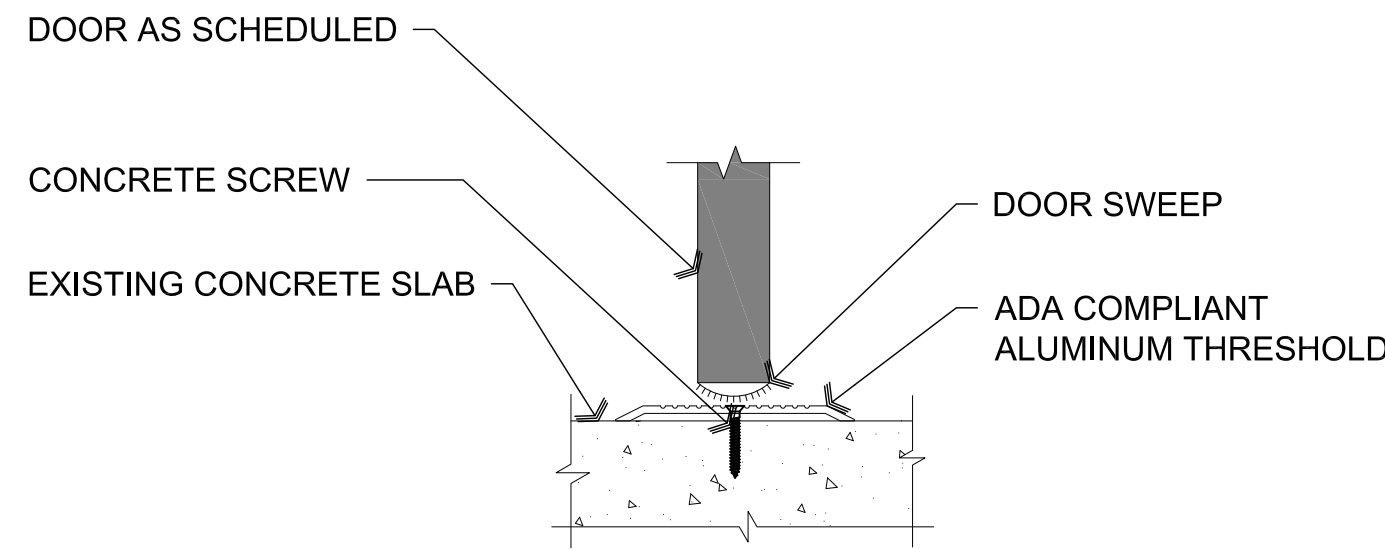
A3 Door Head
SCALE: 3" = 1'-0"



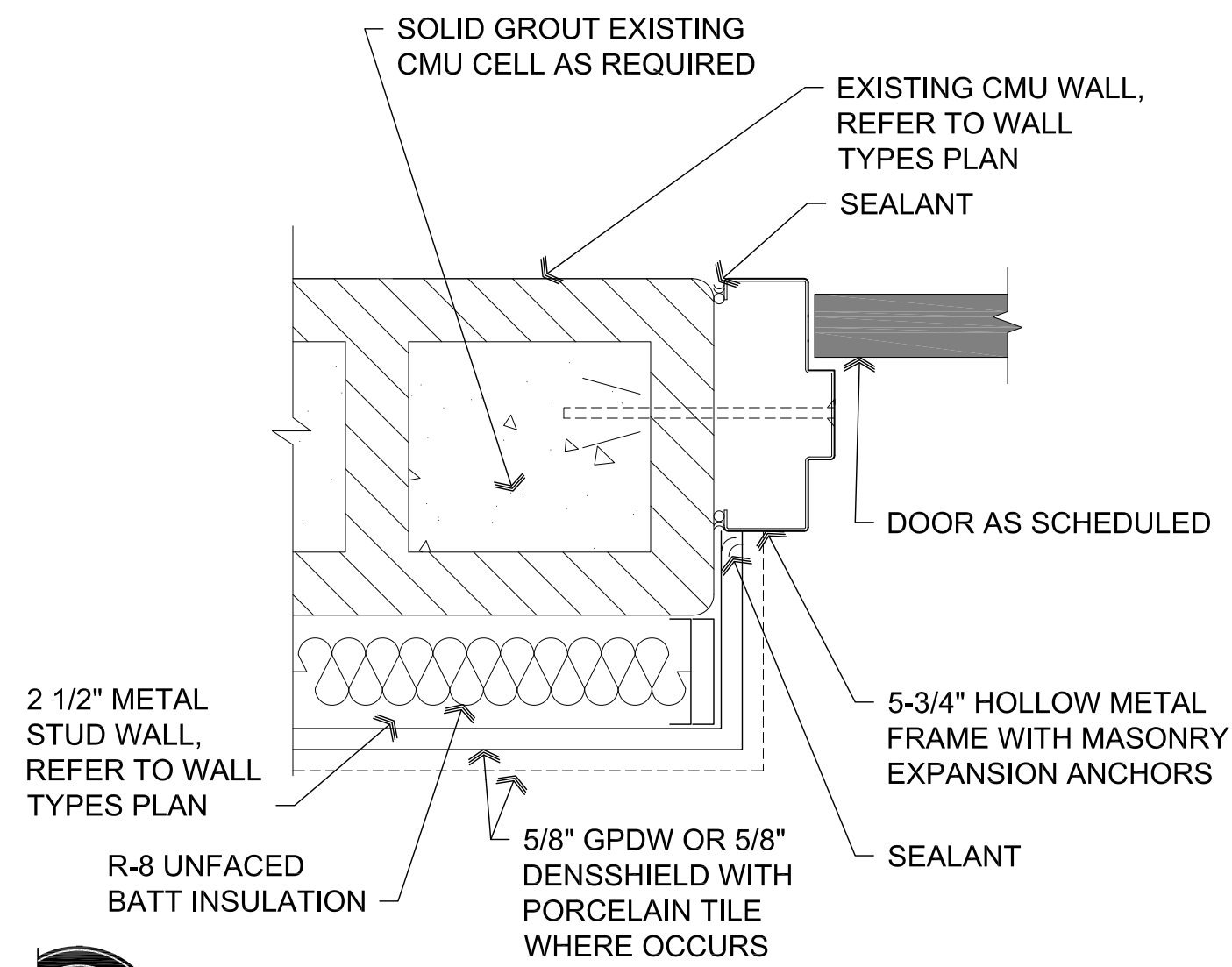
A2 Door Head at CMU Wall
SCALE: 3" = 1'-0"



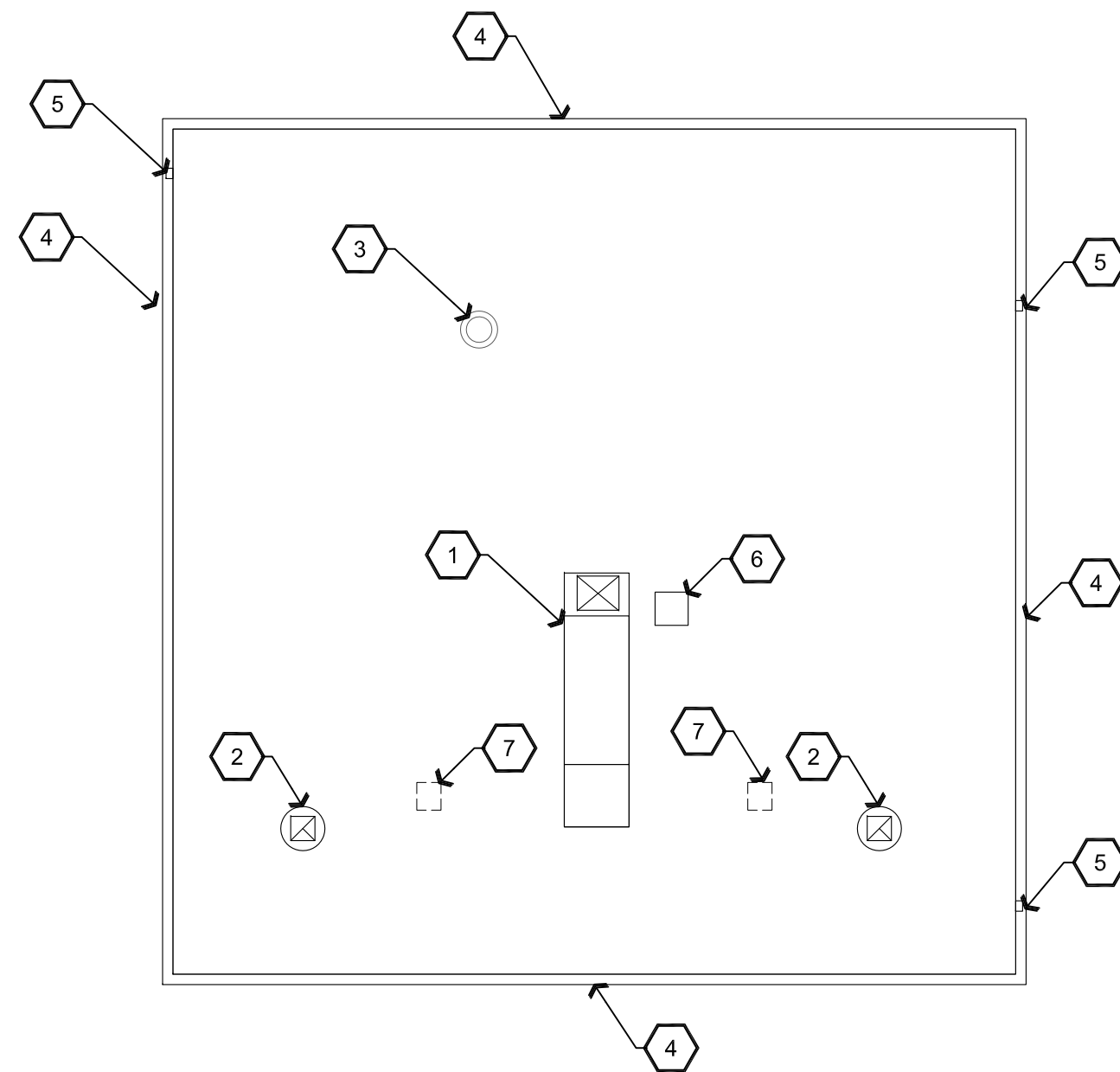
A1 Door Jamb at CMU Wall
SCALE: 3" = 1'-0"



B3 Door Sill
SCALE: 3" = 1'-0"



B2 Door Jamb at CMU Wall
SCALE: 3" = 1'-0"



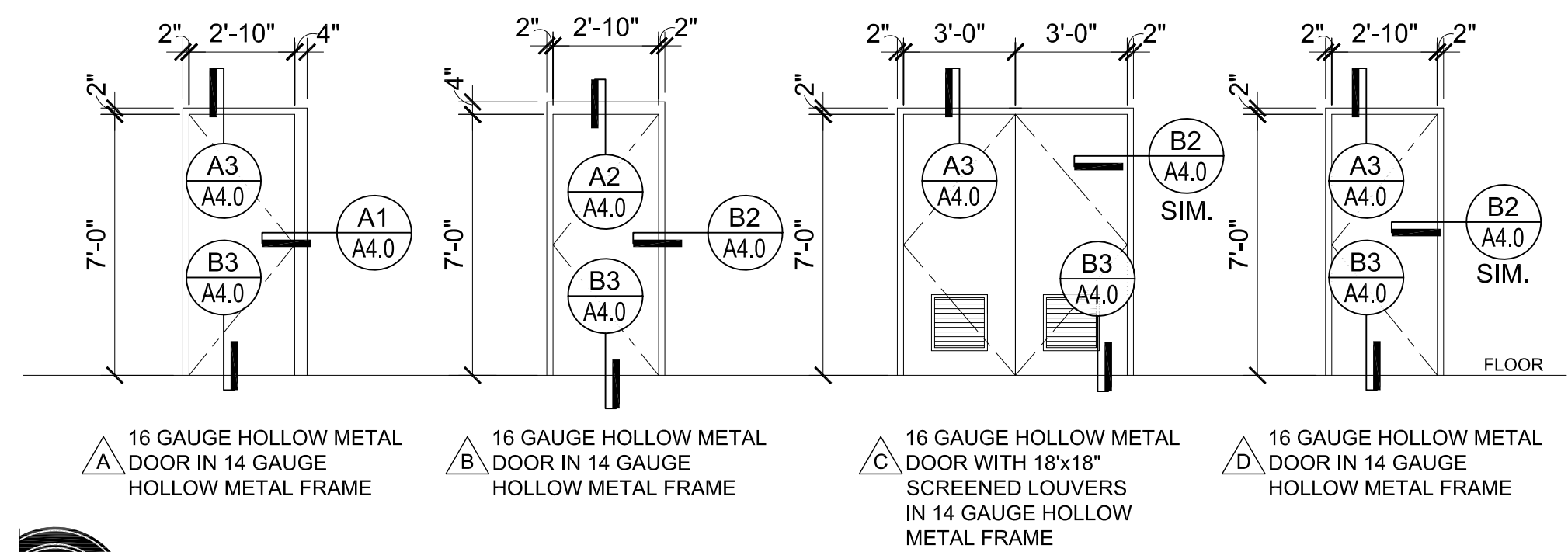
A1 Roof Plan
Scale: 1/8"=1'-0"

Door Schedule

NO.	ROOM NAME	SIZE	TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HARDWARE TYPE
100A	WOMEN	2'-10"x7'-0"	A	HM	PAINT	HM	PAINT	01
100B	WOMEN	2'-10"x7'-0"	B	HM	PAINT	HM	PAINT	01
101A	MEN	2'-10"x7'-0"	B	HM	PAINT	HM	PAINT	01
101B	MEN	2'-10"x7'-0"	A	HM	PAINT	HM	PAINT	01
102A	POOL EQUIPMENT	(2) 3'-0"x7'-0"	C	HM	PAINT	HM	PAINT	02
102B	ELECTRIC	2'-10"x7'-0"	D	HM	PAINT	HM	PAINT	03

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.



C2 Door & Frame Types
Scale: 1/4"=1'-0"

Hardware Schedule

Heading # HW-01

1 SGL	Door 100A	Exterior From Women's 100	RHR	90 Deg
1 SGL	Door 100B	Exterior From Women's 100	RHR	90 Deg
1 SGL	Door 101A	Exterior From Men's 101	LHR	90 Deg
1 SGL	Door 101B	Exterior From Men's 101	RHR	90 Deg

Single Opening 2-10 x 7-0 x 1-3/4 HMD x HMF

Each Door To Receive:

3 EA.	Hinge	FBB168 4-1/2 x 4-1/2 NRP	652	Stanley
1 EA.	Classroom D.B.	83T 7S STK	626	Best
1 EA.	Core	By Owner	626	Best
1 EA.	Closer	4040XP H Cush	689	LCN
1 EA.	Push Plate	8200 4" x 16"	630	Ives
1 EA.	Pull Plate	8302G - 8" 4" x 16"	630	Ives
1 EA.	Kick Plate	8400 10"x 34"	630	Ives
1 EA.	Weather-strip	303AS 36" x 84"	Alum	Pemko
1 EA.	Door Sweep	315CN - 36"	Alum	Pemko
1 EA.	Threshold	171A - 36" MS/ES	Alum	Pemko

Heading # HW-02

1 PR	Door 102A	Exterior From Pool Equip.	RHRA	90 Deg
------	-----------	---------------------------	------	--------

Paired Opening 6-0 x 7-0 x 1-3/4 HMD x HMF

Each Door To Receive:

6 EA.	Hinge	FBB168 4-1/2 x 4-1/2 NRP	652	Stanley
1 EA.	Classroom	9K3 7R 15D S3	626	Best
1 EA.	Core	By Owner	626	Best
2 EA.	Closer	4040XP H Cush	689	LCN
1 SET	Flush bolt	FB51P Constant Latch Top	626	Ives
1 EA.	Dust Proof Strike	DP2	689	Ives
2 EA.	Kick Plate	8400 10"x 34"	630	Ives
1 EA.	Weather-strip	303AS 72" x 84"	Alum	Pemko
2 EA.	Door Sweep	315CN - 36"	Alum	Pemko
1 EA.	Threshold	171A - 72" MS/ES	Alum	Pemko

Heading # HW-03

1 PR	Door 102B	Exterior From Pool Storeroom	LHR	90 Deg
------	-----------	------------------------------	-----	--------

Single Opening 2-10 x 7-0 x 1-3/4 HMD x HMF

Each Door To Receive:

3 EA.	Hinge	FBB168 4-1/2 x 4-1/2 NRP	652	Stanley
1 EA.	Storeroom	9K3 7D 15D S3	626	Best
1 EA.	Core	By Owner	626	Best
1 EA.	Kick Down	1220-5	626	Trimco
1 EA.	Wind Stop	Chain Stop 4048	603	Trimco
1 EA.	Weather-strip	303AS 36" x 84"	Alum	Pemko
1 EA.	Door Sweep	315CN - 36"	Alum	Pemko
1 EA.	Threshold	171A - 36" MS/ES	Alum	Pemko

Descriptive Keynotes

- INSTALL ROOF CURB AT NEW MECHANICAL UNIT. REFER TO MECHANICAL PLANS. REPAIR ROOF AS REQUIRED.
- INSTALL NEW EXHAUST FAN AND ROOF CURB. REFER TO MECHANICAL PLANS. REPAIR ROOF AS REQUIRED.
- EXISTING BOILER FLUE.
- REMOVE AND REPLACE EXISTING GUTTER WITH NEW 6" GALVALUME GUTTER FROM 'ARIZONA SEAMLESS GUTTERS'.
- REMOVE AND REPLACE ALL EXISTING DOWNSPOUTS WITH NEW 3"x4" GALVALUME DOWNSPOUTS FROM 'ARIZONA SEAMLESS GUTTERS'.
- EXISTING ROOF VENT.
- REPAIR ROOF AS REQUIRED WHERE EXHAUST FAN WAS REMOVED.

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

NOTE:
ALL ROOF PENETRATIONS WILL BE MADE BY A CERTIFIED TREMCO ROOF INSTALLER. NO OTHER CONTRACTOR OR ROOFING SYSTEM IS ACCEPTABLE. PROVIDE TREMCO APPROVED ROOF JACK TO ROOFING CONTRACTOR FOR INSTALLATION.
CONTACT TREMCO ROOFING REPRESENTATIVE:
JESSE HARNES
CELL 602-469-7663
EMAIL: JHARNES@TREMCOINC.COM

REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Door Schedule and Details
Roof Plan
PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301
APN:

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: February 13th, 2017
JOB NO.: 696
SHEET:

A4.0

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 Two (2) paper copies 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 and paper copy, 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 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 Owner 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 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.

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 wilful 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-Built's 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-built's 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

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.

06 - WOOD, PLASTICS, COMPOSITES

06 40 00 - ARCHITECTURAL WOODWORK

General The installation of all architectural woodwork and casework shall comply with premium grade per AWI specifications. This section also includes natural stone, engineered stone, recycled glass and all materials associated with millwork.

Custom Casework Restroom counter tops for lavatories will be composite material open on bottom with self-rimming sinks. Sheet mirror mounted full length of wall above top. Top manufacturer to cut lavatory openings in top to dimensions supplied by the plumber. Refer to materials & finish schedule for finishes.

08 - OPENINGS

08 11 00 - METAL DOORS AND FRAMES

General Provide hollow metal doors and frames as shown on the drawings per steel door institute standards.

08 70 00 - HARDWARE

General Refer to hardware schedule.

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 Hawk and Trowel.

DensShield 5/8" thick DensShield - Install In accordance with ASTM C840, manufacturer's recommendations and TCNA Handbook for Ceramic Tile Installation.

09 30 00 - TILE

General Install ceramic tile as indicated on the drawings and in strict accordance with manufacturer's recommended instructions and the TCNA

09 90 00 - PAINTING

General Painting products shall be specified from Sherwin Williams. Restrooms, doors, and door trim shall be Semi-gloss. All wet areas to have semi-gloss mildew resistant paint.

Scope of Work Items included, but not limited to interior conditions:

1. Refer to materials and finish schedule.
2. New drywall partitions and ceilings.
3. Hollow metal doors and frm frames.
4. Access doors and panels, electric panels, exposed cable trays, miscellaneous trim and surfaces not prefinished or excluded specifically.

Number of coats listed below are minimum number. Apply as many coats as necessary to obtain full coverage and uniform appearance.

Paint Schedule Interior drywall 1 coat B28W02600 - ProMar® 200 Zero VOC Interior Latex Primer White 2 coats K46W00151 - Pro Industrial PreCatalyzed Waterbased Semi-Gloss Epoxy Extra White

Gypsum ceilings 1 coat B28W02600 - ProMar® 200 Zero VOC Interior Latex Primer White 2 coats K46W00151 - Pro Industrial PreCatalyzed Waterbased Semi-Gloss Epoxy Extra White

Hollow metal doors, finish - semi gloss Frames and other ferrous materials 1 coat B66W00310 - Pro Industrial Pro-Cryl® Universal Acrylic Primer Off White 2nd-3rd coats K46W00151 - Pro Industrial PreCatalyzed Waterbased Semi-Gloss Epoxy Extra White

Refer to materials and finish schedule for color and location.

REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Specifications

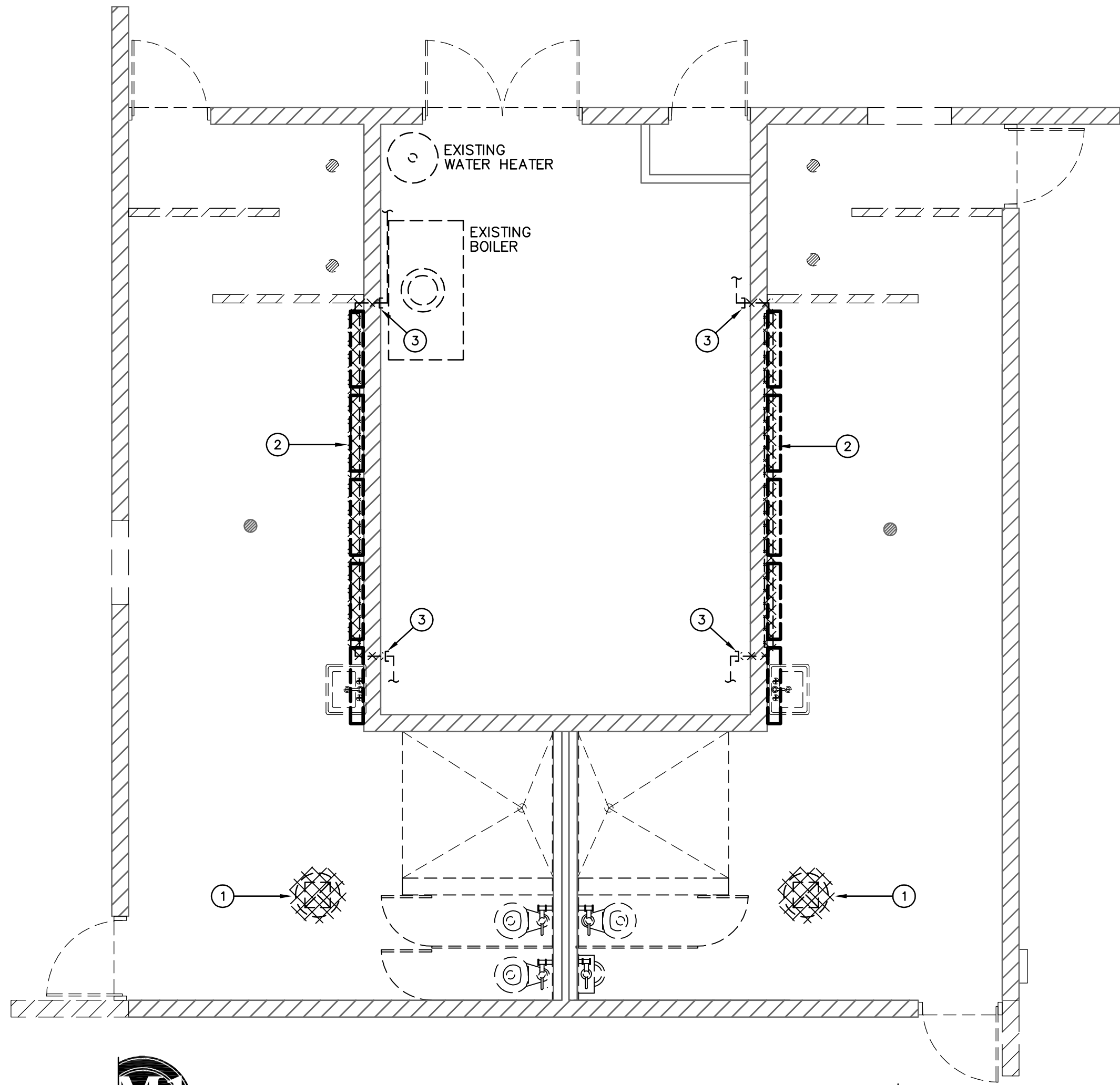
PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

APN:

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE February 13th, 2017
JOB NO. 696
SHEET

A5.0

Dec 12, 2016 - 9:19am



Mechanical Demo Plan

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



GENERAL REQUIREMENTS

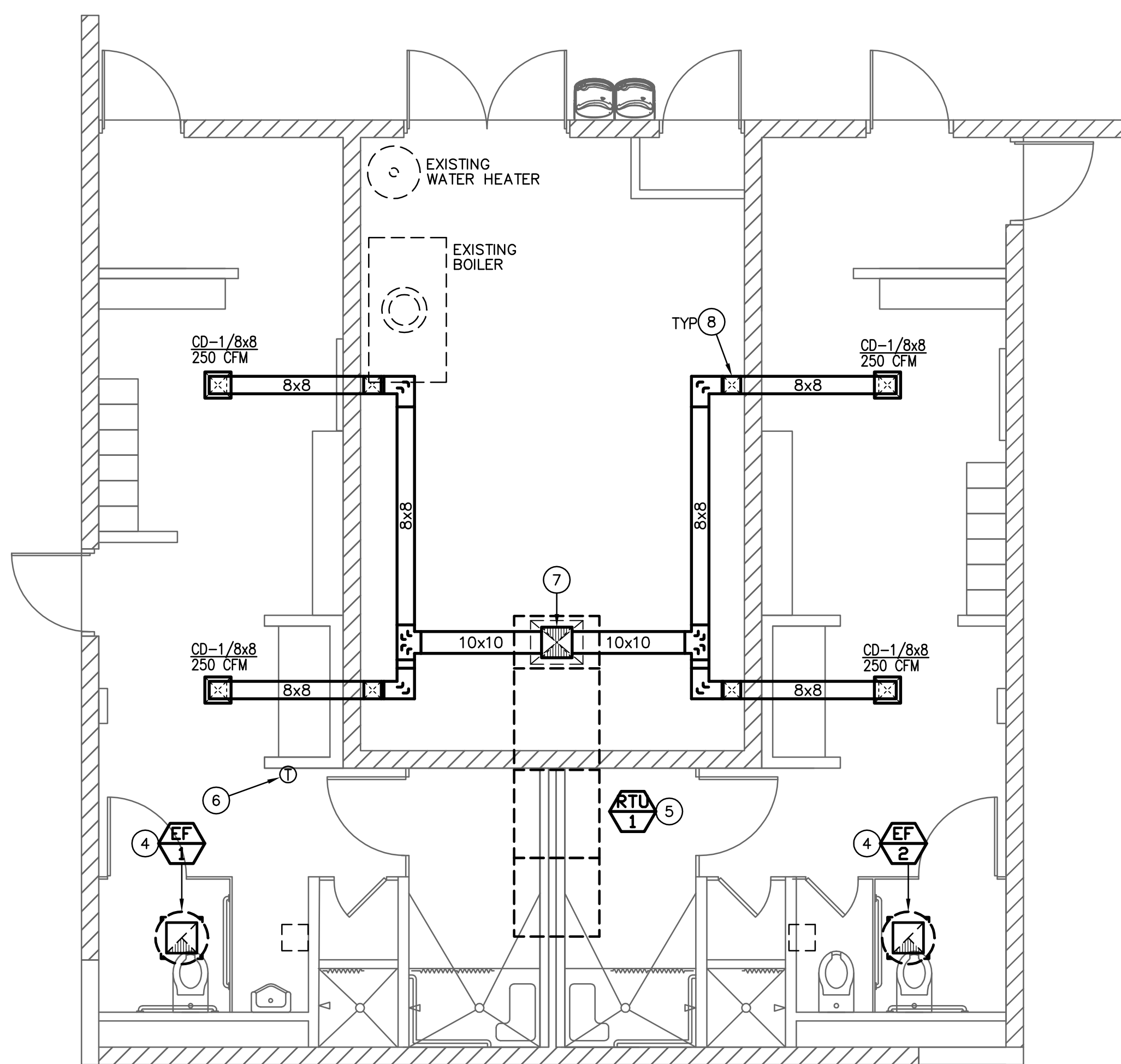
- 1 - PROVIDE CLEARANCES AS PER MANUFACTURER'S RECOMMENDATIONS.
- 2 - PITCH DRAIN LINES 1/8" PER 12" RUN TOWARDS TERMINATION.
- 3 - PROVIDE EQUIPMENT IDENTIFICATION PER IMC 2012.
- 4 - THE CONTRACTOR SHALL DO ALL NECESSARY CUTTING OF WALLS AND CEILING. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT PERMISSION FROM THE ARCHITECT. PATCH AROUND ALL OPENINGS TO MATCH EXISTING CONSTRUCTION.
- 5 - PRIOR TO THE CONTRACTOR ORDERING OR SETTING ANY AIR CONDITIONING EQUIPMENT, DUCTWORK, OR AIR DEVICE, HE SHALL VERIFY LOCATION OF PLACEMENT WITH ARCHITECTURAL DRAWINGS AND CONFIRM WEIGHTS, DISCHARGE CONFIGURATION, SIZES, ELECTRICAL CHARACTERISTICS AND ANY OTHER DIMENSIONAL DATA WHICH MIGHT AFFECT THE SUCCESSFUL INSTALLATION OF THE EQUIPMENT.
- 6 - 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.
- 7 - UPON COMPLETION AND TESTING OF AIR CONDITIONING EQUIPMENT, THE CONTRACTOR SHALL REPLACE ALL CONSTRUCTION AIR FILTERS WITH NEW FILTERS OF THE SIZED SPECIFIED BY THE MANUFACTURER.

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 ALL FINAL THERMOSTAT LOCATIONS WITH OWNER & ARCHITECT PRIOR TO MOUNTING.
- 5 - ALL THERMOSTATS ARE TO BE MOUNTED AT A HEIGHT OF 48" ABOVE THE FLOOR LEVEL FOR DISABLED ACCESS.

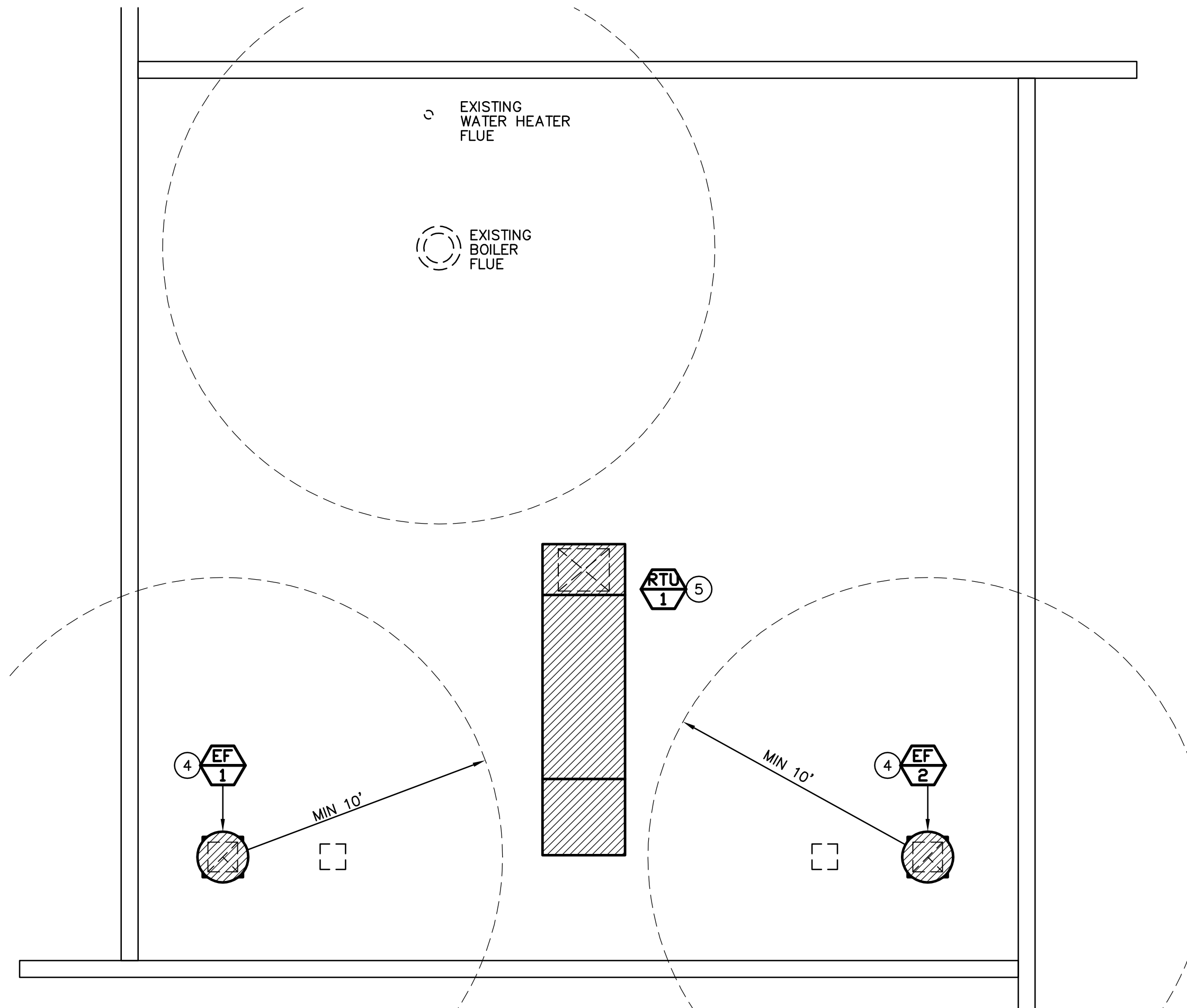
DUCT CONSTRUCTION NOTES

- 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 6'-0"
- 3 - ALL DUCTWORK JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTION ON DUCTWORK SHALL BE LISTED AND LABELED BY UL 181A OR 181B TAPES AND MASTICS.
- 4 - PROVIDE RADIUS ELBOWS, TURNING VANES, AND SPLITTER DAMPERS IN BRANCHES AND EXTRACTORS WHERE APPLICABLE.
- 5 - TURNING VANES SHALL BE INSTALLED IN ALL MITERED ELBOWS.
- 6 - HANGERS FOR SHEET METAL DUCTWORK SHALL BE INSTALLED AS REQUIRED BY 2012 IMC.



Mechanical Plan

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



Mechanical Roof Plan

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



KEYNOTES

- 1 REMOVE EXISTING ROOF MOUNTED EXHAUST FAN AND PATCH ROOF OPENING.
- 2 REMOVE EXISTING HOT WATER BASE BOARD HEATERS.
- 3 REMOVE HEATING WATER PIPING SERVING REMOVED BASE BOARD HEATERS AND CAP PIPING TO REMAIN.
- 4 ROOF MOUNTED CENTRIFUGAL EXHAUST FAN ON NEW 8" CURB.
- 5 ROOF MOUNTED MAKE UP AIR UNIT WITH 2-STAGE HEATING AND EVAPORATIVE COOLING. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ROOF PLAN. COORDINATE WATER AND DRAIN PIPING WITH PLUMBING CONTRACTOR.
- 6 PROGRAMMABLE T-STAT, WITH LOCKABLE COVER MOUNTED 48" ABOVE FLOOR
- 7 14x14 MAKE-UP AIR DUCT DOWN THROUGH ROOF AND ROUTED AS HIGH AS POSSIBLE IN MECHANICAL ROOM. COORDINATE LOCATION OF DUCTWORK WITH EXISTING LIGHTING. CONFIRM WITH ARCHITECT.
- 8 8x8 TO RISE UP TO RUN BETWEEN JOISTS AND ROUTED ABOVE NEW CEILING IN LOCKER ROOM TO SUPPLY DIFFUSER.



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16103

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ARCHITECTURE & PLANNING

DRAWING: Mechanical Plan

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

APN:

DRAWN BY

CHECKED BY

DATE

JOB NO.
696

SHEET

M1.1

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 APPROVAL 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:

- APPLICABLE CITY, COUNTY, AND STATE MECHANICAL, ELECTRICAL, GAS, PLUMBING, HEALTH AND SANITARY CODES, LAWS AND ORDINANCES.
- 2012 INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS.

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 MATERIAL AND WORKMANSHIP, AND TO PERFORM SATISFACTORILY UNDER ALL CONDITIONS OF LOAD OR SERVICE. THE GUARANTEES PROVIDE THAT ANY ADDITIONAL CONTROLS, PROTECTIVE DEVICES, OR EQUIPMENT BE PROVIDED AS NECESSARY TO MAKE THE SYSTEM OF EQUIPMENT OPERATE SATISFACTORILY, AND THAT ANY FAULTY MATERIALS OR WORKMANSHIP BE REPLACED OR REPAIRED. ON FAILURE OF GUARANTOR TO DO THE ABOVE AFTER WRITTEN NOTICE FROM OWNER, THE OWNER MAY HAVE THE WORK DOWN AT THE COST OF GUARANTOR. LOSS OF REFRIGERANT IS CONSIDERED A DEFECT IN WORKMANSHIP AND/OR EQUIPMENT, TO BE CORRECTED AS REQUIRED AT NO EXTRA COST TO THE OWNER.

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

AIR CONDITIONING, HEATING AND VENTILATING

SCOPE

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

VERIFICATION OF DIMENSIONS:

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

CUTTING AND PATCHING:

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

REGULATIONS, PERMITS & INSPECTIONS

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

DUCTWORK

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

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-5 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.

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.

WRAPPED DUCTWORK - FIBER GLASS BLANKET WITH FRK VAPOR RETARDING FACING. 1 1/2 PCF, 2" THICK, WITH A MINIMUM INSTALLED "R-VALUE" OF 6.0. (ASSUMES 25% COMPRESSION)

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.

FURNACE AND CONDENSERS: CARRIER, TRANE, YORK.
MAKE UP AIR UNIT: MODINE.
GRILLES, REGISTERS, DIFFUSERS: KRUEGER, METAL-AIRE, TITUS, FLEXIBLE DUCT: GENFLEX, THERMAFLEX, OR EQUIVALENT.
EXHAUST FANS: GREENHECK, LOREN COOK AND PENN VENTILATOR.
DUCT AND PIPE INSULATION: KNAUF, OWENS-CORNING, MANVILLE, CERTAIN-TEED, PPG.

EXHAUST FANS

SIZE, CAPACITIES, AND TYPE AS INDICATED ON THE DRAWINGS. FURNISH COMPLETE WITH FACTORY CURBS/ROOF CAPS, BAROMETRIC DAMPER, SPEED CONTROL, DISCONNECT, STARTER (IF REQUIRED), AND BIRDSHIELD. FURNISH ROOF MOUNTED FANS WITH INSULATED ROOF CURB; PROVIDE CEILING MOUNTED FANS WITH WALL/ROOF CAP.

AIR SYSTEM BALANCING

AIR SYSTEMS AND AIR DISTRIBUTION TEST AND BALANCE: THE CONTRACTOR SHALL INCLUDE IN HIS BID TESTING AND AIR BALANCE OF AIR MOVING EQUIPMENT AND AIR DISTRIBUTING OR EXHAUSTING SYSTEMS AS HEREIN SPECIFIED. PROVIDE CERTIFIED REPORT TO ARCHITECT.

MAKE UP AIR UNIT SCHEDULE

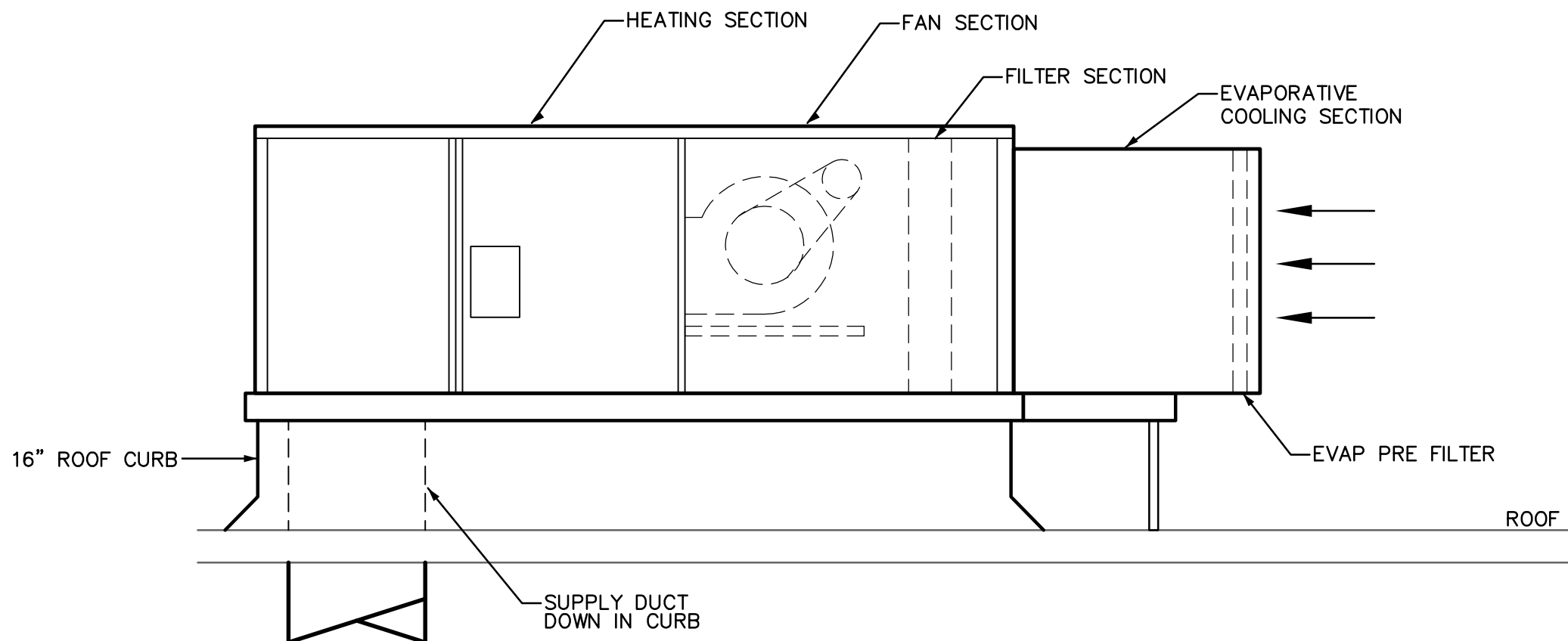
MARK	MANUFACTURER	MODEL	CFM	EXT. S.P.	HP	EVAP MEDIA	HEATING					ELECTRIC	WT. (LBS)	REMARKS
							MBH IN	MBH OUT	%	STAGES	TYPE			
1	MODINE	HDP-125	1,000	0.5	1/2	12" CELDEK	125	100	80%	2	N. GAS	240/1	1,152	①②③④⑤⑥⑦⑧
①	PROVIDE EVAP COOLING SECTION WITH 1" PRE-FILTERS.					⑤	PROVIDE WITH PROGRAMMABLE THERMOSTAT.							
②	PROVIDE WITH 2-STAGE OR MODULATING HEATING.					⑥	PROVIDE WITH UNIT MOUNTED DISCONNECT SWITCH.							
③	HEAT EXCHANGER SHALL BE 409 STAINLESS STEEL.					⑦	PROVIDE WITH 2" MERV 8 FILTERS.							
④	PROVIDE 16" ROOF CURB.					⑧	EVAP SECTION SHALL HAVE AUTOMATIC FILL AND DRAIN KIT.							

EXHAUST FAN SCHEDULE

MARK	MOUNTING /LOCATION	MANUFACTURER	MODEL	CFM	E.S.P.	MOTOR		BAROM. DAMPER	WIRE SCREEN	DRIVE	REMARKS
						H.P.	V/PH				
EF-1	ROOF CENTRIFUGAL	GREENHECK	GB-101	500	0.25	1/4	120/1	YES	NO	BELT	①②③
EF-2	ROOF CENTRIFUGAL	GREENHECK	GB-101	500	0.25	1/4	120/1	YES	NO	BELT	①②③
①	PROVIDE WITH 8" ROOF CURB AND DISCONNECT.										
②	UNIT SHALL OPERATE CONTINUOUSLY.										
③	INTERLOCK WITH MAKE UP AIR UNIT.										

GRILLES/REGISTERS/DIFFUSERS SCHEDULE

MARK	DESCRIPTION	MODULE SIZE	TYPE	OBD	FRAME ①	MATERIAL	FINISH	MANUF.	MODEL	REMARKS
CD-1	SUPPLY DIFFUSER	12" x 12"	SQUARE CEILING	YES	SURFACE	STEEL	WHITE	TITUS	TDC	8Ø NECK
①	PROVIDE FRAME STYLE TO SUIT CEILING TYPE. REFER TO ARCHITECTURAL DRAWINGS.									

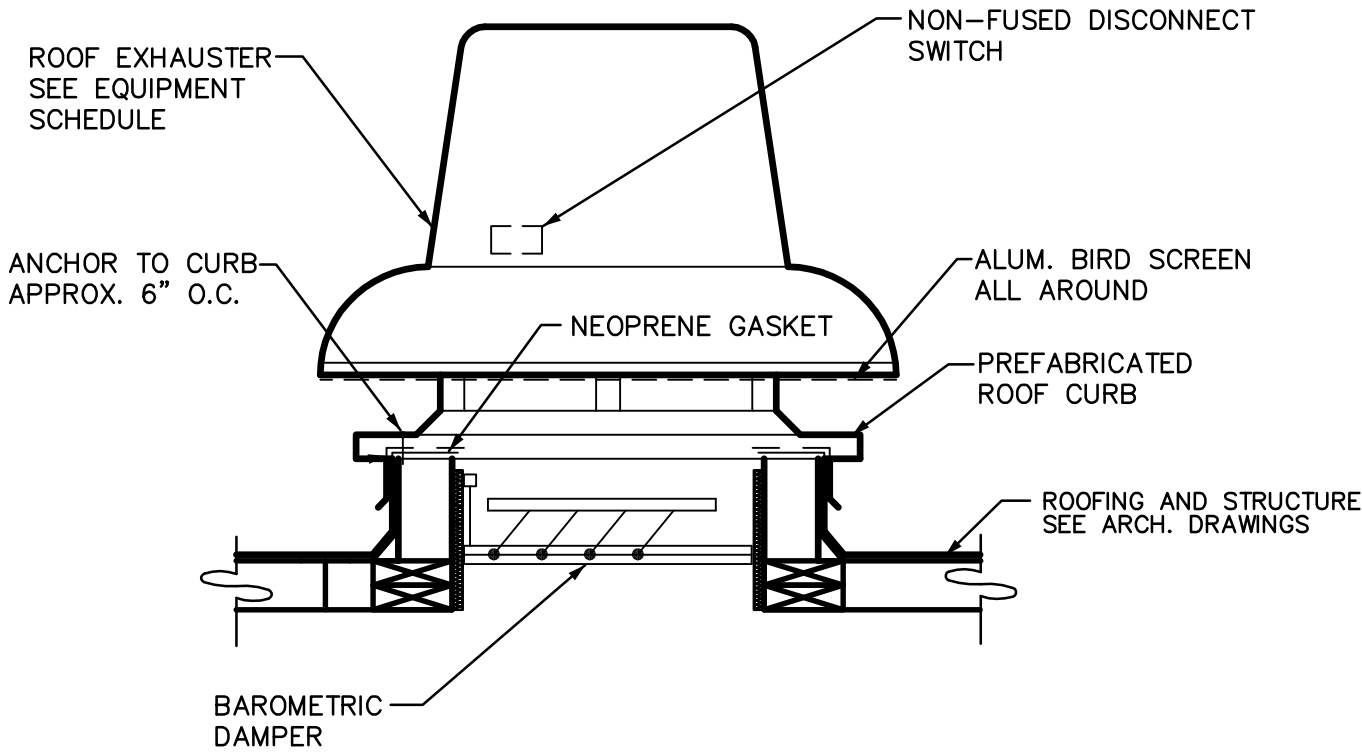


MAKE UP AIR UNIT DETAIL

NOT TO SCALE

1

M2.1



EXHAUST FAN DETAIL

NOT TO SCALE

2

M2.1

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ARCHITECTURE & PLANNING

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PROJECT: ERAU Building 69 Remodel
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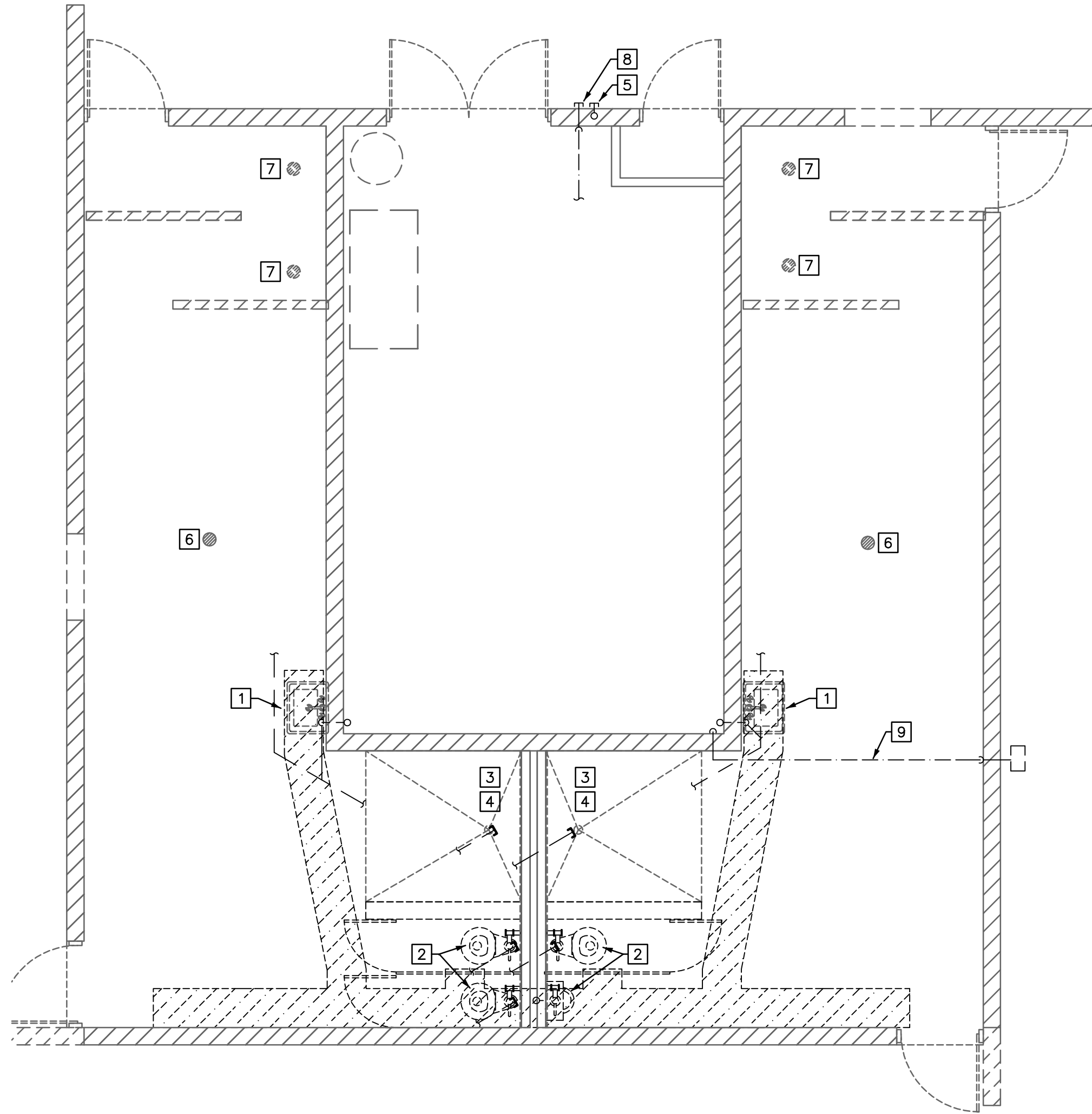
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REVISIONS

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William Mark Odehl
Expires 3/31/17



Plumbing Demolition Plan

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

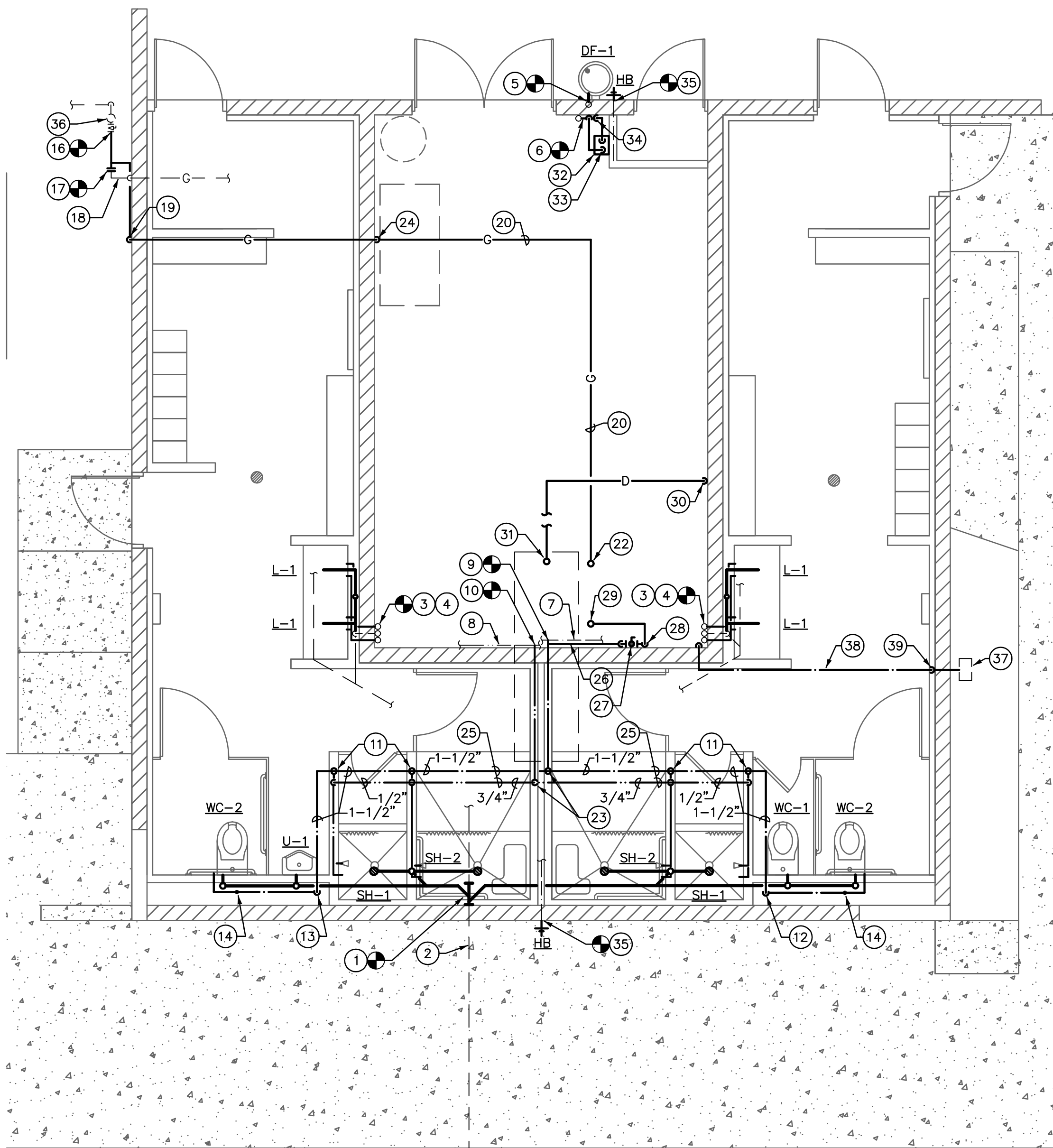


DEMOLITION KEYNOTES

- 1 REMOVE EXISTING FIXTURE & FAUCET. EXISTING WASTE & VENT & H & CW PIPING TO REMAIN AS POINTS OF CONNECTION FOR NEW LAVATORY.
- 2 REMOVE EXISTING FIXTURES & FLUSH VALVES. CAP WASTE PIPING BELOW FLOOR (FOR WC'S & URINAL). REMOVE ALL UNUSED SUPPLY PIPING. NOTE: EXISTING CW SUPPLY TO HOSE BIBB TO REMAIN ACTIVE.
- 3 REMOVE EXISTING SHOWERHEADS & SHOWER VALVES. REMOVE ALL UNUSED PIPING.
- 4 REMOVE EXISTING SHOWER DRAINS & CAP WASTE PIPING BELOW FLOOR. REMOVE ALL UNUSED SUPPLY PIPING.
- 5 EXISTING WASTE PIPING FROM PREVIOUSLY DEMO'D. DRINKING FOUNTAIN TO REMAIN AS POINT OF CONNECTION FOR NEW DRINKING FOUNTAIN.
- 6 EXISTING FLOOR DRAIN TO REMAIN.
- 7 EXISTING FLOOR DRAIN TO BE ABANDONED- REMOVE GRATE, CUT & CAP TRAP ARM BELOW SLAB.
- 8 REMOVE EXISTING CW SUPPLY TO PREVIOUSLY DEMO'D. DRINKING FOUNTAIN TO INSIDE WALL (TO BE USED AS POINT OF CONNECTION FOR NEW REMOTE CHILLER).
- 9 REMOVE EXISTING PVC WATER LINE & CONTROL WIRES FROM WATER SOURCE TO LANDSCAPE IRRIGATION BACKFLOW PREVENTION DEVICE AT BUILDING EXTERIOR.

PLUMBING GENERAL NOTES:

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



Plumbing Floor Plan

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



NOTE ON SLOPE OF WASTE PIPING:

SLOPE ALL HORIZONTAL WASTE PIPING AS FOLLOWS:

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

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

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

PLUMBING NOTE:

ALL PLUMBING FIXTURES SHALL BE OF A LOW-FLOW DESIGN WHICH LIMITS THE WATER FLOW NOT TO EXCEED THE FOLLOWING:

WATER CLOSETS: 1.6 GALLONS PER FLUSH
URINALS: 1.0 GALLONS PER FLUSH
LAV FAUCETS: .5 GALLONS PER MINUTE
SHOWERHEADS: 2.5 GALLONS PER MINUTE

PLUMBING LEGEND

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

KEYNOTES

- 1 CONNECT NEW 4" WASTE TO EXISTING WASTE.
- 2 ASSUMED LOCATION FOR EXISTING 4" WASTE FROM ORIGINAL BUILDING DRAWINGS. FIELD VERIFY EXACT SIZE, LOCATION, INVERT & FLOW DIRECTION PRIOR TO CONSTRUCTION.
- 3 CONNECT NEW LAVATORY TRAP ARM TO EXISTING WASTE FROM DEMO'D. LAV; REWORK PIPING AS REQUIRED FOR NEW FIXTURE INSTALLATION.
- 4 ROUTE NEW LAV WASTE & VENT IN WALL ABOVE FLOOR TO CONNECT TO EXIST. WASTE & VENT FROM DEMO'D. LAV. REWORK PIPING AS REQUIRED FOR NEW FIXTURE INSTALLATION.
- 5 CONNECT NEW DRINKING FOUNTAIN TRAP ARM TO EXIST. WASTE FROM DEMO'D. DRINKING FOUNTAIN. NOTE: UNIT TO MOUNTED AT ADA HEIGHT- REFER TO ARCH. DRAWINGS FOR MOUNTING HEIGHT. REWORK PIPING AS REQUIRED FOR NEW FIXTURE INSTALLATION.
- 6 CONNECT NEW 1/2" CW TO EXIST. CW SUPPLY FROM DEMO'D. DRINK. FOUNTAIN; RISE WITH NEW LINE ALONG WALL TO NEW REMOTE CHILLER.
- 7 EXISTING 1-1/2" CW SUPPLY ROUTED ALONG WALL IN MECH ROOM- FIELD VERIFY EXACT SIZE & LOCATION.
- 8 EXISTING 1" HW SUPPLY ROUTED ALONG WALL IN MECH ROOM- FIELD VERIFY EXACT SIZE & LOCATION.
- 9 CONNECT NEW 1-1/2" CW TO EXISTING CW LINE; ROUTE NEW LINE IN PLUMBING WALL.
- 10 CONNECT NEW 1" HW TO EXISTING HW LINE; ROUTE NEW LINE IN PLUMBING WALL.
- 11 1/2" H & CW DN. TO ROUTE IN WALL TO SHOWER.
- 12 1-1/2" CW DOWN TO 1-1/2" HEADER, WITH 1" EACH WC.
- 13 1-1/2" CW DOWN TO 1-1/2" HEADER, WITH 3/4" TO URINAL & 1" TO WC.
- 14 WATER HAMMER ARRESTER WHA, PDI TYPE "B", ON CW HEADER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 15 PROVIDE NEW BACKWATER VALVE, LINE SIZE, ON EXISTING BUILDING SEWER TO COMPLY WITH CITY OF PRESCOTT REQUIREMENTS. PROVIDE WITH TRAFFIC RATED COVER.
- 16 CONNECT NEW GAS LINE TO EXISTING LOW PRESSURE OUTLET OF EXIST. GAS REGULATOR.
- 17 CONNECT NEW GAS LINE TO EXISTING GAS LINE.
- 18 EXISTING 2" GAS SUPPLY LINE TO POOL HEATER & WATER HEATER (VERIFY).
- 19 NEW GAS LINE RISE ALONG EXTERIOR WALL TO ENTER LOCKER ROOM ABOVE CEILING.
- 20 NEW GAS LINE, SURFACE MOUNT ON BOTTOM OF MECH. ROOM CEILING, COORDINATE ROUTING WITH EXISTING CONDITIONS.
- 21 INSTALL NEW 4" 2-WAY SCO ON EXIST. WASTE.
- 22 GAS PIPING UP THROUGH ROOF TO NEW MAKEUP AIR UNIT. PROVIDE LUBRICATED GAS COCK & 6" DIRT LEG AT UNIT CONNECTION. FLASH PIPING AT ROOF PENETRATION.
- 23 1-1/2" CW & 1" HW RISE TO ROUTE ABOVE CEILING.
- 24 GAS PIPING DROP TO ROUTE BELOW MECH. ROOM CEILING.
- 25 H & CW PIPING ROUTED IN ROOF JOIST SPACE.
- 26 1/2" CW ROUTE ALONG WALL TO SUPPLY/ DRAIN DOWN SYSTEM.
- 27 MAKEUP AIR UNIT SUPPLY/DRAIN DOWN SYSTEM- SEE DETAIL, SHEET P2.1.
- 28 1/2" CW OUT OF DRAIN DOWN SYSTEM. RISE TO ROUTE BELOW CEILING (SURFACE MOUNT TO BOTTOM OF CEILING).
- 29 1/2" CW RISE THROUGH ROOF & CONNECT TO MAKEUP AIR UNIT. FLASH PIPING AT ROOF PENETRATION. PROVIDE NEEDLE VALVE SHUTOFF AT UNIT CONNECTION.
- 30 3/4" BLEED/DRAIN LINE DROP ALONG WALL & TERMINATE AT NEAREST RECEPTOR (VERIFY LOCATION).
- 31 3/4" BLEED & DRAIN LINE CONNECTION TO COOLER DRAIN OUTLET. PIPING MATERIAL: TYPE "M" COPPER. DROP WITH DRAIN LINE THROUGH ROOF TO ROUTE (SURFACE MOUNTED) AT BOTTOM OF CEILING. FLASH PIPING AT ROOF PENETRATION.
- 32 REMOTE CHILLER, MOUNT ON SHELF SUPPORTED FROM WALL, SEE DETAIL, SHEET P2.1.
- 33 PROVIDE VALVED 1/2" CW & CHILLED WATER CONNECTIONS TO REMOTE CHILLER.
- 34 1/2" CHILLED CW DOWN TO DRINKING FOUNTAIN. NOTE: INSULATE CHILLED WATER PIPING WITH 1/2" ARMAFLEX.
- 35 REMOVE EXISTING HOSE BIBB & REPLACE WITH NEW FREEZEPROOF HOSE BIBB. REWORK EXIST. PIPING AS REQ'D.
- 36 LOCATION OF EXISTING NATURAL GAS 2ND STAGE REGULATOR.
- 37 EXISTING LANDSCAPE IRRIGATION SYSTEM BACKFLOW PREVENTION DEVICE.
- 38 INSULATED 3/4" CW FROM WATER SOURCE TO LANDSCAPE IRRIGATION SYSTEM BACKFLOW PREVENTION DEVICE. ROUTE PIPING IN ROOF JOIST SPACE & FURRED WALL SPACE.
- 39 ROUTE 3/4" CW TO BELOW GRADE BY DRILLING CONCRETE SLAB AT AN APPROX. 45° ANGLE DOWNWARD TOWARD EXTERIOR.

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



REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Plumbing Demolition Plan / Plumbing Floor Plan /

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

APN:

DRAWN BY
CHECKED BY
DATE
JOB NO. 696
SHEET

P1.1

PLUMBING SPECIFICATIONS:

1. GENERAL

- 1.1 Scope: Work under this section includes coordinating and furnishing all labor and material necessary to install a complete plumbing system as shown and specified and in accordance with the codes. Contractor shall pay for all permits, meters, fees, city inspections, legal notices, etc., as required.
- 1.2 Submittals: Within 15 days after award of contract, submit 8 copies of all items.
- 1.3 Record Drawings: Provide a set to the Architect at completion of project.
- 1.4 Instructions: Provide maintenance manual and instruct Owner in the proper operation and maintenance of the equipment.
- 1.5 Guarantee: One year on labor, material and equipment.

2. PRODUCTS

2.1 Piping:

2.1.1 Water Lines:

- 2.1.1.1 Copper: Type "L" hard drawn, conforming to ASTM B88, for all water pipe not set under concrete or in the ground.
- 2.1.1.2 Copper: Type "K" soft drawn, conforming to ASTM B88, for water pipe set in or under concrete. Wrap lines below concrete floors with 20 mils of polykon tape.
- 2.1.1.3 Fittings: Wrought copper conforming to ANSI B16.22.

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

2.1.2 Sanitary Waste and Vent Piping:

- 2.1.2.1 Cast Iron conforming to CISPI Standard 301-95 and ASTM A-888 for all no-hub pipe and fittings installed above and below grade.
- 2.1.2.2 Galvanized Iron: Standard weight, Schedule 40 galvanized iron conforming to ASTM A-120 for all vent lines 2-1/2" or smaller.

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

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

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

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

2.1.3 Gas Piping:

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

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

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

Pipe 2" and Smaller: Malleable iron threaded fittings.

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

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

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

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

- 2.3 Pipe Insulation: Use fiberglass preformed insulation with all-service jacket, minimum density of 3.5 pcf. Provide an additional 8-ounce canvas jacket with Arabol finish around all exposed pipe insulation. Cover fittings and valves (except unions) with insulation cement worked on in two applications to a smooth, hard surface, flush with pipe covering. Provide 8" long, 20 gauge, galvanized iron metal insulation guards at locations of hanger rods and supports. Provide 12" long rigid insulation blocks on bottom half of pipe 1" and larger at hangers. Insulation wall thickness shall conform to the following schedule:

Domestic Hot Water, Hot Water Recirculating Lines:

Mains and horizontal branches - 1" thickness.
Drops in walls and partitions - 1/2" thickness.

2.4 Valves:

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

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

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

2.5 Cleanouts:

- 2.5.1 Concrete and Tile Floors: J.R. Smith 4023, with scoriated nickel-bronze top.
- 2.5.2 Cleanouts (exposed vertical piping): J.R. Smith 4512 cast iron branch cleanout tee with bronze plug.
- 2.5.3 Interior Finished Walls: J.R. Smith 4532.
- 2.5.4 Exterior Surface Cleanouts: J.R. Smith 4253. Provide 18" x 18" x 6" concrete pad at landscape areas; provide concrete ring below grade at asphalt areas.
- 2.5.5 Provide all cleanouts with heavy threaded bronze plugs.

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

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

Plumbing Fixtures: American Standard.

Outdoor Drinking Fountains: Most Dependable Fountains.

Valves: Crane, Kennedy, Stockham, Grinnell, Milwaukee, Wolverine.

Shower Valves: Wolverine Brass

Supplies, Stops: Eastman, Kohler, Eljer, Brasscraft, McGuire.

P-Traps: Crane, Kohler, Eljer, Frost, McGuire.

Drains and Cleanouts: J. R. Smith, Zurn, Josam, Wade, Western.

Hangers: Grinnell, Fee & Mason, Elcen, Kin-Line, F & S, B-Line, Michigan.

3. EXECUTION

3.1 Tests and Inspections:

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

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

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

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

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

3.2 Flashing, Sleeves and Escutcheon Plates:

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

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

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

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

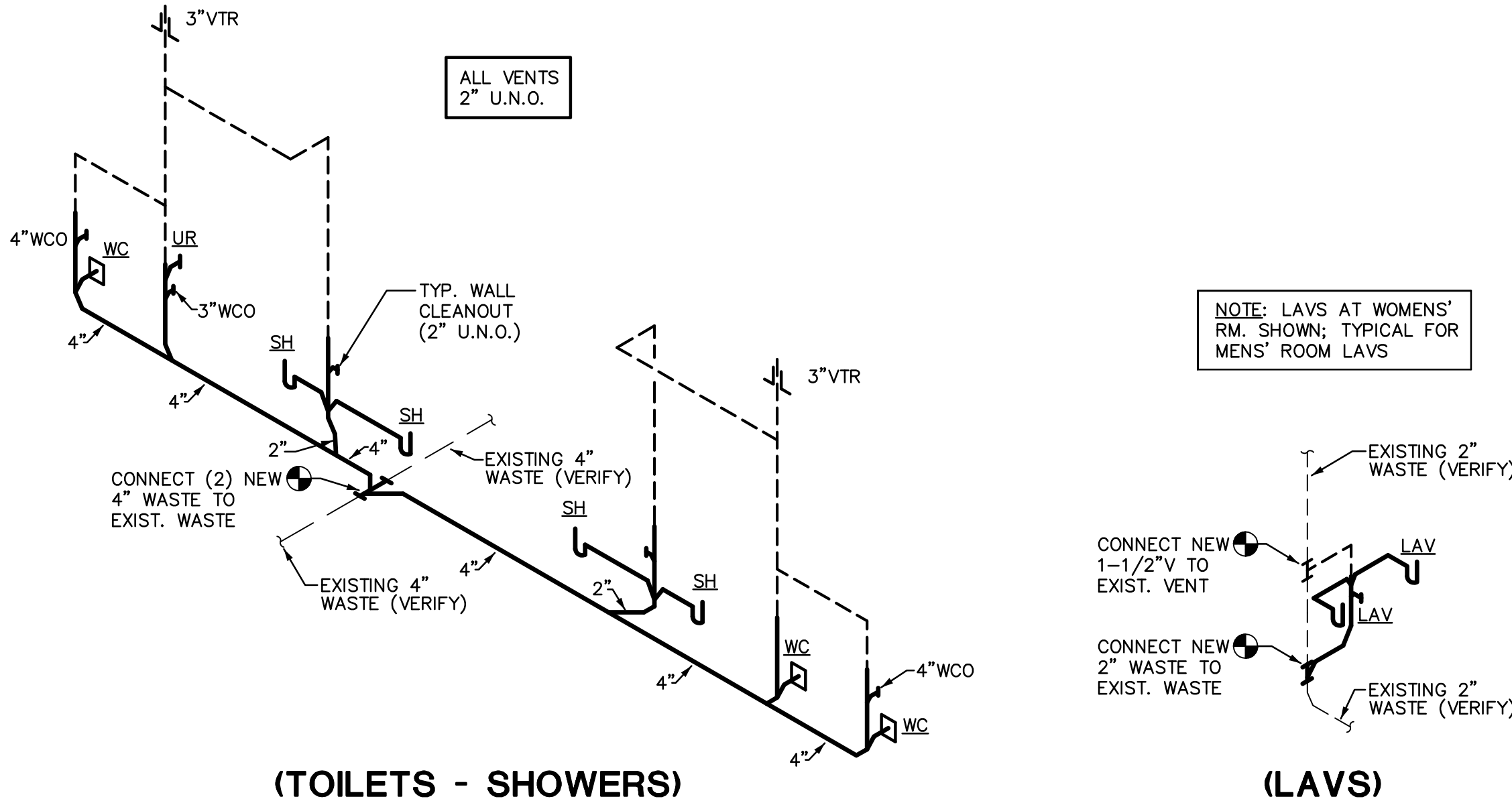
- 3.4 Electrical: Wiring by Electrical Contractor.

PLUMBING FIXTURE SPECIFICATIONS

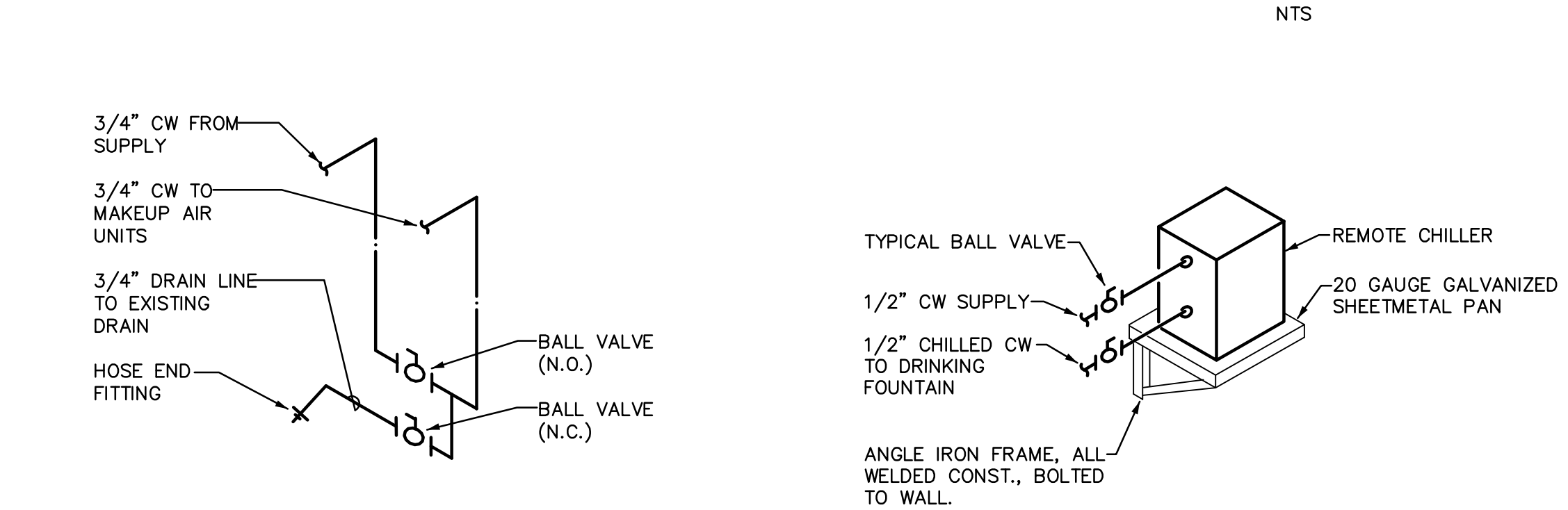
SYMBOL	DESCRIPTION
WC-1	WATER CLOSET: FIXTURE: AMERICAN STANDARD 3351.101, WALL MOUNTED, SIPHON JET, 1.28 GALLONS PER FLUSH, VITREOUS CHINA, ELONGATED BOWL, 1-1/2" TOP SPUD. SEAT: TOTO #534 WHITE OPEN FRONT SEAT WITH CONCEALED STAINLESS STEEL CHECK HINGE & WITHOUT COVER. FLUSH VALVE: SLOAN "OPTIMA" #8111-1.28, EXPOSED INFRARED BATTERY OPERATED SENSOR ACTIVATED CAST BRASS CHROME PLATED FLUSH VALVE, SLOW CLOSING, SELF CLEANING PISTON FLUSH MECHANISM WITH MECHANICAL OVERRIDE BUTTON; MAXIMUM FLUSH CYCLE OF 1.28 GPF. WITH FIELD ADJUSTABLE SENSOR RANGE. FURNISHED WITH SWEAT ADAPTER KIT AND FOUR (4) AA ALKALINE BATTERIES. CARRIER: J.R. SMITH #0210 SERIES; COORDINATE WITH FITTING TYPE REQUIREMENTS.
WC-2	WATER CLOSET (ADA COMPLIANT): SAME FIXTURE, FLUSH VALVE, CARRIER AND SEAT AS WC-1, EXCEPT MOUNT WITH BOWL HEIGHT AT 18" ABOVE FINISHED FLOOR TO MEET HANDICAPPED REQUIREMENTS.
U-1	URINAL (ADA): FIXTURE: AMERICAN STANDARD 6581.015 WHITE VITREOUS CHINA WALL HUNG SIPHON JET URINAL WITH ELONGATED FLUSHING RIM, 3/4" TOP SPUD, J.R. SMITH #0615 WALL HANGER, 2" THREADED FEMALE OUTLET CONNECTION. FLUSH VALVE: SLOAN "OPTIMA" #8186, EXPOSED INFRARED BATTERY OPERATED SENSOR ACTIVATED CAST BRASS CHROME PLATED FLUSH VALVE, SLOW CLOSING, SELF CLEANING PISTON FLUSH MECHANISM WITH MECHANICAL OVERRIDE BUTTON; MAXIMUM FLUSH CYCLE OF 1.0 GPF. WITH FIELD ADJUSTABLE SENSOR RANGE. FURNISHED WITH SWEAT ADAPTER KIT AND FOUR (4) AA ALKALINE BATTERIES. MOUNT FIXTURE AT WHEELCHAIR HEIGHT (REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHT).
L-1	LAVATORY (COUNTERTOP-ADA COMPLIANT): FIXTURE: AMERICAN STANDARD 0476.028, 16" x 10" OVAL VITREOUS CHINA, SELF-RIMMING LAVATORY, FRONT OVERFLOW. FAUCET: SLOAN #EBF-650-BOT, SENSOR ACTIVATED FAUCET WITH THERMOSTATIC MIXING VALVE, AERATOR. SUPPLIES: EASTMAN CSRC-15-LK, ANGLE STOPS WITH FLEXIBLE TUBE RISERS. WASTE: MCGUIRE 155WC OFFSET WHEELCHAIR LAVATORY STRAINER WITH GRID DRAIN, CAST BRASS ELBOW AND OFFSET TAILPIECE. TRAP: MCGUIRE 8902, 1-1/4" x 1-1/2" CAST BRASS P TRAP. INSULATE EXPOSED WATER AND WASTE PIPING WITH TRUEBRO LAV-GUARD INSULATION KIT, MODEL 102, WITH ACCESSORY #105.
DF-1	DRINKING FOUNTAIN (ADA COMPLIANT): FIXTURE: MDF MODEL No. 480EZWMSS, WALL MOUNTED BARRIER FREE SINGLE STATION DRINKING FOUNTAIN, ONE PIECE TYPE 304 SCHEDULE 10 STAINLESS STEEL, WELDED CONSTRUCTION WITH 18 GAUGE POLISHED STAINLESS STEEL RECEPTOR BOWLS, STAINLESS STEEL ANTI-SQUIRT BUBBLER HEADS (MOUNTED WITH LOCK NUT AND WASHER TO PREVENT TAMPERING), STAINLESS STEEL PUSH BARS AND HOUSING. ALL WORKING PARTS ACCESSIBLE THROUGH BOWL OF FOUNTAINS. UNIT FURNISHED WITH WATER SUPPLY (REINFORCED NYLONBraid TUBING, LEAD-FREE AND NSF-61 CERTIFIED WITH 1/2" MIP THREADED INLET WITH STAINLESS STEEL STRAINER). PROVIDE WITH STAINLESS STEEL FITTINGS AND VALVES. UNIT FURNISHED COMPLETE WITH WALL CARRIER PLATE FOR ANCHORING TO A FINISHED WALL. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHT.
SH-1	REMOTE CHILLER: CHILLING CAPACITY 8 GALLONS PER HOUR, NO-LEAD DESIGN, 1/5 HP / 115V.
SH-2	SHOWER: FIXTURE: TILE WALLS AND FLOORS BY GENERAL CONTRACTOR. PROVIDE J.R. SMITH #2005-B EPOXY COATED CAST IRON FLOOR DRAIN WITH 6" DIAMETER ADJUSTABLE NICKEL BRONZE STRAINER, CLAMPING COLLAR AND NO-HUB CONNECTION AT BOTTOM OF SHOWER. SHOWER VALVE: WOLVERINE BRASS #53671 WITH #85651 THERMOSTATIC BALANCING SHOWER VALVE WITH INTEGRAL CHECKSTOPS, HIGH LIMIT STOP, CHROME PLATED METAL TRIM, LOW FLOW 1.5 GPM SHOWER HEAD WITH ARM AND SHOWER. PROVIDE 2" P TRAP.
WHA	SHOWER (HANDICAPPED ACCESSIBLE): FIXTURE: TILE WALLS AND FLOORS BY GENERAL CONTRACTOR. PROVIDE J.R. SMITH #2005-B, EPOXY COATED CAST IRON FLOOR DRAIN WITH 6" DIAMETER ADJUSTABLE NICKEL BRONZE STRAINER, CLAMPING COLLAR AND NO-HUB CONNECTION AT BOTTOM OF SHOWER. SHOWER VALVE: WOLVERINE BRASS #53671, THERMOSTATIC BALANCING SHOWER VALVE WITH INTEGRAL CHECKSTOPS, HIGH LIMIT STOP, CHROME PLATED METAL TRIM, LOW FLOW 1.5 GPM HAND SHOWER WITH INLINE VACUUM BREAKER, 24" SLIDE BAR, 60" METAL HOSE. PROVIDE 2" P TRAP.
HB	WATER HAMMER ARRESTER: SIOUX CHIEF "HYDRA-RESTER", WHERE REQUIRED IN PIPING SYSTEMS. SIZE FOR FIXTURE UNIT LOAD, WITH NESTING TYPE BELLOW CONTAINED WITHIN, CASING AND BELLOW SHALL BE CONSTRUCTED OF STABILIZED 18-8 STAINLESS STEEL.
	HOSE BIBB (FREEZE PROOF): WOODFORD MODEL No. M865, CHROME PLATED FINISH, 3/4" HOSE CONNECTION WITH INTEGRAL VACUUM BREAKER, SELF-DRAINING, LOOSE TEE OPERATOR, ENCLOSED IN A FLUSH MOUNTED 14 GAUGE STAINLESS STEEL WALL BOX WITH LOCKABLE COVER.

FIXTURE CONNECTION SCHEDULE

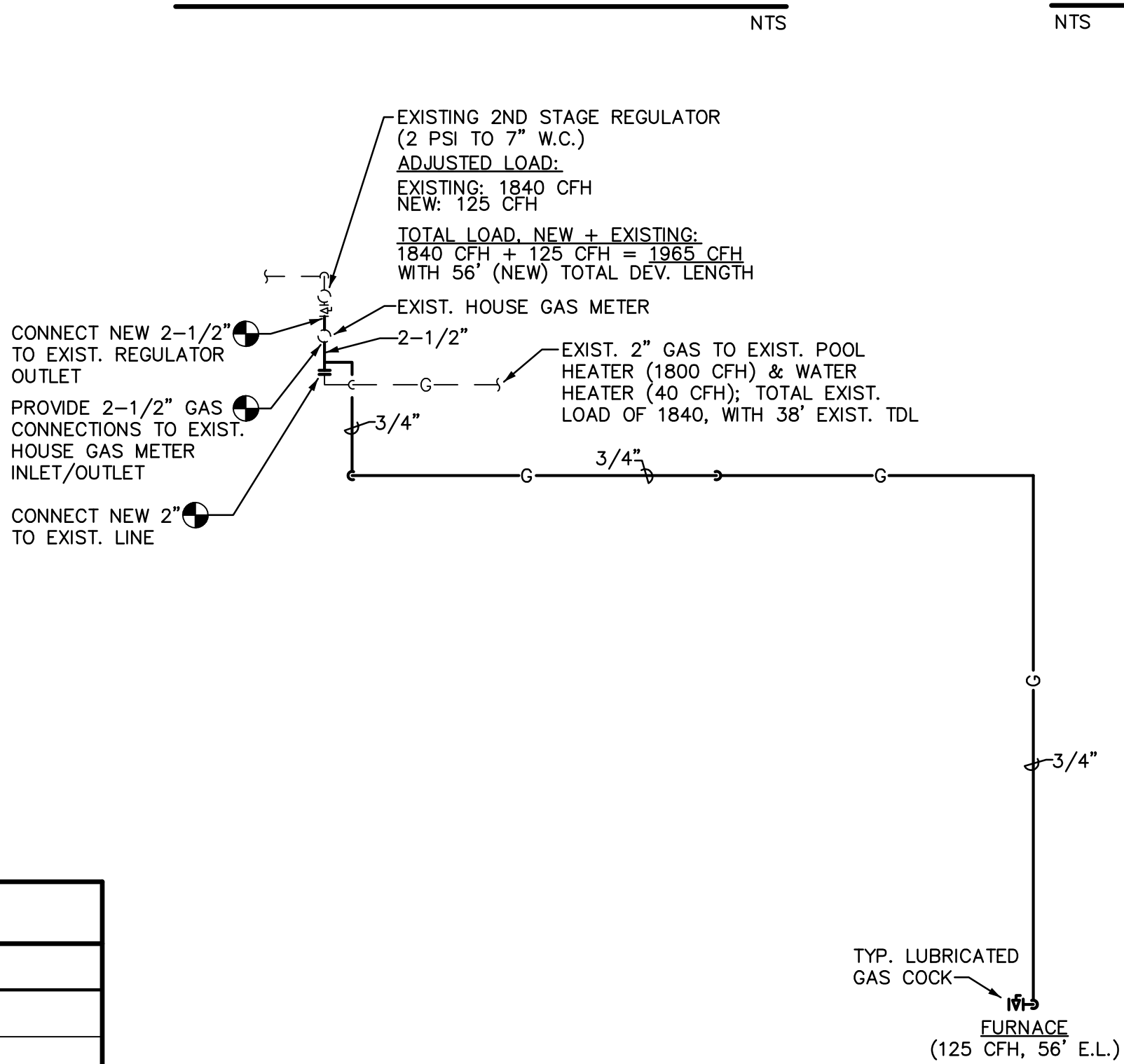
MARK	DESCRIPTION	TRAP SIZE	W	V	CW	HW	REMARKS
WC-1	WATER CLOSET	INT.	4"	2"	1"	-	FLUSH VALVE, WALL MOUNT
WC-2	WATER CLOSET (ADA)	INT.	4"	2"	1"	-	FLUSH VALVE, WALL MOUNT
U-1	URINAL (ADA)	INT.	2"	1-1/2"	3/4"	-	WALL MOUNTED
L-1	LAVATORY (ADA)	1-1/4" x 1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	COUNTERTOP
SH-1	SHOWER	2"	1-1/2"	1-1/2"	1/2"	1/2"	
SH-2	SHOWER (ADA)	2"	1-1/2"	1-1/2"	1/2"	1/2"	
DF-1	DRINKING FOUNTAIN (ADA)	1-1/4" x 1-1/2"	1-1/2"	1-1/2"	1/2"	-	SINGLE STATION
HB	HOSE BIBB	-	-	-	3/4"	-	WITH INTEGRAL VACUUM BREAKER



WASTE AND VENT SCHEMATICS



DRAIN DOWN SYSTEM FOR MAKEUP AIR UNIT



GAS PIPING DIAGRAM

NTS

REMOTE CHILLER DETAIL

NTS

GAS PIPING NOTES:

- MINIMUM DEPTH OF GAS PIPING TO BE 18" BELOW GRADE.
- GAS PIPING SHALL NOT BE INSTALLED IN OR ON THE GROUND UNDER ANY BUILDING.
- GAS PIPING SHALL NOT RUN IN HOLLOW CORE OF BLOCK.
- PROVIDE SHUT-OFF COCK, UNION AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
- ALL GAS USING EQUIPMENT TO BE NATURAL FUEL.
- DO NOT USE FLEXIBLE PIPE CONNECTIONS TO EQUIPMENT.
- 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.
- ALL GAS PIPING, MATERIALS, VALVES, FITTINGS, INSTALLATION AND TESTING SHALL COMPLY WITH CHAP. 4, INTERNATIONAL FUEL GAS CODE.
- VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.
- 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.



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Project
#16103

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ARCHITECTURE & PLANNING

DRAWING: Plumbing Schedules & Details

PROJECT: ERAU Building 69 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

APN:

DRAWN BY
CHECKED BY
DATE
JOB NO. 696
SHEET

P2.1

ELECTRICAL SYMBOLS

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT

- FLUORESCENT FIXTURE, WITH FIXTURE DESIGNATED BY LETTER. SMALL LETTER INDICATES SWITCH LEG
- NIGHT LIGHT- NOT SWITCHED OR EMERGENCY
- FLUORESCENT STRIP FIXTURE.
- CEILING OR WALLMOUNTED FIXTURE.
- PORCELAIN PULL CHAIN FIXTURE
- JUNCTION BOX
- JUNCTION BOX WITH FLEX CONNECTION.
- SINGLE FACE EXIT SIGN- NOT SWITCHED
- DOUBLE FACED EXIT SIGN- NOT SWITCHED.
- TWO HEAD EMERGENCY LIGHT WITH BATTERY.
- S SINGLE POLE SWITCH, + 48" A.F.F. (20A-120/277V)
- S₃ THREE WAY SWITCH, + 48" A.F.F. (20A-120/277V)
- S₄ 4-WAY SWITCH +48" AFF (20A-120/277V)
- S_P SWITCH AND PILOT LIGHT (20A-120-/277V)
- S_K SINGLE POLE SWITCH, KEY OPERATED (20A)
- WALL OR CEILING MOUNTED MOTION SENSOR MANUFACTURE BY LAVITON
- DIMMER CONTROL, + 48" A.F.F. TYPE, RATING AS NOTED
- DUPLEX RECEPTACLE, + 18" A.F.F. (20A)
- DUPLEX RECEPTACLE ABOVE COUNTER, VERIFY HEIGHT. (20A)
- FOURPLEX RECEPTACLE, + 18" A.F.F. (20A)
- HALF SWITCHED DUPLEX RECEPTACLE (20A)
- SPECIAL RECEPTACLE - SIZE & TYPE AS NOTED
- POWER / PHONE / DATA FLUSH FLOOR OUTLET
- TELEPHONE OUTLET PLASTER RING AT + 18" A.F.F. HUBBELL #P12 COVERPLATE. 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUNS.
- DATA SYSTEM OUTLET, 4" SQUARE BOX AND COVERPLATE, 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUN, + 18" A.F.F.
- TELE/DATA COMBO OUTLET, 4" SQUARE BOX AND COVERPLATE, 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUN, + 18" A.F.F.
- CABLE TELEVISION (CATV) OUTLET PLASTER RING AT + 18" A.F.F. U.N.O. HUBBELL COVERPLATE. 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUNS.
- TELEPHONE SYSTEM CONDUIT HOMERUN WITH NYLON PULLWIRE (1" C MIN UNO)
- CLOSED CIRCUIT TV (CCTV) OUTLET SAME AS CATV OUTLET
- REMOTE CONTROL STATION @ +48" AFF
- DISCONNECT SWITCH, FUSE PER EQUIPMENT MANUFACTURERS RECOMMENDATION. OUTSIDE NEMA 3R - N.F. = NON-FUSED.
- COMBINATION STARTER AND FUSIBLE DISCONNECT SWITCH SIZE AS NOTED
- EQUIPMENT TERMINATION CONNECTION POINT VERIFY EXACT LOCATION LOAD AND VOLTAGE AS NOTED
- MOTOR
- THERMAL PROTECTED SWITCH
- MOTOR STARTER - SHADING INDICATES F.B.O.
- DISTRIBUTION PANELBOARD.
- BRANCH CIRCUIT PANELBOARD.
- CONDUIT BELOW FLOOR OR UNDERGROUND
- CONDUIT IN WALL OR ABOVE CEILING
- HOMERUN TO PANEL
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT STUB-OUT, MARK AND CAP AS DIRECTED
- GROUND WIRE (SIZE AS NOTED) EXTENDED AND CONNECTED TO APP'D GROUND

PP										SCHEDULE									
MANS: 100A MLD					LOAD-VA					LOCATION: SEE PLAN									
VOLTAGE: 120 /240V, 3Ø ,4W										MOUNTING: SURFACE									
TYPE: EATON, SQ D OR EQUAL										MIN. A.I.C: 10,000									
CIRCUIT DESCRIPTION			BKR.	CIR. NO.	ØA	ØB	ØC		BKR.	CIR. NO.	CIRCUIT DESCRIPTION								
EXISTING EQUIPMENT (VERIFY RMT'S)			30	1					20	1	EXISTING EQUIPMENT (VERIFY RMT'S)								
				3					20	1									
				2					4	1									
				20	5				30	1									
									6										
				2	7				8	2									
				20	9				30	1									
				1					10										
LIGHTING EXTERIOR			20	11				307	12	2									
				1					20										
LIGHTING MENS LOCKER/RESTROOM			20	13	1100				14	1	LIGHTING WOMEN LOCKER/RESTROOM								
				1					20	1									
RECEPT'S. MENS LOCKER/RESTROOM			20	15		540			16	20	RECEPT'S. WOMEN LOCKER/RESTROOM								
				1		540			20	1									
EXISTING EQUIPMENT (VERIFY RMT'S)			20	17					18	1	EXISTING EQUIPMENT (VERIFY RMT'S)								
				1					20	1									
					19				20	1									
									20	1									
					21				22										
					23				24	2									
					25				26	20	1								
MAKE-UP AIR UNIT RTU-1			20	27		828			28	1	RECEPT. - ELECTRIC DRINKING FOUNTAIN								
					29	600			30		AUTOMATIC DOOR OPENER								
				2				828	30										
RECEPT. ROOF MOUNTED			20	31	180				32		TIMECLOCK								
				1	200				34		SPARE								
IRRIGATION TIMER			20	33		200													
				1															
SPACE				35					36		SPACE								
					37				38										
									40										
					39														
									42										
					41														
TOTAL LOAD PER PHASE: EXISTING ESTIMATED LOAD:					7000	7000	7000	HIØ 7000 / 120 = 58.3 AMPS											
NEW ADDED LOAD:					2200	2508	1535	HIØ 2508 / 120V = 20.9 AMPS											
TOTAL LOAD:					9580	9708	8535	HIØ 9708 / 120V = 80.9 AMPS											

SPECIFICATIONS

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

FIRE WALL/FLOOR PENETRATION

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

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)

ABBREVIATIONS

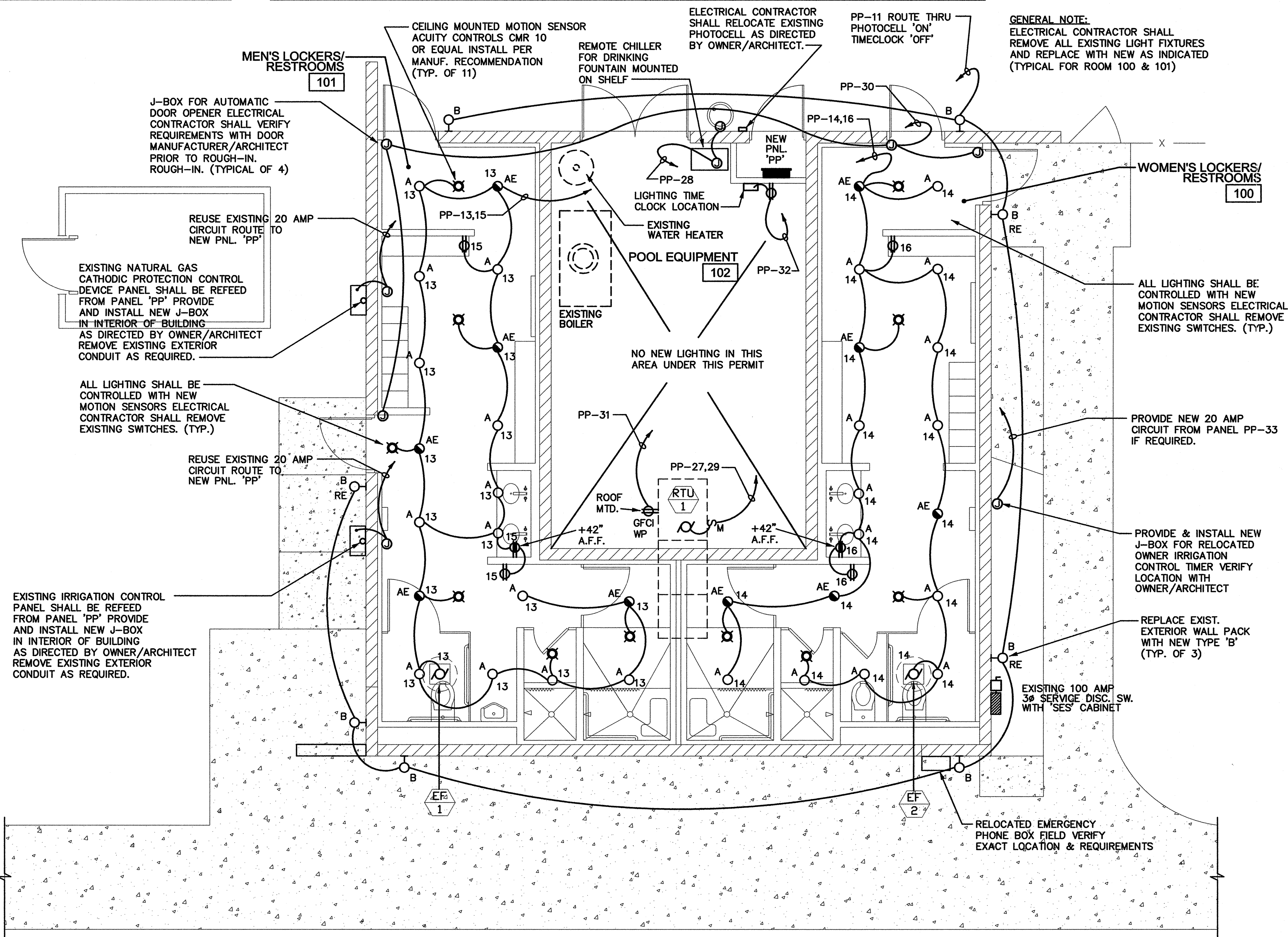
EX	EXISTING LIGHT OR DEVICE TO REMAIN
RE	EXISTING LIGHT OR DEVICE TO BE REPLACE OR RELOCATED EXTEND CIRCUITING AS REQUIRED IF NOT SHOWN.
ER	RELOCATED LIGHT OR DEVICE
RM	REMOVED LIGHT OR DEVICE
A.F.F.	ABOVE FINISHED FLOOR (⌀ OF OUTLET)
A.F.G.	ABOVE FINISHED GRADE (⌀ OF OUTLET)
E.C.	EMPTY CONDUIT
UNO	UNLESS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

GENERAL LIGHTING NOTES:

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

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



Lighting & Power Floor Plan

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



Schedule

Symbol	Label	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Wattage
○	A	Lithonia Lighting	LDN6 40/10 LO6AR LSS MVOLT EZ10	1000LM 80CRI 4000K 6" LED COMMERCIAL DOWNLIGHT	LED	1	LDN6_40_10_LO6AR.ies	1089	17.97
●	AE	Lithonia Lighting	LDN6 40/10 LO6AR LSS MVOLT EZ10 EL	1000LM 80CRI 4000K 6" LED COMMERCIAL DOWNLIGHT W/ BATTERY PACK	LED	1	LDN6_40_10_LO6AR.ies	1089	17.97
⊢○	B	Spaulding Lighting Laredo Series	LMC-30LU-3K-3-1 MVOLT 40K	LED EXTERIOR WALL LUMINAIRE	LED	1		2632	35.00

ELECTRICAL DESIGN & CADD SERVICES INC.

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PRESCOTT, AZ. 86305

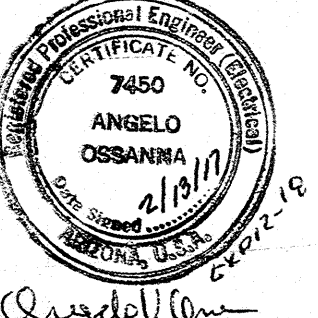
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DRAWING: Lighting & Power Floor Plan, Specifications, Fixture Schedule and Notes

PROJECT: ERAU Building 69 Remodel
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APN:

DRAWN BY

R.A.

CHECKED BY

A.O.

DATE

1-23-2017

JOB NO.

696

SHEET

E1.2