



GENERAL REQUIREMENTS

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, AS LOCALLY AMENDED, AND ALL APPLICABLE CODES & ORDINANCES.
- OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWING, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
- DO NOT USE SCALED DIMENSIONS. USE WRITTEN DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- ALL DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.
- REMOVE ALL MATERIALS RESULTING FROM DEMOLITION WORK FROM THE SITE IN SUCH A MANNER AS TO AVOID CREATING A NUISANCE. STOCKPILE ANY SALVAGED ITEMS PER OWNER'S REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR DISPOSE OF ALL SALVAGED ITEMS TO AN OFF SITE PROPERTY LOCATION.
- THE CONTRACTOR OR SUBCONTRACTOR SHALL INSPECT THE PREMISES PRIOR TO COMMENCING WORK TO CHECK EXISTING CONDITIONS. SHOULD CONTRACTOR OR SUBCONTRACTOR FIND CONDITIONS WHICH HE BELIEVES WOULD IMPEDE HIS WORK, THEN SUCH CONDITIONS MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT. FAILURE TO SO ADVISE WILL CONSTITUTE NOTICE THAT THE CONTRACTOR IS FULLY SATISFIED AND THAT HE INTENDS TO PERFORM HIS OBLIGATIONS WITH NO ALLOWANCE EITHER IN TIME OR MONEY FOR ANY IMPEDIMENTS TO HIS WORK.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD. IF DIMENSIONAL ERRORS OCCUR OR CONDITIONS NOT COVERED ON THE DRAWINGS IS ENCOUNTERED, CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE COMMENCING THAT PORTION OF THE WORK.
- DETAILS, NOTES AND FINISHES SHALL BE APPLICABLE TO ALL TYPICAL CONDITIONS, WHETHER OR NOT REFERENCED AT ALL PLACES. WHEN WORK NOT SPECIFICALLY CALLED OUT IS REQUIRED TO COMPLETE THE PROJECT, IT SHALL BE PROVIDED AND BE OF THE BEST MATERIALS AND WORKMANSHIP.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGES THROUGHOUT CONSTRUCTION. HE SHALL MEET THE LATEST REQUIREMENTS OF THE UNITED STATES DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH STANDARDS AND COMPLY WITH: THE MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION, ALL APPLICABLE SAFETY AND SANITARY LAWS, REGULATIONS AND ORDINANCES, AND ANY SAFETY RULES OR PROCEDURES ESTABLISHED BY THE ARCHITECT AND/OR THE OWNER FOR THE PROJECT.
- THE CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR LOSS OR EXPENSE RESULTING FROM INJURY ON THE PROJECT SITE. HE ASSUMES ALL RISKS IN THE PERFORMANCE OF THE WORK AND IS RESPONSIBLE FOR SUPERVISION, MATERIALS, EQUIPMENT AND LABOR REQUIRED TO IMPLEMENT THE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPERVISION, SAFETY, ADMINISTRATION AND ALL PHASES OF ITS CONTRACT. HE IS ALSO RESPONSIBLE FOR SCHEDULING, COORDINATING, MANAGEMENT AND ADMINISTRATION OF SUB-CONSULTANTS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES AND PROTECT THEM.
- ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND CONDITIONED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS OR INSTRUCTIONS UNLESS HEREINAFTER SPECIFIED TO THE CONTRARY.
- ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER, ACCEPTABLE TO THE ARCHITECT.
- UNLESS OTHERWISE SPECIFICALLY NOTED, THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT AND MACHINERY, TRANSPORTATION, AND OTHER FACILITIES AND SERVICES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK.
- THE CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, ETC. NECESSARY FOR PROPER COMPLETION OF WORK (U.N.O.). THE CONTRACTOR SHALL FILE ALL APPLICATIONS REQUIRED AND PROCURE ALL PERMITS.
- THE CONTRACTOR WARRANTS TO THE OWNER THAT ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT WILL BE NEW UNLESS OTHERWISE SPECIFIED, AND THAT ALL WORK WILL BE GOOD QUALITY, FREE FROM FAULTS AND DEFECTS, AND IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL WORK NOT CONFORMING TO THESE STANDARDS MAY BE CONSIDERED DEFECTIVE. IT IS UNDERSTOOD THAT NO INFERIOR OR NON-CONFORMING WORK OR MATERIALS WILL BE ACCEPTED WHETHER DISCOVERED AT THE TIME THEY ARE INCORPORATED IN THE WORK OR AT ANY TIME BEFORE OR AFTER FINAL ACCEPTANCE. IF REQUIRED BY THE OWNER OR ARCHITECT, THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT.
- THE WARRANTIES AND GUARANTEES PROVIDED IN THE CONSTRUCTION DOCUMENTS SHALL BE IN ADDITION TO AND NOT IN LIMITATION OF ANY OTHER WARRANTY OR GUARANTY OR REMEDY REQUIRED BY LAW OR BY THE CONSTRUCTION DOCUMENTS.
- THE ARCHITECT'S AND ENGINEER'S OBSERVATION FOR COMPLIANCE WITH THE PLANS AND SPECIFICATIONS SHALL NOT BE DEEMED SUPERVISION OR CONTROL OF CONSTRUCTION MEANS OR METHODS EMPLOYED BY THE CONTRACTOR OR ANY SUBCONTRACTOR.
- PROVIDE WOOD BLOCKING SUPPORT AT ALL SURFACE MOUNTED ITEMS MOUNTED TO FACE OF GYPSUM WALLBOARD WALLS.
- CAULK ALL JUNCTURES BETWEEN DIFFERENT MATERIALS.

GREEN VALLEY RECREATION CENTER DESERT HILLS CENTER - LOCKER EXPANSION

2980 SOUTH CAMINO DEL SOL

GREEN VALLEY, ARIZONA 85622

CONSTRUCTION DOCUMENT / PERMIT PACKAGE

CODE REVIEW

SUMMARY OF GOVERNING REGULATIONS				
CODE	TITLE	EDITION	LOCAL AMENDMENTS	
BUILDING CODE	IBC	2018		YES
EXISTING BUILDING CODE	IEBC	2018		YES
ACCESSIBILITY CODE	ICC/ANSI A117.1	2009		
MECHANICAL CODE	IMC	2018		YES
ELECTRICAL CODE	NEC	2017		YES
PLUMBING CODE	IPC	2018		YES
FIRE CODE	IFC	2018		YES
ENERGY CONSERVATION CODE	IECC	2018		YES

GENERAL BUILDING SUMMARY (FOR REFERENCE)					
BUILDING	OCCUPANCY GROUP(S)	TYPE OF CONSTRUCTION	SPRINKLER SYSTEM	BUILDING AREA/HEIGHT/NO. OF STORIES REQUIRED	BUILDING AREA/HEIGHT/NO. OF STORIES ACTUAL
EXISTING BLDG.	B BUSINESS (CERAMICS CLUB)	IIB	YES	69,000 SQ. FT. 75'-0" HIGH 4 STORIES	± 5,624 SQ. FT. ± 35'-0" 2 STORIES

SEPARATE PERMIT

- FIRE SPRINKLERS
- FIRE ALARM

PROJECT DIRECTORY

ARCHITECT

SEAVER / FRANKS ARCHITECTS INC, ALA
2552 NORTH ALVERNON WAY
TUCSON, ARIZONA 85712
(520) 795-4000

CONTACT: RICHARD HUCH

STRUCTURAL ENGINEER

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7850 NORTH SILVERBELL ROAD - SUITE 114, PMB 301
TUCSON, ARIZONA 85743
(520) 440-2375

CONTACT: JEFFREY ROBERTSON

MECHANICAL ENGINEER

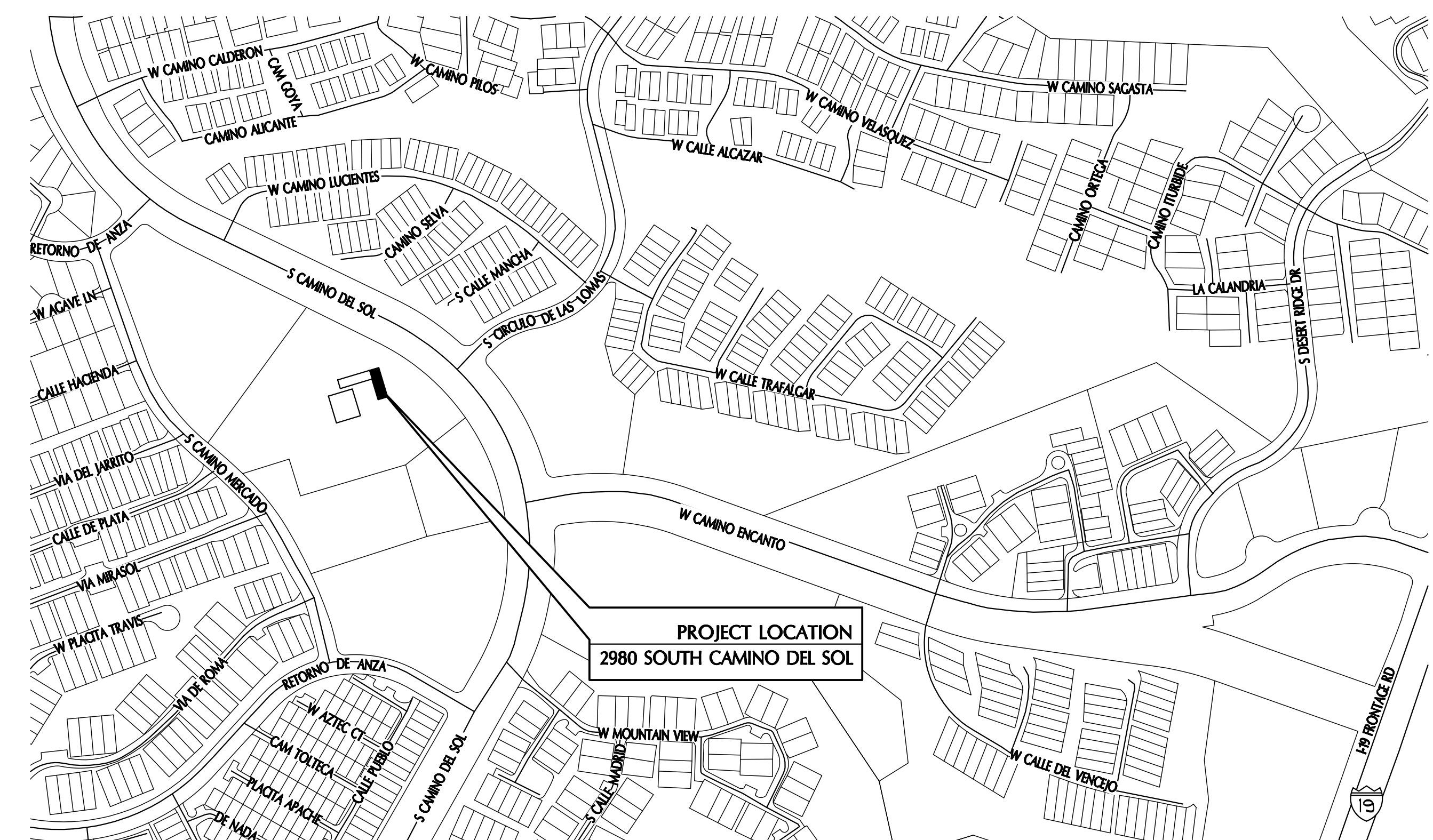
KC MECHANICAL ENGINEERING, LLC
5447 EAST FIFTH STREET - SUITE 112
TUCSON, ARIZONA 85711
(520) 327-7611

CONTACT: MIGUEL GASTELUM
PABLO ZAMORA

ELECTRICAL ENGINEER

CC ELECTRICAL CONSULTING, LLC
5551 SOUTH WHITE MOUNTAIN ROAD - SUITE 2538
SHOW LOW, ARIZONA 85901
(602) 400-1792

CONTACT: JEFFREY CLARK



LOCATION MAP

SCALE: NTS

SCOPE OF WORK

THE SCOPE OF WORK FOR THIS PROJECT INVOLVES THE TENANT IMPROVEMENT OF THE GREEN VALLEY RECREATION CENTER'S DESERT HILLS LOCATION. THE LOCKER EXPANSION (APPROXIMATELY 1538 SQUARE FEET) CONSTRUCTION WILL CONSIST OF NEW STEEL STUD WALLS/PARTITIONS, SUSPENDED GYPSUM BOARD CEILING AS REQUIRED, INCLUDED IN THE SCOPE OF THIS WORK WILL BE ALL STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WORK AS REQUIRED.

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EXPIRES 12-31-26

REVISIONS NO. DATE

LOCKER EXPANSION
GENERAL INFORMATION



GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

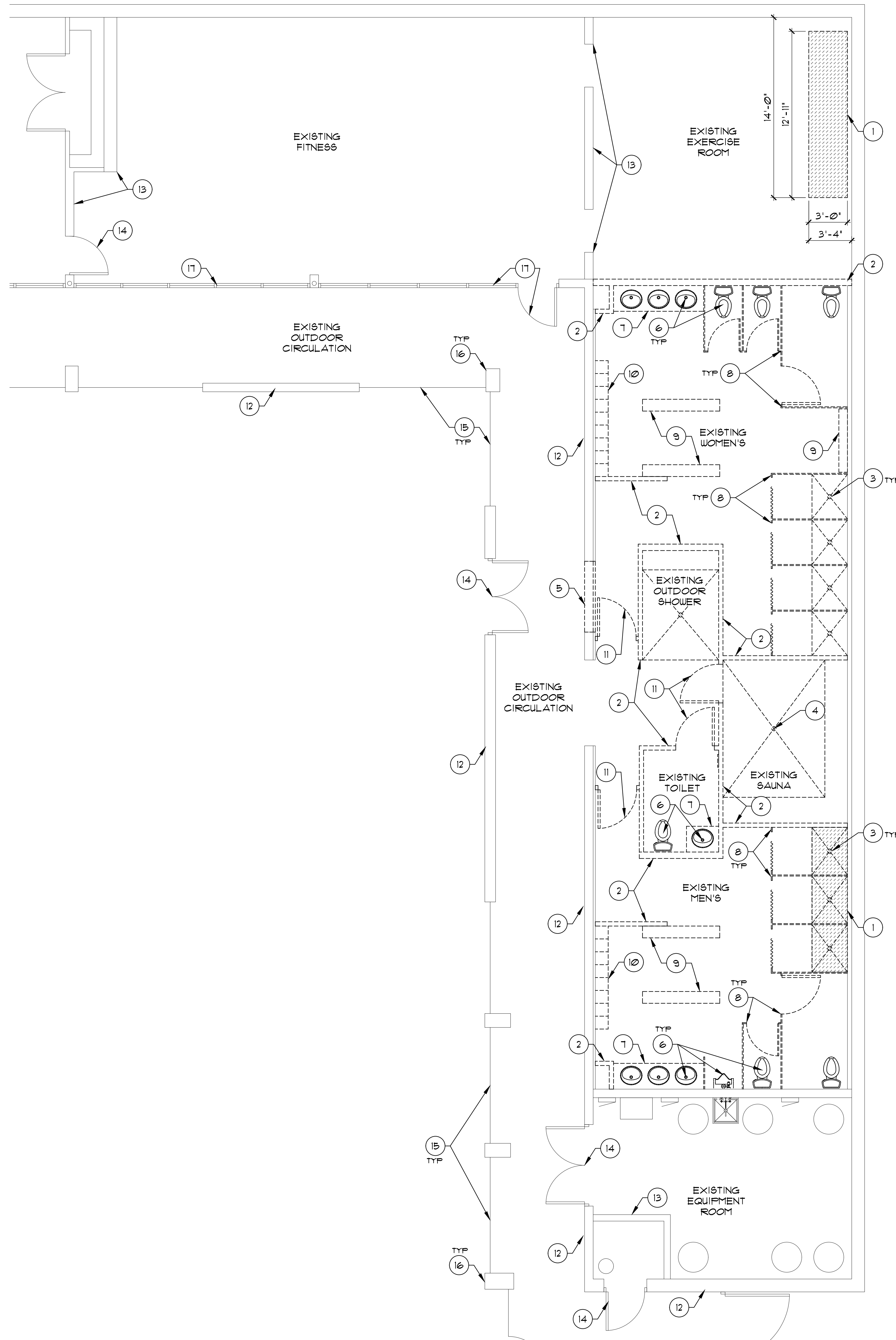
ISSUE DATE 11-04-2024

PROJ. NO. 3709.1

DRG. SCALE AS NOTED

SHEET

A0.0



GENERAL NOTES

- A. CONTRACTOR SHALL SCHEDULE AND COORDINATE WORK.
- B. CONTRACTOR SHALL VISIT SITE AND VERIFY ALL CONDITIONS AND BRING TO ARCHITECT'S ATTENTION PRIOR TO CONSTRUCTION. ANY DISCREPANCIES FROM DRAWINGS.
- C. ALL CONSTRUCTION SHALL CONFORM TO INTERNATIONAL BUILDING CODE (IBC) 2018 EDITION AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS. REQUIRE ALL SUBCONTRACTORS TO COMPLY WITH THESE REGULATIONS.
- D. PROVIDE 48 HOURS NOTICE TO THE BUILDING OWNER OF ANY WORK WHICH MAY DISTURB ADJACENT AREAS, DISRUPT UTILITY SERVICE OR REQUIRED WORK OUTSIDE THE IMMEDIATE AREA UNDER CONSTRUCTION, OR WEEKEND WORK.
- E. DETAILS ARE USUALLY KEYED ONCE ON THE PLANS OR ELEVATIONS AND ARE TYPICAL FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS NOTED OTHERWISE.
- F. CONTRACTOR SHALL CLEAN UP AREAS AFFECTED BY DAILY WORK AND REMOVE DEBRIS AND MATERIALS FROM SITE UPON COMPLETION OF WORK.
- G. MAINTAIN A CLEAN AND ORDERLY WORK AREA AT ALL TIMES.
- H. CONTRACTOR TO PATCH AND REPAIR EXISTING CONSTRUCTION DAMAGED BY THIS WORK AND AS REQUIRED TO MATCH EXISTING.
- J. REMOVE ALL MECHANICAL AND PLUMBING EQUIPMENT - WHERE APPLICABLE - AND CAP ALL EXISTING PLUMBING LINES BELOW GRADE.
- K. PROVIDE TEMPORARY FENCE PER OWNER'S DIRECTION TO ENCLOSE AND PROTECT AREA OF WORK.
- L. FIELD VERIFY ALL CONDITIONS PRIOR CONSTRUCTION.
- M. PROVIDE SAW CUTTING AND CONCRETE REMOVAL AS NECESSARY FOR ALL UNDERGROUND PLUMBING.
- N. CONTRACTOR TO SHORE FLOOR FRAMING AS REQUIRED DURING DEMOLITION/CONSTRUCTION TO ENSURE THE SAFETY OF ALL WORKING IN THE PROJECT AND THOSE ON THE FLOOR ABOVE UTILIZING THE SPACE.

• DEMO PLAN KEYNOTES

1. EXISTING CONCRETE FLOOR WHERE SHOWN FOR FUTURE SHOWER LOCATION TO BE REMOVED.
2. EXISTING INTERIOR WALL TO BE REMOVED.
3. EXISTING SHOWER TO BE REMOVED.
4. EXISTING SAUNA TO BE REMOVED.
5. EXISTING WALL WHERE SHOWN TO BE REMOVED TO ACCOMMODATE NEW ENTRY WAY.
6. EXISTING PLUMBING FIXTURE TO BE REMOVED.
7. EXISTING CASEWORK TO BE REMOVED.
8. EXISTING PARTITION TO BE REMOVED.
9. EXISTING BENCH TO BE REMOVED.
10. EXISTING LOCKERS TO BE REMOVED.
11. EXISTING DOOR AND ASSOCIATED HARDWARE TO BE REMOVED.
12. EXISTING EXTERIOR WALL TO REMAIN.
13. EXISTING INTERIOR WALL TO REMAIN.
14. EXISTING DOOR TO REMAIN.
15. EXISTING FENCING TO REMAIN.
16. EXISTING PIER TO REMAIN.
17. EXISTING STOREFRONT TO REMAIN.



EXPIRES 12-31-26
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**LOCKER EXPANSION
 DEMOLITION FLOOR PLAN**



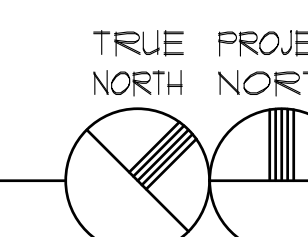
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 2980 SOUTH CAMINO DEL SOL
 GREEN VALLEY, ARIZONA 85622**

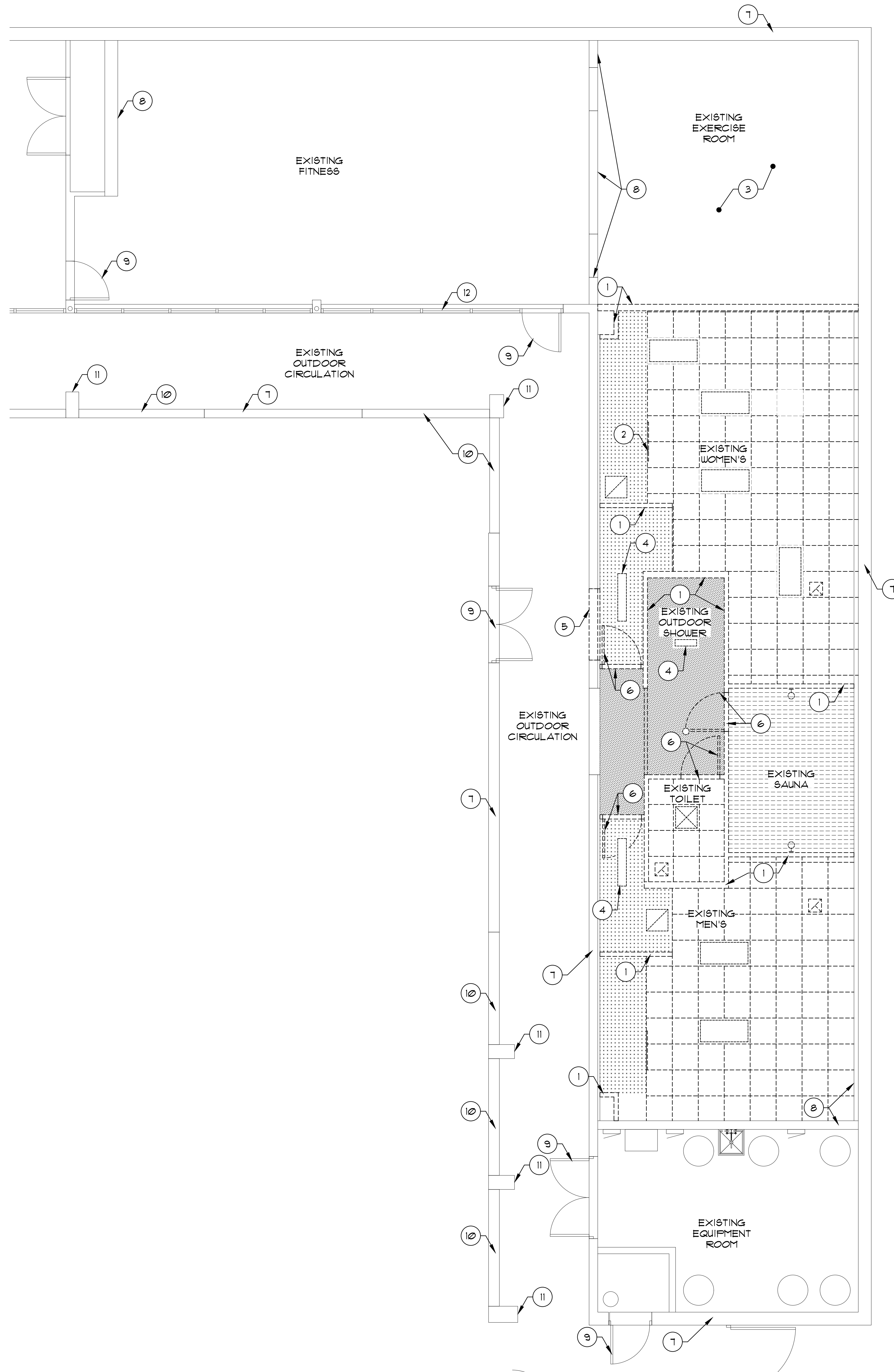
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SHEET

D2.0

1 DEMOLITION FLOOR PLAN
 SCALE: 1/4" = 1'-0"





GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE REMOVAL OF ALL TRASH AND DEMOLISHED MATERIALS. VERIFY WITH OWNER AND THE TRASH REMOVAL AGENCY FOR AN APPROPRIATE DUMPSTER LOCATION AND PICK-UP SCHEDULE.
- C. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE START OF BIDDING AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE OWNER'S / ARCHITECT'S ATTENTION PRIOR TO THE START OF CONSTRUCTION.

DEMOLITION PLAN KEYNOTES

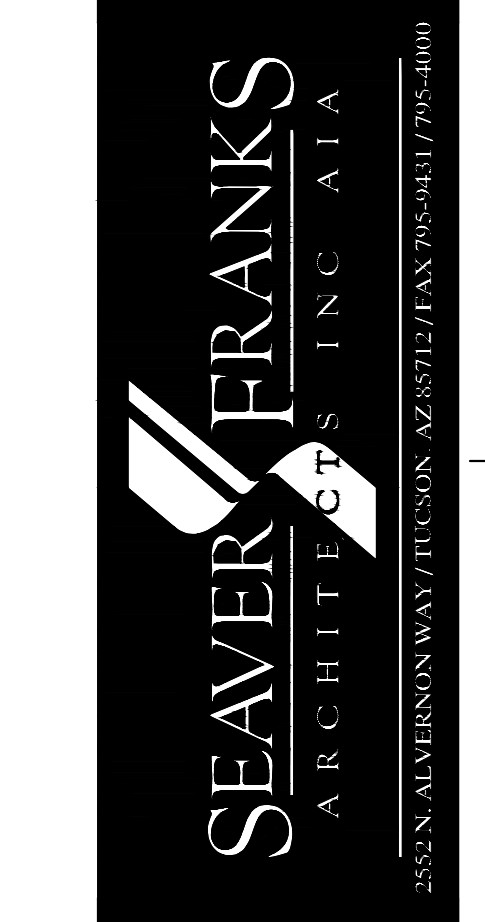
- 1. EXISTING INTERIOR WALL TO BE REMOVED.
- 2. EXISTING SUPPLY AIR DIFFUSER ON WALL TO BE REMOVED.
- 3. EXISTING CEILING WITH LIGHTING AND MECHANICAL DEVICES ON THIS AREA TO BE REMOVED.
- 4. EXISTING LIGHT FIXTURE TO BE REMOVED.
- 5. EXISTING EXTERIOR WALL WHERE SHOWN TO BE REMOVED TO ACCOMMODATE NEW ENTRY WAY.
- 6. EXISTING DOOR WITH ASSOCIATED HARDWARE AND WALL ABOVE TO BE REMOVED.
- 7. EXISTING EXTERIOR WALL TO REMAIN.
- 8. EXISTING INTERIOR WALL TO REMAIN.
- 9. EXISTING DOOR TO REMAIN.
- 10. EXISTING HEADER TO REMAIN.
- 11. EXISTING PIER TO REMAIN.
- 12. EXISTING STOREFRONT TO REMAIN.

RCP LEGEND

	EXISTING SUPPLY AIR DIFFUSER TO BE REMOVED
	EXISTING RETURN AIR GRILLE TO BE REMOVED
	EXISTING 2'x2' LIGHT FIXTURE TO BE REMOVED
	EXISTING 2'x4' LIGHT FIXTURE TO BE REMOVED
	EXISTING 2'x2' ACOUSTICAL CEILING TILE IN EXISTING GRID CEILING TO BE REMOVED
	EXISTING GYPSUM BOARD CEILING TO BE REMOVED
	EXISTING STUCCO CEILING TO BE REMOVED
	EXISTING WOOD SLAT CEILING TO BE REMOVED
	EXISTING LIGHT FIXTURE ON WALL TO BE REMOVED
	EXISTING CAN LIGHT FIXTURE TO BE REMOVED
	EXISTING EXHAUST FAN TO BE REMOVED

NOTES:
 • SEE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE SCHEDULE.

**LOCKER EXPANSION
 DEMOLITION REFLECTED CEILING
 PLAN**



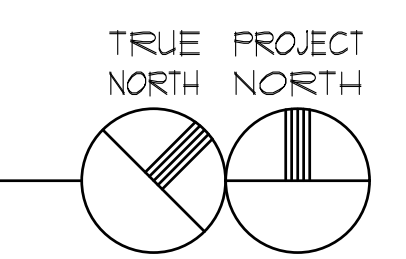
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 2980 SOUTH CAMINO DEL SOL
 GREEN VALLEY, ARIZONA 85622**

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 PROJ. NO. 31703.1
 DRG. SCALE AS NOTED

SHEET

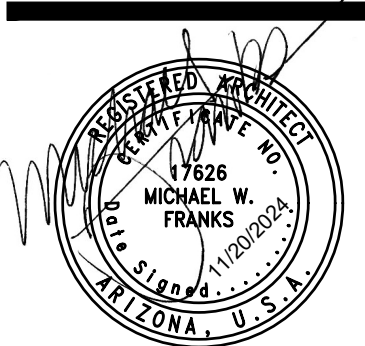
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1 DEMOLITION REFLECTED CEILING PLAN
 SCALE: 1/4" = 1'-0"



GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR CONSTRUCTION.
- B. PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 6/A&B.
- C. ALL FURNITURE TO BE FURNISHED AND INSTALLED BY OWNER.



EXPIRES 12-31-26
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FLOOR PLAN KEYNOTES

1. LOCKERS BY OWNER.
2. FREE STANDING BENCH.
3. 24'X36' CHANNEL-FRAME MIRROR BY BOBRICK, MODEL B-165 2436.
4. OVERHEAD BRACED, FLOOR TO CEILING SHOWER DIVIDER WITH SHOWER CURTAIN AND HOOKS BY BOBRICK, MODELS 1082/1182, 204-2 AND 204-1.
5. SHOWER DRAIN - SEE PLUMBING DRAWINGS.
6. NEW CONCRETE FLOOR - SEE STRUCTURAL DRAWINGS.
7. TUB-WALL TUB/SHOWER COMPARTMENT GRAB BAR BY BOBRICK, MODEL B-6861.
8. LAVATORY - SEE PLUMBING DRAWINGS.
9. BUILT-IN SOLID SURFACE COUNTERTOP.
10. SOAP SYSTEM CABINET, LIQUID BY BOBRICK, MODEL B-830.
11. REVERSIBLE FOLDING SHOWER SEAT BY BOBRICK, MODEL B-5181.
12. TOILET PARTITION BY BOBRICK.
13. WATER CLOSET - SEE PLUMBING DRAWINGS.
14. SURFACE-MOUNTED MULTI-ROLL TOILET TISSUE DISPENSER BY BOBRICK, MODEL B-4288.
15. FLOOR DRAIN - SEE PLUMBING DRAWINGS.
16. STRAIGHT GRAB BAR BY BOBRICK, MODEL B-5806X48.
17. SURFACE MOUNTED WASTE RECEPTACLE BY BOBRICK, MODEL B-271.
18. LOWER AND UPPER WOOD BENCH.
19. SURFACE MOUNTED COAT HOOK BY BOBRICK, MODEL B-9542.
20. URINAL - SEE PLUMBING DRAWINGS.
21. HEAVY DUTY SHOWER CURTAIN ROD WITH SHOWER CURTAIN AND HOOKS BY BOBRICK, MODELS B-610TX36, 204-2 AND 204-1.
22. EXISTING KILN TO REMAIN.
23. PROVIDE NEW KILN.
24. PROVIDE NEW BRICK FLOORING TO MATCH EXISTING.
25. PROVIDE INLET SAUNA WALL VENT (12' ABOVE FINISHED FLOOR).

**LOCKER EXPANSION
REFERENCE FLOOR PLAN**

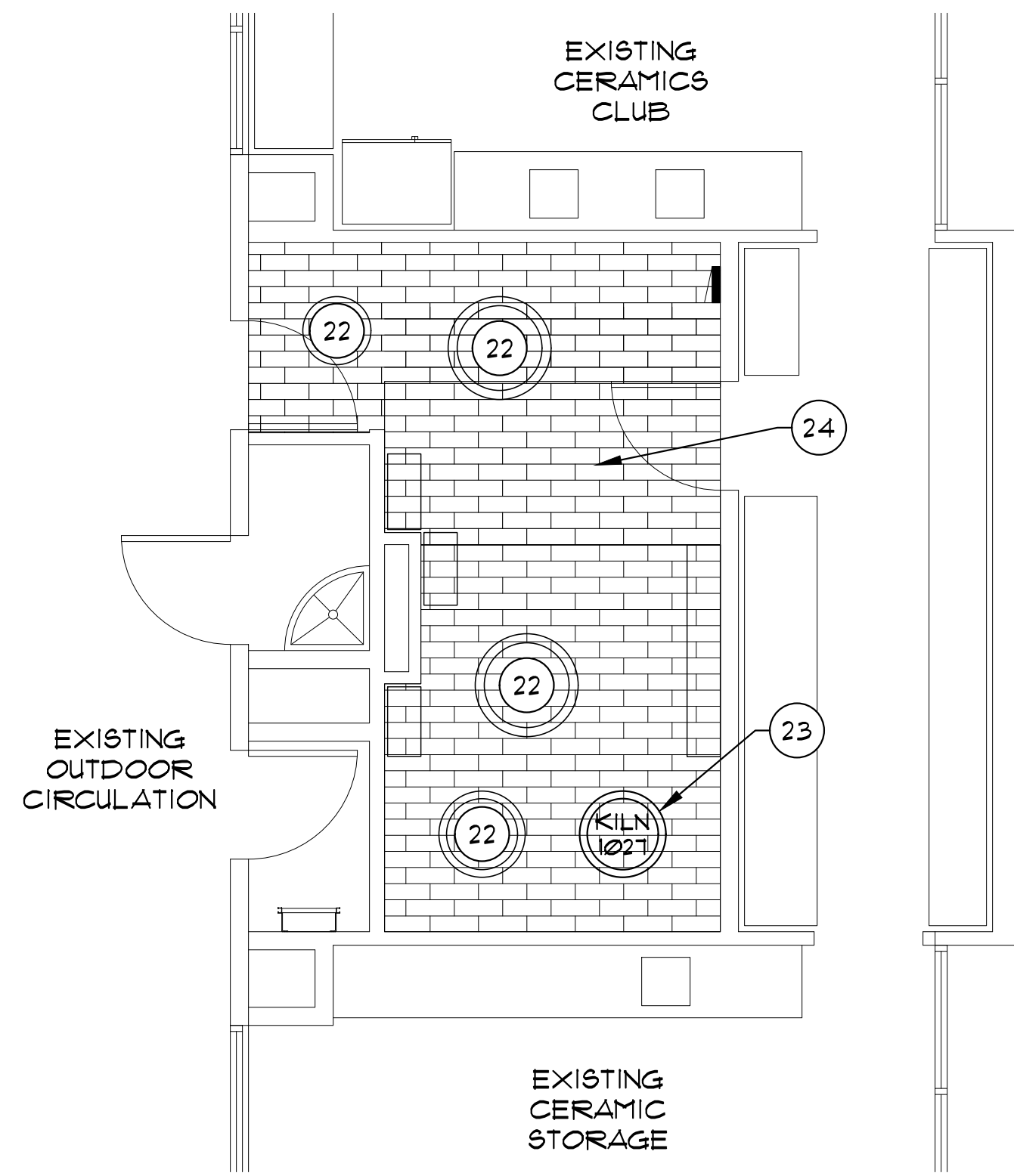
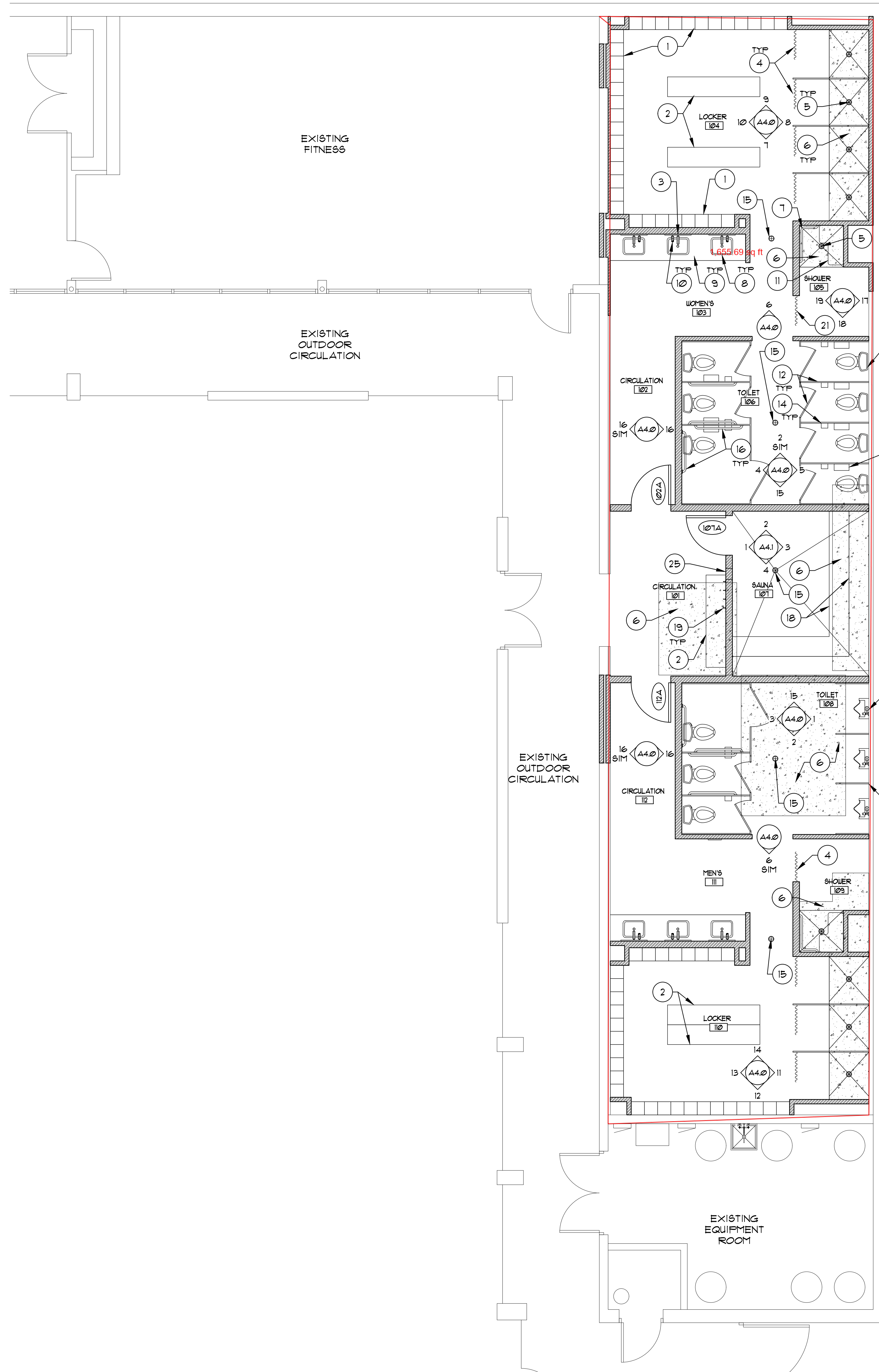


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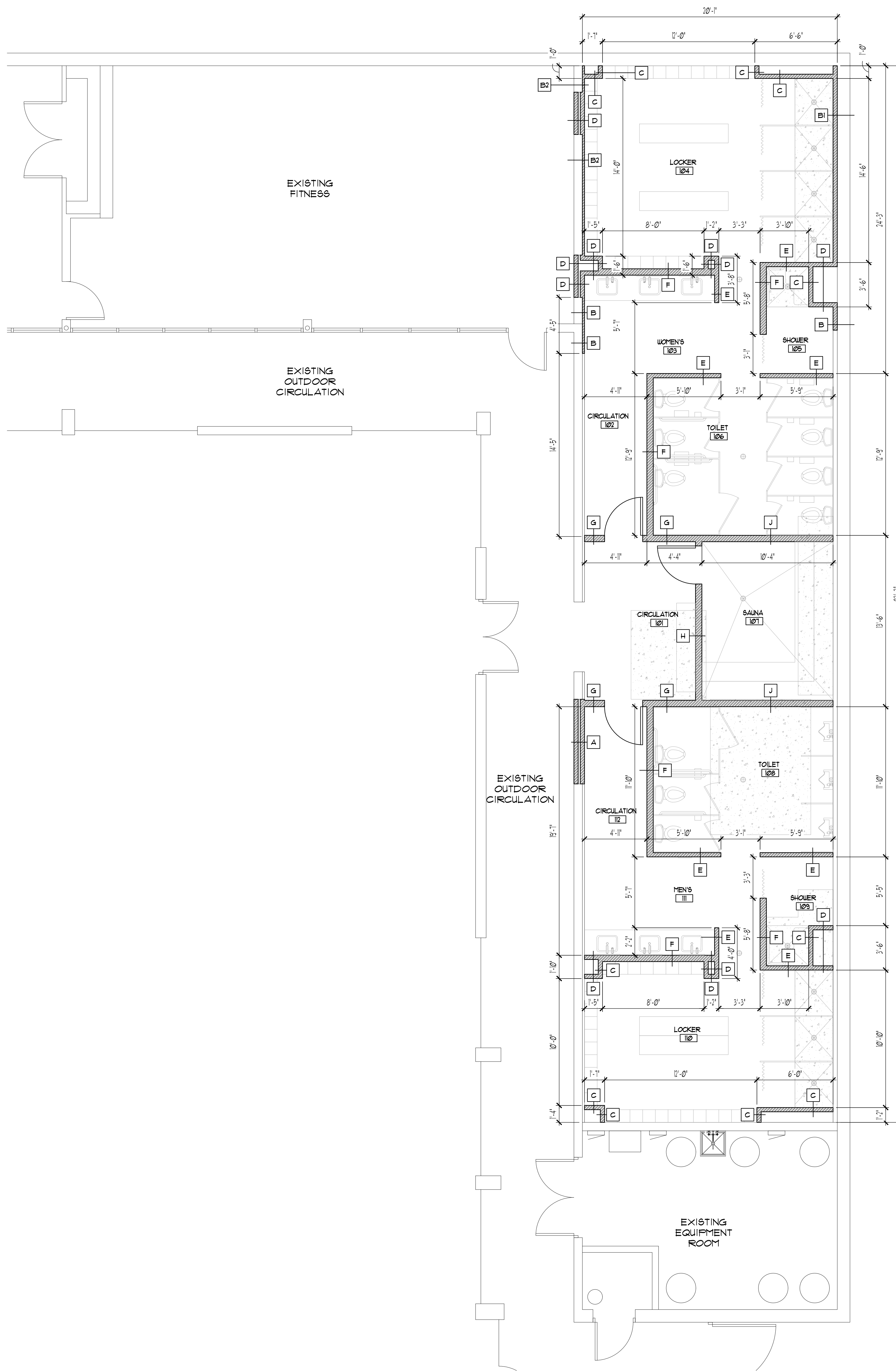
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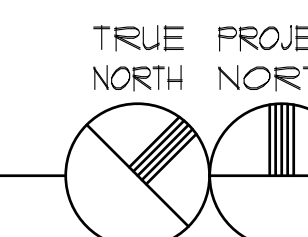
2 REFERENCE FLOOR PLAN
SCALE: 1/4" = 1'-0"
SECOND FLOOR

1 REFERENCE FLOOR PLAN
SCALE: 1/4" = 1'-0"

TRUE PROJECT NORTH
1 REFERENCE FLOOR PLAN
SCALE: 1/4" = 1'-0"
FIRST FLOOR



1 DIMENSION FLOOR PLAN
 SCALE: 1/4" = 1'-0"

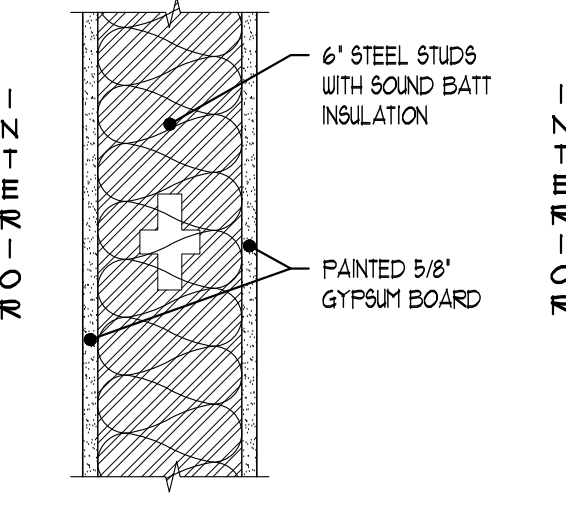
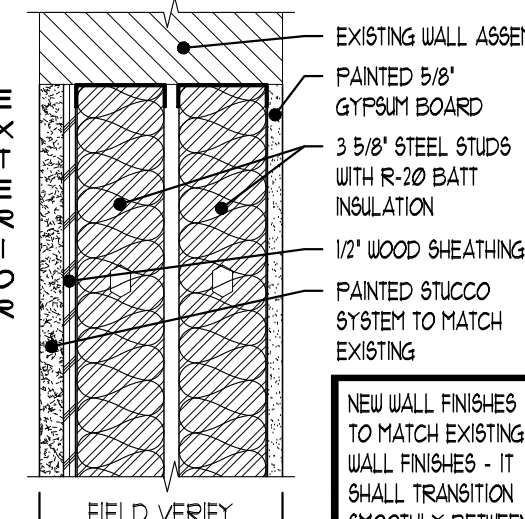
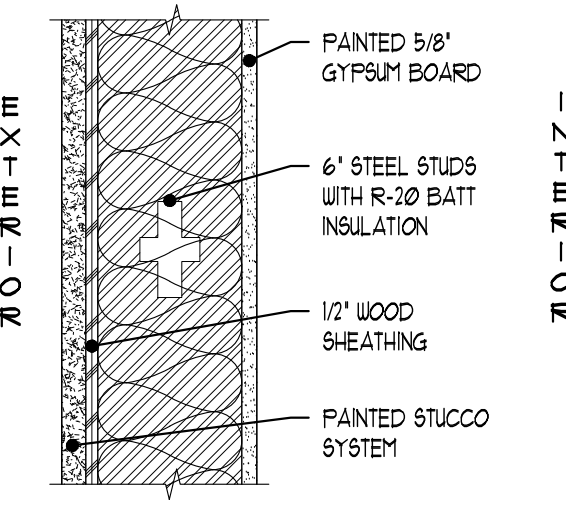
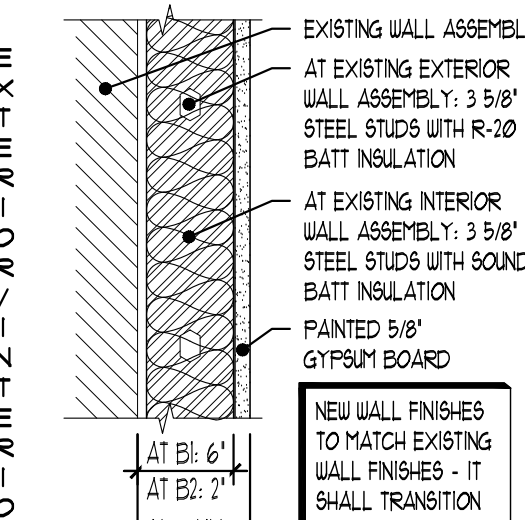
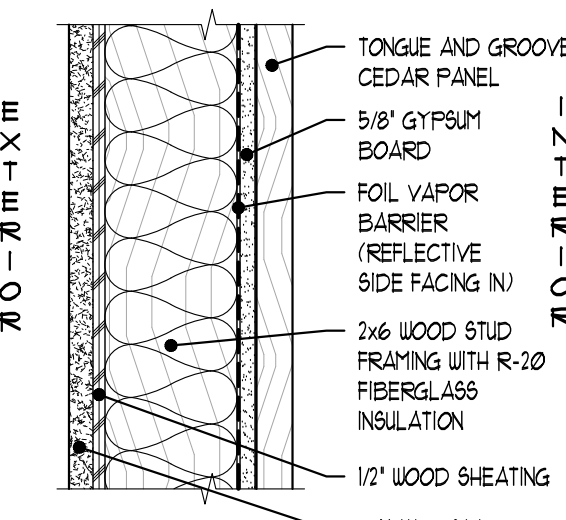
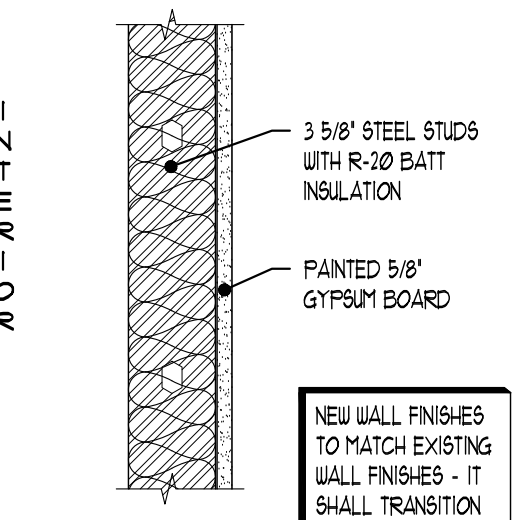
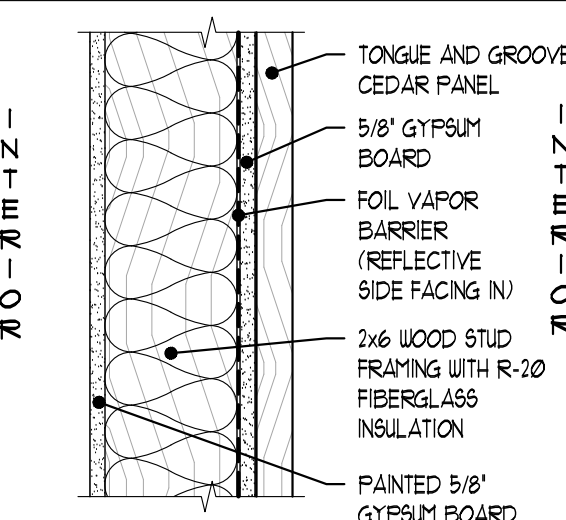
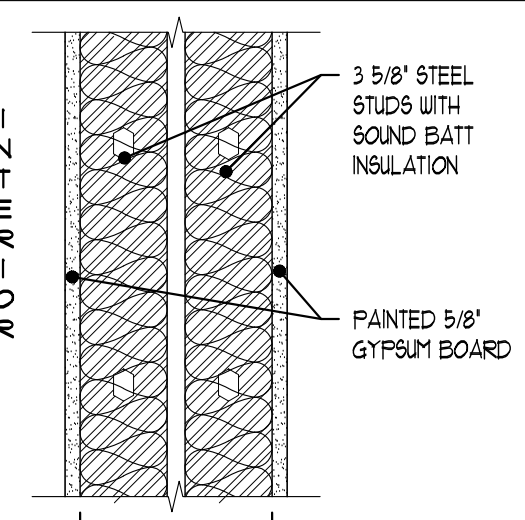
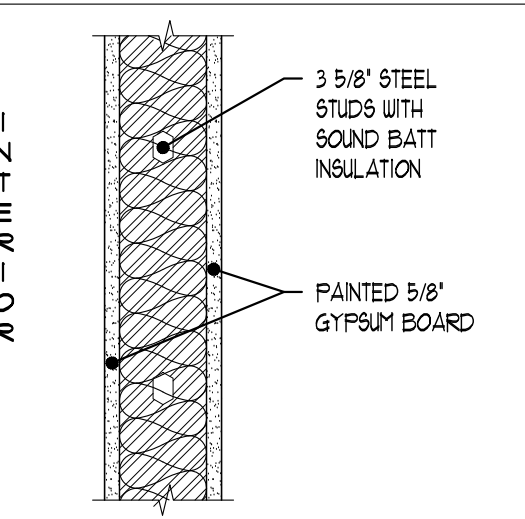


GENERAL NOTES

- A. FIELD VERIFY ALL CONDITIONS PRIOR CONSTRUCTION.
- B. ALL DIMENSIONS ARE TAKEN FROM FACE OF STEEL STUD, UNLESS NOTED OTHERWISE.

WALL TYPES

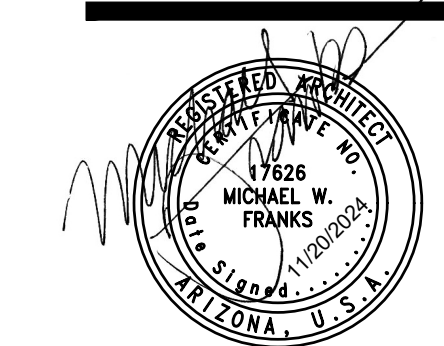
SCALE: 1-1/2" = 1'-0"

 F WALL HEIGHT: 6' ABOVE CEILING HEIGHT	 A WALL HEIGHT: T.O. EXISTING OPENING
 G WALL HEIGHT: 6' ABOVE CEILING HEIGHT	 B WALL HEIGHT: 6' ABOVE CEILING HEIGHT AT CONDITION B2: PROVIDE 1 1/2" STEEL STUDS FURRING
 H WALL HEIGHT: 6' ABOVE CEILING HEIGHT	 C WALL HEIGHT: 6' ABOVE CEILING HEIGHT
 J WALL HEIGHT: 6' ABOVE CEILING HEIGHT	 D WALL HEIGHT: 6' ABOVE CEILING HEIGHT
<p>WALL TYPE GENERAL NOTES:</p> <ol style="list-style-type: none"> a. PROVIDE 5/8" WATER RESISTANT GYPSUM BOARD AT ALL PLUMBING WET WALLS. b. PROVIDE 5/8" FIBERROCK SHEATHING AT ALL WALLS TO RECEIVE TILE. c. PROVIDE SHEARWALL SHEATHING AS INSTRUCTED AND NOTED ON STRUCTURAL DRAWINGS. PLACE PAINTED 5/8" GYPSUM BOARD ON TOP OF THE SHEARWALL ASSEMBLY. d. INSIDE THE SAUNA: PROVIDE VERTICAL GRAIN RED CEDAR TONGUE AND GROOVE SAUNA WOOD CLADDING. 	
 E WALL HEIGHT: 6' ABOVE CEILING HEIGHT	

PARTITION SIZE TABLE

STEEL STUD PARTITION SIZE TABLE				
MAXIMUM UNBRACED PARTITION HEIGHT	STUD DEPTH	FLANGE WIDTH	STUD GA	STUD SPACING
10'-10"	3 5/8"	1 1/4"	25	24" O.C.
12'-5"	3 5/8"	1 1/4"	25	16" O.C.
13'-0"	3 5/8"	1 1/4"	20	24" O.C.
15'-0"	3 5/8"	1 1/4"	20	16" O.C.
20'-0"	6"	1 1/4"	20	24" O.C.

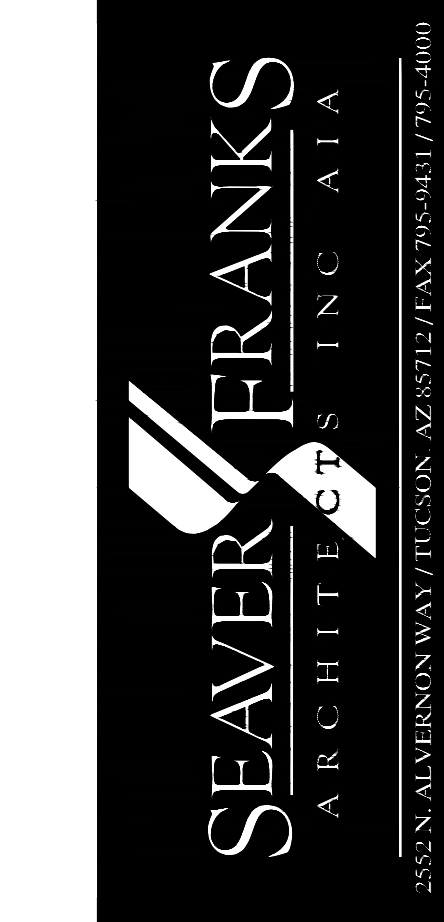
- NOTES:**
1. HEIGHT LIMITATIONS AND STUD PROPERTIES BASED ON INFORMATION PROVIDED IN THE STEEL STUD MANUFACTURERS ASSOCIATION HANDBOOK. VALUES ARE FOR INTERIOR NON-STRUCTURAL NON-COMPOSITE PARTITIONS WITH A 5 PSF LOAD AND L/240 DEFLECTION FACTOR.
 2. PROVIDE 4" STUDS AT PARTITIONS WITH 4" COLUMNS.
 3. SEE 1/A3.0 FOR SLIP TRACK DETAIL.
 4. PROVIDE TYPE 'X' GYPSUM BOARD AT ALL RATED PARTITIONS.
 5. PROVIDE DRYWALL CONTROL JOINTS (AMICO DEEP 'V' WITH REMOVABLE TAPE OR SIMILAR). JOINTS ARE TO BE PLACED AT DRYWALL EXPANSES EXCEEDING 30'-0" IN LENGTH. PROVIDE CONTROL JOINTS IN CEILINGS TO LIMIT AREA TO 2500 SQUARE FEET AND IN ORDER TO LIMIT DIMENSIONS IN EITHER DIRECTION TO 50'-0".



EXPIRES 12-31-26

REVISIONS NO. DATE

**LOCKER EXPANSION
 DIMENSION FLOOR PLAN**

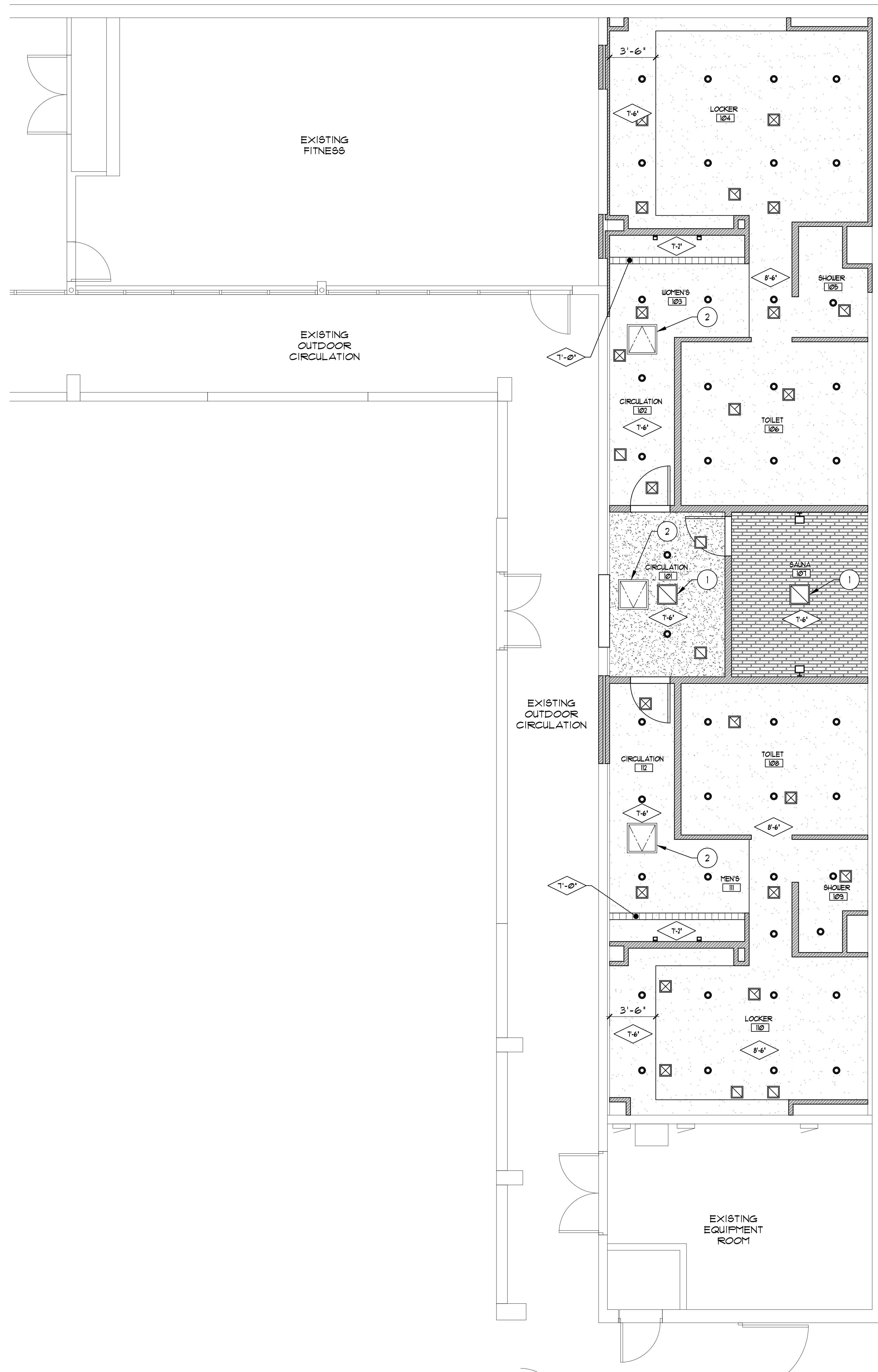


**GREEN VALLEY RECREATION CENTER
 2980 SOUTH CAMINO DEL SOL
 GREEN VALLEY, ARIZONA 85622**

ISSUE DATE 11-04-2024
 PROJ. NO. 3709.1
 DRG. SCALE AS NOTED

SHEET

A2.1



GENERAL NOTES

- FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 6/A6.0.

FLOOR PLAN KEYNOTES

- SAUNA OUTLET CEILING VENT.
- PROVIDE 24"x24" CEILING ACCESS HATCH. VERIFY LOCATION WITH OWNER.

RCP LEGEND	
	CEILING HEIGHT TAG
	NEW SUPPLY AIR DIFFUSER
	NEW RETURN AIR GRILLE
	NEW EXHAUST FAN
	NEW 4\"/>
	NEW WALL SCONCE LED LIGHTING FIXTURE
	NEW PAINTED GYPSUM BOARD CEILING
	NEW PAINTED STUCCO FINISH CEILING
	NEW WOOD SLAT CEILING
	NEW TILE BULKHEAD TO WRAP AROUND THE WALL

NOTES:
 • SEE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE SCHEDULE.

**LOCKER EXPANSION
REFLECTED CEILING PLAN**

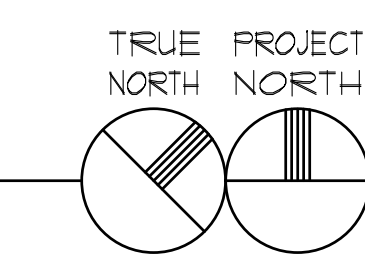


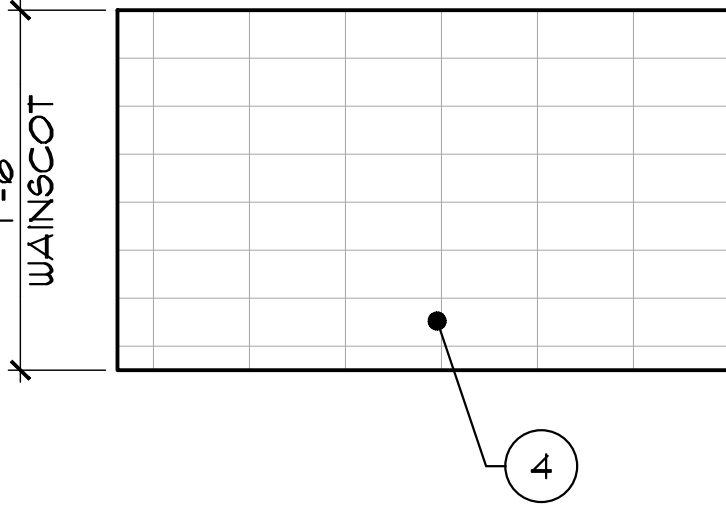
**GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622**

ISSUE DATE 11-04-2024
 PROJ. NO. 3703.1
 DRG. SCALE AS NOTED

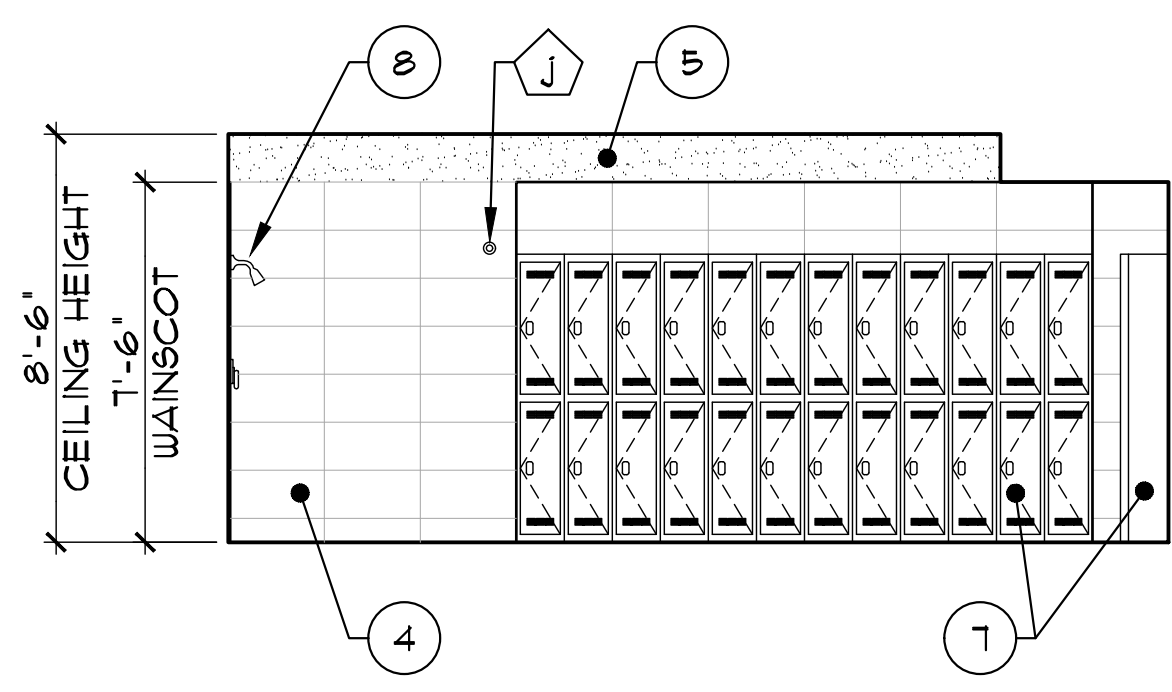
SHEET
A3.0

REFLECTED CEILING PLAN
 SCALE: 1/4" = 1'-0"

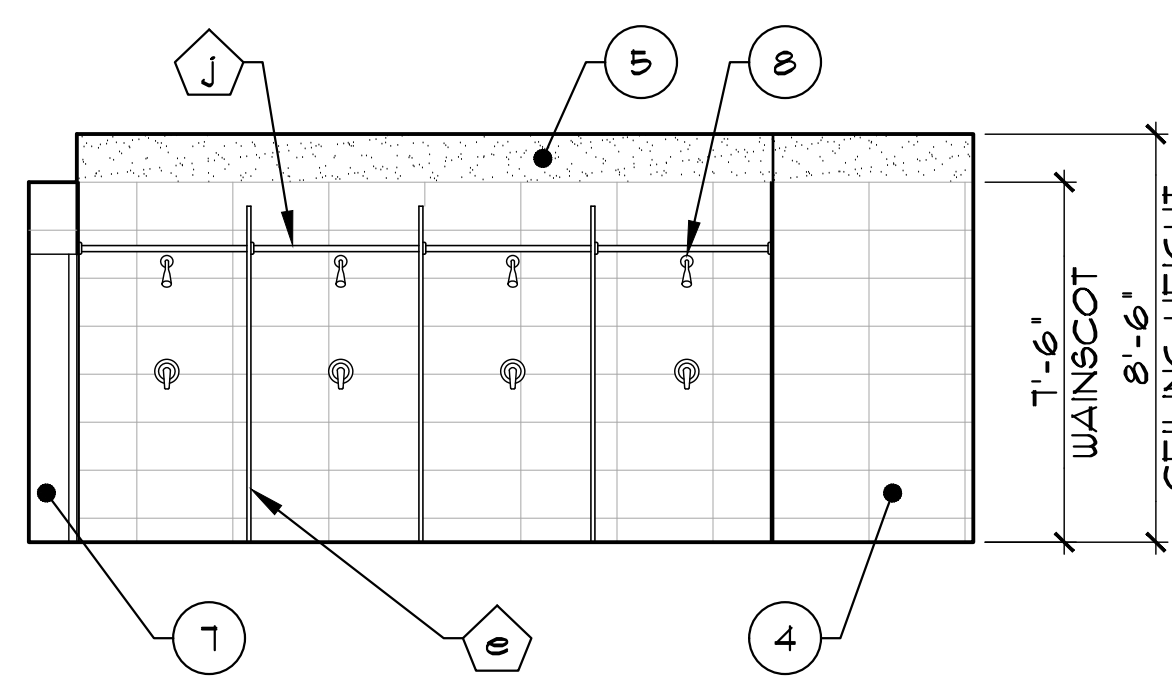




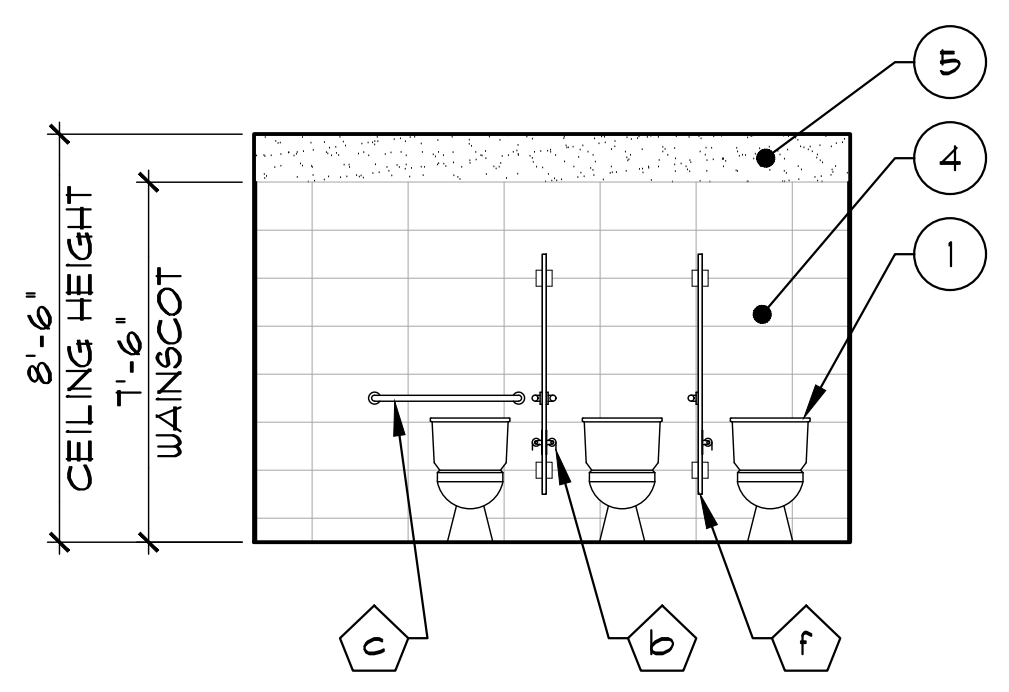
16 MEN'S / WOMEN'S CIRCULATION
SCALE: 1/4" = 1'-0"



12 MEN'S LOCKER - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



8 WOMEN'S LOCKER - EAST ELEVATION
SCALE: 1/4" = 1'-0"



4 WOMEN'S TOILET - WEST ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES

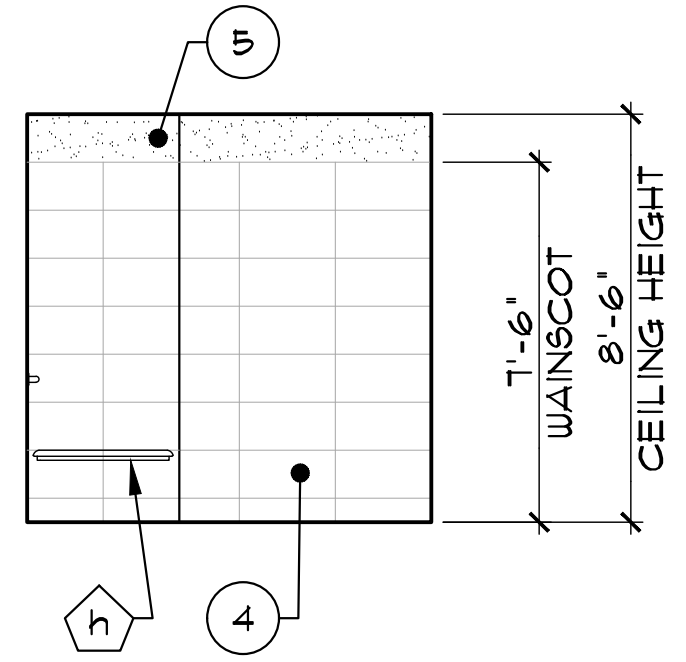
- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 6/A&B.

PLAN KEYNOTES

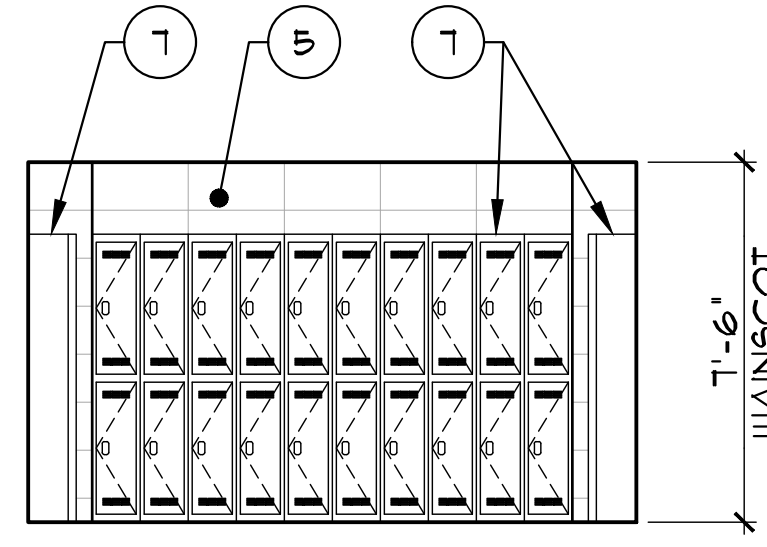
- NOTE: NOT ALL KEYNOTES ARE USED ON THIS SHEET.
1. NEW WATER CLOSET - SEE PLUMBING DRAWINGS.
 2. NEW URINAL - SEE PLUMBING DRAWINGS.
 3. NEW LAVATORY ON SOLID SURFACE COUNTERTOP - SEE PLUMBING DRAWINGS.
 4. NEW WALL TILE.
 5. NEW PAINTED 5/8" GYPSUM BOARD.
 6. NEW WALL SCONCE - SEE ELECTRICAL DRAWINGS.
 7. NEW LOCKERS BY OWNER.
 8. NEW SHOWER - SEE PLUMBING DRAWINGS.

ACCESSORIES KEYNOTES

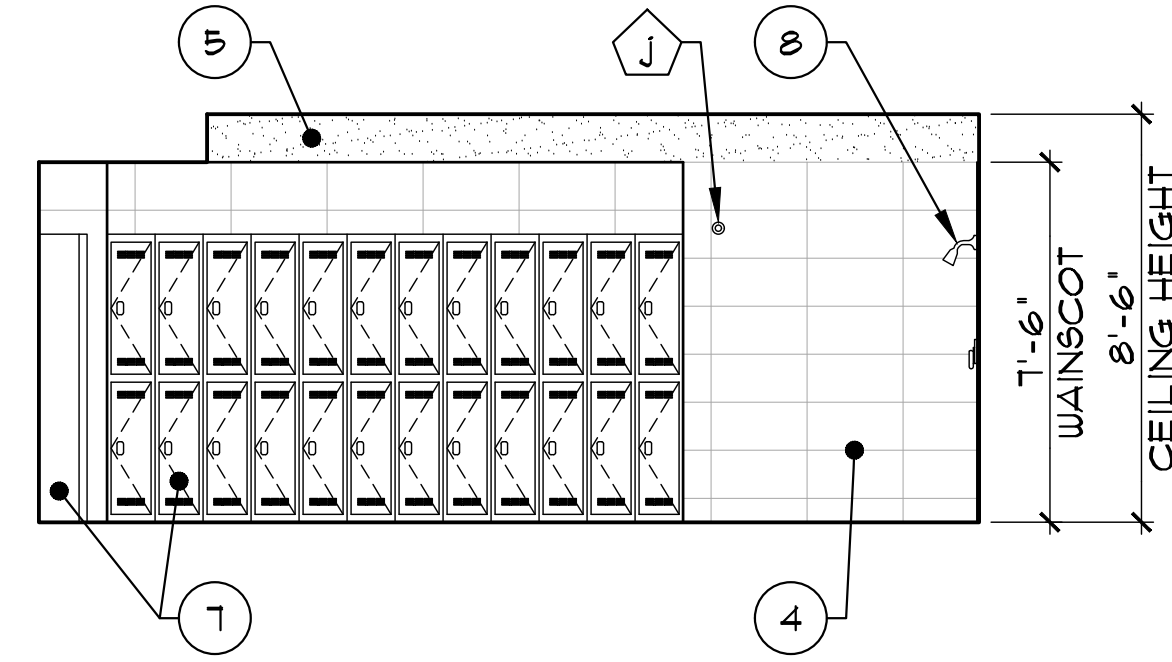
- BATHROOM ACCESSORIES SHALL BE BY BOBRICK
- a. SOAP DISPENSER.
 - b. SURFACE MOUNTED TOILET TISSUE DISPENSER.
 - c. GRAB BAR CONCEALED MOUNTING / SNAP FLANGE.
 - d. FRAMED MIRROR.
 - e. HIGH PRESSURE LAMINATE SHOWER PARTITION.
 - f. HIGH PRESSURE LAMINATE TOILET PARTITION.
 - g. HIGH PRESSURE LAMINATE URINAL PARTITION.
 - h. SHOWER BENCH.
 - i. SHOWER CURTAIN ROD.



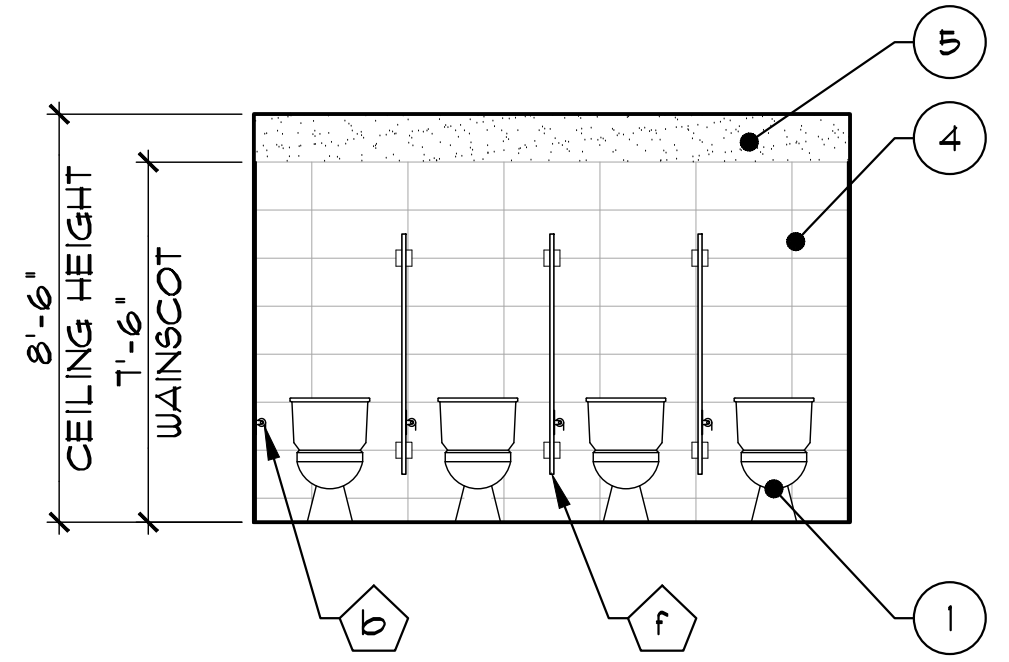
17 ADA TRANSFER SHOWER
SCALE: 1/4" = 1'-0"



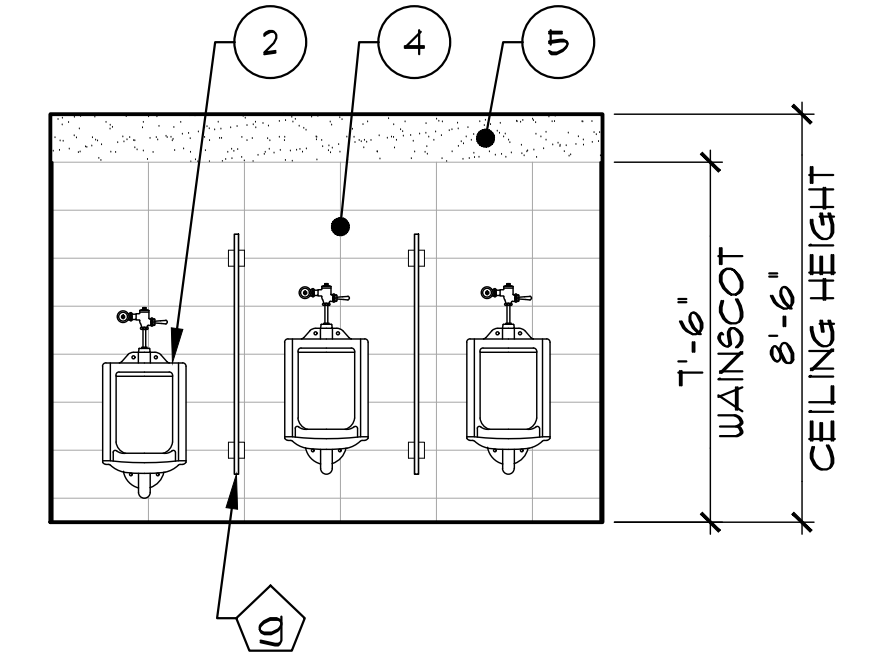
13 MEN'S LOCKER - WEST ELEVATION
SCALE: 1/4" = 1'-0"



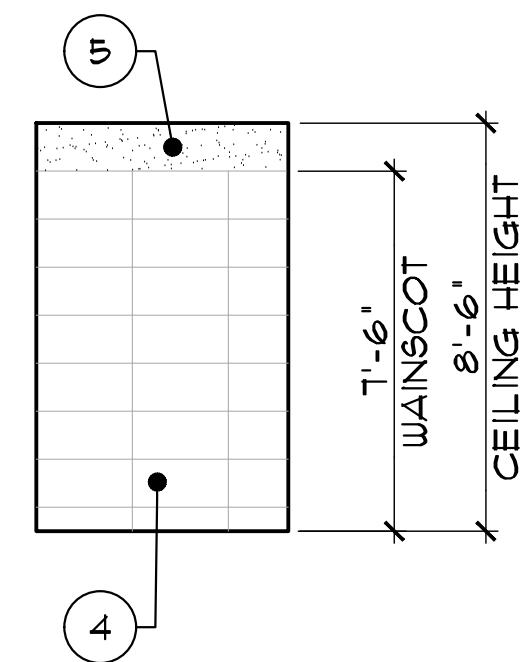
9 WOMEN'S LOCKER - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



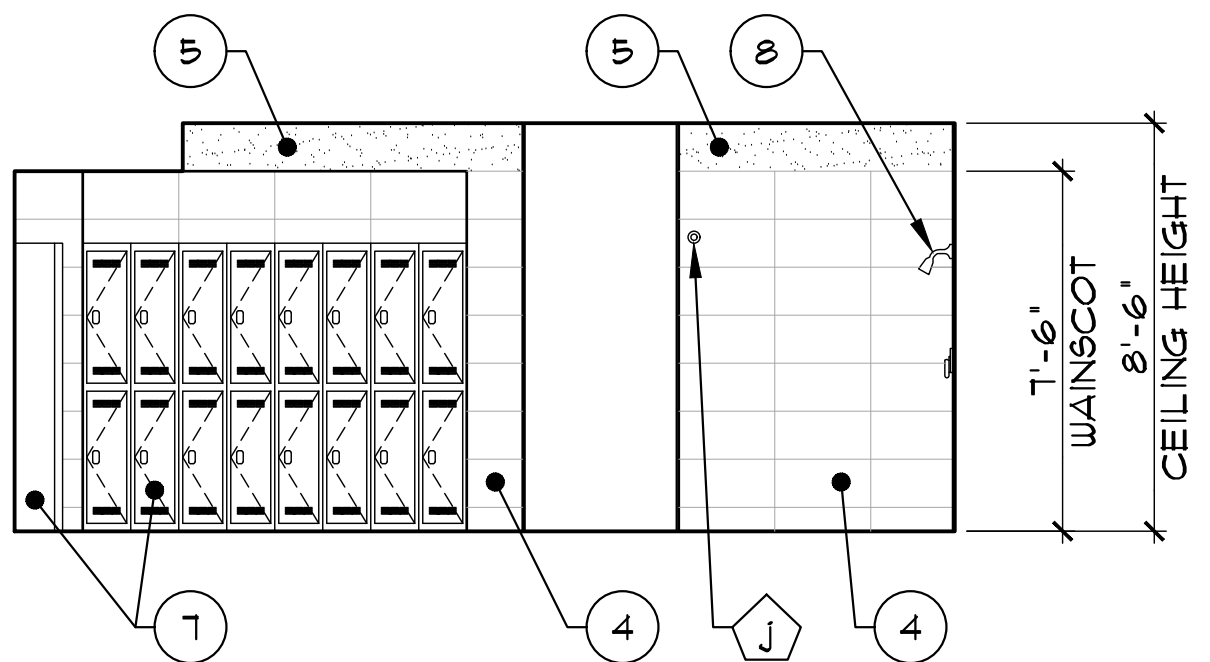
5 WOMEN'S TOILET - EAST ELEVATION
SCALE: 1/4" = 1'-0"



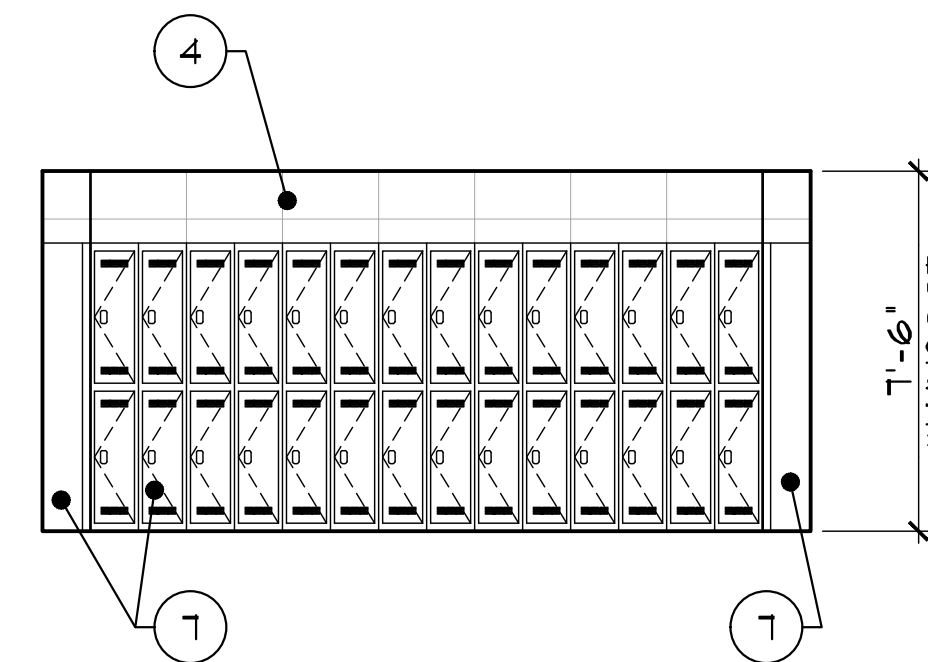
1 MEN'S TOILET - EAST ELEVATION
SCALE: 1/4" = 1'-0"



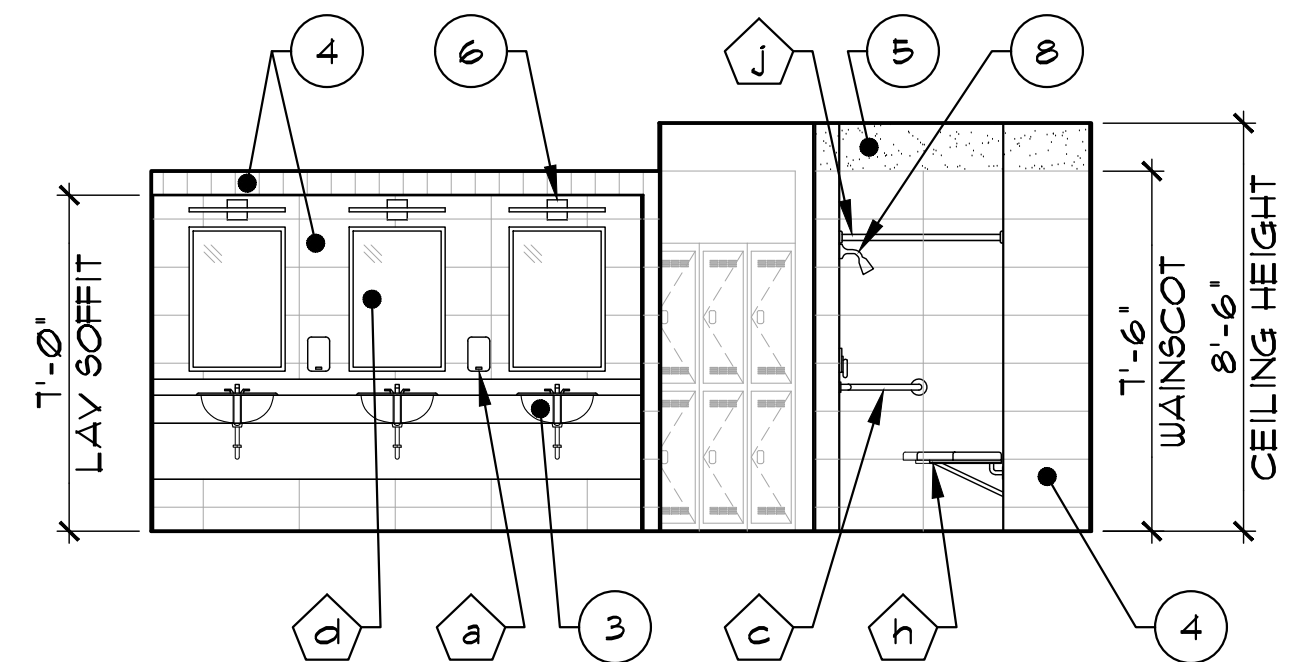
18 ADA TRANSFER SHOWER
SCALE: 1/4" = 1'-0"



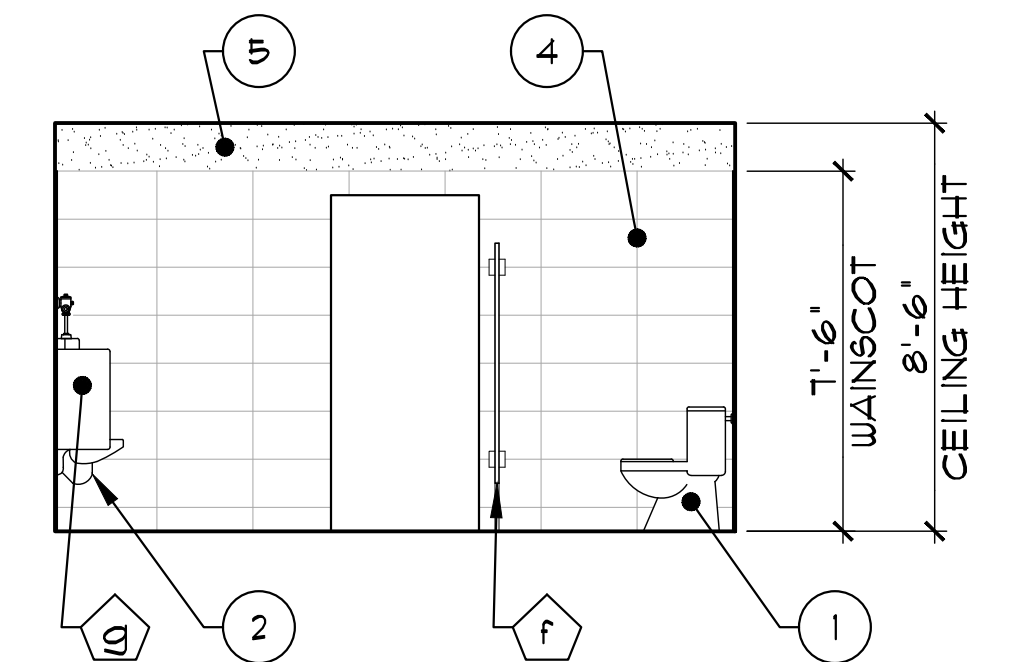
14 MEN'S LOCKER - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



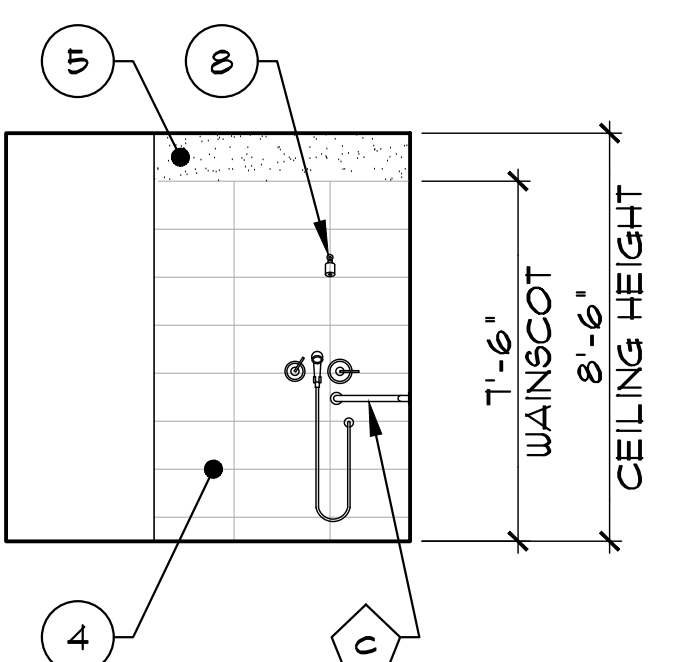
10 WOMEN'S LOCKER - WEST ELEVATION
SCALE: 1/4" = 1'-0"



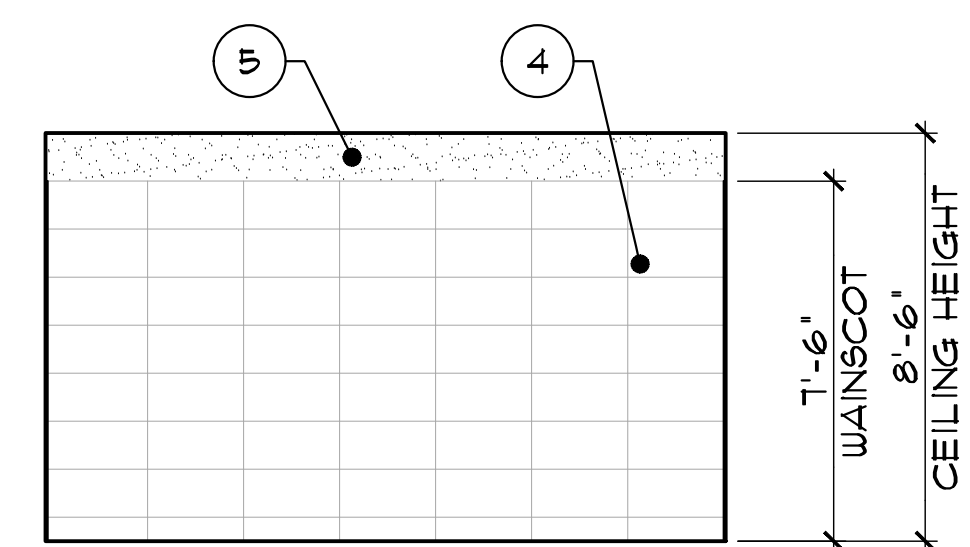
6 LAVATORY AND ADA SHOWER
SCALE: 1/4" = 1'-0"



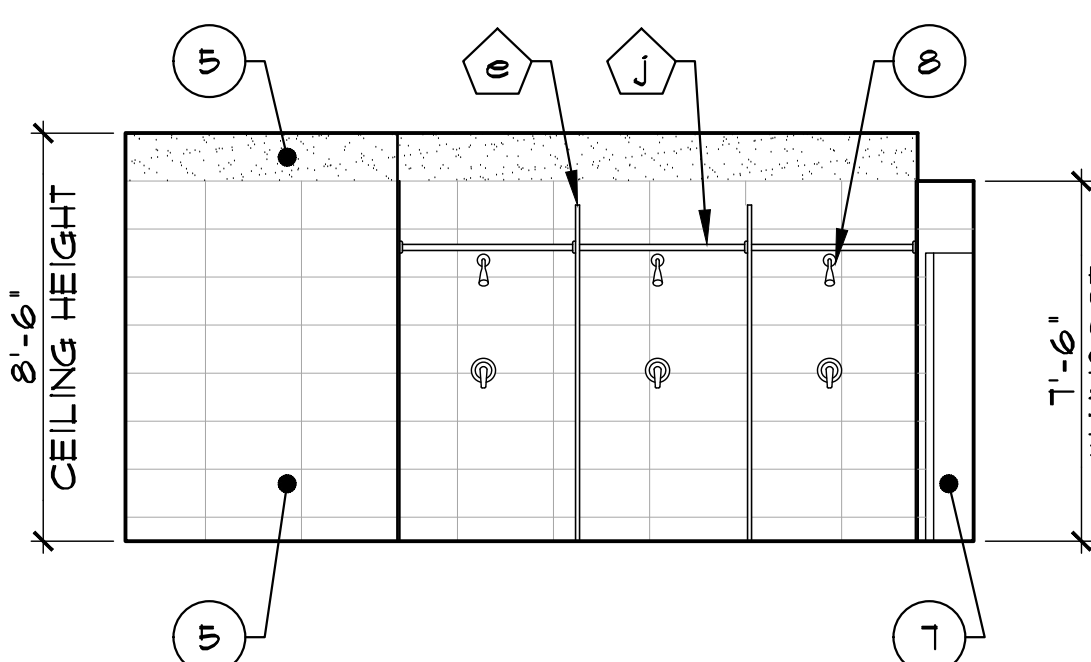
2 MEN'S TOILET - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



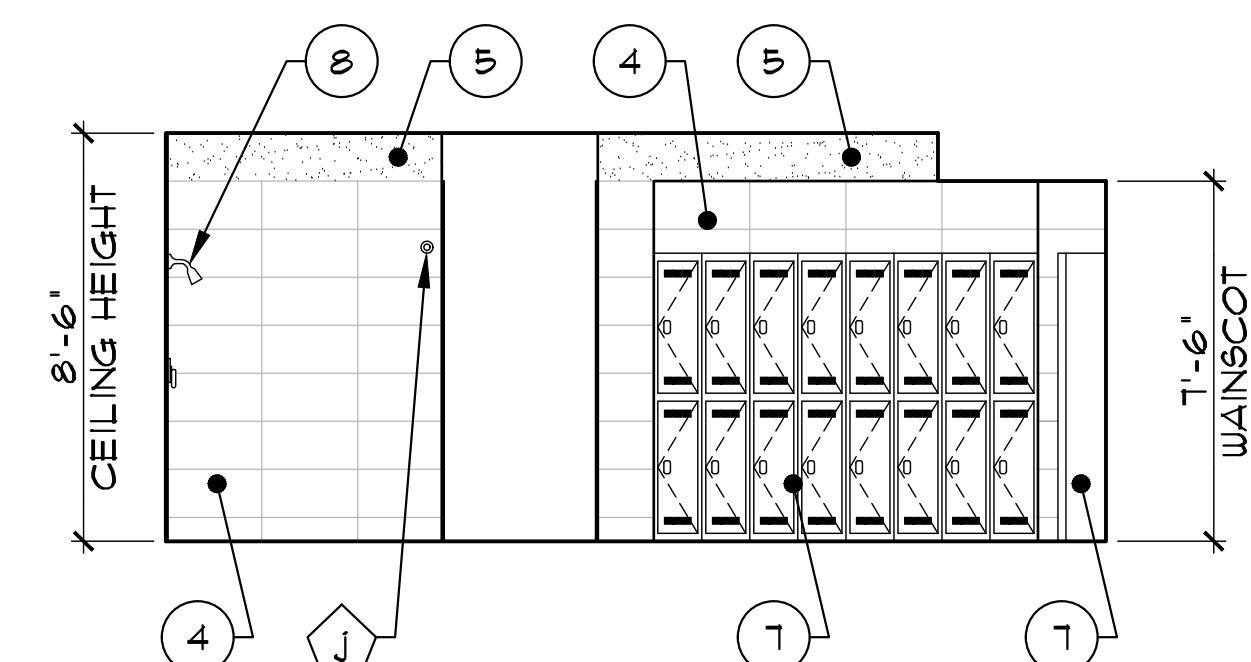
19 ADA TRANSFER SHOWER
SCALE: 1/4" = 1'-0"



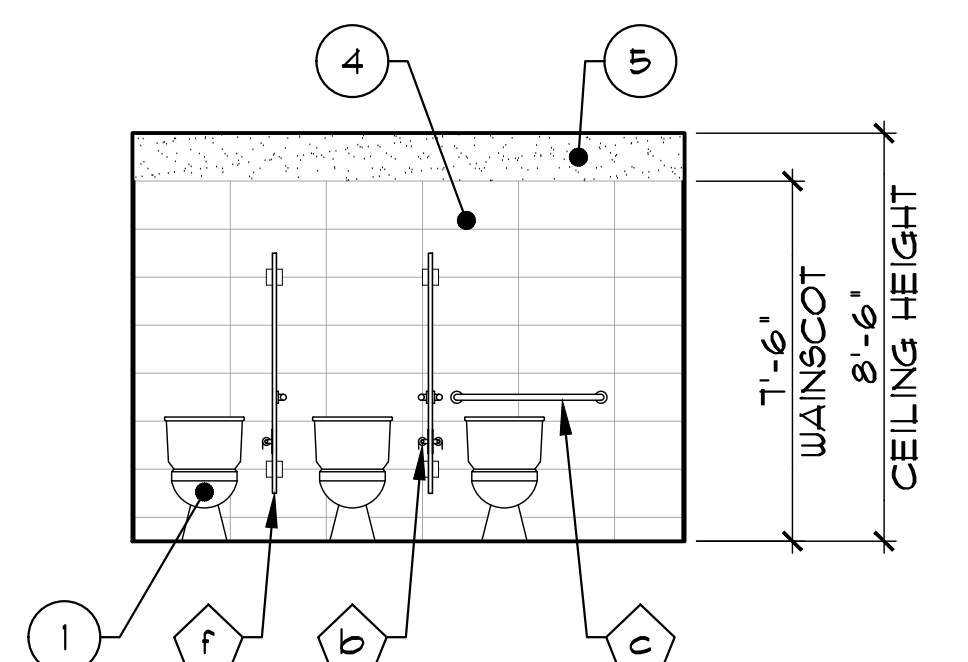
15 GENERAL MEN'S / WOMEN'S TOILET
SCALE: 1/4" = 1'-0"



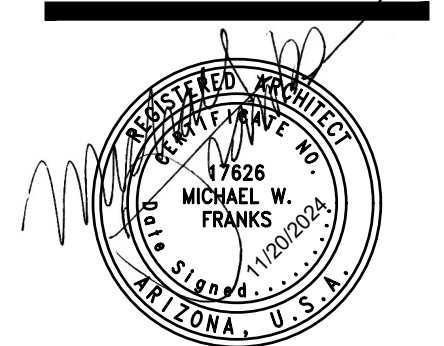
11 MEN'S LOCKER - EAST ELEVATION
SCALE: 1/4" = 1'-0"



7 WOMEN'S LOCKER - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

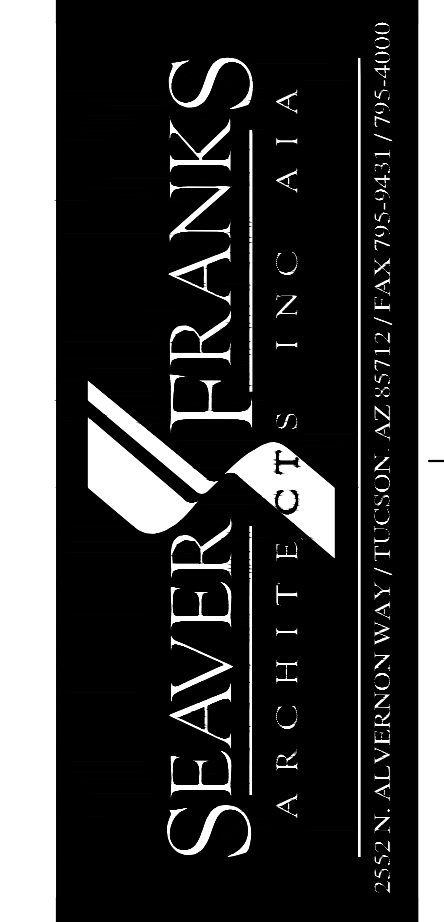


3 MEN'S TOILET - WEST ELEVATION
SCALE: 1/4" = 1'-0"



EXPIRES 12-31-26
REVISIONS
NO. DATE

**LOCKER EXPANSION
INTERIOR ELEVATIONS**



**GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622**

ISSUE DATE 11-04-2024
PROJ. NO. 3703.1
DRG. SCALE AS NOTED

SHEET

A4.0

- A. FIELD VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
- B. PROVIDE BACKING AS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 6/A60.



EXPIRES 12-31-26

REVISIONS
NO. DATE

PLAN KEYNOTES

NOTE: NOT ALL KEYNOTES ARE USED ON THIS SHEET.

1. NEW WOOD PANEL SOFFIT.
2. NEW WOOD SLAT BENCHES.
3. NEW WOOD PANEL FLOORING.
4. NEW VERTICAL GRAIN RED CEDAR TONGUE AND GROOVE SAUNA WOOD CLADDING.
5. NEW WOOD DOOR.



Sauna Kit Assembly

6. Door
Place the door into the framed opening and fasten the hinge side to the 2x4 frame. For added strength and durability replace one screw per hinge (on jamb side) with a 4" screw that will secure into the framing. This step will ensure your sauna door will stay true throughout the years. Mount so the door jamb is flush with the surface of the exterior wall material. Be sure the door is level and plumb. If it is not, use shims between the opposite side jamb and frame. If you do not install the door perfectly square you may have problems with the door opening and closing properly. After the door is securely fastened into place, stuff fiberglass insulation around door jamb and seal with foil vapor barrier. Finish installing tongue and groove wall paneling up to the door jamb then install the door casing trim with a finishing nailer. Use suitable exterior door trim to match sauna exterior walls. Door handles are one of the few sauna parts that can have a stain or wood sealant applied to prevent sweat and moisture from soaking in and staining.

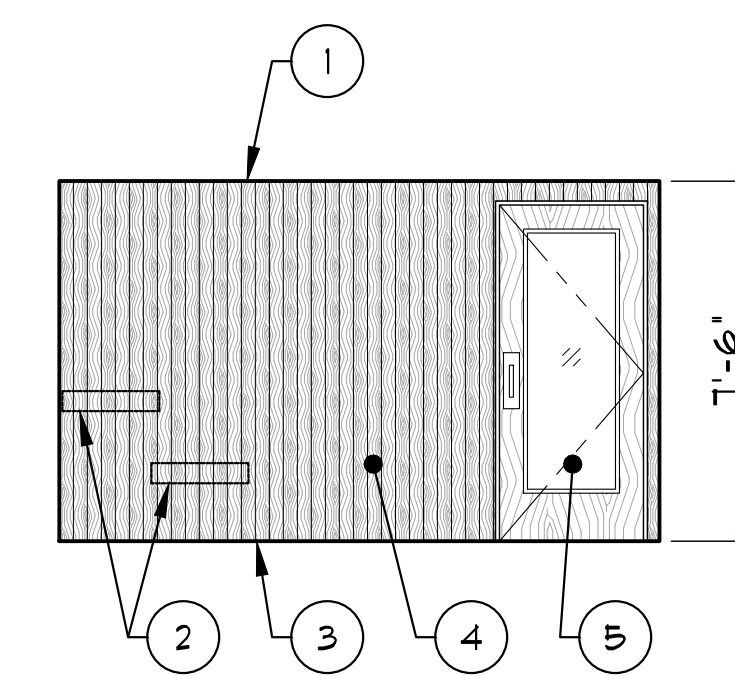
7. Heater
The Sauna Heater should be installed by a licensed electrician according to the heater installation manual following the manufacturer's specifications. When fastening the heater to the wall, be absolutely sure fasteners are going into blocking or studs behind paneling to support the weight of heater and rocks. Wall mounted Sauna heater controls should be placed on exterior wall, near latch side of door for easy use on entering (never put wall controls facing inside sauna room).

8. Heater Guard
Now attach heater guard according to heater manufacturer's installation manual. Place pre-built heater guard into place and fasten using the provided 4" fasteners. For custom built heater guards, follow the heater installation manuals specifications to ensure the prevention of combustion. Inspect heater guard a couple times a year to make sure it is securely installed.

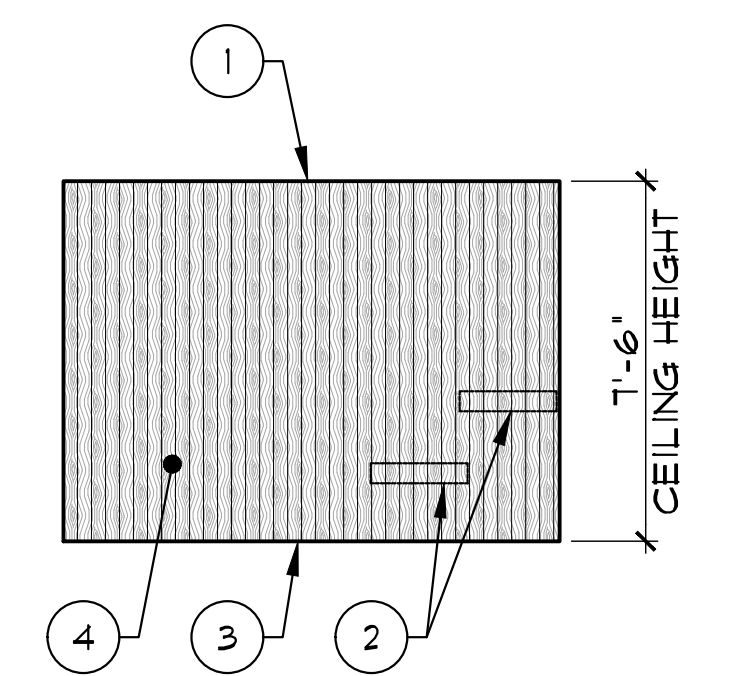
9. Flooring
Now assemble snap together Red Cedar or Ipe hardwood tile flooring on walking area in front of benches. Plastic based tiles are safe to use in cooler temperatures of sauna floor and if sawdust will melt the filler out of the wood. We recommend using "DAP Plastic Wood" or "Wood Workers Friend" that can be found at any hardware store or home centers.

10. Base Board Trim
After flooring material is installed, cut baseboard trim to fit around bottom edge of walls, leaving a 1/2" gap between flooring material and base board trim. Fasten with finishing nailer. **Warning! Do not use any paraffin based wood putties** because the heat of the sauna will melt the filler out of the wood. We recommend using "DAP Plastic Wood" or "Wood Workers Friend" that can be found at any hardware store or home centers.

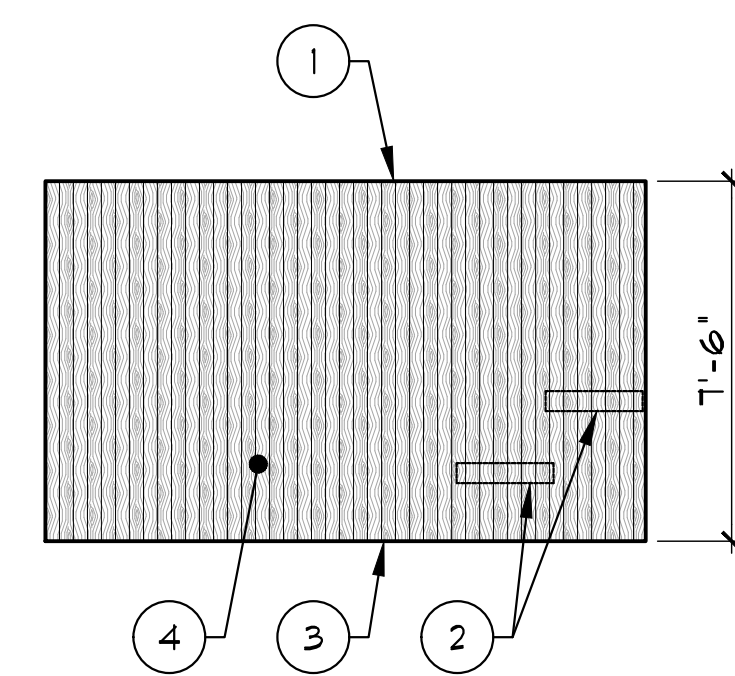
11. Finishing Sanding
Wear a protective breathing mask to avoid breathing in dust particles. Cedar dust is especially dangerous to the respiratory system. Once you have finished the installation of your sauna kit, use a electric powered orbital palm sander and sanding sponges with fine #120 grit sandpaper to give a final touch up sanding to remove small dents, nicks and marks from installation. Use a vacuum to remove all of the sanding dust.



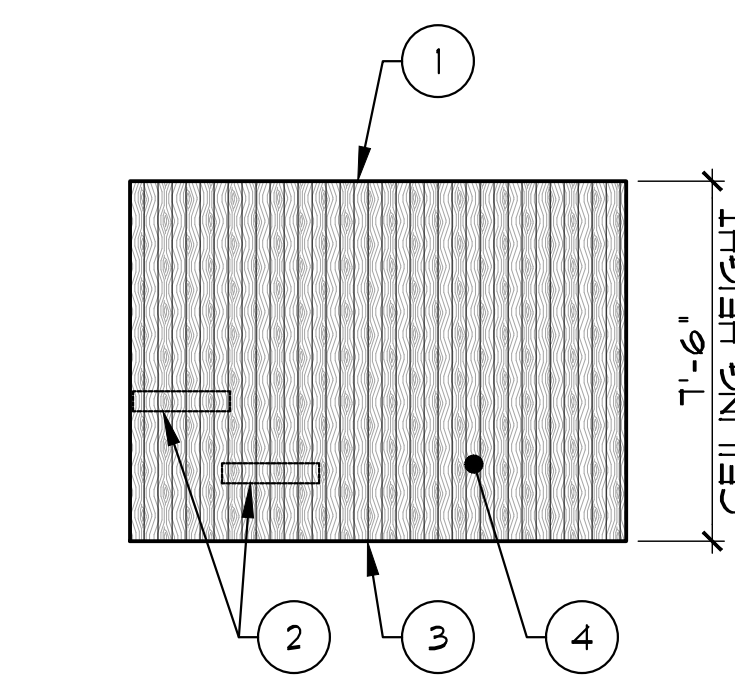
1 SAUNA INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



2 SAUNA INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



3 SAUNA INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



4 SAUNA INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"

Sauna Kit Assembly

1. Vapor Barrier
Be sure proper nailer supports are installed between studs for bench rails and heater mounting before beginning (see Framing Preparation). Staple the special foil vapor barrier (foil side facing you) starting at floor and work horizontally around the room attaching with staples. Allow a little extra vapor barrier in corners to be sure foil doesn't get stretched and torn during paneling assembly. Continue stapling foil vapor barrier tiers around room up to the ceiling, allowing 1" to 2" overlap into lower row. Then install foil vapor barrier on ceiling, taking time to overlap the foil onto walls. For best results, tape seams with high-heat aluminum foil tape.



2. Tongue & Groove Paneling
A Brad nailer is recommended for speed and accuracy. Using a regular hammer for paneling installation can cause damage to boards long preventing the paneling from fully seating. Also a small punch is handy to sink each nail head below surface. It is advised to use stainless steel finishing nails to prevent fastener corrosion which will cause unsightly discoloring and dark streaks. Nail board tongue at 45 degree angle into framing stud or nailer, positioned so that nail will just be hidden by groove of next board. It is best to cut a few pieces of paneling so you can use the scrap cut-offs to practice the nailing technique. Allow a minimum 1/2" gap from bottom of T&G to finished floor level which will allow airflow and prevent moisture wicking off floor and staining/deteriorating wall boards. Allow enough clearance for flooring material or tiles to slide underneath T&G and still have 1/2" gap. Most applications are vertical to minimize board waste.

Install ceiling paneling first. After the ceiling is paneled then install T&G panels on the walls. Start T&G paneling on both sidewalls then panel front and back walls. Use a level to start first board straight then check levelness every couple boards. Nail into tongue on ends and at least 2 spots evenly spaced. The end piece of paneling near corners can be face nailed where the corner trim will cover nail heads (3/4" cove molding is typical). Do not install panels over the door opening. Cut to fit and install cove molding in corners and ceiling as needed. Recommended Horizontal Paneling Applications, starting at bottom of room, alternate short pieces to every other end of wall. Or place seams as desired in other pattern or random. **Note:** It is recommended to install the T&G with tongue side up. This will help prevent any moisture from collecting in the groove. **Option:** Your T&G boards may vary in shade, particularly with cedar. To make a nice transition, lay out all your boards for a given wall in a pattern from light to dark. In general cases faster your lighter boards towards the top of the wall and darker ones towards the bottom, but personal preference is the rule.



3. Sauna Benches
Now see bench installation instruction sheet and bench parts. View the bench video at www.superiorsaunas.com to help visualize bench designs. Mount rails and set benches, be sure rails are well fastened into framing backer board and studs behind tongue and groove paneling. Most saunas have two bench tiers with typical bench top heights at 18" and 36". For third tier benches set height at 54" (recommended minimum ceiling height of 7' 6"). See bench assembly for more details and diagrams.

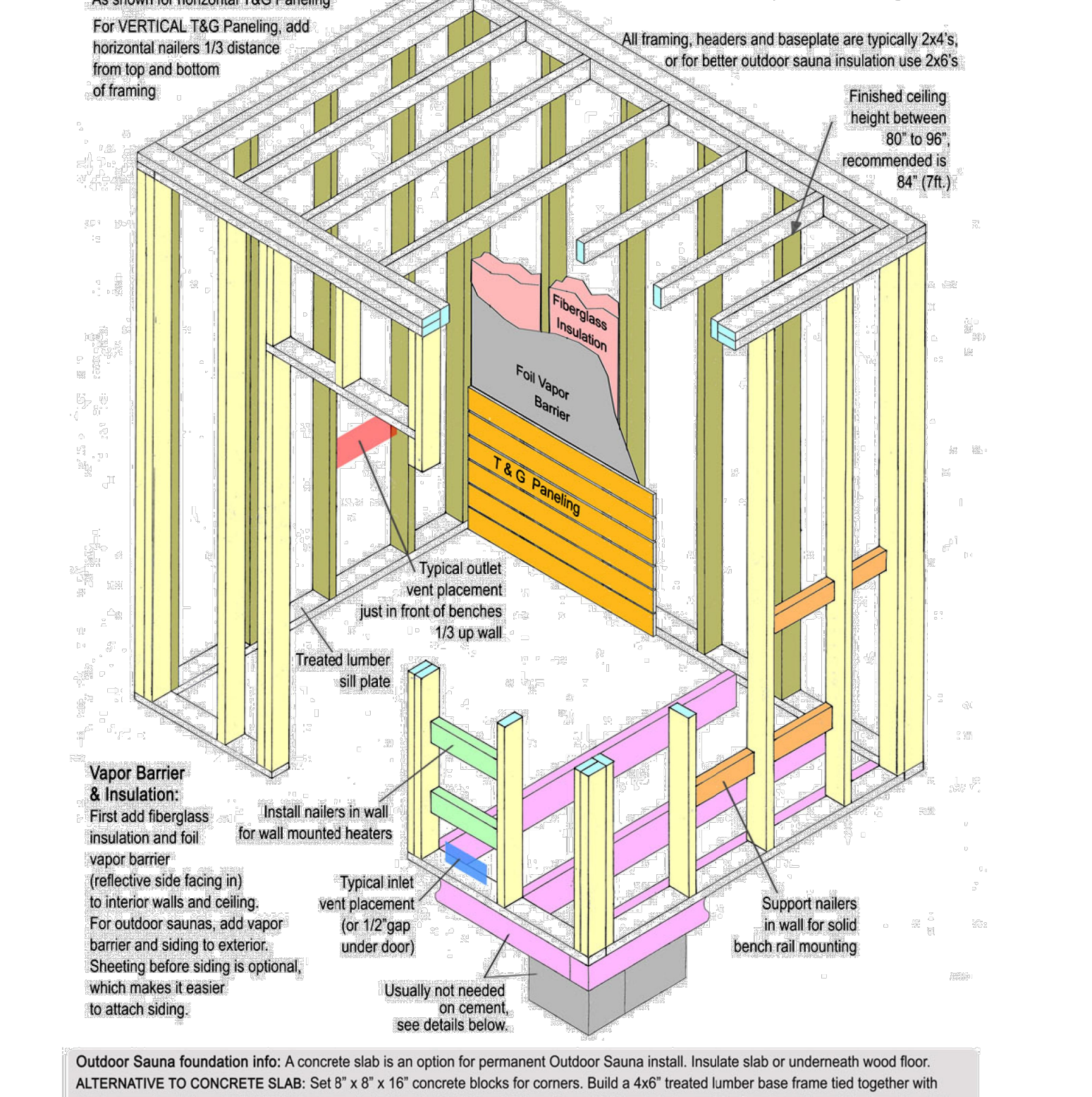
Backwood Benches: Bench top is 1 1/2" thick. Top of Bench Rail heights need to be mounted at 16 3/4" for the 1st tier, 34 1/2" for the 2nd tier, and 52 1/2" for the third tier if needed.

Cedar Benches: Bench top is 1 1/2" thick. Top of Bench Rail heights need to be mounted at 16 1/2" for the first tier, 34 1/2" for the 2nd tier, and 52 1/2" for the third tier if needed.

Wall Mounted Bench Rails: Use a pencil to scribe bench rail height and mounting positions. In certain cases wall rails may need trimming. If dowels are in rails they should face up and towards the front of bench, to fit between bench seat boards to hold from sliding. Start with the rails for the main benches. Use the provided 4" fasteners to mount the rail to the wall, making sure the screws are hitting the backer board supports inside the wall. Use a level to ensure that all of the bench rails will be the same height around the entire sauna.

WIRING & INSULATION: After blocking/nailers are installed, you should have a licensed electrician rough in all of the required wiring for the sauna heater and control panel, lighting and any other accessories. Paper faced fiberglass insulation is recommended for easier stapling to face of framing studs. Next, insulate the R13 or 2x6 constructed walls with max R value fiberglass or proper heat rated foam at R13 to R33 value.

Sauna Room Framing Example



Outdoor Sauna foundation info: A concrete slab is an option for permanent Outdoor Sauna install. Insulate slab or underneath wood floor. **ALTERNATIVE TO CONCRETE SLAB:** Set 8" x 8" x 16" concrete blocks for corners. Build a 4x6" treated lumber base frame tied together with steel corner brackets, add 2x6" post hangers, install treated 2x6 floor joists and use 3/4" treated plywood for floor base board. Optional to add sauna floor drain kit with rubber sheeting over wood floor. For roof design ideas, see photos of Outdoor Saunas. www.SuperiorSaunas.com

Sauna Kit Assembly

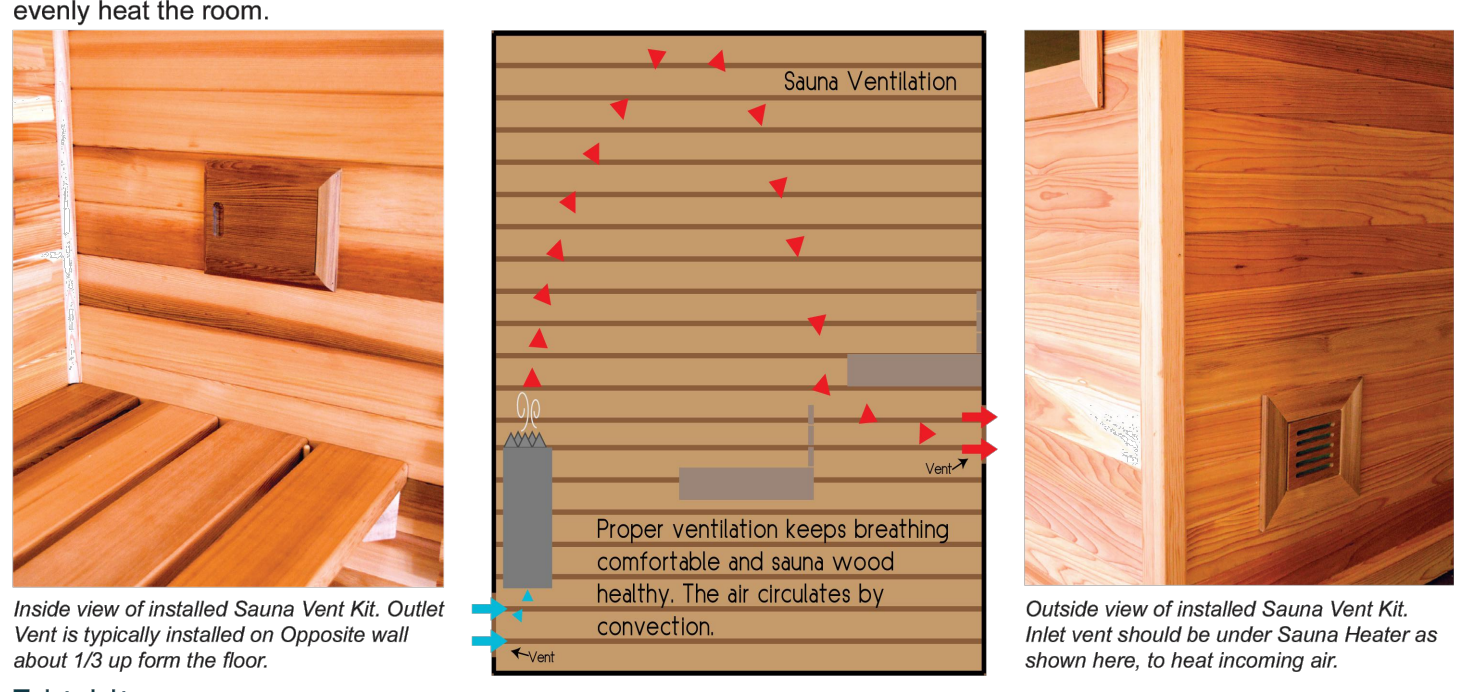
Pillar Supports: Once all wall rails are in place, install the main bench tops to help determine where pillar supports will fit. Install the adjustable feet into bottom supports then adjust height accordingly to raise or lower the pillar to bottom of bench. Pillars that support the end of an L-Bench should be installed directly parallel to the main benches. Double Pillars that support the center of main benches should be installed last. Lay the double pillar down under bottom bench and raise up in place with the bench tops resting on the wall rails. Adjust the feet to raise the pillar to bottom of benches. Fasten all pillars to walls with 4" screws, making sure screws are hitting the support backing inside the wall.

Bench Valance / Skirting Installation: For kits that include Bench Valances, review the provided Bench Support Layout drawing. Valance Brackets need to be mounted directly in front of the wall mounted rail so that the top of the bracket is flush with the top of the rail and make sure that the Valance Bracket stop block is facing down. Use the provided 4" fasteners to secure the brackets to the wall. In certain cases brackets may be pre-installed on to the according pillar. Now set the valances in place.

Standard or Deluxe Backrest: Position the backrest approximately 20" from the top of the bench to the top of the backrest or which ever position suits your comfort, by test positioning before fastening. Fasten using the provided 4" fasteners making sure to use a level to make for a clean install.

Finishing: You may want to do a final sanding with an electric palm sander, fine grit paper to polish paneling and benches to a perfect finish. Use optional natural sauna wood treatment Paraffin Oil for greisting sauna benches from moisture and perspiration soaking in.

4. Venting
Venting is very important for health of sauna woods and provides adequate oxygen for sauna users, especially in wood burning saunas. Outlet vent should be underneath the top bench on wall across from sauna heater to minimize heat loss. Trace louvered vent box on wall and cut slightly larger hole through wall with a jig saw for a clean cut, then fasten vent box in wall with louvers on exterior side of wall. Attach sliding vent door w/ frame on inside wall with finish nailer. You will also need a lower intake vent under heater or nearby if you do not have approximately a 1/2" gap under door. For maximum efficiency, install the intake vent directly underneath the heater to create a convection effect that will more evenly heat the room.



5. Lighting
Install wall mounted Vapor Proof Sauna Light Fixture according to instruction sheet. For the Spectra Recessed Sauna Lighting Kit, see our website Literature Library Install Guides if it is not enclosed in the Sauna Kit Literature Envelope. Always test fit vapor proof fixtures with wiring attached before drilling holes in ceiling, to be sure wiring will reach. Sections of the Spectra wire harness can be extended by splicing in extra wire per installation instructions.

Sauna Design Key Features

1. Sauna Ventilation
The number one feature for a clean long lasting sauna is proper air exchange. There should be an upper outlet vent approximately 3 feet off of the floor, usually under the top bench. The lower intake vent should be at floor level, near the sauna heater which helps to circulate by convection. For indoor saunas, instead of the lower vent, it is acceptable to just leave a 1/2" gap under the door.

2. Sauna Vapor Barrier
It is important that the foil vapor barrier is used in sauna design to keep moisture out of walls. Foil vapor barrier adds IR value of insulation. Plastic or synthetic vapor barriers are not designed for high temperatures inside of the sauna and will likely breakdown and release toxins and be rendered ineffective. Any hot spots like knots in paneling can melt holes in plastic and synthetic vapor barriers, exposing the inner wall to damaging water vapor. Simply install by stapling vapor barrier around walls and ceiling with foil side facing you. Recommended 2" to 3" overlap at seams and use aluminum foil tape on seams for best results.

3. Sauna Wood Types
The woods used for sauna steam rooms vary widely, usually depending on what types of woods are available locally. Sauna woods for walls and ceiling are milled with tongues & grooves (T&G) that interlock tightly and make installation easy. Superior Sauna uses Aspen, Spruce and Cedar for our saunas.

Aspen is very light in color and provides a more soothing sauna experience. It is also considered the most non-allergenic wood for sauna use. This means that more people (especially in public or commercial saunas) can enjoy the health benefits of sauna without irritating certain respiratory conditions, as the famous aromatic Cedar wood scent sometimes can. Superior Sauna Aspen sauna wood comes with a milled relief groove on the backside to allow airflow behind the wood and vapor barrier. It also features a waterfall style T&G design for a more effective water resistant seal.

Nordic Spruce sauna wood paneling is a great choice for any residential or commercial saunas. The quality rustic look (with small tight knots) is very traditional and beautiful with its unique wood grain. Nordic Spruce sauna wood is popular for use in Finnish and European traditional saunas.

Western Red Cedar is a very popular sauna wood with its varying shades of color and aromatic scent. Western Red Cedar T&G sauna wood is available in two different thicknesses for sauna building. Cedar sauna woods have natural oils which gives them a naturally resistant property to many bacteria, fungi and insects.

Sauna Wood Paneling Install: note that stainless steel finishing nails are recommended to attach sauna paneling because regular or galvanized nails will corrode over time and leave dark streaks and stains on the walls. We offer 15, 16 and 18 gauge nails to fit many brands of nail guns (for speed and accuracy). Start with your 2"x4" or 2"x6" framed insulated sauna room walls and ceiling. As you construct your sauna room the only place you may want to use a treated material is on the sill plate. Plan wiring well in advance for sauna light, sauna heater unit and heater control panel. While paneling and trim are being installed, make sure to keep it 1/2" off of floor so it doesn't wick moisture and so there is clearance for Ipe wood flooring tiles or duckboard.

Remember the sauna woods must breathe, so never use sealants or coatings that would break down from the heat and release harmful gases. Sauna Wood Treatment Oil is available and can be applied to paneling and benches to help keep wood cleaner by not allowing excess perspiration to soak into wood fibers. The oil treatment is great for high maintenance commercial saunas or daily used home saunas.

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APPROVED

LOCKER EXPANSION INTERIOR ELEVATIONS SAUNA KIT ASSEMBLY INSTRUCTIONS

SEAVER FRANKS ARCHITECTS, INC. AIA
2525 N ALVERNON WAY / TUCSON, AZ 85741 / TEL 520-361-7700

GREEN VALLEY RECREATION CENTER 2980 SOUTH CAMINO DEL SOL GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
PROJ. NO. 21709.1
DRG. SCALE A6 NOTED

SHEET
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Sauna Design Key Features

4. Sauna Benches

Superior Sauna benches are made of clear grain woods, white Basswood or Red Cedar and feature fully rounded edges for maximum comfort. Many of our bench designs utilize wall mounted rails that allow bench seats to lift out and easily be removed for cleaning. Benches and backrests should be made with clear lumber as knots make for uncomfortable "hot spots". Be sure to install benches with hidden fasteners (from bottom through support into bottom of bench top board) so there are no exposed hot metal fasteners to burn sauna users. Basswood bench stock measures 5 1/2" wide by 1 3/4" thick. Red Cedar size is 5 1/2" wide by 1 3/4" thick. These commercial quality materials will outlast other types of sauna benches, as the surface can be sanded every year or so to maintain a "new look". Portable sauna benches are another option for additional guest seating or as a cooling off bench outside of sauna. Portable benches can be made to ANY custom size. **Note:** Clear grain is on exposed parts, there may be knots hidden on the back, and will not impact sauna use.



5. Sauna Heater

There are a variety of types and sizes of Sauna Heaters for any location, commercial or residential. All of our sauna heaters can have water poured over the rocks to produce steam like in traditional Finnish steam saunas.

Wood Burning Sauna Stoves are the most traditional type of sauna heater and offer the most heat output. Wood sauna stoves usually have the option of a built in water heating tank for bathing after the sauna session.

Electric Sauna Heaters are the most convenient to use and take up very little room space.

Electric sauna heaters should have a sturdy heater guard installed according to heater manufacturer specifications. Wood-burning sauna heaters have much hotter surface temps, so they don't typically use a heater guard and usually require a brick or stone wall they rest heater to act as a heat shield. Water can be used on the rocks for steam with all of Superior Saunas heaters. The Finnleo brand sauna heaters are excellent when used wet or dry. Finnleo has the best warranty in the industry with 5 years for residential use and 1 year for commercial installations. Tylo, Scandia and Polar are other brands of quality electric sauna heaters. We offer replacement parts for most sauna heaters in service, brands



6. Sauna Door

Sauna door types are All Wood, Half Glass, or Full Glass panel. There are several sizes available from standard 24" wide up to 36" wide handicap accessible doors. The All Wood door is paneled on both sides with your choice of T&G paneling and features an insulated core. Glass panel sauna doors come standard with sealed pre-hung jams, 1/2" plate glass door, and all hardware with a special coating for sauna use. Custom sauna doors can be ordered to fit any existing sauna room and pre-hung is optional.

Rough openings for pre-hung sauna doors are typically framed 3" larger on width and height from door jamb size. It is recommended to frame in doors and windows soon after they arrive for a perfect fit with casing and door jamb thickness.

If you plan to build your own sauna door, our Sauna Door Hardware Kits feature heavy duty stainless steel spring hinges, spring ball catch latches and quality wood handles.

7. Sauna Window

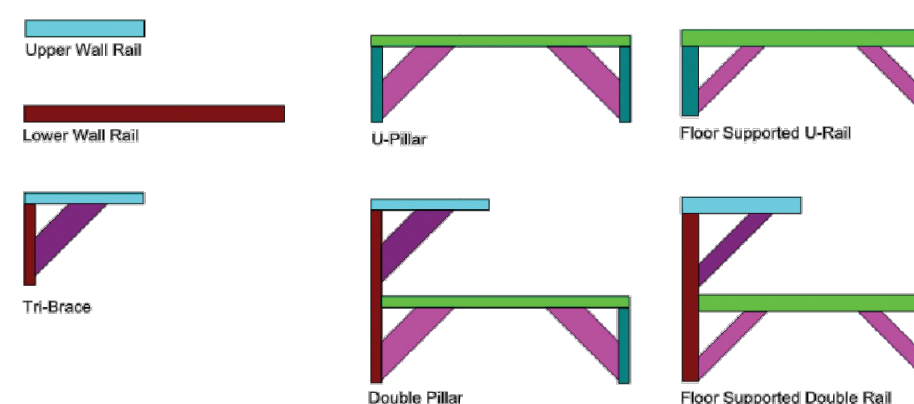
Sauna windows allow ambient light to enter and help make the sauna space seem larger. For outdoor sauna cabins, the sauna window allows a nice view of the lake or the use of an oil lantern for night time lighting, hung outside the sauna of course. For indoor saunas, you can set up a TV on a shelf outside the window. Tempered double pane, insulated glass units are used for efficiency and safety. Window frames are made with quality sealed grade woods. Rough openings for windows are usually framed 1/2" larger on width and height from casing size.

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Stout Bench Pillar Placement Guide

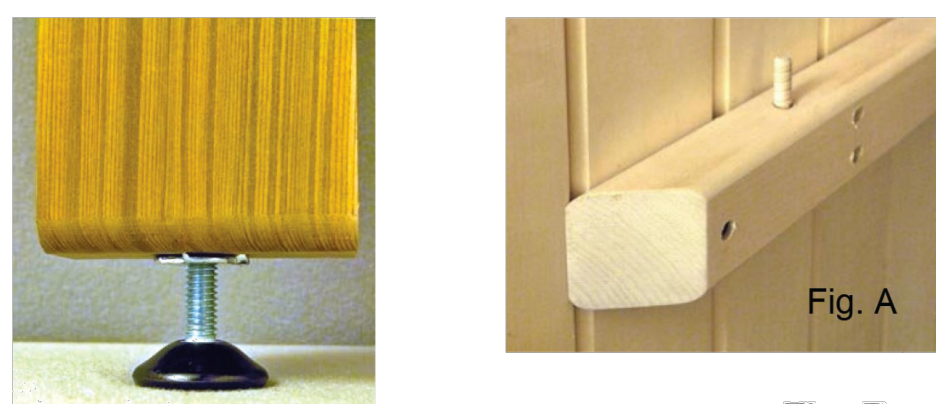
Important! Make sure to install nailer supports to framing before T&G paneling is installed

Bench Support Types



Note: Side wall Floor Supported Rails are typically for sauna projects where only benches are being replaced and the original paneling will not be replaced (doesn't have proper backing inside of wall).

Tips



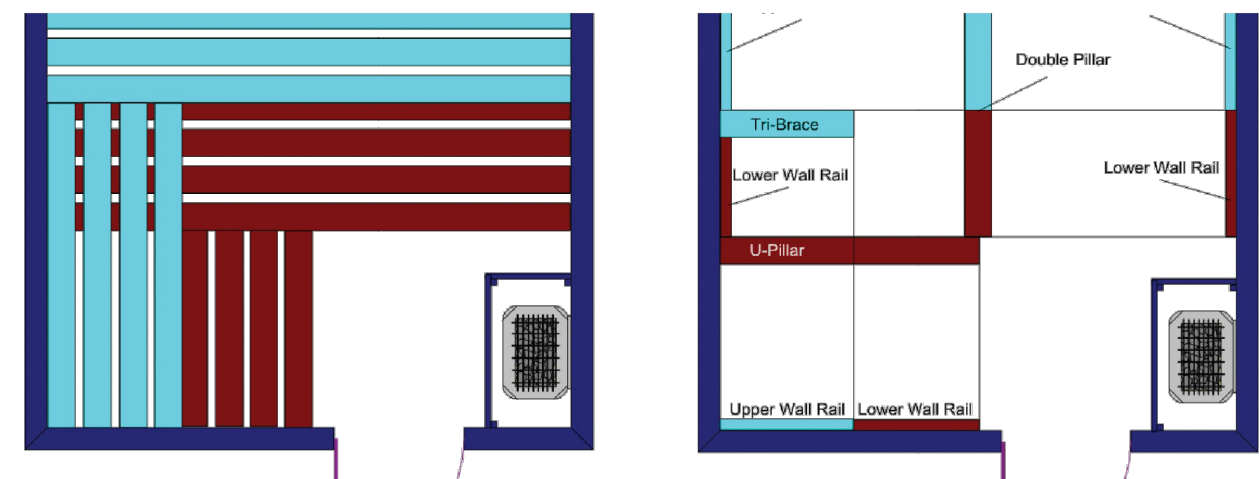
Adjust height of bench feet before attaching pillars to wall, so pillars are same height as the wall mounted rails.

It is recommended to install "Stops" on top of wall mounted rails to hold the bench from sliding. Typically 1/2" dowels are used, to fit in the gap between the 1st and 2nd bench planks (Fig. A).

Usually bottom and/or middle level benches have dowel at front end of wall rail so bench can easily adjust seating capacity (Fig. B). The benches can still be easily lifted out for thorough cleaning of the sauna.

Sample Bench Layout

Sample Pillar Layout



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Stout Bench Support Instructions

Pillar Installation: Though Pillars get support from the floor for adequate strength, it is extremely important to make sure there is proper framing within the wall before starting.

Step 1 Begin with the bottom main bench wall rails. Use tape measure and a pencil to scribe the correct height to mount the rail. Then scribe screw hole location on the wall rail. Using a #12 countersink drill bit pre-drill first pilot hole and then fasten rail using provided 4" screws. After the first screw is holding the rail in place use a level to adjust the rail then finish fastening.

Step 2 Install the bottom L-Bench Wall Rail as shown on the front wall in the diagram to the right.

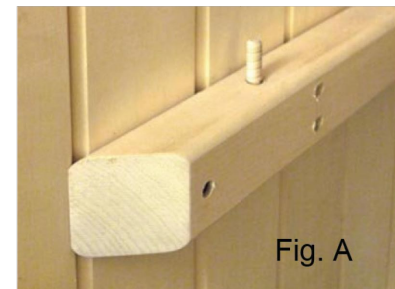
Step 3 Install wall rails for the top main bench. Then install the wall rail for the top L-Bench.

Step 4 Install adjustable feet into the double pillar and position it into place but do not fasten at this time. Set top and bottom main benches into place then adjust the feet on the pillar until it is supporting the center of the benches in the correct manner. Scribe fastener location pre-drill and fasten using 4" screws.

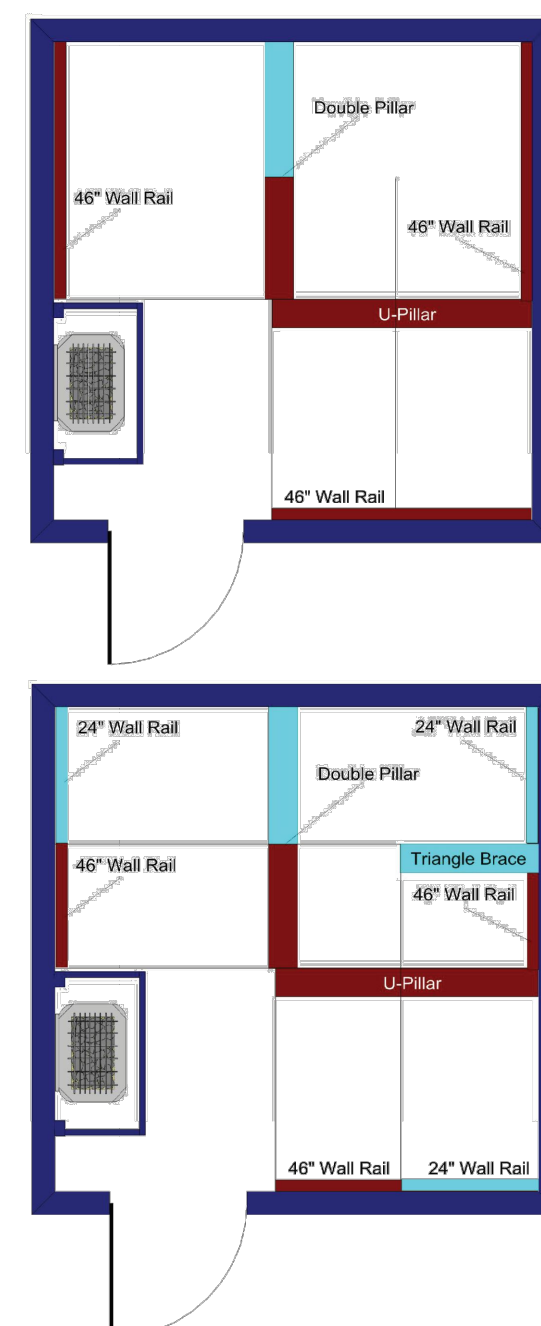
Step 5 Install bottom U-pillar in the same manner as the double pillar.

Step 6 Scribe the mounting position for the upper triangle brace and then fasten the triangle brace into position.

Step 7 It is recommended to install "stops" on top of wall mounted rails to hold bench from sliding.



Step 8 Install the remaining bench tops, then use an Orbital Palm sander with 220 grit sand paper to touch up the benches.

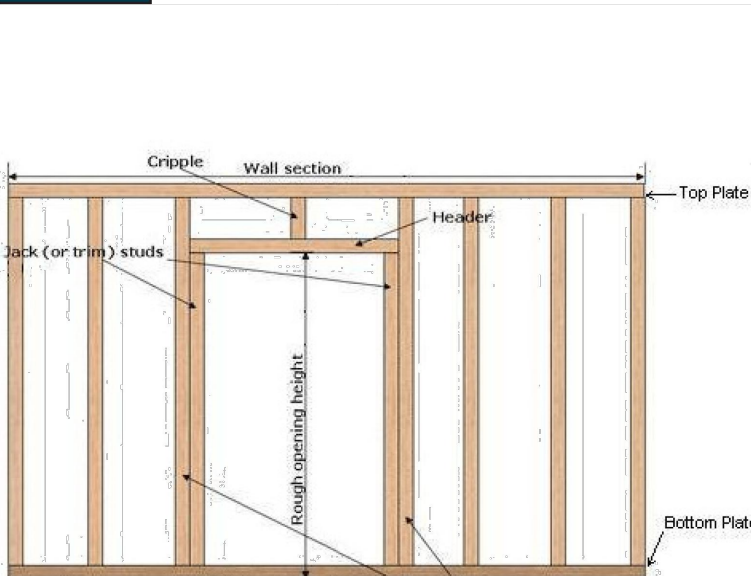


The diagram above illustrates the front view of the installed pillars, rails, and benches on the right side wall.

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Sauna Door Installation Instructions

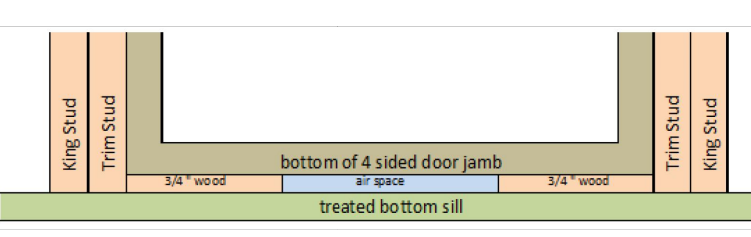
When framing the door start by running king studs from ceiling to floor, between the top and bottom plate. Begin by making the initial rough opening 4" wider than the width of the door frame. Use a level to assure they are plumb. Then cut two jack (trim) studs 1/2" longer than door frame height. Mount to the inside of each king stud. Install header on top of each trim stud & use cripple stud if needed. Recommended for wider doors.



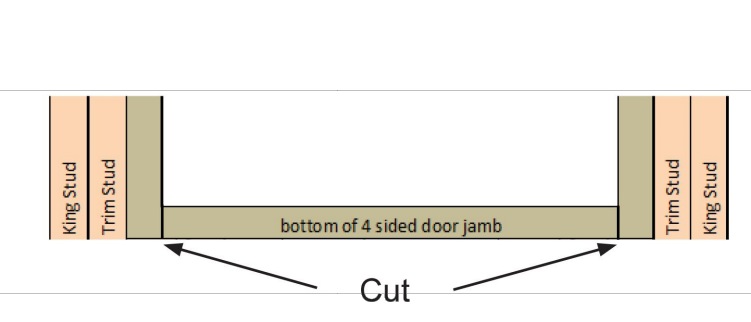
Bottom Plate May be removed for 3 sided jamb. Ex. ADA doors

Next, place door in opening and make sure the door jamb is square and plumb, permanently fasten hinge side of door to trim stud (use shims if needed). Use four evenly spaced shim spots to keep door latch side of jamb plumb and square then fasten to other trim stud. Replace one of the four 3/4" screws holding each hinge into the jamb and replace with 4" screws so the door is anchored into the framing studs also.

Venting hint: If installing door with four sided jamb and intake air vent is needed under door, place 3/4" pieces of wood underneath each side of jamb bottom. Caulk well to prevent seepage.



For ADA 36" Doors: Cut out bottom of jamb for wheelchair access by stiles. Add sweep to the bottom of the door if vent gap is not needed.



*Bottom sill plate should be treated wood. Where sill plate meets floor must be caulked well to prevent water leakage in the case of excessive water use.

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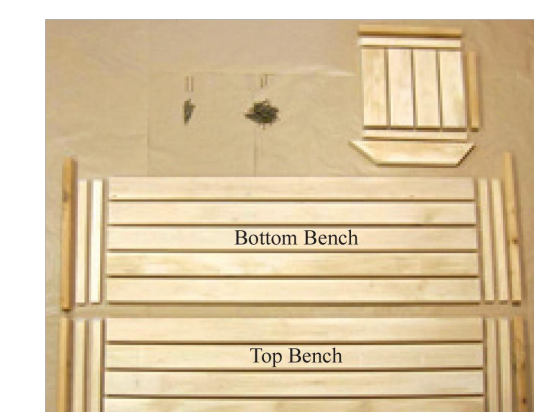
Stout Bench Assembly Instructions

For Wall Mounted & Portable Benches

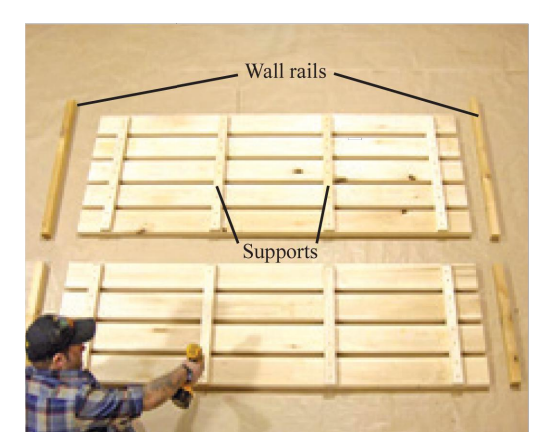
Assemble your elegant, commercial quality Stout Benches in minutes with simple tools. Check invoice and provided picture for bench length and depth. These instructions cover a 2 tier bench layout with "L-Bench" on lower tier. If you have a triple tier bench and have questions, feel free to call. Bench kits are typically shipped already assembled.

Wall-Mounted Benches

1. Layout all pieces as shown, with top surface of bench boards facing down. Gap between boards is 1/2", use suitable spacers if necessary. First put down cardboard, etc. to protect wood finish while assembling. Fasten bench supports 3" from each end of main benches. If more than 2 supports, just evenly space remaining bench supports in between the first two.



2. Use 2" long screws through bench latt into bench stock.



If bench has U-Pillars: Fasten angled bracket or U-pillars with proper length screws into bottom of bench seat, (pre-measure so screw tips don't puncture through the top of the bench.) Use longer 4" screws to secure angled brace or U-pillars to walls.

3. Fasten bench mounting rails to walls with 4" long screws, making sure screws are secured into backing nailers behind paneling. Lower bench rail is longer to allow sliding of bench under top bench, a dowel in the rail holds bench in front position. General rules for bench heights are 18" for 1st tier, 36" for 2nd tier and 54" for 3rd tier if overall height allows (7'6" or so). Benches are not usually fastened to rails to allow for sliding purposes.



Call our design consultants for all your do it yourself sauna part needs. We manufacture and distribute custom sauna kits, prefab saunas and all sauna components to complete your sauna project. DIY sauna parts, heaters and accessories are shipped world wide.

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Stout Bench Support Instructions

- TOOLS NEEDED:**
- Tape Measure
 - 1/2" Electric Drill
 - Pencil
 - #12 counter sink drill bit
 - Level
 - T-25 Torx bit

Walls Rails

Supports ends of benches that come in contact with a wall. Wall rails receive support primarily from the framing. The majority of the load on the benches is supported by the wall rails so adequate framing within the wall is extremely important to assure your bench system will be properly supported. Install wall rails before you begin installing pillar supports. Standard bench heights are 18" for the bottom tier and 36" above finished floor for the top tier. These measurements are finished, you will need to subtract the bench thickness so that your finished benches are installed at 18 and 36 inches with the bench tops in place. If they are not installed at the correct height your pillars will not support the benches correctly.

Pillars

Double pillars and U-Pillars have adjustable feet to aid in leveling the support and to keep the wood from wicking moisture from the floor. The lower bench can easily slide underneath the top bench for cleaning purposes. Adequate framing within wall is extremely important.

- Double Pillar** - A Double Pillar is a support that is designed to brace both the top and the bottom benches. A double pillar is typically used in the center of the two main benches to eliminate the benches from sagging in the center. Double Pillars may also be used to support the open end in bench systems that do not span the entire distance of a wall.
- U-Pillar** - A U-Pillar is designed to support the floating end of a Lower L-Bench. The opposite end of the L-Bench will be supported by a Wall Rail. U-Pillars may also be used to support the center of a bottom bench to prevent sagging. The Lower Bench can slide back on U-Pillars.
- Triangle Brace** - A Triangle Brace is designed to support the floating end of a Upper L-Bench. Triangle Braces are raised off of the floor and receives support primarily from the extra backing within the wall.

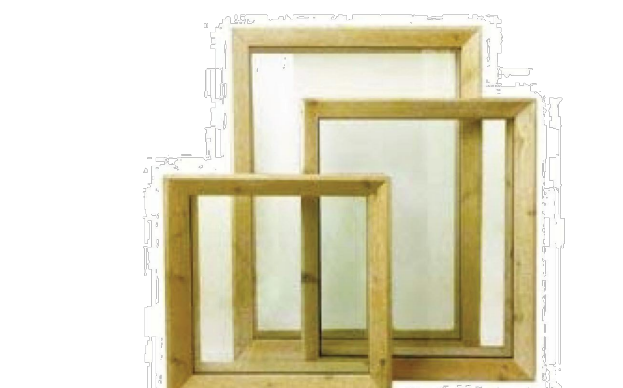
Pillar Positioning Example:

Diagram to the right outlines a typical bench Layout. Main Benches are against the back wall and the L-Benches are laying against the right wall.

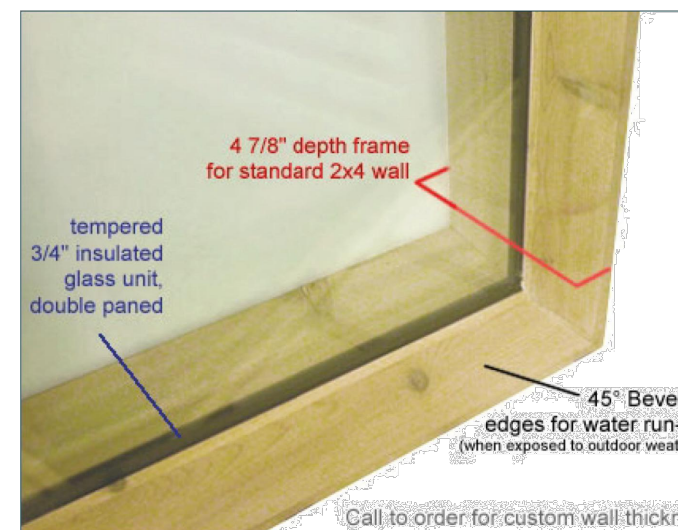
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Window Installation

Check rough opening by measuring the top, middle, bottom and the height on both sides. If the measurements differ more than 1" cut filler strips to level or plumb the window jamb. Optimally you want a 1/4" gap all the way around the window using wooden shims to maintain spacing. If you are installing an outdoor exposed window use a self-adhering waterproof membrane and wrap the window overlapping about 12" at the corners of the windows. Add flashing where needed.



Next install the windows making sure that the gaps around the window are even, using shims to keep the window stationary. Then fasten the window in the shimmed areas with a nail or screw from behind the framing for a cleaner finish. Stuff the gap with insulation. Finally you may now trim out the window. If putting trim on the outside, first run a bead of silicone all the way around the wood window frame, also bead around the glass where it meets the frame & around the trim to keep moisture from penetrating into the wall.



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Sauna Care Instructions

With very minimal maintenance you can keep your sauna room looking great for many years. The following is only a general guide. **IMPORTANT: NEVER** use a water hose to clean a sauna, as the untreated wood will absorb water and cause mold, fungi, etc. to grow fast and blacken wood fibers. Saunas should always have vents for fresh air intake and outside, or substitute a 1/2" gap under door for inlet.

Step 1: Do not paint, varnish or stain the interior portions of your sauna. The wood needs to breathe (absorb and slowly release heat and humidity). Also, artificial finishes make the wood surface much hotter, create the possibility of harmful fumes from the wood sealer, and take away some of the "softness" of heat and steam penetrating the wood. Finnish made Paraffin Oil Treatment Kit (available at www.SuperiorSaunas.com) is a product that is tested and proven safe for sauna use, to protect sauna woods from excess moisture and helps to maintain a clean sauna.

Step 2: Door handles and floor boards are an exception to step #1. These two points of the sauna can get dirty easily. To make cleaning easier, you can safely treat the handles and floor boards with a good wood sealant or polyurethane finish. The door handles and floor boards are not exposed to the high heat as near the ceiling, that may cause off-gassing.



After Sauna Care:

Step 3: After you're finished using the sauna, use a towel to wipe any excess moisture off of benches, prop the duckboards off the floor. Leave the sauna door open, to air it out completely. The heat remaining in the rocks and in the wood should dry the sauna completely, and even can help dry down the shower area, if it is adjacent to the sauna room. For snap-together tile wood floor tiles, clean surface daily to weekly in public facilities or as needed. It is suggested to remove floor tiles semi-annually to clean sub floor.

Step 4: The simplest method of sauna maintenance is to use a tested and proven safe sauna cleaner such as Sauna Clean (available at www.SuperiorSaunas.com). Sauna Clean is an environmentally friendly disinfectant, bacteria remover and odor eliminator used by facilities with saunas and steam baths. With a hand brush and properly diluted cleaner, do a quick scrubbing of the benches, walls, backrests, etc. After scrubbing, ALWAYS wipe up any excess water with a towel to protect wood floors. Commercial saunas should be cleaned daily or weekly depending on usage. Residential saunas weekly or monthly depending on usage. This will keep your sauna looking great for years.

Step 5: If you get some dirt, sweat stains or mold developing anywhere in sauna (if #4 is missed a few times) try the following:

- Dilute a few cap fulls of bleach with a gallon of tap water and give a good scrub with a hand brush.
- To get the benches or sauna paneling looking like new, you can lightly sand with fine grit sand paper about once per year. It will lighten them more to their original condition.

Step 6: ALWAYS wipe up any excess water with a towel to protect sauna wood fibers. After cleaning sauna, it is recommended to turn on sauna for a session to help with properly drying wood fibers.

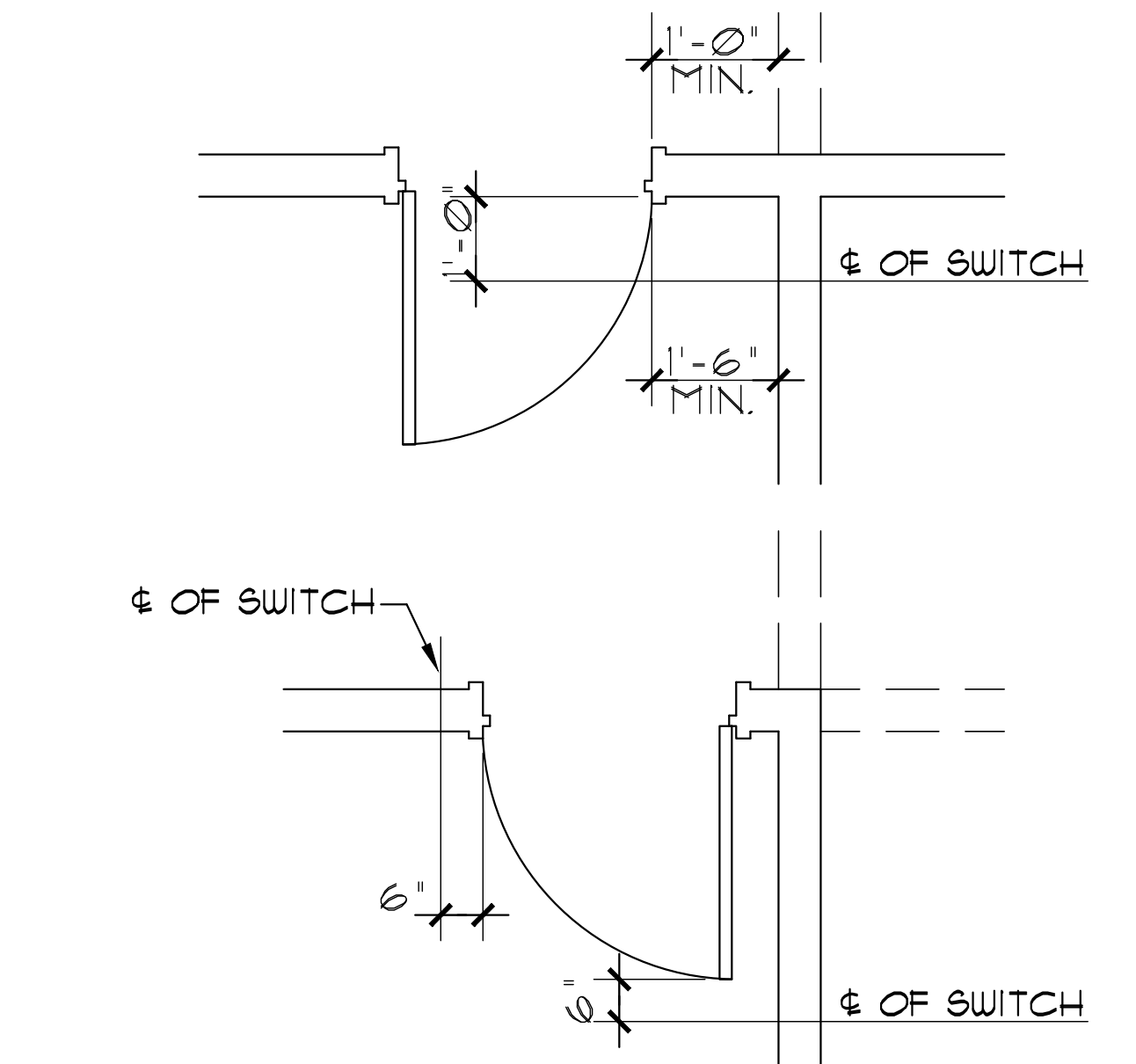
With these simple maintenance tips your sauna will stay inviting, fresh smelling, and enjoyable to be in. The main rule is: ENJOY!

Optional Maintenance for Commercial Facilities:

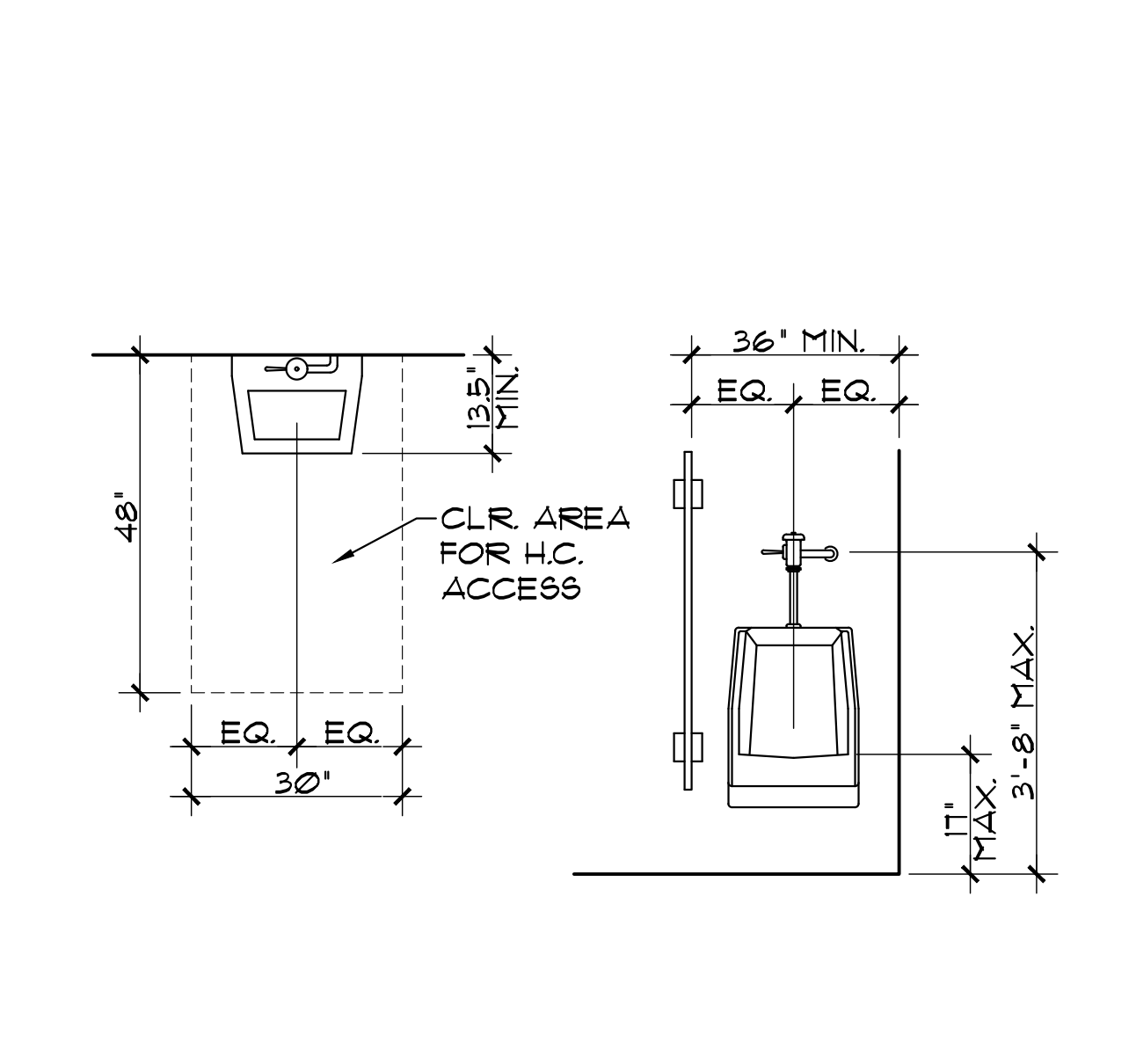
Commercial facilities can benefit from using an Ozone Generator automatic sanitizing system to save on labor hours of cleaning a sauna by hand. The PowerZone 400 unit works by safely neutralizing bacteria before it has a chance to multiply and break down sauna wood fibers.

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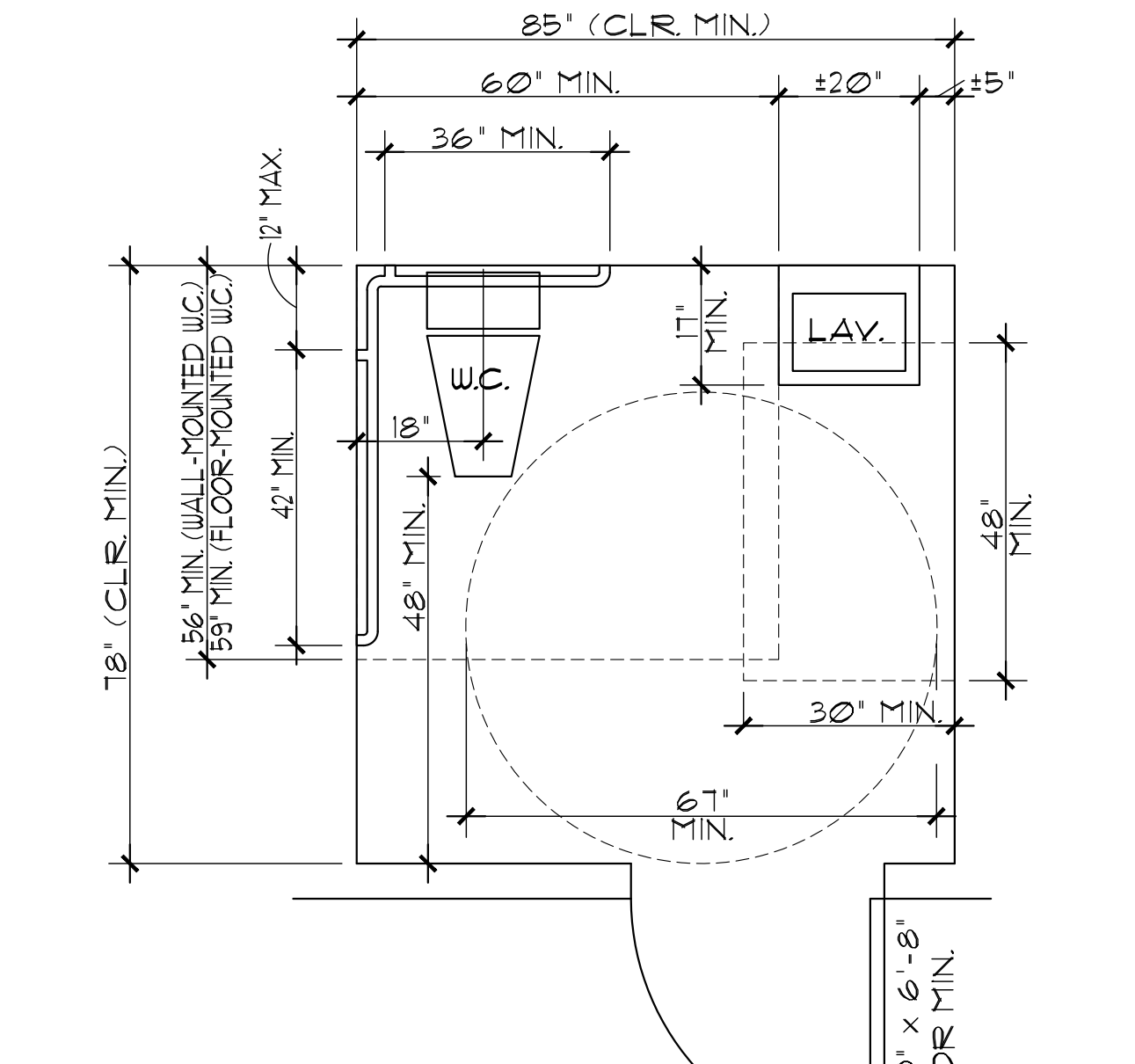




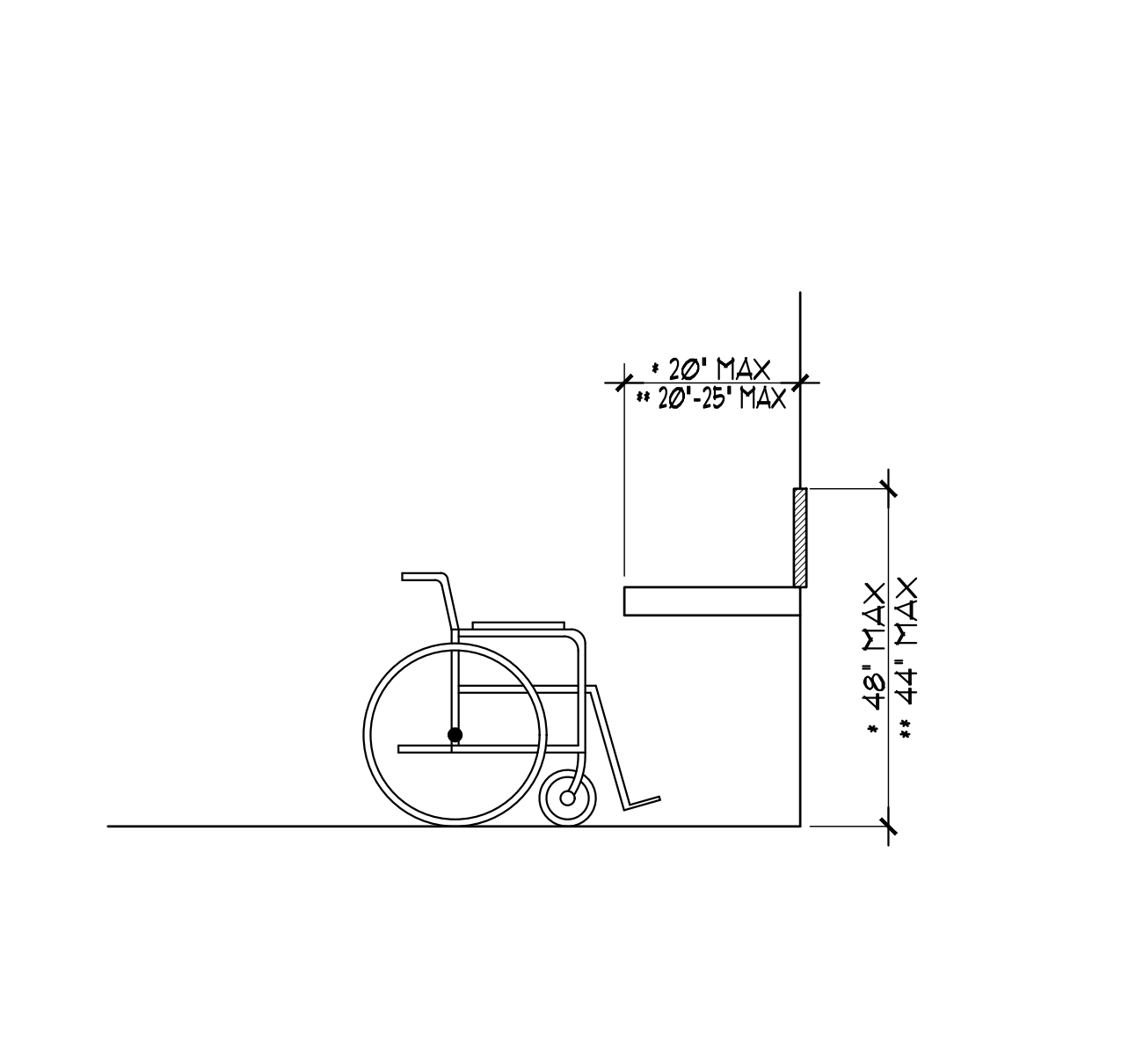
7 LIGHT SWITCH LOCATIONS
SCALE: 1/2" = 1'-0"



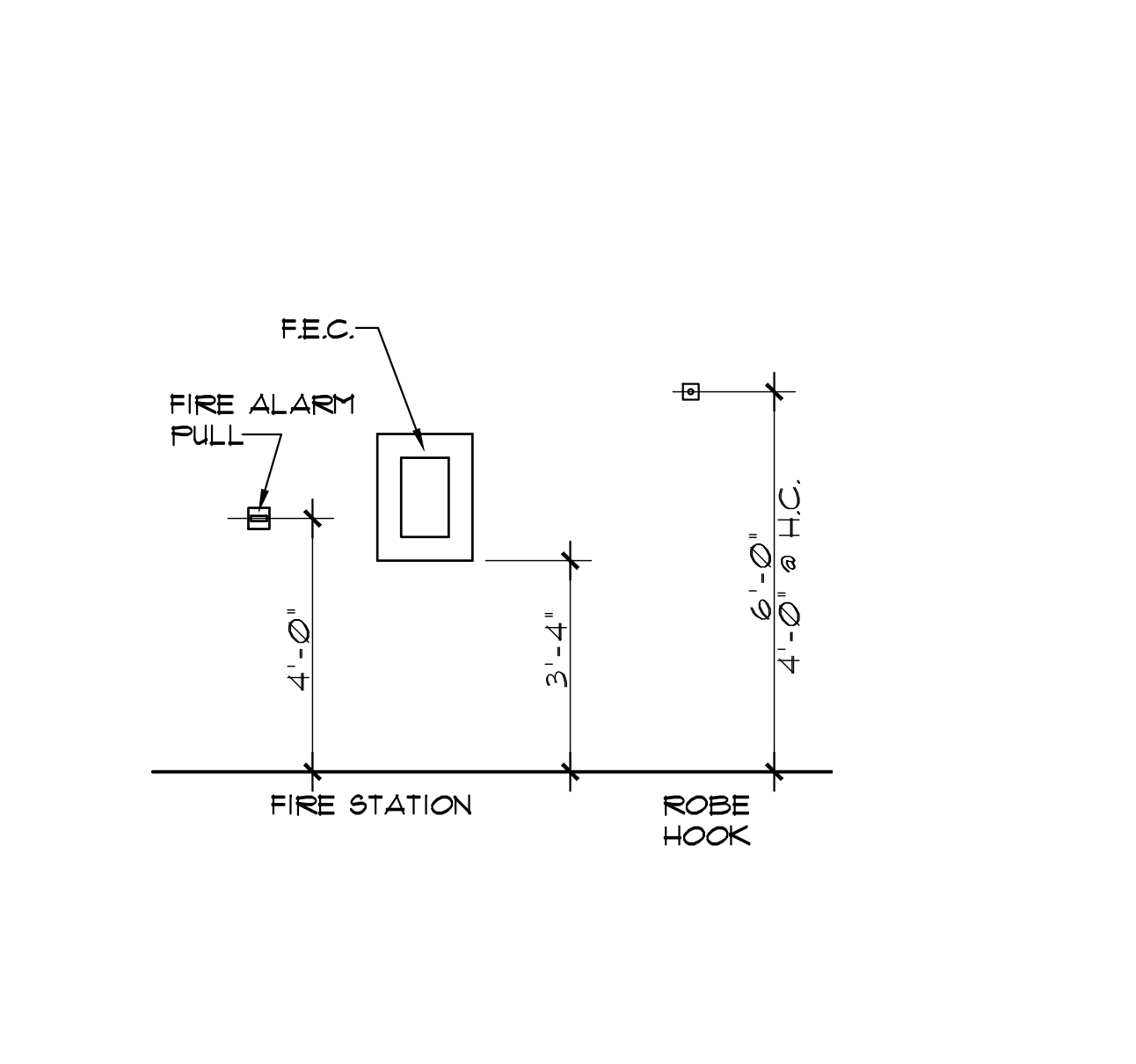
13 ADA URINAL
SCALE: 1/2" = 1'-0"



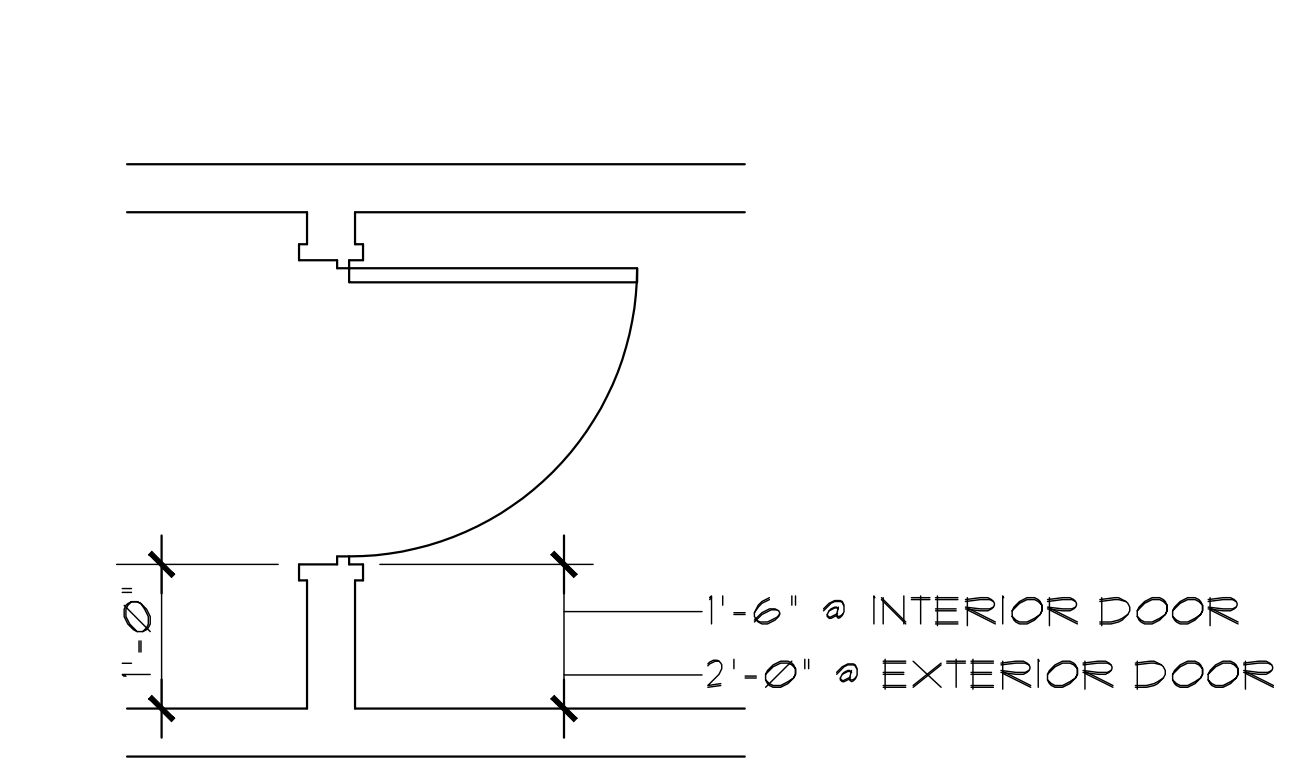
9 ADA WATER CLOSET
SCALE: 1/2" = 1'-0"



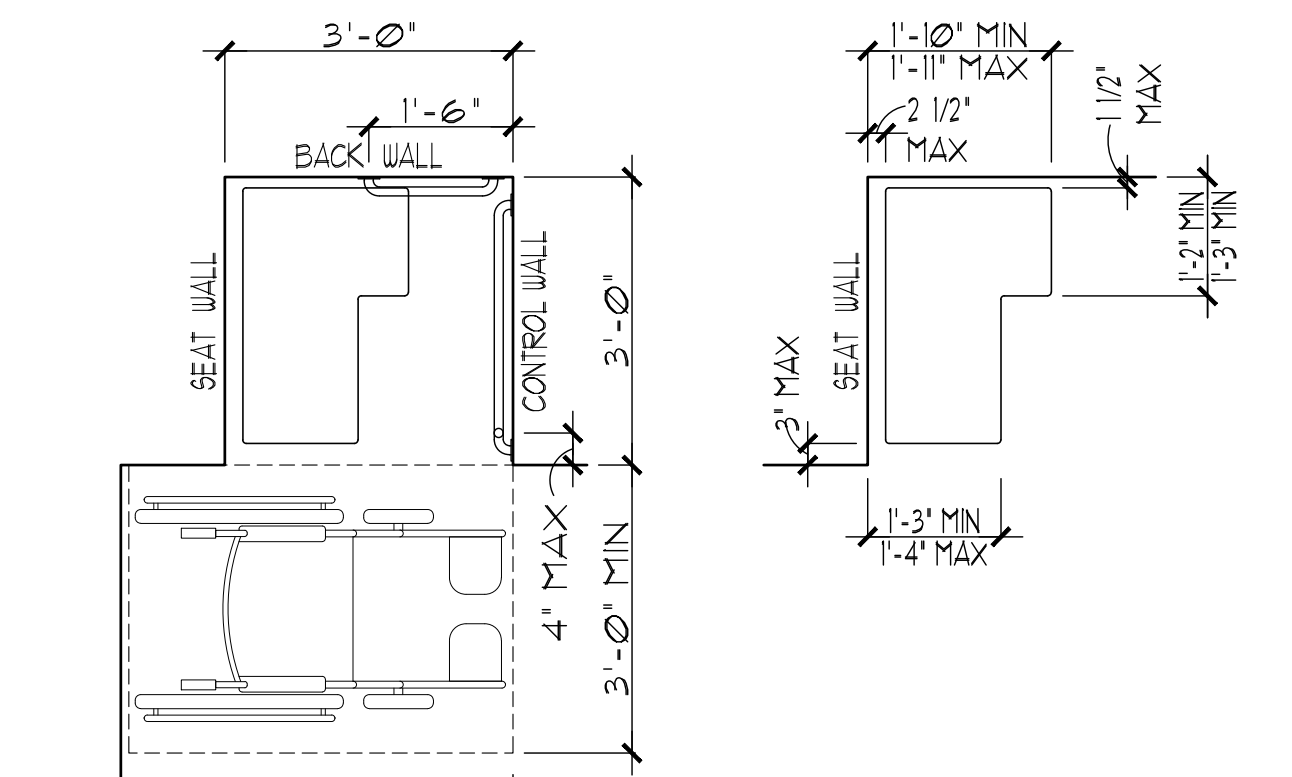
5 ADA OBSTRUCTED HIGH FORWARD REACH
SCALE: 1/2" = 1'-0"



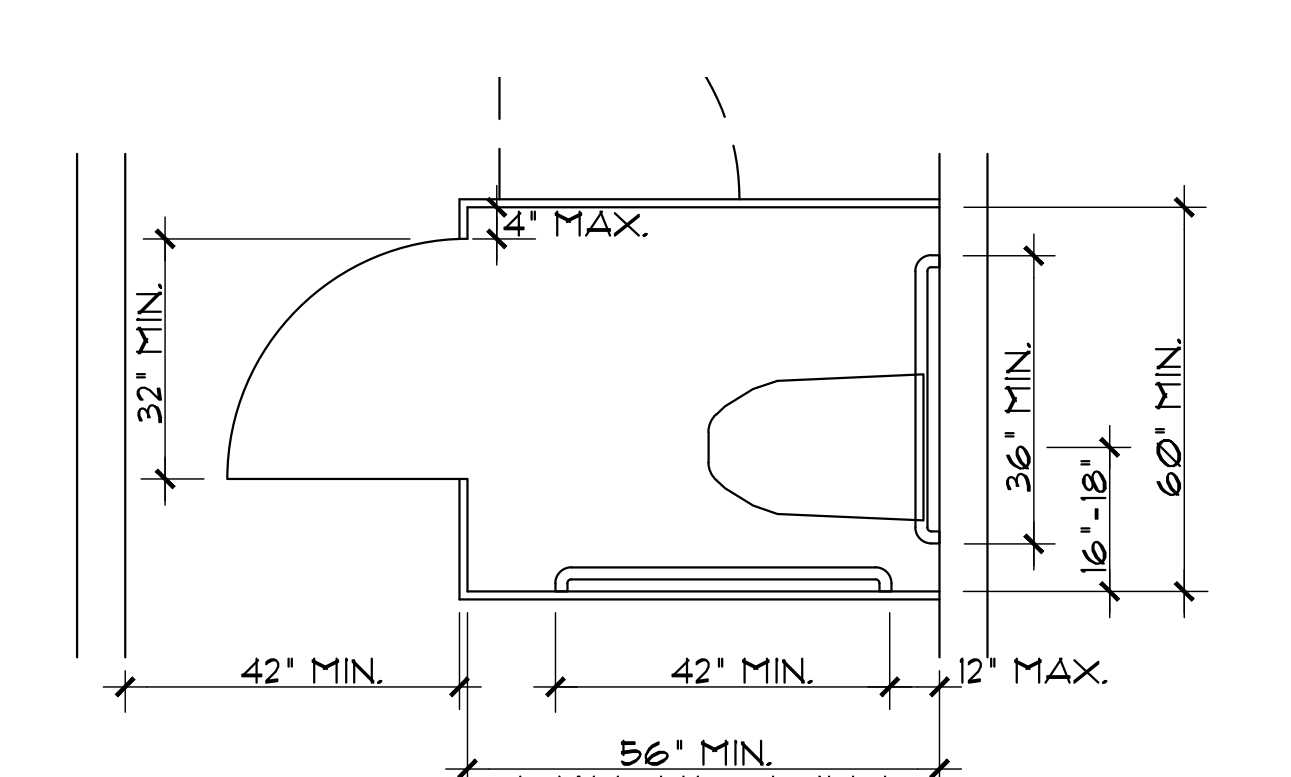
1 TYPICAL MOUNTING HEIGHTS
SCALE: 3/8" = 1'-0"



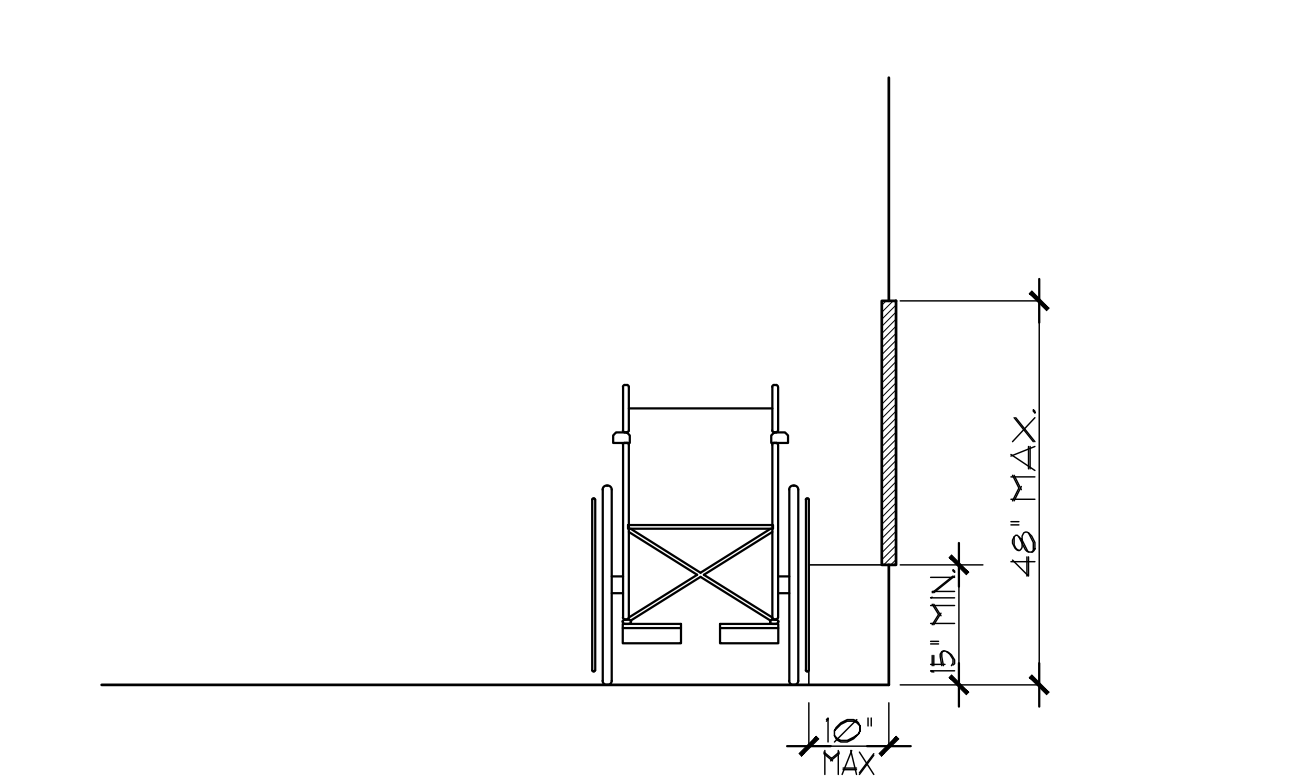
18 LIGHT SWITCH LOCATIONS
SCALE: 1/2" = 1'-0"



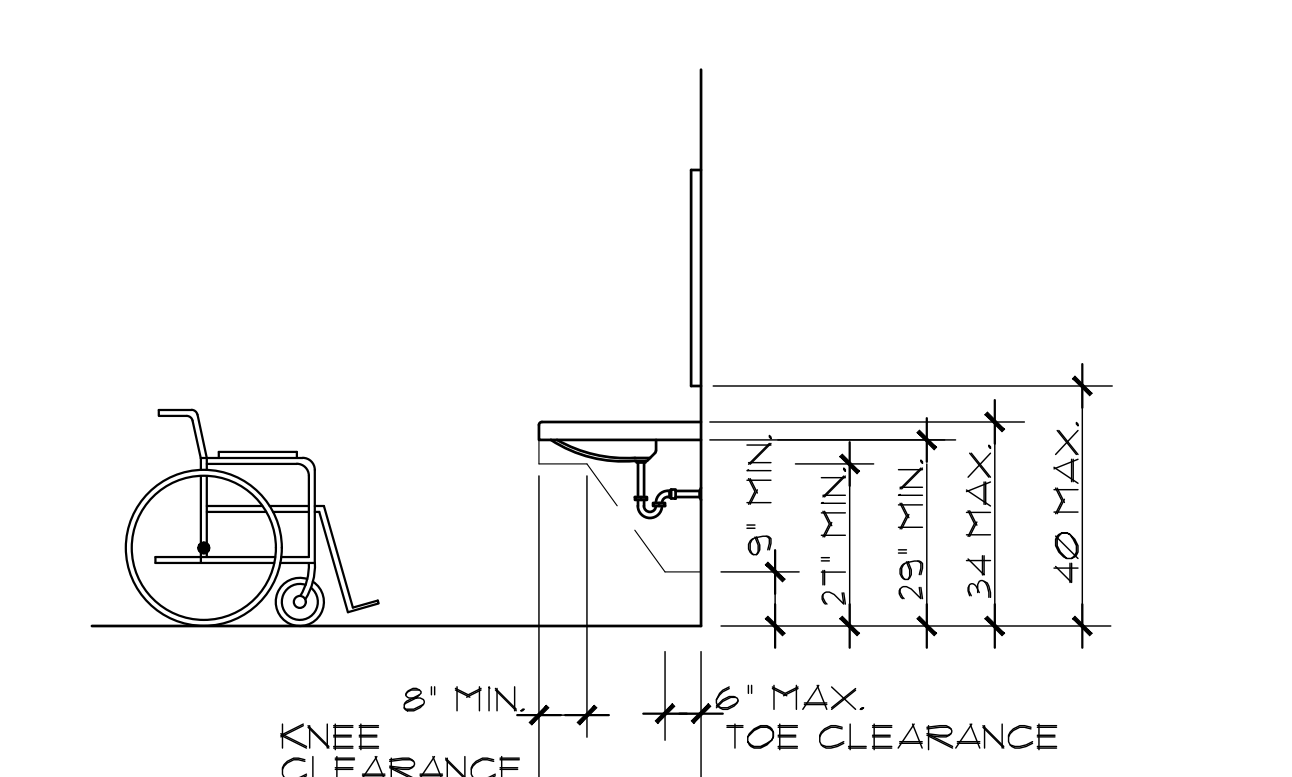
14 TRANSFER TYPE SHOWER COMPARTMENT
SCALE: 1/2" = 1'-0"



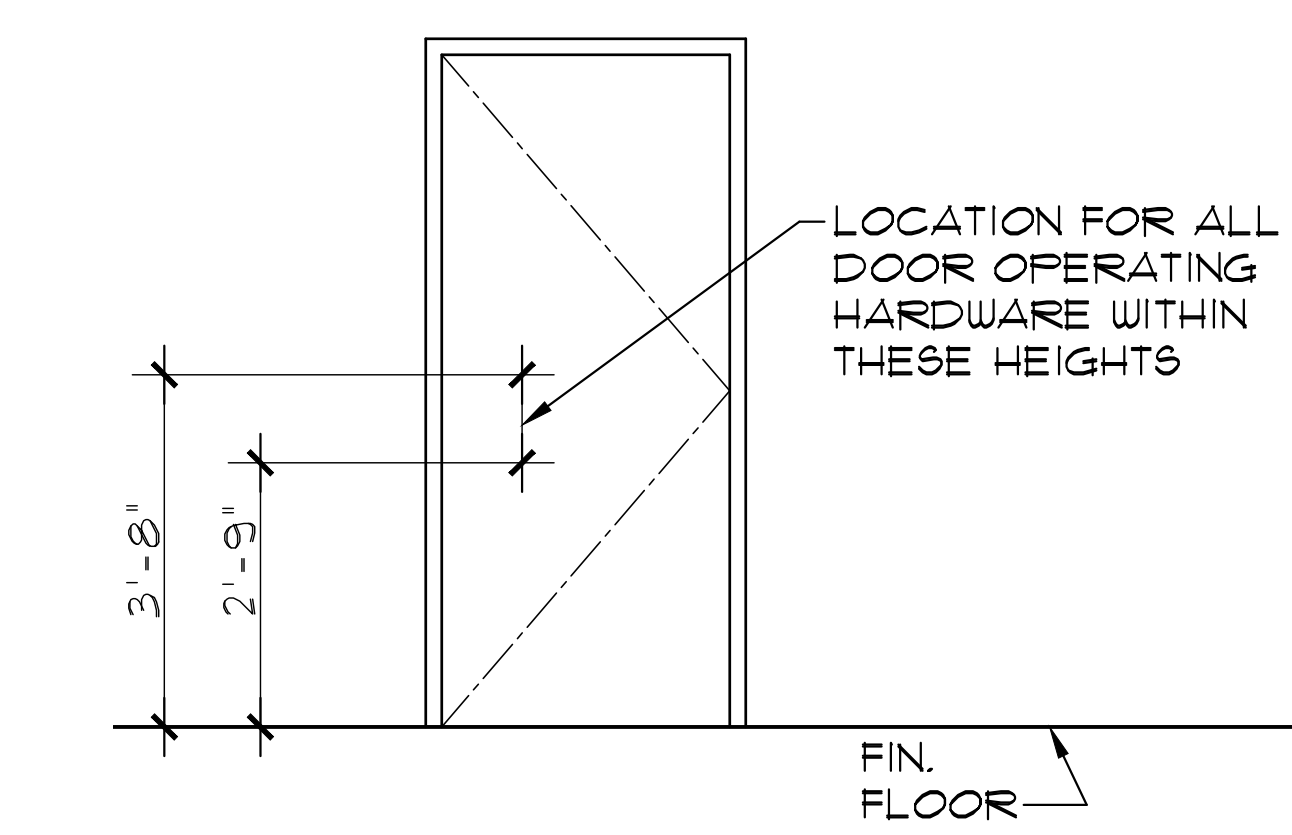
10 STANDARD ACCESSIBLE TOILET STALL
SCALE: 1/2" = 1'-0"



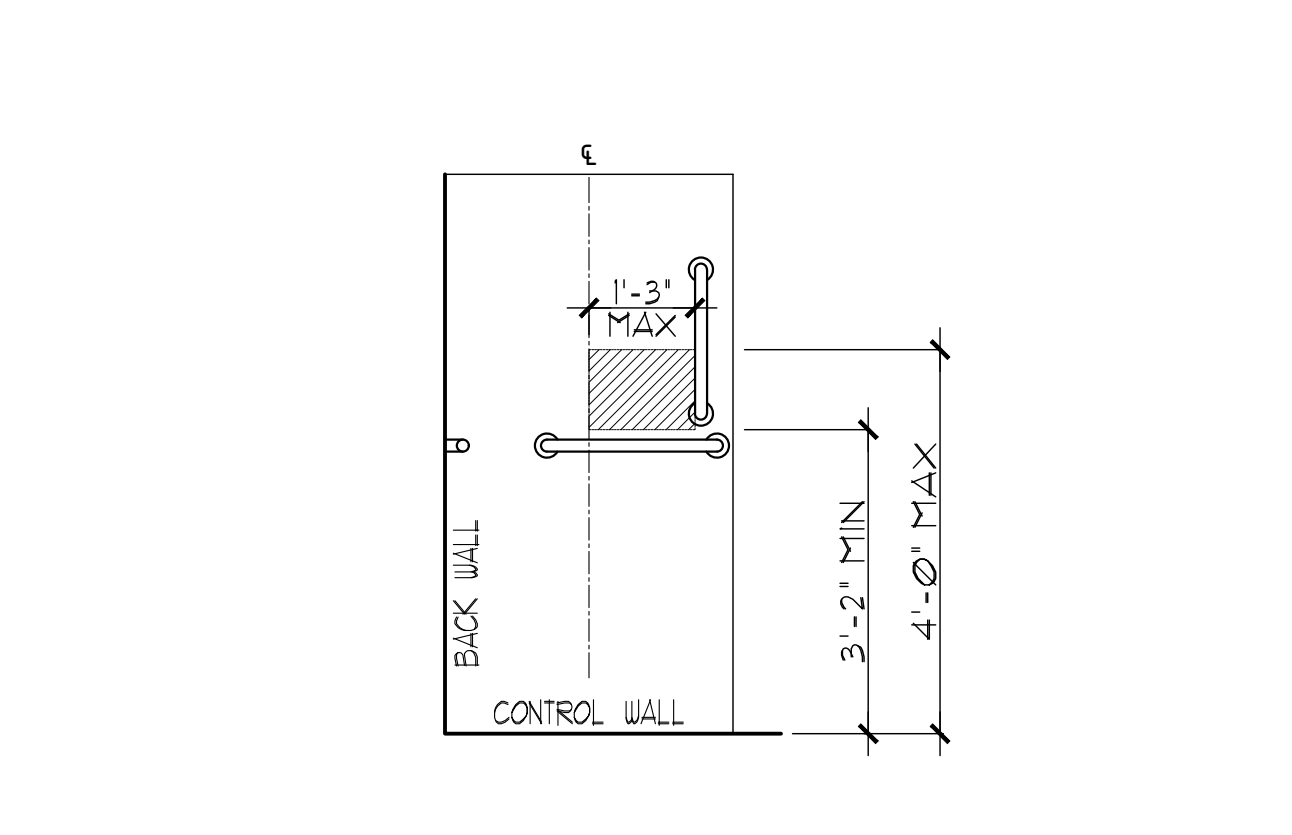
6 ADA UNOBSTRUCTED SIDE REACH
SCALE: 1/2" = 1'-0"



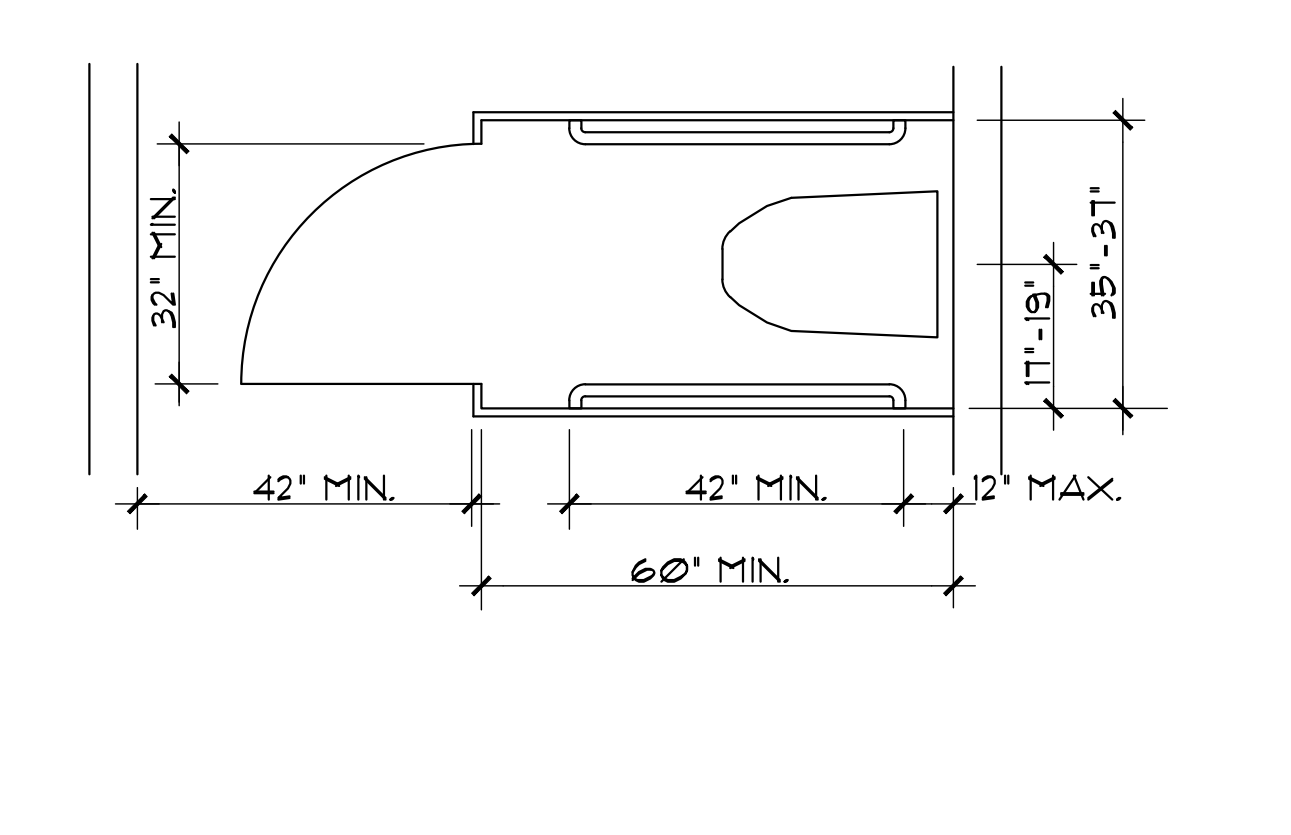
2 ACCESSIBLE LAVATORY CLEARANCES
SCALE: 1" = 1'-0"



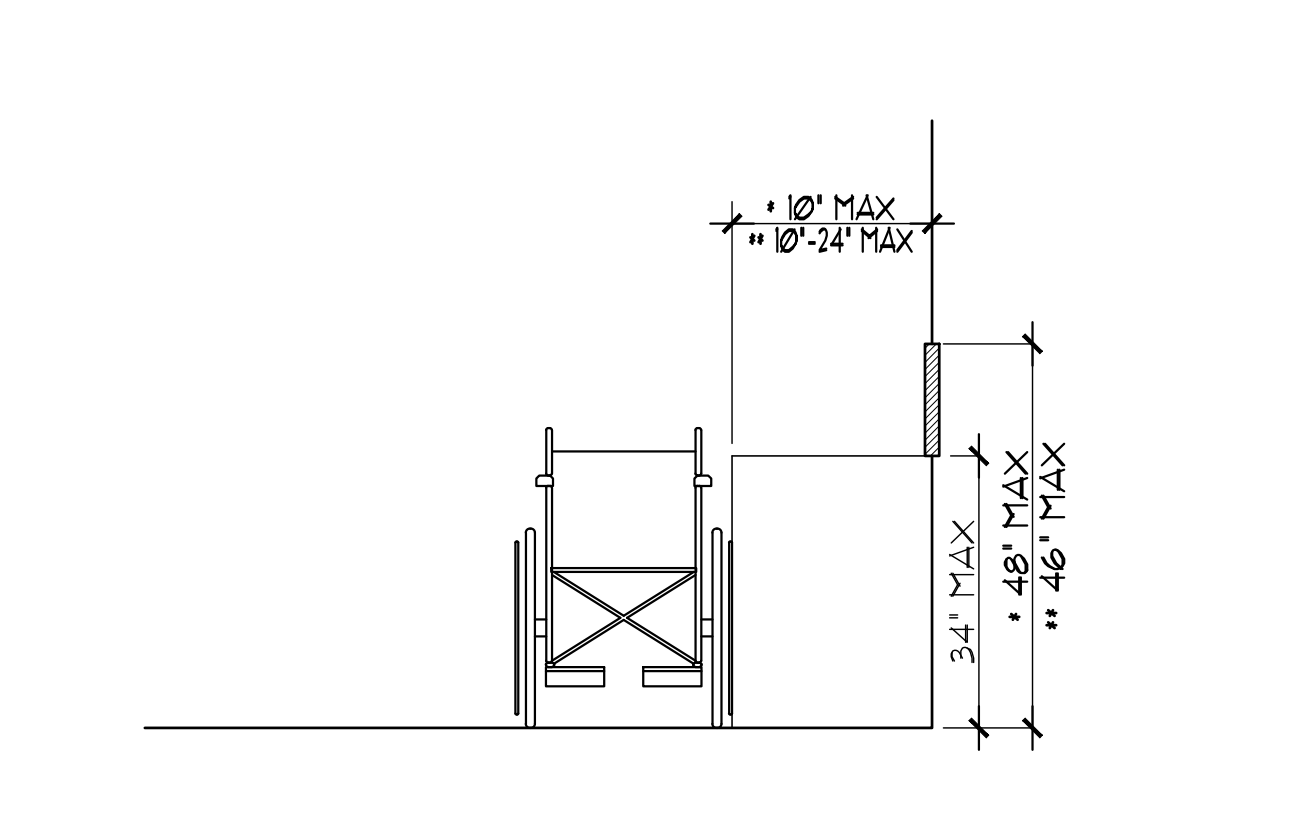
19 DOOR OPERATING HARDWARE MOUNTING HEIGHT
SCALE: 1/2" = 1'-0"



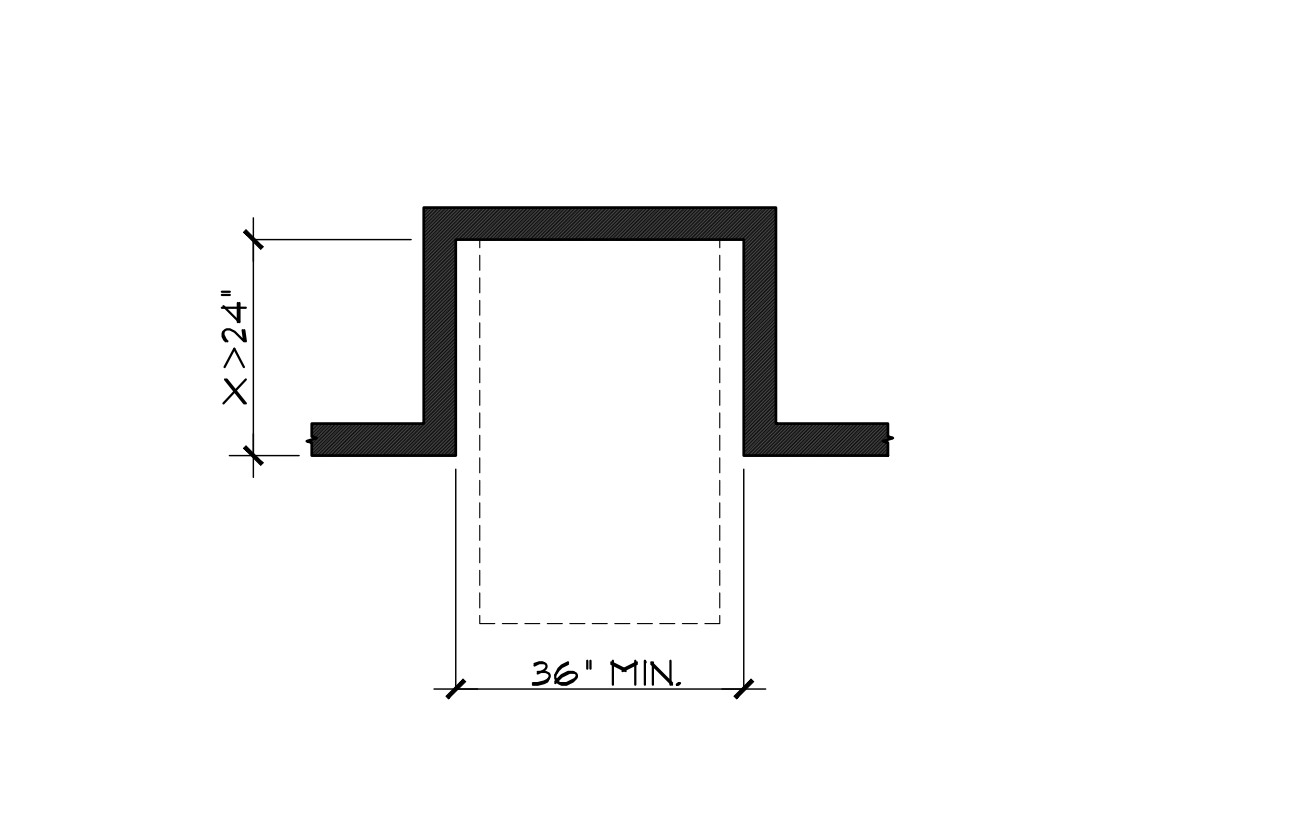
15 TRANSFER TYPE SHOWER CONTROLS
SCALE: 1/2" = 1'-0"



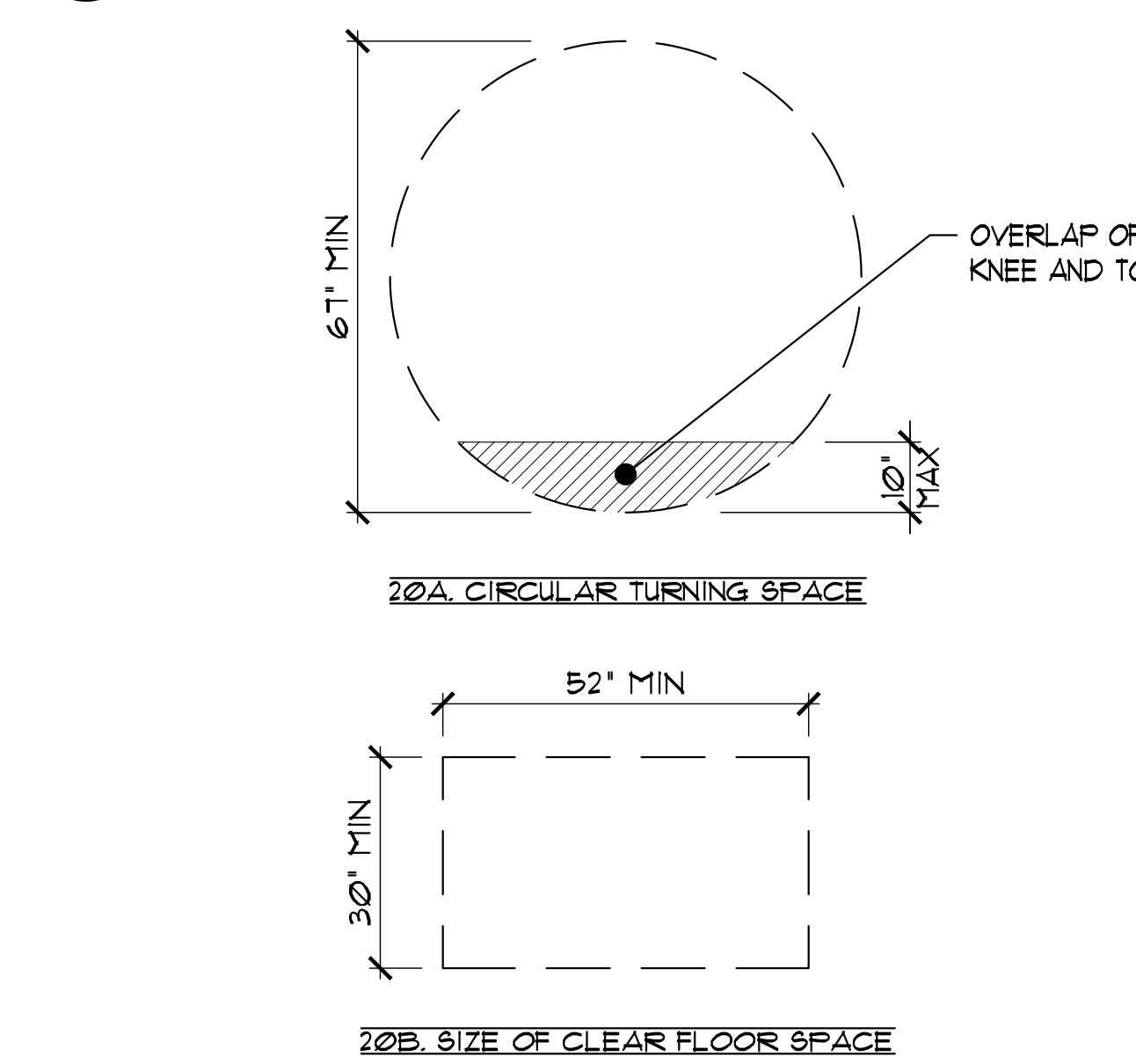
11 ADA AMBULATORY WATER CLOSET
SCALE: 1/2" = 1'-0"



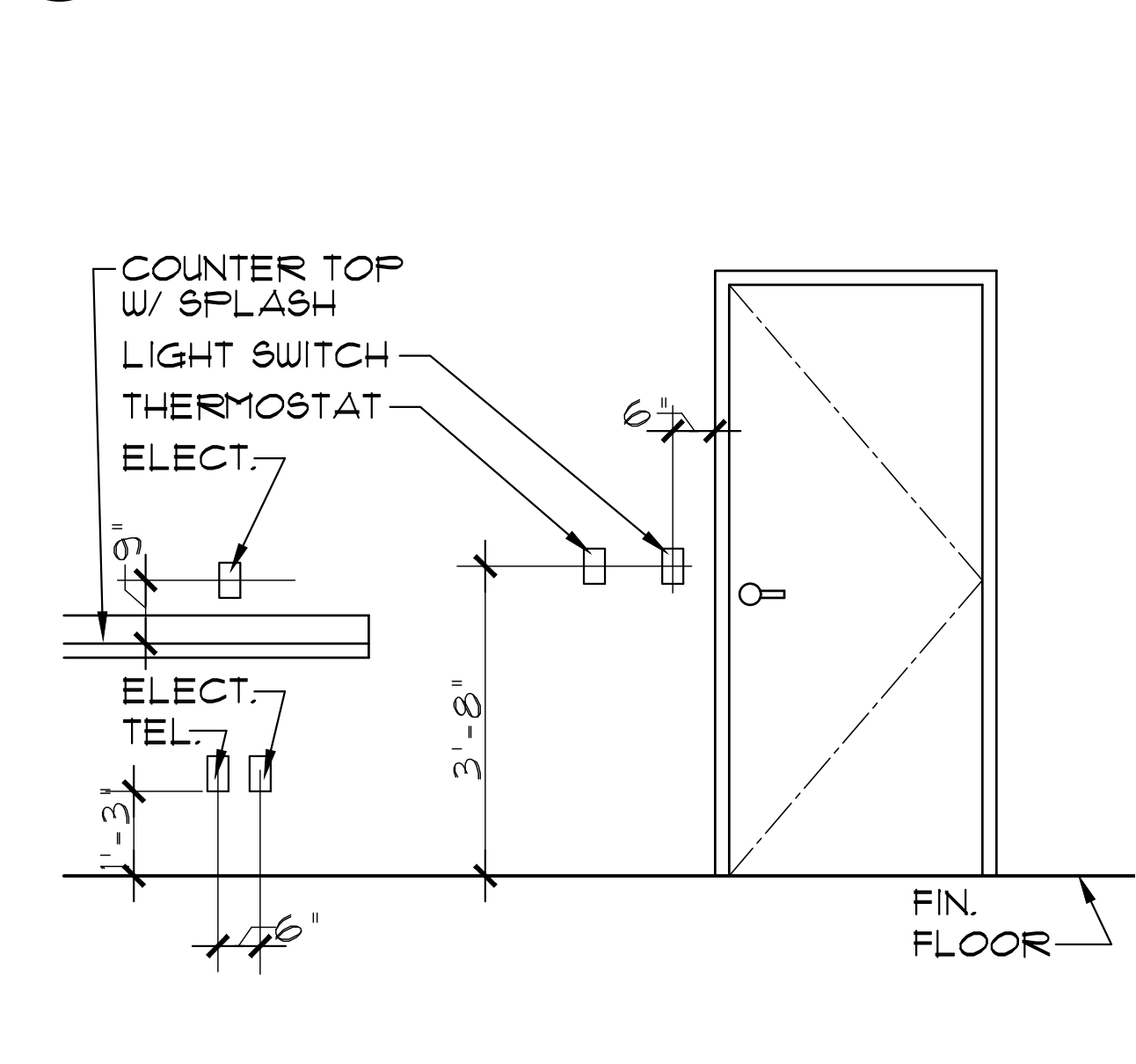
7 ADA OBSTRUCTED HIGH SIDE REACH
SCALE: 1/2" = 1'-0"



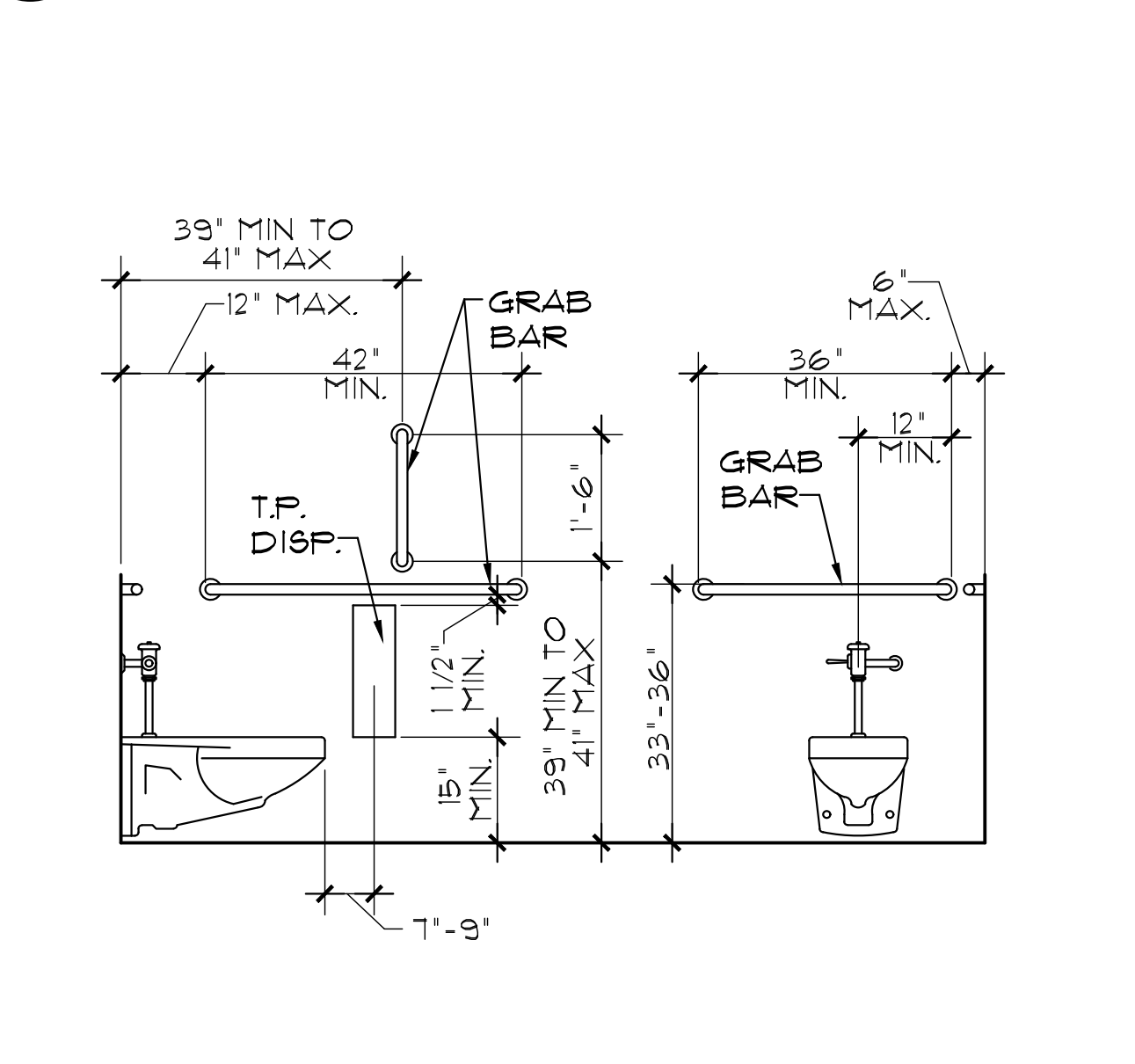
3 ADA FORWARD APPROACH
SCALE: 1/2" = 1'-0"



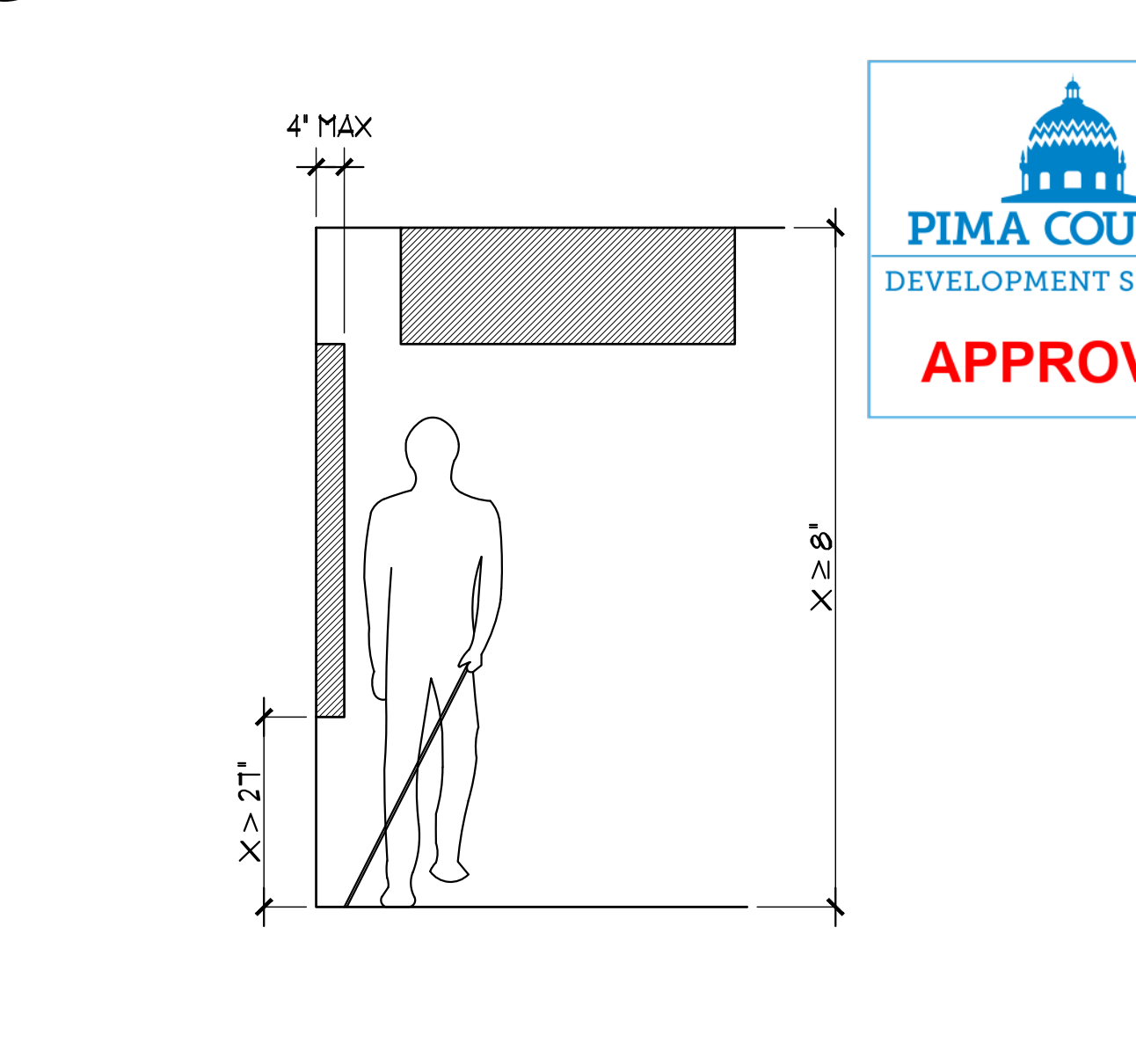
20 ADA TURNING SPACES
SCALE: 1/2" = 1'-0"



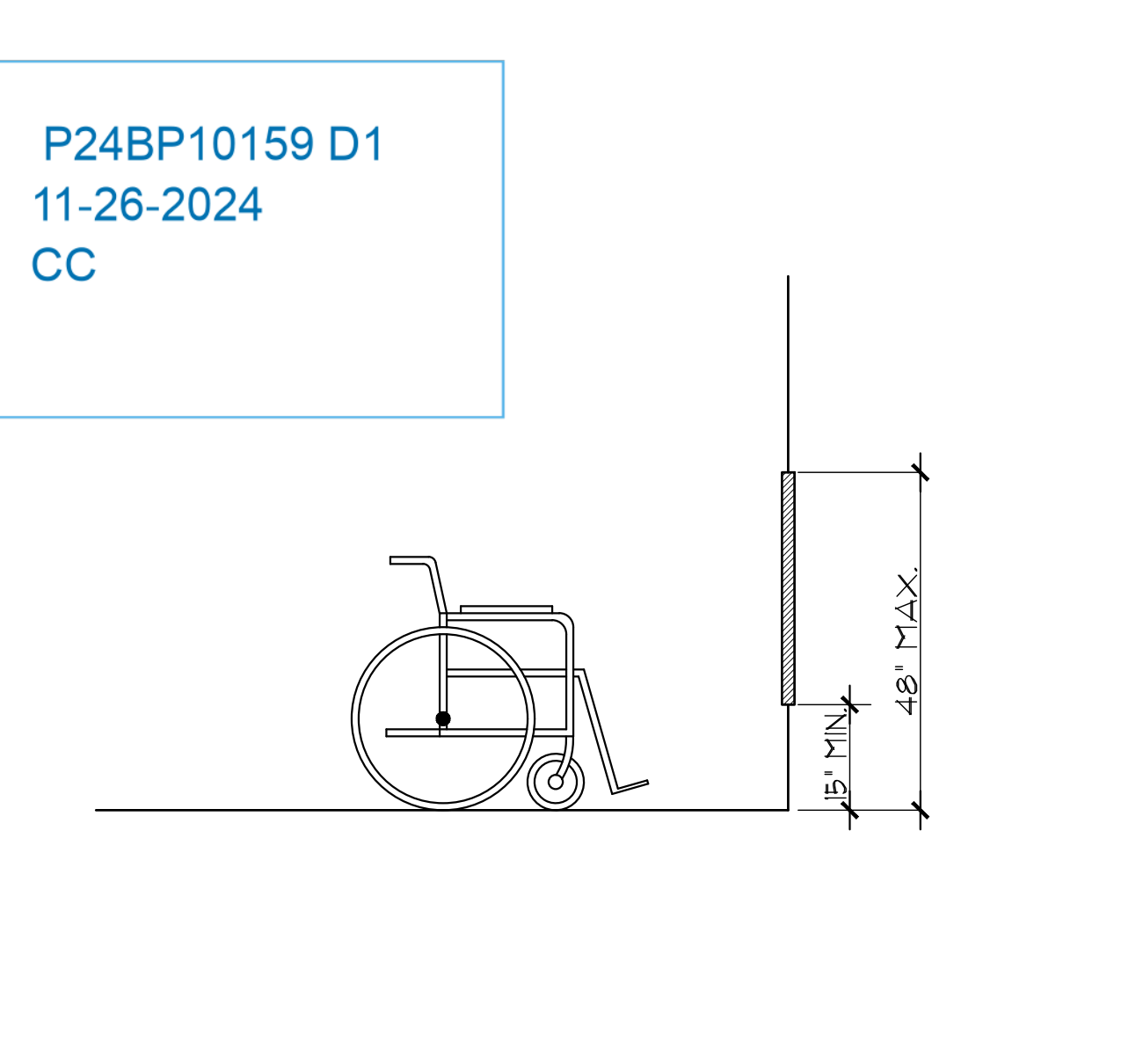
16 ELECTRICAL MOUNTINGS
SCALE: 1/2" = 1'-0"



12 ADA WATER CLOSET
SCALE: 1/2" = 1'-0"



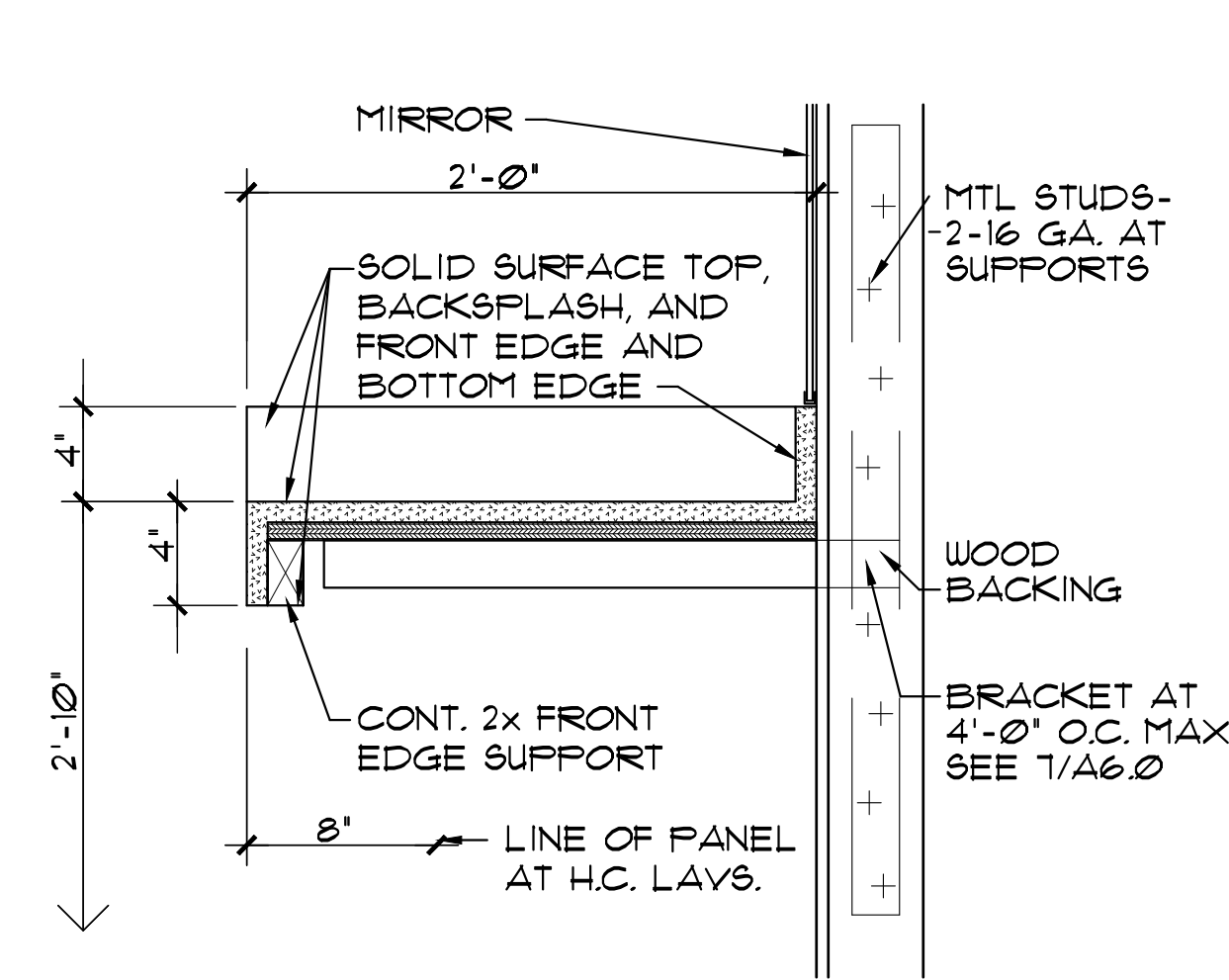
8 LIMITS OF PROTRUDING OBJECTS
SCALE: 1/2" = 1'-0"



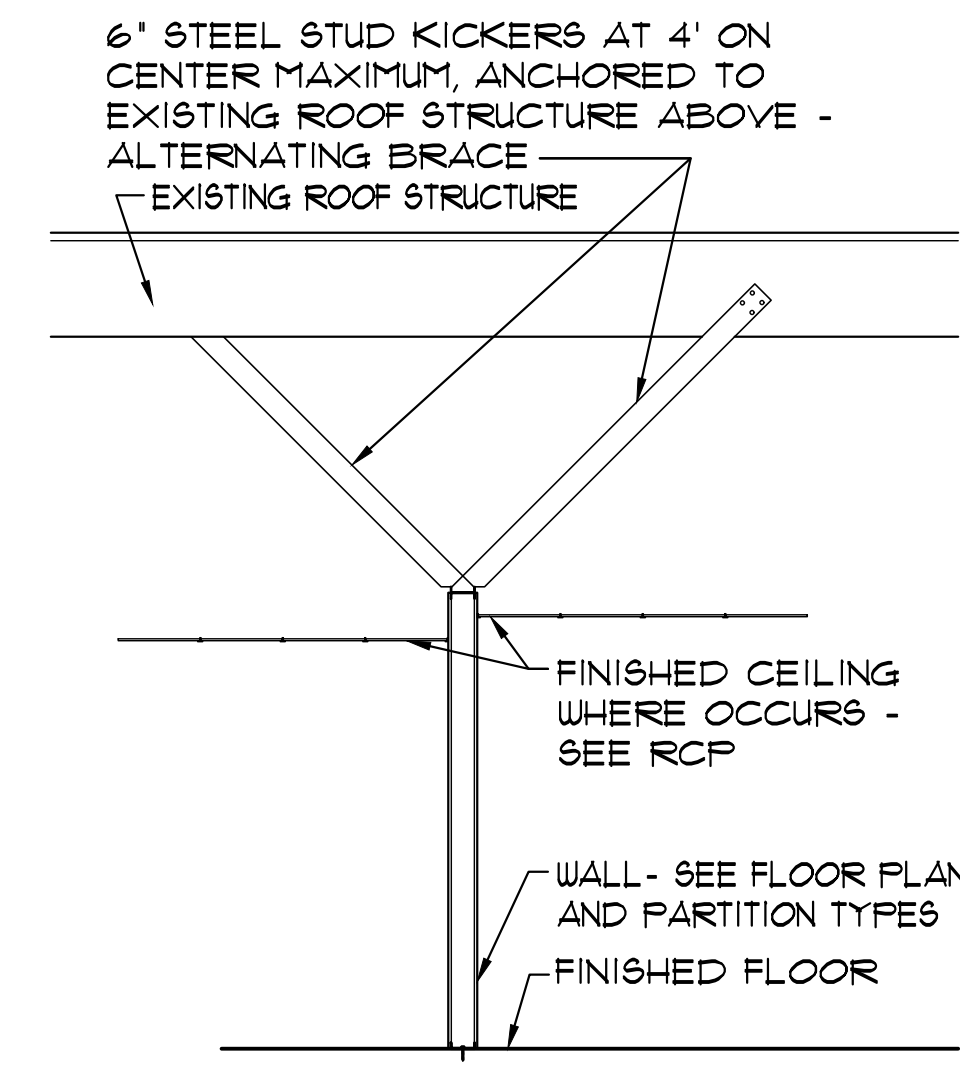
4 ADA UNOBSTRUCTED FORWARD REACH
SCALE: 1/2" = 1'-0"



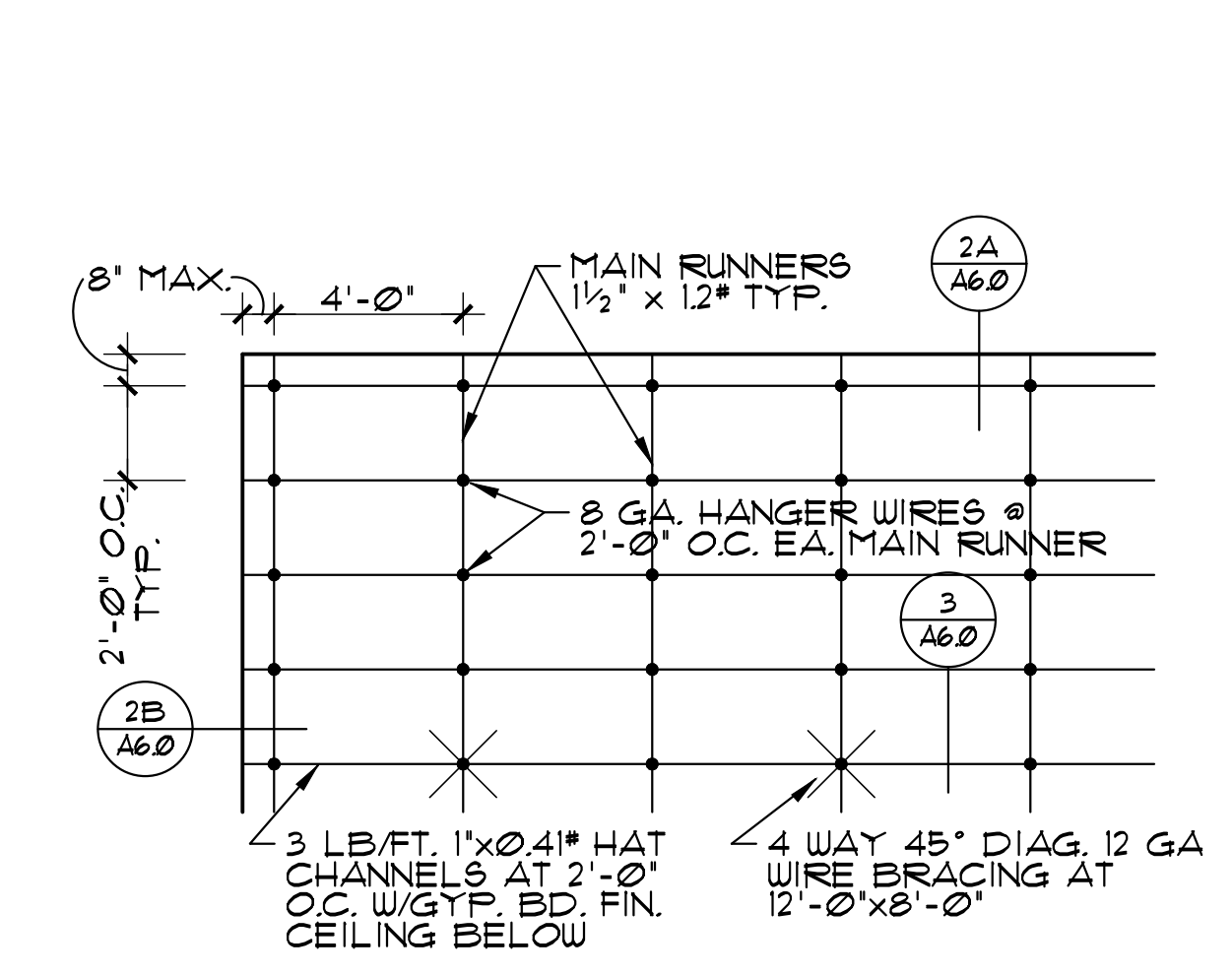
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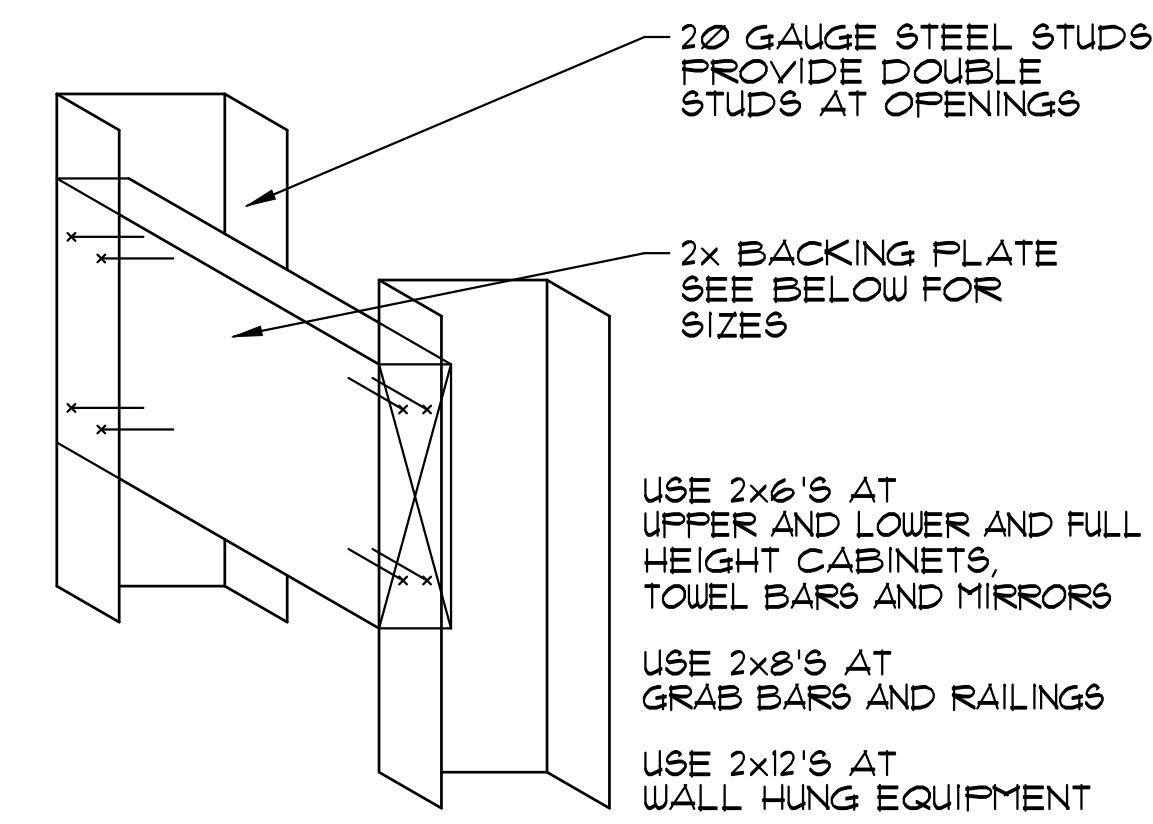
5 LAVATORY AND COUNTER
SCALE: 1 1/2" = 1'-0"



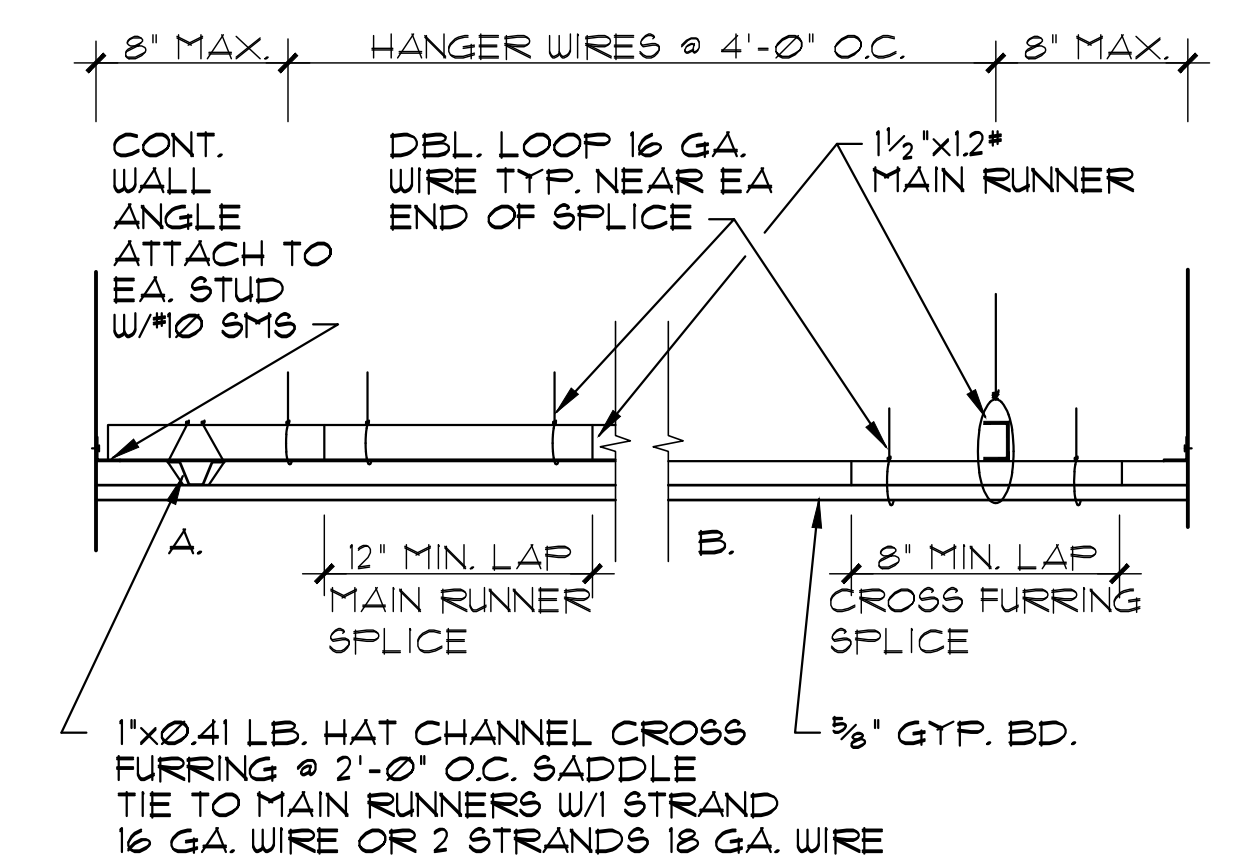
6 WALL BRACE DETAIL
SCALE: 1/4" = 1'-0"



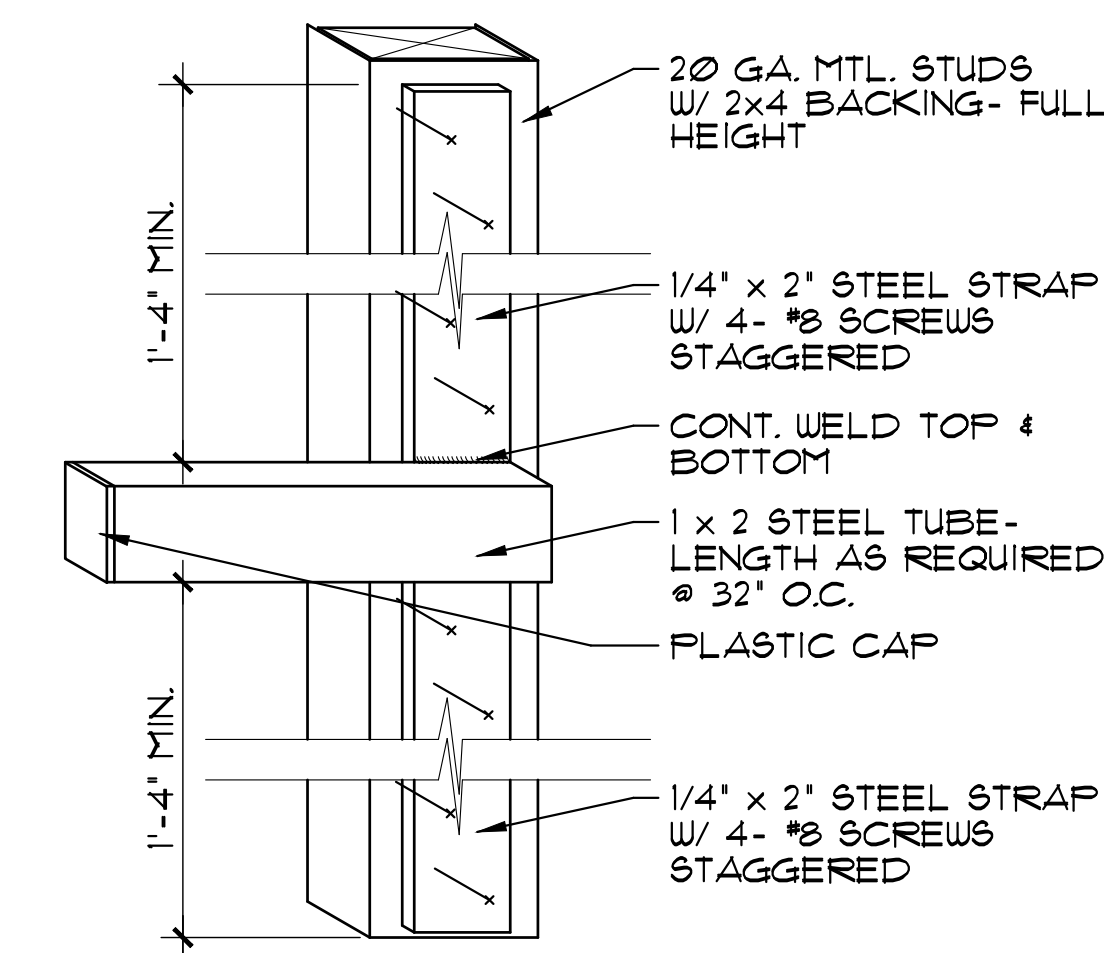
1 GYPSUM BOARD CEILING PLAN
SCALE: 1/4" = 1'-0"



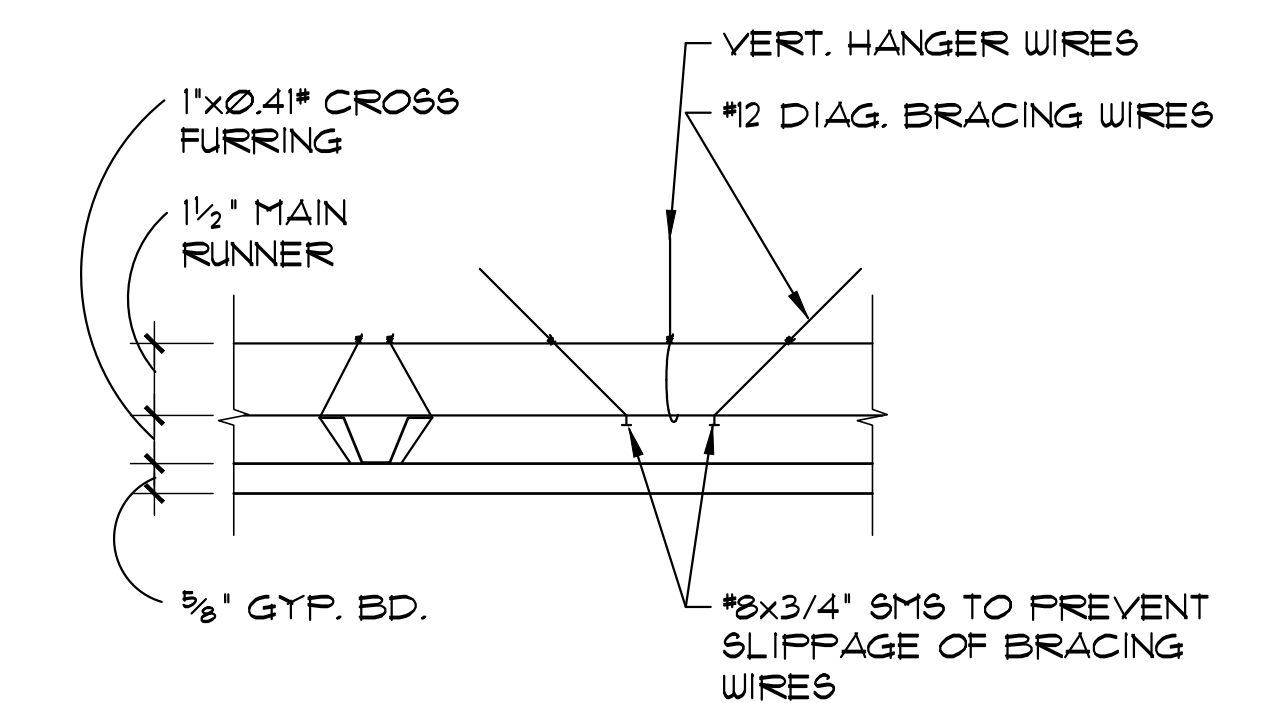
6 BACKING PLATE
SCALE: 3" = 1'-0"



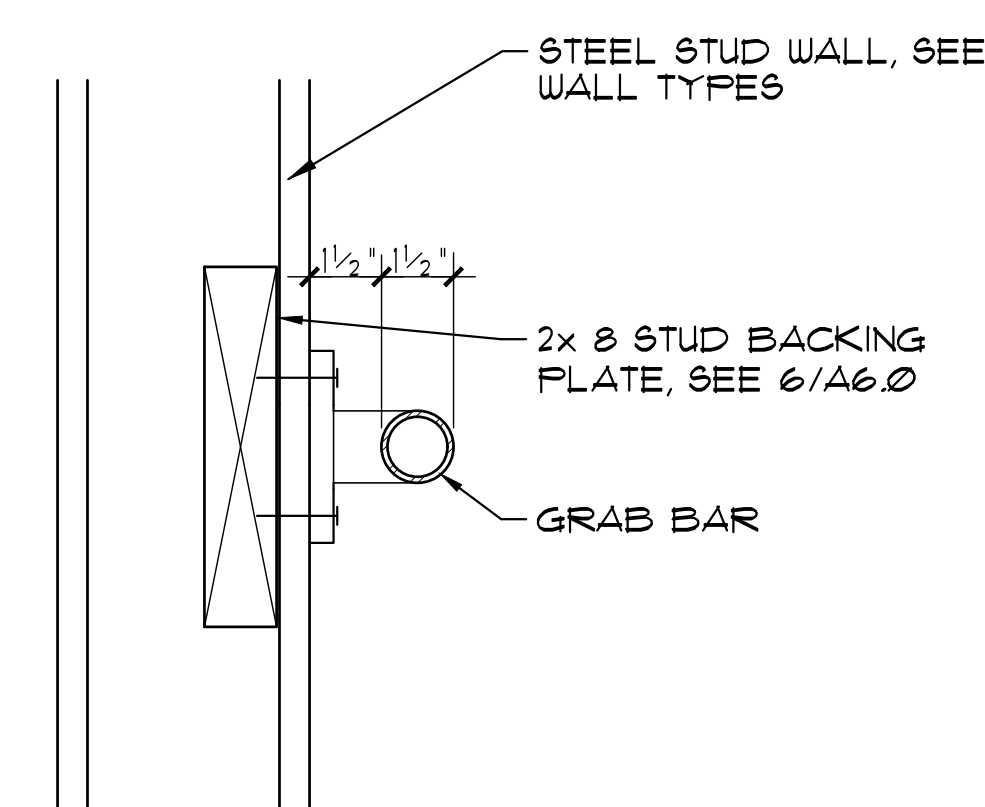
2 PERIMETER AT GYPSUM BOARD CEILING
SCALE: 1 1/2" = 1'-0"



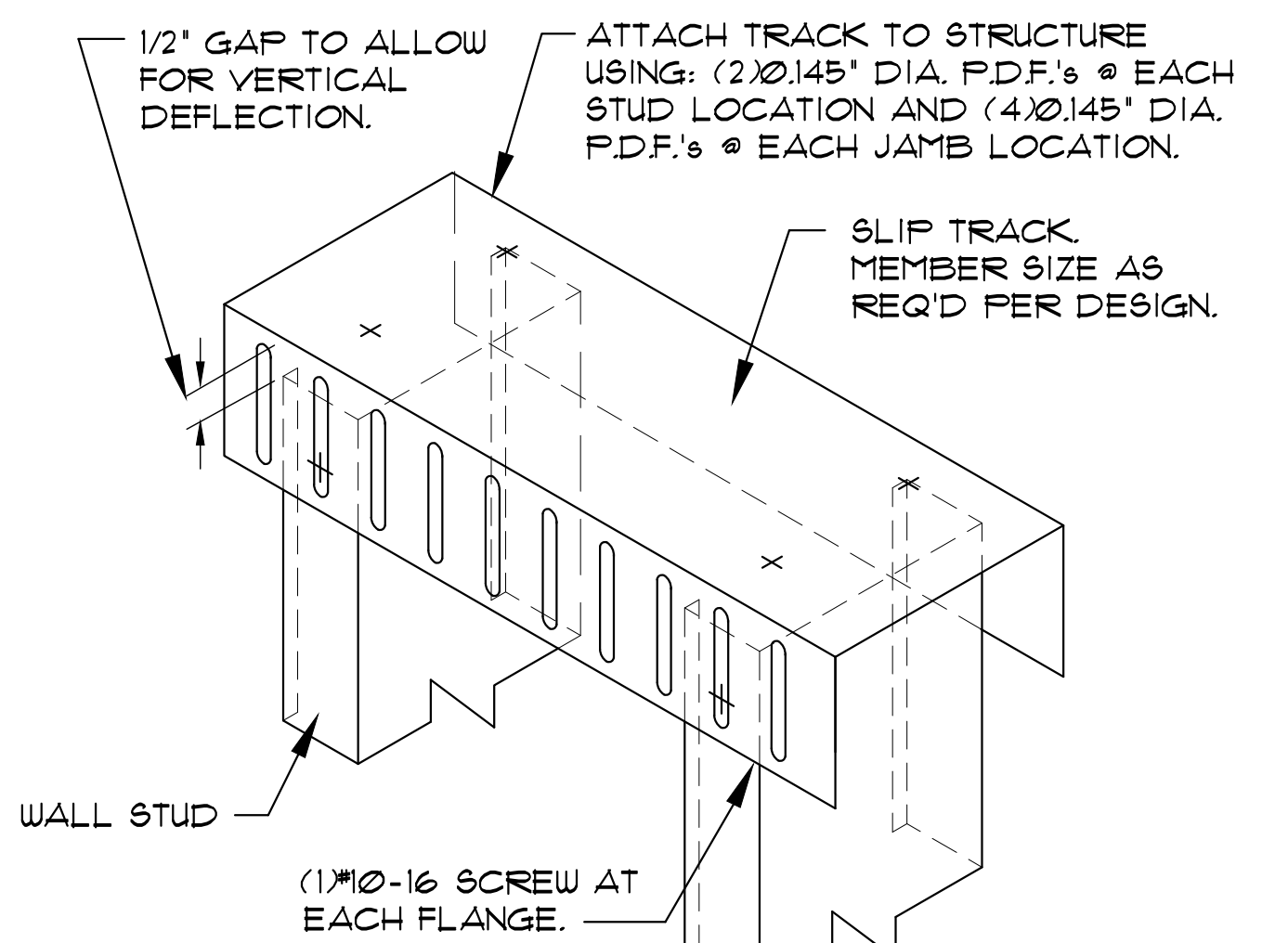
7 BRACKET
SCALE: 3" = 1'-0"



3 INTERMEDIATE AT GYPSUM BOARD CEILING
SCALE: 3" = 1'-0"



8 GRAB BAR
SCALE: 3" = 1'-0"



4 DEFLECTION SLIP TRACK
SCALE: 3/4" = 1'-0"

LOCKER EXPANSION
INTERIOR DETAILS

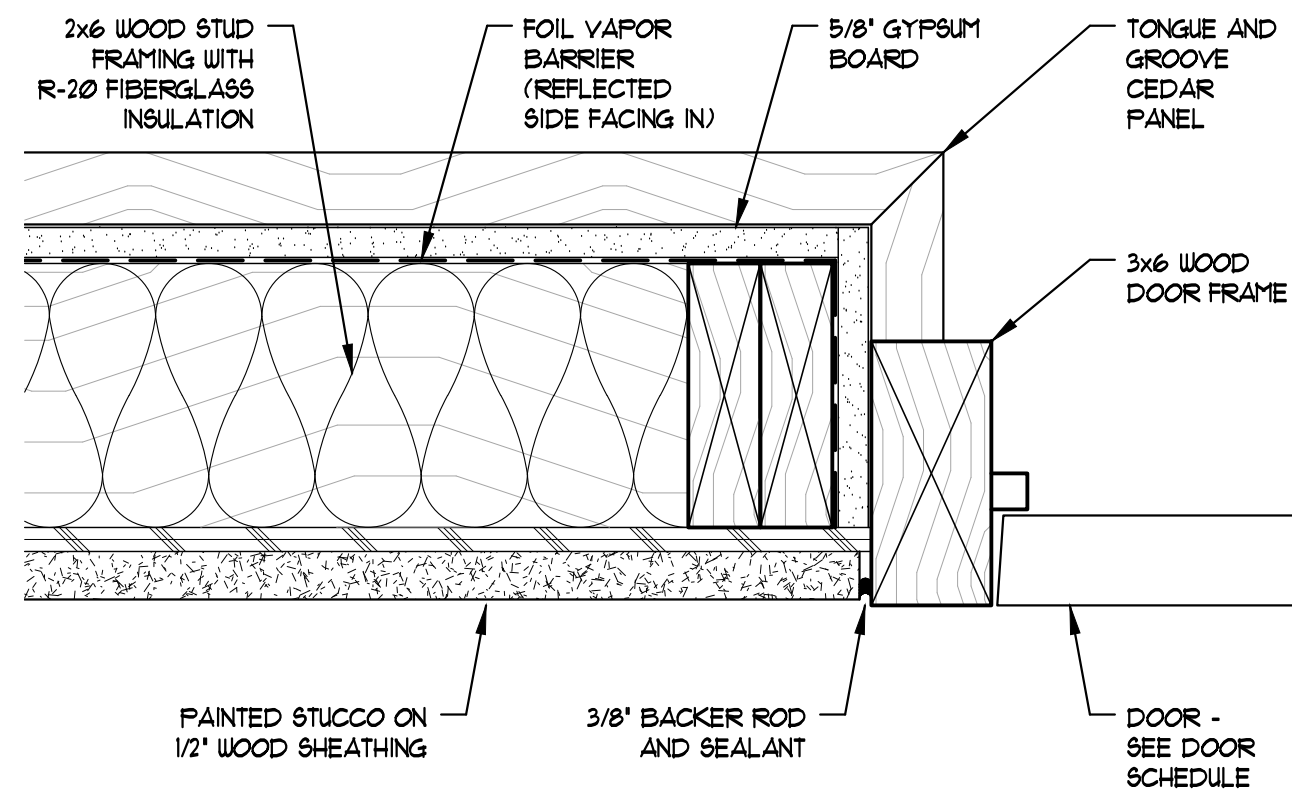
SEAVER FRANKS
 ARCHITECTS, INC. AIA
2525 ALVERNAN WAY / TUCSON, AZ 85711 / FAX 520-241-7700-4000

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GREEN VALLEY, ARIZONA 85622

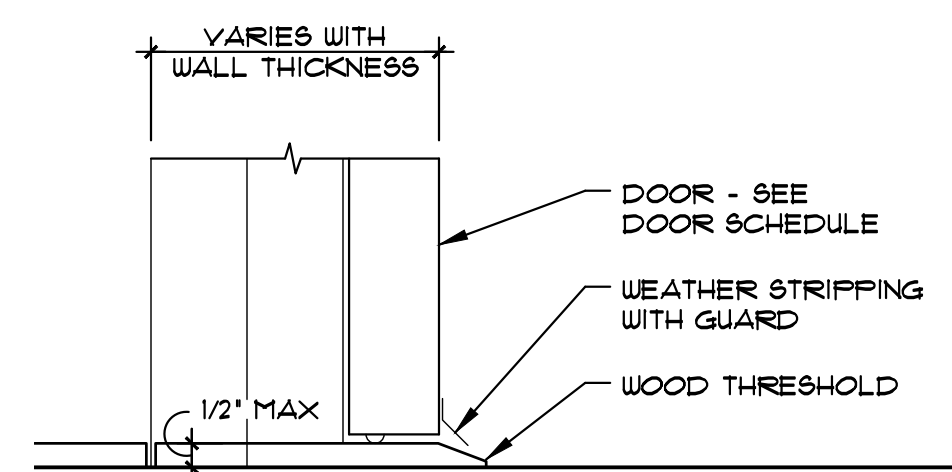
ISSUE DATE 11-04-2024
 PROJ. NO. 3703.1
 DRG. SCALE A6 NOTED

SHEET

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3 WOOD DOOR - HEAD
SCALE: 3" = 1'-0"



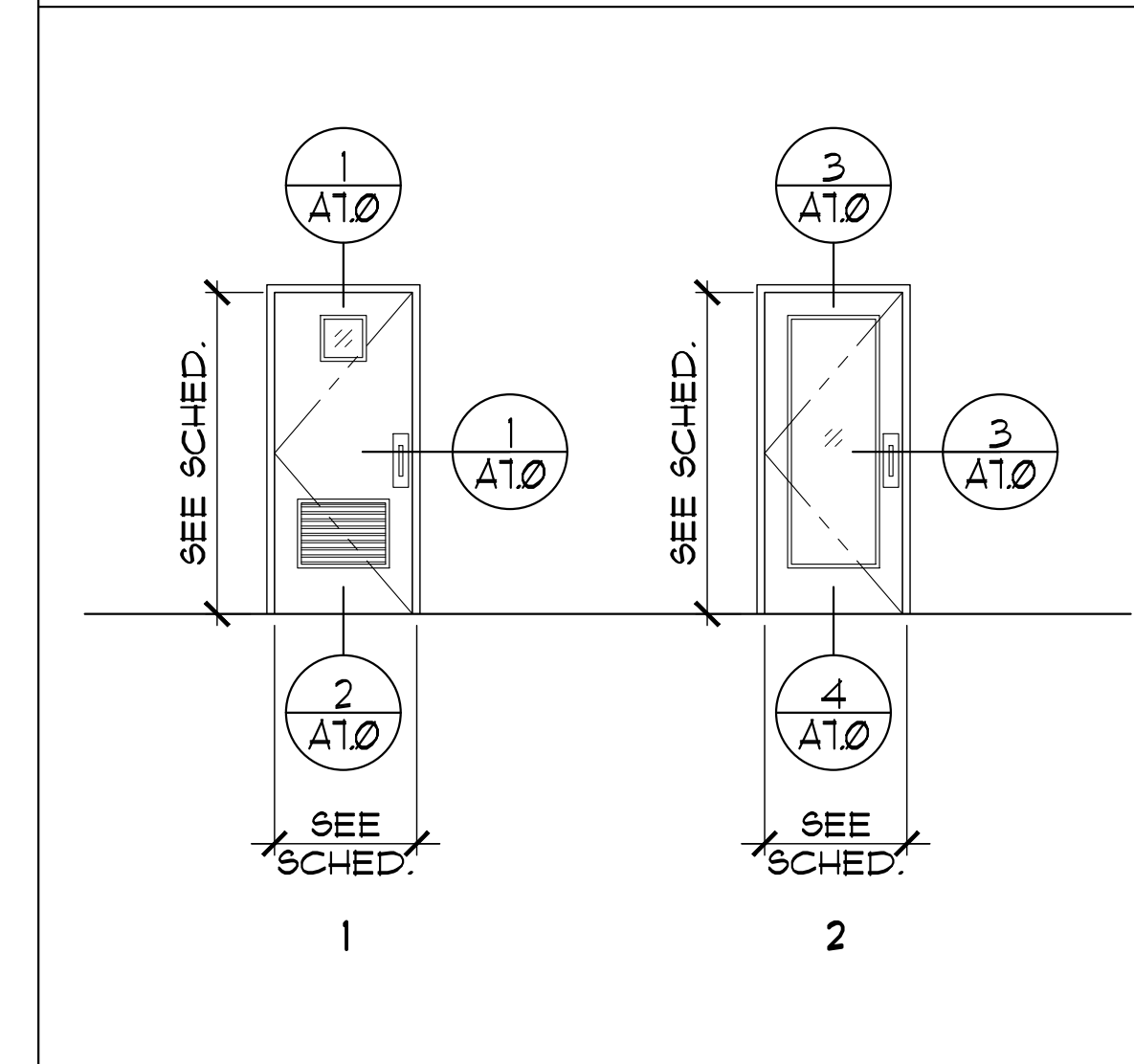
4 DOOR THRESHOLD
SCALE: 3" = 1'-0"

DOOR SCHEDULE										
NO.	ROOM NAME	OPENING SIZE (W X H)	DOOR			FRAME		HARDWARE	NOTES	
			TYPE	MATERIAL	FINISH	GLASS	MATERIAL			FINISH
102A	CIRCULATION	3'-0" x 1'-0"	1	HM/GL	PT	T	FM	PT	FUSH/PULL * R.P.T	-
101A	SALINA	3'-0" x 1'-0"	2	WD/GL	ST	T	WD	ST	FUSH/PULL *	-
102A	CIRCULATION	3'-0" x 1'-0"	1	HM/GL	PT	T	FM	PT	FUSH/PULL * R.P.T	-

DOOR KEY TO ABBREVIATIONS

GL = GLAZING	FM = PRESSED METAL	ST = STAINED	WD = WOOD
HM = HOLLOW METAL	PT = PAINTED	T = TEMPERED GLAZING	

DOOR TYPES



GENERAL DOOR NOTES

- OWNER SHALL WORK WITH CONTRACTOR'S DOOR HARDWARE SUPPLIER TO GENERATE A DOOR HARDWARE SCHEDULE. SECURITY ACCESS CONTROL MAY BE REQUIRED AT CERTAIN DOORS. ONCE CRITERIA IS SET, CONTRACTOR SHALL SUBMIT HARDWARE SCHEDULE FOR FINAL OWNER APPROVAL. FINISH SHALL BE 6/6 SATIN CHROME. MANUFACTURER SHALL BE SCHLAGE OR APPROVED COMPARABLE PRODUCT.
- ALL DOOR HARDWARE SHALL CONFORM WITH ACCESSIBILITY REQUIREMENTS. HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, FINCHING OR TWISTING OF THE WRIST TO OPERATE. SUCH HARDWARE SHALL BE 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR OR GROUND.
- DOOR CLOSER SUEEP PERIODS TO COMPLY WITH ADAAG 4.13.10 AND INTERIOR DOOR OPENING FORCE TO BE FIVE POUNDS MAXIMUM PER ADAAG 4.13.15.
- EGRESS DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT SHALL NOT HAVE MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS AND SHALL BE CAPABLE OF BEING UNLATCHED IN NO MORE THAN A SINGLE OPERATION.
- GENERAL CONTRACTOR TO PROVIDE MASTER KEY FOR ALL FRONT DOORS (NOT A CONSTRUCTION CORE).
- INCLUDES DEADBOLT AND SIGN READING 'DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED'.
- INCLUDES EXIT HARDWARE ALWAYS LOCKED ON OUTSIDE, AND SECURITY MEASURES ABOVE.
- PROVIDE DOUBLE GLASS PANE AT DOOR. ONE PANE SHALL BE LAMINATED.
- FUSH/PULL, DOOR OPERATION BY PUSHING OR PULLING THE DOOR, NO LATCH OR LOCKING DEVICE.
- PER 2018 IBC SECTION 1010.1.5.4(2), THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED. A READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. THE SIGN SHALL BE IN LETTERS ONE INCH HIGH ON A CONTRASTING BACKGROUND.
- PROVIDE DOOR CLOSERS.
- EXTERIOR HOLLOW METAL DOORS SHALL BE INSULATED WITH A U-FACTOR OF 0.350.

ROOM FINISH SCHEDULE

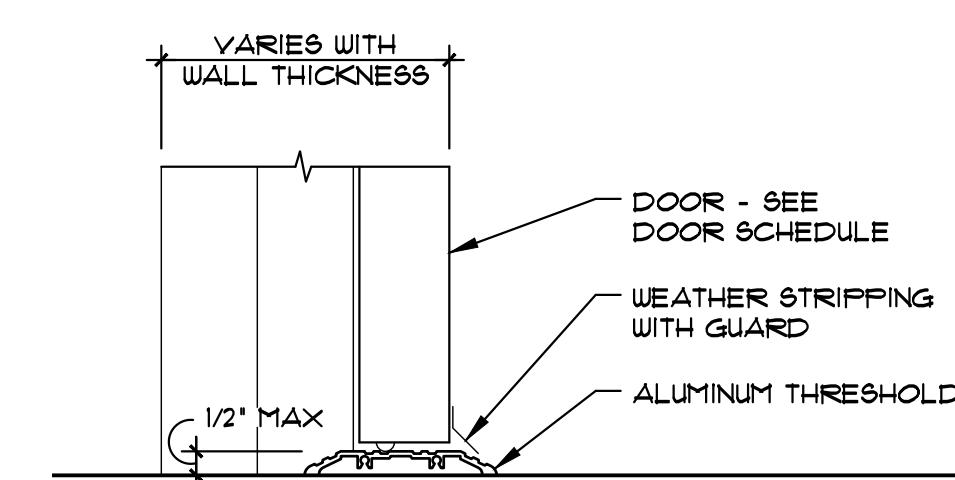
NO.	ROOM NAME	FLOOR				WALLS				CEILING		REMARKS
		MATERIAL	FINISHES	BASE	N	S	E	W	MATERIAL	FINISHES	HEIGHT	
101	CIRCULATION	F1		B1	W4	W4	W4	W4	C3		1'-6"	-
102	CIRCULATION	F2		B1	W2	W2	W2	W2	C1		1'-6"	-
103	WOMEN'S	F2		B1	W2	W2	W2	W2	C1		VARIABLES	-
104	LOCKER	F2		B1	W1/W2	W1/W2	W1/W2	W1/W2	C1		VARIABLES	-
105	SHOWER	F2		B1	W1/W2	W1/W2	W1/W2	W1/W2	C1		8'-6"	-
106	TOILET	F2		B1	W1/W2	W1/W2	W1/W2	W1/W2	C1		8'-6"	-
107	SALINA	F3		B2	W3	W3	W3	C2			1'-6"	-
108	TOILET	F2		B1	W1/W2	W1/W2	W1/W2	W1/W2	C1		8'-6"	-
109	SHOWER	F2		B1	W1/W2	W1/W2	W1/W2	W1/W2	C1		8'-6"	-
110	LOCKER	F2		B1	W1/W2	W1/W2	W1/W2	W1/W2	C1		VARIABLES	-
111	MEN'S	F2		B1	W2	W2	W2	W2	C1		VARIABLES	-
112	CIRCULATION	F2		B1	W2	W2	W2	W2	C1		1'-6"	-

ROOM FINISH SCHEDULE KEY

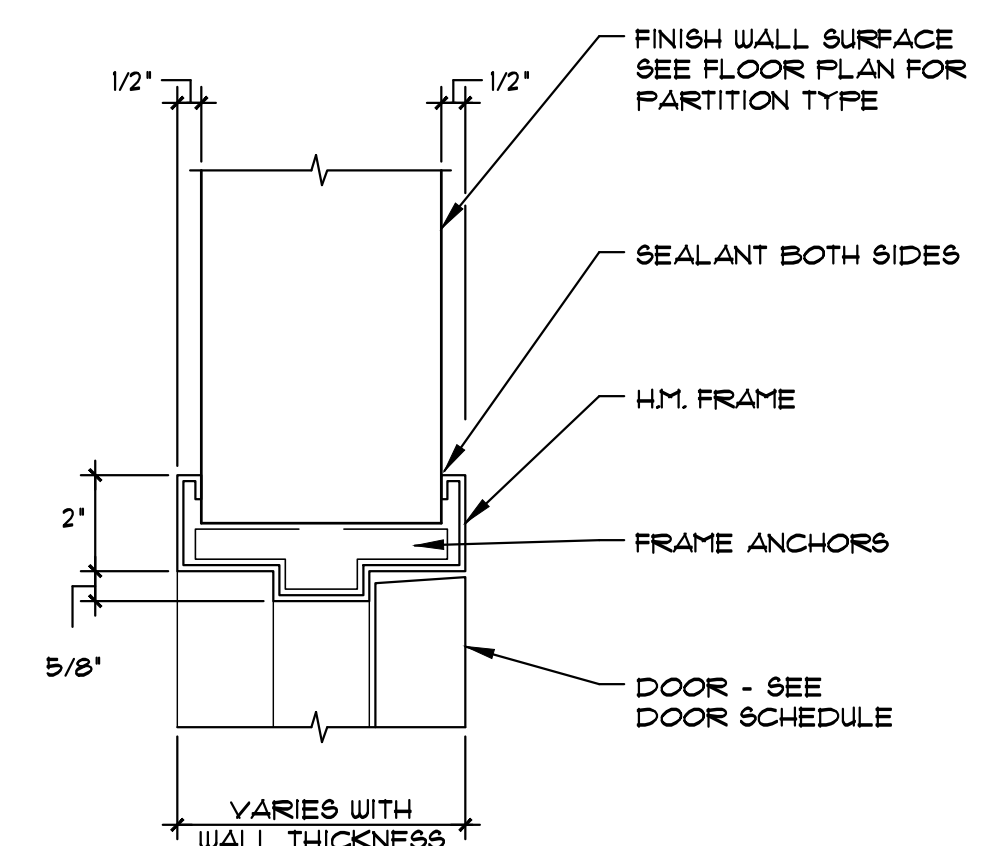
FLOOR	BASE	WALL / WAJNSCOT	CEILING
F1 - SEALED AND POLISHED CONCRETE	B1 - CERAMIC TILE	W1 - PAINTED GYPSUM BOARD (EGGSHELL ENAMEL)	C1 - PAINTED GYPSUM BOARD (EGGSHELL ENAMEL)
F2 - CERAMIC TILE	B2 - CEDAR WOOD PLANK	W2 - CERAMIC TILE	C2 - CEDAR WOOD PLANK
F3 - CEDAR WOOD PLANK		W3 - CEDAR WOOD PLANK	C3 - PAINTED STUCCO SYSTEM TO MATCH EXISTING
		W4 - PAINTED STUCCO SYSTEM TO MATCH EXISTING	

FINISH MATERIAL GENERAL NOTES

- PATCH EXISTING FLOORING AS REQUIRED.
- ALL INTERIOR FINISHES TO COMPLY WITH ALL STATE AND LOCAL BUILDING CODES.
- SAMPLES OF ALL FINISHES ARE REQUIRED TO BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.
- ALL WALLS SHALL BE PAINTED AND RECEIVE 1 COAT OF PRIMER AND 2 FINISH COATS OF PAINT.
- PAINT FINISHES AT THE CEILING SHALL BE FLAT.
- PAINT FINISHES AT WALLS SHALL BE SHERWIN WILLIAMS SUPERPAINT VELVET.
- OWNER TO SPECIFY COLORS ON THE WALLS.



2 DOOR THRESHOLD
SCALE: 3" = 1'-0"



1 HOLLOW METAL DOOR - HEAD
SCALE: 3" = 1'-0"



EXPIRES 12-31-26
REVISIONS NO. DATE

LOCKER EXPANSION
DOOR TYPES, DOOR/FINISH
SCHEDULES, AND DETAILS



GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
PROJ. NO. 3709.1
DRG. SCALE AS NOTED

SHEET
A7.0

GENERAL STRUCTURAL NOTES

- A. DESIGN CRITERIA:**
- DESIGN CODE: 2018 INTERNATIONAL BUILDING CODE, WITH LOCAL AMENDMENTS.
 - RISK CATEGORY: II
 - ROOF LIVE LOAD: 20 PSF (REDUCIBLE)
 - FLOOR LIVE LOAD: 40 PSF (100 PSF AT STORAGE)
 - STORAGE LIVE LOAD: 100 PSF
 - SNOW DESIGN: GROUND SNOW LOAD: 0 PSF
 - WIND DESIGN: BASIC DESIGN WIND SPEED, V: 105 MPH
ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}: 83 MPH
WIND EXPOSURE: B
INTERNAL PRESSURE COEFFICIENT (C_{pi}): + 0.55
SEISMIC IMPORTANCE FACTOR: I_e: 1.0
S_s: 0.258, S_v: 0.081
SITE CLASS: D
S_{DS}: 0.274, S_{DS}: 0.129
SEISMIC DESIGN CATEGORY: B
EQUIVALENT LATERAL FORCE PROCEDURE
WIND AND SEISMIC LOADS ARE ULTIMATE STRENGTH DESIGN LIMIT STATES PER ASCE 7-16, U.N.C.

- B. GENERAL:**
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTORS MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, NOR WILL THE STRUCTURAL ENGINEER BE RESPONSIBLE FOR CONSTRUCTION SITE SAFETY, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO.
 - CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THE DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES AND OMISSIONS SHALL BE RESOLVED WITH THE ARCHITECT. DO NOT USE SCALED LENGTHS.
 - CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS SO AS NOT TO EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
 - WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION UNLESS OTHERWISE NOTED.
 - WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. WHERE NO SPECIFIC DETAIL IS SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT FOR BIDDING PURPOSES, WHERE ANY MEMBER OR STRUCTURAL ELEMENT IS SHOWN BUT NOT CALLED OUT ON THE PLANS OR DETAILS, THE LARGEST SIMILAR MEMBER OR ELEMENT USED IN THE PROJECT SHALL BE UTILIZED.
 - REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND CIVIL DRAWINGS FOR LOCATION AND DETAILS OF BLOCKOUTS, INSERTS AND OPENINGS, CURBS, EQUIPMENT BASES AND PADS, SITE WORK ITEMS, ETC. AND DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
 - APPROVED EQUAL OPTIONS ARE FOR THE CONTRACTORS CONVENIENCE. IF AN OPTION IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY AND COORDINATION OF ALL DETAILS.
 - ALL DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT. TYPICAL DETAILS MAY OR MAY NOT BE FLAGGED ON THE DRAWINGS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.
 - ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN.

- C. INSTRUCTIONS TO BIDDERS AND CONTINGENCIES:**
- UNDER NO CIRCUMSTANCES SHALL THESE DRAWINGS BE "FINAL BID" UNTIL THE PROJECT IS FULLY PERMITTED.
 - ALL PRELIMINARY PRICING EFFORTS SHALL BE CONSIDERED TO BE THE ONLY AND SHALL INCLUDE THE NECESSARY CONTINGENCIES, ALLOWANCES, ALTERNATES, ETC. AS APPROPRIATE TO ACCOUNT FOR MODIFICATIONS AND ADDITIONS THAT WILL OCCUR TO THE DRAWINGS DURING THE FINALIZATION OF THE DESIGN AND PERMITTING.
 - THE GENERAL CONTRACTOR SHALL UTILIZE THE FOLLOWING MINIMUM CONTINGENCIES FOR EACH OF THE STRUCTURAL ELEMENT COSTS TO BE USED AT THE SOLE DISCRETION OF THE STRUCTURAL ENGINEER.
 - SCHEMATIC DESIGN - 30% MINIMUM
 - DESIGN DEVELOPMENT - 15% MINIMUM
 - CONSTRUCTION DOCUMENTS/FINAL BID - 3% MINIMUM
 - THE CONTINGENCY FOR EACH STRUCTURAL ELEMENT COST SHALL BE CLEARLY SHOWN AS A LINE ITEM IN THE GENERAL CONTRACTORS FINAL BID AND/OR COST ESTIMATE. ALL OF THE "FINAL BID" CONTINGENCIES NOT USED BY THE STRUCTURAL ENGINEER SHALL BE REFUNDED TO THE OWNER PRIOR TO CLOSEOUT OF THE PROJECT.
 - ANY MODIFICATIONS, DELETIONS OR ELLIMINATIONS TO THE STRUCTURAL BIDDING AND CONSTRUCTION REQUIREMENTS, WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER, SHALL AUTOMATICALLY INDEMNIFY THE STRUCTURAL ENGINEER OF ANY COSTS THAT MAY ARISE DURING THE DESIGN AND CONSTRUCTION OF THE PROJECT.
 - WHERE DISCREPANCIES OCCUR WITHIN THE DRAWINGS, THE CONTRACTOR WILL EITHER RESOLVE THE DISCREPANCIES WITH THE ARCHITECT BEFORE BIDDING OR INCLUDE THE GREATER COST ITEM IN THE BID AND RESOLVE THE DISCREPANCY PRIOR TO CONSTRUCTION.

- D. LIMITATION OF LIABILITY:**
- THE STRUCTURAL ENGINEER IS NOT LIABLE FOR ANY ASPECTS OF THE STRUCTURE WHICH ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DOCUMENTS. IN THE EVENT A BUILDING ELEMENT IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE TO INFORM THE ENGINEER SO THAT THE ENGINEER CAN PROVIDE THE DESIGN.

- E. EXISTING STRUCTURES:**
- ALL PARTIES INVOLVED IN THE RENOVATION WORK SHALL VISIT THE SITE, BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND VERIFY THOSE EXISTING CONDITIONS SHOWN ON THE DRAWINGS.
 - VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE STRUCTURAL ENGINEERING THROUGH THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES.
 - THESE PLANS HAVE BEEN PREPARED BASED ON LIMITED AS-BUILT DOCUMENTS AND/OR VISUAL OBSERVATIONS. DESIGN CHANGES MAY BE REQUIRED BECAUSE OF POSSIBLE AMBIGUITIES, HIDDEN CONDITIONS OR INCONSISTENCIES IN RECORD DRAWINGS.
 - THE CONTRACTOR SHALL HAVE APPROPRIATE CONTINGENCIES TO ACCOUNT FOR BOTH DESIGN AND CONSTRUCTION CONDITIONS THAT MAY ARISE FROM THE DISCOVERY OF CONCEALED OR UNKNOWN CONDITIONS IN THE EXISTING STRUCTURE.
 - IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON PLANS, NOTIFY THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT PRIOR TO PROCEEDING. FAILURE TO NOTIFY THE STRUCTURAL ENGINEER OF DISCREPANCIES BETWEEN THE PLANS AND ACTUAL EXISTING CONDITIONS SHALL INDEMNIFY THE STRUCTURAL ENGINEER (THE STRUCTURAL ENGINEER SHALL NOT BE LIABLE FOR UNKNOWN EXISTING CONDITIONS OR ISSUES ARISING THEREFROM).

- F. ROUGH CARPENTRY AND PLYWOOD:**
- WOOD FRAMING SHALL CONFORM TO IRC CHAPTER 23. FRAMING LUMBER SHALL COMPLY WITH THE 2018 EDITION OF THE NATIONAL DESIGN SPECIFICATION. MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19 PERCENT. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY. ALL SAWN LUMBER SHALL BE DOUGLAS FIR-LARCH WITH THE FOLLOWING MINIMUM GRADES:
POSTS
4X MEMBERS: NO. 2
6X MEMBERS: NO. 1
STUDS: NO.2
LEDGERS AND TOP PLATES: NO. 2
 - ALL WOOD STRUCTURAL PANELS SHALL CONFORM TO DOC P5-1 OR P8-2 STANDARDS. SHALL HAVE AN EXTERIOR OR EXPOSURE 1 CLASSIFICATION AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. WHERE PLYWOOD IS USED, LAY UP PLYWOOD WITH GRAIN PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. ON ROOFS WHERE PLYWOOD IS LAID UP WITH FACE GRAIN PARALLEL TO SUPPORTS, USE A MINIMUM OF 5/8" PLYWOOD AT SHEAR WALLS. PROVIDE 2X BLOCKING AT ALL UNSUPPORTED EDGES. WHERE SCREWS ARE INDICATED FOR WOOD TO WOOD ATTACHMENTS, USE WOOD SCREWS. ALL WOOD STRUCTURAL PANELS SHALL BE OF THE FOLLOWING NOMINAL THICKNESS, SPAN/RATIO AND SHALL BE ATTACHED AS FOLLOWS UNLESS NOTED OTHERWISE:
a. WALL: **
• THICKNESS: 3/8"
• SPAN/RATIO: 240
• EDGE ATTACHMENT: 8d AT 6" O.C.
• INTERMEDIATE ATTACHMENT: 8d AT 12" O.C.
** SEE SHEAR WALL SCHEDULE.
 - OTHER APARATED PANELS (I.E. ORIENTED STRAND BOARD) MAY BE SUBSTITUTED FOR PLYWOOD PROVIDED THAT THEY COMPLY WITH PRODUCT STANDARD 2-10 AND HAVE THE SAME EXPOSURE DURABILITY CLASSIFICATION, SPAN RATING AND NOMINAL THICKNESS.
 - STUD WALLS SHALL BE 2X6 AT 16" O.C. U.N.O. ON THE PLANS. PLATE ANCHOR BOLTS SHALL BE 1/2" DIAMETER PLACED NOT TO EXCEED 4'-0" O.C. MAXIMUM U.N.O. ANCHOR BOLTS SHALL BE PLACED AT ALL JAMBS, CORNERS, INTERSECTIONS AND WALL ENDS. ALL BOTTOM PLATES SHALL HAVE A MINIMUM OF 2 ANCHOR BOLTS. ALL BOTTOM PLATES OR SILLS ON CONCRETE SLABS ON GRADE AND ON CONCRETE OR MASONRY FOUNDATIONS SHALL BE PRESURE TREATED WOOD STAMPED BY AN APPROVED AGENCY.
 - DO NOT NOTCH, DRILL OR SPLICE JOISTS, BEAMS OR LOAD BEARING OR STRUCTURAL STUDS WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.
 - DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER PARTITIONS. DOUBLE UP JOISTS BELOW MECHANICAL EQUIPMENT. PROVIDE 2" SOLID BLOCKING AT MIDSPAN AND AT SUPPORTS OF ALL JOISTS.
 - DOUBLE UP STUDS AT JAMBS AND AS REQUIRED UNDER BEAMS IN BEARING WALLS. EVERY OTHER STUD OF A WOOD FRAME BEARING WALL SHALL HAVE A SIMPSON H3 ANCHOR TOP AND BOTTOM. PROVIDE 2X BLOCKING AT MID-HEIGHT OF BEARING STUD WALLS.
 - ALL NAILING SHALL BE WITH COMMON NAILS. ALL NAILING NOT NOTED SHALL BE PER TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE. WOOD CONNECTORS SHALL BE 40 MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. OR OTHER MANUFACTURER WITH CURRENT AND EQUIVALENT ICC APPROVAL. ALL NAIL HOLDERS IN CONNECTORS SHALL BE FILLED WITH NAIL OF THE LARGEST SIZE INDICATED IN THE MANUFACTURERS CATALOG U.N.O. MULTIPLE, SKEWED AND/OR SLOPED HANGERS SHALL BE SUPPLIED BY THE CONTRACTOR WHERE NECESSARY.
 - ALL FABRICATION SHALL BE PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.
a. JOIST SIZES ARE INDICATED ON PLANS AND SCHEDULES. EXAMPLES OF CALCUTS IN JOIST SCHEDULE ARE AS FOLLOWS:
• 14" WOOD JOIST #846 WHERE 16" INDICATES JOIST DEPTH. 18" INDICATES TOTAL LOAD (PLF). 40 INDICATES LIVE LOAD (PLF). THE UNIFORM LOADS DO NOT INCLUDE SPECIAL OR ADDITIONAL LOADS NOTED ON THE PLANS OR DETAILS.
 - THE JOIST MANUFACTURER SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN, FABRICATION AND ERECTION PROCEDURES FOR ALL JOISTS, JOIST HANGERS, ROD OR METAL BRIDGING.

- BLOCKING PANELS, WEB STIFFENERS, INCIDENTAL FRAMING, FRAMING FOR OPENINGS NOT SHOWN ON DRAWINGS, TEMPORARY AND PERMANENT BRACING AND BRIDGING, CONNECTIONS, HOLD-DOWN ANCHORS AND ALL OTHER ITEMS REQUIRED FOR A COMPLETE AND SAFE INSTALLATION OF THE JOIST SYSTEM. JOIST SIZES ARE INDICATED ON THE DRAWINGS.
- ADDITIONAL JOISTS SHALL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT. MECHANICAL EQUIPMENT WEIGHTS SHOWN ON THE DRAWINGS HAVE NOT BEEN INCLUDED IN THE JOIST LOAD DESIGNATIONS. THE JOIST MANUFACTURER SHALL PROVIDE ALL MECHANICAL EQUIPMENT WEIGHTS AS ADDITIONAL LOADS TO BE SUPPORTED BY THE JOISTS WHERE APPLICABLE.
- LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/260 AT SIMPLE SPAN MEMBERS AND 2 X SPAN/360 AT CANTILEVER MEMBERS. TOTAL LOAD DEFLECTION SHALL BE LIMITED TO SPAN/240 AT SIMPLE SPAN CONDITIONS AND 2 X SPAN/240 AT CANTILEVER MEMBERS. ROOF JOIST DURATION OF LOAD FACTOR SHALL BE 1.25 FOR COMBINED DEAD AND LIVE LOADS AND SHALL BE 1.60 FOR ANY LOAD COMBINATION INCLUDING WIND OR SEISMIC.
- CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED. ALL MECHANICAL DRAWINGS, CALCULATIONS AND SHOP DRAWINGS SHALL INCLUDE BUT NOT BE LIMITED TO DESIGN LOADS, ALLOWABLE STRESSES, STRESS DIAGRAMS, SPECIAL BEARING OR CONNECTION DETAILS AND ERECTION DRAWINGS.
- ALL CONNECTORS SPECIFIED BY THE MANUFACTURER SHALL HAVE CURRENT ICC APPROVAL. MANUFACTURER SHALL SUPPLY MULTIPLE, SKEWED AND/OR SLOPED JOIST HANGERS AS NECESSARY.
- JOISTS SHALL HAVE CURRENT ICC APPROVAL. DESIGN FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE ICC REPORT.
- ALL FABRICATION SHALL BE PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.
- JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL 300 POUNDS POINT DEAD LOAD, LOCATED ANYWHERE ON THE JOIST.

- G. FOUNDATIONS: (NO SOILS REPORT):**
- NO SOILS REPORT PROVIDED. FOUNDATION DESIGN IS BASED UPON A PRESUMPTIVE ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF PER IBC TABLE 1806.2. FOUNDATIONS SHALL BEAR ON FIRM, UNDISTURBED NATIVE SOIL AT 1'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE. FINISHED GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOUNDATIONS AND LOWEST FINISHED GRADE WITHIN 5'-0" FOR EXTERIOR FOUNDATIONS. THE BUILDING OFFICIAL SHALL INSPECT THE FOUNDATIONS PRIOR TO PLACEMENT OF CONCRETE PER IBC SECTION 1103.4. A GEOTECHNICAL INVESTIGATION OF THE SITE SOIL CONDITIONS IS RECOMMENDED. IF THE BUILDING OFFICIAL HAS REASON TO DOUBT THE VALIDITY OF THE PRESUMPTIVE SOIL BEARING PRESSURE, A GEOTECHNICAL INVESTIGATION MAY BE REQUIRED. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY GEOTECHNICAL ASPECTS OF THIS PROJECT.

- H. CONCRETE:**
- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 AND ACI 318.
 - CEMENT SHALL CONFORM TO ASTM C150, TYPE II, AGGREGATE PER ASTM C33, LIGHTWEIGHT AGGREGATE PER ASTM C330. MIX DESIGNS SHALL BE DESIGNED PER ACI 301 AND REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. MIX DESIGNS FOR POST-TENSIONING CONCRETE SHALL BE PROPORTIONED SO AS TO MINIMIZE SHRINKAGE CRACKING.
 - CONCRETE SHALL BE READY MIXED CONCRETE IN ACCORDANCE WITH ASTM C94. MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
• SLABS ON GRADE: 3,000 PSI
• FOUNDATIONS: 3,000 PSI
• DESIGNED FOR 2,500 PSI
 - CONCRETE SHALL BE FREE OF CHLORIDE. FLY ASH MAY NOT BE USED IN CONCRETE USED IN FLATWORK OR ARCHITECTUALLY EXPOSED CONCRETE. FLY ASH MAY BE SUBSTITUTED AT A 1:1 RATIO BY WEIGHT OF FLY ASH TO CEMENT/US CONCRETE. FLY ASH SHALL CONFORM TO ASTM C618, CLASS F AND SHALL BE LIMITED TO 30% OF CEMENT BY WEIGHT.
 - MAXIMUM SLUMP 4 1/2" FOR CONCRETE WITHOUT PLASTICIZER. IF PLASTICIZER IS USED, AN 8" MAXIMUM SLUMP IS ALLOWED AT PLACEMENT.
 - PROVIDE SLEEVES FOR UTILITY OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. DO NOT CUT ANY CONDUCTING REINFORCING.
 - NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER.
 - MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDERLOOR DUCTS, ETC. RE-VIBRATE TOPS OF CAISSONS 15 MINUTES AFTER PLACING CONCRETE. CAST CLOSURE POUR AROUND JOINTS AFTER DEAD LOAD IS APPLIED UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT. ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY CONTROL JOINTS, KEYS OR SAW CUTS. AS SHOWN ON THE FOUNDATION PLAN. UNLESS APPROVED OTHERWISE BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY CONTROL JOINTS, KEYS OR SAW CUTS. SUCH THAT THE LENGTH OF ANY UNBOUND SECTION DOES NOT EXCEED 120 FEET. CONTROL JOINTS SHALL NOT BE SPACED MORE THAN 15' O.C. AND SHALL NOT EXCEED A LENGTH TO WIDTH RATIO OF 1:5. UNLESS APPROVED IN WRITING BY THE ARCHITECT. KEYS OR SAW CUTS SHALL NOT OCCUR AT EXPOSED EDGES DURING PLACEMENT. ALL OTHER JOINTS MAY BE SAW CUT.
 - CONCRETE SHALL NOT BE DROPPED MORE THAN FIVE FEET VERTICALLY WITHOUT USE OF TREMES.
 - CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAR EXCAVATIONS PROVIDED THE REQUIRED COVERTEGE FOR REINFORCING IS MAINTAINED.
 - CONCRETE WHICH HAS CONTAINED WATER FOR MORE THAN 90 MINUTES, 60 MINUTES IF AIR TEMPERATURE EXCEEDS 90 DEGREES, SHALL NOT BE USED. RETEMPERING OF CONCRETE AFTER INITIAL SET HAS OCCURED IS NOT PERMITTED.
 - CURE EXPOSED CONCRETE FOR A MINIMUM OF 7 DAYS IN ACCORDANCE WITH ACI 301 PROVIDING IN ORDER TO PREVENT CRACKING. CURE WITH WATER OR WITH A CEMENT COMPOUND. MOIST CURING, MOISTURE RETAINING COVER CURING CURING OR COMBINATIONS THEREOF.
 - CONCRETE COMPRESSIVE STRENGTH AND SLUMP SHALL BE TESTED PER ASTM C31 AND C39. PROVIDE A MINIMUM OF 3 CYLINDERS PER TEST FOR EACH DAY'S CONCRETE PLACEMENT OR AS DIRECTED BY THE ARCHITECT. TEST ONE CYLINDER AT 1 DAY AND TWO (2) DAYS. TESTING SHALL BE DONE BY A QUALIFIED TESTING LABORATORY.

- I. REINFORCING STEEL:**
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (F_y = 60 KSI) DEFORMED BARS FOR ALL BARS #4 AND LARGER. ASTM A615, GRADE 40 (F_y = 40 KSI) DEFORMED BARS FOR ALL #3 BARS. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60 (F_y = 60 KSI) LOW ALLOY DEFORMED BARS. WELDED WIRE FABRIC PER ASTM A185. WIRE PER ASTM A62. PROVIDE IN FLAT SHEETS. WELDING OF REINFORCING SHALL BE IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING IS ALLOWED.
 - ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 318 AND THE CRSI "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION" AND AS MODIFIED BY THE DRAWINGS. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
• CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
• #6 AND LARGER EXPOSED TO EARTH OR WEATHER: 2"
• #5 AND SMALLER EXPOSED TO EARTH OR WEATHER: 1 1/2"
• COLUMNS (TO TIES): 1 1/2"
• BEAMS (TO STIRRUPS): 1 1/2"
• FLAT SLAB
• ALL OTHERS PER LATEST EDITION OF ACI 318
 - UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE CLASS B "TENSION LAP SPLICES PER LATEST EDITION OF ACI 318. LAP SPLICES IN CONCRETE COLUMNS SHALL BE STANDARD COMPRESSION LAP SPLICES. STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SUCH THAT THE OVERLAP BETWEEN THE OUTER MOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
 - ALL SPLICES LOCATIONS SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
 - ALL REINFORCING NOTED AS CONTINUOUS SHALL BE FULLY CONTINUOUS AND SPLICED. SPLICED BARS SHALL BE PLACED AT THE SAME EFFECTIVE DEPTH, U.N.O.
 - REINFORCING BAR SPACINGS GIVEN ARE MAXIMUM ON CENTERS. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SKEW HOOKS AS REQUIRED FOR CONCRETE COVER. SECURELY TIE ALL BARS IN POSITION BEFORE PLACING CONCRETE.
 - PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS.
 - REINFORCING BAR HOOKS SHALL BE STANDARD AID HOOKS UNLESS NOTED OTHERWISE.

- J. STRUCTURAL CONSTRUCTION**
- ALL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST AISI "STEEL CONSTRUCTION MANUAL" AND AWS D1.1.
 - STRUCTURAL SHAPES, PLATES AND BOLTS SHALL BE AS FOLLOWS:
• W SECTIONS: ASTM A992, F_y = 50 KSI
• HSS SQUARE AND RECTANGULAR SHAPES: ASTM A500, GRADE B, F_y = 46 KSI
• ROUND HSS: ASTM A500, GRADE B, F_y = 42 KSI
• PIPE STEEL: ASTM A53, F_y = 35 KSI
• ALL OTHER SHAPES AND PLATES: ASTM A36, F_y = 36 KSI
• BOLTS IN STEEL CONNECTIONS: ASTM A325N
• BOLTS IN WOOD CONNECTIONS: ASTM A307, GRADE A
• ANCHOR BOLTS: ASTM A307 OR A307, GRADE A
• HEAVY HEX ANCHOR BOLTS: ASTM F1554, GRADE 36
• ANCHOR RODS: ASTM F1554, GRADE 36
• THREADED RODS: ASTM A36
 - BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC., SHALL BE INSTALLED WITH STEEL WASHERS. TYPE N BOLTS PER AISI "STEEL CONSTRUCTION MANUAL" AND SHALL BE TIGHTENED TO THE SNUG-TIGHT CONDITION AS DEFINED PER AISI. UNLESS NOTED OTHERWISE, ALL HIGH STRENGTH BOLTING SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY TO ENSURE BOLT TENSION.
 - SHOP PAINT ALL STEEL SURFACES WITH FABRICATOR'S STANDARD RUST-INHIBITING PRIMER EXCEPT AT SURFACES ENCASED IN CONCRETE. SURFACES SHOULD RECEIVE FIREPROOFING, OR SURFACES ENCLOSED WITHIN THE BUILDING FINISHES.
 - BEAMS, COLUMNS AND BRACES SHALL NOT BE SPLICED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
 - DRYPACK FOR COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL BE FIRE STRAT GROUT OR AN EQUAL NON-METALLIC SHRINKAGE-RESISTANT GROUT. F_c = 5000 PSI MINIMUM. INSTALL GROUT UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL GROUT UNDER BASE PLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION.
 - ALL WELDING PER LATEST AMERICAN WELDING SOCIETY STANDARDS. EXCEPT STEEL JOISTS AND JOIST BRACERS SHALL COMPLY WITH STANDARDS. ALL WELDING SHALL BE DONE BY WELDERS HOLDING VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELDS SHOWN ON THE DRAWINGS OR NOTES. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW. FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
 - ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR ASTM A706 GRADE 60 REINFORCING BARS, USE E80 SERIES.
 - HEADED STUDS SHALL BE NELSON GRANULAR FLOW FILLED HEADED ANCHOR STUDS OR APPROVED EQUAL MADE FROM COLD FINISHED LOW CARBON STEEL, AND SHALL CONFORM TO ASTM A108, GRADES 1015 OR 1020 WITH A MINIMUM TENSILE STRENGTH OF 60 KSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.

- K. POST-INSTALLED ANCHORS:**
- EPOXY BOLTS OR DOWELS SHALL BE A THREADED ROD OR REINFORCING STEEL INSTALLED WITH ONE OF THE FOLLOWING PRODUCTS SATISFYING CRACKED CONCRETE REQUIREMENTS IN ACCORDANCE WITH CURRENT ACI PUBLICATION:
• SIMPSON "SET XP" ICC REPORT ESR-2508
• SIMPSON "SET-3C" ICC REPORT ESR-4257
EPOXY BOLTS FOR MASONRY SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS.
• SIMPSON "SET" ICC REPORT ESR-1998
• HILTI "HT-HY 270" ICC REPORT ESR-4143
 - EXPANSION BOLTS FOR CONCRETE SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS SATISFYING CRACKED CONCRETE REQUIREMENTS IN ACCORDANCE WITH CURRENT ACI PUBLICATION:
• HILTI "KWIK BOLT TZ" ICC REPORT ESR-1917
• SIMPSON "STRONG BOLT 2 WEDGE ANCHOR" ICC REPORT ESR-3037
 - EXPANSION BOLTS OR SCREW BOLTS FOR MASONRY SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS:
• HILTI "KWIK BOLT IF" ICC REPORT ESR-1385
• SIMPSON "TITEN HD" ICC REPORT ESR-1998
• SIMPSON "WEDGE-ALL" ICC REPORT ESR-1396
 - SCREW BOLTS FOR CONCRETE SHALL BE ONE OF THE FOLLOWING APPROVED PRODUCTS SATISFYING CRACKED CONCRETE REQUIREMENTS IN ACCORDANCE WITH CURRENT ACI PUBLICATION.
• SIMPSON "TITEN HD" ICC REPORT ESR-2713
 - THE CONTRACTOR MAY NOT USE SUBSTITUTES FOR EPOXY OR EXPANSION ANCHORS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
 - FOR MINIMUM EMBEDMENT LENGTH SEE DETAILS AND NOTES. INSTALL ALL BOLTS AS OUTLINED IN THE MANUFACTURER'S SPECIFICATIONS, UTILIZING PROPER SIZE AND TYPE OF DRILL HOLE CLEANING, DRIVING AND TIGHTENING TOOL.
 - SPECIAL INSPECTION OF ALL POST-INSTALLED ANCHORS IS REQUIRED.

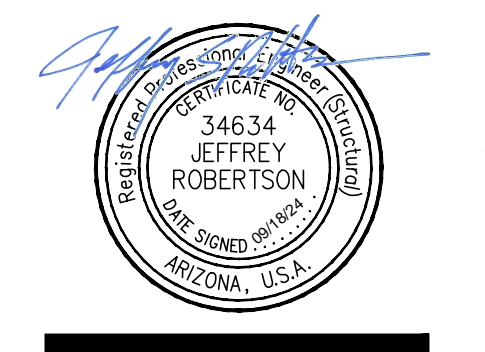
- L. SHOP DRAWINGS AND PRODUCT DATA:**
- SHOP DRAWINGS AND/OR PRODUCT DATA SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS AND FOR ALL STRUCTURAL ITEMS TO BE REVIEWED BY THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS PRIOR TO FABRICATION AND/OR CONSTRUCTION IN THE FIELD. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
 - THE GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DRAWINGS PRIOR TO SUBMITTAL. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. THE CONTRACTOR SHALL CLOUD OR FLAO ALL ITEMS NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. VERIFY ALL DIMENSIONS WITH THE ARCHITECT.
 - ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS SHALL BE CLOUDED BY THE MANUFACTURER OR FABRICATOR. ANY CHANGES, SUBSTITUTIONS OR DEVIATIONS WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTED PARTIES, SHALL NOT BE CONSIDERED AFTER THE ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY BY THE STRUCTURAL ENGINEER.
 - THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO ALLOW OR NOT ALLOW ANY CHANGES TO THE ORIGINAL CONTRACT DOCUMENTS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW. THE ENGINEER RESERVES THE RIGHT TO MAKE CHANGES TO THE CONTRACT DOCUMENTS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.
 - PROVIDE ELECTRONIC PDF SUBMITTALS IN A TIMELY MANNER TO ALLOW A MINIMUM OF FIVE WORKING DAYS FOR THE ENGINEER'S REVIEW. THE FILES SHALL ALLOW FOR COMMENTS TO BE PLACED ON THE FILES DURING REVIEW BY THE STRUCTURAL ENGINEER.
 - THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND WHICH ARE NOT NOTED AS ALLOWED BY THE STRUCTURAL ENGINEER OR ARCHITECT ARE NOT TO BE CONSIDERED CHANGED TO THE ORIGINAL CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEMS OMITTED OR SHOWN INCORRECTLY ARE CONSTRUCTED IN ACCORDANCE WITH THE ORIGINAL CONTRACT DOCUMENTS. SHOP DRAWINGS PROCESSED BY THE ENGINEER SHALL NOT BE CONSIDERED CHANGE ORDERS.
 - THE ENGINEER'S REVIEW IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS SHALL REST WITH THE CONTRACTOR. SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF TECHNICAL DEFICIENCIES ARE IDENTIFIED. TECHNICAL DEFICIENCIES IDENTIFIED BY THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING PARTY.
 - ALL ENGINEERING DESIGNS AND LAYOUTS PERFORMED BY OTHERS SHALL BE SEALED BY A REGISTERED ENGINEER LOCATED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

- M. SPECIAL INSPECTIONS AND TESTING:**
- THE OWNER SHALL EMPLOY SPECIAL INSPECTORS TO PROVIDE INSPECTION AND TESTING DURING CONSTRUCTION OF THE TYPES OF WORK REQUIRING SPECIAL INSPECTION AS INDICATED ON THE DRAWINGS.
 - SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR APPROVED BY THE ARCHITECT. STRUCTURAL ENGINEER OF RECORD AND THE BUILDING OFFICIAL.
 - SPECIAL INSPECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A STATE REGISTERED STRUCTURAL OR CIVIL ENGINEER WHO IS FAMILIAR WITH THE STRUCTURAL DESIGN OF THIS PROJECT. THE SPECIAL INSPECTION CERTIFICATE SHALL BE SEALED BY THE SUPERVISING REGISTERED ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR AND THE TESTING LABORATORY PRIOR TO BEGINNING ANY WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED.
 - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR THE CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
 - THE SPECIAL INSPECTOR SHALL PROVIDE INSPECTION REPORTS TO THE BUILDING OFFICIAL AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
 - UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

- N. STRUCTURAL OBSERVATIONS:**
- STRUCTURAL OBSERVATIONS ARE THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR ANY SPECIAL INSPECTIONS PERFORMED.
 - THE OWNER SHALL EMPLOY A REGISTERED STRUCTURAL ENGINEER TO PERFORM STRUCTURAL OBSERVATIONS DURING CONSTRUCTION. IT IS RECOMMENDED THAT THE ENGINEER OF RECORD (EOR) BE RETAINED AS THE STRUCTURAL OBSERVER, AS THE EOR IS THE MOST FAMILIAR WITH THE STRUCTURAL SYSTEM.
 - THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL OBSERVER AT THE STAGES OF CONSTRUCTION INDICATED ON THE DRAWINGS, 5 BUSINESS DAYS IN ADVANCE OF THE REQUIRED OBSERVATION. THE STATE OF COMPLETION AT THE TIME OF THE OBSERVATION SHALL ALLOW FOR CORRECTION OF POTENTIAL DEFICIENCIES WITHOUT SUBSTANTIAL REMOVAL OF COMPLETED WORK.
 - THE STRUCTURAL OBSERVER SHALL PREPARE A WRITTEN OBSERVATION REPORT AFTER EACH VISIT. DEFICIENCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL PREPARE FOR THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE OBSERVATIONS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

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INTERPRETATION OF DRAWINGS			
TYPICAL NOTES			
1.	FOR APPLICABLE CODES AND STANDARDS, MATERIAL STRENGTHS AND CONSTRUCTION REQUIREMENTS. SEE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS.		
2.	VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.		
3.	FOR CLARITY, ALL EXTERIOR SLABS AND SIDEWALKS MAY NOT BE SHOWN. FOR EXACT DIMENSION, LOCATION, JOINTS AND SCORE LINES, SEE ARCHITECTURAL DRAWINGS. RESOLVE ANY DISCREPANCY WITH ARCHITECT. DO NOT SCALE DRAWINGS.		
4.	FOR CLARITY, ALL ROOF, FLOOR AND WALL OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL STRUCTURAL DETAILS. VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL AND ELECTRICAL EQUIPMENT, VETS, ETC. WITH MECHANICAL AND ELECTRICAL ENGINEERS THROUGH ARCHITECT.		
5.	DETAILS MARKED "TYPICAL" MAY OR MAY NOT BE CUT ON PLANS. THEY SHALL APPLY UNLESS NOTED OTHERWISE.		
PLAN LEGEND			
SYMBOL	DESCRIPTION	REMARKS	
(# NOTE)	DETAIL CUT	01-99 SEE TYPICAL DETAILS 101-199 SEE FOUNDATION DETAILS 201-299 SEE FLOOR FRAMING DETAILS 301-399 SEE ROOF FRAMING DETAILS 401-499 SEE STAIR FRAMING DETAILS	
(1)	SHEET KEYNOTE	SEE SHEET KEYNOTES ON EACH PLAN SHEET	
(--- ---)	EXISTING WOOD / STEEL	SEE FOUNDATION AND FRAMING PLANS	
(=)	WOOD / STEEL STUD WALL		
(--- --- ---)	HIDDEN STRUCTURAL WALL		
(⊠)	OPENING	SEE TYPICAL NOTE 4 ABOVE	
([])	MECHANICAL UNIT	SEE FRAMING PLANS AND MECHANICAL EQUIPMENT SCHEDULE	
B	BEAM		
C	COLUMN		
F	FOOTING		
J	JOIST	SEE SCHEDULES	
L	LEDGER		
LT	LINTEL		
STRUCTURAL ABBREVIATIONS			
AFC	ABOVE FINISHED FLOOR	ICC	INTERNATIONAL CODE COUNCIL
A.B.C.	AGGREGATE BASE COURSE	K	KIPS
ACI	AMERICAN CONCRETE INSTITUTE	LBS	POUNDS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	(LLV)	LONG LEG VERTICAL
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	(LSV)	LONG SIDE VERTICAL
AP	AMERICAN PLYWOOD ASSOCIATION	MAX	MAXIMUM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MCJ	MINIMUM CONTROL JOINT
AWS	AMERICAN WELDING SOCIETY	M	MINIMUM
BOD	BOTTOM OF DECK	N.I.C.	NOT IN CONTRACT
BOF	BOTTOM OF FOOTING	N.T.S.	NOT TO SCALE
BOS	BOTTOM OF SHEATING	OP	OPPOSITE
CABO	COUNCIL OF AMERICAN BUILDING OFFICIALS	O.C.	ON CENTER
CJ	CONSTRUCTION/CONTROL JOINT	P	POUNDS PER CUBIC FOOT
CLR	CENTERLINE	PCI	PRESTRESSED CONCRETE INSTITUTE
CMU	CONCRETE MASONRY UNIT	PJ	PANEL JOINT
CONT	CONTINUOUS	PL	POUNDS PER LINEAR FOOT
CSI	CONCRETE REINFORCING STEEL INSTITUTE	PLF	POUNDS PER SQUARE FOOT
D	DEFORMED BAR ANCHOR	PRE-ENG	PRE-ENGINEERED
D.B.A.	DOUBLE BOLTS	PSI	POUNDS PER SQUARE INCH
D.F.	DOUGLAS FIR-LARCH	PTI	POST-TENSIONING INSTITUTE
D.F.P.	EXISTING FINISHED FLOOR ELEVATION	RS	ROUGH SAWN
EQ	EQUAL	SIM	SIMILAR
F.F.E.	FINISHED FLOOR ELEVATION	(SLV)	SHORT LEG VERTICAL
GLB	GLUED/LAMINATED BEAM	(SSV)	SHORT SIDE VERTICAL
G.S.N.	GENERAL STRUCTURAL NOTES	T&G	TONGUE AND GROOVE
HSS	HOLLOW STRUCTURAL SECTION	T	FLANGE THICKNESS
IBC	INTERNATIONAL BUILDING CODE	W.F.	WEB THICKNESS
		W.F.F.	WORKING POINT WELDED WIRE FABRIC



REVISIONS
NO. _____ DATE _____

LOCKER EXPANSION
GENERAL STRUCTURAL NOTES
SEAVEY FRANKS ARCHITECT INC.
 2525 W. ALHAMBRA WAY, TULSON, AZ 85757 | TEL: 480.436.7700

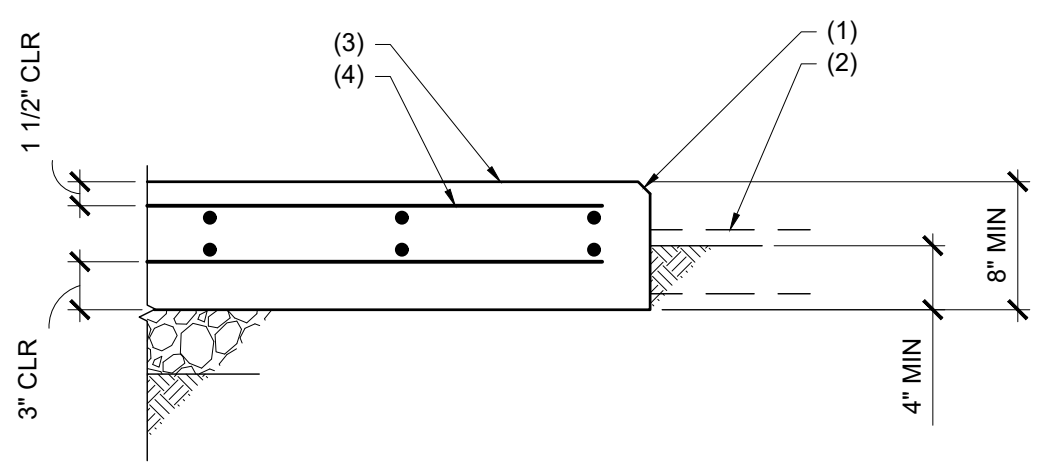
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GREEN VALLEY, ARIZONA 85622

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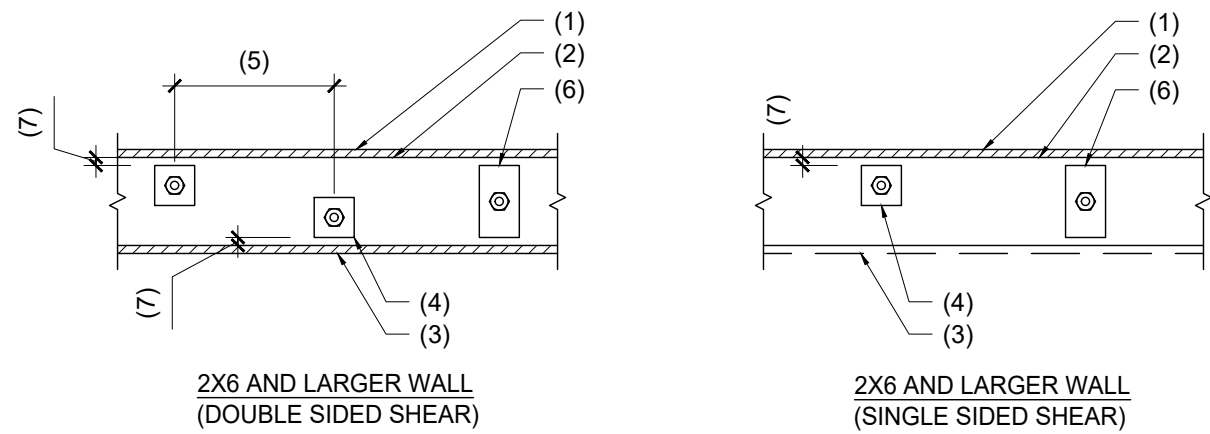
- 3/4" CHAMFER.
- CONCRETE SLAB OR FINISHED GRADE WHERE OCCURS.
- CONCRETE EQUIPMENT PAD.
- #4 AT 12" O.C. EACH WAY TOP AND BOTTOM.



01 TYPICAL CONCRETE EQUIPMENT PAD ON GRADE
SCALE: NTS

NOTES:

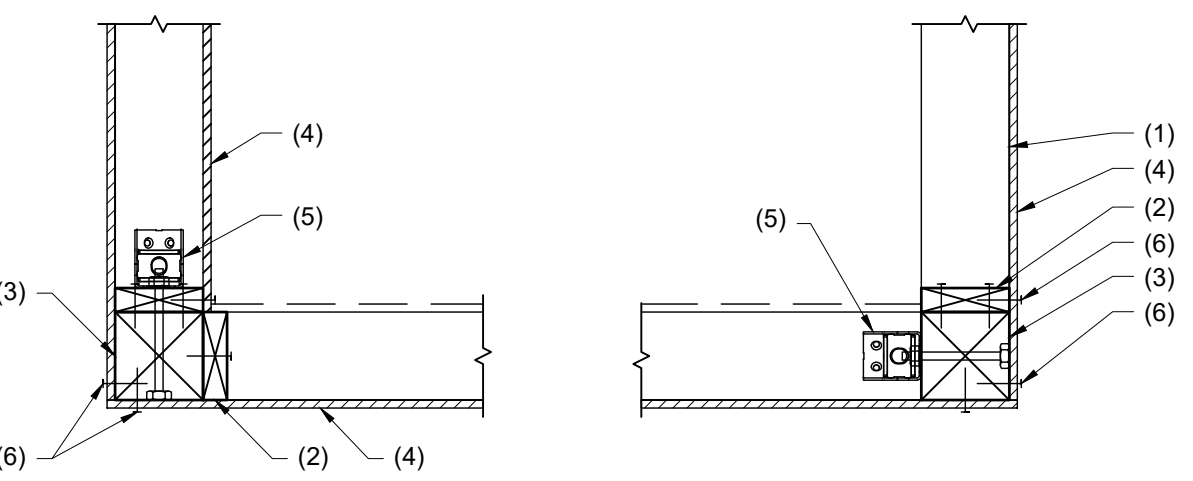
- SHEATHING.
- CONTINUOUS BOTTOM PLATE.
- SHEATHING AS OCCURS.
- STEEL PLATE WASHER AND ANCHOR BOLT.
- STAGGER ANCHOR BOLTS IN SILL TO MAINTAIN EDGE DISTANCE.
- STEEL PLATE WASHER SIZE MAY BE INCREASED TO MAINTAIN EDGE DISTANCE IN LIEU OF STAGGERING ANCHOR BOLTS.
- 1/2\"/>



06 PLAN VIEW - ANCHOR BOLT PLATE WASHERS
SCALE: NTS

NOTES:

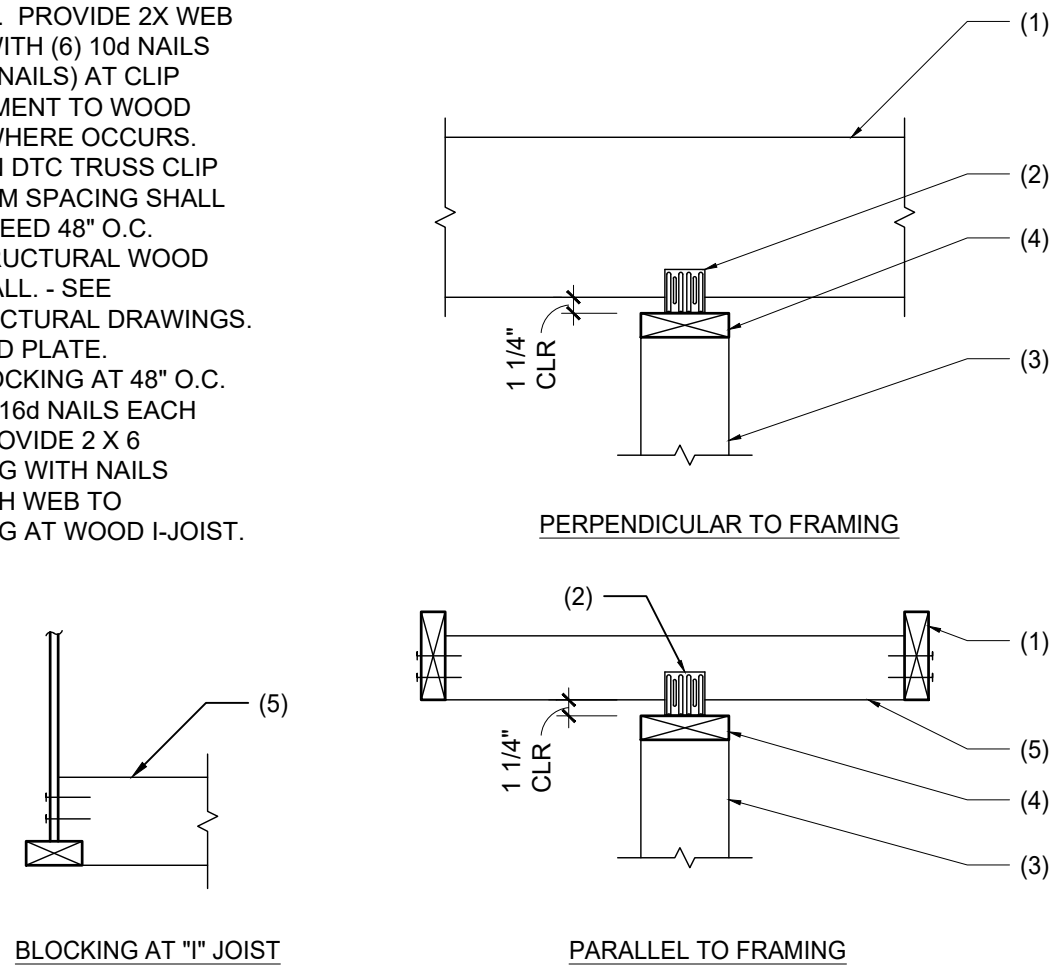
- WOOD STUD WALL.
- WOOD STUD WITH 16d NAILS AT 6\"/>



10 TYPICAL HOLDDOWN AT WOOD SHEAR WALL AT CORNER
SCALE: NTS

NOTES:

- JOIST, 1\"/>



02 TYPICAL CONNECTION OF NON-STRUCTURAL WALLS TO FLOOR OR ROOF FRAMING
SCALE: NTS

NOTES:

- 2 X WOOD STUDS AT 16\"/>

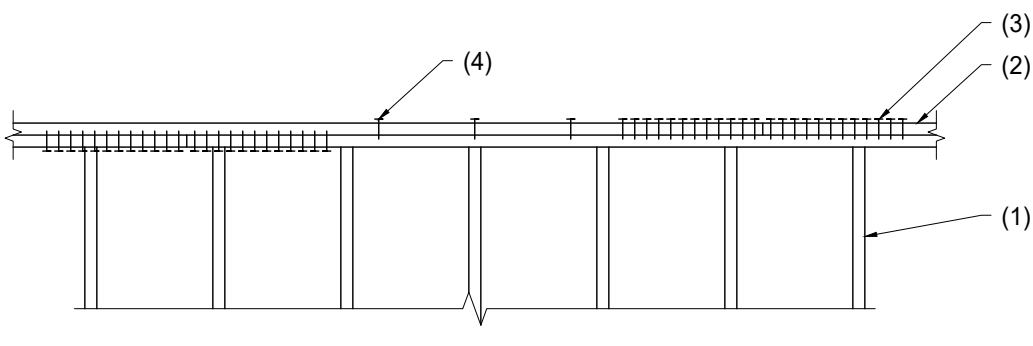
TYPICAL NOTES:

- THIS DETAIL SHALL APPLY TO ALL EXTERIOR, INTERIOR LOAD BEARING AND SHEAR WALLS.
- SEE SHEAR WALL SCHEDULE FOR MINIMUM NUMBER OF FULL HEIGHT END WALL STUDS.

07 TYPICAL WOOD STUD BEARING WALL AND WOOD STUD SHEAR WALL
SCALE: NTS

NOTES:

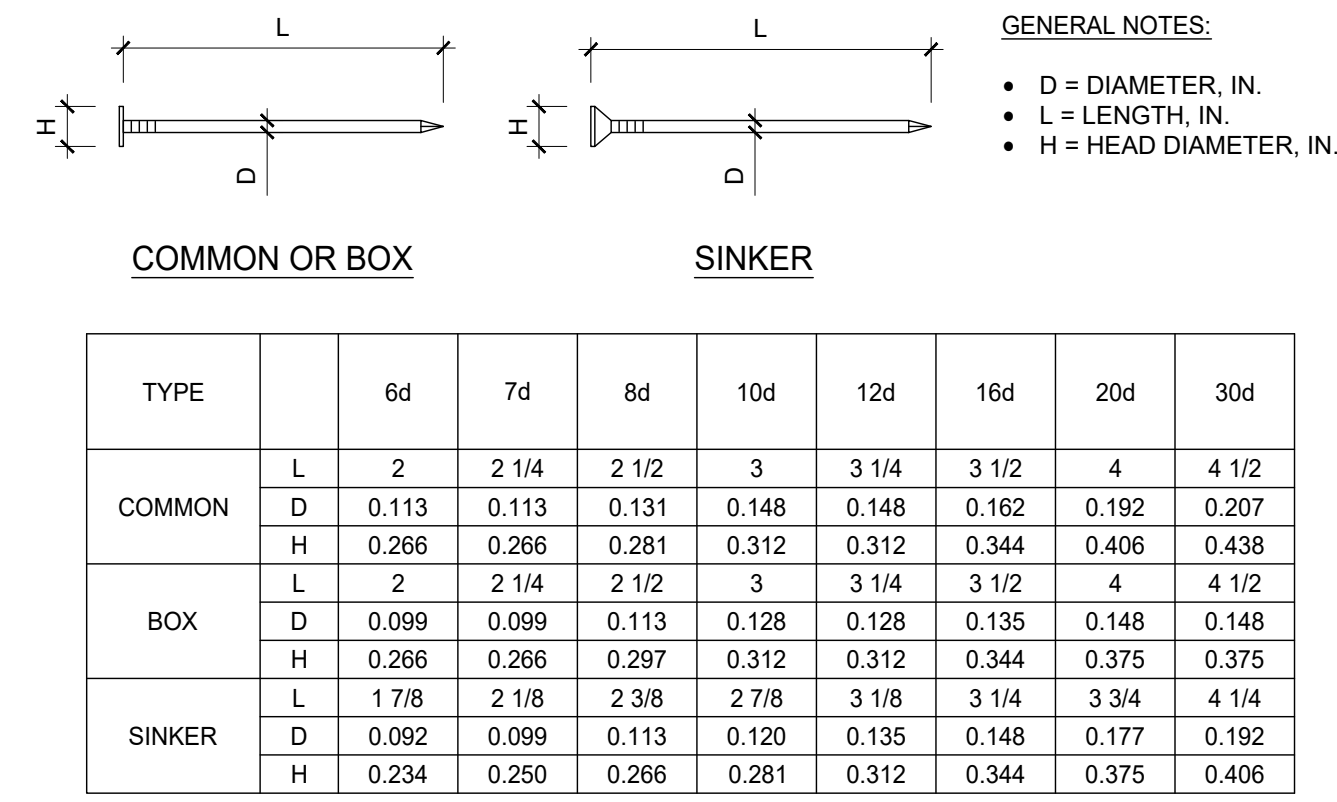
- 2X WOOD STUDS.
- DOUBLE TOP PLATE.
- (2) 16d EACH SIDE OF SPLICE - TYP.
- 16d AT 12\"/>



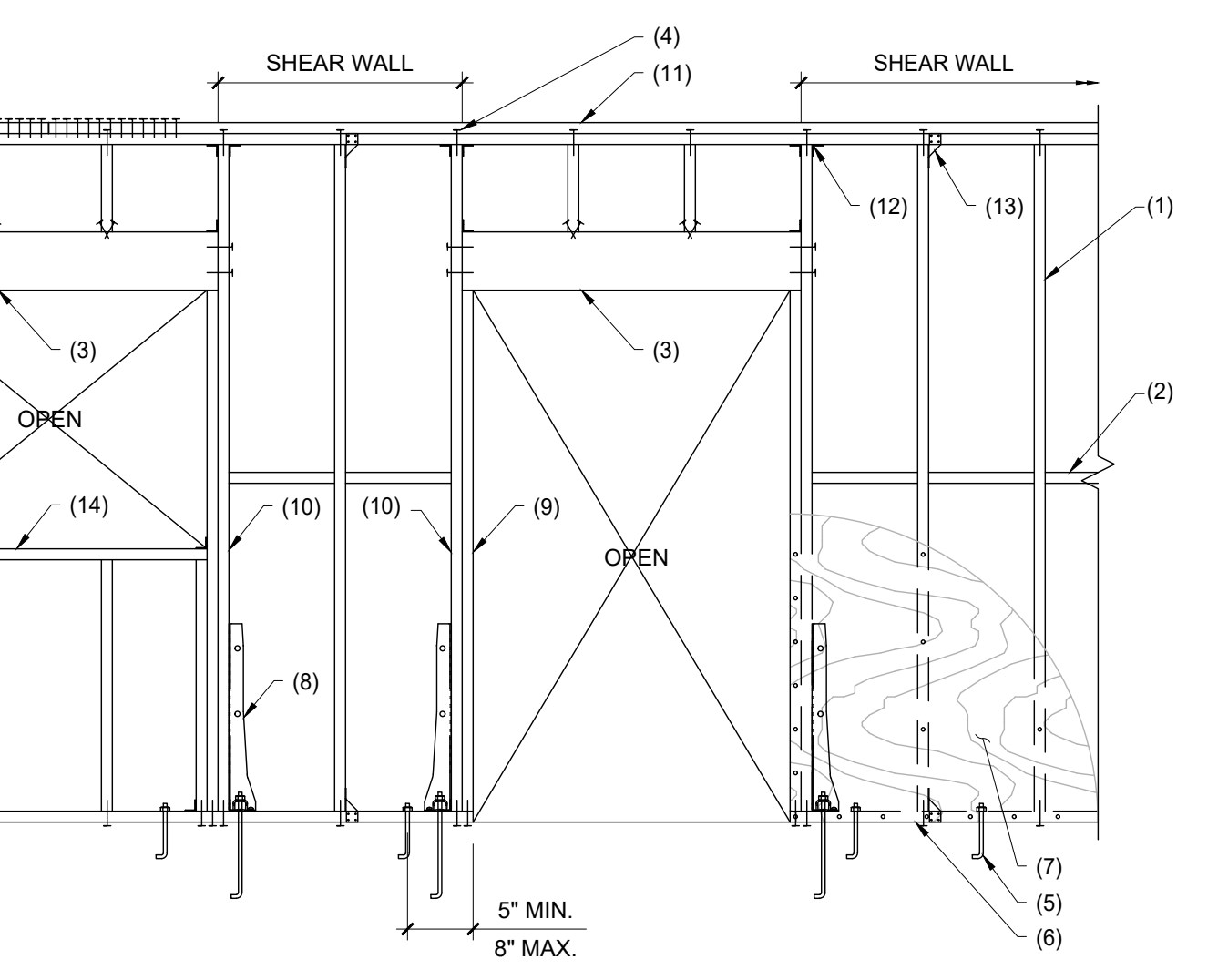
11 TYPICAL WOOD TOP PLATE SPLICE
SCALE: NTS

NOTES:

- TOLERANCES ARE SPECIFIED IN ASTM F1667. TYPICAL SHAPE OF COMMON, BOX, AND SINKER STEEL WIRE NAILS SHOWN. SEE ASTM F1667 FOR OTHER NAIL TYPES.
- IT IS PERMITTED TO ASSUME THE LENGTH OF THE TAPERED TIP IS 2D.



03 STANDARD COMMON, BOX, AND SINKER STEEL WIRE NAILS
SCALE: NTS



08 TYPICAL PLYWOOD SHEAR PANEL
SCALE: NTS

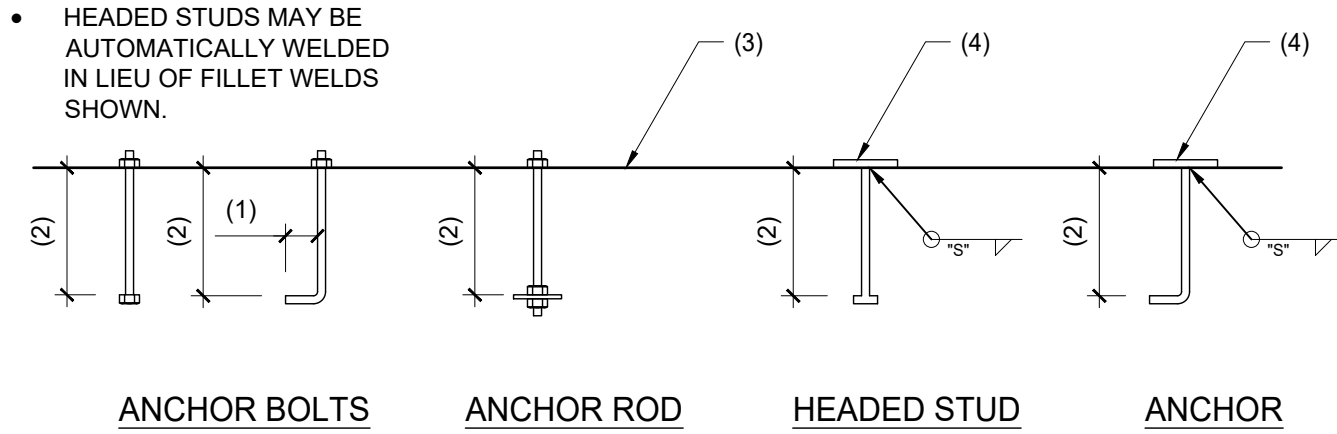
NOTES:

- 2\"/>

ANCHOR DIAMETER	VERTICAL BOLT EMBEDMENT LENGTH	HORIZONTAL BOLT EMBEDMENT LENGTH	HEADED STUD FILLET WELD SIZE, \"S\"
1/2"	7"	4"	1/4"
5/8"	7"	4"	5/16"
3/4"	7"	5"	5/16"
7/8"	8"	6"	5/16"
1"	9"	7"	3/8"
1 1/8"	10"	8"	---
1 1/4"	11"	9"	---

TYPICAL NOTES:

- PROVIDE ANCHORS PER THIS DETAIL UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
- HEADED STUDS MAY BE AUTOMATICALLY WELDED IN LIEU OF FILLET WELDS SHOWN.

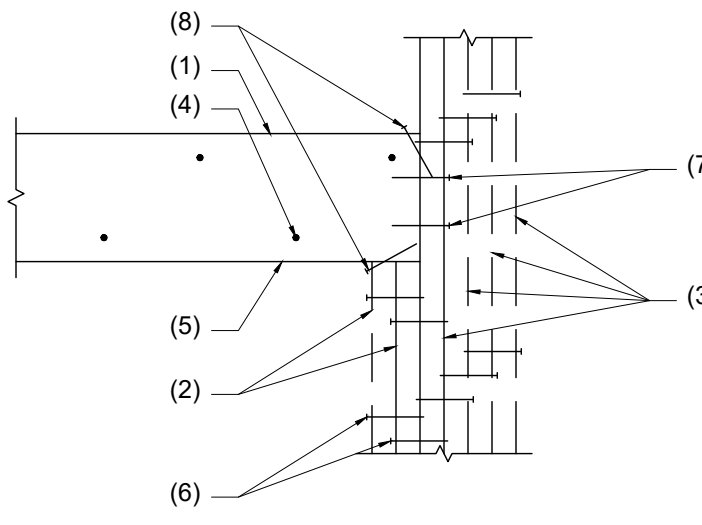


12 TYPICAL CAST IN PLACE ANCHORS
SCALE: NTS

NOTES:

- WOOD LINTEL.
- 2X TRIM STUDS PER LINTEL SCHEDULES.
- 2X JAMB STUDS PER LINTEL SCHEDULES CONTINUOUS FROM SILL PLATE TO TOP PLATE.
- 16d NAILS AT 12\"/>

- GENERAL NOTES:**
- D = DIAMETER, IN.
 - L = LENGTH, IN.
 - H = HEAD DIAMETER, IN.



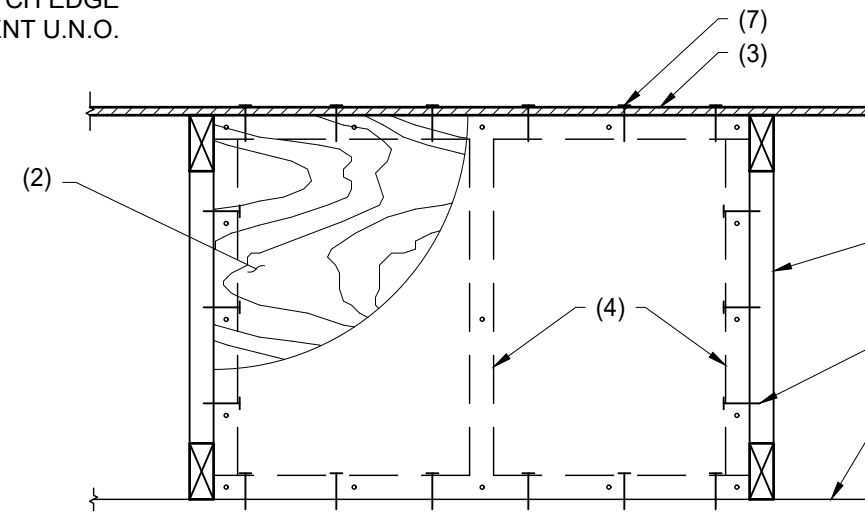
04 TYPICAL WOOD LINTEL
SCALE: NTS

NOTES:

- WOOD TRUSS, TRUSS MANUFACTURER SHALL PROVIDE VERTICAL WEB TO MATCH LOCATION OF SHEAR PANEL.
- 3/8\"/>

TYPICAL NOTES:

- (1) ROW OF 2\"/>



09 PLAN VIEW - INTERSECTING WALL AT CONTINUOUS SHEAR WALL
SCALE: NTS

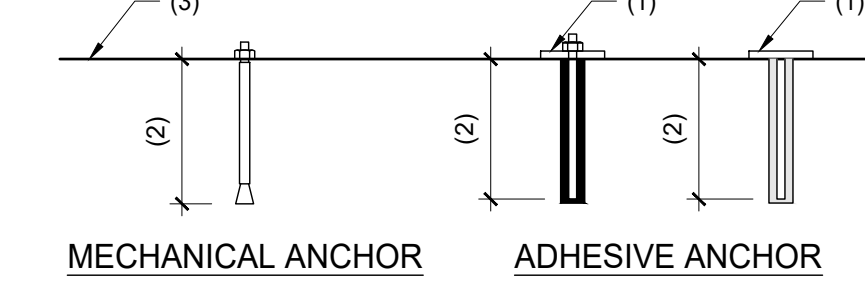
NOTES:

- PLATE, ANGLE, CHANNEL, ETC. THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.
- EMBEDMENT.
- FACE OF CONCRETE OR MASONRY.

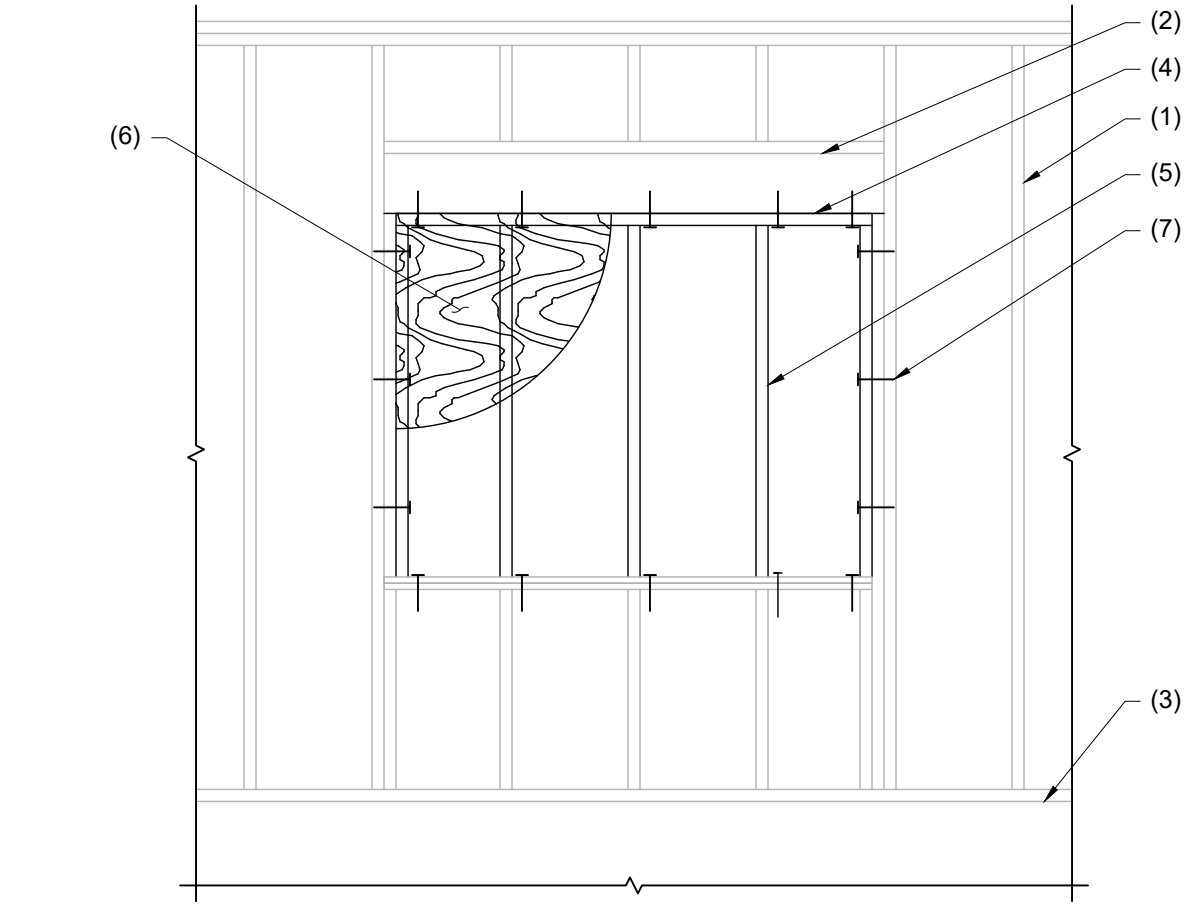
TYPICAL NOTES:

- PROVIDE ANCHORS AND REINFORCING PER THIS DETAIL UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
- POST-INSTALLED ANCHORS SHALL HAVE CURRENT I.C.C. APPROVAL.
- MECHANICAL ANCHORS INCLUDE BUT ARE NOT LIMITED TO WEDGE, UNDERCUT AND SCREW TYPE ANCHORS.
- ADHESIVE ANCHORS INCLUDE BOTH THREADED ROD AND REINFORCING STEEL.

ANCHOR DIAMETER	MECHANICAL ANCHOR EMBEDMENT LENGTH		ADHESIVE ANCHORS EMBEDMENT LENGTH		REINFORCING STEEL SIZE	ADHESIVE ANCHORS EMBEDMENT LENGTH	
	CONCRETE	MASONRY	CONCRETE	MASONRY		CONCRETE	MASONRY
3/8"	3"	2 3/4"	4 1/2"	3 1/2"	#3	3"	6"
1/2"	4"	3 1/2"	5"	4 1/2"	#4	6"	8"
5/8"	5 1/4"	4 1/2"	6 3/4"	6"	#5	6"	8"
3/4"	5 3/4"	5 1/2"	6 3/4"	7"	#6	8"	8"
7/8"	---	---	7"	---	#7	8"	8"
1"	8"	8"	8"	---	#8	10"	8"
1 1/4"	---	---	10"	---	#9	12"	12"



13 TYPICAL POST-INSTALLED ANCHORS/REINFORCING STEEL
SCALE: NTS

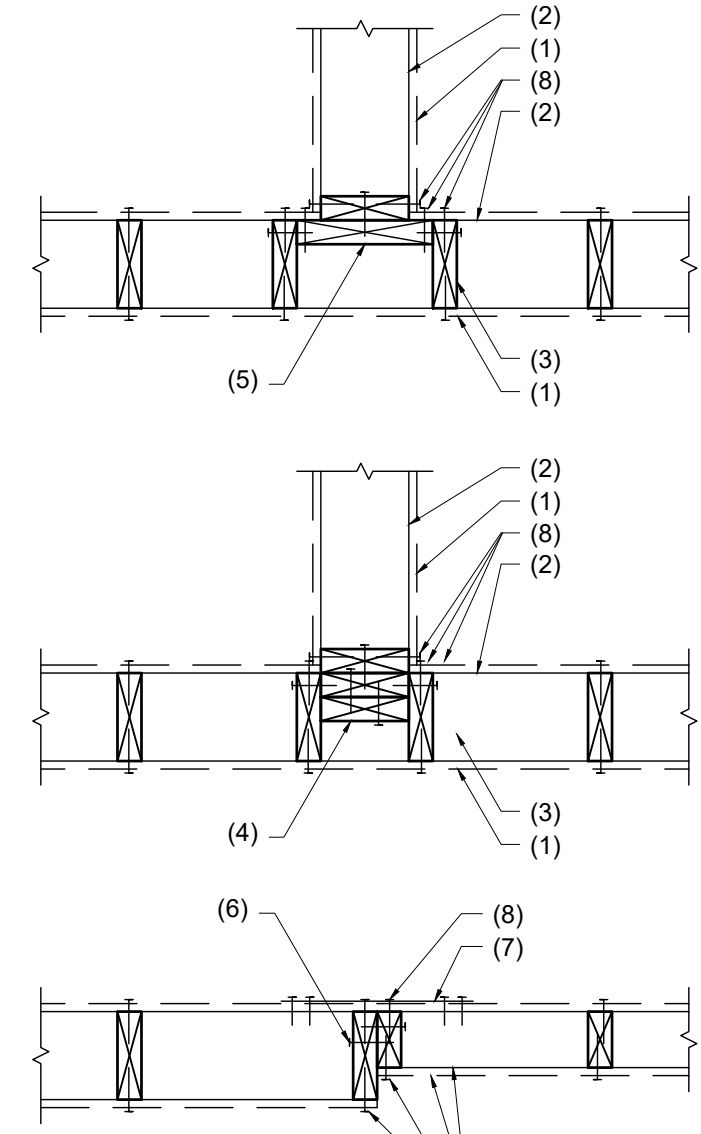


- NOTES:**
- EXISTING WOOD STUD WALL.
 - EXISTING WOOD LINTEL.
 - EXISTING FOUNDATION, STEM WALL, OR SLAB.
 - 2 X WOOD PLATE, TOP AND BOTTOM.
 - 2 X WOOD STUDS AT 16\"/>

05 TYPICAL WOOD STUD INFILL AT EXISTING WOOD STUD WALL
SCALE: NTS

NOTES:

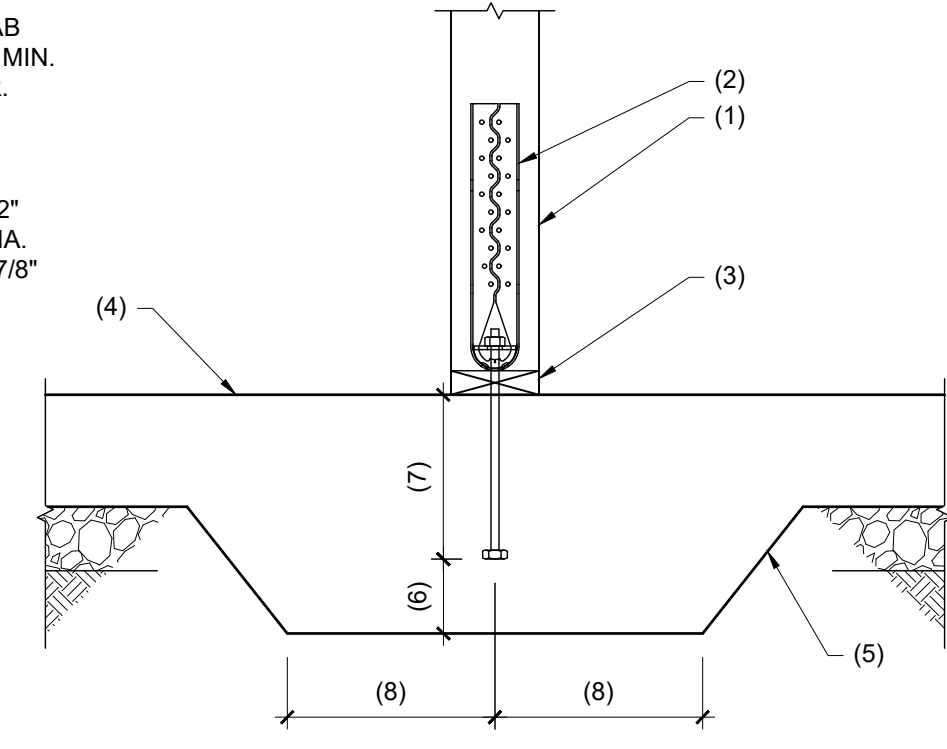
- SHEAR WALL SHEATHING AS OCCURS.
- WOOD STUD WALL.
- CONTINUOUS WALL STUD EACH SIDE OF INFILL WITH 16d AT SPACING TO MATCH EDGE NAILING SPACING OF SHEAR WALL PER SCHEDULE.
- (2) 2X STUD INFILL.
- FLAT 2X STUD, 2\"/>



06 PLAN VIEW - INTERSECTING WALL AT CONTINUOUS SHEAR WALL
SCALE: NTS

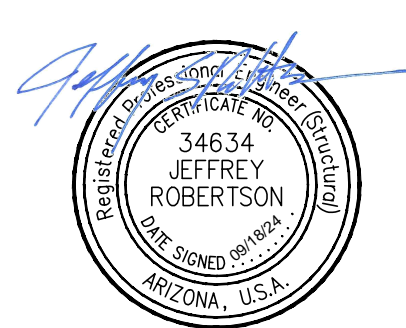
NOTES:

- END WALL STUDS OR JAMB AS OCCURS.
- HOLDDOWN AND ANCHOR PER PLANS.
- CONTINUOUS 2X BOTTOM PLATE.
- POST TENSIONED CONCRETE SLAB ON GRADE.
- INCREASE THICKNESS OF SLAB AS REQUIRED TO PROVIDE 3\"/>



14 TYPICAL HOLDDOWN AT INTERIOR WALL
SCALE: NTS

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TYPICAL DETAILS



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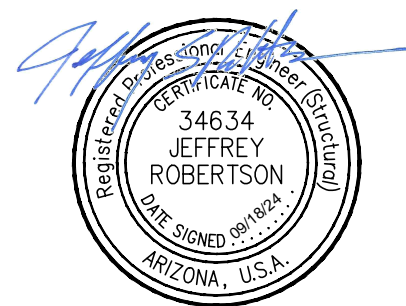
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PROJ. NO. 21709.1
DRG. SCALE A5 NOTED

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S1.1

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FOUNDATION PLAN



GREEN VALLEY RECREATION CENTER
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GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
PROJ. NO. 3709.1
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FOUNDATION KEYNOTES

- EXISTING FOOTING.
- EXISTING WALL.
- WALL ABOVE.
- SAWCUT EXISTING SLAB FOR NEW FOOTING PER SCHEDULE.
- PROVIDE (4) #4 DOWELS TO NEW FOOTING REINFORCING. EPOXY INTO EXISTING FOOTING WITH 6" EMBEDMENT.
- NEW OPENING IN EXISTING WALL. SEE ARCHITECTURAL FOR MORE INFORMATION.

SHEAR WALL (SW) SCHEDULE

MARK	SHEATHING MATERIAL AND ATTACHMENT				SILL PLATE ATTACHMENT		REMARK	
	TYPE	MATERIAL THICKNESS	NUMBER OF FACES	EDGE ATTACHMENT	FIELD ATTACHMENT	ATTACHMENT TYPE		ATTACHING SPACING
SW1	W.S.P.	3/8"	1	8d AT 6" O.C.	8d AT 12" O.C.	1/2" DIA. ANCHOR BOLTS	32" O.C.	-
SW2	W.S.P.	3/8"	1	8d AT 2" O.C.	8d AT 12" O.C.	1/2" DIA. ANCHOR BOLTS	8" O.C.	-

- NOTES:
- SEE TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
 - MAXIMUM STUD SPACING IS 24" O.C.
 - EDGE ATTACHMENT SPACING APPLIES TO ALL STUDS AT PANEL EDGES, TOP AND BOTTOM PLATES AND BLOCKING AT PANEL EDGES.
 - LOCATE FASTENERS 3/8" MINIMUM FROM EDGES.
 - PROVIDE STEEL STUD BLOCKING OR FLAT STRAPPING AT ALL PANEL EDGES.
 - PROVIDE BACK TO BACK DOUBLE STUDS U.N.O. AT END OF ALL SHEAR WALLS.
 - THE STEEL FACE SHALL BE IN CONTACT WITH THE FRAMING.
 - USE SELF DRILLING/SELF TAPPING BUGLE HEAD SCREWS WITH A MINIMUM 0.285" HEAD DIAMETER FOR W.S.P. AND 0.43" DIAMETER FOR FIBERBOARD AND MINIMUM 1 25" LENGTH.
 - SCREWS ATTACHING PANELS SHALL BE INSTALLED IN ONE OPERATION THROUGH THE PANEL INTO FRAMING.
 - SCREW THREADS SHALL PENETRATE INTO THE FRAMING MEMBER BY AT LEAST THREE EXPOSED THREADS.
 - PROVIDE A MINIMUM OF (2) SILL ATTACHMENTS AT SHEAR WALLS.

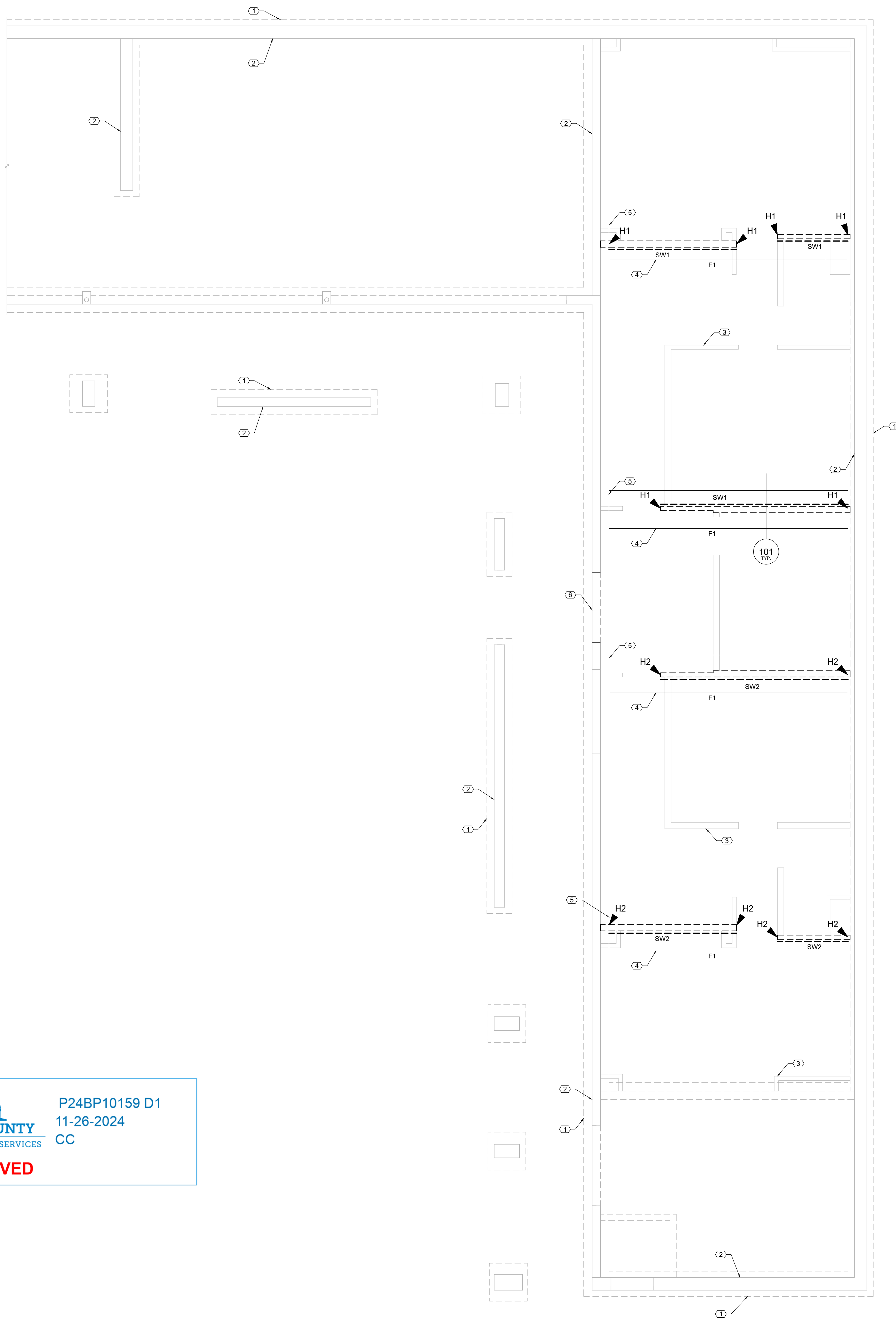
FOOTING (F) SCHEDULE

MARK	DIMENSION	THICKNESS	REINFORCING	REMARK
F1	3'-0" x CONTINUOUS	18"	(4) #4 CONTINUOUS	-

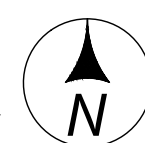
HOLDOWN (H) SCHEDULE

MARK	TYPE	WALL ATTACHMENT	END STUDS	ANCHOR ATTACHMENT	REMARK
H1	SIMPSON HDU2-SDS2.5	(6) 1/4 x 2 1/2 SDS SCREW	(2) 2x6	5/8" DIA. SIMPSON PAB5	NOTE 1
H2	SIMPSON HDU8-SDS2.5	(20) 1/4 x 2 1/2 SDS SCREWS	(3) 2x6	7/8" DIA. SIMPSON PAB7	NOTE 1


- NOTES:
- 9" EMBED INTO FOOTING.

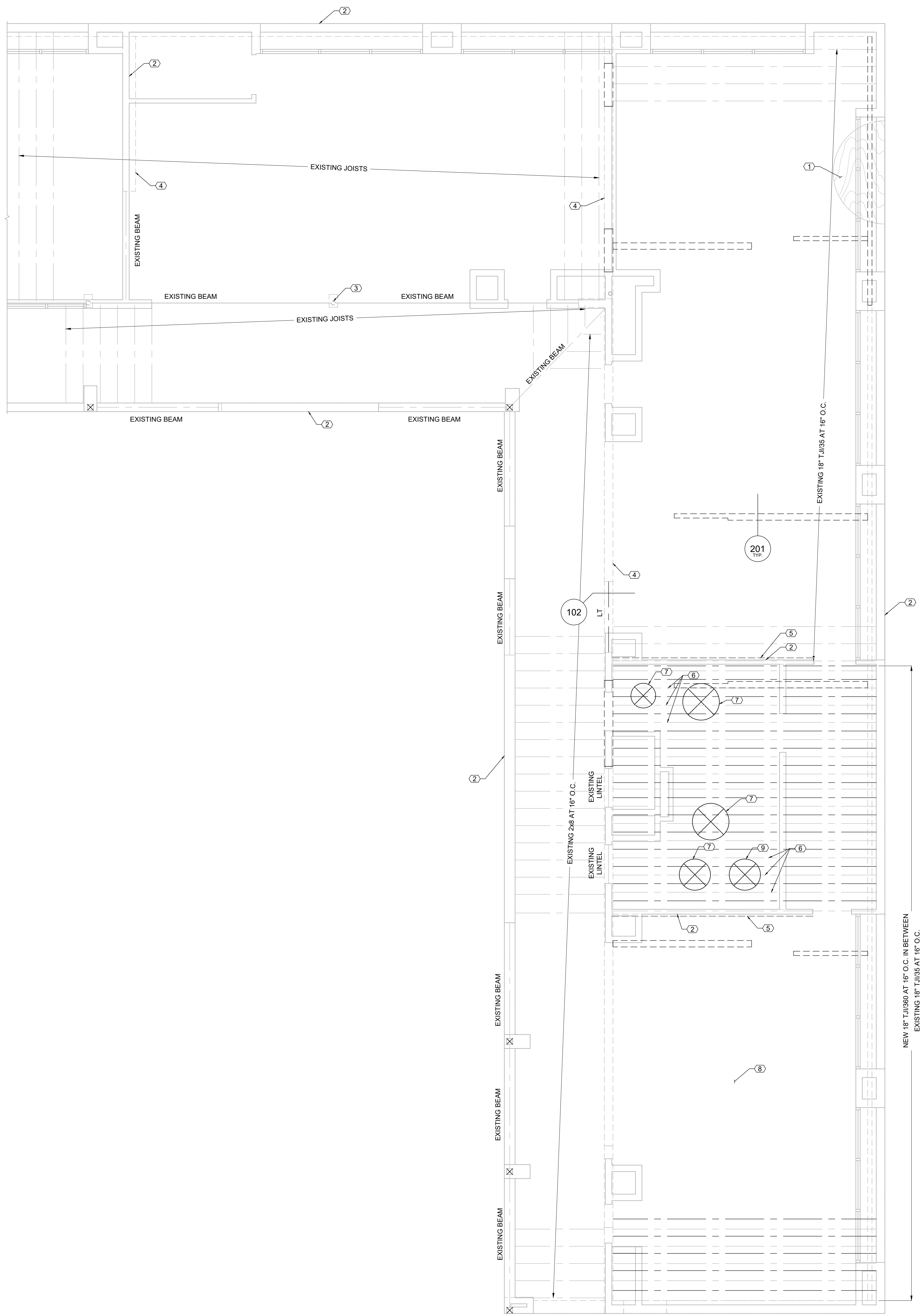


FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



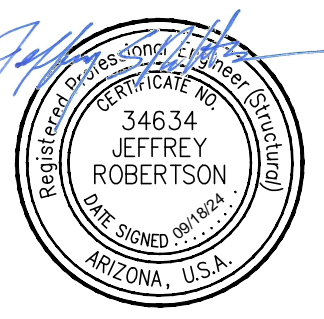

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FLOOR FRAMING KEYNOTES

1. EXISTING FLOOR SHEATHING.
2. EXISTING WALL ABOVE.
3. EXISTING COLLUM BELOW.
4. EXISTING WALL BELOW.
5. EXISTING SHEARWALL.
6. MAXIMUM WEIGHT OF NEW BRICK FLOORING SHALL BE 10 PSF. REMOVE EXISTING FLOOR PRIOR TO INSTALLATION OF NEW FLOORING. KILN LOCATIONS PER ARCHITECTURAL DRAWINGS.
7. RELOCATED EXISTING KILN. IF WEIGHT OF EXISTING KILN EXCEEDS 400 LBS SPREAD EVENLY TO (2) MIN. JOISTS.
8. ROOM SHALL BE POSTED AS 100 PSF MAX. LOADING. LOADING INCLUDES BUT IS NOT LIMITED TO WEIGHT OF SHELVING, PEOPLE AND MOULDS.
9. NEW KILN - 290 LBS MAX.



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**LOCKER EXPANSION
FLOOR FRAMING PLAN**



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GREEN VALLEY, ARIZONA 85622**

FLOOR FRAMING PLAN

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



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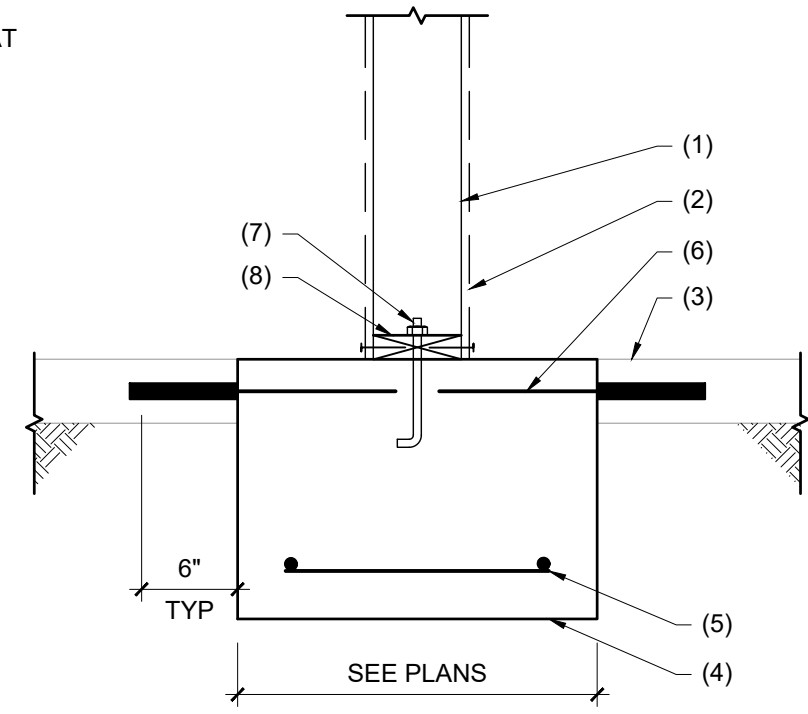
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NOTES:

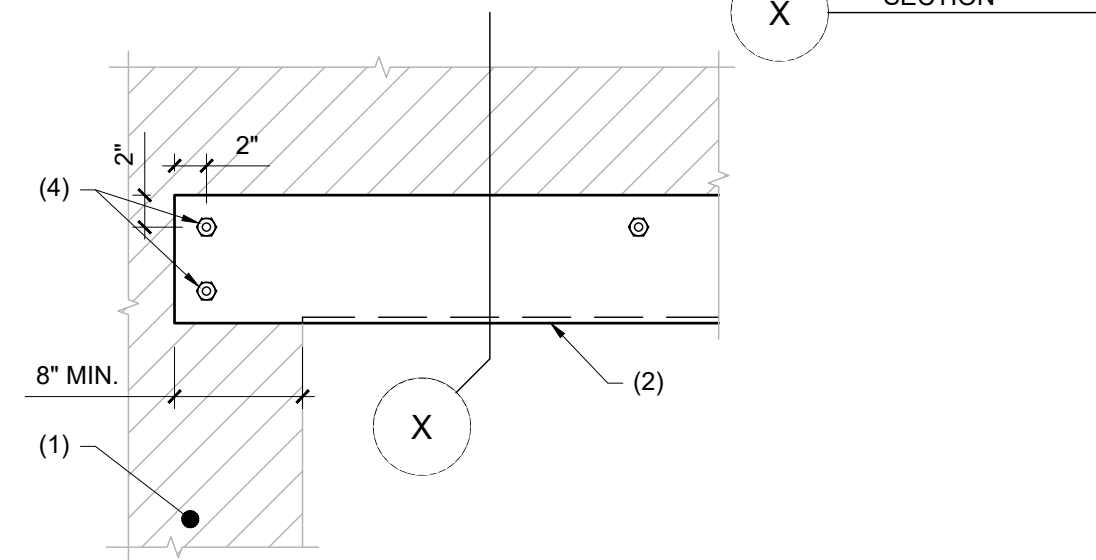
1. WOOD STUD WALL.
2. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.
3. SAWCUT EXISTING SLAB AS NEEDED.
4. CONCRETE FOOTING PER PLANS, REINFORCING PER FOOTING SCHEDULE.
5. #4 EPOXY DOWELS x 18" LONG AT 24" O.C.
6. ANCHOR BOLTS.
7. 2x CONTINUOUS WOOD PLATE.



101 INTERIOR WOOD WALL AND FOOTING AT EXISTING SLAB ON GRADE
SCALE: NTS

NOTES:

1. EXISTING CMU WALL.
2. CONTINUOUS L8x8x1/2" BENT STEEL PLATE WITH 5/8" DIA. SET-3G EPOXY BOLTS AT 18" O.C.
3. SHORE EXISTING WALL AND EXISTING FLOOR FRAMING UNTIL STEEL LINTEL IS IN PLACE AND FULLY CONNECTED.
4. (2) 5/8" DIA. SET-3G EPOXY BOLTS WITH 5" MIN. EMBEDMENT.



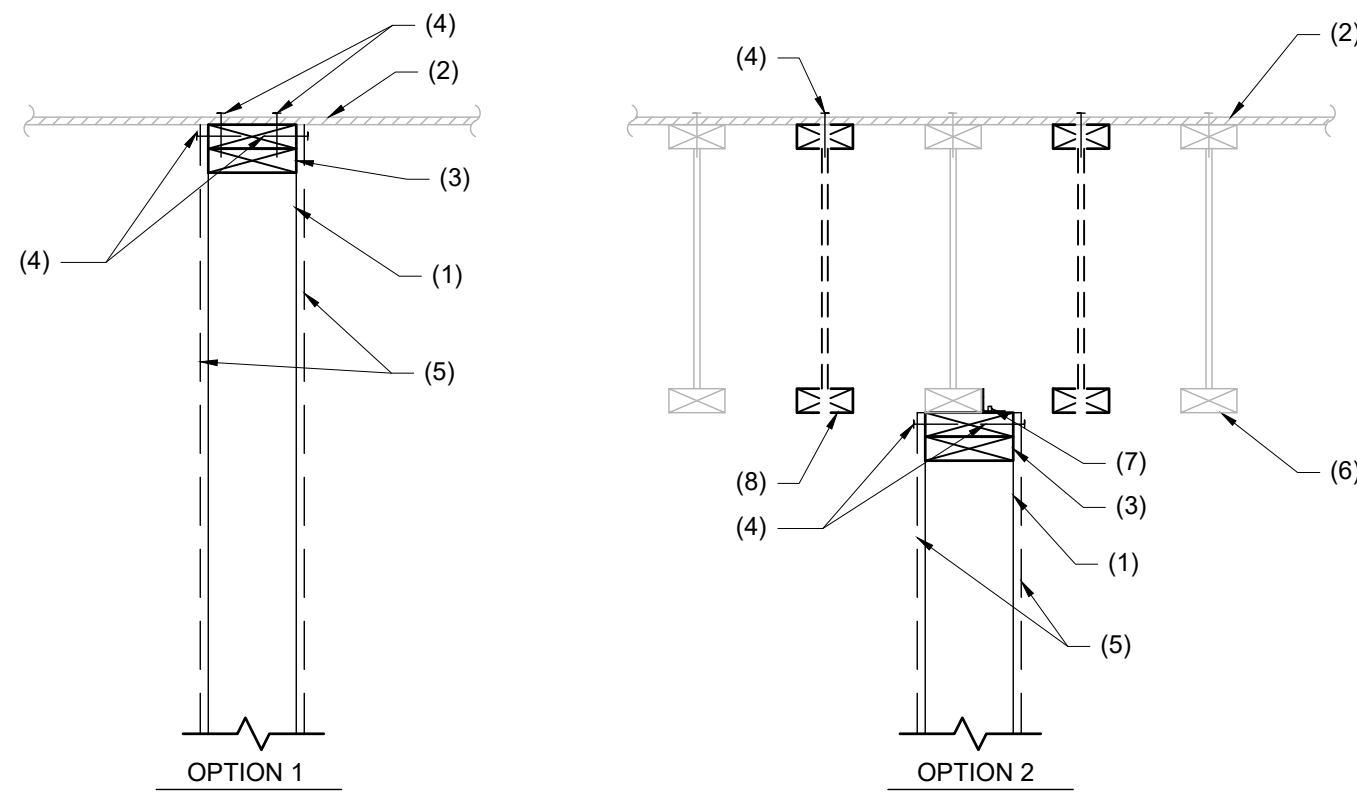
102 EXISTING CMU WALL AT STEEL BENT PLATE
SCALE: NTS

NOTES (OPTION 1):

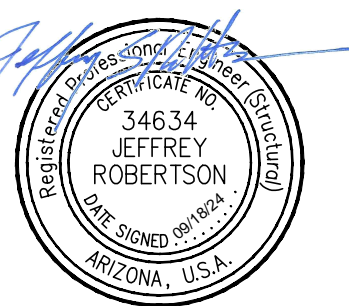
1. WOOD STUD WALL.
2. PLYWOOD SHEATHING.
3. (2) 2x WOOD PLATE.
4. TWO ROWS OF EDGE NAILING.
5. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.

NOTES (OPTION 2):

1. WOOD STUD WALL.
2. EXISTING PLYWOOD SHEATHING.
3. (2) 2x WOOD PLATE.
4. EDGE NAILING.
5. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.
6. EXISTING WOOD JOIST.
7. SIMPSON A35 AT 16" O.C.
8. NEW WOOD I-JOIST WHERE OCCURS.

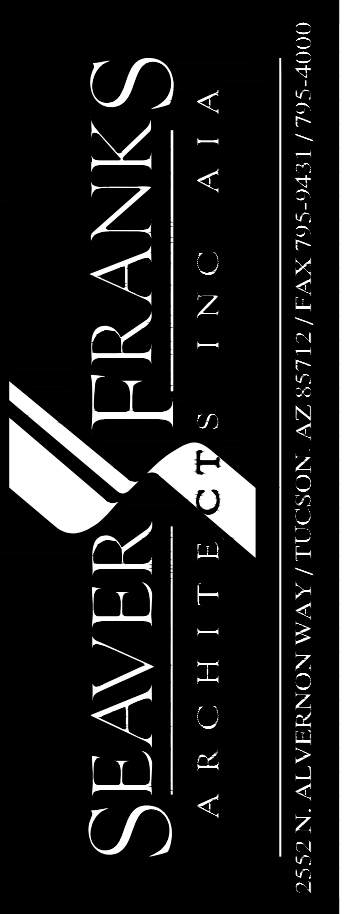


201 EXISTING PLYWOOD SHEATHING OR EXISTING FRAMING TO WOOD STUD WALL
SCALE: NTS



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FRAMING DETAILS



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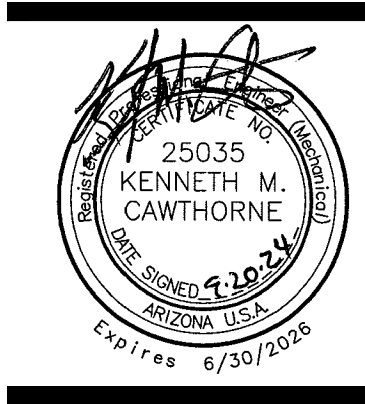
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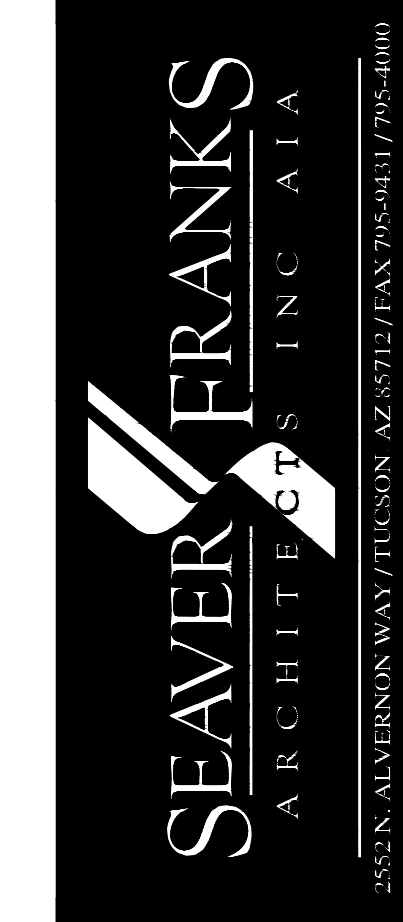
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 MECHANICAL DEMOLITION
 WORK PLAN**

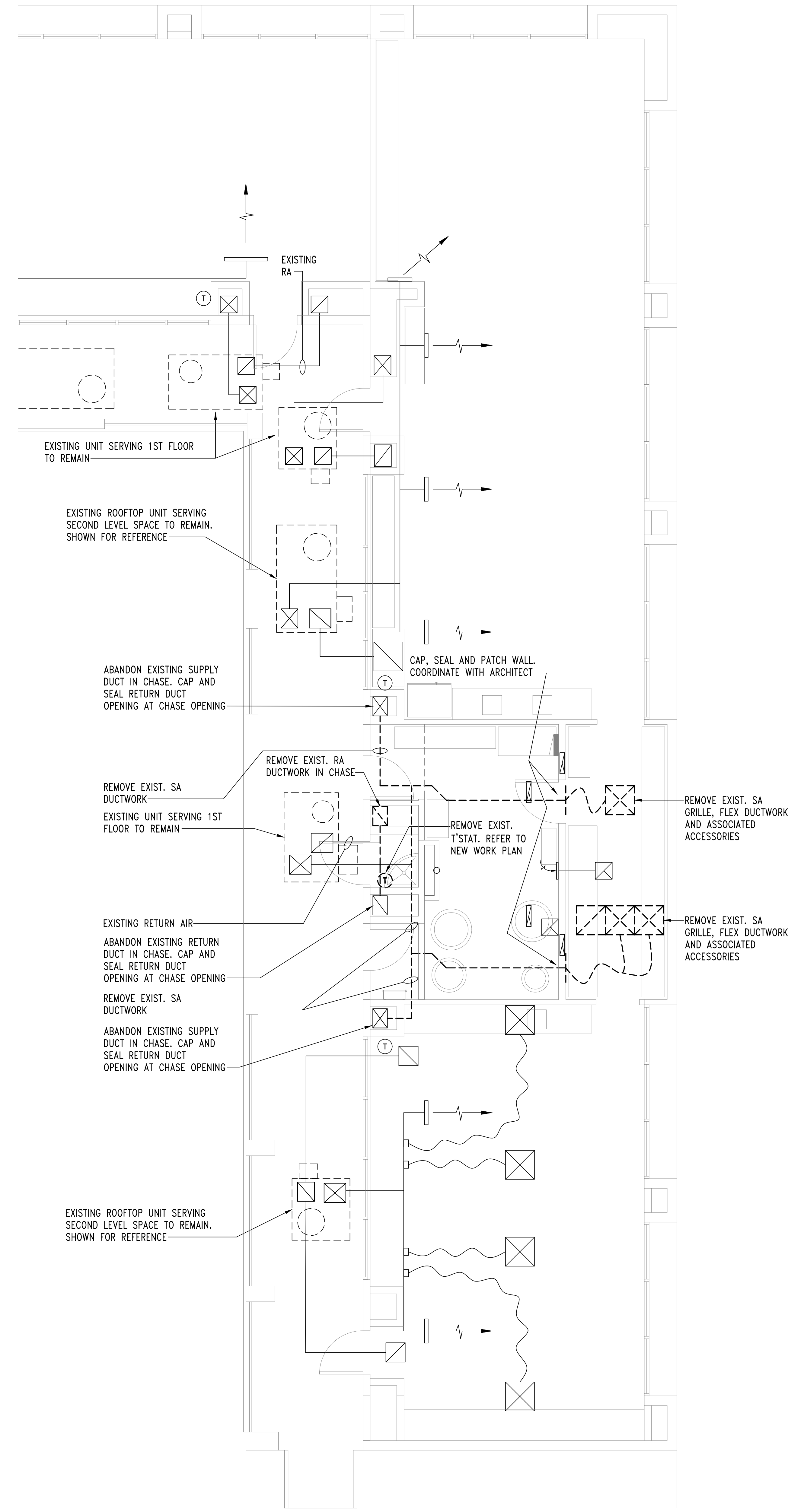


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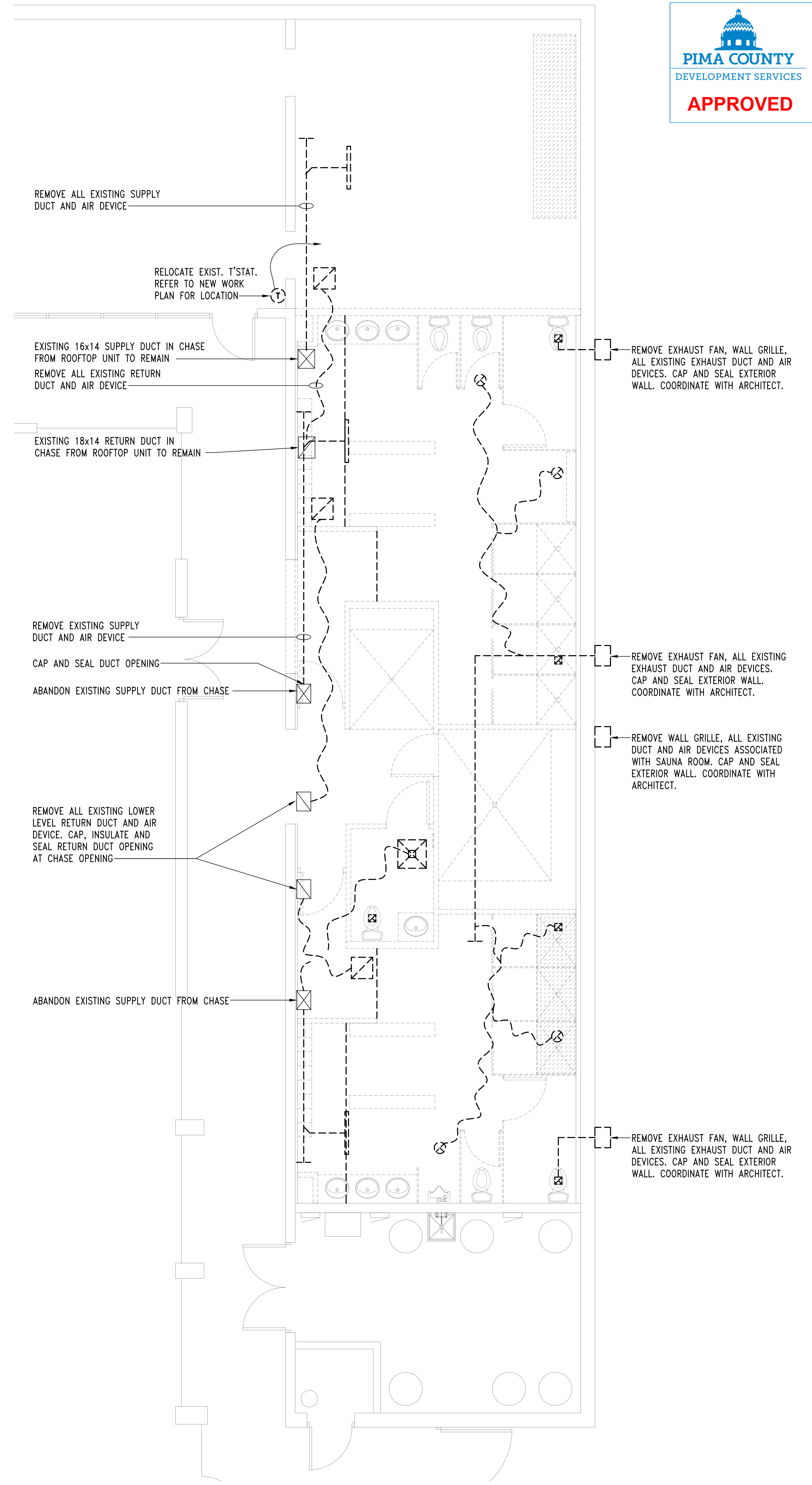
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 PROJ. NO. 3103.1
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M1.0

KC MECHANICAL ENGINEERING, L.L.C.
 5447 East Fifth Street # 112 Tucson, Arizona 85711 520/327-7611
 Designers: Mech: MG Plumb: PLZ Project #: 23331



1 DEMOLITION MECHANICAL PLAN - UPPER LEVEL
 SCALE: 1/4" = 1'-0"
 TRUE PROJECT NORTH

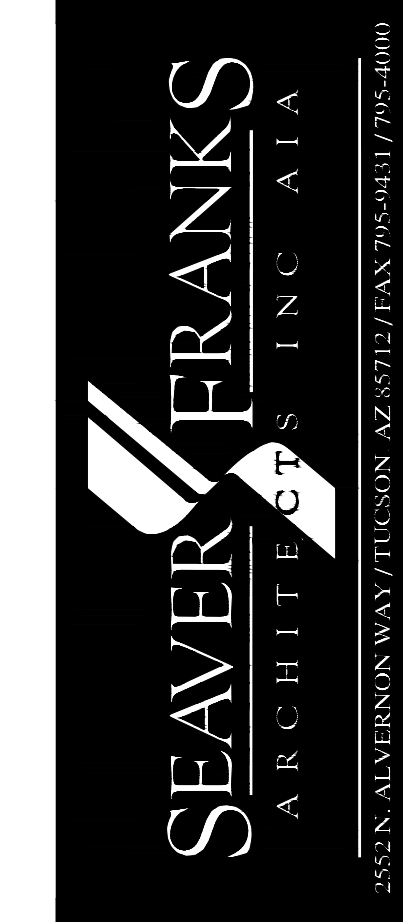


1 DEMOLITION MECHANICAL PLAN - LOWER LEVEL
 SCALE: 1/4" = 1'-0"
 TRUE PROJECT NORTH



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LOCKER EXPANSION
MECHANICAL NEW WORK AND
NEW WORK ROOF PLAN




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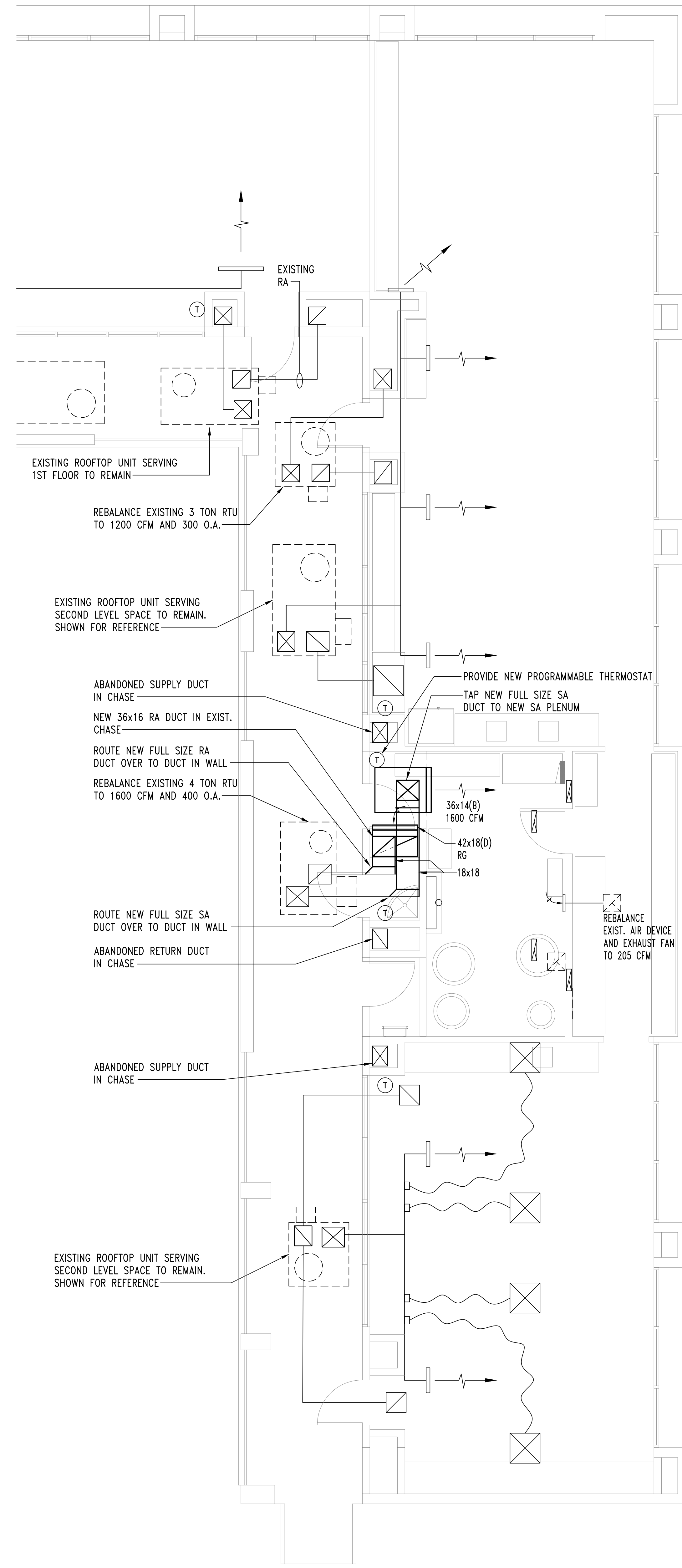
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DRG. SCALE: AS NOTED

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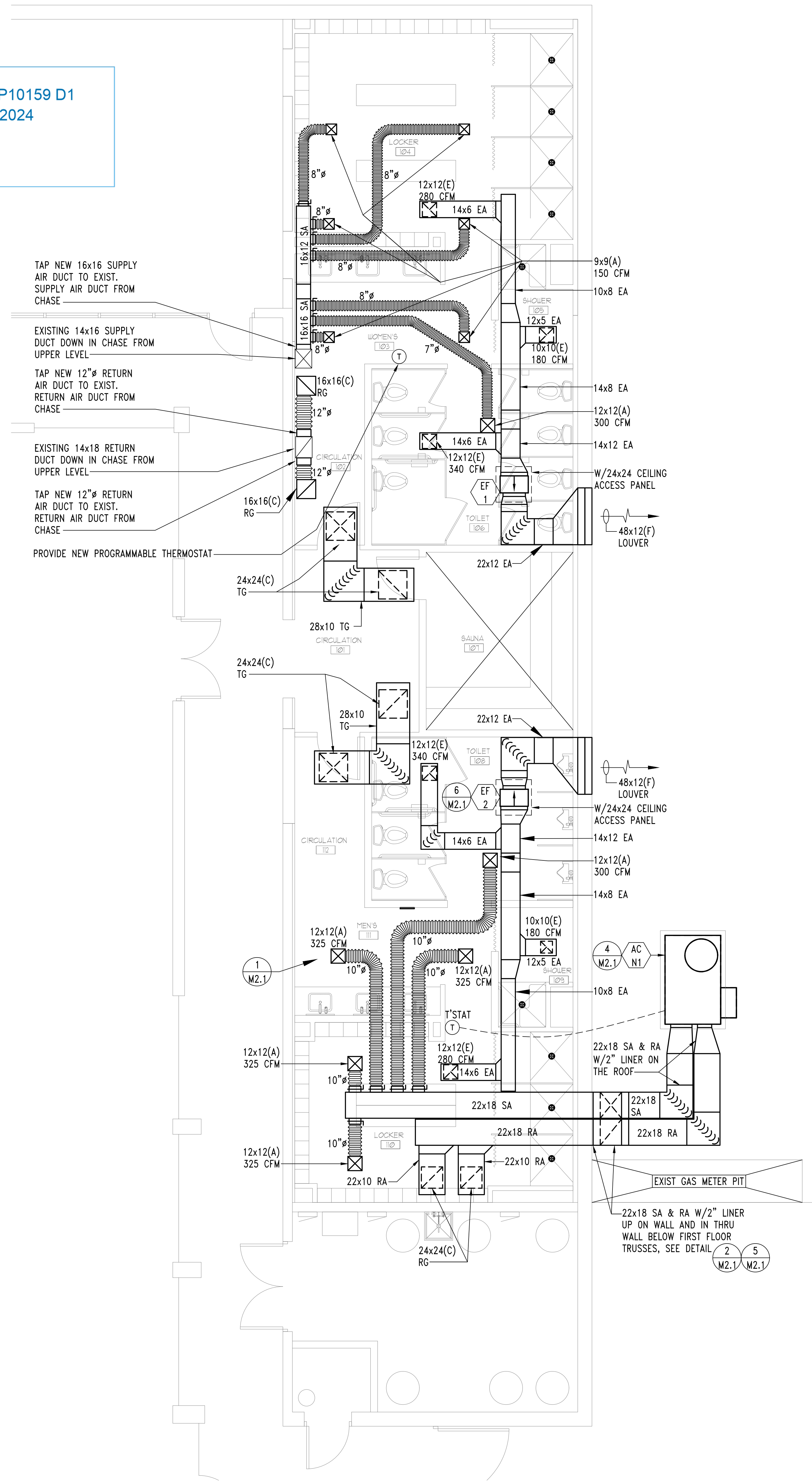
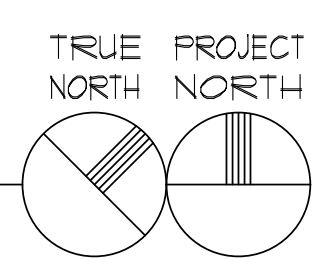
M1.1

KC MECHANICAL ENGINEERING, L.L.C.
5447 East Fifth Street # 112 Tucson, Arizona 85711 520/327-0432
Designers: Mech: MG Plumb: PLZ Project #: 23331

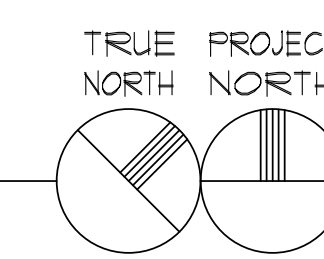

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2 MECHANICAL NEW WORK ROOF PLAN - UPPER LEVEL
SCALE: 1/4" = 1'-0"



1 MECHANICAL NEW WORK PLAN - LOWER LEVEL
SCALE: 1/4" = 1'-0"





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MECHANICAL SCHEDULES
AND DETAILS



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5447 East Fifth Street # 112
Tucson, Arizona 85711
Designers: Mech: MG Plumb: PLZ Project #: 23331

BUILDING UNIT	ROOM NUM.	ROOM NAME	ZONE FLOOR AREA, Az (SQ.FT.)	CODE	OCCUPANCY CATEGORY, Ra, Rp	ZONE POPULATION Pz	ZONE AIR DISTRIBUTION EFFECTIVENESS, E _{az}	ZONE SUPPLY AIR FLOW (CFM)	SYSTEM POPULATION P _s	OUTDOOR AIR INTAKE (WC OR URINAL) VOLUME (CFM)	REQUIRED EXHAUST VENTILATION (CFM)	NOTES
NEW		WOMENS LOCKERS	400	83	LOCKER/DRESSING ROOMS	0.0		500			100	
	4ton	WOMENS TOILET	175	87	TOILETS - CONTINUOUS	0.0		200		7	350	
		WOMENS SHOWERS	135	89	SHOWERS - CONTINUOUS	0.0		500			0	
			710			0.0	CSCR	1,200	0	0	450	
EXIST		MEN LOCKERS	345	83	LOCKER/DRESSING ROOMS	0.0		600			86	
	4ton	MEN TOILET	160	87	TOILETS - CONTINUOUS	0.0		400		6	300	
		MEN SHOWERS	115	89	SHOWERS - CONTINUOUS	0.0		600			0	
			620			0.0	CSCR	1,600	0	0	386	

MARK	AC-N1
NOMINAL TONNAGE	4
MINIMUM TOTAL COOLING CAPACITY (MBH)	39.8
MINIMUM SENSIBLE COOLING CAPACITY (MBH)	35.3
COOLING AMBIENT TEMPERATURE (DEG. F)	110
ENTERING AIR TEMPERATURE (DEG/DB/WB)	82/64
MINIMUM ENERGY EFFICIENCY RATIO (SEER)	16.0
TYPE OF HEATING	NATURAL GAS
MINIMUM HEATING CAPACITY (MBH)	47.5
HEATING AMBIENT TEMPERATURE (DEG F)	28
MAXIMUM NATURAL GAS INPUT (CFH)	80
MINIMUM NUMBER HEATING STAGES	2
ENTERING AIR TEMPERATURE (DEG DB)	60
SUPPLY AIR (CFM)	1600
OUTSIDE AIR (CFM)	400
EXT. STATIC PRESSURE ("w.g.)	0.5
DRIVE TYPE	DIRECT
MAXIMUM OPERATING WEIGHT (LBS)	900
VOLTS/PHASE/HZ	460/3/60
UNIT FLA	8.65
UNIT MCA	10
UNIT MCOB	15
REFERENCE	CARRIER 48CGDM05

- NOTES
- CAPACITY SCHEDULED SHALL BE FOR 3000 FT. ELEVATION.
 - SCHEDULED CAPACITY IS ACTUAL CAPACITY.
 - PROVIDE LOW VOLTAGE CONTROL POWER TRANSFORMER.
 - PROVIDE SINGLE POINT POWER CONNECTION.
 - PROVIDE FIELD MOUNTED DISCONNECT SWITCH AND CONVENIENCE OUTLET. REFER TO ELECTRICAL DRAWINGS.
 - PROVIDE NECESSARY CONTROLS TO PREVENT COMPRESSOR RAPID RECYCLING.
 - PROVIDE OUTSIDE AIR INTAKE HOOD W/BAROMETRIC AND MANUAL DAMPER AND BIRDSCREEN.
 - PROVIDE LOW AMBIENT CONTROL TO 30 DEG. F.
 - PROVIDE MIN. 14" FACTORY ROOF CURB ANCHORED TO CONCRETE PAD. LEVEL UNIT AS REQUIRED.
 - PROVIDE 2" PLEATED DISPOSABLE FILTERS. SEE SPECIFICATIONS.
 - PROVIDE 5 YEAR COMPRESSOR WARRANTY.
 - PROVIDE CONDENSOR COIL HAIL GUARD.
 - PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT SIMILAR TO HONEYWELL MODEL VISION PRO TH8320R WITH OPTIMIZE START-UP, AUTO-CHANGEOVER, NIGHT SET-BACK, OVER-RIDE CONTROL. FAN SHALL BE LOCKED IN THE ON POSITION.

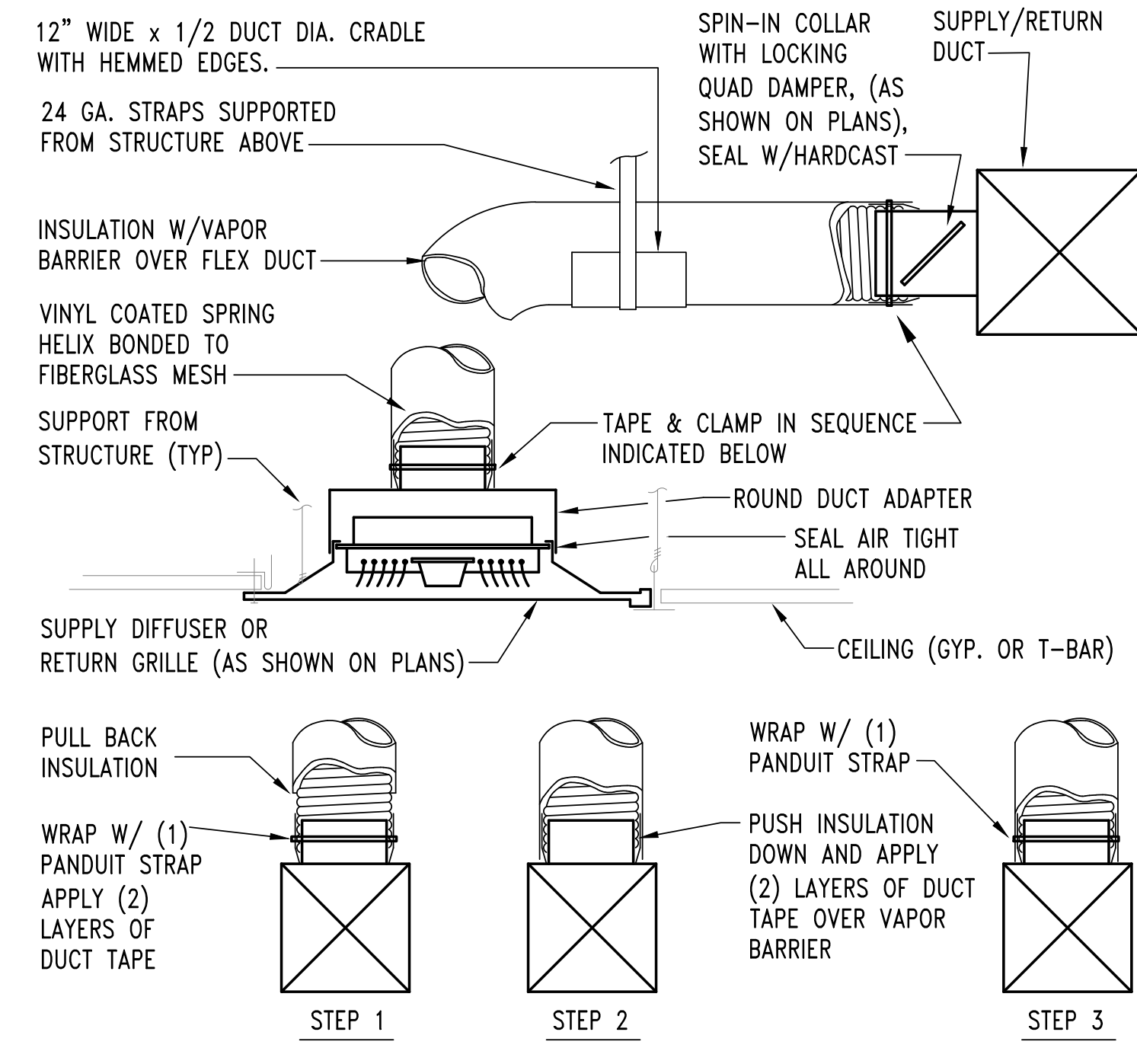
MARK	EF-1,2
TYPE	CEILING
WHEEL TYPE	F.C.
MINIMUM WHEEL DIAMETER	7.7
AIR FLOW (CFM)	800
E.S.P. ("w.g.)	0.3
DRIVE TYPE	DIRECT
MAXIMUM FAN SPEED (RPM)	989
MAXIMUM SONES	5.5
MOTOR HP	8.4(AMPS)
VOLTS/PHASE/HZ	115/1/60
MAXIMUM OPERATING WEIGHT (LBS.)	45
REFERENCE	GREENHECK CSP-A1550

NOTES

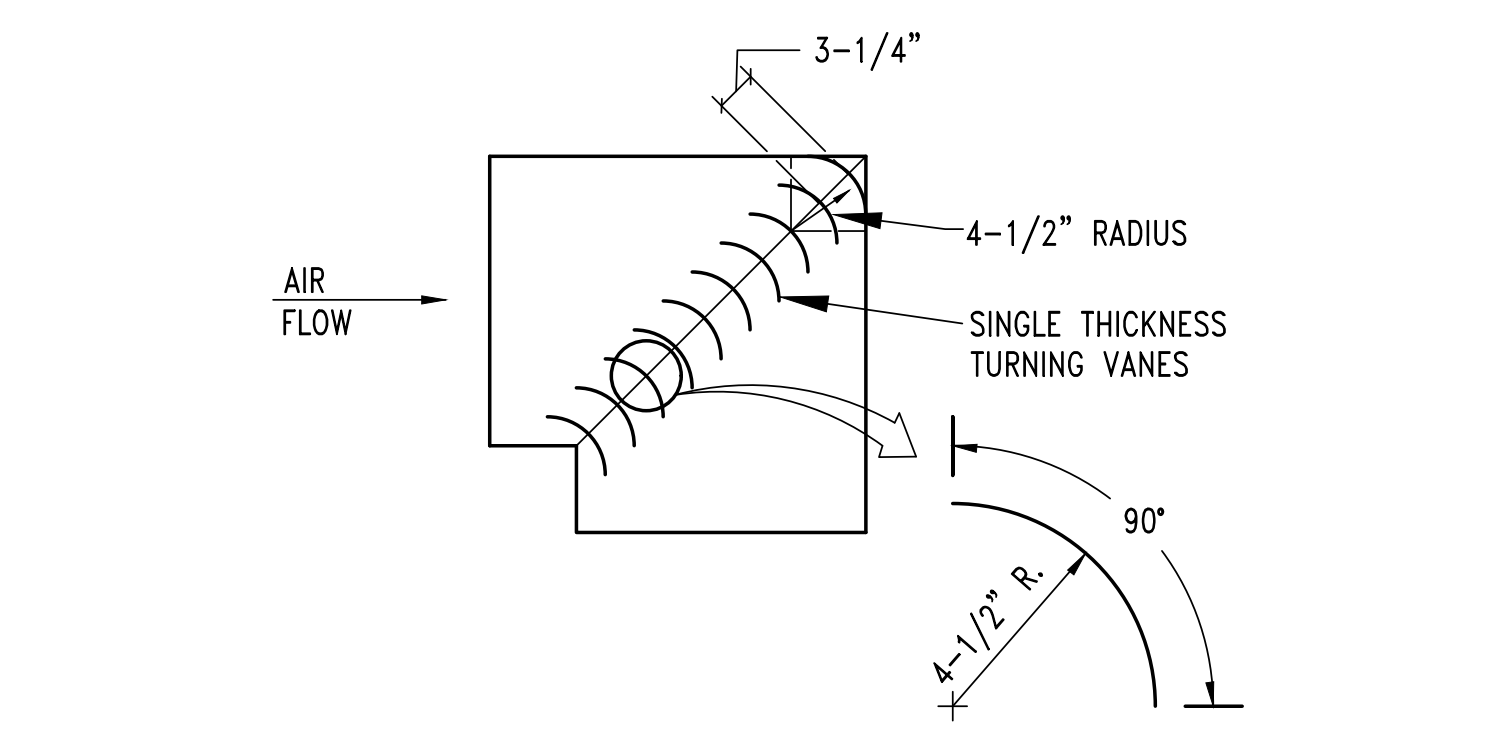
- SCHEDULE CAPACITY SHALL BE FOR 3000 FT. ELEVATION.
- FAN PERFORMANCE SHALL BE AMCA CERTIFIED.
- PROVIDE DISCONNECT SWITCH, BACKDRAFT DAMPER, SPRING ISOLATORS, AND SPEED CONTROLLER MOUNTED TO FAN OR ECM MOTOR FOR BALANCING
- PROVIDE 7-DAY PROGRAMMABLE TIME WALL SWITCH. INTERMATIC MODEL ST01C OR EQUIVALENT TIME CLOCK SCHEDULED TO OPERATE DURING OCCUPIED HOURS.

Womans	
Air Handler Description:	Womans Constant Volume - Sum of Peaks
Supply Air Fan:	Blow-Thru with program estimated horsepower of 0.25 HP
Fan Input:	65% motor and fan efficiency with 1 in. water across the fan
Sensible Heat Ratio:	0.77
Air System Peak Time:	5pm in August
Outdoor Conditions:	Cig: 99° DB, 69° WB, 68.33 grains, Htg: 28° DB
Indoor Conditions:	Cig: 75° DB, 50% RH, Htg: 75° DB
Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.	
Room Space sensible loss:	11,119 Btuh
Infiltration sensible loss:	0 Btuh
Outside Air sensible loss:	13,872 Btuh
Supply Duct sensible loss:	585 Btuh
Return Duct sensible loss:	0 Btuh
Return Plenum sensible loss:	0 Btuh
Total System sensible loss:	25,576 Btuh
Heating Supply Air: 11,704 / (.911 X 1.08 X 20) =	595 CFM
Winter Vent Outside Air (50.4% of supply) =	300 CFM
Room space sensible gain:	15,127 Btuh
Infiltration sensible gain:	0 Btuh
Draw-thru fan sensible gain:	0 Btuh
Supply duct sensible gain:	1,033 Btuh
Reserve sensible gain:	628 Btuh
Total sensible gain on supply side of coil:	16,788 Btuh
Cooling Supply Air: 17,569 / (.911 X 1.1 X 17) =	1,031 CFM
Summer Vent Outside Air (29.1% of supply) =	300 CFM
Return duct sensible gain:	0 Btuh
Return plenum sensible gain:	0 Btuh
Outside air sensible gain:	7,215 Btuh
Blow-thru fan sensible gain:	577 Btuh
Total sensible gain on return side of coil:	7,792 Btuh
Total sensible gain on air handling system:	24,580 Btuh
Room space latent gain:	5,296 Btuh
Infiltration latent gain:	0 Btuh
Outside air latent gain:	-447 Btuh
Total latent gain on air handling system:	4,848 Btuh
Total system sensible and latent gain:	29,429 Btuh
Check Figures	
Total Air Handler Supply Air (based on a 17° TD):	1,031 CFM
Total Air Handler Vent. Air (29.09% of Supply):	300 CFM
Total Conditioned Air Space:	710 Sq.ft
Supply Air Per Unit Area:	1.4526 CFM/Sq.ft
Area Per Cooling Capacity:	289.5 Sq.ft/Ton
Cooling Capacity Per Area:	0.0025 Tons/Sq.ft
Heating Capacity Per Area:	36.02 Btuh/Sq.ft
Total Heating Required With Outside Air:	25,576 Btuh
Total Cooling Required With Outside Air:	2.45 Tons

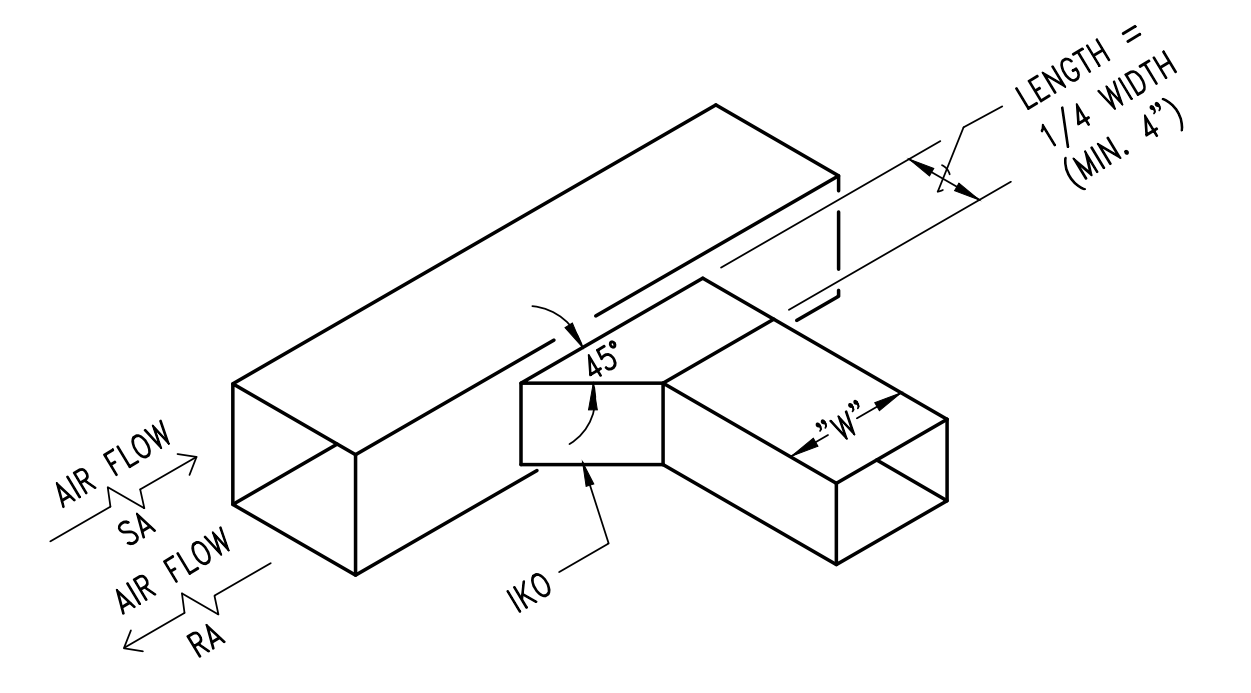
Mens	
Air Handler Description:	Mens Constant Volume - Sum of Peaks
Supply Air Fan:	Blow-Thru with program estimated horsepower of 0.29 HP
Fan Input:	65% motor and fan efficiency with 1 in. water across the fan
Sensible Heat Ratio:	0.81
Air System Peak Time:	4pm in August
Outdoor Conditions:	Cig: 101° DB, 69° WB, 65.20 grains, Htg: 28° DB
Indoor Conditions:	Cig: 75° DB, 50% RH, Htg: 75° DB
Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.	
Room Space sensible loss:	13,308 Btuh
Infiltration sensible loss:	0 Btuh
Outside Air sensible loss:	18,496 Btuh
Supply Duct sensible loss:	700 Btuh
Return Plenum sensible loss:	0 Btuh
Total System sensible loss:	32,505 Btuh
Heating Supply Air: 14,008 / (.911 X 1.08 X 20) =	712 CFM
Winter Vent Outside Air (66.2% of supply) =	400 CFM
Room space sensible gain:	17,721 Btuh
Infiltration sensible gain:	0 Btuh
Draw-thru fan sensible gain:	0 Btuh
Supply duct sensible gain:	1,192 Btuh
Reserve sensible gain:	759 Btuh
Total sensible gain on supply side of coil:	19,672 Btuh
Cooling Supply Air: 20,263 / (.911 X 1.1 X 17) =	1,190 CFM
Summer Vent Outside Air (33.6% of supply) =	400 CFM
Return duct sensible gain:	0 Btuh
Return plenum sensible gain:	0 Btuh
Outside air sensible gain:	10,421 Btuh
Blow-thru fan sensible gain:	666 Btuh
Total sensible gain on return side of coil:	11,087 Btuh
Total sensible gain on air handling system:	30,759 Btuh
Room space latent gain:	4,638 Btuh
Infiltration latent gain:	0 Btuh
Outside air latent gain:	-1,390 Btuh
Total latent gain on air handling system:	3,249 Btuh
Total system sensible and latent gain:	34,008 Btuh
Check Figures	
Total Air Handler Supply Air (based on a 17° TD):	1,190 CFM
Total Air Handler Vent. Air (33.63% of Supply):	400 CFM
Total Conditioned Air Space:	620 Sq.ft
Supply Air Per Unit Area:	1.9168 CFM/Sq.ft
Area Per Cooling Capacity:	218.8 Sq.ft/Ton
Cooling Capacity Per Area:	0.0046 Tons/Sq.ft
Heating Capacity Per Area:	52.43 Btuh/Sq.ft
Total Heating Required With Outside Air:	32,505 Btuh
Total Cooling Required With Outside Air:	2.83 Tons



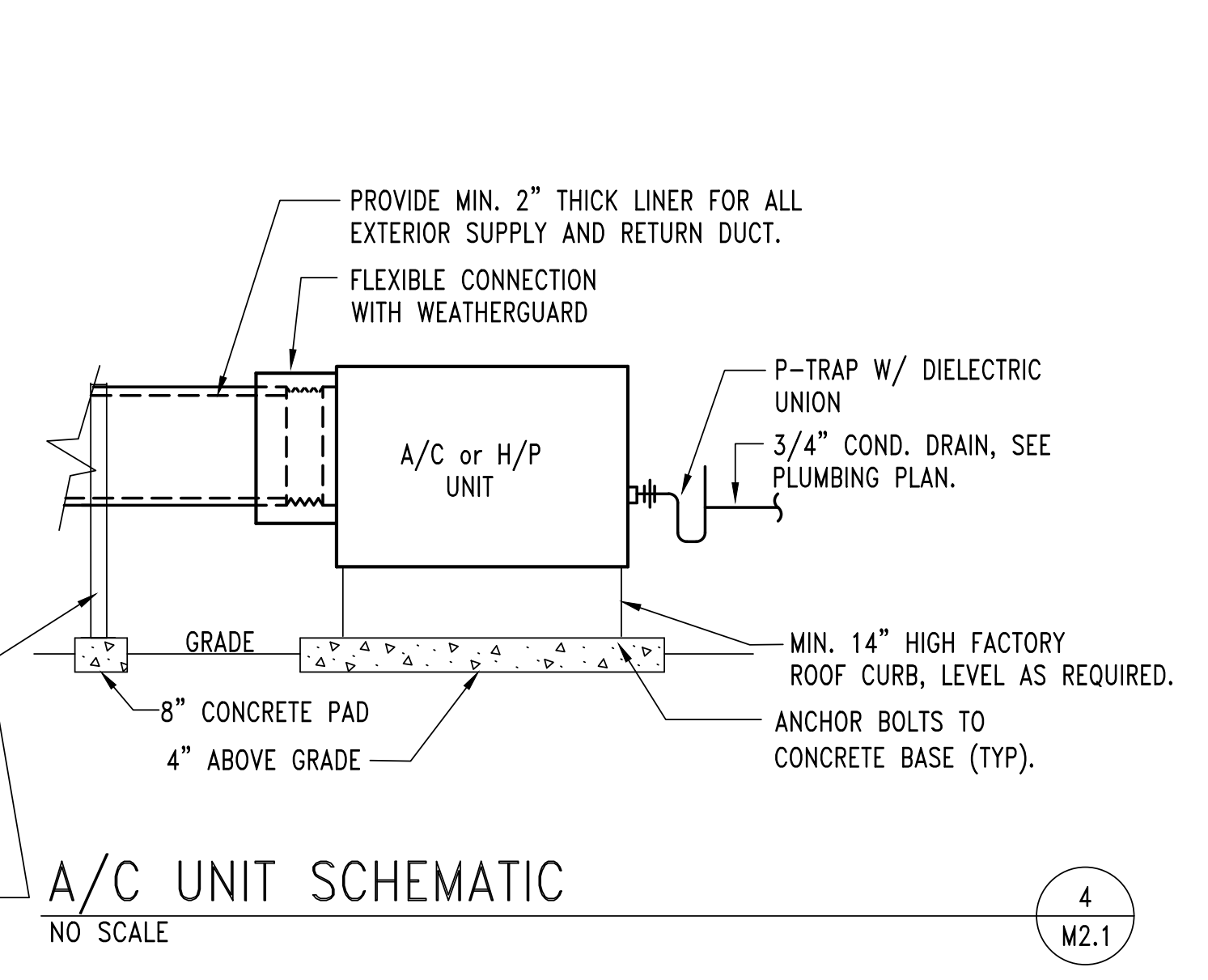
AIR DEVICE AND FLEXIBLE DUCT DETAIL
NO SCALE



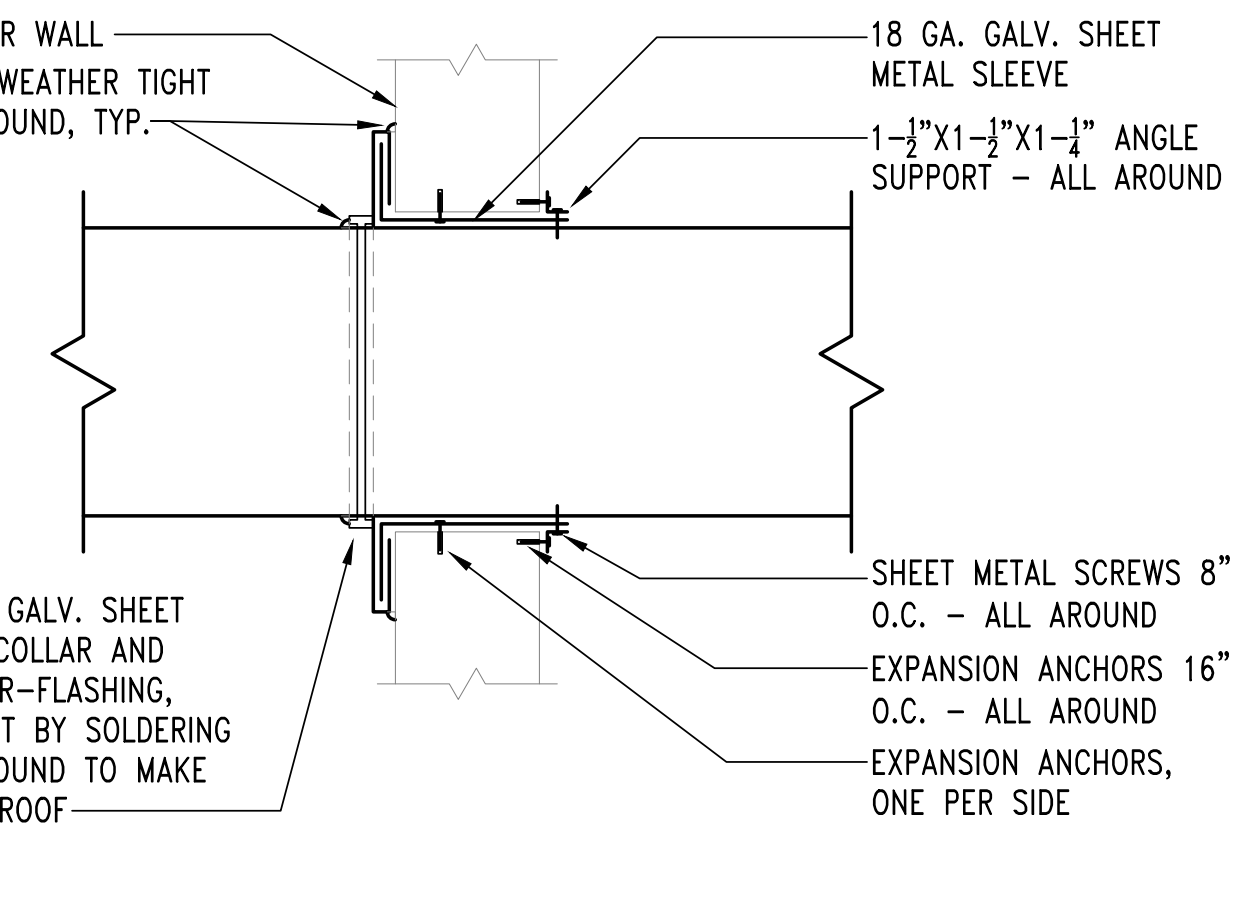
MITER ELBOW W/TURNING VANES DETAIL
NO SCALE



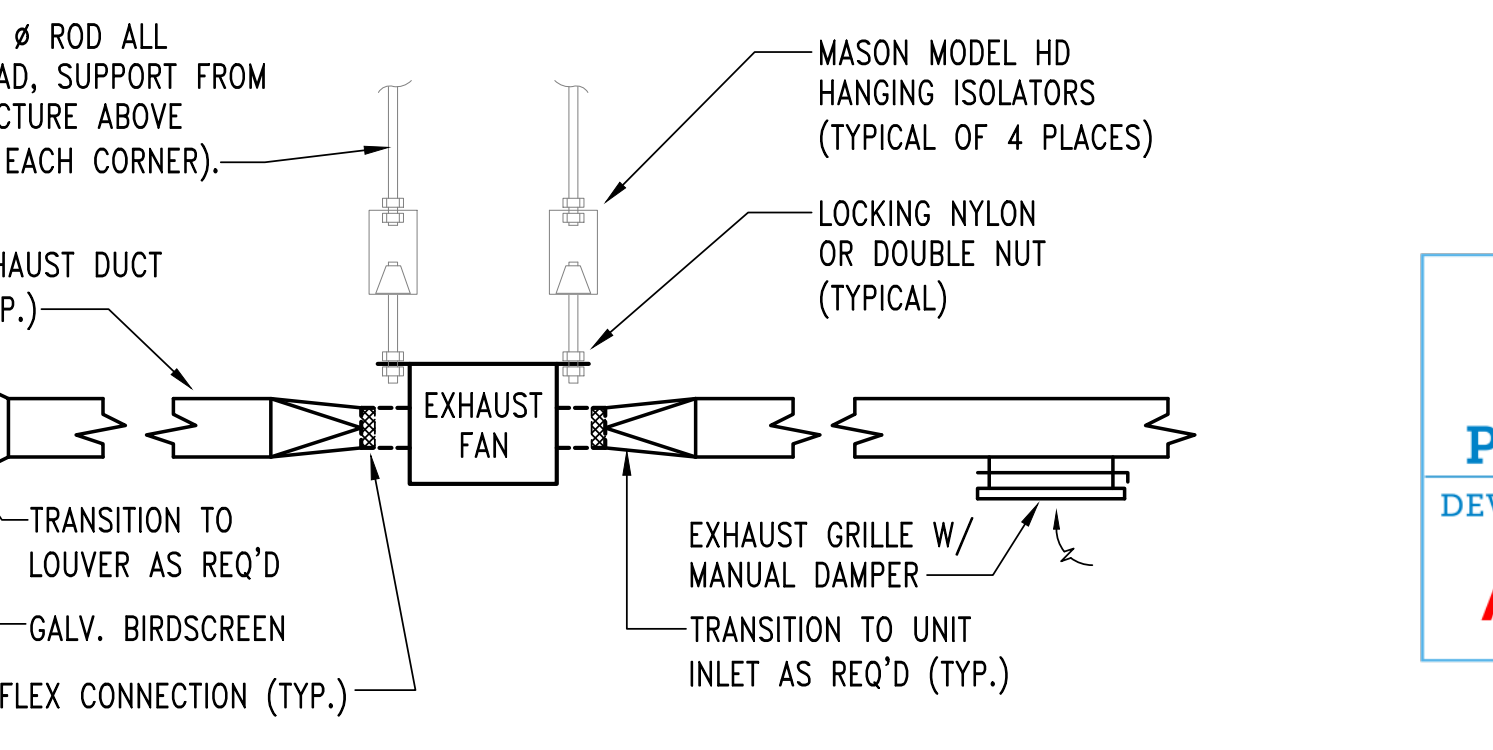
DUCT TAKE-OFF DETAIL
NO SCALE



A/C UNIT SCHEMATIC
NO SCALE



DUCT THRU WALL
NO SCALE



IN-LINE EXHAUST FAN DETAIL
NO SCALE

MARK	A	B	C	D	E	F
SERVICE	SUPPLY	SUPPLY	RETURN/TRANSFER	RETURN	EXHAUST	EXHAUST
MATERIAL	ALUM	ALUM	ALUM	STEEL	ALUM	ALUM
FINISH	WHITE	WHITE	WHITE	WHITE	WHITE	PRIMED
PATTERN	4-WAY	DOUBLE	EGGCRADE	SINGLE	EGGCRADE	DRAINABLE
		DEFLECTION		DEFLECTION		
REFERNCE	KRUEGER	KRUEGER	KRUEGER	KRUEGER	KRUEGER	RUSKIN
	5184	5880V	EGC5	S80H	EGC5	ELF375X
NOTES	1,2,3	1,2	2	2	1,2	4

1. PROVIDE OPPOSED BLADE DAMPER.
2. PROVIDE FRAME STYLE SUITABLE FOR CEILING OR WALL SPECIFIED ON ARCH. DRAWINGS.
3. PROVIDE SQUARE TO ROUND ADAPTORS WHEN REQUIRED.
4. PROVIDE FLANGE FRAME OR BOX FRAME(COORDINATE W/ARCHITECT) AND BIRDSCREEN.



REVISED 7/23/24
MECHANICAL SPECIFICATIONS

MECHANICAL GENERAL REQUIREMENTS

- CODES: CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE FOLLOWING CODES:
 - INTERNATIONAL BUILDING CODE (2018 EDITION)
 - INTERNATIONAL MECHANICAL CODE (2018 EDITION)
 - INTERNATIONAL PLUMBING CODE (2018 EDITION)
 - INTERNATIONAL FUEL GAS CODE (2018 EDITION)
 - INTERNATIONAL ENERGY CONSERVATION CODE (2018 EDITION)
 - THE INTERNATIONAL FIRE CODE (2018 EDITION)
 - ALL AS AMENDED BY THE LOCAL GOVERNING AGENCY.

GENERAL: THE WORK COVERED BY THIS SPECIFICATION SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, LABOR, TRANSPORTATION, TOOLS, PERMITS, FEES, INSPECTIONS, UTILITIES AND INCIDENTALS NECESSARY FOR THE COMPLETE INSTALLATION OF ALL WORK REQUIRED BY THE CONTRACT DRAWINGS.

DRAWINGS: THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND CANNOT SHOW EVERY CONNECTION IN DETAIL OR EVERY PIPE OR DUCT IN ITS EXACT LOCATION. THESE DETAILS ARE SUBJECT TO THE REQUIREMENTS OF ORDINANCES AND ALSO STRUCTURAL AND ARCHITECTURAL CONDITIONS. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE STRUCTURAL AND FINISH CONDITIONS AND SHALL COORDINATE WITH THE SEPARATE TRADES IN ORDER TO AVOID INTERFERENCE BETWEEN THE VARIOUS PHASES OF WORK. WORK SHALL BE LAID OUT SO THAT IT WILL BE CONCEALED IN FURRED CHASES OR ABOVE CEILING, ETC., IN FINISHED PORTIONS OF THE BUILDING, UNLESS SPECIFICALLY NOTED OR INDICATED TO BE EXPOSED. WORK SHALL BE INSTALLED TO AVOID DRIPPING OF STRUCTURAL MEMBERS. ALL WORK SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE LINES OF THE BUILDING UNLESS OTHERWISE NOTED. THE APPROXIMATE LOCATION OF EACH ITEM IS INDICATED ON THE DRAWINGS. THESE DRAWINGS ARE NOT INTENDED TO GIVE COMPLETE AND EXACT DETAILS IN REGARD TO LOCATION. EXACT LOCATIONS ARE TO BE DETERMINED BY ACTUAL MEASUREMENTS OF THE BUILDING.

EQUIPMENT INSTALLATION: PROVIDE AND INSTALL UNIONS AT PROPER POINTS TO PERMIT REMOVAL OF PIPE AND EQUIPMENT WITHOUT DAMAGE TO OTHER PARTS OF THE SYSTEM. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER TO PERMIT ACCESS TO PARTS REQUIRING SERVICE WITHOUT DISASSEMBLY OF OTHER EQUIPMENT.

EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION REQUIRED FOR THE INSTALLATION OF THE WORK. CONTRACTOR SHALL BACKFILL, COMPACT AND REPAIR CONCRETE OR PAVING TO MATCH EXISTING FINISH AS CLOSELY AS POSSIBLE.

EXISTING FACILITIES: LOSS OR DAMAGE TO EXISTING FACILITY CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO COST TO THE OWNER. THE CONTRACTOR SHALL COORDINATE ALL WORK REQUIRED IN EXISTING AREAS WITH THE OWNER AND SHALL ARRANGE FOR ALL TEMPORARY UTILITY SERVICES, PROTECTION OF THE FACILITY AND ITS CONTENTS, BARRICADES, SAFETY DEVICES, ETC., REQUIRED TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL REMOVE AND REINSTALL EXISTING CONSTRUCTION IF REQUIRED TO ACCOMPLISH THE WORK. NOTIFY THE OWNER AT LEAST TWO DAYS IN ADVANCE OF ALL REQUIRED SERVICE OUTAGES.

SUBSTITUTIONS: EQUIPMENT OF EQUAL QUALITY TO THAT SPECIFIED MAY BE SUBSTITUTED PROVIDED IT MEETS OR EXCEEDS THE CAPACITY SCHEDULED, IS OF SIMILAR CONSTRUCTION, AND WILL FIT IN THE SPACE ALLOTTED WITH AMPLE SERVICE CLEARANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH ALL OTHER TRADES (SUCH AS ELECTRICAL AND STRUCTURAL) OF ANY PRODUCT REQUIRING A CHANGE IN THE WORK OF THAT TRADE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY ADDITIONAL COSTS ASSOCIATED WITH SUCH A CHANGE. MATERIALS OF CONSTRUCTION SHALL BE AS SPECIFIED.

SUPPORTS, ANCHORS AND SLEEVES: SUPPORT HORIZONTAL PIPING WITH STEEL CLEVIS HANGERS AND VERTICAL PIPING WITH RISER CLAMPS. PROVIDE COPPER PLATED HANGERS AND CLAMPS FOR COPPER PIPING OR WRAP THE COPPER PIPE AT HANGERS WITH TWO LAYERS OF PVC TAPE OR EQUIVALENT. HANGER SPACING AND ROD SIZE SHALL BE IN ACCORDANCE WITH THE LOCAL CODE AND/OR ASHRAE STANDARDS. SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA STANDARDS. DUCTWORK SHALL BE SUPPORTED INDEPENDENT FROM OTHER DUCTWORK AND EQUIPMENT. PROVIDE MINIMUM 18 GAUGE GALVANIZED STEEL SLEEVES FOR DUCTWORK, FLASHINGS, AND ESCUTCHEONS. SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS. THROUGH PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE PER MANUFACTURER'S LISTED DETAILS AND INSTRUCTIONS, EQUAL OF HLTI. PIPING SHALL BE PROVIDED WITH STANDARD WEIGHT STEEL PIPE OF SIZE TO PASS PIPE AND INSULATION. PIPE SLEEVES ARE NOT REQUIRED IF PENETRATIONS ARE CORE DRILLED. PIPING SHALL NOT BE SUPPORTED FROM PENETRATION.

SHOP DRAWINGS: PROVIDE SHOP DRAWINGS AND MANUFACTURER'S DATA ON ALL PLUMBING FIXTURES AND TRIM, EQUIPMENT, MECHANICAL DEVICES AND FIRE PROTECTION SYSTEM FOR APPROVAL.

WARRANTY: PROVIDE TWO YEAR WARRANTY FROM DATE OF FINAL ACCEPTANCE ON ALL LABOR AND MATERIALS PROVIDED UNDER THIS CONTRACT. PROVIDE AN ADDITIONAL FIVE YEAR WARRANTY ON THE MOTOR_COMPRESSOR UNITS FOR ALL AIR CONDITIONING OR HEAT PUMP EQUIPMENT AND WATER HEATERS.

OPERATION AND MAINTENANCE MANUAL: PROVIDE A COMPLETE INDEXED, BOUND MANUAL OF ALL EQUIPMENT REQUIRING MAINTENANCE.

TRAINING: CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO HOURS TRAINING TO THE OWNER ON THE OPERATION OF ALL EQUIPMENT.

CLEAN-UP: CONTRACTOR SHALL MAINTAIN PREMISES IN CLEAN CONDITION AT END OF EACH DAY AND THOROUGHLY CLEAN-UP AT END OF CONSTRUCTION.

FIRE PROTECTION:

GENERAL: THE EXISTING FIRE PROTECTION SYSTEM IS A WET PIPE AUTOMATIC SPRINKLER SYSTEM AND SHALL BE MODIFIED PER THE NEW ARCHITECTURAL FLOOR PLAN AND CEILING PLAN.

QUALITY ASSURANCE: DESIGN INSTALLATION SHALL MEET THE REQUIREMENTS OF NFPA 13, INSURANCE UNDERWRITERS, THE REQUIREMENTS SPECIFIED HEREINAFTER AND THE LOCAL FIRE CODE. THE SYSTEM SHALL BE DESIGNED AND INSTALLED BY A FIRE PROTECTION CONTRACTOR LICENSED IN THE STATE OF ARIZONA AND EXPERIENCED IN THIS TYPE OF SYSTEM DESIGN AND INSTALLATION WITH A MINIMUM OF FIVE YEARS EXPERIENCE. EVIDENCE TO SUPPORT THE ABOVE REQUIREMENTS MAY BE REQUESTED, AND ANY PROPOSED INSTALLER WHO CANNOT SHOW SUITABLE EXPERIENCE WILL BE REJECTED.

ACCEPTABLE MANUFACTURERS: PRODUCTS MANUFACTURED BY AUTOMATIC SPRINKLER, VICTAULIC, GRINNELL, VIKING, CENTRAL, OR APPROVED EQUAL MEETING THESE SPECIFICATIONS ARE ACCEPTABLE.

ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF THE FIRE PROTECTION SYSTEM SHALL BE LISTED AS APPROVED BY THE UNDERWRITERS LABORATORIES, INC., LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS, AND THE FACTORY MUTUAL TESTING LABORATORIES LIST OF APPROVED EQUIPMENT. FIRE PROTECTION DEVICES AND DEVICES INVOLVING FIRE HAZARD SHALL BE THE LATEST DESIGN OF THE MANUFACTURER.

SPRINKLER PIPING AND PIPE FITTING:

PIPING: PIPING, FITTINGS, JOINTS, AND INSTALLATION SHALL BE AS SPECIFIED IN NFPA 13.

SPRINKLER HEADS: UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, SPRINKLER HEADS SHALL BE UPRIGHT OR PENDANT, QUICK RESPONSE HEADS EXCEPT THAT SPRINKLER HEADS TO BE INSTALLED IN THE VICINITY OF HEATING EQUIPMENT AND LIGHTS, SHALL BE OF THE TEMPERATURE RATINGS REQUIRED FOR SUCH LOCATIONS BY NFPA 13.

INSTALLATION: THE SPRINKLER SYSTEM SHALL BE DESIGNED AND SIZED BASED ON NFPA 13 REQUIREMENTS.

ACTUAL NUMBER OF SPRINKLER HEADS, HEAD SPACING, PIPE ROUTING, COVERAGE, ETC., AS REQUIRED BY THE APPLICABLE AUTHORITIES AND/OR ARCHITECTURAL AND STRUCTURAL CONDITIONS, SHALL BE THE CONTRACTORS RESPONSIBILITY.

HEADS SHALL BE LOCATED IN A SYMMETRICAL PATTERN RELATED TO CEILING FEATURES SUCH AS BEAMS, LIGHT FIXTURES, DIFFUSERS, ETC., AND WHERE APPLICABLE, HEADS SHALL BE LOCATED SYMMETRICAL WITH THE GRID CEILING. HEADS SHALL BE ARRANGED IN A MANNER ACCEPTABLE TO THE ARCHITECT.

THE CONTRACTOR SHALL PROVIDE SPARE HEADS EQUAL TO ONE PERCENT OF THE TOTAL NUMBER OF HEADS INSTALLED UNDER THE CONTRACT, BUT NOT LESS THAN 10.

TESTS: UPON COMPLETION AND PRIOR TO ACCEPTANCE OF THE INSTALLATION, THE CONTRACTOR SHALL SUBJECT THE SYSTEM TO THE TESTS REQUIRED BY THE NFPA 13 AND THE LOCAL FIRE DEPARTMENT.

PLUMBING:

PIPING:

- SANITARY SOIL AND VENT PIPING--
 - SCHEDULE 40 SOLID CORE PVC PIPING WITH DWV FITTINGS (ASTM D1784, D1785 OR D2665) AND LOW VOC SOLVENT JOINTS WHERE APPROVED BY CODE AGENCIES AND NOT EXPOSED TO PHYSICAL DAMAGE, CELLULAR OR FOAM CORE PVC PIPING WILL NOT BE ACCEPTED.
 - WHERE INSTALLED IN A RETURN AIR FLENUM, CAST IRON PIPING SHALL BE USED.

DOMESTIC WATER PIPING--

- ABOVE GRADE--
 - TYPE "L" HARD TEMPER COPPER PIPE WITH WROUGHT FITTINGS AND 95-5 LEAD FREE SOLDER JOINTS OR COPPER ALLOY PRESS FITTINGS WITH FACTORY INSTALLED EDPM SEALING ELEMENT AND SMART CONNECTION PRESS ENDS EQUAL OF VIEGA.
- BELOW GRADE FROM WATER METER TO 5'-0" FROM BUILDING--
 - TYPE "L" HARD TEMPER COPPER WITH WROUGHT COPPER FITTINGS AND SILVER SOLDERED JOINTS, OR
 - SCHEDULE 40 PVC PIPING AND FITTINGS WITH SOLVENT JOINTS,
 - CROSS-LINKED POLYETHYLENE (PEX) TUBING; ASTM F876 & ASTM F877, STANDARD GRADE HYDROSTATIC DESIGN AND PRESSURE RATINGS FROM PLASTIC PIPE INSTITUTE (PPI), JOINTS / FITTINGS: ASTM F1964, COLD EXPANSION FITTINGS.

NATURAL GAS PIPING--

- ABOVE GRADE--
 - SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS. SUPPORT PIPING ON ROOF WITH PIPE SUPPORTS EQUAL OF MIRO SPACED AS DIRECTED BY CODE. PROVIDE LISTED BALL VALVES, UNIONS AND DIRT LEGS AT ALL APPLIANCES. PIPING EXPOSED TO WEATHER SHALL HAVE MINIMUM TWO COATS OF YELLOW PAINT.

CONDENSATE DRAIN PIPING--

- TYPE M, HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS.
- SCHEDULE 40 PVC PIPING AND FITTINGS WITH SOLVENT JOINTS.
- AT CONNECTION TO EACH UNIT PROVIDE DIELECTRIC UNION, TRAP AND OPEN BREATHER TEE ON DISCHARGE SIDE OF TRAP. INSULATE ALL CONDENSATE DRAIN LINES ABOVE CEILING AND IN STUD SPACES WITH 1/2" THICK ARMSTRONG "ARMAFLEX" INSULATION OR EQUAL.

FLASHING: FLASH ALL VENTS THROUGH ROOF WITH 4 LB. LEAD SHEET EXTENDING NOT LESS THAN 8" AWAY AND TURNED DOWN INTO THE VENT, 1" MINIMUM.

INSULATION:

- INSULATE ALL DOMESTIC HOT WATER SUPPLY AND HOT WATER RETURN PIPING UP TO 140F OPERATING TEMPERATURE, 1-1/4" DIAMETER & SMALLER, WITH 1" THICK GLASS FIBER SECTIONAL PIPE INSULATION WITH ALL SERVICE JACKET OR EQUIVALENT ARMAFLEX FOAM. PIPING 1-1/2" DIAMETER AND LARGER SHALL BE PROVIDED WITH 1-1/2" INSULATION, NON-RECIRCULATED HOT WATER SUPPLY BRANCHES MAY BE INSULATED WITH 1/2" THICK INSULATION, INSTALL INSULATION IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS. PROVIDE SHEET METAL SADDLES AT HANGER LOCATIONS. INSULATION SHALL BE INSTALLED CONTINUOUS THROUGH ALL HANGERS, ALL VALVES, PUMPS, STRAINERS, UNIONS, ETC., ON 1" AND LARGER PIPING SHALL BE FULLY INSULATED. ALL PIPING SYSTEMS SHALL BE TESTED PRIOR TO THE APPLICATION OF INSULATION.
- PIPES EXPOSED TO WEATHER SHALL BE PROVIDED WITH A 0.16" THICK CORRUGATED ALUMINUM JACKET. ALL JOINTS AND SEAMS IN ALUMINUM JACKETING SHALL BE SEALED.

PIPING SPECIALTIES: CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS OR FLANGES AT ALL LOCATIONS WHERE COPPER OR BRASS PIPING CONNECTS TO FERROUS PIPING OR EQUIPMENT. INSTALL WATER HAMMER ARRESTORS (EQUAL TO J.R. SMITH SERIES #5000) WITH ACCESS DOORS (EQUAL TO J.R. SMITH SERIES #4760) WHERE SHOWN ON PLAN.

VALVES: VALVES FOR DOMESTIC HOT AND COLD WATER SHALL BE LEAD-FREE AND AS MANUFACTURED BY KITZ, STOCKHAM, NIBCO, APOLLO, MILWAUKEE OR JENKINS.

BALL VALVES SHALL BE BRONZE, TWO PIECE BODY, FULL PORT FORGED BRASS BALL, SILICON BRONZE STEM, PTFE OR HDPE SEAT, PACKING AND GASKET; THREADED OR SOLDERED ENDS. VALVES SHALL CONFORM TO MSS SP-110

CHECK VALVES SHALL BE CLASS 125, BRONZE BODY, BRONZE DISC, Y-PATTERN, SWING CHECK DESIGN, THREADED OR SOLDERED ENDS. VALVES SHALL CONFORM TO MSS SP-80.

WHERE VALVE INSTALLATION IS CONCEALED; PROVIDE J.R. SMITH SERIES 4760 OR APPROVED EQUAL ACCESS DOORS WITH CONCEALED HINGE AND KEY OPERATED LOCKS. DOORS SHALL BE LARGE ENOUGH TO SERVICE VALVES AND SHALL BE INSTALLED FLUSH WITH FINISHED WALLS OR CEILING.

PLUMBING FIXTURES: FURNISH ALL STANDARD PRODUCTS OF AMERICAN STANDARD, KOHLER, CRANE, TOTO, DELTA, MOEN, CHICAGO, T&S BRASS, WIFAB, SLOAN, DELANT, ELKAY, HANS OR APPROVED EQUAL. ALL FIXTURES SHALL BE WHITE UNLESS OTHERWISE NOTED. REFER TO SCHEDULE FOR SPECIFIC REQUIREMENTS. PROVIDE STOPS AT HOT AND COLD WATER CONNECTIONS TO EACH FIXTURE.

WATER HEATERS: CAPACITIES AND ACCESSORIES TO BE AS SCHEDULED ON THE DRAWINGS AND BE MANUFACTURED BY STATE, A.O. SMITH, RHEEM, BRADFORD WHITE, CHROMIUM, TENAX OR APPROVED EQUAL.

EXECUTION: SLOPE DRAINAGE PIPING INSIDE AND OUTSIDE OF BUILDING IN ACCORDANCE WITH REQUIREMENTS OF THE GOVERNING PLUMBING CODES.

ESTABLISH GRADE LINES WITH SURVEYOR'S LEVEL. VERIFY LOCATION OF SEWER TAPS BEFORE START OF WORK AND MAKE NECESSARY GRADE ADJUSTMENTS. DRAIN VENT LINES BACK TO SOIL LINES.

LOCATE CLEANOUTS AT EACH CHANGE OF LINE DIRECTION OF MORE THAN 45 DEG. WHERE MORE THAN ONE CHANGE OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FT. INTERVAL.

BRING EXTERIOR CLEANOUTS UP TO GRADE AND INSTALL IN 18" X 18" CUBE OF CONCRETE. PROVIDE A CAST IRON COVER OVER EACH EXTERIOR CLEANOUT.

INSTALL WATER PIPING TO AVOID CONTACT WITH STRUCTURE WHEN POSSIBLE TO PREVENT EXCESSIVE WATER HAMMER NOISE TRANSMISSION.

ALL PIPING SHALL BE INSTALLED AT RIGHT ANGLES TO THE BUILDING LINES AND PLUMB.

WRAP METALLIC PIPE IN CONTACT WITH CONCRETE BLOCK, SLABS OR STUCCO WITH 10 MIL THICK PVC TAPE TO PREVENT CORROSION.

FLUSH PIPING CLEAN WITH WATER AFTER INSTALLATION. DISINFECT POTABLE WATER SYSTEM PER CODE, ANWA C651, OR ANWA C652 AND SUBMIT TEST RESULTS.

TESTING: TEST ALL PIPING PRIOR TO COVERING OR BACKFILLING.

WATER PIPING- TEST AT 100 PSIG FOR A CONTINUOUS PERIOD OF NOT LESS THAN FOUR (4) HOURS. DURING THIS TIME, CAREFULLY INSPECT THE SYSTEM FOR LEAKS. CONTRACTOR SHALL REPAIR ALL LEAKS IF NECESSARY AND TEST AGAIN UNTIL NO LEAKAGE IS DETECTED.

SOIL, WASTE AND VENT PIPING- TEST BY PLUGGING LINES AND FILLING SYSTEMS WITH WATER TO A STATIC HEAD OF 10 FEET OF WATER. OBSERVE WATER LEVEL FOR A TWO (2) HOUR PERIOD. IF LEVEL IS LOWERED, INDICATING LEAKAGE, REPAIR LEAKS AND TEST AGAIN UNTIL NO FURTHER LEAKAGE IS DETECTED.

NATURAL GAS PIPING- TEST AT 30 PSIG FOR A CONTINUOUS PERIOD OF NOT LESS THAN FOUR (4) HOURS. DURING THIS TIME, CAREFULLY INSPECT THE SYSTEM FOR LEAKS. CONTRACTOR SHALL REPAIR ALL LEAKS IF NECESSARY AND TEST AGAIN UNTIL NO LEAKAGE IS DETECTED.

HEATING, VENTILATING AND AIR CONDITIONING:

EQUIPMENT: EQUIPMENT CAPACITIES AND CHARACTERISTICS SHALL BE AS SCHEDULED ON THE DRAWINGS. INSTALL AS INDICATED ON DRAWINGS AND AS PER MANUFACTURER'S PRINTED INSTRUCTIONS. AIR CONDITIONING EQUIPMENT MANUFACTURED BY CARRIER, TRANE, LENNOX, DAIKIN, JCI (YORK), RHEEM, RUUD, AMERICAN STANDARD, BRYANT OR DAY & NIGHT IS ACCEPTABLE. DUCTLESS SPLIT AND VRF SYSTEM EQUIPMENT MANUFACTURED BY CARRIER (TOSHIBA), TRANE, LENNOX, DAIKIN, LG, MITSUBISHI, SANYO, FUJITSU, OR TOSHIBA IS ACCEPTABLE. EXHAUST FANS MANUFACTURED BY GREENHECK, LOREN COOK, TWIN CITY, PENN BARRY, BROAD, DELTA, JENCO OR S & P ARE ACCEPTABLE.

EQUIPMENT IDENTIFICATION: CONTRACTOR SHALL PROVIDE EQUIPMENT TAGS ON ALL MAJOR EQUIPMENT, I.E., AIR CONDITIONERS, EXHAUST FANS, ETC. TAGS SHALL BE BLACK WITH A MINIMUM OF 1" HIGH WHITE LETTERS PERMANENTLY AFFIXED TO THE UNITS. HAND WRITTEN TAGS ARE NOT ACCEPTABLE.

DUCTWORK:

DUCT SIZES: DIMENSIONS ON DRAWINGS ARE SHEET METAL DUCT SIZES. DO NOT INCREASE DUCT SIZE FOR ACOUSTICALLY LINED OR INTERNALLY INSULATED DUCTS.

ALL LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED WITH A MIN. 2" W.G. PRESSURE CLASSIFICATION AND SEAL CLASS C. SEAL ALL TRANSVERSE JOINTS WITH HARDCAST.

DUCT GAUGES: FABRICATION AND SUPPORT SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS.

ROUND DUCTWORK: GALVANIZED STEEL LOCK FORMING QUALITY, MINIMUM 0.028 INCH THICK CONTINUOUS SPIRAL SEAM. FABRICATE ROUND DUCT ELBOWS OF MINIMUM FIVE (5) PIECE CONSTRUCTION.

GALVANIZED DUCTWORK: GALVANIZED STEEL LOCK FORMING QUALITY HAVING ZINC COATING OF 1.25 OUNCES PER SQUARE FOOT FOR EACH SIDE PER ASTM A553. ALL DUCTWORK SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. ALL DUCTWORK EXPOSED TO WEATHER SHALL BE SEALED (JOINTS AND SEAMS) WITH SILICONE SEALANT. ALL DUCTWORK JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK MUST BE SECURELY SEALED USING WELDMENTS; MECHANICAL FASTENERS WITH SEALS, GASKETS, OR MASTICS; WESH AND MASTIC SEALING SYSTEMS; OR TAPES. TAPES AND MASTICS MUST BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B.

FLEXIBLE DUCTS: FLEXIBLE DUCTS SHALL BE INSULATED (MINIMUM 1" THICK, WITH MINIMUM THERMAL RESISTANCE OF R4.2) AND HAVE A FOIL SCRIM VAPOR BARRIER. FLEXIBLE DUCTWORK SHALL BE LISTED AS UL 181 CLASS 1 FLEXIBLE AIR DUCT AND SHALL COMPLY WITH NFPA STANDARDS. PROVIDE FLEXIBLE DUCTWORK AS MANUFACTURED BY MANVILLE, OWEN CORNING, THERMOFLEX, OR EQUIVALENT.

DUCT LINER: ALL RECTANGULAR SUPPLY AND RETURN DUCTWORK TO BE INTERNALLY LINED FOR THERMAL AND/OR ACOUSTICAL PURPOSES SHALL BE 1" THICK WITH A MINIMUM THERMAL RESISTANCE OF R4.2, SUITABLE FOR TEMPERATURE RANGE OF 40 F TO 250 F AND MAXIMUM AIR VELOCITY OF 4000 FPM. INSTALL LINER IN ACCORDANCE WITH SMACNA DUCT LINER APPLICATION STANDARD. LINE ALL AIR CONDITIONING DUCTWORK EXTERIOR TO THE BUILDING ENVELOPE WITH 2" THICK DUCT LINER WITH A MINIMUM THERMAL RESISTANCE OF 8.0.

INSULATION: WRAP ALL ROUND SUPPLY AND RETURN DUCTWORK NOT INTERNALLY LINED WITH A MAXIMUM 1-1/2" THICK, FLEXIBLE FIBERGLASS INSULATION HAVING A FACTORY APPLIED FOIL SCRIM KRAFT VAPOR BARRIER. INSULATION SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R4.2 AT 75 F MEAN TEMPERATURE. INSULATION SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. DUCT WRAP SHALL BE INSTALLED SO AS TO PROVIDE A UNIFORM THICKNESS. INSULATION SHALL NOT BE COMPRESSED.

ACCESS DOORS: FABRICATE RIGID AND CLOSE FITTING DOORS OF GALVANIZED STEEL WITH SEALING GASKETS AND QUICK FASTENING LOCKING DEVICES. FOR INTERNALLY LINED OR INSULATED DUCTWORK, INSTALL MINIMUM ONE INCH THICK INSULATION WITH SHEET METAL COVER. INSTALL AT EACH FIRE DAMPER. ACCESS DOORS SHALL BE MINIMUM 12" SQUARE.

DAMPERS: FABRICATE BALANCING DAMPERS OF GALVANIZED STEEL, MINIMUM 16 GAUGE AND PROVIDE WITH LOCKING QUADRANTS. UNLESS INDICATED OTHERWISE, DAMPERS SHALL BE OPPOSED BLADE TYPE.

FLEXIBLE CONNECTION: PROVIDE FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET OF ALL AIR MOVING DEVICES. FABRICATE OF NEOPRENE COATED FLAMEPROOF FABRIC APPROXIMATELY 4-INCH WIDE TIGHTLY CRIMPED INTO METAL EDGING STRIP AND ATTACH TO DUCTING AND EQUIPMENT BY SCREWS OR BOLTS AT 6-INCH INTERVALS. FLEXIBLE CONNECTIONS SHALL BE ASSEMBLED PER MANUFACTURER'S INSTRUCTIONS FOR OPTIMUM SHAPE. FLEXIBLE CONNECTIONS EXPOSED TO THE WEATHER SHALL BE PROVIDED WITH A SHEET METAL WEATHER SHIELD.

TURNING VANES: FABRICATE TURNING VANES AND RAILS OF 24 GAUGE GALVANIZED STEEL AND ASSEMBLE RATTLE FREE. TURNING VANES SHALL BE SINGLE THICKNESS PREFABRICATED OR ASSEMBLED PER MANUFACTURER'S INSTRUCTIONS FOR OPTIMUM SHAPE.

FILTERS: FILTERS SHALL BE 2" THICK PLATED TYPE, DISPOSABLE, MEDIUM EFFICIENCY, MERV 8, CAMFL FANH 30/30 OR EQUIVALENT. FILTERS SHALL BE IN PLACE WHENEVER SYSTEMS ARE IN OPERATION. CONTRACTOR SHALL PROVIDE AND INSTALL AN ADDITIONAL SET OF FILTERS FOR EACH UNIT AT THE COMPLETION OF PROJECT.

AIR DEVICES: AIR DISTRIBUTION DEVICES SHALL BE AS SCHEDULED ON THE DRAWINGS AND EQUAL TO KRUEGER, TITUS, PRICE, TUTTLE & BAILEY, MAILOR, OR AIR CONCEPTS.

TESTING AND BALANCING: AN INDEPENDENT TESTING AND BALANCING AGENCY CERTIFIED BY THE AABC SHALL BE ENGAGED TO TEST AND BALANCE THE HVAC SYSTEMS. SYSTEMS SHALL BE BALANCED TO PLUS/MINUS 10% OF DESIGN REQUIREMENTS. THE CONTRACTOR SHALL PLACE ALL SYSTEMS AND EQUIPMENT INTO FULL OPERATION FOR TESTING AND BALANCING. ONE COPY OF THE FINAL TEST AND BALANCE REPORT WITH THE AABC NATIONAL PERFORMANCE GUARANTY SHALL BE SENT DIRECTLY TO THE ENGINEER OF RECORD. PROVIDE FIVE (5) ADDITIONAL COPIES TO THE CONTRACTOR. ONLY TYPED REPORTS WILL BE REVIEWED AND MUST BE ACCOMPANIED WITH FLOOR PLAN INDICATING TAB TAGS. THE FOLLOWING AABC AGENCIES ARE PRIOR APPROVED. NO OTHER TEST AND BALANCE AGENCIES WILL BE CONSIDERED.

1. ARIZONA AIR BALANCE COMPANY
2. GENERAL AIR CONTROL, INC.
3. PRECISIONAIRE OF ARIZONA, INC.
4. TAB TECHNOLOGY, INC.



REVISIONS DATE NO.

LOCKER EXPANSION SPECIFICATIONS



GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
PROJ. NO. 3709.7
DRG. SCALE A6 NOTED

SHEET

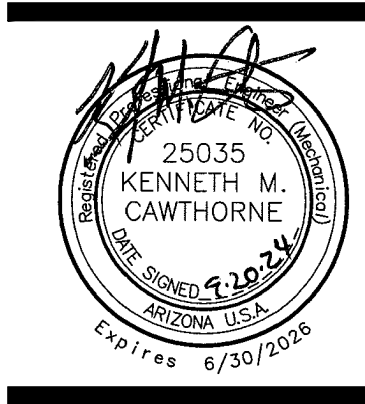


5447 East Fifth Street # 112
Tucson, Arizona 85711
Designers Mech: MG Plumb: PLZ

5201/327-0632
Project #: 23331

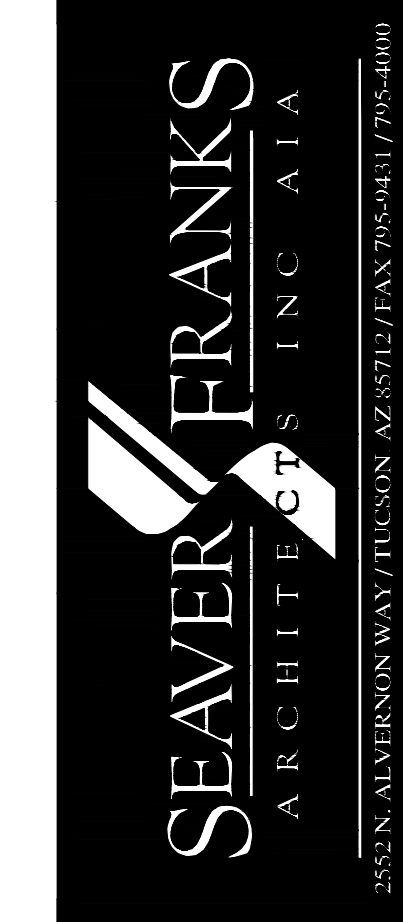
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REVISIONS
NO. DATE

LOCKER EXPANSION
PLUMBING DEMOLITION
PLAN

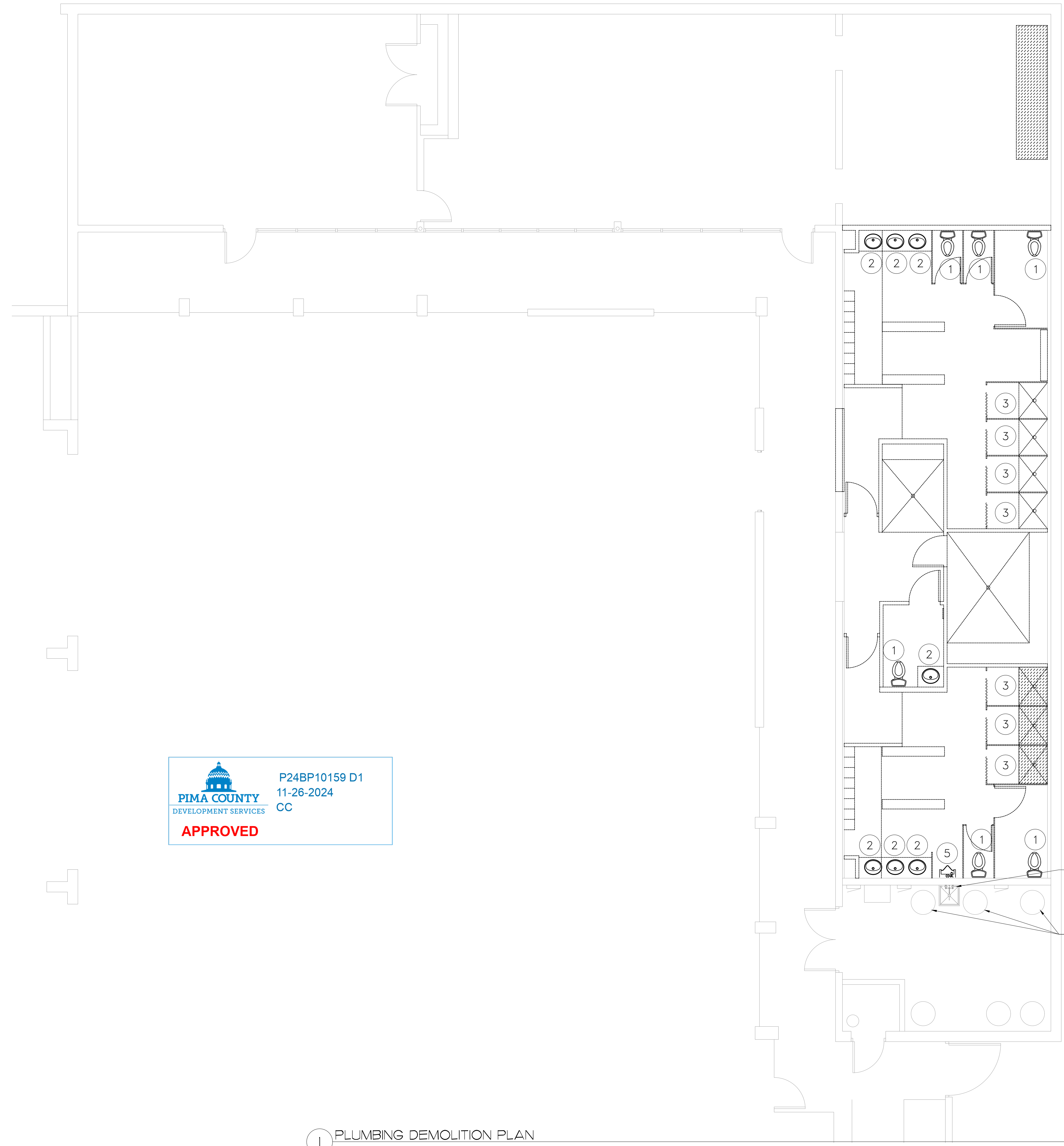


GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
PROJ. NO. 3703.1
DRG. SCALE AS NOTED

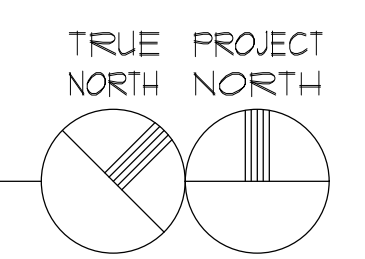
SHEET
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- PLUMBING DEMOLITION KEYNOTES
1. REMOVE WATER CLOSET & ALL ASSOCIATED PIPING. CAP CW & VENT AT MAIN. CAP SEWER BELOW FLR. PATCH FLR. & WALL AS REQUIRED.
 2. REMOVE LAVATORY & ALL ASSOCIATED PIPING. CAP CW, HW, & VENT AT MAIN. CAP SEWER BELOW FLR. PATCH FLR. AS REQUIRED.
 3. REMOVE SHOWER & ALL ASSOCIATED PIPING. CAP CW, HW & VENT AT MAIN. CAP SEWER BELOW FLR. PATCH FLR. AS REQUIRED.
 4. REMOVE DRINKING FOUNTAIN & ALL ASSOCIATED PIPING. CAP CW & VENT AT MAIN. CAP SEWER BELOW FLR. PATCH FLR. AS REQUIRED.
 5. REMOVE URINAL & ALL ASSOCIATED PIPING. CAP CW & VENT AT MAIN. CAP SEWER BELOW FLR. PATCH FLR. AS REQUIRED.




 P24BP10159 D1
 11-26-2024
 CC
APPROVED

1 PLUMBING DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

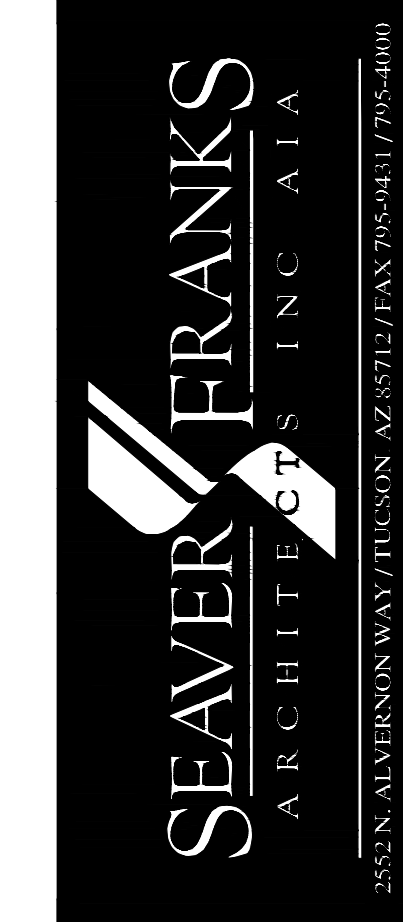



KC
 MECHANICAL
 ENGINEERING, L.L.C.
 5447 East Fifth Street # 112 Tucson, Arizona 85711 520/327-7611
 Designers Mech: MG Plumb: PLZ Project #: 23331



REVISIONS
NO. DATE

LOCKER EXPANSION
PLUMBING NEW WORK
PLAN

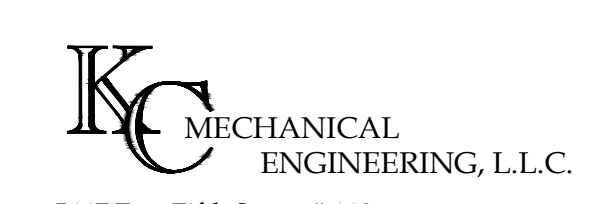


GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
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P1.0



5447 East Fifth Street # 112
Tucson, Arizona 85711
520/327-0432
Designers Mech: MG Plumb: PLZ Project #: 23331

- PLUMBING GENERAL NOTES
- COORDINATE ALL WORK WITH ALL OTHER TRADES. EXACT ROUTING OF ALL PIPING SHALL BE CAREFULLY COORDINATED WITH ALL STRUCTURAL CONDITIONS.
 - CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING PIPING LOCATIONS, SIZES, INVERTS AND DIRECTION OF FLOW BEFORE THE START OF WORK.
 - PROVIDE REQUIRED DEMOLITION OF EXISTING PLUMBING EQUIPMENT, FIXTURES, MATERIALS AND OTHER ITEMS WHICH ARE NOT TO BE REUSED IN NEW DESIGN. ALL ITEMS WHICH THE OWNER DOES NOT WISH TO SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
 - ALL PLUMBING FIXTURES AND EQUIPMENT IDENTIFIED BY A "P" NUMBER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR, UNLESS NOTED OTHERWISE. SEE PLUMBING SCHEDULES.
 - OFFSET ALL PLUMBING VENTS AS REQUIRED INSURING MINIMUM 10'-0" CLEARANCE FROM ALL OUTSIDE AIR INTAKES.
 - PROVIDE ACCESS DOORS WHERE SHUT-OFF VALVE OR OTHER DEVICES ARE CONCEALED IN A HARD CEILING. SEE SPECIFICATIONS. COORDINATE WITH ARCHITECT.
 - ALL SEWER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE.

PLUMBING SYMBOLS AND LEGEND

—S—	S	SOIL OR WASTE LINE	ABV	ABOVE
—GW—	GW	GREASE WASTE LINE	AFF	ABOVE FINISH FLOOR
—V—	V	VENT LINE	A/C	AIR CONDITIONING
—CW—	CW	COLD WATER LINE	A.D.	ACCESS DOOR
—HW—	HW	HOT WATER LINE	BEL.FLR.	BELOW FLOOR
—G—	G	GAS LINE (LOW PRESSURE)	C.I.	CAST IRON
—MPG—	MPG	MEDIUM PRESSURE GAS	C.F.H.	CUBIC FEET PER HOUR
—HPG—	HPG	HIGH PRESSURE GAS	CLG.	CEILING
—FL—	FL	FIRE LINE	CONT.	CONTINUATION
—P—	P	PLUG VALVE	DN.	DOWN
—SOV—	SOV	SHUT OFF VALVE (BALL VALVE)	EXIST.	EXISTING
—CV—	CV	CHECK VALVE	FCD	FLOOR CLEANOUT
—U—	U	UNION	GCO	GRADE CLEANOUT
—T&PR	T&PR	TEMPERATURE & PRESSURE RELIEF	TYP.	TYPICAL
—HB	HB	HOSE BIBB	UG	UNDERGROUND
—WHA	WHA	WATER HAMMER ARRESTOR	VCP	VITRIFIED CLAY PIPE
			VR	VENT RISER
			W/	WITH
			WCO	WALL CLEANOUT
			WET-V	WET-VENT

* SOME SYMBOLS MAY NOT APPLY TO THIS PROJECT

WET PIPE SPRINKLER SYSTEM

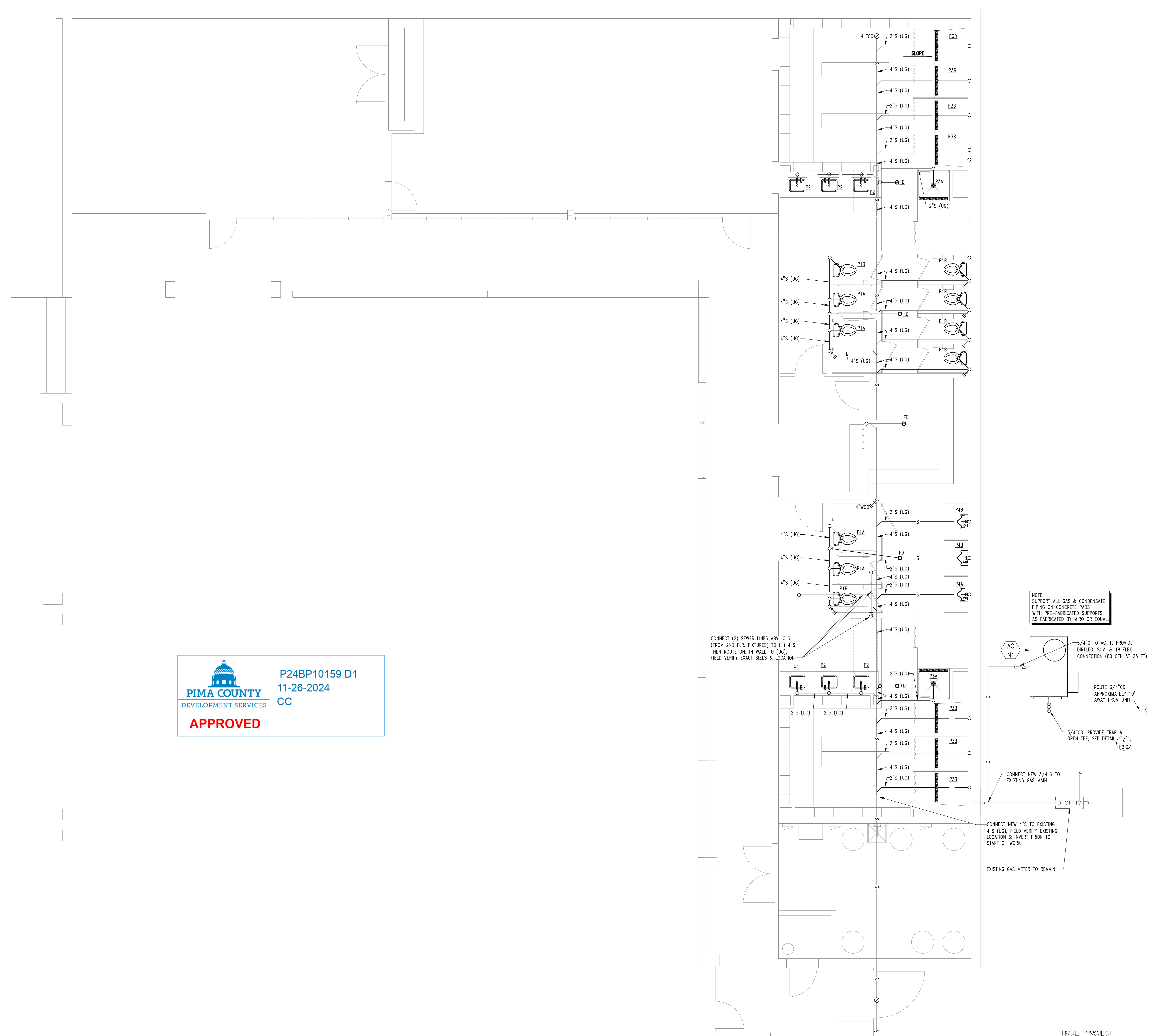
THE BUILDING CONTAINS AN EXISTING WET PIPE SPRINKLER SYSTEM. THE CONTRACTOR SHALL MODIFY THIS SYSTEM TO CONFORM WITH THE NEW ARCHITECTURAL FLOOR PLAN. LOCATION OF SPRINKLER HEADS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTIVE CEILING PLAN (SPECIFICALLY THE LOCATION OF ALL LIGHT FIXTURES AND CEILING AIR DEVICES). THE SYSTEM PROVIDED SHALL COMPLY WITH ALL REQUIREMENTS OF NFPA, LOCAL AND FEDERAL CODES WHICH GOVERN SUCH WORK AND THE SPECIFICATION NOTES ON THESE DRAWINGS. CONTRACTOR SHALL SUBMIT DETAILED CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL BY THE GOVERNING AGENCY.

STANDARD FOR CONSTRUCTION: NFPA 13

IDENTIFICATION OF HAZARD:
LIGHT HAZARD

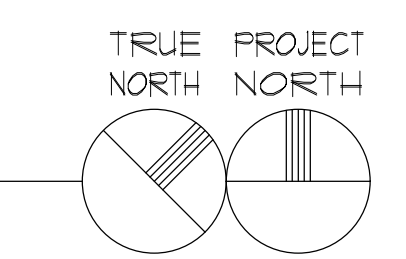
DESIGN DENSITY: 0.10GPM/S.F. OVER 1500 S.F.

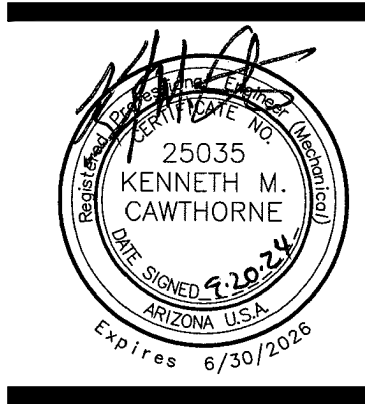
NOTE: 1. FIRE PROTECTION CONTRACTOR SHALL CONDUCT FLOW TEST PRIOR TO THE START OF WORK.



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11-26-2024
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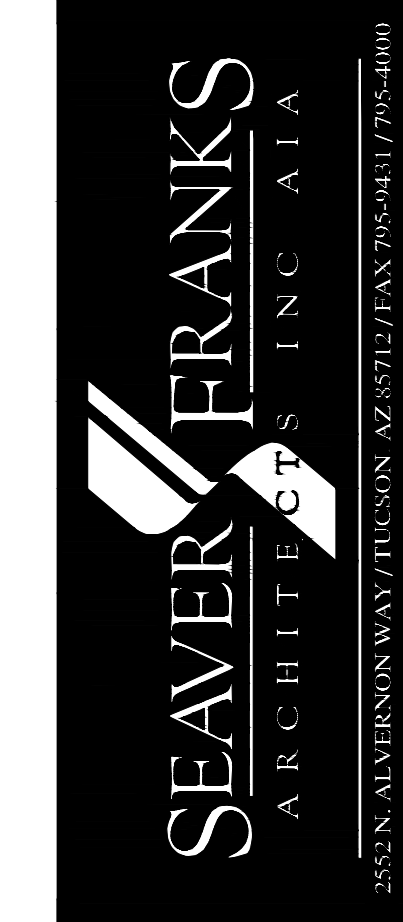
PLUMBING NEW PLAN
SCALE: 1/4" = 1'-0"





NO.	REVISIONS	DATE

**LOCKER EXPANSION
PLUMBING NEW WORK
PLAN**



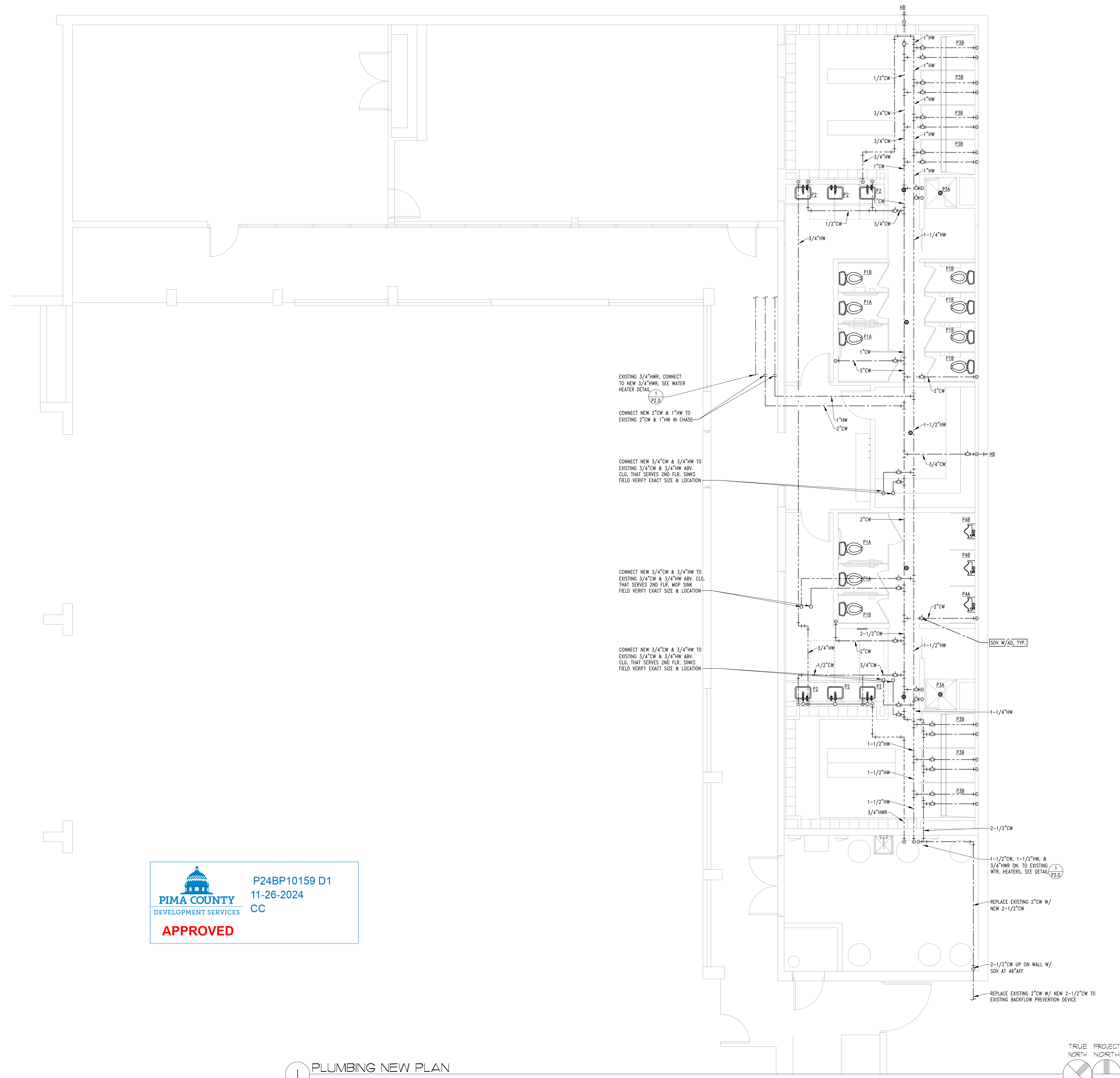
**GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622**

ISSUE DATE: 11-04-2024
PROJ. NO.: 3703.1
DRG. SCALE: AS NOTED

SHEET

P1.1

KC MECHANICAL ENGINEERING, L.L.C.
5447 East Fifth Street # 112 Tucson, Arizona 85711 520/327-7611
Designers: Mech: MG Plumb: PLZ Project #: 23331



EXISTING 3/4" HW, CONNECT TO NEW 3/4" HW, SEE WATER HEATER DETAIL P2.0

CONNECT NEW 2" CW & 1" HW TO EXISTING 2" CW & 1" HW IN CHASE

CONNECT NEW 3/4" CW & 3/4" HW TO EXISTING 3/4" CW & 3/4" HW ABV. CLG. THAT SERVES 2ND FLR. SINKS. FIELD VERIFY EXACT SIZE & LOCATION

CONNECT NEW 3/4" CW & 3/4" HW TO EXISTING 3/4" CW & 3/4" HW ABV. CLG. THAT SERVES 2ND FLR. MOP SINK. FIELD VERIFY EXACT SIZE & LOCATION

CONNECT NEW 3/4" CW & 3/4" HW TO EXISTING 3/4" CW & 3/4" HW ABV. CLG. THAT SERVES 2ND FLR. SINKS. FIELD VERIFY EXACT SIZE & LOCATION

SOV W/AD, TYP.

1-1/2" CW, 1-1/2" HW, & 3/4" HW DN. TO EXISTING WIR. HEATERS, SEE DETAIL P2.0

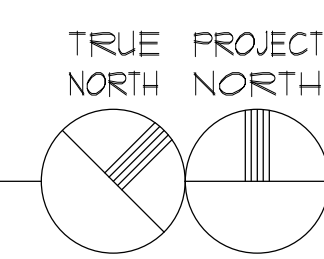
REPLACE EXISTING 2" CW W/ NEW 2-1/2" CW

2-1/2" CW UP ON WALL W/ SOV AT 48" AFF

REPLACE EXISTING 2" CW W/ NEW 2-1/2" CW TO EXISTING BACKFLOW PREVENTION DEVICE

PIMA COUNTY DEVELOPMENT SERVICES
P24BP10159 D1
11-26-2024
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APPROVED

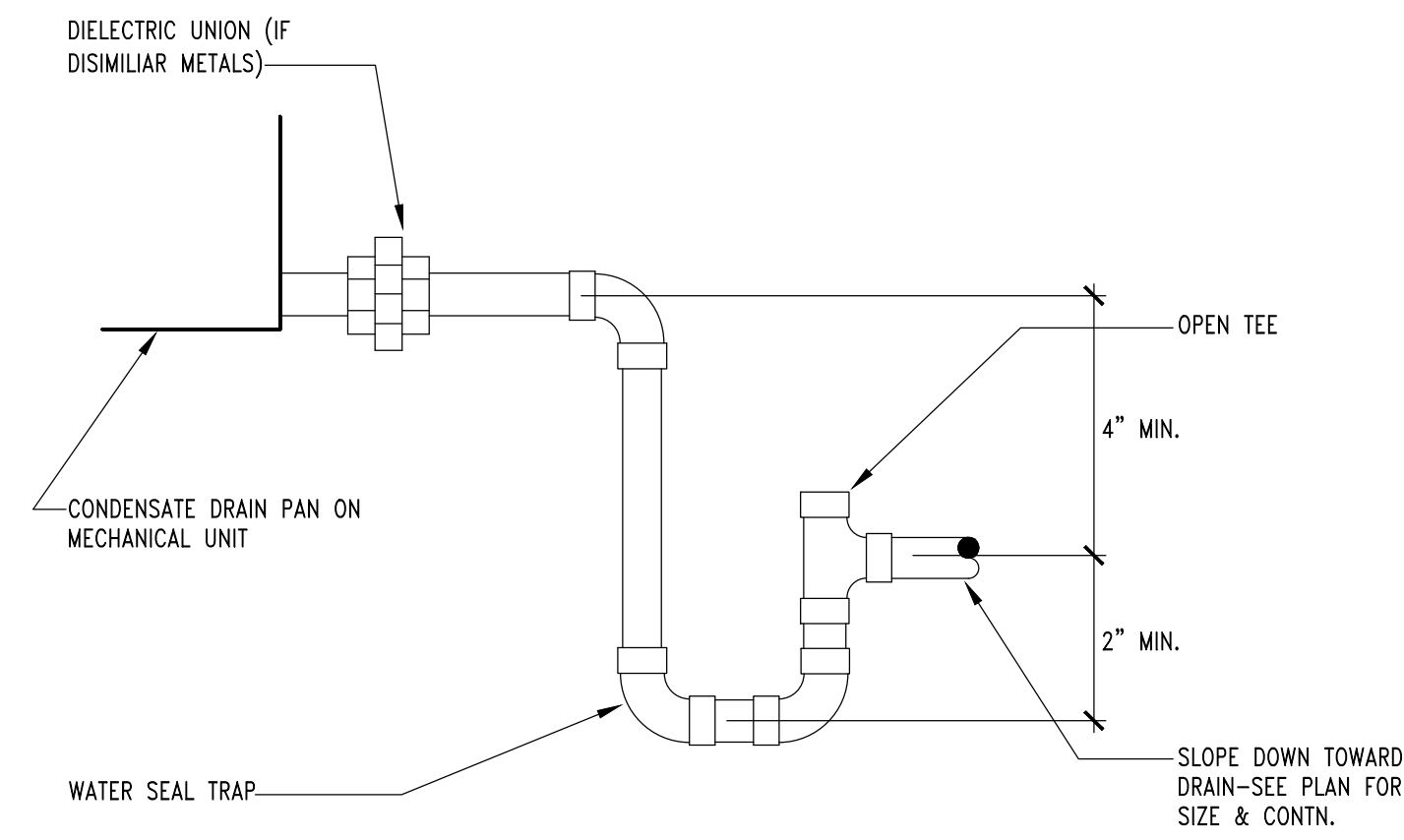
PLUMBING NEW PLAN
SCALE: 1/4" = 1'-0"



PRESSURE LOSS CALCULATIONS		
Total Fixture Demand:	33.0	F.U.
Plumbing GPM Demand:	22	GPM
Assumed Pressure Available at Property Line	75.0	PSI
SITE PRESSURE LOSS		
A. Pipe Loss (main water pipe to Meter)	2.0	PSI
B. Existing water meter	3.0	PSI
C. Existing Reduced Pressure Backflow Preventors (RPBP)	13.0	PSI
D. Pipe Loss (RPBP to building)	2.0	PSI
E. xx		PSI
TOTAL SITE PRESSURE LOSSES	20.0	PSI
BUILDING PRESSURE LOSS		
A. Pressure Required at Last Fixture	25.0	PSI
B. Lift of 10 ft @ 2.31	4.3	PSI
TOTAL BUILDING PRESSURE LOSSES	29.3	PSI
TOTAL PRESSURE DROP (TOTAL SITE & BUILDING LOSS)	49.3	PSI
TOTAL ALLOWABLE PRESSURE DROP (ASSUMED PRESSURE - TOTAL PRESSURE LOSS)	25.7	
EQUIVALENT FEET CALCULATION (BUILDING)		
A. Total Measured Length of Pipe (building entrance to furthest fixture)	150	FT
B. Add 50% for Fittings and Valves	75	FT
TOTAL EQUIVALENT FEET	225	FT
ALLOWABLE AVERAGE "P"/100 FT.		
25.7 PSI X 100 =	11.4	PSI/100 FT. ALLOWABLE WITHIN BUILDING
225 EQUIV. FT.		

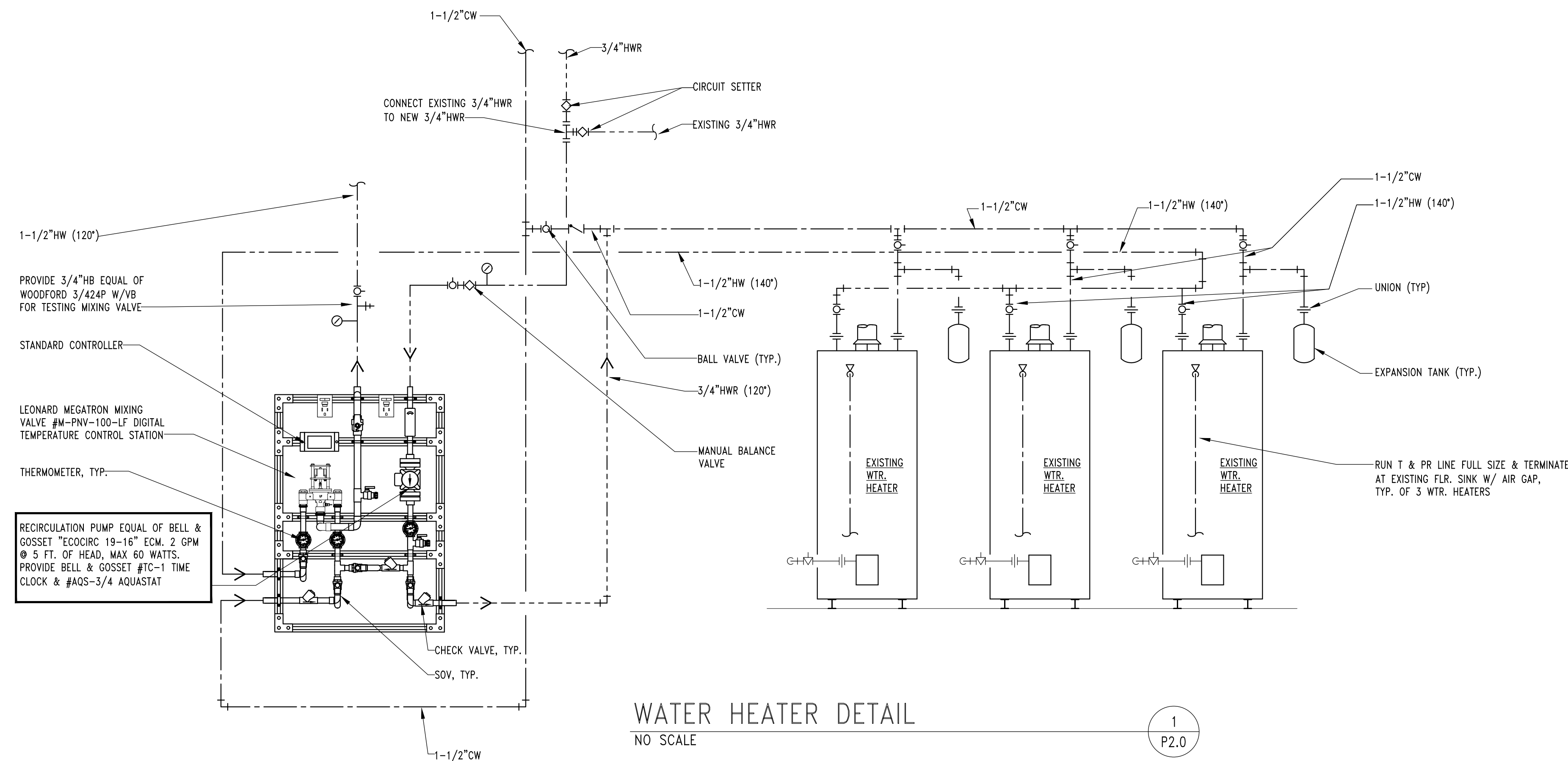
MARK	FIXTURE	DESCRIPTION	QTY	WASTE FIXTURE UNITS		WATER FIXTURE UNITS*		CONNECTION SIZES (INCHES) **			
				FU	TOTAL	FU	TOTAL	WASTE	VENT	HOT	COLD
P1A	WATER CLOSET (ADA)	KOHLER "HIGHCLIFF" #K-96057-0, 1.6 GAL./FLUSH MAXIMUM, VITREOUS CHINA, FLOOR MOUNTED, FLUSH VALVE WATER CLOSET W/ADA COMPLIANT HIGH BOWL. PROVIDE SLOAN G2 #8110 SENSOR OPERATED FLUSH VALVE, CHURCH #9500SSCT SELF-SUSTAINING CHECK HINGES, OPEN FRONT SEAT	4	4	16	5	20	4	2	-	1 1/4
P1B	WATER CLOSET	KOHLER "WELLCOMME" #K-96053-0, 1.6 GAL./FLUSH MAXIMUM, VITREOUS CHINA, FLOOR MOUNTED, FLUSH VALVE WATER CLOSET. PROVIDE SLOAN G2 #8110 SENSOR OPERATED FLUSH VALVE, CHURCH #9500SSCT SELF-SUSTAINING CHECK HINGES, OPEN FRONT SEAT.	6	4	24	5	30	4	2	-	1 1/4
P2	LABATORY (ADA)	KOHLER "PRINNINGTON" #K-2005, VIT. CHINA, COUNTER MOUNTED LABATORY. PROVIDE SLOAN #EBF-650 SENSOR OPERATED, BATTERY POWERED FAUCET (0.5 GPM, 0.25 GALS. MAX PER CYCLE) & #327 DRAIN, CAST BRASS "P" TRAP W/GURE CHROME PLATED LOOSE KEY ANGLE STOPS & SUPPLIES, & WASTE & STOP INSULATION EQUAL TO TRUEBRO #102. PROVIDE ASSE 1070 CERTIFIED THERMOSTATIC MIXING VALVE EQUAL OF WATTS MODEL # USG-B W/ 3/8" FITTINGS.	6	1	6	1	6	2	1 1/2	1/2	1/2
P3A	SHOWER ADA	MOEN MODEL #T9342GM PRESSURE BALANCING ASSE MIXING VALVE, DIVERTER, HAND HELD SPRAY UNIT AND FIXED SHOWER HEAD, (2.5 GPM) 60" LONG HOSE, INTEGRAL STOPS,VACUUM BREAKER, 30"SLIDE BAR FOR HAND HELD SPRAY UNIT. ZURN #ZPT1-36 POD PRO SHALLOW S.S. LINEAR DRAIN, 36" IN LENGTH	2	2	4	2	4	-	-	1/2	1/2
P3B	SHOWER	MOEN MODEL #T9375 PRESSURE BALANCING ASSE MIXING VALVE, AND FIXED SHOWER HEAD, (2.5 GPM) INTEGRAL STOPS,VACUUM BREAKER, 30"SLIDE BAR FOR HAND HELD SPRAY UNIT. ZURN #ZPT1-36 POD PRO SHALLOW S.S. LINEAR DRAIN, 36" IN LENGTH	7	2	14	2	14	-	-	1/2	1/2
FD	FLOOR DRAIN	J.R. SMITH #2005-8P, COATED CAST IRON BODY AND ADJUSTABLE 5" SQUARE NIKALOY STRAINER. PROVIDE TRAP GUARD OR SLUR SEAL.	4	2	8	-	-	2	1 1/2	-	-
P4A	URINAL (ADA)	KOHLER "BARDON" #K-4991-ET, WATERSAVER VITREOUS CHINA WALL HUNG WASHOUT URINAL. PROVIDE 1.0 GAL./FLUSH, "SLOAN ROYAL" #G2 B186 BATTERY POWERED, SENSOR OPERATED FLUSH VALVE AND J.R. SMITH #536 FLOOR MOUNTED URINAL CARRIER W/17" RIM HEIGHT.	1	2	2	4	4	2	1 1/2	-	1
P4B	URINAL	KOHLER "BARDON" #K-4960-ET, WATERSAVER VITREOUS CHINA WALL HUNG WASHOUT URINAL. PROVIDE 1.0 GAL./FLUSH, "SLOAN ROYAL" #G2 B186 BATTERY POWERED, SENSOR OPERATED FLUSH VALVE AND J.R. SMITH #536 FLOOR MOUNTED URINAL CARRIER.	2	2	4	4	8	2	1 1/2	-	1
HB	HOSE BIBB	WOODFORD #24P-3/4 BRASS HOSE BIBB W/VACUUM BREAKER & REMOVABLE LOOSE KEY HANDLE ATTACHED TO OPERATING STEM.	2	-	-	2.5	1 3.5	-	-	-	3/4
TOTAL FIXTURE UNITS				78			89.5				

* PER 2018 IPC SECTION 604.1, THE WATER PIPE SIZE TO CONFORM TO AN ACCEPTED ENGINEERING PRACTICE.
 PIPE SIZE IS BASED ON USING 2018 IAPMO THAT IS AN ACCEPTED ENGINEERING PRACTICE AND IS BASED ON LOW FLOW FIXTURES.
 ** FIXTURE SERVICE PIPE SIZE SHALL BE THE SIZE INDICATED WITH REDUCER (IF REQ'D) AS CLOSE TO FIXTURE CONNECTION AS POSSIBLE



CONDENSATE TRAP DETAIL
NO SCALE

2
P2.0



WATER HEATER DETAIL
NO SCALE

1
P2.0



REVISIONS
NO. DATE

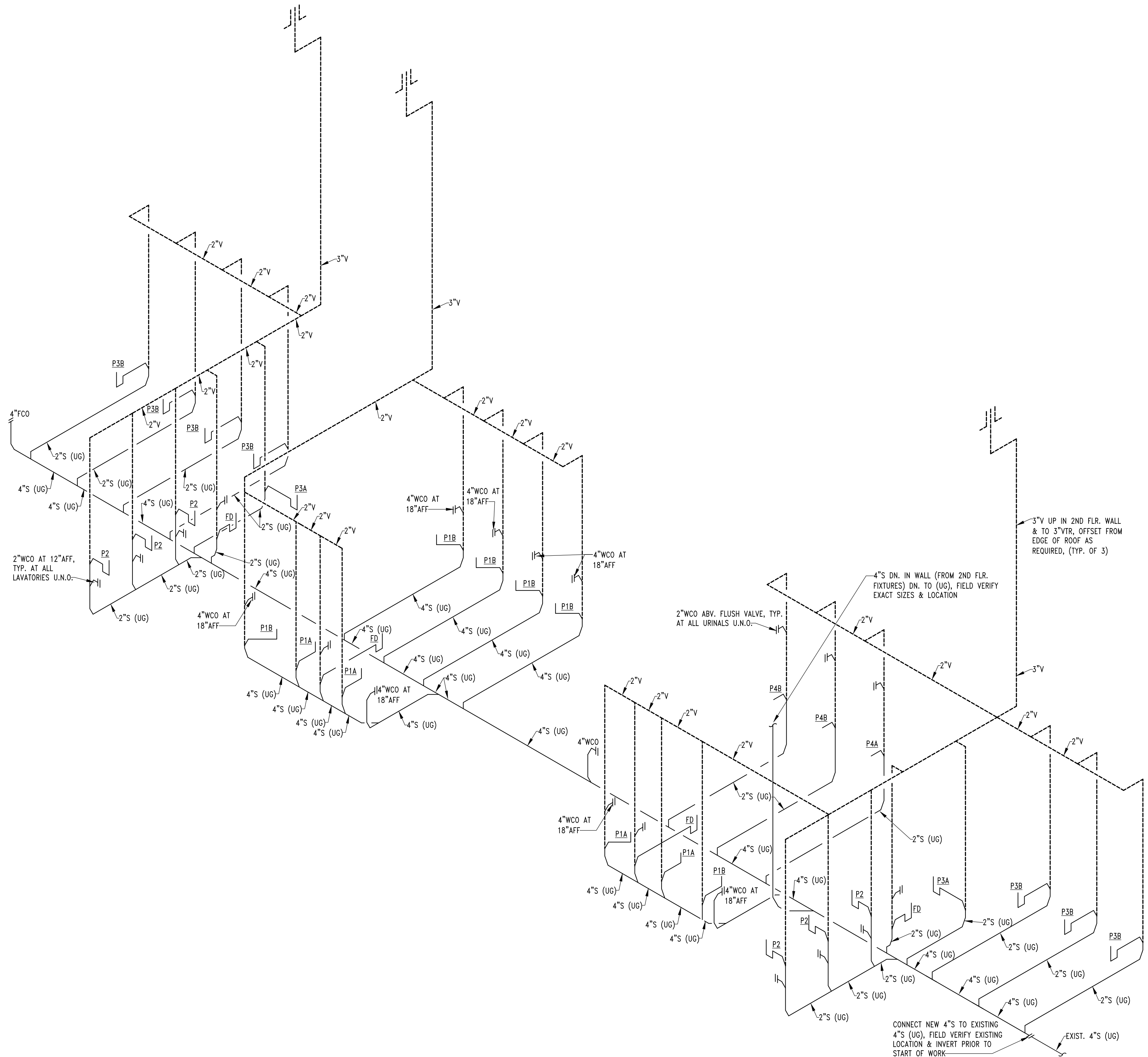
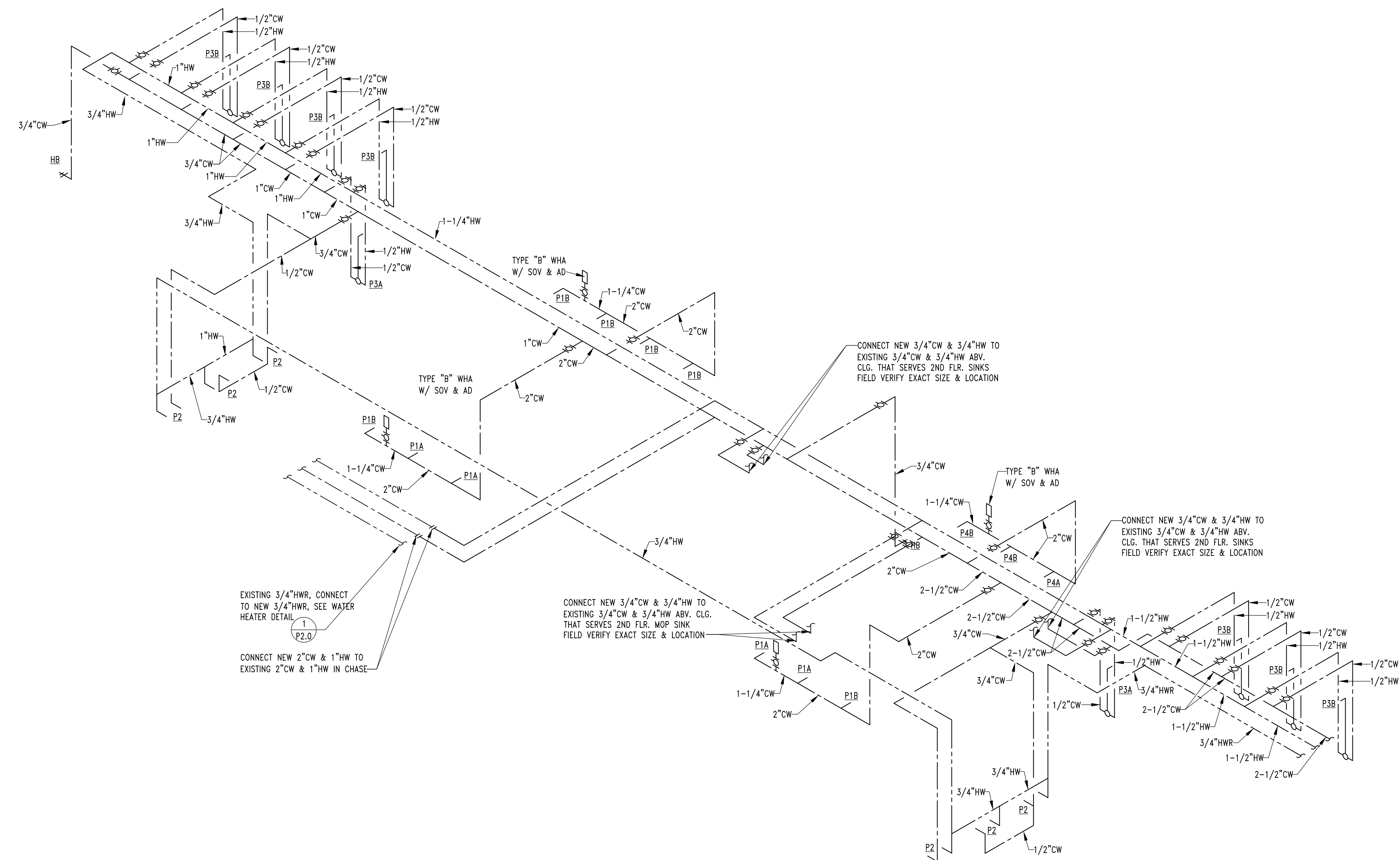
LOCKER EXPANSION
PLUMBING SCHEDULES



GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

ISSUE DATE: 11-04-2024
PROJ. NO.: 31709.1
DRG. SCALE: AS NOTED

SHEET
P2.0



LOCKER EXPANSION
PLUMBING RISERS



GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
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 PROJ. NO. 21093.1
 DRG. SCALE AS NOTED

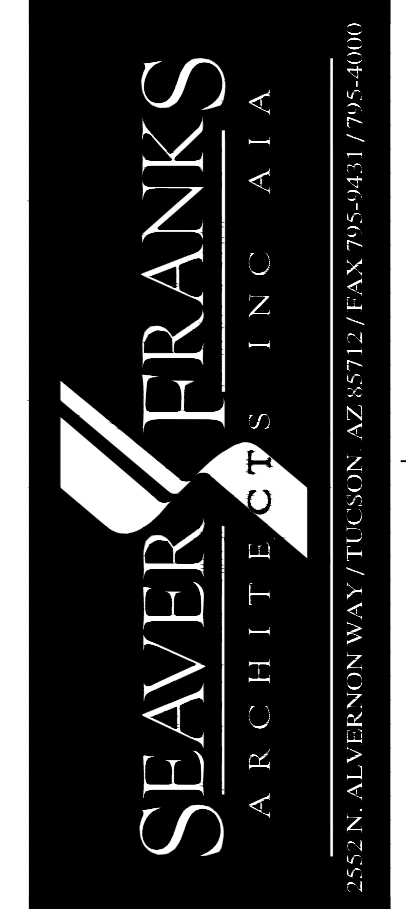
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NO. DATE

LOCKER EXPANSION
ELECTRICAL DEMO PLANS



GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622

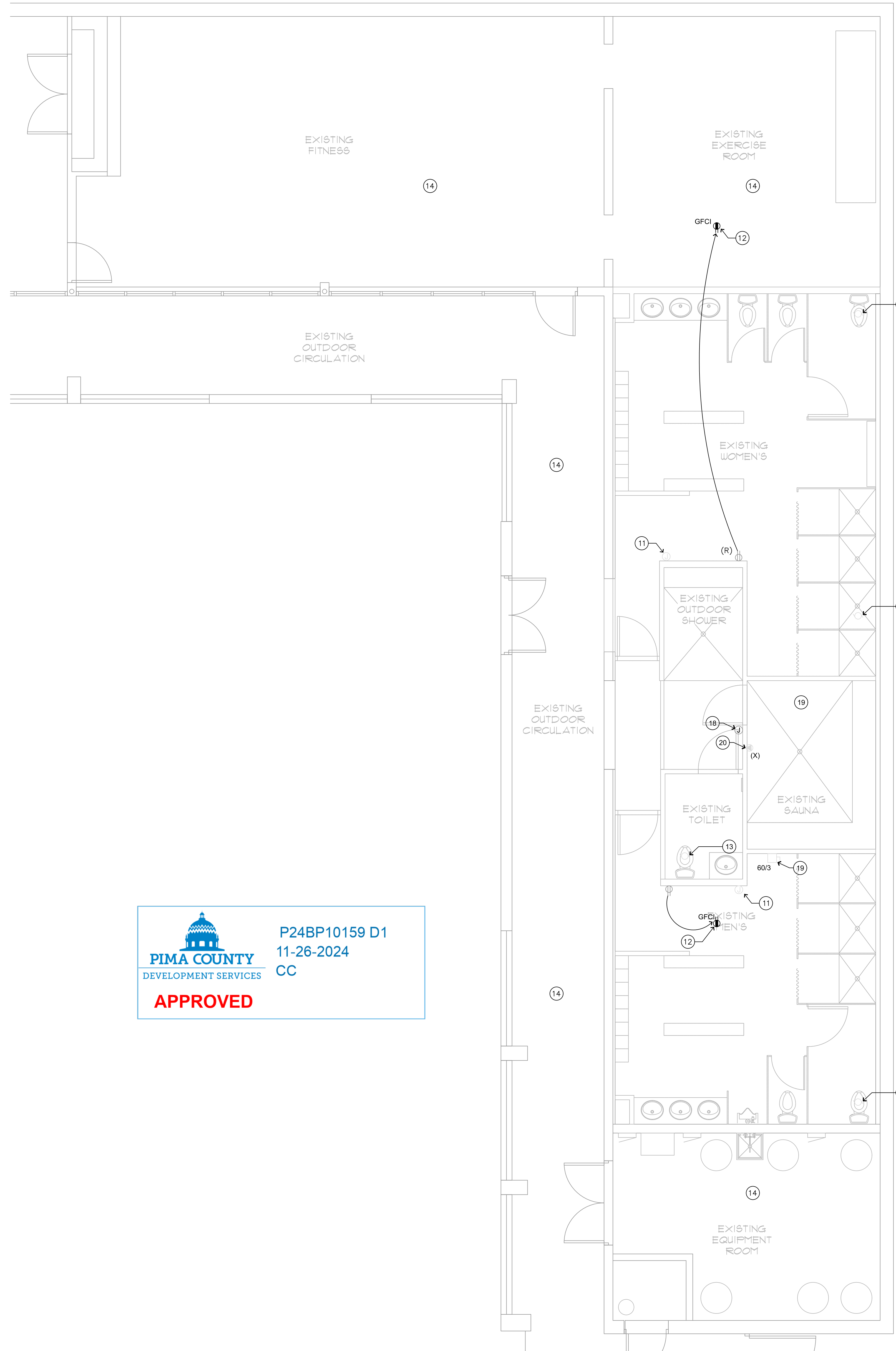
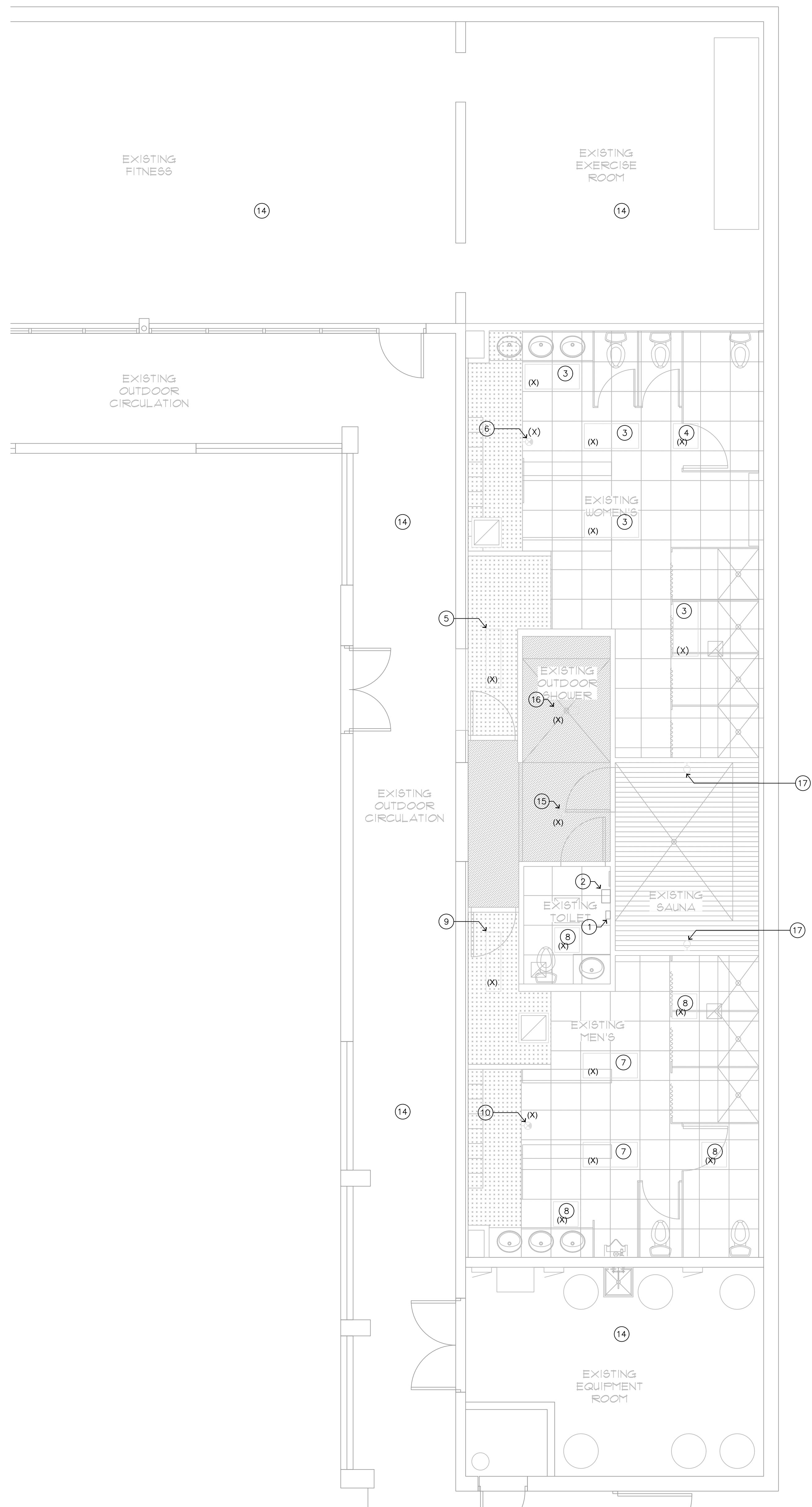
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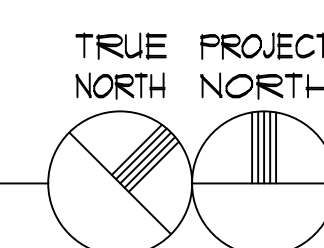
ED1.0

KEYED NOTES:

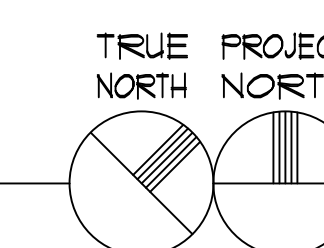
- ELECTRICAL CONTRACTOR TO DEMO INTERMATIC TIME CONTROLLER USED FOR ALL BATHROOM LIGHTING. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 AND #5.
- ELECTRICAL CONTRACTOR TO DEMO INTERMATIC TIME CONTROLLER USED FOR ALL SAUNA LIGHTING. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 AND #5.
- ELECTRICAL CONTRACTOR TO DEMO 4-LAMP, T8, 2' X 4' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (4) FIXTURES DEMO'D RATED AT 512.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO 3-LAMP, T8, 2' X 2' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 96.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO 2-LAMP, T8, 1' X 4' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 128.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO EXISTING EXIT SIGN. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 10.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO 4-LAMP, T8, 2' X 4' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (2) FIXTURES DEMO'D RATED AT 256.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO 3-LAMP, T8, 2' X 2' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (4) FIXTURES DEMO'D RATED AT 384.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO 2-LAMP, T8, 1' X 4' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 96.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO EXISTING EXIT SIGN. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 10.0-WATTS REMOVED.
- JUNCTION BOX UNKNOWN USAGE. ELECTRICAL CONTRACTOR TO VERIFY. IF USED FOR POWER OR LIGHTING IN SPACE THEN VERIFY NEED. DEMO IF NOT REQUIRED.
- RELOCATED RECEPTACLE CIRCUIT. PROVIDE NEW GFCI TYPE RECEPTACLE. COLOR OF RECEPTACLE AND COVER TO MATCH EXISTING. SEE E1.0 FOR ACTUAL LOCATION OF RECEPTACLE.
- ELECTRICAL CONTRACTOR TO DEMO POWER TO EXISTING EXHAUST FAN TO BE DEMO'D. EXHAUST FAN CIRCUIT TO BE REUSED FOR (2) NEW EXHAUST FANS. SEE DRAWING E1.0 FOR NEW EXHAUST AND DETAILS. NEW NEW LOAD ADDED.
- NOT IN SCOPE OF WORK.
- ELECTRICAL CONTRACTOR TO DEMO 1-LAMP, PL TYPE, WALL MOUNTED FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 42.0-WATTS REMOVED.
- ELECTRICAL CONTRACTOR TO DEMO 2-LAMP, T8, 1' X 2' FLUORESCENT. FED FROM EXISTING PANEL 'BP' CIRCUITS #1 OR #5. TOTAL OF (1) FIXTURE DEMO'D RATED AT 34.0-WATTS REMOVED.
- EXISTING SAUNA LIGHT FIXTURES TO BE DEMO'D AND REINSTALLED WHEN THE NEW SAUNA WALLS ARE INSTALLED. END-USER WOULD LIKE TO REUSE THE EXISTING FIXTURES. ELECTRICAL CONTRACTOR TO CLEAN AND RE-LAMP.
- ELECTRICAL CONTRACTOR TO DEMO EXISTING SAUNA CONTROLS AND JUNCTION BOX TO BE REUSED AT NEW OPENING OF SAUNA AFTER SAUNA IS UPDATED.
- EXISTING SAUNA TO BE RECONFIGURED. ELECTRICAL CONTRACTOR TO DEMO EXISTING MEANS OF DISCONNECT AND WILL BE REPLACED WITH NEW. SEE DRAWINGS E1.0 FOR NEW SAUNA LAYOUT. EXISTING SAUNA CONTROLS AND SAUNA EQUIPMENT TO REMAIN 'AS-IS'. NO NEW ELECTRICAL.
- EXISTING SAUNA DISCONNECT. ELECTRICAL CONTRACTOR TO DEMO EXISTING DISCONNECT AND MOVE TO NEW LOCATION. REPLACE DISCONNECT (20-AMP, 3-POLE) RECEPTACLE AND REPLACE WITH NEW. EXISTING SAUNA EQUIPMENT TO BE RE-USED.

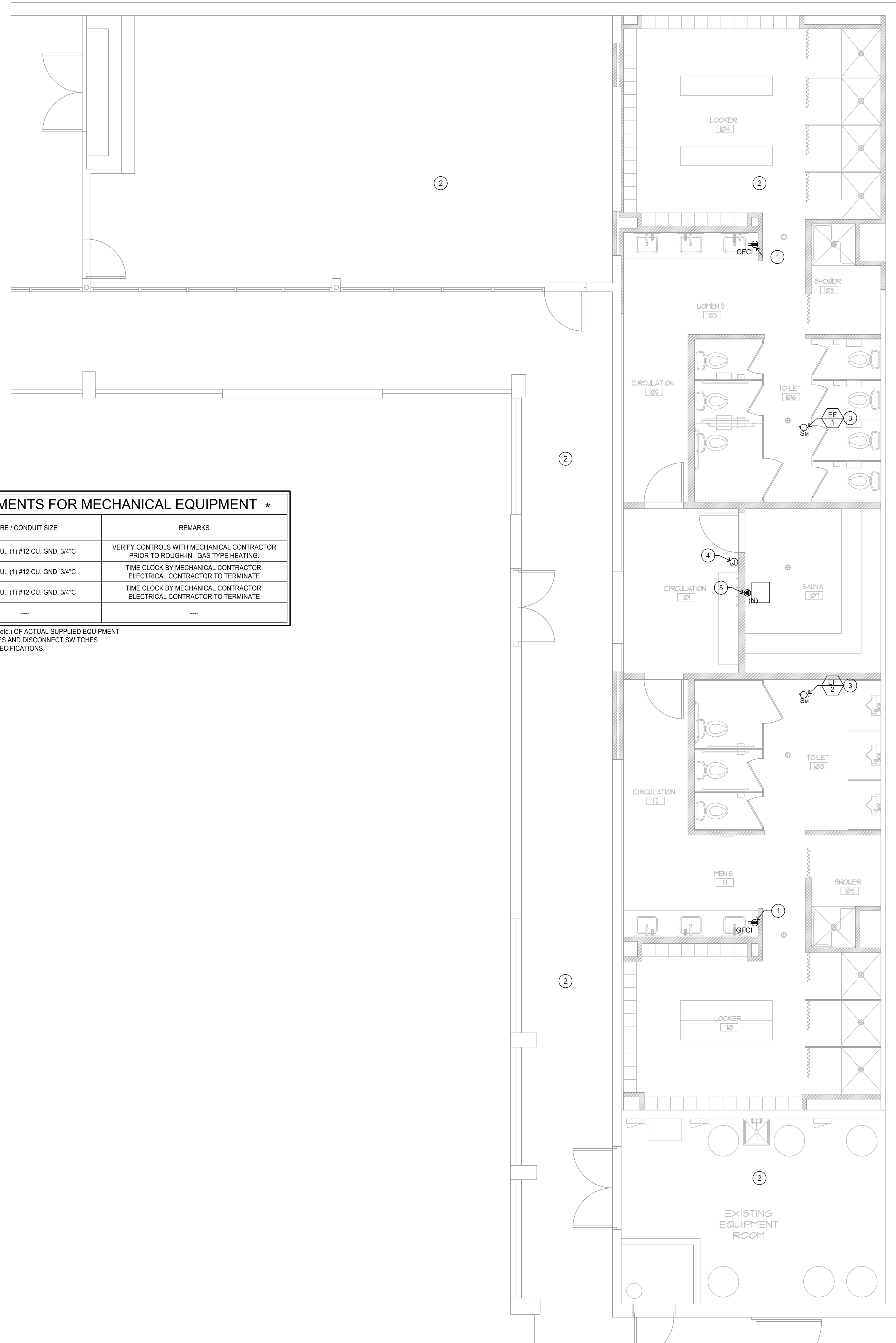


1 DEMO LIGHTING FLOOR PLAN
SCALE: 1/4" = 1'-0"



1 DEMO POWER FLOOR PLAN
SCALE: 1/4" = 1'-0"





ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT *						
EQUIP. NO.	VOLT./ PHASE	FLA	HP	HEATING (KW)	WIRE / CONDUIT SIZE	REMARKS
AC-N1	480/3Ø	8.7	-	-	(3) #12 CU., (1) #12 CU. GND. 3/4"	VERIFY CONTROLS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. GAS TYPE HEATING.
EF-1	120	8.4	-	-	(2) #12 CU., (1) #12 CU. GND. 3/4"	TIME CLOCK BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO TERMINATE
EF-2	120	8.4	-	-	(2) #12 CU., (1) #12 CU. GND. 3/4"	TIME CLOCK BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO TERMINATE
-	-	-	-	-	----	----

* VERIFY ELECTRICAL CHARACTERISTICS (ie KW, FLA, VOLTAGE, etc.) OF ACTUAL SUPPLIED EQUIPMENT PRIOR TO ORDERING ANY ELECTRICAL DEVICES, etc. SIZE FUSES AND DISCONNECT SWITCHES PER SUPPLIED MECHANICAL EQUIPMENT MANUFACTURER'S SPECIFICATIONS.

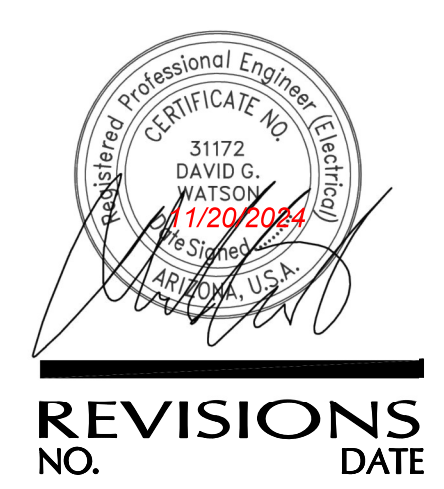
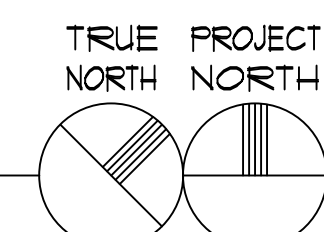
GENERAL NOTES:

- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH 2017 (OR LATEST ADOPTED) NATIONAL ELECTRICAL CODES AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND TOWN OF GREEN VALLEY AMENDMENTS TO N.E.C.
- ALL WIRING SHALL BE COPPER UNLESS OTHERWISE NOTED OTHERWISE. INSULATION SHALL BE TYPE XHHW OR THHN/THWN. MINIMUM CONDUCTOR SIZE IS #12 AWG. LARGER CONDUCTORS TO BE USED WHEN INDICATED. #10 AWG. NEUTRAL CONDUCTOR WHEN COMMON WITH 2 OR 3 (208Y/120) VOLT CIRCUITS.
- PROVIDE BOND WIRE IN ALL RACEWAYS, SIZED PER N.E.C. ART. #250.
- INSTALL ALL WIRING IN APPROVED METALLIC RACEWAY. WIRING METHODS (AC, MC, NM, SE, UF OR SIMILAR CABLES) ARE NOT APPROVED.
- ALL PENETRATIONS OF FIRE RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO UNDERWRITERS LABORATORY LISTINGS FOR THROUGH PENETRATIONS FIRESTOP SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS WHICH SHOW COMPLETE CONFORMANCE TO THE U.L. LISTING TO THE INSPECTORS. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED.
- CONTRACTOR IS TO VERIFY CONDITION OF EXISTING INSTALLATIONS BY FIELD INSPECTION. CONTRACTOR IS TO PROVIDE NEW WIRE, CONDUIT, AND BOXES AS REQUIRED WITH NO ADDITIONAL COST.
- CONTRACTOR IS TO COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.
- ALL GENERAL USE RECEPTACLES MOUNTED WITHIN 6" OF A BASIN OR SINK SHALL BE G.F.C.I.
- ALL RECEPTACLES, LIGHTING AND DATA/TELEPHONE COVER PLATE TYPES, COLORS AND FINISHES SHALL MATCH EXISTING. ALL WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE.
- CONTRACTOR IS TO PROVIDE BOND WIRE IN ALL RACEWAYS, SIZED PER N.E.C. ART. #250.
- CONTRACTOR IS TO VERIFY EXACT LOCATIONS, MOUNTING HEIGHTS AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PROVIDED BY OTHERS PRIOR TO ROUGH-IN. CONTRACTOR IS TO PROVIDE DISCONNECT SWITCHES AND TRANSFORMERS AS REQUIRED, AND FINAL CONNECTIONS TO EQUIPMENT PER OWNER.
- CONTRACTOR IS TO PROVIDE AND INSTALL ADDITIONAL EXIT SIGNS, EMERGENCY LIGHTS AND NIGHT LIGHTS IF REQUIRED BY GOVERNING INSPECTOR. ALL LIGHTING FIXTURES TO BE INDEPENDENT LABORATORY LISTED.
- ELECTRICAL CONTRACTOR SHALL PROPERLY SUPPORT ALL EXISTING AND NEW CONDUIT FROM NEW SUPPORTS PER NEC ART. 300-11.
- 2" X 4" FIXTURES SHALL BE SUPPORTED BY GALVANIZED CADMIUM PLATED JACK CHAINS AND SAFETY "S" HOOKS ATTACHED TO THE BUILDING STRUCTURE. LEAVE FIXTURES CLEAN OF DIRT, DUST, GREASE SPOTS, DEBRIS. ALL GLASS, PLASTIC AND OTHER COMPONENTS ARE TO BE UNSCRATCHED AND UNBROKEN PRIOR TO ACCEPTANCE.
- CONTRACTOR MAY REUSE THE EXISTING CONDUIT, BRANCH CIRCUITS, DEVICES AND BACK BOXES TO THE EXTENT POSSIBLE. ALL REUSED CONDUCTORS SHALL MATCH DESIGNATED CONDUCTOR SIZES OR THEY SHALL BE REPLACED.

KEYED NOTES:

- 1 SEE DRAWING ED1.0 FOR RELOCATION OF EXISTING RECEPTACLE CIRCUIT.
- 2 NOT IN SCOPE OF WORK.
- 3 SEE DRAWING ED1.0, KEYED NOTE #10 FOR DETAILS OF EXISTING DEMOD (4) EXHAUST FANS. ELECTRICAL CONTRACTOR TO REUSE EXISTING EXHAUST FAN CIRCUIT(S) FOR NEW EXHAUST FANS.
- 4 ELECTRICAL CONTRACTOR TO INSTALL SAUNA CONTROL PANEL THAT WAS RELOCATED FOR SAUNA RECONFIGURATION. SEE DRAWING, KEYED NOTE #18, ED1.0 FOR DETAILS. CONTROLS TO BE REUSED FOR NEW SAUNA LAYOUT.
- 5 ELECTRICAL CONTRACTOR TO INSTALL A NEW SAUNA MEANS OF DISCONNECT THAT MAYBE NEED TO BE RELOCATED FOR SAUNA RECONFIGURATION. SEE DRAWING, KEYED NOTE #20, ED1.0 FOR DETAILS. DISCONNECT DEMOD WILL BE REPLACED WITH NEW OF SAME SIZE. DEMOD LOCATION TO BE FIELD VERIFIED BY ELECTRICAL CONTRACTOR AND INSTALLED IN NEW LOCATION AS PER END-USERS REQUIREMENTS. NO NEW ELECTRICAL LOAD ADDED TO THIS RECONFIGURATION AND EXISTING CIRCUITS TO BE REUSED. EXISTING SAUNA IS 15.0 KW, 208-VOLT, 3Ø.

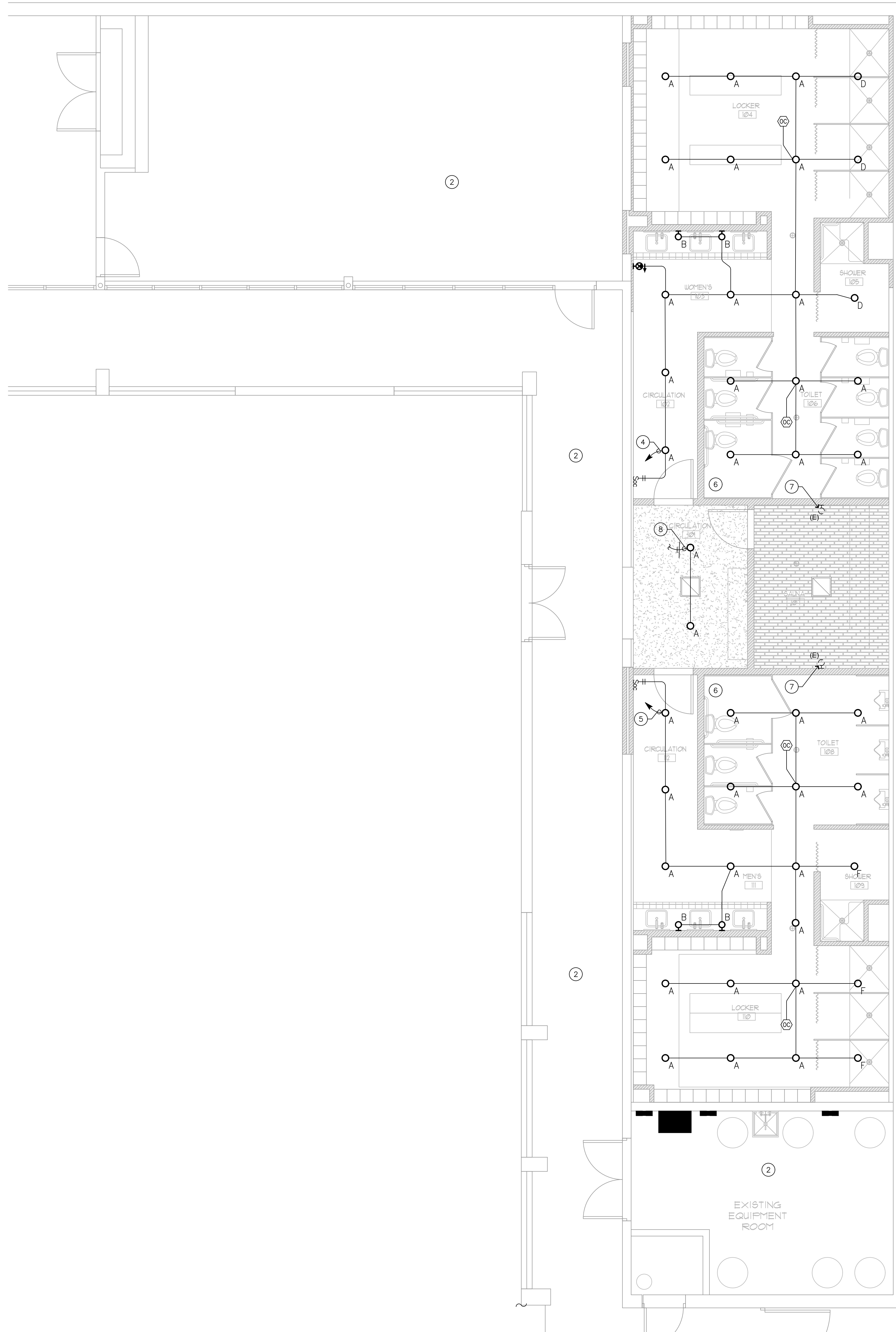
POWER FLOOR PLAN
SCALE: 1/4" = 1'-0"



LOCKER EXPANSION ELECTRICAL POWER PLAN



**GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622**



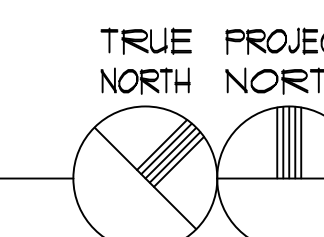
1 LIGHTING FLOOR PLAN
 SCALE: 1/4" = 1'-0"

KEYED NOTES:

- 1 TYPE 'B' FIXTURE TO BE MOUNTED AT +8'-6" A.F.G.
- 2 NOT IN SCOPE OF WORK.
- 3 DEMO'D LOAD CALLED OUT ON DRAWING ED1.0 EQUALS 1,332-WATTS BETWEEN EXISTING LIGHTING CIRCUITS 'BP'-1 AND 'BP'-5. NEW LOAD FOR THIS SCOPE OF WORK IS 475.6-WATTS. TOTAL LOAD REMOVED EQUALS 1,332.0 - 475.6 = 856.4-WATTS REMOVED FOR EXISTING PANEL 'BP'.
- 4 DEMO'D LOAD CALLED OUT ON DRAWING ED1.0 KEYED NOTE #3 THRU #6 EQUALS 747.0-WATTS BETWEEN EXISTING LIGHTING CIRCUITS 'BP'-1 OR 'BP'-5. NEW LOAD FOR THIS SCOPE OF WORK IS 316.0-WATTS. TOTAL LOAD REMOVED EQUALS 747.0 - 306.0 = 431.0-WATTS REMOVED FOR EXISTING PANEL 'BP'-1 OR 'BP'-5. ELECTRICAL CONTRACTOR TO DETERMINE WHICH CIRCUIT IN THE FIELD.
- 5 DEMO'D LOAD CALLED OUT ON DRAWING ED1.0 KEYED NOTE #7 THRU #10 EQUALS 746.0-WATTS BETWEEN EXISTING LIGHTING CIRCUITS 'BP'-1 OR 'BP'-5. NEW LOAD FOR THIS SCOPE OF WORK IS 316.0-WATTS. TOTAL LOAD REMOVED EQUALS 746.0 - 306.0 = 430.0-WATTS REMOVED FOR EXISTING PANEL 'BP'-1 OR 'BP'-5. ELECTRICAL CONTRACTOR TO DETERMINE WHICH CIRCUIT IN THE FIELD.
- 6 DEMO'D LOAD CALLED OUT ON DRAWING ED1.0 KEYED NOTE #15 THRU #17 EQUALS 226.0-WATTS BETWEEN EXISTING LIGHTING CIRCUITS 'BP'-1 OR 'BP'-5. NEW LOAD FOR THIS SCOPE OF WORK IS 137.6-WATTS. TOTAL LOAD REMOVED EQUALS 226.0 - 137.6.0 = 88.4-WATTS REMOVED FOR EXISTING PANEL 'BP'-1 OR 'BP'-5. ELECTRICAL CONTRACTOR TO DETERMINE WHICH CIRCUIT IN THE FIELD.
- 7 EXISTING SAUNA LIGHTING TO REMAIN 'AS-IS' AND FED FROM EXISTING LIGHTING CIRCUIT. NO NEW LOAD ADDED. SEE KEYED NOTE #17, ED1.0 FOR DETAILS.
- 8 EXISTING 6" CAN LIGHTS TO BE REPLACED WITH NEW. RE-USE EXISTING CIRCUIT AND SWITCHING.

LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MFR.	CATALOG #	VOLT.	LAMPS		REMARKS
					#	TYPE	
A	4" OPEN LED DOWN LIGHT	GOTHAM	EV04-3515 AR_LSS MVD MVOLT ELSDF TRV	MVOLT	LED'S W/FIXTURE 1,527 LUMENS 13.7W, 3,500°K	(EM) DENOTES 14W BATTERY BACK-UP. PROVIDE WITH CONTINUOUS PWR FOR CHARG	
B	CONTEMPORARY LED VANITY LIGHT FIXTURE	BROWNLEE	FLOW-RD 5160 24 BN H16 EC2 35K	MVOLT	LED'S W/FIXTURE 1,890 LUMENS 16.0W, 3,500°K	MOUNT ABOVE MIRROR	
C	SAUNA ROOM 6" OPEN LED DOWN LIGHT	KIRLIN	LRR-00613-750L-WFL-	MVOLT	LED'S W/FIXTURE 791 LUMENS 30.0W, 3,500°K		
8	EXIT SIGN WITH BATTERY BACK-UP	LITHONIA	EDGR_1 R EL WM	MVOLT	LED'S W/FIXTURE 3.1 W, 3,500°K	MOUNT ABOVE DOOR	



LOCKER EXPANSION ELECTRICAL LIGHTING PLAN



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 GREEN VALLEY, ARIZONA 85622**

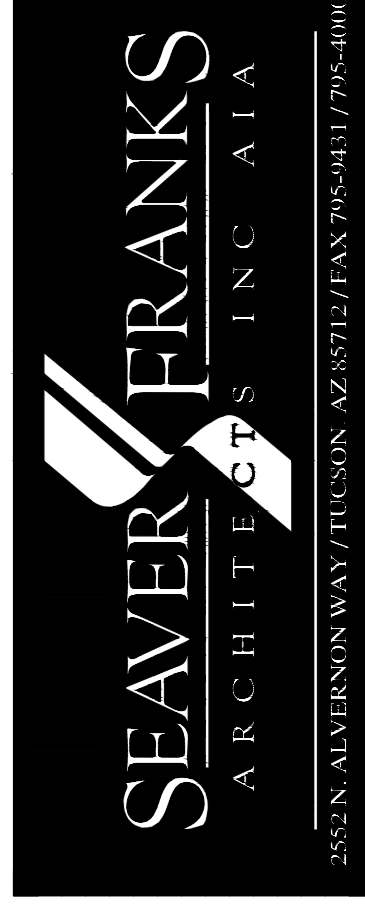
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NO. DATE

**LOCKER EXPANSION
ELECTRICAL LIGHT
SPECIFICATION SHEETS**



**GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622**

ISSUE DATE 11-04-2024
PROJ. NO. 3709.1
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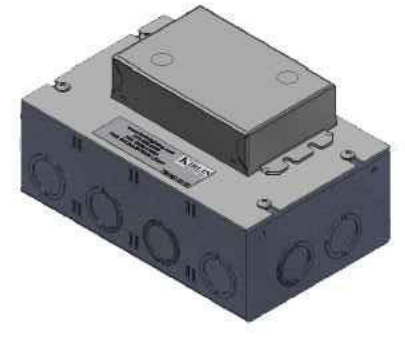
p. 602-400-1792 • jeff@ccecaz.com
5551 White Mountain Road, #2-538, Show Low, AZ 85901



Job No. 23077

KIRLIN Since 1895
TYPE 'C' & 'D'
REMOVAL DATE

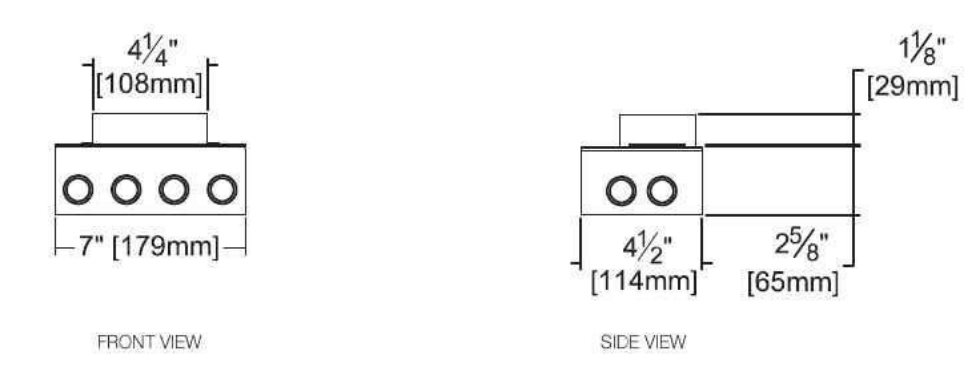
LED Remote Driver for Use With LRR-06013 (Sauna / Steam Downlight)
0-10V • 100 - 0.1% Dimming • Constant Current



- Specifications**
- 30 watt, constant current analog driver, single control channel.
 - Supports up to (3) LRR-06013-750L luminaires.
 - 100-0.1% full range dimming.
 - Compatible with 0-10V DC dimming controls.
 - Linear dimming profile standard.
 - Maximum 50 ft. cable length from power supply to single fixture.
 - 120-277V / 60-60Hz standard. Load insensitive.
 - Suitable for -20°C (-4°F) to 50°C (122°F).
 - Includes J-bus with 1/8" and 1/4" knockouts.
 - Also see specification sheet for LRR-06013.
 - Three Year Limited Warranty

Required for:
LRR-06013
Sauna / Steam Light
(sold separately)

Dimensions



KIRLIN The Kirlin Company
3401 EAST JEFFERSON AVENUE • DETROIT, MI 48207-4232
Lighting Since 1895 (313) 259-6400 • Fax: (313) 259-3127 • www.kirlinlighting.com

Due to our continuous effort to improve products, technical information is subject to change without notice. The Kirlin Company expects photometric performance to improve significantly and frequently as LED source technology improves.

gotham E V O Multiple Layers of Light
Luminaire Type: TYPE 'A'
Catalog Number: **BAA**

General Illumination Round Downlight 4"

Feature Set

- Bounding Ray™ optical design
- Utilized optics mechanically attach the light engine to the lower reflector for complete optical alignment.
- 45° cutoff to source and source image
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- 2.5 watt/cm² @ 90-CRI typical, 90-CRI optional
- Features are wet location, covered ceiling
- Available with 10% dimming, 1% dimming, or dim to dark
- Baking distribution with feathered edges provides even illumination on horizontal and vertical surfaces
- ENERGY STAR® certified product.
- UGR of zero for fixtures aimed at user with a cut-off equal to or less than 0.05deg per CIE 127:1996 (document glare in interior lighting, IESNA)

Distribution

Items marked by a shaded background qualify for the Design Select program and ship in 13 days or less. To learn more about Design Select, visit www.designselect.com/designselect. *See ordering tree for details.

Superior Performance*

Item	2500	5000	7500	10000	15000	20000	25000	30000	35000	40000	45000
Delivered Lumens	271	573	858	1061	1527	1994	2560	3130	3612	4120	4584
Wattage per Watt	3.1	7.2	7.9	8.8	13.7	18.5	25.7	31.2	38.4	35.4	40.1
Efficiency per Watt	87.4	79.6	102.3	113.8	111.5	102.3	104.4	99.7	76.1	116	114

*Based on 3500K A9 LED MW BCR

Coordinated Apertures | Multiple Layers of Light

General Illumination Layer | EVO High Center Beam Layer | i-trio EVO + i-trio — Multiple Layers of Light

Core Downlight Adjustable Open Network Lensed Network Cylinder Parola Bead Hyperlight

Healthcare MR Surgical Sinks Patient Room

Special Applications Dynamic Feed Service Vented/Temper Clear Room Shower Steam Room

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gotham E V O Multiple Layers of Light
Luminaire Type: TYPE 'D'
Catalog Number: **66**

General Illumination Shower Downlight 4"

Feature Set

- Wide down bath or recessed lens
- NSF Splash/Non-Roof Zone
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- 2.5 watt/cm² @ 90-CRI typical, 90-CRI optional
- IP66 rated, non-slip. Features are wet location, covered ceiling
- Anti-bacterial paint finish
- Non-conductive dead front trim
- Suitable for steam room application
- UGR of zero for fixtures aimed at user with a cut-off equal to or less than 0.05deg per CIE 127:1996 (document glare in interior lighting, IESNA)

Distribution

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.designselect.com/designselect. *See ordering tree for details.

Superior Performance

Item	1000	1500	2000	2500
Delivered Lumens	143	191	264	216
Wattage	8.8	13.7	13.5	25.7
Efficiency	95.8	93.5	88.4	84.2

*Measured per IESNA 3500K

Coordinated Apertures | Multiple Layers of Light

General Illumination Layer | EVO High Center Beam Layer | i-trio EVO + i-trio — Multiple Layers of Light

Core Downlight Adjustable Open Network Lensed Network Cylinder Parola Bead Hyperlight

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FLOW-RD TYPE 'B' **BROWNLEE**



5160 LED

The FLOW-RD (model #: 5160) features a smooth flow of uniform illumination, utilizing an ultra slim diffuser (2" dia.), a contemporary yet minimal mounting plate, and two decorative end cap options. This unit is available in four sizes, each of which can be mounted horizontally over a mirror or vertically as a sconce. Brushed Nickel standard with optional finishes available. For a square profile refer to Model #: 5165.

FINISHES

BR	BK	BZ	BL	AM	SL	PL	ML	MC	WH
----	----	----	----	----	----	----	----	----	----

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nLIGHT nWSXA Low Voltage Wall Switch Sensor

OVERVIEW

The nWSXA series nLight wall switch occupancy sensor provides a simple control solution for a small room, in particular one utilizing nLight enabled digital luminaires. Capable of detecting small motion up to 20' (6.10 m), this sensor is perfect for private offices, private rest rooms, copy rooms, closets or any small enclosed space. Available as a basic infrared (PIR) or nLight MicroSensors (Dual Technology (DT)), this digital sensor can be programmed locally, via the front push buttons, or remotely via the nLight software solutions. The nWSXA includes an integrated photoeye (inhibit only - disabled by default).

FEATURES

- 100% digital PIR detection, vandal resistant lens standard, includes screwless wall plate
- Push-button programmable, adjustable time delays, multiple operating modes
- Multiple nWSXA sensors or WallProfs can be used in 3-wire or greater configurations w/o traveler wires
- Photoeye standard (inhibit only - disabled by default)
- Broadcasts occupancy photoeye, and switch information over a local and/or global nLight channel
- Remotely firmware upgradeable

CONTROL MODES

A control zone with an nWSXA can operate in several modes:

1. Auto On / Auto Off (i.e. Fully Automatic)
2. Manual On (initial state) to Override On (with expiration timer)
3. Auto On (initial state) to Override On (with expiration timer)
4. Manual On / Automatic Off (i.e. Semi-Automatic)
5. Manual On (initial state) to Fully Automatic
6. Predictive Off Switch (returns zone to auto-on unless person remained in room after an off switch press)

*See MDU operation chart on page 2.

Buy American Act

Product with the USA option is assembled in the USA and meets the Buy American (n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

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ORDERING INFORMATION

Example: nWSXA 10X DW WH

Series	Occupancy Detection	Voltage	Dimming	Color	Temp/Humidity	Buy American(1) *
nWSXA	Passive Infrared	LV Low Voltage	[blank] None DX Radio/Level dim control	WH White WHN White IV Ivory GY Grey AL Lt. Almond RD Red	[blank] Standard ET Low temp	[blank] Standard BA Buy American(2) AC Compliant

ACCESSORIES

Series	# of Gangs	Mounting	Color	Packaging
WS-PODA	1 GANG	Single Gang	WH White IV Ivory GY Grey AL Lt. Almond	[blank] Single Unit
SSW1	1 GANG	Single Gang	WH White IV Ivory GY Grey AL Lt. Almond	M61 6 Pack

Notes:

1. Only available in WH.
2. Not available with 12 option.
3. Only available for Energy Pack.
4. Not available for SW Series.
5. Ships with custom network wall plate.
6. Only available with SW series.
7. Single units only available with SW series.

All nWSXA switches are shipped with wall plates and mounting brackets (WS-XPODA). However, the following order information is available to acquire replacement wall plates. Also compatible with the WSU-C Series.

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KIRLIN ARCHITECTURAL LIGHTING
TYPE 'C' & 'D'
LRR-06013

**Latitudes Series
Sauna and Steam Room 6" Downlight • LED**

Up to 70,000 Hour Life • Type IC • Wet Listed
LM-79 Certified • LM-80 Qualified

- Specifications**
- Delivered System Performance**
- Nominal Lumens Must Specify Type IC
 - Select trim & beam distribution: see chart
 - Select color (CCT): see chart (90-CRI standard. Option -HC for 90+ (35% lumen loss)
 - 70,000 hour life (L70=90)
- Thermal Management System**
- Rated 100°C (212°F) maximum
 - Aluminum heat sink and components for quiet operation, long life, and low maintenance
 - LED Driver - REMOTE. See REM-0700A next page for remote driver information
- Trim Assembly**
- Smooth white stainless tapered aluminum self-flanged rigid cast trim (field paintable)
 - Optional colors or custom color available
 - High strength prismatic acrylic above 1/2" clear flat polycarbonate lens. Also see: DA
- IP66 Rated Sealed and Gasketed Trim**
- Protects against potential (ODL-trim) water jets from all directions and against ingress of dust
 - Silicone seal between trim and lens seals lens to trim
 - Closed-cell gasketing on trim flange seals flange to ceiling
 - O-rings on stainless steel fasteners seal fasteners to trim
 - Meets ASTM E 2883 restricted airflow of 2CFM maximum
- Acrylic Enamelled Aluminum Housing**
- Rustproof and corrosion resistant. exceeds 3000 hour ASTM 596 salt spray test
 - Shallow depth: fits restricted plenums
 - Cool operation extends component life
 - Flexible design: visible and fully serviceable through aperture
 - Built-in plaster flange
- Outlet Box (Galvanized)**
- UL Listed. ADA compliant, removable cover. 1/2" and 3/4" knockouts
- Installation & Hardware**
- Indoor/Outdoor in ceilings up to 1/4" thick or see option 79
 - Compatible with fire rated enclosures (by others)
 - 27" hanger bars & adjusting brackets (2) supplied
- UL-C-UL (Canada)**
- UL Listed wet, damp or dry locations, covered ceilings
 - Type IC for direct contact with insulation
 - Through hanger conductors (# #12 AWG 90°C) for Type IC listing
- IEC & FCC Compliance**
- Meets IEC EN 60529 I2 electromagnetic compatibility standard for medical electrical equipment
 - FCC Part 15 certified for EMI/RFI emissions
 - **THREE YEAR Limited Warranty**
 - Complete standard fixture

Options and Ordering Configuration

Model	Lumens	Beam	CCT & CRI	Trim Options	Other Options
LRR-06013	750L	(Blank) 90°	(Blank) 3000K, 90-CRI	(Blank) Standard white trim finish	(Blank) None

Projected L70* for LED Luminaires

In Open Plenum	90,000 hours
In Insulation (Type IC)	70,000 hours

Kirlin Lighting | 3401 E. Jefferson Ave., Detroit, MI 48207-4232, USA | P: 313.259.6400 | www.kirlinlighting.com

TYPE '\$' CEILING

nLIGHT nCM xx RJB nCM PDT xx RJB

OVERVIEW

The nCM xx RJB family of rugged ceiling/surface mount occupancy sensors provide a range of networked sensor solutions for applications with flexible ceiling (e.g. ceiling tiles, sheetrock, plaster), nCM xx RJB family sensors utilize 100% Digital Passive Infrared (PIR) detection and flexibility for multiple mounting height and coverage pattern requirements. Dual technology occupancy detection can also be added as an option for applications where occupants are stationary for long periods of time. nCM xx RJB family sensors are also available with an optional auxiliary low voltage relay for simple integration with a BMS system or other building system.

FEATURES

- 100% digital PIR detection
- Optional dimming photoeye (ADPX) option
- Optional auxiliary low voltage relay (All optional) for dry contact output - relay only tracks occupancy by default, ignoring switch and photoeye commands
- LED status indicator
- Adjustable settings (e.g. occupancy time delays, photoeye set points) via push-button or Sensorview software application
- Broadcasts occupancy and photoeye information over a local nLight channel
- Remotely upgradeable firmware

Buy American Act

Product with the USA option is assembled in the USA and meets the Buy American (n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Capable

This item is an A+ capable component, which has been designed and tested to provide out-of-the-box hardware compatibility with single communication, when included as part of an A+ Certified Solution. To learn more about A+, visit www.acuitybrands.com/a-plus.

ORDERING INFORMATION

Series	Dimming	Fault Protection	Default Mode	Voltage	Temp/Humidity	Buy American(1) *
nPP16	None 0-10VDC Dimming output (in-chamber) DS 0-10VDC Dimming output (via side slot)	IEF External Fault Photoeye	[blank] Auto On (Switch Ch. 1) SW2 Auto On (Switch Ch. 2) SW3 Auto On (Switch Ch. 3) SW4 Auto On (Switch Ch. 4) SA Manual On (Switch Ch. 1) SA2 Manual On (Switch Ch. 2) PA2 Auto On to 70% (Partial On) PA Auto On to 50% (Partial On)	[blank] 120/277VAC 230 220-240VAC 347 130-139VAC	[blank] Standard ET Low temp	[blank] Standard BA Buy American(2) AC Compliant

ACCESSORIES

Series	Replacement Fuse
nPP16_FAMILY	MPP FUSE J10

Notes:

1. Requires Da DS option
2. Not available with 230, 347, or 480 options

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P24BP10159 D1
11-26-2024
CC
APPROVED

COMcheck Software Version 4.1.1.0
Interior Lighting Compliance Certificate

Project Information
 Energy Code: 2018 IECC
 Project Title: GREEN VALLEY RECREATION CENTER
 Project Type: New Construction

Construction Site: 2980 S. CAMINO DEL SOL, GREEN VALLEY, AZ 85622
 Owner/Agent:
 Designer/Contractor: JEFF CLARK, CC ELECTRICAL CONSULTING, LLC, 3553 S. WHITE MOUNTAIN ROAD #2-538, SHOW LOW, AZ 85901, 602.400.1792, JEFF@CCECAZ.COM

Unspecified

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-WOMENS LOCKER ROOM (Common Space Types:Locker Room)	667	0.48	320
2-MENS LOCKER ROOM (Common Space Types:Locker Room)	652	0.48	313
3-SPA (Common Space Types:Locker Room)	72	0.48	35
4-STEAM SAUNA (Common Space Types:Locker Room)	72	0.48	35
Total Allowed Watts =			702

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-WOMENS LOCKER ROOM (Common Space Types:Locker Room)				
LED 1: A: 4" LED DOWNLIGHT: Other:	1	17	14	233
LED 2: B: 24" LED VANITY FIXTURE: LED Linear 17W:	1	2	16	32
LED 3: F: 4" LED DOWNLIGHT: LED PAR 10W:	1	3	14	41
2-MENS LOCKER ROOM (Common Space Types:Locker Room)				
LED 4: A: 4" LED DOWNLIGHT: Other:	1	17	14	233
LED 5: B: 24" LED VANITY FIXTURE: LED Linear 17W:	1	2	16	32
LED 6: F: 4" LED DOWNLIGHT: LED PAR 10W:	1	3	14	41
3-SPA (Common Space Types:Locker Room)				
LED 7: C: 6" LED DOWNLIGHT: LED PAR 10W:	1	2	9	18
4-STEAM SAUNA (Common Space Types:Locker Room)				
LED 8: D: 6" LED DOWNLIGHT: LED PAR 10W:	1	2	9	18
Total Proposed Watts =			647	

Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
 Data filename: C:\Users\jeff.Clark\Desktop\CURRENT JOBS THAT WE ARE WORKING ON\23000\23077 - Page 1 of 7
 Green Valley Recreation Locker Expansion\23077 JOB FILE\comcheck.cck

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3 [EL22] 2	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight responsive controls for applicable spaces. C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL26] 1	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL27] 1	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.3 [EL6] 1	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.6 [EL26] 1	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.7 [EL27] 1	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8.2 [EL28] 1	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9 [EL29] 1	Total voltage drop across the combination of feeders and branch circuits <= 3%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
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Interior Lighting PASSES: Design 8% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

JEFF CLARK, PROJECT MANAGER
 Name - Title Signature Date 11/21/2023

Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
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 Green Valley Recreation Locker Expansion\23077 JOB FILE\comcheck.cck

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3 [F117] 2	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.4.1 [F118] 1	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C408.1.1 [F157] 1	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturer's information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [F116] 1	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [F133] 1	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
 Data filename: C:\Users\jeff.Clark\Desktop\CURRENT JOBS THAT WE ARE WORKING ON\23000\23077 - Page 6 of 7
 Green Valley Recreation Locker Expansion\23077 JOB FILE\comcheck.cck

COMcheck Software Version 4.1.1.0
Inspection Checklist
 Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software
 Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4] 1	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR9] 1	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
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1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
 Data filename: C:\Users\jeff.Clark\Desktop\CURRENT JOBS THAT WE ARE WORKING ON\23000\23077 - Page 7 of 7
 Green Valley Recreation Locker Expansion\23077 JOB FILE\comcheck.cck

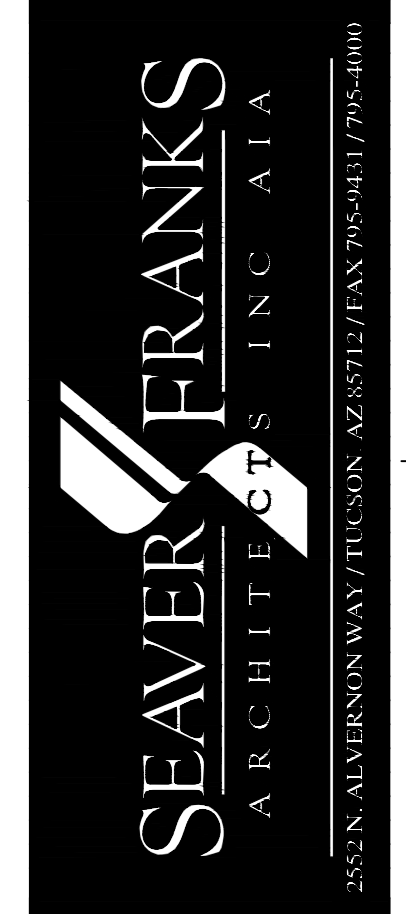
Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2 [EL22] 1	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL18] 1	Occupancy sensors installed in classroom/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL19] 2	Occupancy sensors control function in warehouses in warehouses, the lighting in aiseways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL20] 3	Occupant sensor control function in open plan office areas. Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.2 [EL21] 2	Each area not served by occupancy sensors per C405.2.1 have time-switch controls and functions detailed in sections C405.2.1 and C405.2.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: GREEN VALLEY RECREATION CENTER Report date: 11/21/23
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 Green Valley Recreation Locker Expansion\23077 JOB FILE\comcheck.cck



REVISIONS
 NO. DATE

LOCKER EXPANSION
 ELECTRICAL LIGHT
 COMCHECK



GREEN VALLEY RECREATION CENTER
 2980 SOUTH CAMINO DEL SOL
 GREEN VALLEY, ARIZONA 85622

ISSUE DATE 11-04-2024
 PROJ. NO. 3709.1
 DRG. SCALE A6 NOTED

SHEET

E2.2



P24BP10159 D1
 11-26-2024
 CC



Job No. 23077

p. 602.400.1792 • jeff@ccecaz.com
 5551 White Mountain Road, #2-538, Show Low, AZ 85901

PANEL LEGEND:

- INDICATES EXISTING CIRCUIT BREAKER & LOAD.
- INDICATES NEW CIRCUIT BREAKER & LOAD.
- INDICATES CIRCUIT BREAKER WITH 'LOCK-OFF' DEVICE.
- INDICATES EXISTING CIRCUIT BREAKER W/CHANGED LOAD.
- ▲ INDICATES CIRCUIT THRU
- ▲ MISCELLANEOUS.
- * INDICATES CONTINUOUS LOAD TAKEN @ 125% PER N.E.C.

EXISTING FULLY RATED PANEL

PANEL 'HA' 1250 AMP 277/480V, 3φ, 4W MAIN 250 M.C.B. NEMA 1 SURF MTG

LOCATION	SEE PLAN	TYPE	SEE C.B. NOTE	BREAKER RATING	42,000 AIC	
USE/AREA SERVED	CB No	A	B	C	No	CB USE/AREA SERVED
AC-N1	1	2410	2	20	1	LTG - NEW COORIDOR
4-TON	3	2410	4			BUSSED SPACE
8.7 FLA (GAS UNIT)	5	2410	6			BUSSED SPACE
AC-N2	7	3324	8			BUSSED SPACE
5-TON	9	3324	10			BUSSED SPACE
	11		12			BUSSED SPACE
AC-N3	13	2660	14			BUSSED SPACE
5-TON	15	2660	16			BUSSED SPACE
	17		18			BUSSED SPACE
	19		20			BUSSED SPACE
	21		22			BUSSED SPACE
	23		24			BUSSED SPACE
	25		26			BUSSED SPACE
	27		28			BUSSED SPACE
	29		30			BUSSED SPACE
	31		32			BUSSED SPACE
	33		34			BUSSED SPACE
	35		36			BUSSED SPACE
TRANSFORMER 'TA'	37	11844	38			BUSSED SPACE
	39	10164	40			BUSSED SPACE
	41	11244	42			BUSSED SPACE
TOTAL (CONNECTED)	20727	18558	19638			
25 % CONTINUOUS	123					
TOTAL (CODE)	20850	18558	19638	20850 VA / 277V. = 75.3 A.		

EXISTING FULLY RATED PANEL

PANEL 'LA' 200 AMP 120/208V, 3φ, 4W MAIN 200 M.C.B. NEMA 1 SURF MTG

LOCATION	SEE PLAN	TYPE	SEE C.B. NOTE	BREAKER RATING	10,000 AIC	
USE/AREA SERVED	CB No	A	B	C	No	CB USE/AREA SERVED
KILN #	1	4992	2	20	1	EF-N1
	3	480	4			REC - EXTERIOR
KILN #	5	4992	6			EF-1 (8.4 FLA)
	7	4992	8			EF-2 (8.4 FLA)
KILN #	9	1008	10			BUSSED SPACE
	11		12			BUSSED SPACE
	13		14			BUSSED SPACE
	15		16			BUSSED SPACE
	17		18			BUSSED SPACE
	19		20			BUSSED SPACE
	21		22			BUSSED SPACE
	23		24			BUSSED SPACE
	25		26			BUSSED SPACE
	27		28			BUSSED SPACE
	29		30			BUSSED SPACE
	31		32			BUSSED SPACE
	33		34			BUSSED SPACE
	35		36			BUSSED SPACE
	37		38			BUSSED SPACE
	39		40			BUSSED SPACE
	41		42			BUSSED SPACE
TOTAL (CONNECTED)	11472	10164	10992			
25 % CONTINUOUS	372		252			
TOTAL (CODE)	11844	10164	11244	11844 VA / 120V. = 98.7 A.		

SHORT CIRCUIT CALCULATIONS

FAULT DESIG	PANEL	LOAD AMPS	LENGTH (FT.)	SOURCE SHORT CKT AMPS	"1" OR "3"	# OF CDTRS/ PHASE?	"CU" OR "AL"	CDR SIZE (avg/kcmil)	METAL CONDUIT? "Y" OR "N"	"C" VALUE	X F M R				V	f	m	SOURCE Isc (amps)	MOTOR CONTRIB	TOTAL Isc (amps)
											XMFR KVA	PRI VOLTS	DEG C RISE (115/150)	% Z						
F1	PANEL 'HA'	200	10	32,600	3	1	CU	250 KCM	Y	16483	480	480	150	6.5	208	3.1512	0.2409	15,560	0	15,560
F2	TRANSFORMER 'TA'	100	40	15,560	3	1	CU	#1	Y	7292	75	480	150	5.1	208	5.1420	0.1628	3,417	0	3,417

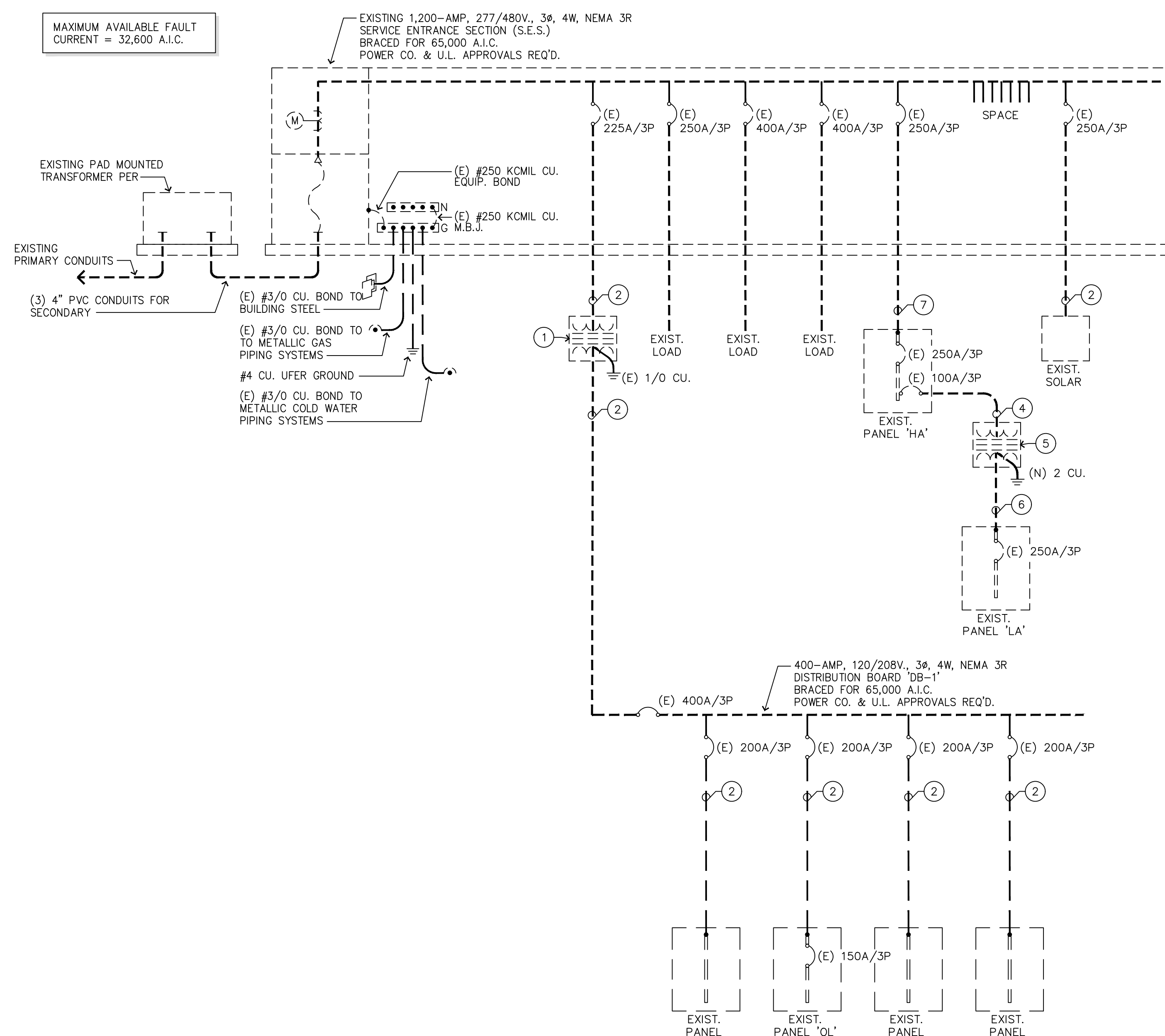
KEYED NOTES:

- 1 EXISTING TRANSFORMER 'T', 150KVA, 480V/120/208V, 3φ 4W, NEMA 3R.
- 2 EXISTING FEEDERS AND CONDUIT TO REMAIN "AS-IS".
- 3 EXISTING (4) #5/0 CU., (1) #6 CU. GND., 2"C. ALSO SHOWN ON E1.0.
- 4 EXISTING (3) #1 CU., (1) #8 CU. GND., 1-1/2"C.
- 5 EXISTING TRANSFORMER 'TA', 75KVA, 480V/120/208V, 3φ 4W, NEMA 3R.
- 6 EXISTING (4) #4/0 CU., (1) #2 CU. GND., 2-1/2"C.
- 7 EXISTING (3) #250 KCMIL CU., (1) #2 CU. GND., 3"C.

LOAD CALCULATION:

EXISTING LOADS:
 EXISTING HIGH DEMAND = 83,170KW FROM TEP DATED (9/2/2022)
 $\frac{83,170}{.8pf} \times 125\% \div 480 \sqrt{3} = 156.4 \text{ AMPS}$

NEW LOADS:
 NEW LOADS - NEW PANELS 'HA' & 'LA' = 75.3 AMPS
 TOTAL LOAD ON S.E.S. = 231.7 AMPS



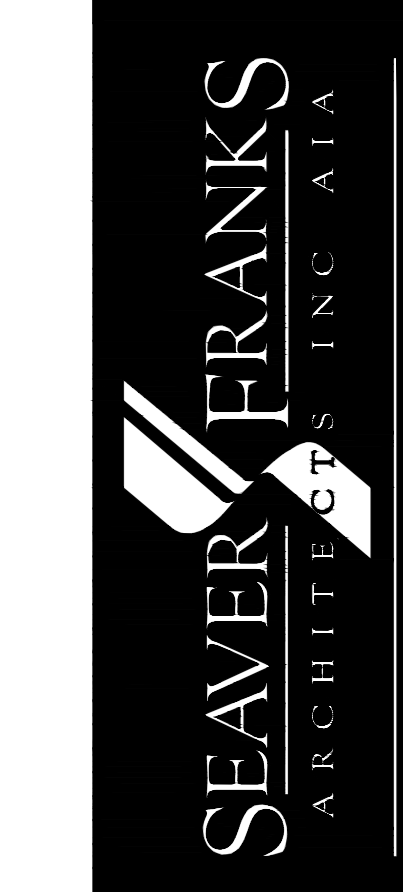
ONE-LINE DIAGRAM

- N.T.S.
1. ALL EQUIPMENT & INSTALLATIONS ARE 'EXISTING' UNLESS NOTED AS 'NEW'.
 2. ELECTRICAL CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS PRIOR TO ANY WORK.
 3. ALL CONDUCTOR SIZES BASED ON TYPE 'HHHW' & 'THHN/THWN' COPPER.
 4. ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL METER KITS WERE REQUIRED (VERIFY PRIOR TO ANY WORK)



REVISIONS
NO. DATE

**LOCKER EXPANSION
ONE LINE DIAGRAM AND
PANEL SCHEDULES**



**GREEN VALLEY RECREATION CENTER
2980 SOUTH CAMINO DEL SOL
GREEN VALLEY, ARIZONA 85622**

ISSUE DATE 11-04-2024
 PROJ. NO. 3703.1
 DRG. SCALE AS NOTED



Job No. 23077

SHEET

E3.0

