



# INTERIOR UP-FIT FOR: ALLOY PERSONAL TRAINING

## 14807 W 64TH AVE, ARVADA, CO 80007

### ARCHITECT

GERALD P. NOE ARCHITECT  
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### PROJECT MANAGER

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ATTN: JASON TOGNARINA

### GENERAL NOTES:

- THESE DRAWINGS ARE AN INSTRUMENT OF CONDITIONAL SERVICES. THE ARCHITECT TAKES NO RESPONSIBILITY FOR ACTUAL FIELD CONDITIONS AND CONSTRUCTION. THESE DRAWINGS ARE TO CONVEY DESIGN INTENTIONS AND CODE COMPLIANCE ONLY. ACTUAL LOCATIONS AND DIMENSIONS TO BE FIELD VERIFIED.
- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL LOCAL CODES, ORDINANCES, ETC. INCLUDING:
  - 2018 International Building Code
  - 2018 International Residential Code
  - 2018 International Fuel Gas Code
  - 2018 International Mechanical Code
  - 2018 International Plumbing Code
  - 2009 International Property Maintenance Code
  - 2018 International Energy Code
  - 2018 International Fire Code
  - 2018 International Existing Building Code
  - 2023 National Electrical Code
  - 2018 International Swimming Pool and Spa Code
- ALL CONSTRUCTION MATERIAL AND INSTALLATION OF MECHANICAL, ELECTRICAL, & PLUMBING SHALL BE IN STRICT ACCORDANCE WITH ALL LOCAL CODES & ORDINANCES.
- ALL CONSTRUCTION MATERIAL AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH 2017 AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) HANDICAP CODE AND THE (ADA) AMERICAN DISABILITIES ACT.
- COORDINATION OF ALL TRADES IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND IS ESSENTIAL TO THE COMPLETION OF THE PROJECT.
- BY EXECUTING THE CONTRACT, THE CONTRACTOR REPRESENTS THAT HE HAS VISITED THE SITE FAMILIARIZED HIMSELF WITH THE EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- NO CHANGE ORDERS WILL BE ISSUED FOR CHANGES REQUIRED IN THE WORK DUE TO AN INCOMPLETE FIELD VISIT BY THE CONTRACTOR PRIOR TO BIDDING.
- NO CHANGE ORDERS WILL BE ISSUED FOR CHANGES REQUIRED IN THE WORK AFTER CONSTRUCTION HAS COMMENCED UNLESS SPECIFICALLY AUTHORIZED BY AN OWNERS REPRESENTATIVE.
- AN ERROR OR OMISSION IN THESE DOCUMENTS RESULTING IN A CHANGE ORDER FOR ADDITIONAL COST AND / OR TIME SHALL NOT BE CONSIDERED A HARDSHIP OR DAMAGE TO THE OWNER TO THE EXTENT THAT THE ADDITIONAL COST AND TIME WOULD HAVE INCREASED THE BASE BID PRICE AND / OR TIME HAD THERE BEEN NO ERROR OR OMISSION IN THE DOCUMENTS AD THE TIME BIDS WERE RECEIVED. THE OWNER ACKNOWLEDGES THAT THE WORK ASSOCIATED WITH THE ERROR OR OMISSION, HAD IT BEEN INCLUDED IN THE BASE BID, WOULD HAVE AFFECTED THE TIME AND COST OF THE ORIGINAL BASE BID PRICE. THE OWNER IN NOT ENTITLED TO BENEFIT FROM FREE OR REDUCED COST OR TIME FOR WORK THAT WOULD HAVE OTHERWISE INCREASED THE CONTRACT TIME AND OR COST OF THE BASE BID HAD NO ERROR OR OMISSION BEEN IN THE BID DOCUMENTS.

### GENERAL CONSTRUCTION NOTES:

- GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AT THE JOB SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT. THE G.C. IS RESPONSIBLE FOR PROPER FIT AND INSTALLATION OF ALL WORK SHOWN ON THESE DRAWINGS. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY FABRICATION OF INSTALLATION TECHNIQUES PROVIDED BY THE G.C. OR ANY OF HIS SUBCONTRACTORS.
- G.C. TO SECURE AND PAY FOR ALL PERMITS, TEMPORARY UTILITIES AND CARRY LIABILITY INSURANCE AS REQUIRED.
- ALL DIMENSIONS ARE TO THE FACE OF BLOCK, STUD OR CENTERLINE, UNLESS NOTED OTHERWISE.
- ALL INTERIOR STUD WALLS TO BE METAL STUDS AT 16" O.C. WITH GYPSUM BOARD AT EACH FACE AS DETAILED, UNLESS NOTED OTHERWISE.
- ALL FLOOR FINISHES TO BE LEVEL AND FLUSH AT INTERSECTIONS, UNLESS OTHERWISE NOTED
- CEILING SUSPENSION SYSTEM TO BE SECURED TO STRUCTURAL MEMBERS OR ADDITIONAL SUPPORTS ABOVE.
- G.C. TO PROVIDE COMPLETE SHOP DRAWINGS FOR ALL NECESSARY WORK AS SPECIFIED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

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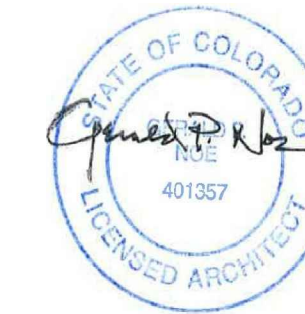
**GERALD P. NOE ARCHITECT**

COLORADO REGISTRATION NO. 401357

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04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE,  
ARVADA, CO 80007

SHEET TITLE:

**COVER SHEET**

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**G-1.0**

SHEET 1 OF 5

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.

TYPICAL FIRE PENETRATION SIGNAGE:

# FIRE AND SMOKE BARRIER, PROTECT ALL OPENINGS

GENERAL NOTES:

- EACH NEW/EXISTING FIRE WALL, FIRE BARRIER, FIRE PARTITION, SMOKE BARRIER, SMOKE PARTITION, OR ANY NEW/EXISTING WALL REQUIRED TO HAVE PROTECTED OPENINGS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ABOVE ANY DECORATIVE CEILING AND IN ALL CONCEALED SPACES WITH THE WORDING "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS" OR SIMILAR LANGUAGE. SUCH SIGNS OR STENCILING SHALL BE PROVIDED WITH 4" IN. HIGH LETTERS, AND IN. STROKE, AND NOT MORE THAN 15' FEET ON-CENTER. SUCH SIGNS OR STENCILING SHALL BE PROVIDED WITH RED LETTERING AND PROVIDED ON BOTH SIDES OF SAID ASSEMBLIES.

KEY NOTES

- MAXIMUM DIFFERENCE IN FLOOR ELEVATION ON BOTH SIDES OF ALL EGRESS DOORS TO REMAIN AT 2" MAX. IN ACCORDANCE WITH THE CODE, TYP.
- 3'-0" CLEAR AREA IN FRONT OF ELECTRICAL PANELS
- FIRE EXTINGUISHERS

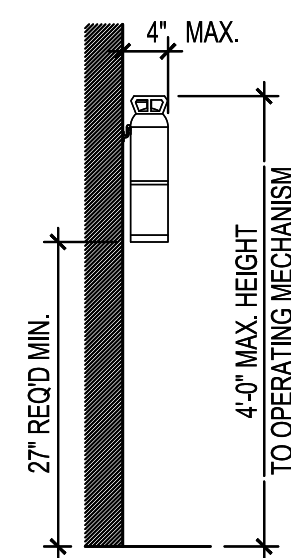
FIRE EXTINGUISHER ANALYSIS

1. CLASSIFICATION OF HAZARD: (N.F.P.A 10 SECTION 1-5)

- LIGHT (LOW) HAZARD (N.F.P.A 10 SECTION 1-5.2)  
 MINIMUM RATED SINGLE EXTINGUISHER = 2A (N.F.P.A 10 TABLE 3-2.1)  
 MAXIMUM FLOOR AREA PER UNIT OF A = 3000 SF (N.F.P.A 10 TABLE 3-2.1)  
 MAXIMUM FLOOR AREA FOR EXTINGUISHER = 11,250 SF (N.F.P.A 10 TABLE 3-2.1)  
 MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER = 75 FEET (N.F.P.A 10 TABLE 3-2.1)

2. FIRE EXTINGUISHER SPECIFICATION:

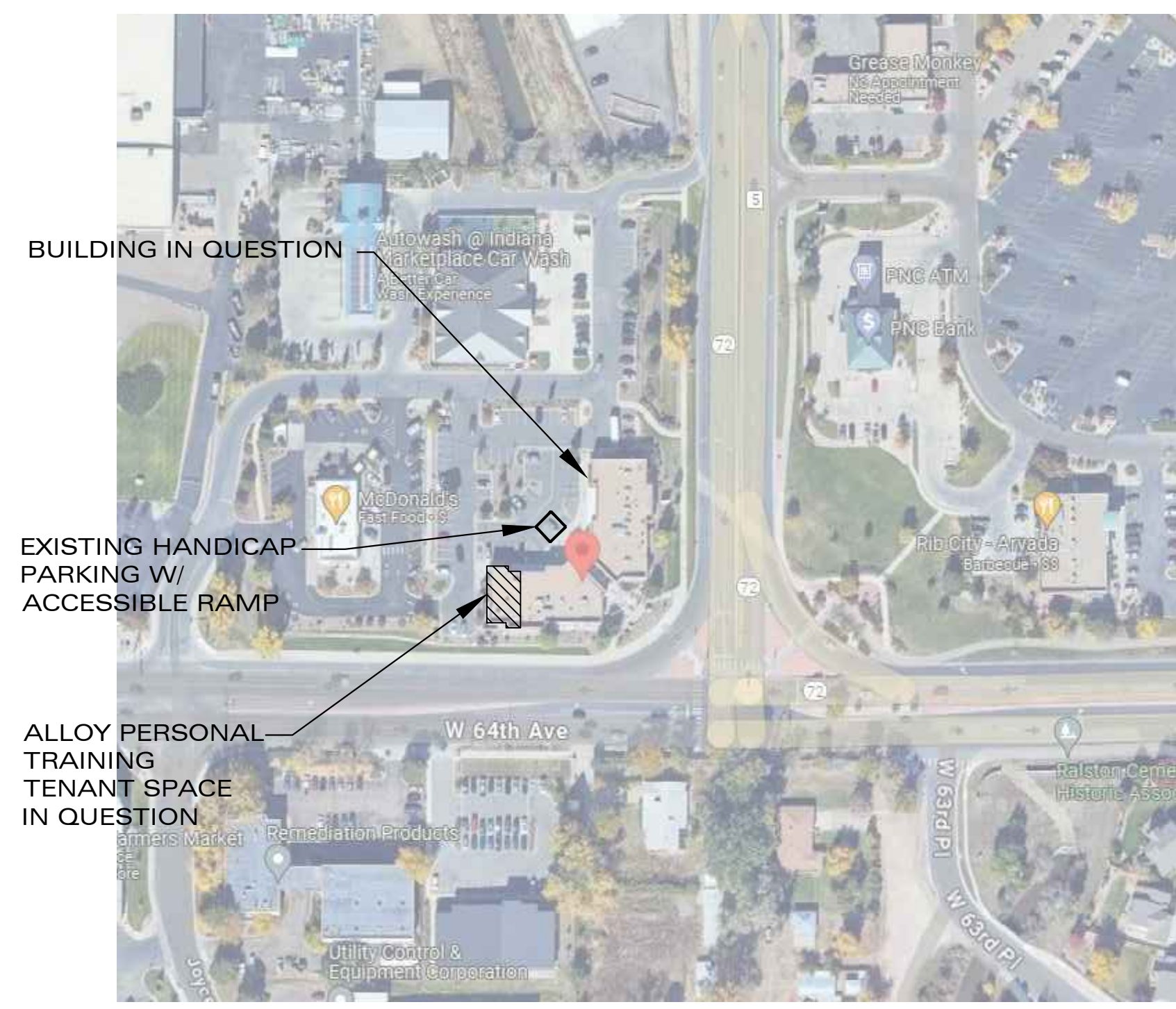
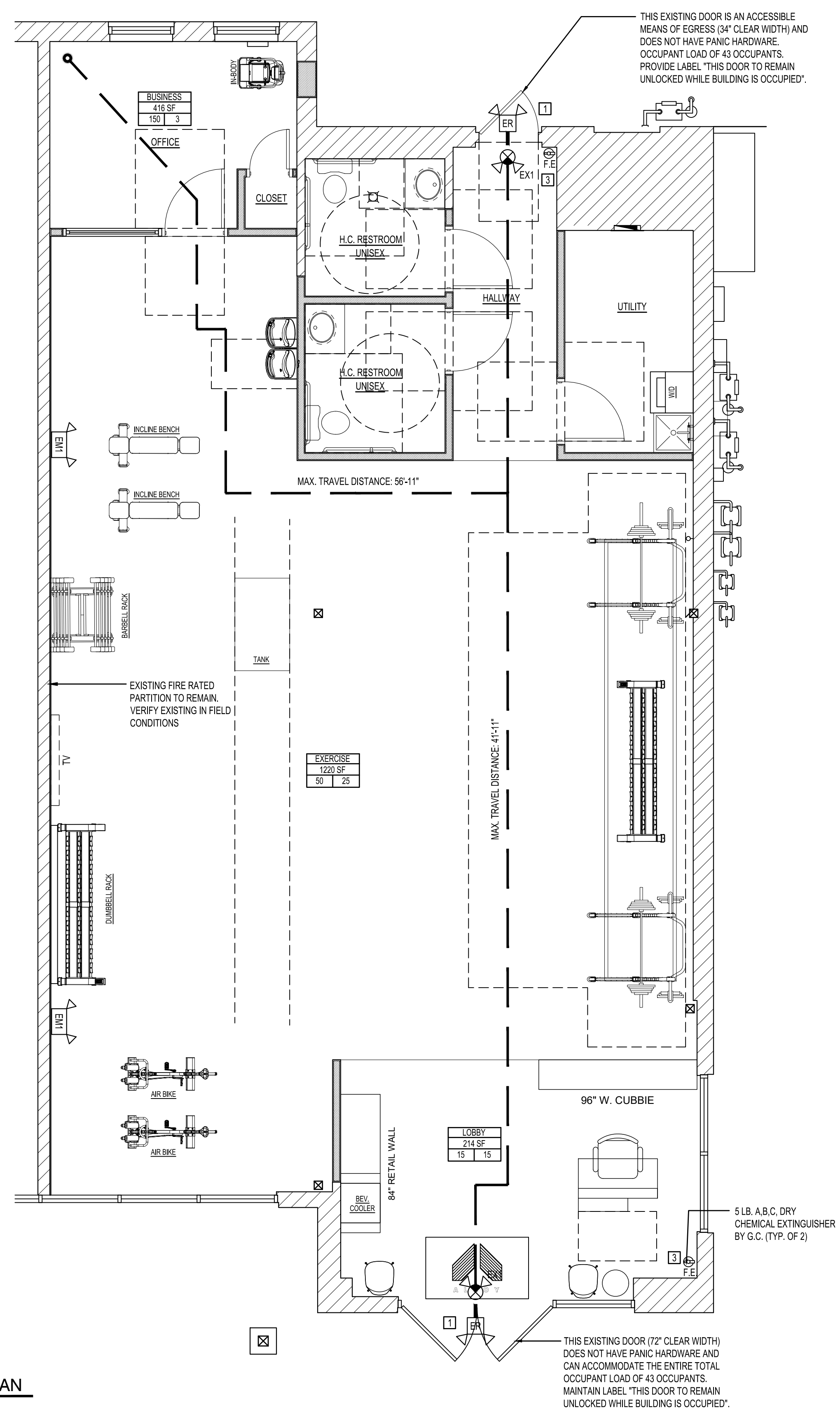
- MANUFACTURER: LARSENS  
 SERIES: MP - SERIES MULTI PURPOSE DRY CHEMICAL  
 MODEL NO.: MP5 (UL RATING 2A-10B-C)  
 BRACKET: PROVIDE WALL BRACKET



NOTES

PER THE 2018 INTERNATIONAL BUILDING CODE, SECTION 1011.3 A TACTILE SIGN - STATING EXIT AND COMPLYING WITH ICC A117.1 (RAISED LETTERING AND BRAILLE) IS TO BE PROVIDED ADJACENT TO EACH DOOR TO AN EGRESS STAIRWAY, AN EXIT PASSAGEWAY, THE EXIT DISCHARGE, AREA OF RESCUE, AND EXTERIOR AREA FOR ASSISTED RESCUE. SIGNS SHALL BE PLACED ON THE WALL, ON THE LATCH SIDE OF THE DOOR, 48 TO 60 INCHES OFF OF THE FLOOR.

1 LIFE SAFETY PLAN  
 SCALE: 1/4" = 1'-0"



2 SITE LOCATION MAP  
 NOT TO SCALE

LUL PENETRATION DETAIL NOTE:  
 1. ALL PENETRATIONS THROUGH THE DEMISING WALL(S) ARE EXISTING. NO CHANGES PROPOSED

LIFE SAFETY PLAN LEGEND

OCC	OCCUPANCY CLASSIFICATION
AREA	FLOOR AREA
XXX   XXX	TOTAL OCCUPANTS FOR THIS SPACE

SQUARE FOOTAGE ANALYSIS

TOTAL LEASABLE SQUARE FOOTAGE - 1993 SQ.FT.	
TOTAL USEABLE SQUARE FOOTAGE - 1850 SQ.FT.	
FITNESS AREA (1220 SF)	= 69%
LOBBY (214 SF)	= 17%
OTHER SPACE (416 SF)	= 14%
OCCUPANCY LOAD = 43	

OCCUPANCY LOAD CALCULATION:

FITNESS AREA - EQUIPMENT AREA (1220 SF) / 50	= 25
LOBBY (214 SF) / 15	= 15
OTHER SPACE (416 SF) / 150	= 3
TOTAL	= 43

**BUILDING DATA**

NAME OF PROJECT: INTERIOR UP-FIT FOR ALLOY PERSONAL TRAINING  
 ADDRESS: 14807 W 64TH AVE, ARVADA, CO 80007

THIS PROJECT WAS DESIGNED UNDER:  
 2018 INTERNATIONAL BUILDING CODE (MBPS)

PROPOSED USE: FITNESS CENTER / GYM  
 OWNER'S REPRESENTATIVE: GERALD P. NOE  
 CODE ENFORCEMENT JURISDICTION: ARVADA  
 GROSS AREA TENANT SPACE: 1,993 S.F. (EXISTING)  
 CONSTRUCTION TYPE: III-B SPRINKLERED  
 OCCUPANCY CLASSIFICATION: ASSEMBLY  
 OCCUPANT LOAD: 43 PERSONS (SEE LIFE SAFETY PLAN ON G-2.0)  
 EGRESS WIDTH REQUIRED: 43 PERSONS x .2' = 8.6' (MIN. 8.2" REQUIRED)  
 EGRESS WIDTH PROVIDED: 108"  
 (2) 3'-0" x 7'-0" FULL GLASS METAL DOOR  
 (1) 3'-0" x 7'-0" HOLLOW METAL DOOR

PLUMBING FIXTURES REQUIRED / PROVIDED PER 2902.2 (2021 I.B.C.):

REQUIRED:	MEN: 1 TOILET PER 75 MEN & 1 LAV. PER 100 MEN
	WOMEN: 1 TOILET PER 75 WOMEN & 1 LAV. PER 100 WOMEN
PROVIDED:	MEN: 1 TOILET PER 75 MEN & 1 LAV. PER 100 MEN
	WOMEN: 1 TOILET PER 75 WOMEN & 1 LAV. PER 100 WOMEN

MAXIMUM TRAVEL DISTANCE: 100'-0"  
 PROVIDE FIRE EXTINGUISHERS IN ACCORDANCE WITH N.F.P.A. 10

**GP | N**

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STATE OF COLORADO  
 ARCHITECT  
 401357

04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:  
 CHRISTINA & CURTIS VANDENBERG  
 509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:  
**ALLOY**  
**INTERIOR UP-FIT**  
 14807 W 64TH AVE,  
 ARVADA, CO 80007

SHEET TITLE:  
**LIFE SAFETY PLAN & CODE ANALYSIS**

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**G-2.0**

SHEET 2 OF 5

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04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**ACCESSIBILITY DETAILS**

PROJECT NUMBER 24-036

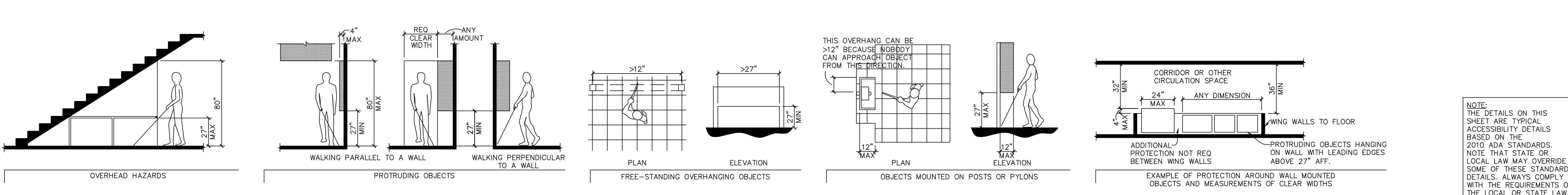
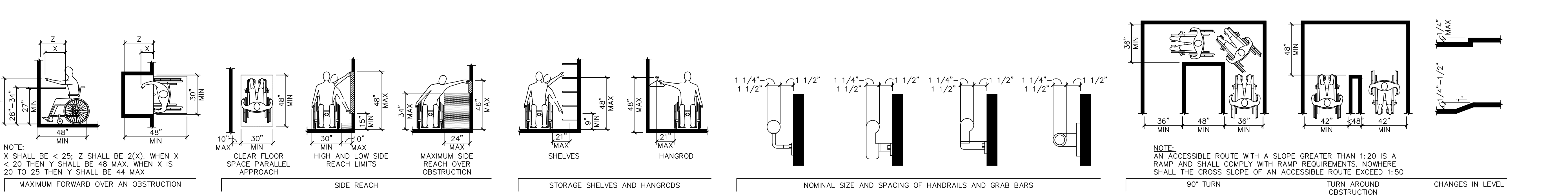
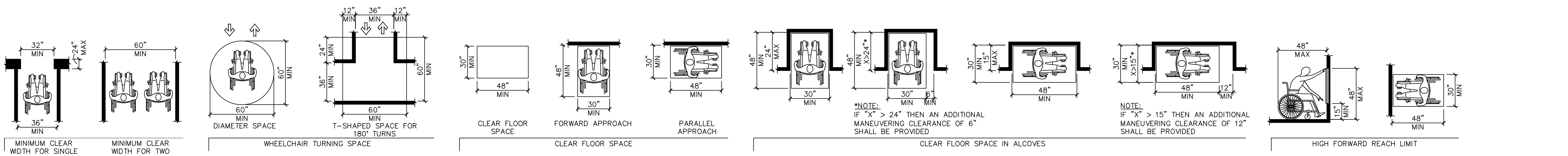
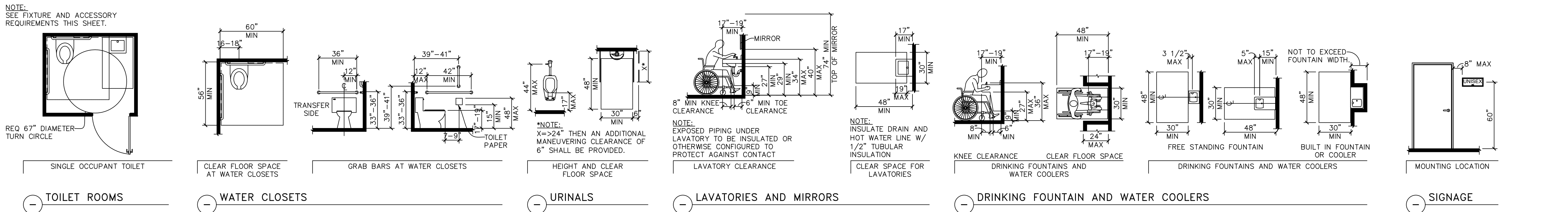
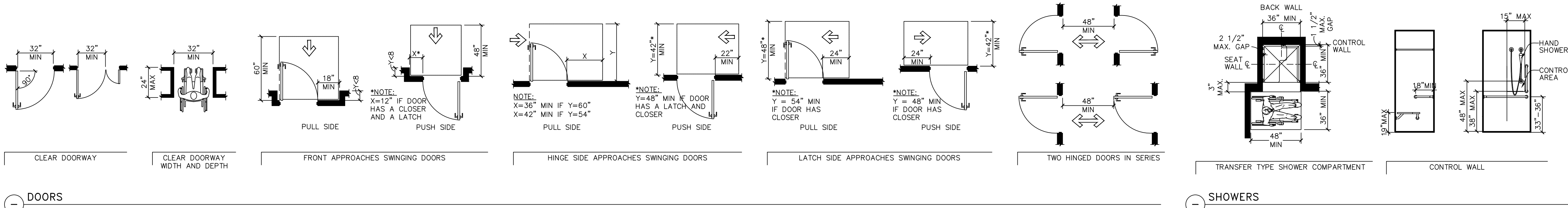
DATE 04-19-2023

SHEET NO.

**G-3.0**

SHEET 4 OF 5

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.



NOTE: THE DETAILS ON THIS SHEET ARE TYPICAL ACCESSIBILITY DETAILS BASED ON THE 2010 ADA STANDARDS. NOTE THAT STATE OR LOCAL LAW MAY OVERRIDE SOME OF THESE STANDARD DETAILS. ALWAYS COMPLY WITH THE REQUIREMENTS OF THE LOCAL OR STATE LAW.

**System No. W-L-1243**

ANSI/UL 1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0	FT Rating — 0
L Rating At Ambient - 5 CFM/sq ft	FH Ratings — 1 and 2 Hr (See Item 1)
L Rating At 400 F - Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient - 5 CFM/sq ft
	L Rating At 400 F - Less Than 1 CFM/sq ft

**SECTION A-A**

- Wall Assembly — The 1 or 2 hr. fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Design in the Fire Resistance Directory and shall include the following construction features:
  - Studs — Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide, fabricated from min 25 MSG galvanized steel, spaced max 24 in. (610 mm) OC.
  - Gypsum Board\* — 5/8 in. (16 mm) thick, 4 ft. (1.2 m) wide with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Designs. Max diam of opening is 3-1/2 in. (89 mm).
 The hourly F, FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
- Through-Penetrant — Max one flexible metal pipe or conduit installed concentrically or eccentrically within opening. The annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 1 in. (25 mm). Penetrant to be rigidly supported on both sides of wall assembly. The following types and sizes of penetrants may be used:
  - Flexible Metal Conduit+ — Nom 2 in. (51 mm) diam (or smaller) aluminum or steel flexible conduit installed either concentrically or eccentrically within the firestop system. The annular space between conduit and periphery of opening shall be min 0 in. (point contact) to max 1 in. (25 mm). Conduit to be rigidly supported on both sides of wall assembly. See Flexible Metal Conduit (DXUZ) category in the Electrical Construction Materials Directory for names of manufacturers.
  - Through Penetrating Product\* — Flexible Metal Piping — The following types of steel flexible metal gas piping may be used:
    - Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. OMEGA FLEX INC
    - Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. GASTITE, DIV OF TITFLEX
    - Min 5/8 in. (16 mm) thickness of fill material applied with annulus, flush with both surfaces of the wall. At point contact location between penetrant and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the penetrant /gypsum board interface on both sides of wall. WARD MFG L L C

**HILTI**  
Hilti Firestop Systems

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Page: 1 of 2

**System No. W-L-2098**

**F Ratings — 1 and 2 Hr (See Item 1)**  
**T Ratings — 1 and 2 Hr (See Item 1)**  
**L Rating At Ambient — Less Than 1 CFM/Sq Ft**  
**L Rating At 400 F — 4 CFM/Sq Ft**

**SECTION A-A**

- Wall Assembly — The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
  - Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
  - Gypsum Board\* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 4-3/8 in. (111 mm).
 The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
- Through Penetrants — One nonmetallic pipe installed within the firestop system. Pipe to be rigidly supported on both sides of floor or wall assembly. The space between pipe and periphery of opening shall be min 3/4 in. (19 mm) to max 1-1/4 in. (32 mm). Pipe to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:
  - Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) piping system.
  - Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) piping systems.
- Fill, Void or Cavity Material\* — Sealant — Installed to completely fill the annular space between the pipes and gypsum wallboard on both sides of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant. \* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

**HILTI**  
Hilti Firestop Systems

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**System No. W-L-5293**

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings - 1 and 2 Hr (See Item 1)	F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1 and 2 Hr (See Item 1)	FT Ratings - 1 and 2 Hr (See Item 1)
	FH Ratings - 1 and 2 Hr (See Item 1)
	FTH Ratings - 1 and 2 Hr (See Item 1)

**SECTION A-A**

- Wall Assembly — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
  - Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
  - Gypsum Board\* — Thickness, type, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 5 in. (127 mm).
 The hourly F, T, FT, FH and FTH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
- Through Penetrants — One Chlorinated Polyvinyl Chloride (CPVC) Pipe nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Nom 1-1/2 in. (38 mm) diam (or smaller) SDR 11 or SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems. Pipe to be rigidly supported on both sides of wall.
- Pipe Covering\* — Nom 1 in. (25 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56kg/m<sup>3</sup>) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe or tubing and periphery of the opening shall be min. 1/4 in. (6 mm) to max 7/8 in. (22 mm).
- Fill, Void or Cavity Material\* — Sealant — Min 5/8 in. (16 mm) thickness of sealant applied within annulus, flush with both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant \* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

**HILTI**  
Hilti Firestop Systems

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**System No. W-L-1175**

**F Ratings - 1 and 2 Hr (See Item 1)**  
**T Rating - 0 Hr**  
**L Rating at Ambient - Less Than 1 CFM/sq ft**  
**L Rating at 400 F - Less Than 1 CFM/sq ft**

**SECTION A-A**

- Wall Assembly — The 1 or 2 hr fire rated wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features.
  - Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
  - Gypsum Board\* — Nom 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the Fire Resistance Directory. Max diam of opening is 5-1/2 in. The hourly F and T Ratings of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Through Penetrant — One metallic tubing or conduit installed concentrically or eccentrically within the firestop system. Tube or conduit to be rigidly supported on both sides of wall assembly. The annular space between the tube or conduit and periphery of the steel sleeve shall be min 0 in. (point contact) to max 1 in. The following types and sizes of metallic tube or conduit may be used:
  - Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
- Fill Void or Cavity Material\* — Putty — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At point contact location between penetrant and wall, a 1/4 in. crown of fill material shall be applied at the conduit/wall interface on both sides of the assembly, lapping 1/4 in. on the conduit and 1/4 in. beyond the periphery of the opening. HILTI INC — CP618 Putty Slick

\*Bearing the UL Classification Mark

**HILTI**  
Hilti Firestop Systems

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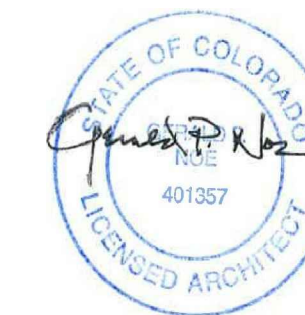
**GERALD P. NOE ARCHITECT**

COLORADO REGISTRATION NO. 401357

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04-19-2023

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NO.	DATE	DESCRIPTION	BY
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CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**UL DESIGN DETAILS**

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**G-4.0**

SHEET 7 OF 7

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CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**SLAB &  
DEMO PLAN**

PROJECT NUMBER 24-036

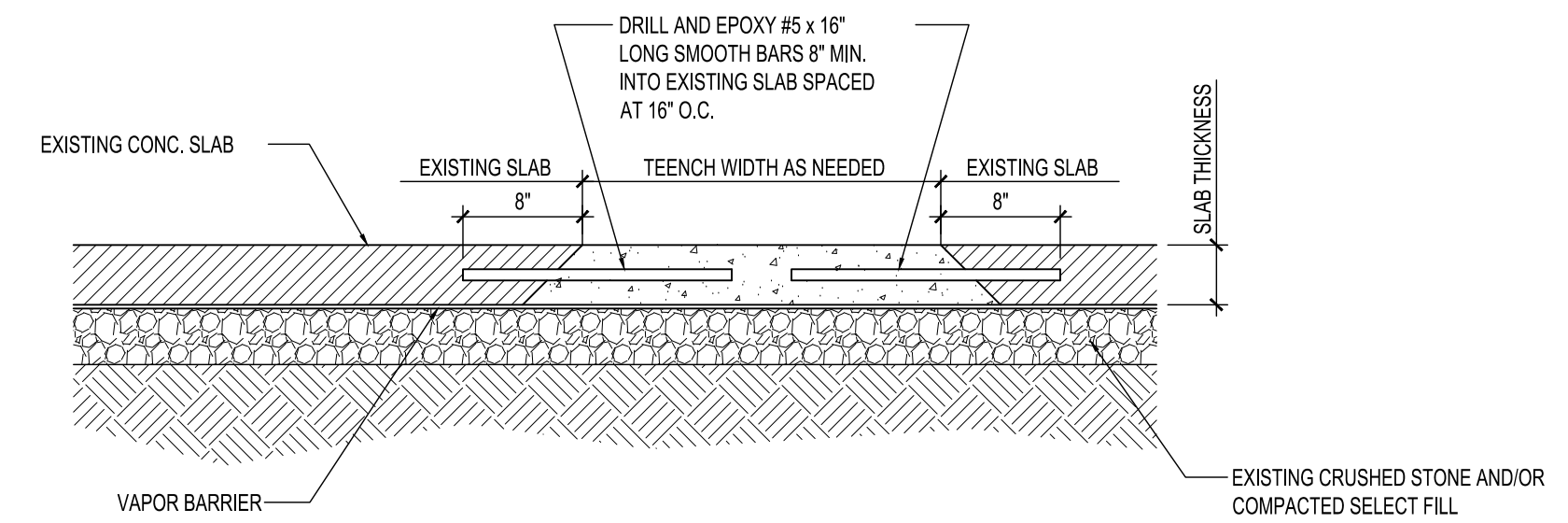
DATE 04-19-2023

SHEET NO.

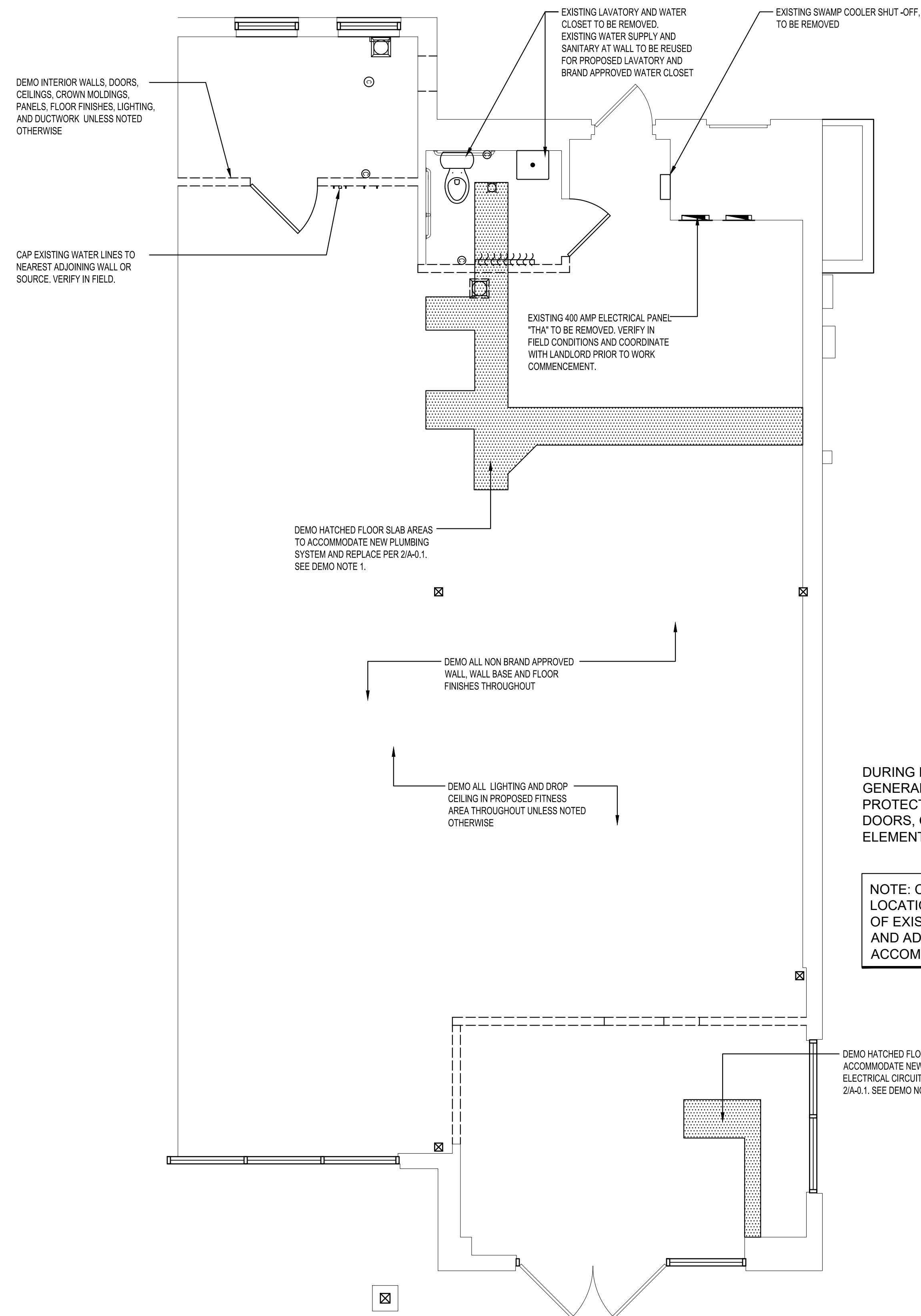
**A-0.1**

SHEET 1 OF 16

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.



**2 SLAB DETAIL**  
1" = 1'-0"



DURING DEMOLITION, THE GENERAL CONTRACTOR SHALL PROTECT ALL EXISTING WALLS, DOORS, GLAZING AND STRUCTURE ELEMENTS THAT ARE TO REMAIN.

NOTE: CONTRACTOR TO VERIFY LOCATION AND INVERT ELEVATION OF EXISTING SANITARYSEWER LINE AND ADJUST SYSTEM LAYOUT TO ACCOMMODATE.

- GENERAL DEMOLITION NOTES:**
- CONTRACTOR TO VERIFY ALL PLUMBING REQUIREMENTS BASED ON NEW EQUIPMENT PROVIDED. IDENTIFY EXTENT OF SLAB REMOVAL PRIOR TO CUTTING. INSTALL NEW PLUMBING FIXTURES TO COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES.
  - CUTTING OF EXISTING CONSTRUCTION FOR THE INSTALLATION OF ALL NEW WORK BY ALL TRADES, AND SUBSEQUENT PATCHED THEREOF, SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, WHETHER THE WORK IS DONE BY HIS OWN FORCES OR NOT. CUTTING SHALL BE TO A STRAIGHT LINE, UNWORKMANLIKE CUTTING, DAMAGE RESULTING FROM AND UNACCEPTABLE PATCHING SHALL REPAIRED AND/OR REPLACED TO AN ACCEPTABLE CONDITION APPROVED BY THE OWNER.
  - PATCHING MATERIAL SHALL MATCH EXISTING ADJACENT MATERIALS AND CLOSELY AS POSSIBLE IN COLOR, PATTERNS AND/OR TEXTURE.
  - ALL SALVAGE MATERIALS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER U.N.D. ALL NON-SALVAGED CONSTRUCTION MATERIALS AND DEBRIS FROM DEMOLITION WORK SHALL BE REMOVED FROM THE SITE AS WORK PROGRESSES.
  - PROTECT ALL EXISTING FINISHES, WALLS, FIXTURES, AND DEVICES TO REMAIN.
  - THE CONTRACTOR SHALL COORDINATE THE SEQUENCE OF WORK WITH THE OWNER. THE SCHEDULE SHALL BE REVISED AT THE WEEKLY JOB SITE MEETINGS.
  - CONTRACTOR TO PATCH EXISTING FINISHES TO ORIGINAL CONDITION AND TO TOUCH-UP FINISHES AS REQUIRED PRIOR TO INSTALLATION.
  - ALL EXISTING ELECTRICAL OUTLETS, SWITCHES, JUNCTION BOXES, CLEAN-OUTS, PLUMBING ACCESS SHALL REMAIN ACCESSIBLE.
  - CONTRACTOR TO VERIFY LOCATION AND INVERT ELEVATION OF EXISTING SANITARY SEWER LINE AND ADJUST SYSTEM LAYOUT TO ACCOMMODATE.
  - THE CONTRACTOR SHALL ENGAGE A LICENSED PROFESSIONAL PEST CONTROL OPERATOR TO APPLY TERMITE CONTROL SOLUTION WHERE THE SOIL IS DISTURBED. PROVIDE AN EPA-REGISTERED TERMITICIDE COMPLYING W/ REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, IN A SOLUBLE OR EMULSIBLE, CONCENTRATED FORMULATION THAT DILUTES WITH WATER OR FOAMING AGENT. USE ONLY SOIL TREATMENT SOLUTIONS THAT ARE NOT HARMFUL TO PLANTS. PROVIDE QUANTITY REQUIRED FOR APPLICATION AT THE LABEL VOLUME AND RATE FOR THE MAXIMUM TERMITICIDE CONCENTRATION ALLOWED FOR EACH SPECIFIC USE, ACCORDING TO THE PRODUCT'S EPA-REGISTERED LABEL.
  - CONTRACTOR SHALL DEMO ALL INTERIOR WALLS, FINISHES, CEILINGS, LIGHTING, UNUSED PLUMBING, DUCTWORK & UNUSED ELECTRICAL DEVICES.

**1 SLAB PLAN**  
1/4" = 1'-0"



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04-19-2023

REVISIONS:

NO. DATE DESCRIPTION BY

CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG 509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



INTERIOR UP-FIT 14807 W 64TH AVE, ARVADA, CO 80007

SHEET TITLE:

DIMENSIONED FLOOR PLAN

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

A-1.0

SHEET 2 OF 16

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.

MARK	SIZE	TYPE	FINISH	FRAME	HARDWARE		
					FINISH	GROUP	FINISH
101E	(2) 3'-0" x 7'-0" - EXISTING - ENTRY	A	EX	EXISTING	EX	EX	EX
102	3'-0" x 7'-0" - (1" UNDERCUT) - UTILITY	E	4	HM - PAINTED	1	1	3
103	3'-0" x 7'-0" - (1" UNDERCUT) - RESTROOM	E	4	HM - PAINTED	1	3	3
104	3'-0" x 7'-0" - (1" UNDERCUT) - RESTROOM	E	4	HM - PAINTED	1	3	3
105	3'-0" x 7'-0" - (1" UNDERCUT) - OFFICE	G	4	HM - PAINTED	1	1	3
106	2'-0" x 7'-0" - (1" UNDERCUT) - CLOSET	E	4	HM - PAINTED	1	1	3
106E	3'-0" x 7'-0" - EXISTING - REAR EXIT	F	EX	EXISTING	EX	EX	EX

DOOR TYPES (NOT ALL TYPES ARE USED)	
	TYPE A ALUM. / GLASS
	TYPE C INSULATED HOLLOW METAL
	TYPE E SOLID CORE WOOD
	TYPE F ALUM. / GLASS
	TYPE G WOOD WITH GLASS (WOOD TRIM AROUND GLASS)

FINISHES			
1	PAINTED THE SAME COLOR AS THE WALL THEY ARE LOCATED IN WITH SEMI-GLOSS PAINT		
2	MATCH EXISTING - ALUMINUM STOREFRONT		
3	BRUSHED NICKEL		
4	PAINT P4 (SEE FINISHES SCHEDULE ON SHEET A-1.2)		

GENERAL DOOR NOTES

- NEW EXTERIOR STOREFRONT DOORS AND WINDOWS ARE TO MATCH THE EXISTING AND / OR THE REMAINDER OF THE BUILDING.
- THE INTERIOR SURFACE OF HOLLOW METAL EXTERIOR EMERGENCY EXIT DOORS, INTERIOR DOORS ARE TO BE FLAT / SMOOTH SOLID CORE WOOD WITH PAINTED P4. RAISED PANEL OR HOLLOW-CORE DOORS ARE NOT ALLOWED.
- ALL NEW / EXISTING HOLLOW METAL DOOR FRAMES ARE TO BE WELDED OR KNOCK-DOWN HOLLOW METAL AND PAINTED TO MATCH THE ADJACENT WALL. WOOD FRAMES ARE NOT ALLOWED. THE FRAMES SHOULD BE PAINTED WITH A SPRAY APPLICATION; BRUSH AND ROLLER APPLICATION ARE NOT ALLOWED.

HARDWARE SETS (NOT ALL SETS ARE USED)

(SCHLAGE AL SERIES BRUSHED NICKEL)

- OFFICE & UTILITY: LOCKSET - LEVER HANDLE - KEYED HINGES - 1 1/2 PAIR DOOR STOP
- RESTROOM: LOCKSET - LEVER HANDLE (PRIVACY SET) HINGES - 1 1/2 PAIR DOOR STOP COAT HOOK DOOR CLOSER
- EXIT (REAR): PANIC DEVICE W/ KEYED DOGGING HINGES - 1 1/2 PAIR SELF-CLOSING DEVICE ADA THRESHOLD KEYED LEVER ON EXTERIOR SIDE WEATHERSTRIPPING
- GENERAL: PASSAGE LATCH SET (EXISTING) HINGES - 1 1/2 PAIR (EXISTING) SELF-CLOSING DEVICE (EXISTING) VERIFY THAT EXISTING HARDWARE IS IN GOOD WORKING ORDER AND REPLACE ANY ITEMS THAT ARE NEEDED OR MISSING

GENERAL CONSTRUCTION NOTES:

- ALIGNMENT OF DOOR HEADS AND OTHER CRITICAL HORIZONTAL ELEMENTS SHALL BE MAINTAINED AT A CONSTANT LEVEL RELATIVE TO THE CEILING PLANE, AND SHALL NOT FOLLOW VARIATIONS IN THE FLOOR PLANE.
- ALL PARTITION JOINTS SHALL BE SPACKLED, TAPED & SANDED SMOOTH WITH NO VISIBLE JOINTS.
- ALL EXTERIOR CORNERS OF GYPSUM BOARD SHALL HAVE SCREWED METAL CORNER BEADS.
- ALL NEW WET LOCATIONS (TOILET WALLS, MOP SINK AREAS, HAND SINK AREAS, ETC.) ARE TO HAVE WALLS CONSTRUCTED WITH 5/8" CEMENT BACKER BOARD WHERE TILE IS INSTALLED OR 5/8" WATER RESISTANT GYPSUM BOARD.
- CONTRACTOR TO PROVIDE AND IDENTIFY AREAS TO RECEIVE ACCESS PANELS. COORDINATE EXACT LOCATIONS WITH ALL SUB-CONTRACTORS.
- CONTRACTOR TO REVIEW CONDITIONS OF EXISTING FLOOR SLAB AND DETERMINE THE BEST METHOD FOR PATCHING, REPAIRING, FILLING AND SEALING OF NEW PATCHED SLAB AREAS.
- PROVIDE (2) 2A10B-C DRY CHEMICAL FIRE EXTINGUISHER MOUNTED ON WALL HOOK AS LOCATED ON PLAN.
- ALL MATERIALS AND PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL TILE SHALL BE INSTALLED PER THE TILE COUNCIL OF NORTH AMERICA STANDARD DETAILS.
- ALL INTERIOR FINISHES SHALL COMPLY WITH TABLE 803.9 OF THE 2021 INTERNATIONAL BUILDING CODE.

WALL TYPE LEGEND:

- 3-5/8" OR 6" (SEE PLAN) 20 GA. METAL STUDS @ 16" O.C. TO UNDERSIDE OF EXISTING DROP CEILING. PROVIDE 1/2" GYP. BD. IN OFFICES OR 1/2" WATER RESISTANT GYP. BD. IN WET AREAS
- 3-5/8" OR 6" (SEE PLAN) 20 GA. METAL STUDS @ 16" O.C. W/ 1/2" GYP. BD. TO ROOF DECK. PROVIDE R-23 ROCKWOOL INSULATION IN AT FULL HEIGHT.
- 1 HOUR FIRE RATED BARRIER
- 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO ROOF DECK W/ 1/2" GYP. BD. IN AREAS OR 1/2" WATER RESISTANT GYP. BD. IN WET AREAS & 1/2" CEMENT BACKER BOARD AT ALL TILE AREAS

DIMENSIONAL NOTE:

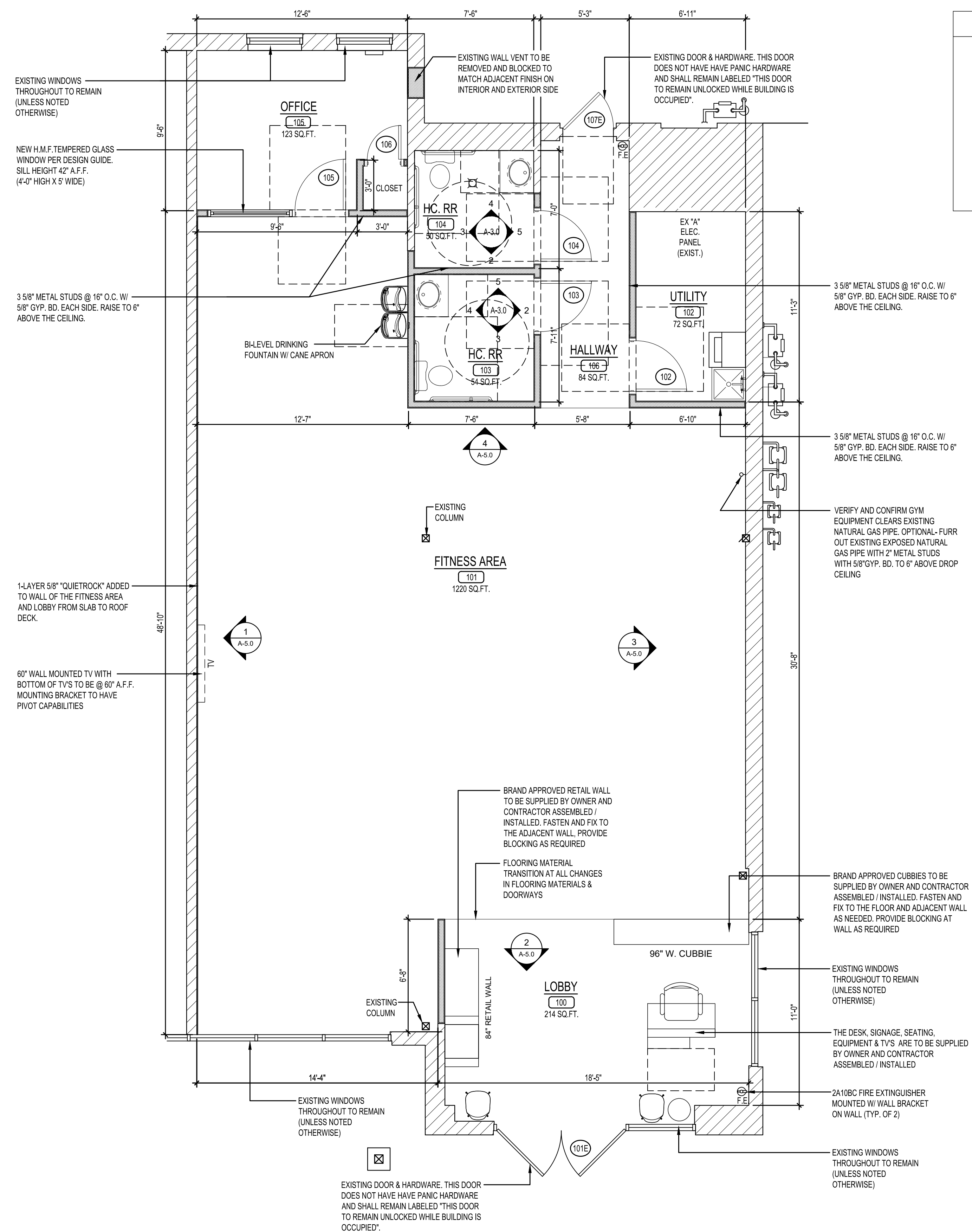
- EXISTING DIMENSION TO BE FIELD VERIFIED - ALL DIMENSIONS PULLED FROM EXISTING BUILDING WALLS ARE FROM THE FACE OF FRAMING OR STRUCTURE. ALL GYP. BD. SHALL BE INSTALLED AND FINISHED AS SCHEDULED

GENERAL WOOD BLOCKING NOTES:

- ITEMS REQUIRING BLOCKING
- TELEVISIONS
  - GRAB BARS
  - LAVATORIES
  - WALL MOUNTED SHELVING
  - RESTROOM MIRRORS
  - DESK
  - WALL MOUNTED SIGNAGE
- FOR WALL MOUNTED EQUIPMENT, CONTRACTOR MUST BUILD A REINFORCED WALL WITH ADDITIONAL BLOCKING - REFER TO MANUFACTURER SPECIFICATIONS.
  - BLOCKING HEIGHT LOCATIONS WILL VARY DUE TO INSTALLATION HEIGHTS AND CODE REQUIREMENTS - VERIFY PRIOR TO INSTALLING.

CONTRACTOR SHALL LABEL ALL EXTERIOR DOORS AND ELECTRICAL DISCONNECT WITH THE SUITE NUMBER IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

INSULATION NOTE: CONTRACTOR SHALL INSULATE ALL FURRED OUT NEW WALLS THAT ARE AGAINST INTERIOR AND EXTERIOR MASONRY / CONCRETE / METAL BUILDING WALLS. CONTRACTOR SHALL ALSO INSULATE ALL NEW RESTROOM WALLS AND CEILINGS PER REFLECTED CEILING PLAN.



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



**GERALD P. NOE ARCHITECT**

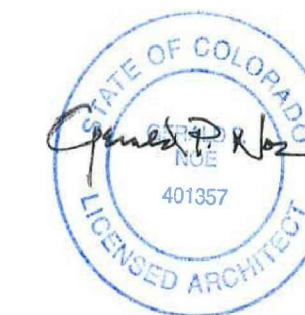
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CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**FF&E PLAN**

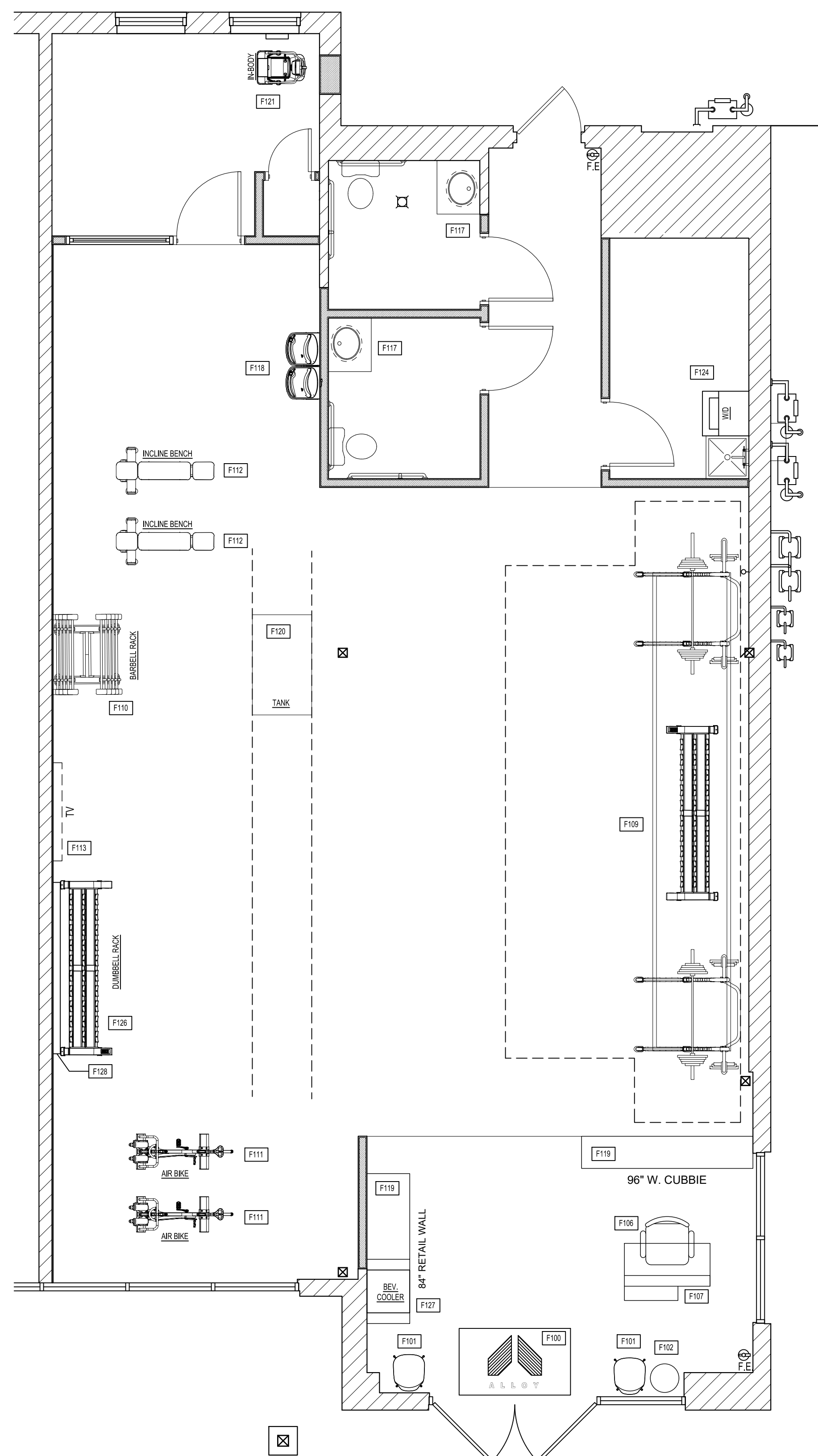
PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**A-1.1**

SHEET 3 OF 16



ITEM	DESCRIPTION
F100	LOGO ENTRY MAT, SEE FINISH PLAN (PROVIDED BY TENANT)
F101	GUEST CHAIRS, MIN. 4
F102	ROUND METAL TABLE
F106	BLACK TASK CHAIR (OR ALLOY YELLOW)
F107	CUSTOM RECEPTION DESK, W/ TWO COMPUTERS (PROVIDED BY FRANCHISEE AND INSTALLED BY CONTRACTOR)
F109	CUSTOM TORQUE FITNESS RACK A (SEE <a href="http://torquefitness.com">http://torquefitness.com</a> )
F110	BARBELL RACK, 36"W x 44-1/2"L x 58"H
F111	ASSAULT AIR BIKES ON WHEELS (PERFORMBETTER.COM), TOTAL OF 2
F112	TORQUE INCLINE BENCH
F113	60" MIN. TV, MOUNTED WALL WITH PIVOT MOUNT
F114	CUSTOM TORQUE FITNESS RACK B (SEE <a href="http://torquefitness.com">http://torquefitness.com</a> )
F117	CUSTOM SINGLE PED RR VANITY PROVIDED AND INSTALLED BY CONTRACTOR
F118	H/LOW DRINKING FOUNTAIN W/ BOTTLE REFILLER
F119	CABINET PROVIDED BY FRANCHISEE AND INSTALLED BY CONTRACTOR
F120	TORQUE TANK
F121	INBOY 570 SCALE
F123	TABLE AND CHAIRS
F124	STACKABLE WASHER & VENTLESS DRYER (PROVIDED BY FRANCHISEE AND INSTALLED BY CONTRACTOR)
F126	DUMBBELL RACK
F127	BEVERAGE COOLER BY FRANCHISEE
F128	SLAT WALL (4' X 8') (PROVIDED BY FRANCHISEE AND INSTALLED BY CONTRACTOR)

NOTE: ALL FURNITURE AND EQUIPMENT IS PROVIDED BY TENANT AND IS SHOWN TO REPRESENT SCALE, LOCATION AND TYPE

1 **FF&E PLAN**  
SCALE: 1/4" = 1'-0"

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**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**FINISH  
PLAN &  
DETAILS**

PROJECT NUMBER 24-036

DATE 04-19-2023

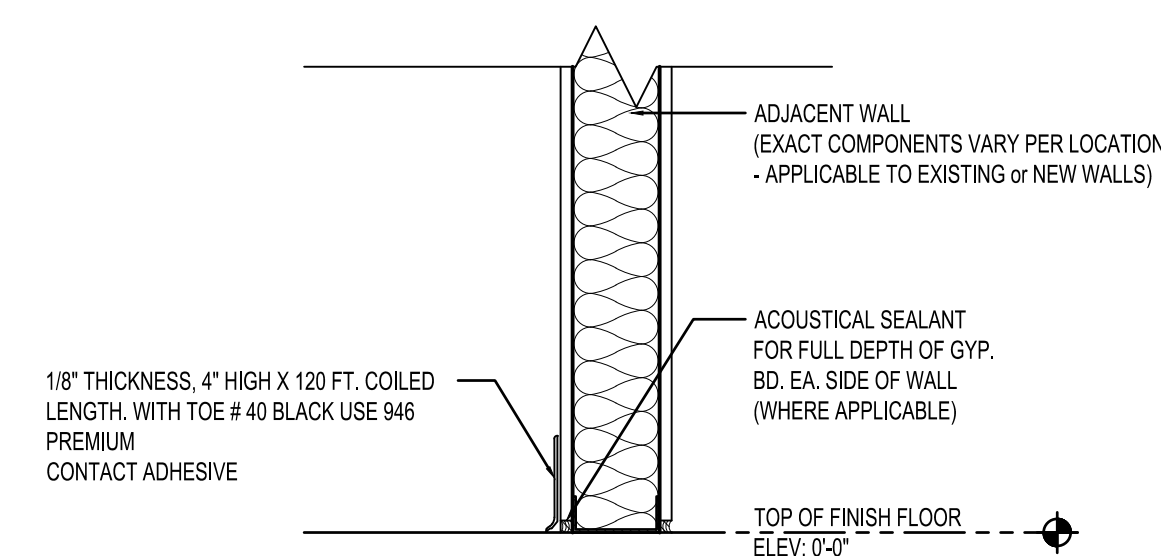
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**A-1.2**

SHEET 6 OF 6

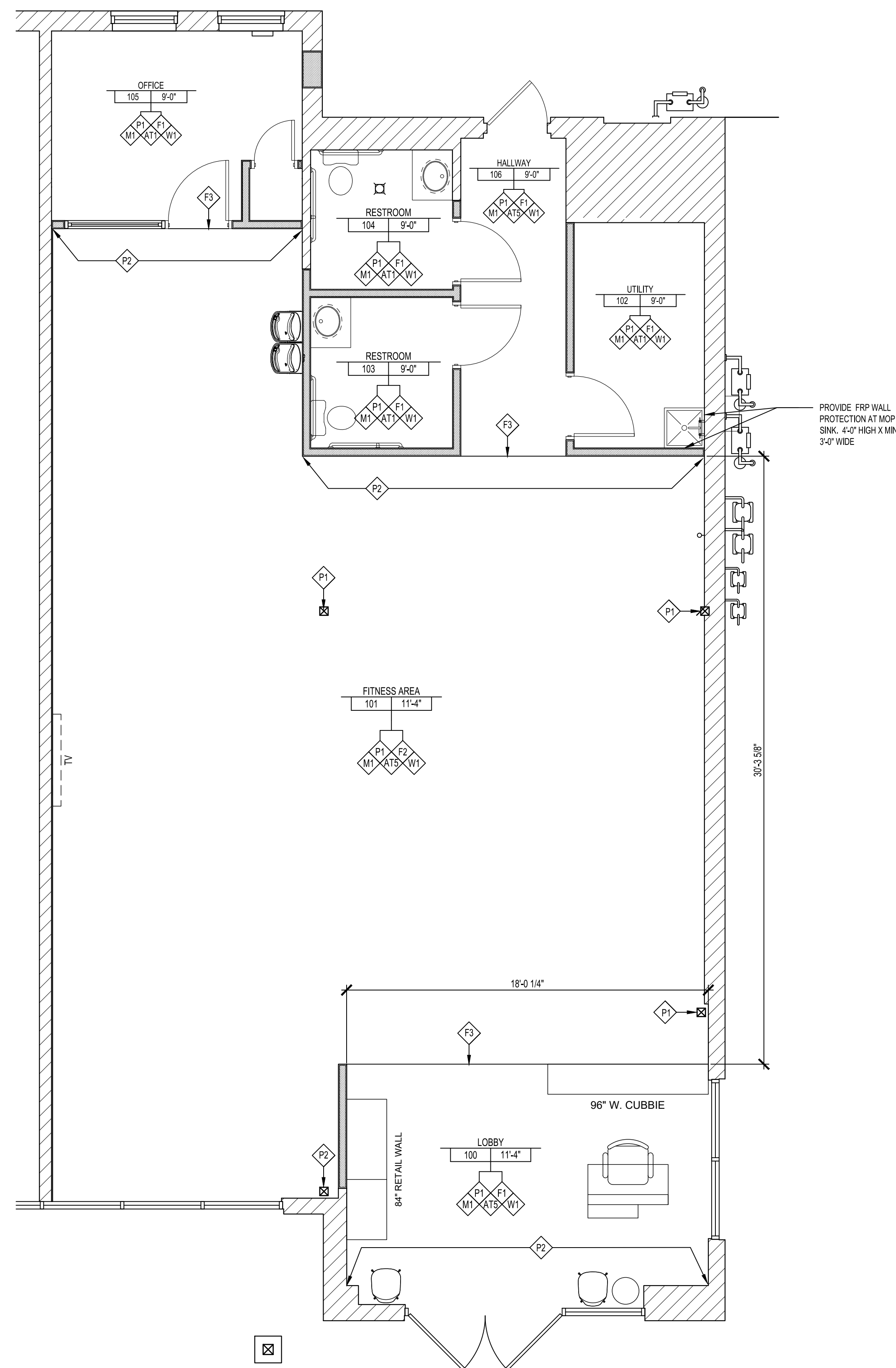
**PLAN NOTES**

- A. REFERENCE MATERIAL RESOURCES AND SCHEDULE SHEET FOR FINISH SELECTIONS AND ADDITIONAL INFORMATION.
- B. PROVIDE THRESHOLDS, TRANSITION STRIPS, EDGINGS, ETC. AT CHANGES IN FLOORING MATERIAL.
- C. PRIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL NOT BE LESS THAN CLASS N GROUPS A.
- D. CONTRACTOR TO GET BRAND & OWNER'S REPRESENTATIVE APPROVAL ON ALTERNATE MATERIAL SELECTIONS PRIOR TO PURCHASE AND INSTALLATION. PROVIDE SAMPLES.
- E. INTERIOR FINISH CLASSIFICATIONS:  
FOR SPRINKLERED BUILDINGS:  
INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS - CLASS B  
CORRIDORS AND ENCLOSURES FOR EXIT ACCESS STAIRWAYS AND RAMPS - CLASS C  
ROOMS AND ENCLOSED SPACES - CLASS C  
FOR NON-SPRINKLERED BUILDINGS:  
INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS - CLASS A  
CORRIDORS AND ENCLOSURES FOR EXIT ACCESS STAIRWAYS AND RAMPS - CLASS B  
ROOMS AND ENCLOSED SPACES - CLASS C  
CLASS A = FLAME SPREAD INDEX 0-25; SMOKEDEVELOPED INDEX 0-450  
CLASS B = FLAME SPREAD INDEX 26-75; SMOKEDEVELOPED INDEX 0-450  
CLASS C = FLAME SPREAD INDEX 76-200; SMOKEDEVELOPED INDEX 0-



**2 DETAIL WITH RUBBER BASE (TYP.)**

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



**1 FINISHES FLOOR PLAN**

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

**FINISHES SCHEDULE**

MOULDING (ALL MOLDINGS)	FLOORING
M1 4" JOHNSONITE-MODEL DC 40 4 x 120 1/8 Toe - Black, Rubber	F1 LUXURY VINYL TILE : MILLIKEN WILDERNESS COLLECTION, CLOVE MDW165, 6" X 48", INSTALL W/ 1/3 DROP EACH ROW, CLASSIFICATION CLASS III, TYPE B (SOLID VINYL FLOOR)
CONTRACTOR SHALL PROVIDE AND INSTALL ALL TRIM ACCESSORIES, THESE FINISH PRODUCTS SHALL BE INSTALLED IN STRICT ACCORDANCE W/ MANUFACTURER RECOMMENDATIONS ** TRIM ITEMS AVAILABLE AT LOCAL RETAILERS (LOWES & HOME DEPOT) **	
FLOORING	F2 RUBBER FLOORING: ACHIEVE 2, 8MM X 48 IN., D952, ARTEMIS GRAY- TO BE ACQUIRED BY THE CONTRACTOR FROM THE REQUIRED VENDOR, PLAE FLOORING AND INSTALLED AS PART OF THE CONTRACTOR'S WORK BY THE REQUIRED VENDOR
	F3 TRANSITION STRIP BETWEEN LVT AND RUBBER FLOORING, PROVIDED AND INSTALLED BY CONTRACTOR.
CEILING	PAINT STAIN
AT1 24" X 24" LAY-IN TILE: ARMSTRONG, DUNE, TEGULAR TILE WITH 15/16" CEILING GRID, WHITE	P1 SHERWIN WILLIAMS, SITE WHITE SW7070; SATIN FINISH ON WALLS, SEMI-GLOSS ON HOLLOW METAL DOOR FRAMES
AT2 EXPOSED STRUCTURE painted (BLACK)	P2 SHERWIN WILLIAMS, MONORAIL SW7663; SATIN FINISH ON WALLS, SEMI-GLOSS ON HOLLOW METAL DOOR FRAMES
AT3 EXISTING CEILING GRID TO BE PAINTED WHITE, IF NOT ALREADY WHITE, AND ANY DAMAGED CEILING TILES TO BE REPLACED TO MATCH EXISTING	P3 SHERWIN WILLIAMS, COLOR TO MATCH PANTONE 395U
AT4 EXISTING GYPSUM BOARD CEILING TO BE PAINTED WHITE	P4 SHERWIN WILLIAMS, TRICORN BLACK SW6258 ON ALL DOORS INSIDE SPACE
AT5 24"X48" LAY-IN TILE: ARMSTRONG FINE FINISHED, SQUARE EDGE, BLACK (1729BL), OR APPROVED EQUAL WITH 15/16" CEILING GRID, BLACK	P5 SHERWIN WILLIAMS, MATTE BLACK, FLAT FINISH (UNDERSIDE OF DECK AND DUCTWORK)
ALL INTERIOR FINISHES SHALL COMPLY WITH I.B.C. 803.9 & SECTION 804 INCLUDING CEILING TILE & FLOOR TILE	** PROVIDE EPOXY PAINT ON ALL WET WALLS INCLUDING LAUNDRY AND RESTROOMS **
WALL FINISHES	W2 EXISTING WALL TILE TO REMAIN
W1 GYPSUM BOARD - SMOOTH FINISH WALLS IN LOBBY AND FITNESS AREA WITH OPEN CEILING SHALL BE PAINTED EITHER P1 OR P2 (AS NOTED ON PLAN) FROM THE FLOOR UP TO THE LEVEL OF THE LOWEST POINT OF THE EXISTING ROOF JOISTS AND THEN BLACK P5 FROM THAT HEIGHT UP TO THE ROOF. MINIMUM PAINT CHANGE HEIGHT SHALL BE 10'-0" A.F.F. AND MAXIMUM PAINT CHANGE HEIGHT SHALL BE 14'-0" A.F.F.	
CONTRACTOR TO PROVIDE AND INSTALL 3W X 4H FRP WALL PROTECTION ON BOTH SIDES AT MOP SINK	
ALL NEW WALLS TO RECEIVE LEVEL 4 FINISH	
ALL INTERIOR FINISHES SHALL COMPLY WITH I.F.C. 803.1 - 804.1	

GENERAL FINISH FLOR PLAN NOTES

1. ALL FLOORING PRODUCTS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS TO INSURE ALL APPLICABLE WARRANTIES AND PROPER FINISH OUT.
2. PROVIDE VINYL CORNER GUARDS AS NEEDED, VERIFY SPECIFICATIONS WITH OWNER.
3. COORDINATION OF VINYL FLOORING TO CARPET TO BE OF FLAT CONSISTENT TRANSITION. PREPARATIONS TO BE MADE PRIOR TO INSTALLATION TO ALLOW FOR MATERIAL THICKNESS.
4. ALL VINYL FLOORING TO BE CENTERED UNLESS OTHERWISE NOTED.
5. CONTACT ARCHITECT IMMEDIATELY SHOULD ANY DISCREPANCIES OCCUR VIA CONSTRUCTION DOCUMENTS OR FINISHING.
6. ALL SOFFIT AND WALL PAINT TO BE EGGSHELL UNLESS OTHERWISE NOTED.
7. ALL PAINT ON DOOR TRIMS SHALL BE EGGSHELL UNLESS OTHERWISE NOTED.
8. ALL TRANSITIONS AT DOORS TO RECEIVE THRESHOLDS (TO BE ADA COMPLIANT).
9. PROVIDE FLOOR TRANSITION STRIP BETWEEN ALL CHANGES IN FLOORING BETWEEN ROOMS.
10. ALL INTERIOR FLOOR FINISHES TO COMPLY WITH IBC SECTION 804.
11. ALL WALL & CEILING FINISH MATERIALS TO COMPLY WITH IBC SECTION 803 AND TABLE 803.11.
12. PROVIDE/INSTALL MIN 6" SOUND BATT, INSULATION ABOVE ALL CEILINGS, THROUGHOUT.

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CLIENT NAME:

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PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**REFLECTED  
CEILING PLAN**

PROJECT NUMBER 24-036

DATE 04-19-2023

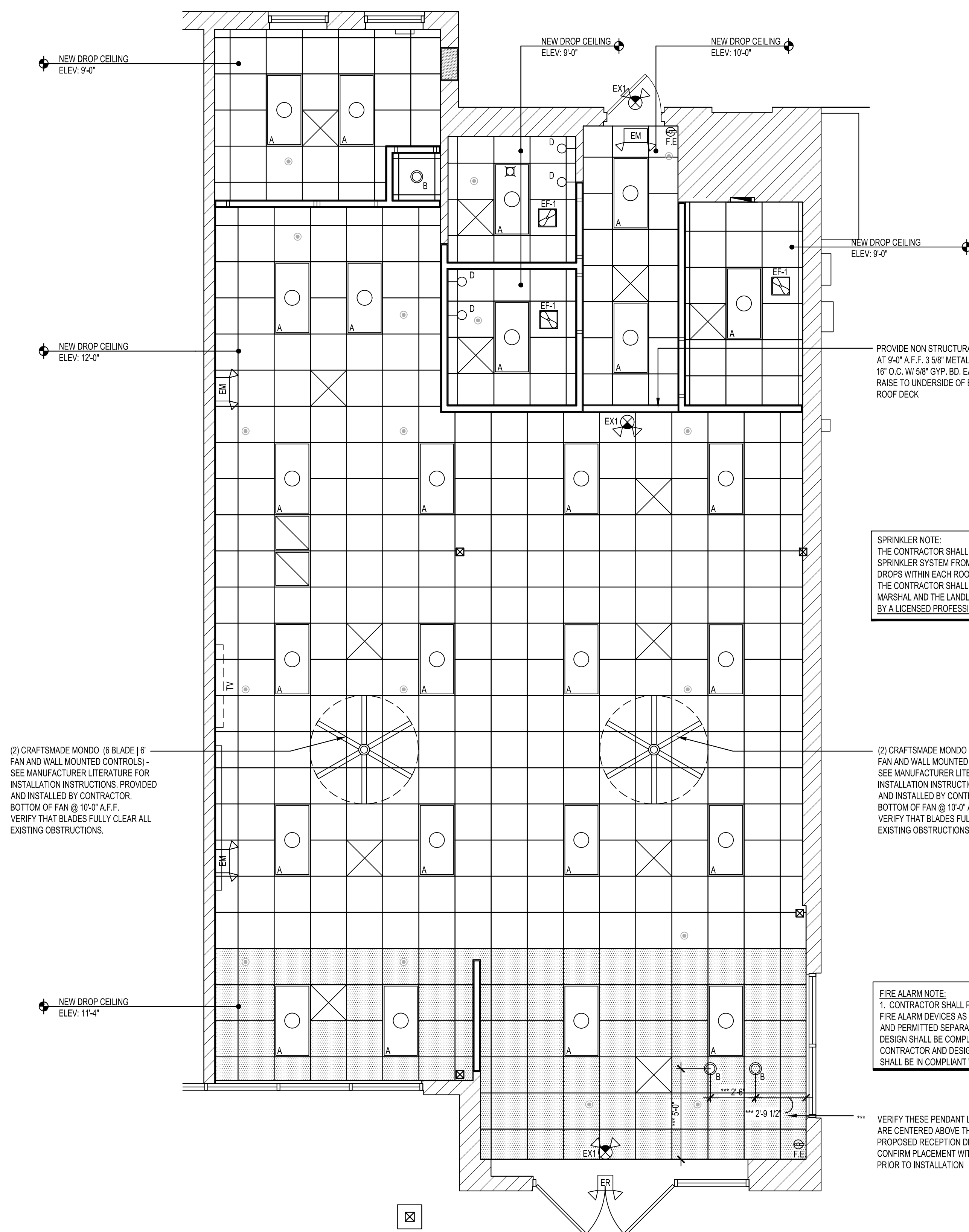
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LEGEND			
	2x4 LED PANEL - NIGHT LIGHT SEE ELECTRICAL FOR SPECIFICATION		EXHAUST FAN SEE HVAC FOR SPECIFICATION
	2x4 LED PANEL SEE ELECTRICAL FOR SPECIFICATION		EXIT LIGHT (GREEN TEST) W/ BATTERY BACK-UP SEE ELECTRICAL FOR SPECIFICATION
	2x2 SUPPLY AIR GRILL SEE HVAC FOR SPECIFICATION PAINTED TO MATCH CEILING COLOR		EMERGENCY LIGHT W/ BATTERY BACK-UP SEE ELECTRICAL FOR SPECIFICATION
	2x2 RETURN AIR GRILL SEE HVAC FOR SPECIFICATION PAINTED TO MATCH CEILING COLOR		REMOTE DISCHARGE DUAL HEAD SEE ELECTRICAL FOR SPECIFICATION
	SPRINKLER HEAD (UPRIGHT OR PENDANT) PRELIMINARY LOCATION		2x2 ACOUSTICAL CEILING SYSTEM SEE A-4.0 FOR SPECIFICATION
	SUSPENDED LED HIGH BAY LIGHT SEE ELECTRICAL FOR SPECIFICATION		PAINTED GYP. BD. CEILING
	LED PENDANT LIGHT SEE ELECTRICAL FOR SPECIFICATION		LED SCONCE LIGHT



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



Designation: E 580/E 580M - 09a

### Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions<sup>1</sup>

This standard is issued under the fixed designation E 580/E 580M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

#### 1. Scope

1.1 This practice covers the installation of suspended systems for acoustical tile and lay-in panels that are constructed to resist the effects of earthquake motions as defined by ASCE 7 and the International Building Code. These groupings are for Seismic Design Category C and Seismic Design Categories D, E and F.

1.2 The authority having jurisdiction shall determine the applicability of this practice.

1.3 Specification C 635 and Practice C 636 cover suspension systems and their installation without special regard to seismic lateral restraint needs. They remain applicable and shall be followed when this practice is specified.

1.4 This practice is not intended to stifle research and development of new products or methods. This practice is not intended to prevent the installation of any material or prohibit any design or method of construction not prescribed in this practice, provided that any such alternative has been substantiated by verifiable engineering data or full-scale dynamic testing that is acceptable to the authority having jurisdiction.

1.5 Ceiling areas of 1000 ft<sup>2</sup> [92.9 m<sup>2</sup>] or less shall be exempt from the lateral force bracing requirements of 5.2.8.

1.6 Ceilings constructed of gypsum board which is screw or nail attached to suspended members that support a ceiling on one level extending from wall to wall shall be exempt from the requirements of this practice.

1.7 Free floating ceilings (those not attached directly to any structural walls) supported by chains or cables from the structure are not required to satisfy the seismic force requirements provided they meet the following requirements:

1.7.1 The design load for such items shall equal 1.4 times the vertical operating weight.

1.7.2 Seismic interaction effects shall be considered in accordance with 5.7.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee E33 on Building and Environmental Acoustics and is the direct responsibility of Subcommittee E33.04 on Application of Acoustical Materials and Systems. Current edition approved Aug. 15, 2009. Published August 2009. Originally approved in 1976. Last previous edition approved in 2009 as E 580 - 09<sup>a</sup>.

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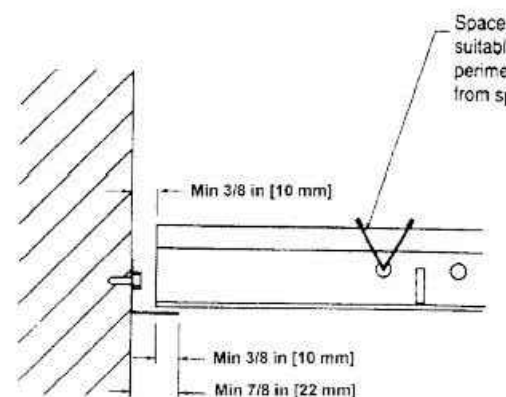


FIG. 1 Category C Treatment of Cross Runners, Main Runners, and Wall Closures at Terminal Ends

NFPA 70 National Electric Code<sup>6</sup>

#### 3. Significance and Use

3.1 This practice is a prescriptive set of installation methods to be used for suspended ceilings and is often used in lieu of designing a separate lateral restraint system. The authority having jurisdiction shall determine the applicability of this practice to local code requirements.

3.2 This practice covers installation of suspended ceiling systems and related components in areas that require resistance to the effects of earthquake motions as defined by ASCE 7 and the International Building Code.

3.3 The practice is broken into two main sections. The first section covers areas with light to moderate earthquake potential (Seismic Design Category C) while the second deals with severe earthquake potential (Seismic Design Category D, E & F).

3.4 This practice includes requirements from multiple sources including provisions of this practice, CISCA Seismic Recommendations for Direct-hung Acoustical Tile and Lay-in Ceilings, Seismic Zones 0-2 and CISCA Guidelines for Seismic Restraint for Direct Hung Suspended Ceiling Assemblies, Seismic Zones 3 & 4, suspended ceiling requirements from the International Building Code and ASCE 7. The purpose is to combine the requirements from these sources into a single comprehensive document.

#### 4. Seismic Design Category C

Note 1—This section is intended to provide an unrestrained (free-floating) ceiling system that will accommodate the movement of the structure during a seismic event.

##### 4.1 Suspension System Components:

4.1.1 The recommendations in this section are for ceilings systems with an average weight over the entire ceiling of 2.5 lb/ft<sup>2</sup> [12 N/m<sup>2</sup>] or less. This average weight includes suspension members, panels or tiles, light fixtures, supported flexible

<sup>6</sup> Available from National Fire Prevention Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269-9101.

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supported within 8 in. [200 mm] from each wall or ceiling discontinuity (see Fig. 3).

4.2.4 The terminal ends of suspension members shall have a minimum of 3/8-in. [9-mm] clearance from the wall as shown in Fig. 1. Reveal (shadow) edge wall closures with these clearances are shown in Fig. 2.

4.2.5 Terminal ends of main runners and cross members shall be tied together to prevent their spreading or have some other approved means to prevent their spreading. Stabilizer bars, cross tees or other means to prevent spreading shall occur within 8 in. [200 mm] of each wall.

4.2.6 Permanent runner end attachment (i.e., pop rivets) for grid alignment purposes shall not be permitted.

4.2.7 All ceiling penetrations (columns, sprinklers, etc.) and independently supported fixtures or services shall have a minimum of 0.375-in. [9-mm] clearance on all sides by using suitable escutcheons or perimeter closure details.

##### 4.3 Suspension Wire Application:

4.3.1 Suspension wires that are a minimum of No. 12 gauge [2.70 mm] galvanized, soft-annealed, mild steel wire shall be spaced at 4 ft [1200 mm] on center along each main runner, unless engineering calculations justifying increased spacing are provided.

4.3.2 Each vertical wire shall be attached to the ceiling suspension member and to the support above such that the wire loops shall be tightly wrapped and sharply bent to prevent any vertical movement or rotation of the member within the loops. The wire must be wrapped around itself a minimum of three full turns (360° each) within a 3-in. length. Connection devices to the supporting construction shall be capable of carrying not less than a 100-lb (45-kg) allowable load.

4.3.3 Suspension wires shall not hang more than one in six out of plumb unless countering wires are provided.

4.3.4 Wires shall not attach to or bend around interfering material or equipment. A trapeze or equivalent device shall be used where obstructions preclude direct suspension. Trapeze suspensions shall be sized to resist the dead load and lateral forces appropriate for Category C.

##### 4.4 Light Fixture Application:

4.4.1 All lighting fixtures shall be positively attached to the suspended ceiling system by mechanical means as specified in the National Electrical Code unless independently supported. The attachment device shall have the capacity of supporting 100% of the lighting fixture weight acting in any direction. A minimum of two attachment devices are required for each fixture.

4.4.2 Surface-mounted lighting fixtures shall be attached to the ceiling system with a positive clamping device that completely surround the supporting members. Safety wires shall be attached between the clamping device and the adjacent ceiling hanger or to the structure above. In no case shall the fixture exceed the design carrying capacity of the supporting members.

4.4.3 Lighting fixtures weighing less than 10 lb [5 kg] shall have one, No. 12-gauge [2.70 mm] safety wire connected from the fixture housing (not the detachable end plates) to the structure above. It is not necessary for these safety wires to be

taut. Supplementary hanger wires of cross tees supporting light fixtures shall not be required.

4.4.4 Lighting fixtures weighing less than 56 lb [25 kg] shall have, in addition to the requirements outlined in 5.4.1, two No. 12-gauge [2.70 mm] hanger wires connected from the fixture housing to the structure above that act as safety wires. It is not necessary for these safety wires to be taut.

4.4.5 Lighting fixtures weighing 56 lb [25 kg] or more shall be supported directly from the structure above by approved hangers.

4.4.6 Pendant-hung lighting fixtures shall be supported directly from the structure above using no less than No. 9-gauge [3.80 mm] wire or an approved alternate support. The ceiling suspension system shall not provide any direct support.

4.4.7 Rigid conduit is not permitted for attachment of the fixtures.

##### 4.5 Services within the Ceiling:

4.5.1 Flexible sprinkler hose fittings, ceiling mounted air terminals or other services weighing less than 20 lb [9 kg] shall be positively attached to the ceiling suspension main runners or cross runners that have the same carrying capacity as the main runners.

4.5.2 Flexible sprinkler hose fittings, air terminals or other services weighing more than 20 lb [9 kg] but less than 56 lb [25 kg] shall have, in addition to the requirements in 4.5.1, two No. 12-gauge [2.70 mm] hanger wires connected from the terminal or service to the ceiling system hangers or to the structure above that act as safety wires. It is not necessary for these wires to be taut.

4.5.3 Flexible sprinkler hose fittings, air terminals or other services weighing more than 56 lb [25 kg] shall be supported directly from the structure above by approved hangers.

##### 4.6 Partition Application to Suspended Ceilings:

4.6.1 The ceiling system shall not provide lateral support for walls or partitions. Walls or partitions shall only be attached to the ceiling suspension provided they allow the ceiling membrane to move laterally to accommodate the required clearance as specified in 4.2.4.

#### 5. Seismic Design Category D, E & F

Note 2—The objective of this section is to provide a restrained ceiling through either connection to the perimeter wall, or through bracing either rigid or non-rigid. The key to good seismic performance of this type of ceiling is the width of the closure angle around the perimeters are adequate to accommodate ceiling motion and that penetrations, such as columns and piping, have adequate clearance to avoid concentrating restraining loads on the ceiling system.

##### 5.1 Suspension System Components:

5.1.1 Only heavy-duty main tees as defined in Specification C 635 shall be used.

5.1.2 The main runners and cross runners of the ceiling system and their splices, intersection connectors, and expansion devices shall be designed and constructed to carry a mean ultimate test load of not less than 180 lb [80 kg] in compression and in tension. The tensile test shall allow for a 5° offset of the connection in any direction. Instead of a 5° misalignment, the load can be applied with a 1-in. [25-mm] eccentricity on a sample not more than 24 in. [600 mm] long on each side of the

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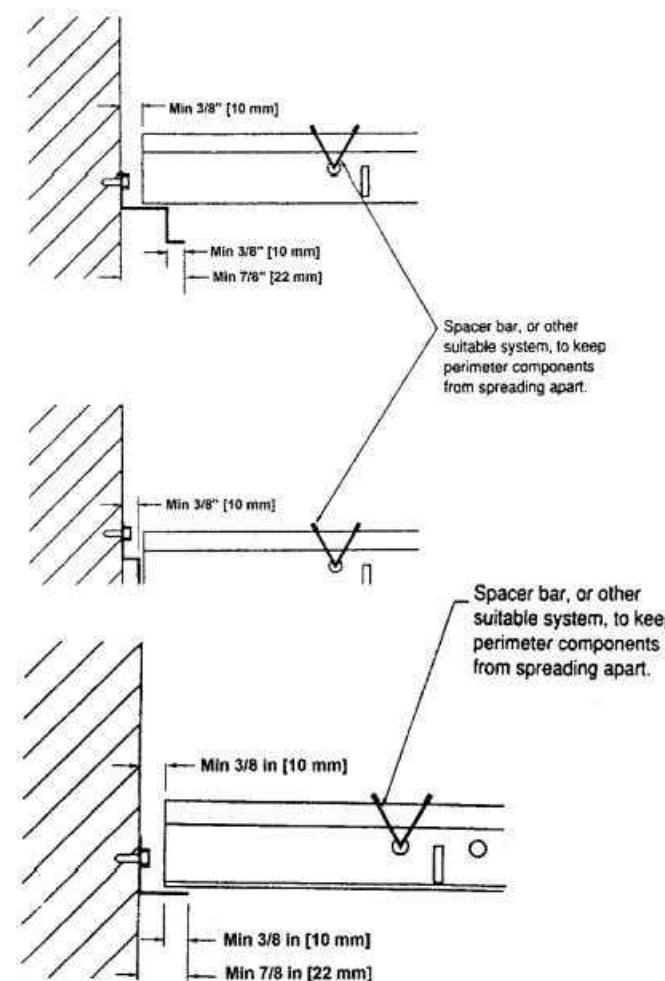


FIG. 2 Category C Treatment of Cross Runners and Main Runners at Terminal Ends When Using Reveal (Shadow) Edge Wall Closures

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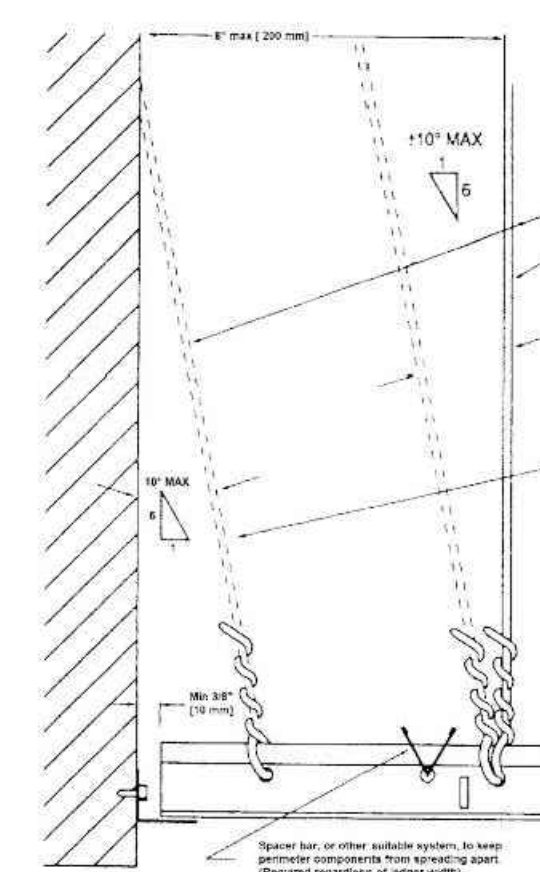


FIG. 3 Category C Treatment of Cross Runners and Main Runners at Terminal Ends When Support Ledge of Perimeter Closure is Less Than Minimum 3/8 in. [22 mm]

splice or intersection. The connectors at splices and intersections shall be the mechanical interlocking type.

5.1.3 Evaluation of test results shall be made on the mean values resulting from tests on a minimum of three identical specimens. If the deviation of any individual test result exceeds ±10% from the mean value, three additional samples shall be tested. After the required testing on the six specimens is complete, Drop the high and low test values and use the remaining four test results to obtain the mean test value average. If one of the remaining test results still exceeds the ±10% mean value, the lowest individual test value recorded from the six test will be used as the reported test result.

##### 5.2 Suspension System Application:

5.2.1 Unless perimeter members are a structural part of the approved system and meet the structural load carrying requirements, wall angles or channels shall be considered as aesthetic closers and shall have no structural value assessed to themselves or their method of attachment to the walls.

5.2.2 The perimeter support angle shall supply a support ledge of not less than 2 in. [50 mm].

5.2.3 Main runner and/or cross runner ends shall be attached to the perimeter on two adjacent walls. A clearance of 3/4 in. [18 mm] shall be maintained between the main runner and cross runner ends and the perimeter members on the two opposite walls (see Fig. 4, C-C). On the walls where the terminal end runners are not fixed to the perimeter supporting closure, allow for 3/4 in. [18 mm] axial movement.

5.2.4 Terminal ends of main runners and cross members shall be tied together or have some other approved means to prevent their spreading. Stabilizer bars, cross tees or other means to prevent spreading shall occur within 8 in. [200 mm] of each wall.

5.2.5 Direct concealed suspended ceiling systems shall have positively connected stabilizer bars or mechanically connected cross runners at a maximum spacing of 60 in. [1500 mm] perpendicular to the main runners. Stabilization shall occur within 24 in. [600 mm] of each wall.

5.2.6 The terminal end of each cross runner and main runner shall be supported independently, a maximum of 8 in. (200 mm) from each wall or ceiling discontinuity with No. 12-gauge [2.70 mm] wire or approved wall support. See Fig. 4.

##### 5.2.7 Suspension Wire Application:

5.2.7.1 Suspension wires of galvanized, soft-annealed, mild steel wire shall not be smaller than No. 12 gauge [2.70 mm] spaced at 4 ft [1200 mm] on center along each main runner unless calculations justifying the increased spacing or alternate materials are provided.

5.2.7.2 Each vertical wire shall be attached to the ceiling suspension member and to the support above such that the wire loops shall be tightly wrapped and sharply bent to prevent any vertical movement or rotation of the member within the loops. The wire must be wrapped around itself a minimum of three

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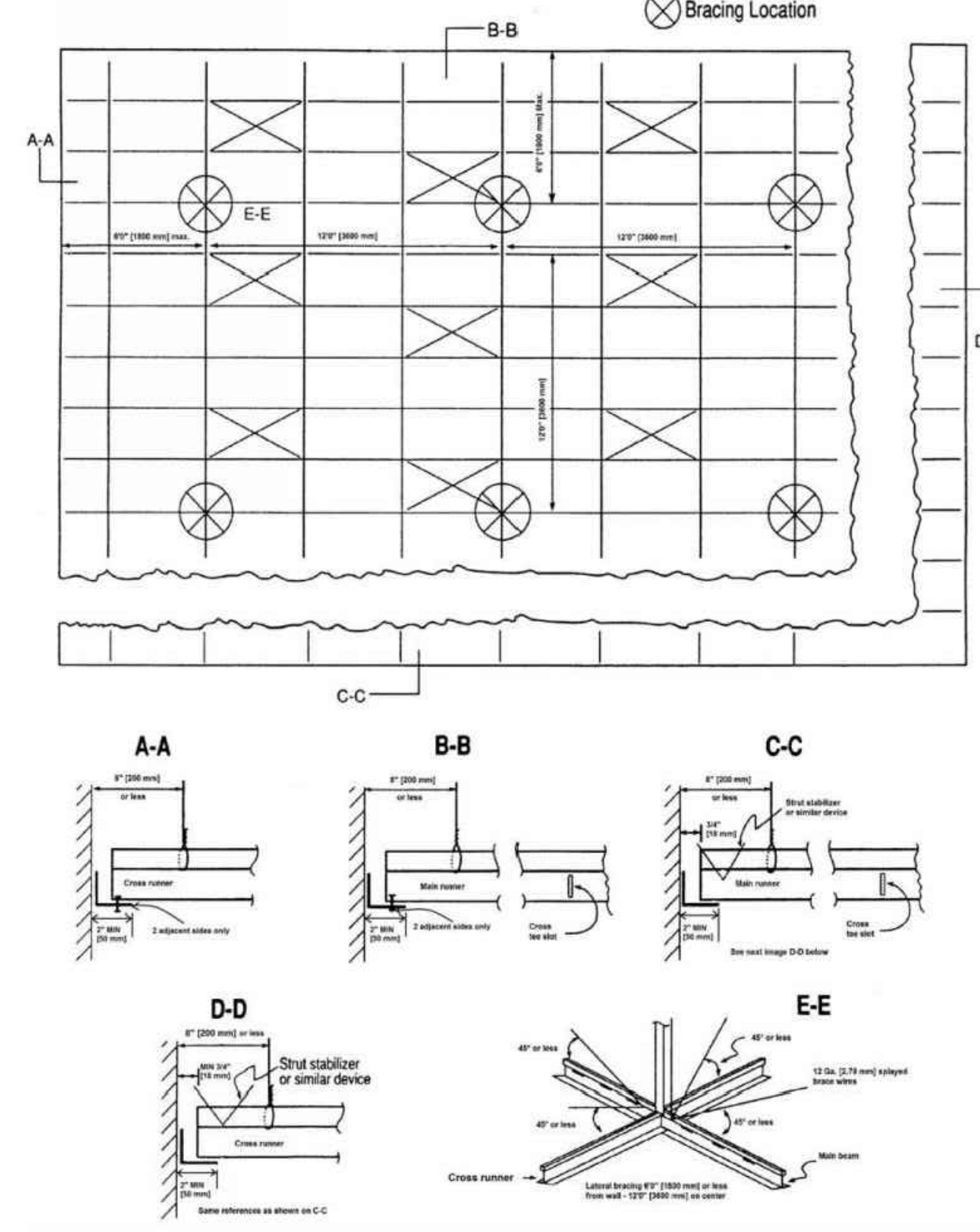


FIG. 4 Categories D, E & F Treatments

full turns (360° each) within a 3-in. [75-mm] length. Connection devices to the supporting construction shall be capable of carrying not less than a 100-lb [45-kg] allowable load.

5.2.7.3 Suspension wires shall not hang more than one in six out of plumb unless countering wires are provided.

5.2.7.4 Wires shall not attach to or bend around interfering material or equipment. A trapeze or equivalent device shall be used where obstructions preclude direct suspension. Trapeze suspensions shall be sized to resist the dead load and lateral forces appropriate for the seismic design category.

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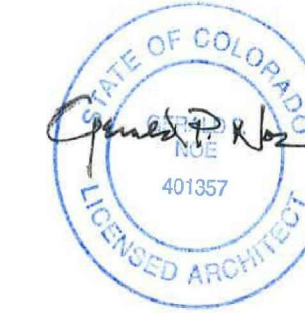
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SHEET TITLE:

ASTM E580  
CEILING DETAILS

PROJECT NUMBER 24-036

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SHEET 6 OF 16

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5.2.8 Lateral Force Bracing:  
5.2.8.1 Lateral force bracing is required for all ceiling areas greater than 1000 ft<sup>2</sup> [92.9 m<sup>2</sup>].

5.2.8.2 Horizontal restraints shall be effected by four No. 12-gauge [2.70 mm] wires secured to the main runner within 2 in. [50 mm] of the cross runner intersection and splayed 90° from each other at an angle not exceeding 45° from the plane of the ceiling. A strut fastened to the main runner at the location of the bracing wires shall be extended to and fastened to the structural members supporting the roof or floor above. The strut shall be adequate to resist the vertical component induced by the bracing wires. These horizontal restraint points shall be placed 12 ft [3600 mm] on center in both directions with the first point within 6 ft [1800 mm] from each wall. Attachment of the restraint wires to the structure above and to the main runner shall be adequate for the load imposed. See Fig. 4.

5.2.8.3 Lateral force bracing members shall be spaced a minimum of 6 in. [150 mm] from all horizontal piping or duct work that is not provided with bracing restraints for horizontal forces. Bracing wire shall be attached to the grid and to the structure in such a manner that they can support a load of not less than 200 lb [90 kg] or two times the actual design load, whichever is greater.

5.2.8.4 Rigid braces that have been designed to limit relative lateral deflections at the point of attachment of the ceiling grid to less than 0.25 in. [6 mm] are permitted to be used in the place of diagonal splay wires.

5.2.8.5 Except where rigid bracing is used or substantiating design calculations have shown that lateral deflections are limited to less than 0.25 in. [6 mm], sprinkler heads and other penetrations shall have a 2-in. [50-mm] oversize ring, sleeve or adapter through the ceiling tile to allow for free movement of at least 1 in. [25 mm] in all horizontal directions. Alternatively, a flexible sprinkler hose fitting that can accommodate 1 in. [25 mm] of ceiling movement shall be permitted to be used without the oversized ring, sleeve or adapter.

5.2.8.6 Changes in ceiling plane elevation shall have independent positive bracing.

5.2.8.7 Cable trays and electrical conduits shall be supported and braced independently of the ceiling.

5.2.8.8 Integral Ceiling/Sprinkler Construction—As an alternate to providing the large clearances specified in 5.2.8.4, it is acceptable for the sprinkler system and the ceiling system grid to be designed and constructed so that they are tied together as an integral unit. Such a design shall be performed by a registered engineer and shall consider the mass and flexibility of all elements involved, including the ceiling system, sprinkler system, light fixtures and mechanical (HVAC) appurtenances.

5.2.9 Seismic Separation Joint:

5.2.9.1 All continuous ceiling areas exceeding 2500 ft<sup>2</sup> [232 m<sup>2</sup>], shall have a seismic separation joint, bulkhead braced to the structure or full height partition that breaks the ceiling into areas of no more than 2500 ft<sup>2</sup> [232 m<sup>2</sup>] and having a ratio of the long to short dimension less than or equal to 4. Each area shall be capable of allowing ± 3/4 in. [18 mm] axial movement. Areas surrounded by bulkheads or full height partitions shall be provided with closure angles in accordance with 5.2.2. Each

area with a seismic separation joint, bulkhead or full height partition shall have horizontal bracing or restraints in accordance with 5.2.8.2.

5.3 Light Fixture Application:

5.3.1 All lighting fixtures shall be positively attached to the suspended ceiling system by mechanical means as specified in the National Electrical Code, unless independently supported. The attachment device shall have the capacity of 100 % of the lighting fixture weight acting in any direction. A minimum of two attachment devices are required for each fixture.

5.3.2 Surface-mounted lighting fixtures shall be attached to the ceiling suspension system with positive clamping devices that completely surround the supporting members. Safety wires shall be attached between the clamping device and the adjacent ceiling hanger or to the structure above. In no case shall the fixture exceed the design carrying capacity of the supporting members.

5.3.3 When the load carrying capability of cross tees supporting light fixtures is less than 16 lbs/ft (241.7 N/m), supplemental hanger wires shall be required. Supplemental hanger wires shall be installed as shown in Fig. 5.

5.3.4 Lighting fixtures weighing less than 10 lb [5 kg] shall have one, No. 12 gauge [2.70 mm] safety wire connected from the fixture housing to the structure above. It is not necessary for these safety wires to be taut.

5.3.5 Lighting fixtures weighing greater than 10 lb [5 kg] but less than 56 lb [25 kg] shall have, in addition to the requirements outlined in 5.3.4, two No. 12-gauge [2.70 mm] hanger wires connected from the fixture housing (not the detachable end plates) to the structure above that act as safety wires. It is not necessary for these safety wires to be taut.

5.3.6 Lighting fixtures weighing 56 lb [25 kg] or more shall be supported directly from the structure above by approved hangers.

5.3.7 Pendant-hung lighting fixtures shall be supported directly from the structure above using no less than No. 9-gauge [3.70 mm] wire or an approved alternate support. The ceiling suspension system shall not provide any direct support.

5.3.8 Rigid conduit shall not be used for attachment of the fixtures.

5.4 Services within the Ceiling:

5.4.1 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing less than 20 lb [9 kg] shall be positively attached to the ceiling suspension main runners or to cross runners that have the same carrying capacity as the main runners.

5.4.2 Flexible sprinkler hose fittings, air terminals or other services weighing more than 20 lb [9 kg] but less than 56 lb [25 kg] shall have, in addition to the requirements in 5.4.1, two No. 12-gauge [2.70 mm] hanger wires connected from the terminal or service to the ceiling system hangers or to the structure above that act as safety wires. It is not necessary for these wires to be taut.

5.4.3 Flexible sprinkler hose fittings, air terminals or other services weighing more than 56 lb [25 kg] shall be supported directly from the structure above by approved hangers.

5.5 Partition Application to Suspended Ceilings:

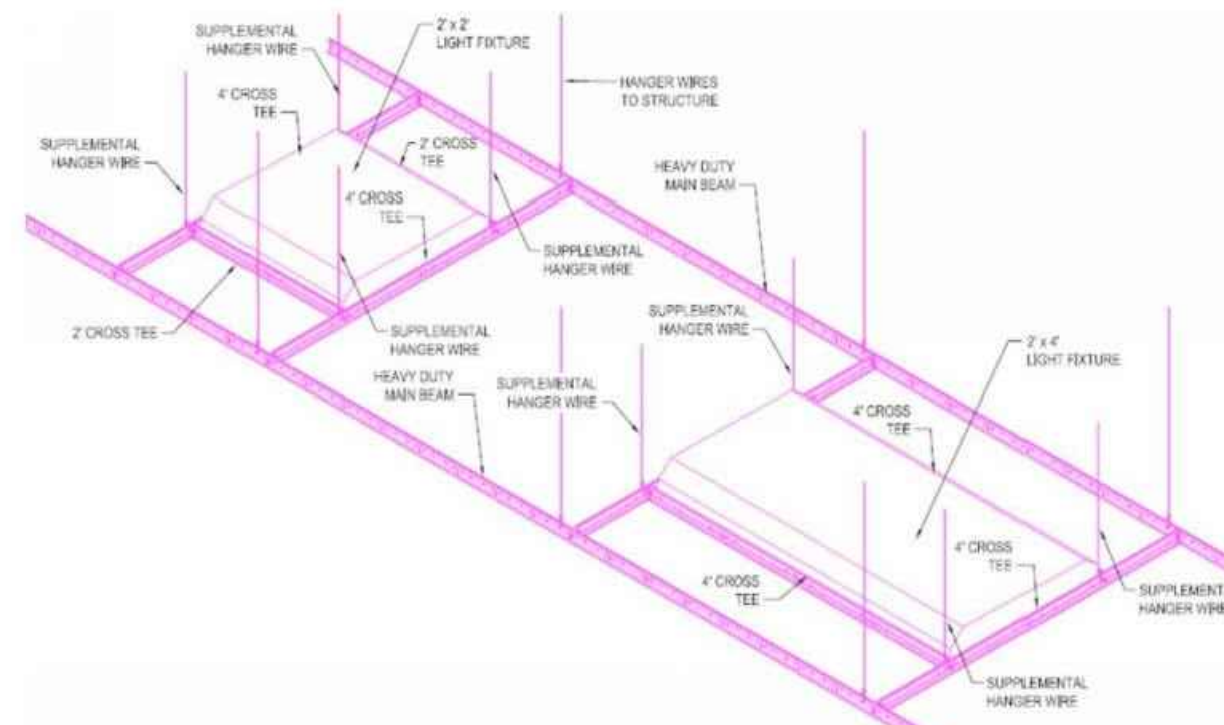


FIG. 5 Supplemental Hanger Wires at Light Fixtures (continued)

essential or non-essential ceiling, mechanical or electrical component shall not cause the failure of an essential ceiling, mechanical or electrical component. This shall be the responsibility of the design professional.

Note 3—An essential component is a component that must function and be operable immediately after a seismic event.

6. Substantiation

6.1 Each ceiling system manufacturer shall furnish tension and compression force capabilities of main runner splices, cross runner connections, and expansion devices. The manufacturer shall also furnish load capabilities of the suspension system components.

6.2 All load testing shall be conducted or witnessed by an approved independent testing agency.

6.3 All seismic ceiling designs not conforming to this standard shall be by a licensed engineer and shall be approved by the authority having jurisdiction.

7. Drawings and Specifications

7.1 The drawings shall clearly identify all systems and shall define or show all supporting details, lighting fixture attachment, lateral force bracing, partition bracing, etc. When this standard is referenced in a drawing, this standard shall be considered part of the requirements of the drawing to the prescribed extent of such reference. Where differences occur between provisions of this standard and referenced codes, the provisions of the code shall apply. Deviations or variation shall be shown or defined in detail.

8. Keywords

8.1 ceiling suspension; earthquake; seismic; seismic restraint; suspended ceiling

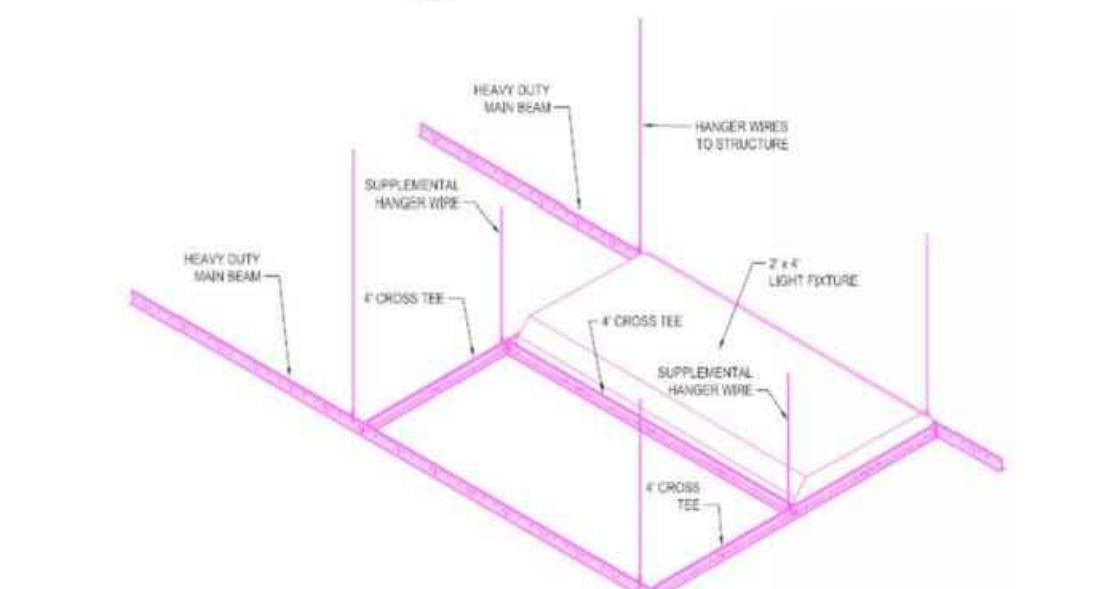


FIG. 5 Supplemental Hanger Wires at Light Fixtures

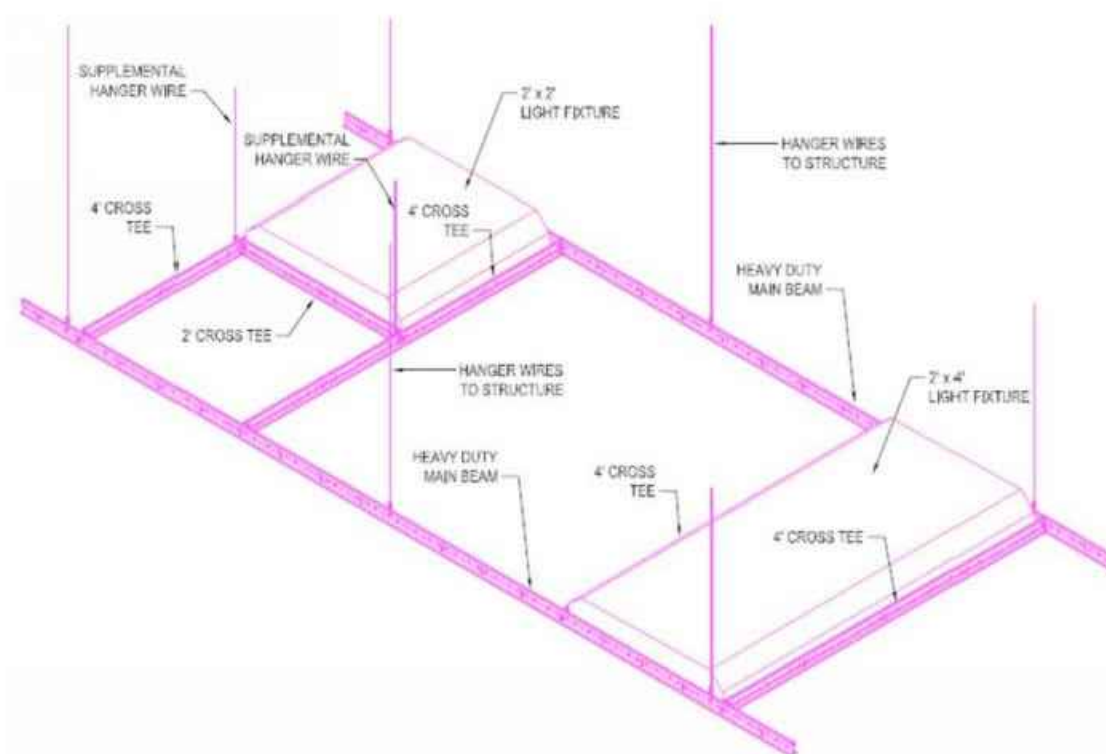


FIG. 5 Supplemental Hanger Wires at Light Fixtures (continued)

5.5.1 Partitions that are tied to the ceiling and all partitions greater than 6 ft (1.8 m) in height shall be laterally braced to the building structure. Such bracing shall be independent of any ceiling splay bracing. Bracing shall be spaced to limit horizontal deflection at the partition head to be compatible with ceiling deflection requirements as determined for suspended ceilings.

5.6 Ceiling Penetrations:

5.6.1 All ceiling penetrations (columns, etc.) and independently supported fixtures or services shall be considered as perimeter closures that also must allow the required clearances by using suitable closure detail.

5.7 Consequential Damage/Seismic Interaction Effects:

5.7.1 The functional and physical interrelationship of architectural components (ceilings), their supports, and their effect on each other shall be considered so that the failure of an

APPENDIX  
(Nonmandatory Information)

X1. COMMENTARY

X1.1 Recommendations in previous versions of this practice were based in part on testing done in the 1980's. This, coupled with general observations from the earthquake prone areas in California have lead to the original practice.

X1.2 Actual earthquake experience (most notably Northridge and Loma Prieta earthquakes) has shown that three main things are critical for good performance of ceiling systems during earthquakes which are:

X1.2.1 Independent safety wires on light fixtures to prevent dropout.

X1.2.2 Minimum strength requirements for splices and cross/runner/main runner intersections, and

X1.2.3 Spreader bars and independent support of suspension member terminal ends at wall closures which prevent panel dropout if the perimeter suspension terminal end slips off of the closure support ledge.

X1.3 These observations have lead to the requirement for safety wires on light fixtures and minimum connection

strengths in Practice E 580/E 580M. This also led to the requirement for 2-in. [50 mm] perimeter support ledge and the requirement for independent support of terminal ends of suspension members.

X1.4 Advent of International Building Code has raised the awareness of seismic installation requirements in areas within the United States where these requirements traditionally were not a concern.

X1.5 The introduction of non-traditional ceiling made of wood and metal, as well as ceilings that do not use traditional tee bar suspension systems, has lead to a need for an expansion of the prescriptive installation requirements. There has been also a general concern over the interaction of the ceiling system with HVAC components, lights and sprinklers. This coupled with the coming of next generation of performance based seismic codes has lead to new interest in clear and concise requirements for installation of ceiling systems. The result is this current rewrite of this practice.

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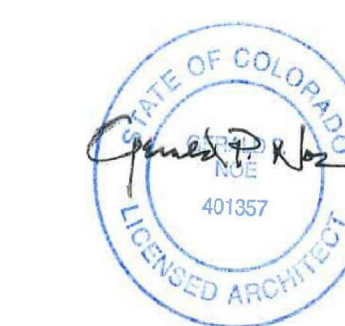
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CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



INTERIOR UP-FIT  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

ASTM E580  
CEILING DETAILS

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.:

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**INTERIOR UP-FIT**  
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ARVADA, CO 80007

SHEET TITLE:

**RESTROOM ELEVATIONS & DETAILS**

PROJECT NUMBER 24-036

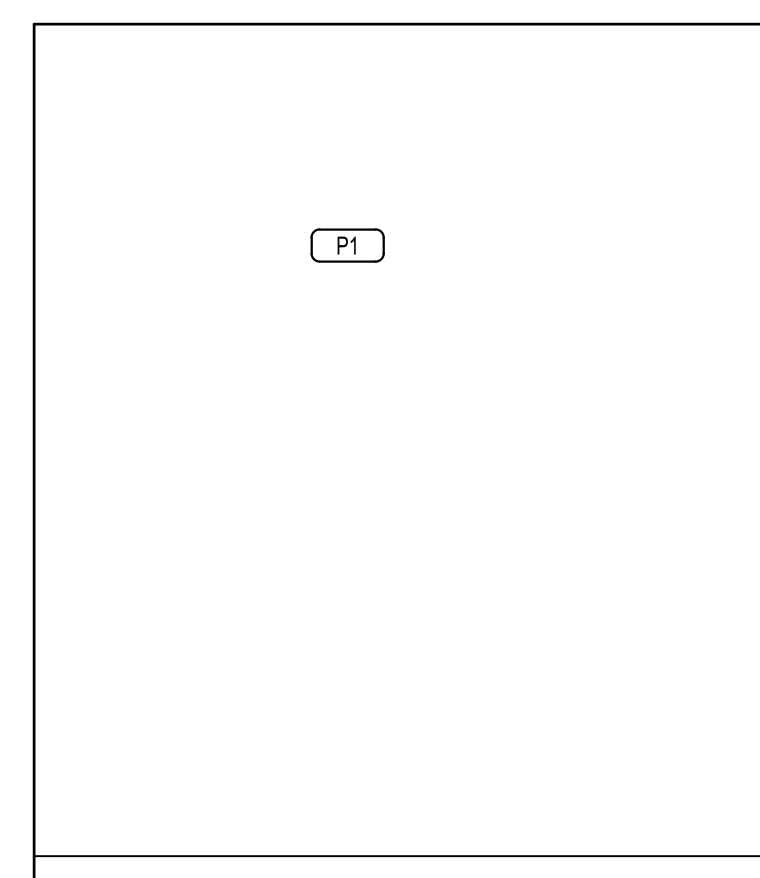
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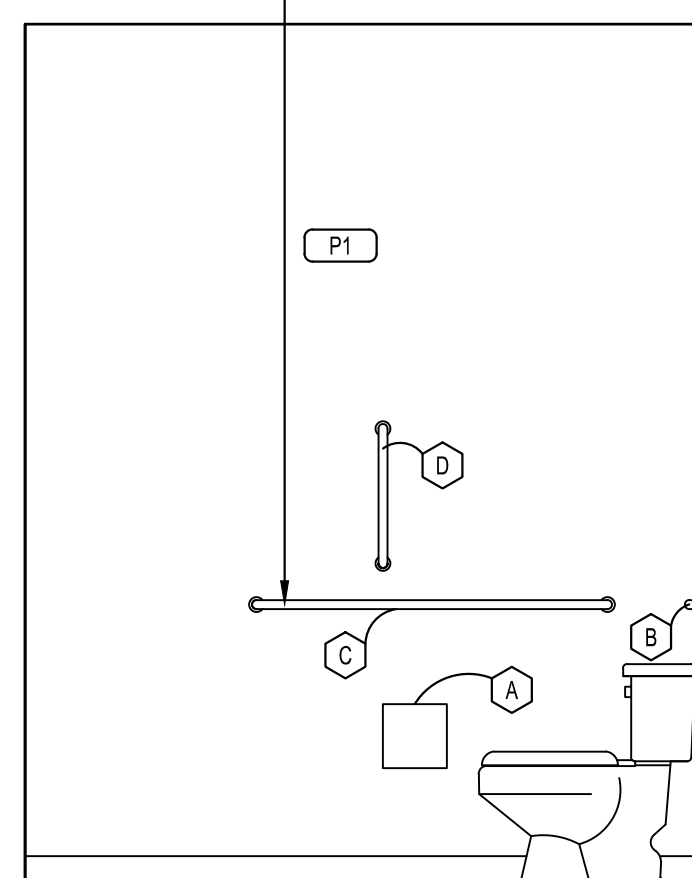
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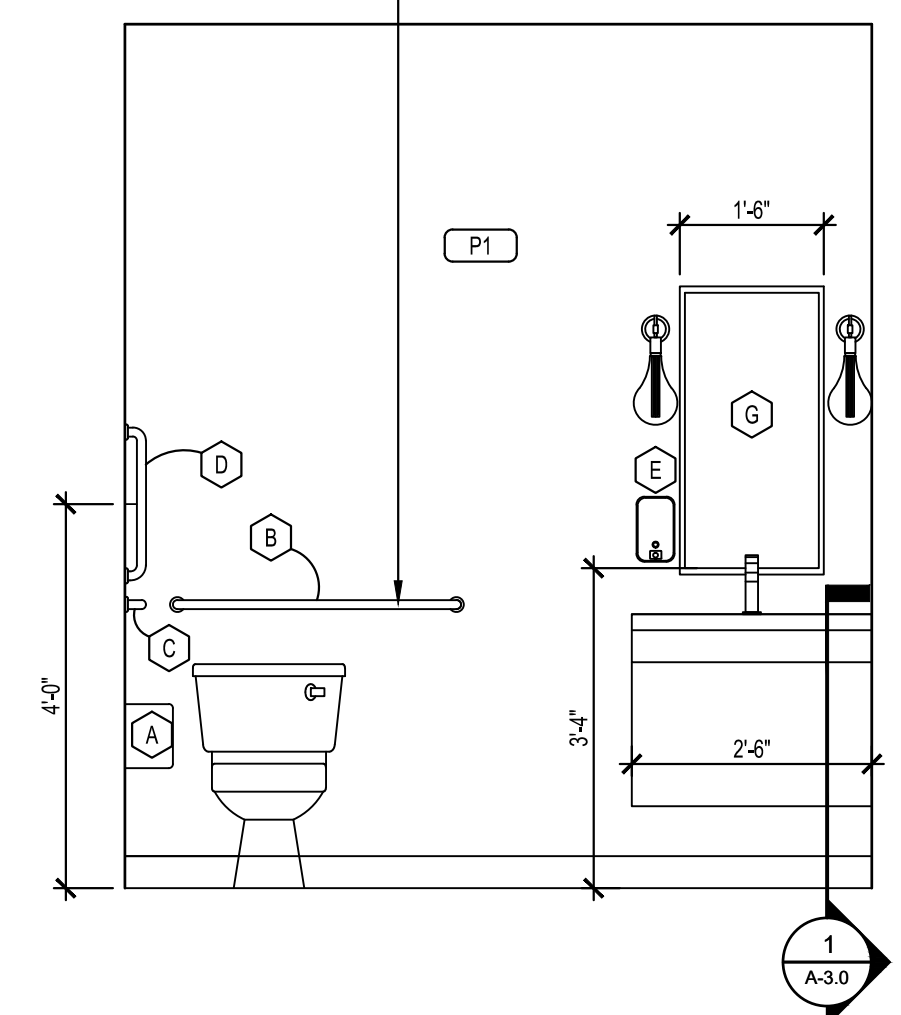
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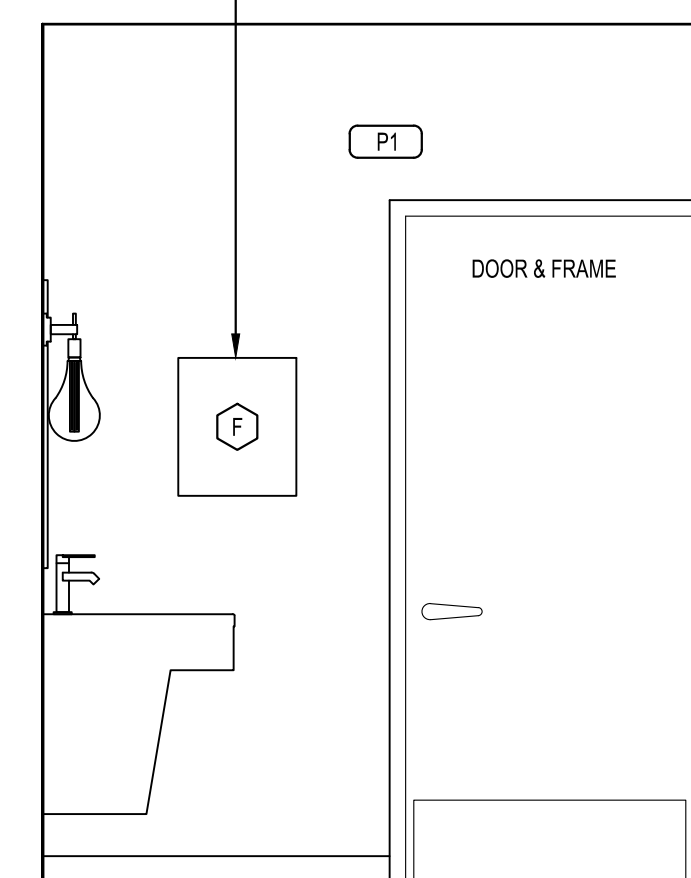
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SCALE: 1/2" = 1'-0"



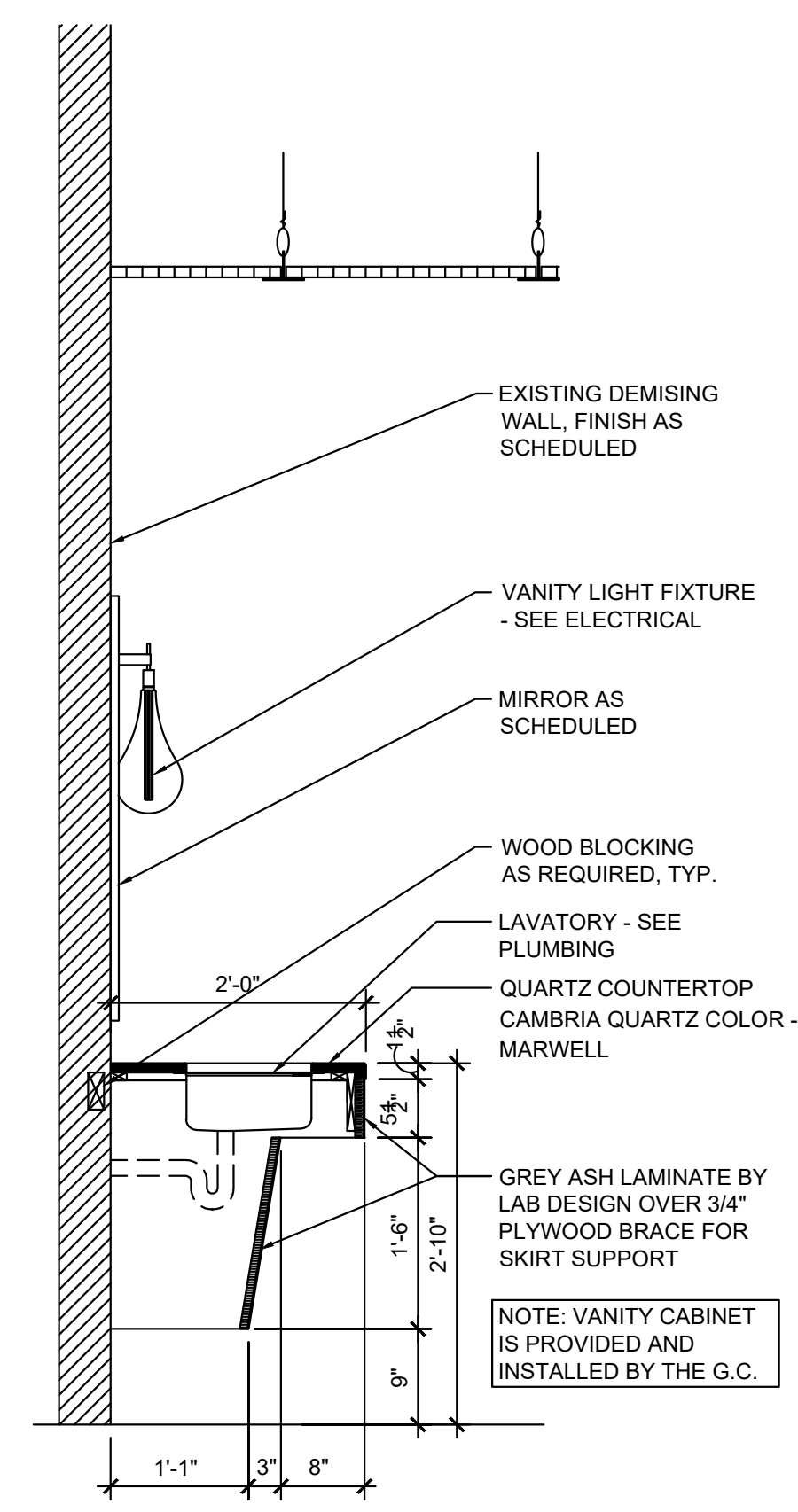
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SCALE: 1/2" = 1'-0"



**4 RESTROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



**5 RESTROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



**1 LAVATORY SECTION**  
SCALE: 3/4" = 1'-0"

ACCESS. NO.	TYPE	MANUFACTURER	MODEL NO.	MOUNTING HEIGHT
A	TOILET PAPER DISPENSER	BOBRICK	B-2888	SEE ELEVATIONS
B	36" GRAB BAR (EXIST.)	BOBRICK	B-6806 x 36	36" TO CENTER
C	42" GRAB BAR (EXIST.)	BOBRICK	B-6806 x 42	36" TO CENTER
D	18" GRAB BAR - VERTICAL (EXIST.)	BOBRICK	B-6806 x 18	40" TO BOTTOM CENTER
E	SOAP DISPENSER	PURE FORCE FOAMING SOAP DISPENSER		48" MAX. TO CONTROL
F	PAPER TOWEL DISPENSER	GEORGIA PACIFIC	59498A	48" MAX. TO CONTROL
G	FRAMED MIRROR (1/4" POLISHED PLATE GLASS) 1 PIECE BOBRICK MODEL B-165 1836			40" TO BOTTOM OF REFLECTIVE SURFACE
H	ADA RESTROOM SIGN	SEE DETAIL		60" A.F.F. TO CENTERLINE

- PROVIDE BLOCKING AND ANCHORS TO ATTACH ALL ACCESSORIES.
- ALL SPECIFIED MANUFACTURERS MAY BE SUBSTITUTED BY AN OWNER APPROVED EQUAL - FURNISHED AND INSTALLED BY CONTRACTOR
- ALL TOILET ACCESSORIES SHALL BE MOUNTED IN ACCORDANCE WITH THE ADA HEIGHT & REACH RANGES.



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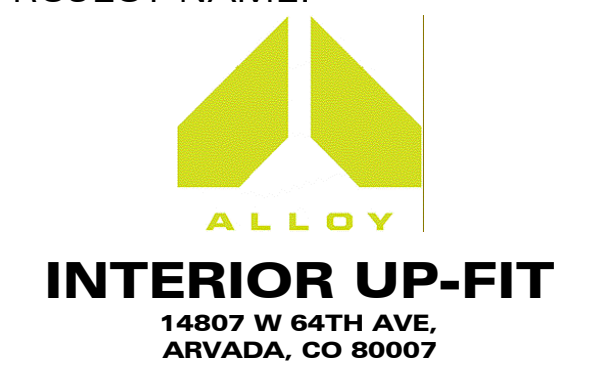
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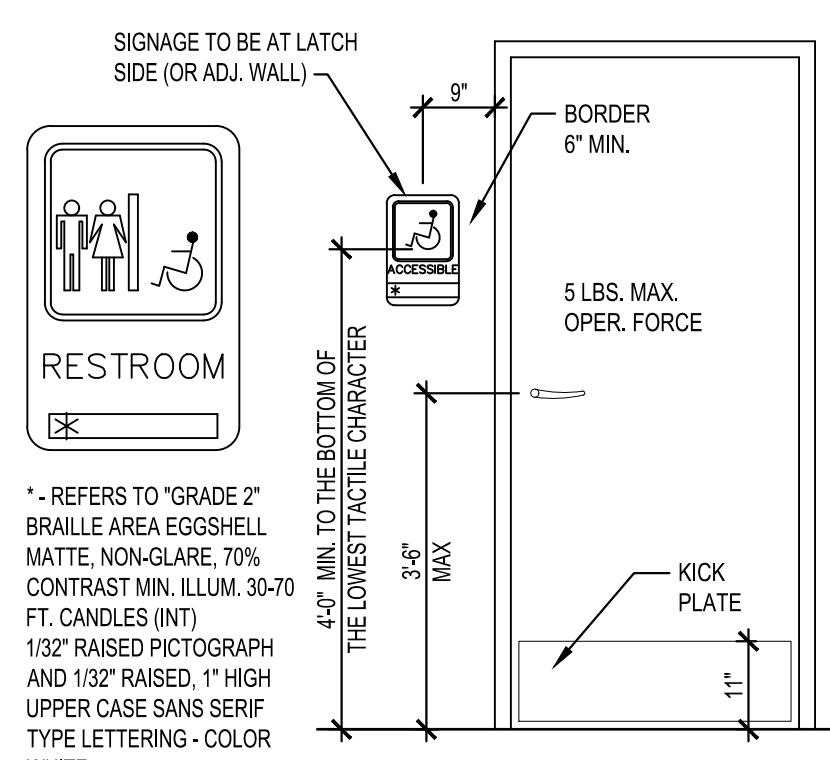
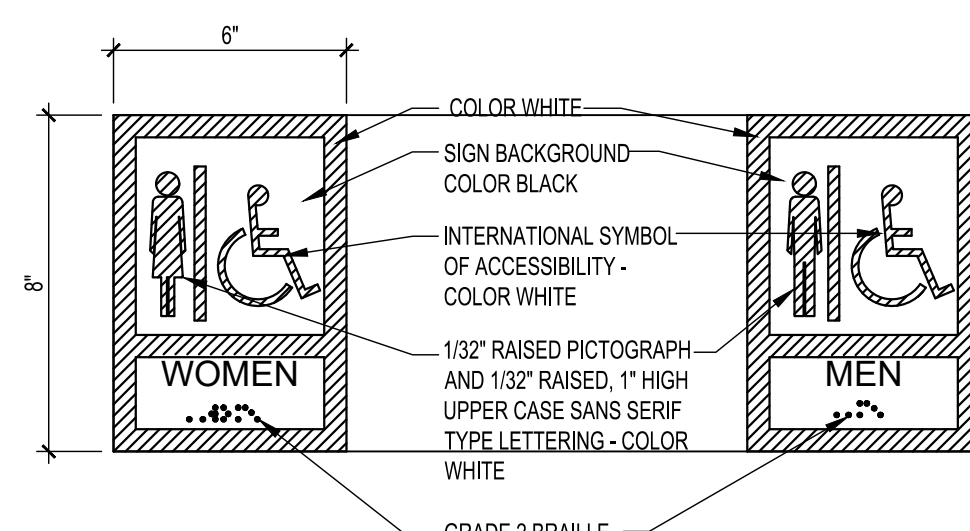
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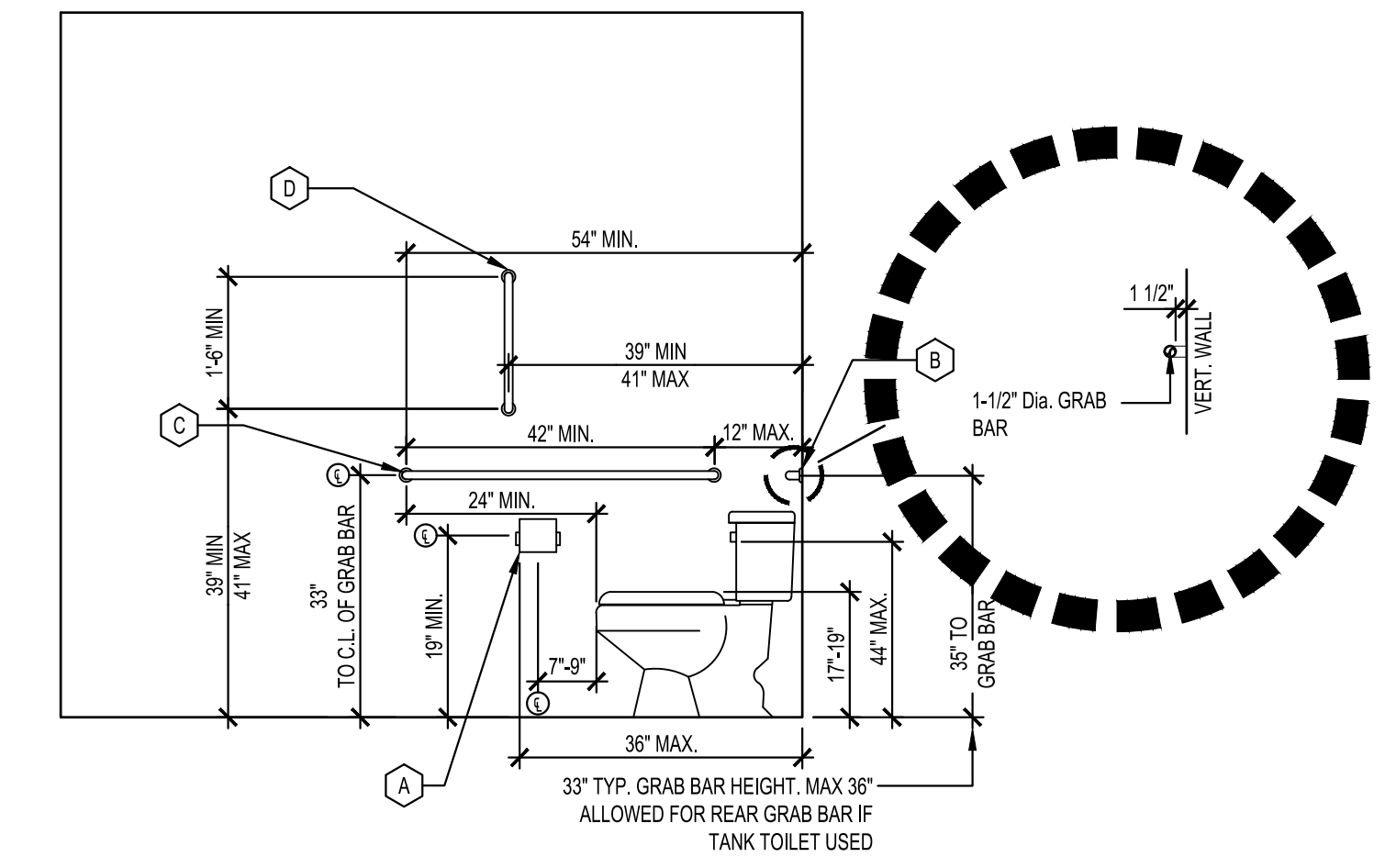
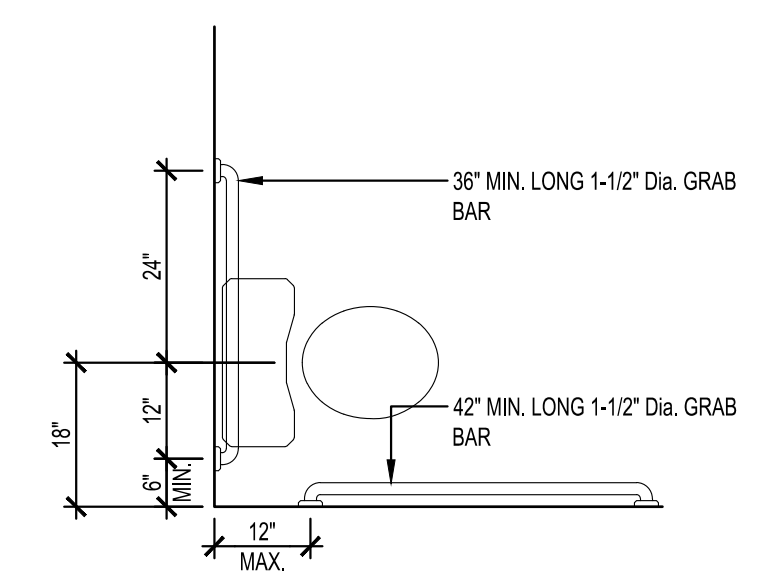
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ADA SIGNAGE TYPE DETAILS AND NOTES

WALL SIGNAGE (TYP.)



1 RESTROOM SIGN & DOOR  
SCALE: 1/2" = 1'-0"



NOTES:

- A. BENDING STRESS IN A GRAB BAR INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF A 250 LB. POINT LOAD SHALL BE LESS THAN THE ALLOWABLE.
- B. SHEAR STRESS INDUCED IN A GRAB BAR BY THE APPLICATION OF A 250 LB. POINT LOAD SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR, AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS.
- C. SHEAR FORCE INDUCED IN FASTENER OR MOUNTING DEVICES FROM THE APPLICATION OF A 250 LB. POINT LOAD SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND SUPPORTING STRUCTURE.
- D. TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF A 250 LB. POINT LOAD, PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF A 250 LB. POINT LOAD, SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND SUPPORTING STRUCTURE.
- E. GRAB BARS AND WALL OR OTHER SURFACE ADJACENT TO THEM SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8"
- F. GRAB BAR LENGTHS INDICATED SHALL NOT INCLUDE ANY MOUNTING CURVATURE. MINIMUM DIMENSIONS APPLY TO STRAIGHT LENGTH OF BAR.

ALL ADA SIGNS SHALL CONFORM WITH IBC ACCESSIBILITY GUIDELINES

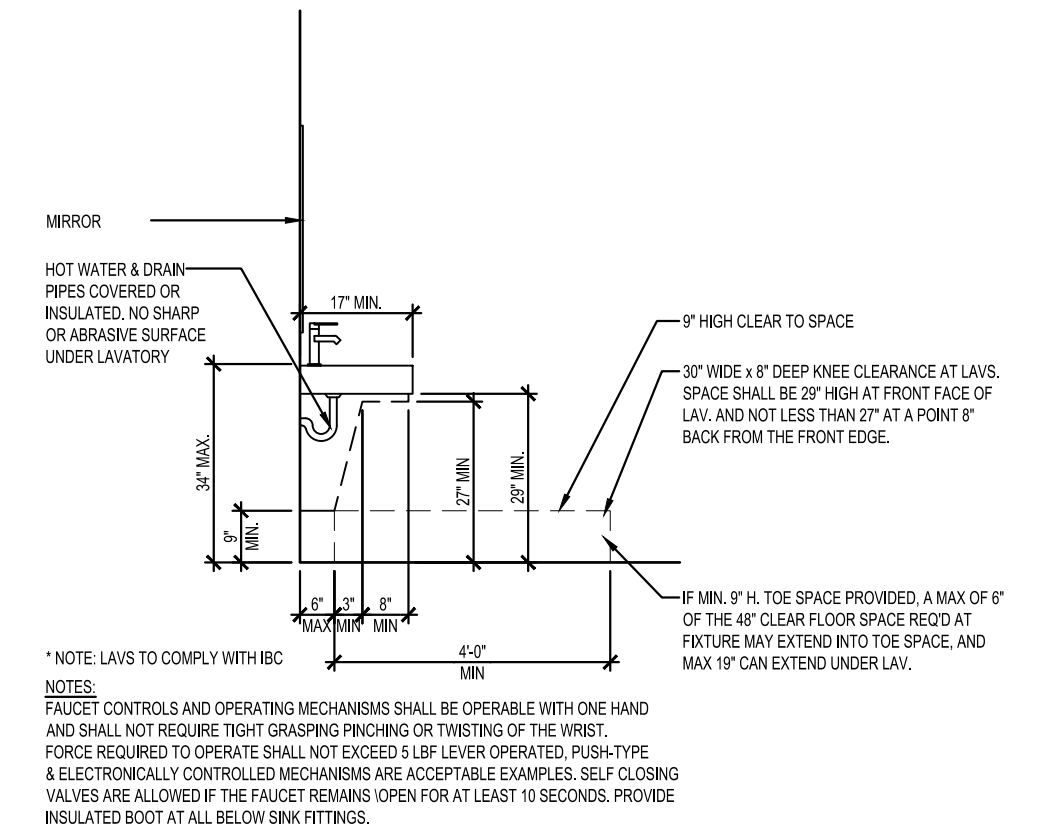
- 1. LETTERS AND NUMBERS MUST BE RAISED 1/32" FROM SIGNAGE SURFACE.
- 2. CHARACTER HEIGHT MUST BE AT LEAST 5/8" BUT NOT TO EXCEED 2". TYPE STYLE FOR LETTERS AND NUMBERS SHALL BE SANS SERIF OR SIMPLE SERIF.
- 3. PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW PICTOGRAM DOOR MOUNTED ACCESSIBILITY SIGN.
- 4. PLASTIC LAMINATE SECURED TO CENTER OF DOOR FACE CENTER LINE AT 60" A.F.F.
- 5. WOMEN'S SYMBOL 1/4" THICK 12" DIAMETER.
- 6. MEN'S SYMBOL 1/4" THICK TRIANGLE 12" SIDES.
- 7. COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM COLOR AND CONTRAS OF DOOR USE NEMA RATED SELF EXTINGUISHING ADHESIVE TO MOUNT.

DOOR MOUNTED ACCESSIBILITY SIGN

- 1. PLASTIC LAMINATE SECURED TO CENTER OF DOOR FACE CENTER LINE AT 60" A.F.F.
- 2. WOMEN'S SYMBOL 1/4" THICK 12" DIAMETER
- 3. MEN'S SYMBOL 1/4" THICK TRIANGLE 12" SIDES
- 4. COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM COLOR AND CONTRAS OF DOOR USE NEMA RATED SELF EXTINGUISHING ADHESIVE TO MOUNT

ADA MOUNTING HEIGH NOTES

- 1. COMPLY WITH THE REQUIREMENTS OF IBC AND ANSI A117.1.
- 2. IT IS THE INTENT OF THE DESIGN THAT ALL ITEMS SHOWN AT TYPICAL HEIGHTS BE ACCESSIBLE TO PERSONS WITH DISABILITIES.
- 3. THE MOUNTING HEIGHTS CLEARANCES AND CONFIGURATIONS SHOWN ON THIS SHEET ARE TYPICAL AND SHALL APPLY TO ALL INSTANCES OF THE ITEM SHOWN. THE DIMENSIONS SHOWN ON THIS SHEET TAKE PRECEDENCE OVER TYPICAL DIMENSIONS SHOWN ON THE ELECTRICAL OR MECHANICAL DRAWINGS FOR THE MOUNTING OF ITEMS INSTALLED BY THE ELECTRICAL OR MECHANICAL TRADES.
- 4. TYPICAL MOUNTING HEIGHTS FOR ITEMS NOT SHOWN ON THIS SHEET MAY BE ILLUSTRATED BY OTHER SHEETS. REFER TO "INDEX OF DRAWINGS" FOR ADDITIONAL INFORMATION.
- 5. CONTRACTOR SHALL VERIFY IN FIELD THAT EXISTING RESTROOMS FIXTURES AND ACCESSORIES TO REMAIN COMPLY WITH ADA MOUNTING HEIGHTS. IN CASE OF DISCREPANCIES GC SHALL RELOCATE FIXTURES AND PATCH IMPACTED AREAS TO MATCH ADJACENT FINISHES.
- 6. FOR LOCATION OF ACCESSORIES REFER TO RESTROOM INTERIOR ELEVATIONS.
- 7. FOR FIXTURES AND PLUMBING ACCESSORIES REFER TO PLUMBING SCHEDULE.





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PROJECT NAME:



INTERIOR UP-FIT 14807 W 64TH AVE, ARVADA, CO 80007

SHEET TITLE:

FRAMING, GYPSUM BOARD & PAINTING SPECS.

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

A-4.2

SECTION 054000 COLD-FORMED METAL FRAMING

PART 1 - GENERAL

- 1.1 SUMMARY
A. SECTION INCLUDES: 1. INTERIOR NON-LOAD-BEARING WALL FRAMING. 2. BULK HEAD FRAMING.
1.2 PERFORMANCE REQUIREMENTS
A. STRUCTURAL PERFORMANCE: PROVIDE COLD-FORMED METAL FRAMING CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER CONDITIONS INDICATED.
1. DEFLECTION LIMITS: DESIGN FRAMING SYSTEMS TO WITHSTAND DESIGN LOAD WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:
a. INTERIOR LOAD-BEARING AND NON-LOAD BEARING WALL FRAMING: HORIZONTAL DEFLECTION OF 1/360 OF THE WALL HEIGHT UNDER A HORIZONTAL LOAD OF 5 LB/SQ. FT. (239 PA).

PART 2 - PRODUCTS

- 2.1 MATERIALS
A. STEEL STUDS: MANUFACTURER'S STANDARD C-SHAPED STEEL STUDS, OF WEB DEPTHS INDICATED, PUNCHED, WITH STIFFENED FLANGES, AND AS FOLLOWS:
1. MINIMUM BASE-METAL THICKNESS: 20 GAUGE || 33 MILS.
2. FLANGE WIDTH: 1-5/8 INCHES.
2.2 WALL FRAMING
A. STEEL STUDS: MANUFACTURER'S STANDARD C-SHAPED STEEL STUDS, OF WEB DEPTHS INDICATED, PUNCHED, WITH STIFFENED FLANGES, AND AS FOLLOWS:
1. MINIMUM BASE-METAL THICKNESS: 20 GAUGE || 33 MILS.
2. FLANGE WIDTH: 1-5/8 INCHES.
B. STEEL TRACK: MANUFACTURER'S STANDARD U-SHAPED STEEL TRACK, OF WEB DEPTHS INDICATED, UNPUNCHED, WITH STRAIGHT FLANGES, AND SAME MINIMUM BASE-METAL THICKNESS AS STEEL STUDS.
C. STEEL BOX OR BACK-TO-BACK HEADERS: MANUFACTURER'S STANDARD C-SHAPES USED TO FORM HEADER BEAMS, OF WEB DEPTHS INDICATED, PUNCHED, WITH STIFFENED FLANGES, AND AS FOLLOWS:
1. MINIMUM BASE-METAL THICKNESS: 18 GAUGE || 43 MILS.
2. FLANGE WIDTH: 1-5/8 INCHES

- 2.3 FRAMING ACCESSORIES
A. FABRICATE STEEL-FRAMING ACCESSORIES FROM STEEL SHEET, ASTM A 1003/A 1003M, STRUCTURAL GRADE, TYPE H, METALLIC COATED, OF SAME GRADE AND COATING WEIGHT USED FOR FRAMING MEMBERS, UNLESS OTHERWISE INDICATED.
B. STEEL SHAPES AND CLIPS: ASTM A 36/A 36M, ZINC COATED BY HOT-DIP PROCESS ACCORDING TO ASTM A 123/A 123M.
C. ANCHOR BOLTS: ASTM F 1554, GRADE 36 THREADED CARBON-STEEL HEX-HEADED BOLTS AND CARBON-STEEL NUTS, AND FLAT, HARDENED-STEEL WASHERS; ZINC COATED BY HOT-DIP PROCESS ACCORDING TO ASTM A 153/A 153M, CLASS C.
D. EXPANSION ANCHORS: FABRICATED FROM CORROSION-RESISTANT MATERIALS, WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 5 TIMES DESIGN LOAD, AS DETERMINED BY TESTING PER ASTM E 488 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AGENCY.
E. POWER-ACTUATED ANCHORS: FASTENER SYSTEM OF TYPE SUITABLE FOR APPLICATION INDICATED, FABRICATED FROM CORROSION-RESISTANT MATERIALS, WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 10 TIMES DESIGN LOAD, AS DETERMINED BY TESTING PER ASTM E 1190 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AGENCY.
F. MECHANICAL FASTENERS: ASTM C 1513, CORROSION-RESISTANT-COATED, SELF-DRILLING, SELF-TAPPING STEEL DRILL SCREWS.
1. HEAD TYPE: LOW-PROFILE HEAD BENEATH SHEATHING, MANUFACTURER'S STANDARD ELSEWHERE.

PART 3 - EXECUTION

- 3.1 PREPARATION
A. INSTALL LOAD BEARING SHIMS OR GROUT BETWEEN THE UNDERSIDE OF WALL BOTTOM TRACK OR RIM TRACK AND THE TOP OF FOUNDATION WALL OR SLAB AT STUD OR JOIST LOCATIONS TO ENSURE A UNIFORM BEARING SURFACE ON SUPPORTING CONCRETE OR MASONRY CONSTRUCTION.
B. INSTALL SEALER GASKETS TO ISOLATE THE UNDERSIDE OF WALL BOTTOM TRACK OR RIM TRACK AND THE TOP OF FOUNDATION WALL OR SLAB AT STUD OR JOIST LOCATIONS.
3.2 INSTALLATION, GENERAL
A. INSTALL COLD-FORMED METAL FRAMING ACCORDING TO AISI'S "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS" AND TO MANUFACTURER'S WRITTEN INSTRUCTIONS UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
B. INSTALL COLD-FORMED METAL FRAMING AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE, AND WITH CONNECTIONS SECURELY FASTENED.
C. INSTALL FRAMING MEMBERS IN ONE-PIECE LENGTHS.
D. INSTALL TEMPORARY BRACING AND SUPPORTS TO SECURE FRAMING AND SUPPORT LOADS COMPARABLE IN INTENSITY TO THOSE FOR WHICH STRUCTURE WAS DESIGNED. MAINTAIN BRACES AND SUPPORTS IN PLACE, UNDISTURBED, UNTIL ENTIRE INTEGRATED SUPPORTING STRUCTURE HAS BEEN COMPLETED AND PERMANENT CONNECTIONS TO FRAMING ARE SECURED.
E. DO NOT BRIDGE BUILDING EXPANSION AND CONTROL JOINTS WITH COLD-FORMED METAL FRAMING. INDEPENDENTLY FRAME BOTH SIDES OF JOINTS.
F. INSTALL INSULATION, SPECIFIED IN DIVISION 07 SECTION "THERMAL INSULATION," IN BUILT-UP EXTERIOR FRAMING MEMBERS, SUCH AS HEADERS, SILLS, BOXED JOISTS, AND MULTIPLE STUDS AT OPENINGS, THAT ARE INACCESSIBLE ON COMPLETION OF FRAMING WORK.
G. FASTEN HOLE REINFORCING PLATE OVER WEB PENETRATIONS THAT EXCEED SIZE OF MANUFACTURER'S STANDARD PUNCHED OPENINGS.
H. ERECTION TOLERANCES: INSTALL COLD-FORMED METAL FRAMING LEVEL, PLUMB, AND TRUE TO LINE TO A MAXIMUM ALLOWABLE TOLERANCE VARIATION OF 1/8 INCH IN 10 FEET (1:960) AND AS FOLLOWS:
1. SPACE INDIVIDUAL FRAMING MEMBERS NO MORE THAN PLUS OR MINUS 1/8 INCH FROM PLAN LOCATION; CUMULATIVE ERROR SHALL NOT EXCEED MINIMUM FASTENING REQUIREMENTS OF SHEATHING OR OTHER FINISHING MATERIALS.

- 3.3 LOAD BEARING WALL INSTALLATION
A. INSTALL CONTINUOUS TOP AND BOTTOM TRACKS SIZED TO MATCH STUDS, ALIGN TRACKS ACCURATELY AND SECURELY ANCHOR AT CORNERS AND ENDS, AND AT SPACINGS AS INDICATED ON DRAWINGS.
B. SQUARELY SEAT STUDS AGAINST TOP AND BOTTOM TRACKS WITH GAP NOT EXCEEDING OF 1/8 INCH BETWEEN THE END OF WALL FRAMING MEMBER AND THE WEB OF TRACK. FASTEN BOTH FLANGES OF STUDS TO TOP AND BOTTOM TRACKS. SPACE STUDS AS INDICATED ON DRAWINGS.
C. SET STUDS PLUMB, EXCEPT AS NEEDED FOR DIAGONAL BRACING OR REQUIRED FOR NON-PLUMB WALLS OR WARPED SURFACES AND SIMILAR CONFIGURATIONS.
D. ALIGN STUDS VERTICALLY WHERE FLOOR FRAMING INTERRUPTS WALL FRAMING. WHERE STUDS CANNOT BE ALIGNED, CONTINUOUSLY REINFORCE TRACK TO TRANSFER LOADS.
E. ALIGN FLOOR AND ROOF FRAMING OVER STUDS, WHERE FRAMING CANNOT BE ALIGNED, CONTINUOUSLY REINFORCE TRACK TO TRANSFER LOADS.

SECTION 06100 - MISCELLANEOUS CARPENTRY

PART 1 - WORK

- 1.1 WORK INCLUDES
A. MISCELLANEOUS WOOD FRAMING WITH DIMENSION LUMBER.
B. MISCELLANEOUS FINISHED WOOD SHELVING.
C. WOOD FURNITURE FOR WALLS.
D. CONCEALED WOOD BLOCKING AND ROLLERS FOR SUPPORT OF CABINETS, TOILET ACCESSORIES, LOCKERS, SHELVING, FITNESS EQUIPMENT

PART 2 - PRODUCT

- 2.1 PRODUCT DESCRIPTION
A. LUMBER: PS 20, ANY COMMERCIAL SOFTWOOD SPECIES GRADES IN ACCORDANCE WITH NFPA GRADING RULES; STANDARD GRADE OR BETTER, SURFACING - FOUR SIDES (S4S).
B. ACCESSORIES: NAILS, BOLTS, LAGS, SCREWS AND SPIKES TO BE GALVANIZED WHERE USED FOR EXTERIOR, OR HIGH HUMIDITY LOCATIONS AND WITH TREATED WOOD.
C. PRESERVATIVE TREATMENT: PRESSURE TREAT ALL WOOD MEMBERS THAT COME IN CONTACT WITH ROOFING, WATERPROOFING, THE GROUND, CONCRETE, OR MASONRY. COMPLY WITH REQUIREMENTS OF AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARDS C2 AND C9 FOR PRESERVATIVE TREATMENT.
D. FIRE RETARDANT TREATMENT: CARPENTRY SHALL MEET A MINIMUM CLASS III (C) FLAME SPREAD RATING PER THE REQUIREMENTS OF ASTM - 84. WHERE FIRE-RESISTIVE CONSTRUCTION IS REQUIRED BY BUILDING CODES, PROVIDE WOOD MATERIALS IMPREGNATED WITH FIRE-RETARDANT CHEMICALS. IDENTIFY TREATED WOOD WITH APPROPRIATE CLASSIFICATION MARKING OF UNDERWRITERS LABORATORIES, INC.
E. MISCELLANEOUS OAK VENEER PLYWOOD.

SECTION 07840 - FIRE-STOPPING

PART 1 - WORK

- 1.1 WORK INCLUDES
A. PROVIDE FIRE STOPPING SYSTEMS PRODUCED AND INSTALLED TO RESIST THE SPREAD OF FIRE, ACCORDING TO REQUIREMENTS INDICATED, AND THE PASSAGE OF SMOKE AND OTHER GASES.
B. FIRE-RESISTIVE JOINT SEALANTS: PROVIDE JOINT SEALANTS WITH FIRE-RESISTIVE RATINGS INDICATED, AS DETERMINED PER ASTM E 119, BUT NOT LESS THAN EQUALING OR EXCEEDING THE FIRE-RESISTANCE RATING OF THE CONSTRUCTION IN WHICH THE JOINT OCCURS.
C. FOR FIRE STOPPING EXPOSED TO VIEW, TRAFFIC, MOISTURE AND PHYSICAL DAMAGE, PROVIDE PRODUCTS THAT DO NOT DETERIORATE WHEN EXPOSED TO THESE CONDITIONS.
D. FOR PIPING PENETRATIONS FOR PLUMBING AND WET-PIPE SPRINKLER SYSTEMS, PROVIDE MOISTURE RESISTANT THROUGH-PENETRATION FIRE-STOP SYSTEMS.
E. FOR PENETRATIONS INVOLVING INSULATED PIPING, PROVIDE THROUGH-PENETRATION FIRE-STOP SYSTEMS NOT REQUIRING REMOVAL OF INSULATION.
F. FOR FIRE-STOPPING EXPOSED TO VIEW, PROVIDE PRODUCTS WITH FLAME-SPREAD VALUES OF LESS THAN 25 AND SMOKE DEVELOPED-VALUES OF LESS THAN 450, AS DETERMINED PER ASTM E 84.

SECTION 09280 - GYPSUM BOARD SYSTEMS

PART 1 - GENERAL

- 1.1 GYPSUM BOARD SYSTEMS
A. SCOPE: PROVIDE METAL WALL AND CEILING FRAMING, BLOCKING, GYPSUM BOARD INSTALLATION AND FINISHING (INCLUDING SKIM COATING WHERE NOTED), AND SOUND ATTENUATION INSULATION AS SHOWN ON DRAWINGS.
B. PERFORM GYPSUM BOARD SYSTEMS WORK IN ACCORDANCE WITH RECOMMENDATIONS OF ASTM C754 AND GA 216 UNLESS OTHERWISE SPECIFIED IN THIS SECTION.
C. ENVIRONMENTAL REQUIREMENTS: MAINTAIN A MINIMUM TEMPERATURE OF 55 DEGREES F. DURING APPLICATION AND CURING OF JOINT TREATMENT COMPOUNDS.
D. METAL STUDS: NON-LOAD-BEARING ROLLED STEEL, GALVANIZED, CHANNEL SHAPED, 26 GAUGE, UNLESS OTHERWISE INDICATED. PUNCHED FOR UTILITY ACCESS. GOLD BOND BUILDING PRODUCTS - SCREW STUDS; UNITED STATES GYPSUM - STEEL STUDS; THE CELOTEX CORPORATION - STEEL STUDS; CLARKDIETRICH INDUSTRIES - STEEL STUDS. SPACE AT 24" O.C. UNLESS NOTED OTHERWISE.
E. RUNNER CHANNELS (GAUGE TO MATCH METAL STUDS) COLD ROLLED STEEL WITH FACTORY APPLIED RUST-RESISTANT FINISH, 1-1/2 INCH SIZE, UNLESS OTHERWISE INDICATED.
F. FURRING AND BRACING MEMBERS: 25 GAUGE COLD FORMED GALVANIZED STEEL HAT-SHAPED OR Z-SHAPED, PLAIN OR KNURLED FACE.
G. EXPANSION / CONTROL JOINTS: GOLD BOND BUILDING PRODUCTS - E-Z STRIP OR U.S. GYPSUM - NO. 83.
H. GYPSUM BOARD:
1. STANDARD GYPSUM BOARD: 5/8 INCH THICK; MAXIMUM PERMISSIBLE LENGTH: SQUARE CUT ENDS, TAPERED EDGES; ASTM C36.
2. STANDARD FIRE RATED GYPSUM BOARD: UL RATED; 5/8 INCH THICK; MAXIMUM PERMISSIBLE LENGTH: SQUARE CUT ENDS, TAPERED EDGES.
I. GYPSUM BOARD ACCESSORIES: PROVIDE IN ACCORDANCE WITH GA 216 AND MANUFACTURER'S RECOMMENDATIONS.
1. CORNER BEADS: GOLD BOND BUILDING PRODUCTS - STANDARD CORNER BEADS; UNITED STATES GYPSUM - DUR-A-BEAD.
2. CASING BEADS: GOLD BOND BUILDING PRODUCTS - NO. 100; U.S. GYPSUM - NO. 200A.
3. JOINT TREATMENT: GOLD BOND BUILDING PRODUCTS - JOINT COMPOUNDS; TOPPING COMPOUND AND JOINT TAPE; U.S. GYPSUM - JOINT COMPOUNDS, TAPING AND TOPPING, AND PERF-A-TAPE.
4. BONDING ADHESIVE: H.B. FULLER CO. - MAX BOND; GOLD BOND BUILDING PRODUCTS - WALLBOARD/PANEL ADHESIVE; UNITED STATES GYPSUM - DURABOND 200 ADHESIVE.
5. SOUND ATTENUATION BLANKETS: 3 INCH THICK BLANKETS, THERMAFIBER SAFB AS MANUFACTURED BY OWENS CORNING.

SECTION 09900 - PAINTING

PART 1 - GENERAL

- 1.1 WORK INCLUDED
A. SURFACE PREPARATION.
B. FIELD APPLICATION OF PAINTS, STAINS, VARNISHES, AND OTHER COATINGS.

PART 2 - PRODUCTS

- 2.1 PRODUCT
A. AS INDICATED ON FINISH SCHEDULE.

PART 3 - EXECUTION

- 3.1 PREPARATION
A. SURFACES: CORRECT DEFECTS AND CLEAN SURFACES WHICH AFFECT WORK OF THIS SECTION. REMOVE OR REPAIR EXISTING COATING THAT

- EXHIBIT SURFACE DEFECTS.
B. MARKS: SEAL WITH SHELLAC THOSE WHICH MAY BLEED THROUGH SURFACE FINISHES.
C. IMPERFECT SURFACES: REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI-SODIUM PHOSPHATE AND BLEACH. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY COMPLETELY.
D. ALUMINUM SURFACES SCHEDULED FOR PAINT FINISH: REMOVE SURFACE CONTAMINATION BY STEAM OR HIGH PRESSURE WATER. REMOVE OXIDATION WITH ACID ETCH AND SOLVENT WASHING. APPLY ETCHING PRIMER IMMEDIATELY FOLLOWING CLEANING.
E. GYPSUM BOARD SURFACES: FILL MINOR DEFECTS WITH FILLER COMPOUND. SPOT PRIME DEFECTS AFTER REPAIR.
F. GALVANIZED SURFACES: REMOVE SURFACE CONTAMINATION AND OILS AND WASH WITH SOLVENT. APPLY COAT OF ETCHING TYPE PRIMER.
G. CONCRETE AND UNIT MASONRY SURFACES SCHEDULED TO RECEIVE PAINT FINISH: REMOVE DIRT, LOOSE MORTAR, SCALE, POWDER, AND OTHER FOREIGN MATTER. REMOVE OIL AND GREASE WITH A SOLUTION OF TRI-SODIUM PHOSPHATE, RINSE WELL AND ALLOW TO THOROUGHLY DRY. REMOVE STAINS CAUSED BY WEATHERING OF CORRODING METALS WITH A SOLUTION OF SODIUM METASILICATE AFTER THOROUGHLY WETTING WITH WATER. ALLOW TO DRY.
H. PLASTER SURFACES: FILL HAIRLINE CRACKS, SMALL HOLES, AND IMPERFECTIONS ON PLASTER SURFACES WITH PATCHING PLASTER. MAKE SMOOTH AND FLUSH WITH ADJACENT SURFACES. WASH AND NEUTRALIZE HIGH ALKALI SURFACES.
I. UNCOATED STEEL AND IRON SURFACES: REMOVE GREASE, MILL SCALE, WELD SPLATTER, DIRT, AND RUST. WHERE HEAVY COATINGS OF SCALE ARE EVIDENT, REMOVE BY WIRE BRUSHING OR SANDBLASTING. CLEAN BY WASHING WITH SOLVENT. APPLY A TREATMENT OF PHOSPHORIC ACID SOLUTION, ENSURING WELD JOINTS, BOLTS, AND NUTS ARE SIMILARLY CLEANED. SPOT PRIME PAINT AFTER REPAIRS.
J. UNPRIMED STEEL SURFACES: CLEAN BY WASHING WITH SOLVENT. APPLY A TREATMENT OF PHOSPHORIC ACID SOLUTION, ENSURING WELD JOINTS, BOLTS AND NUTS ARE SIMILARLY CLEANED. PRIME SURFACES TO INDICATE DEFECTS, IF ANY. PAINT AFTER DEFECTS HAVE BEEN REMEDIATED.
K. SHOP PRIMED STEEL SURFACES: SAND AND SCRAPE TO REMOVE LOOSE PRIMER AND RUST. FEATHER EDGES TO MAKE TOUCH-UP PATCHES INCONSPICUOUS. CLEAN SURFACES WITH SOLVENT. PRIME BARE STEEL SURFACES.
L. INTERIOR WOOD ITEMS SCHEDULED TO RECEIVE PAINT FINISH: WIPE OFF DUST AND GRIT PRIOR TO PRIMING. SEAL KNOTS, PITCH STREAKS, AND SAPPY SECTIONS WITH SEALER. FILL NAIL HOLES AND CRACKS AFTER PRIMER HAS DRIED. SAND BETWEEN COATS. BACK PRIME INTERIOR WOODWORK.
M. INTERIOR WOOD ITEMS SCHEDULED TO RECEIVE TRANSPARENT FINISH: WIPE OFF DUST AND GRIT PRIOR TO PRIMING. SEAL KNOTS, PITCH STREAKS, AND SAPPY SECTIONS WITH SEALER. FILL NAIL HOLES AND CRACKS AFTER SEALER HAS DRIED) SAND LIGHTLY BETWEEN COATS.
N. METAL DOORS SCHEDULED FOR PAINTING: PRIME METAL DOOR TOP AND BOTTOM EDGE SURFACES.
3.2 APPLICATION
A. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AS SPECIFIED, AND AS RECOMMENDED BY THE MANUFACTURER.
3.3 SCHEDULE - INTERIOR
A. WOOD - TRANSPARENT: FILLER COAT (FOR OPEN GRAINED WOOD ONLY) WITH ONE COAT OF ALKYD-BASED STAIN, ONE COAT OF CLEAR SANDING SEALER AND TWO FINISH COATS OF ALKYD-BASED OR POLYURETHANE SATIN VARNISH.
B. STEEL - UNPRIMED: ONE COAT OF RUST-INHIBITIVE, ALKYD-BASED OR EPOXY-METAL PRIMER WITH TWO FINISH COATS OF INTERIOR ODORLESS, SEMI-GLOSS ALKYD ENAMEL.
C. STEEL - PRIMED: TOUCH-UP OF SHOP PRIMER AND TWO FINISH COATS OF INTERIOR ODORLESS, SEMI-GLOSS ALKYD ENAMEL.
D. STEEL - GALVANIZED: ONE COAT GALVANIZED METAL PRIMER WITH TWO FINISH COATS OF INTERIOR ODORLESS, SEMI-GLOSS ALKYD ENAMEL.
E. ALUMINUM - MILL FINISH: ONE COAT RUST-INHIBITIVE, ACRYLIC - OR ALKYD-BASED, METAL PRIMER WITH TWO COATS OF INTERIOR SEMI-GLOSS ACRYLIC-LATEX ENAMEL.
F. PLASTER AND GYPSUM BOARD: ONE COAT OF LATEX-BASED, INTERIOR PRIMER WITH TWO FINISH COATS OF ACRYLIC-LATEX INTERIOR PAINT; FLAT FINISH AT CEILING AND SOFFIT APPLICATIONS, AND EGGSHELL FINISH AT WALL APPLICATIONS.
3.4 OTHERS
A. PAINTING OF ALL WALL SURFACES TO BE COMPLETED PRIOR TO THE INSTALLATION OF ANY WALL TRIM OR PANELING.

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04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**INTERIOR ELEVATIONS**

PROJECT NUMBER 24-036

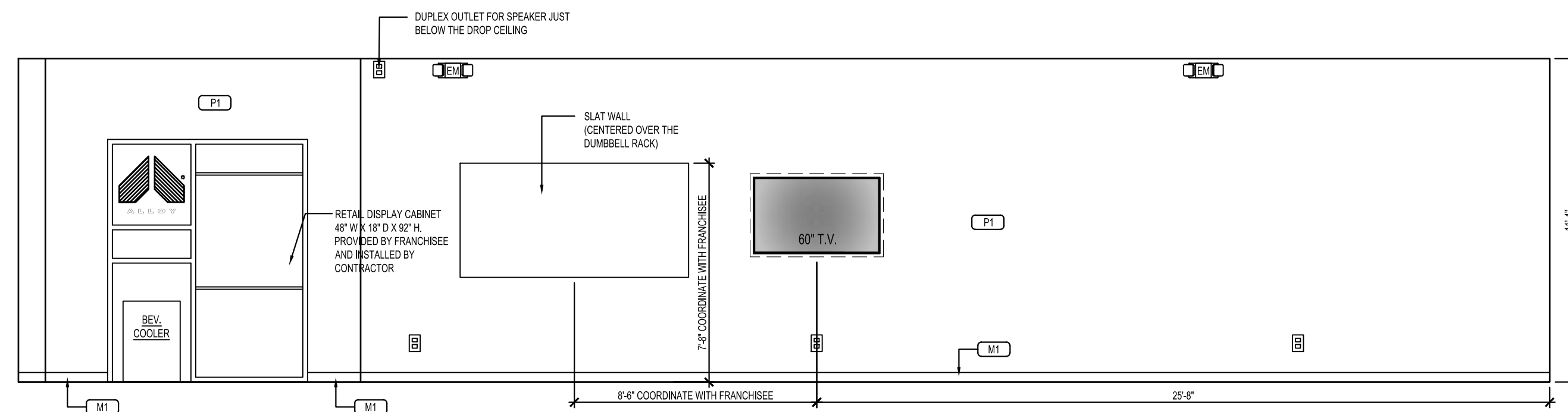
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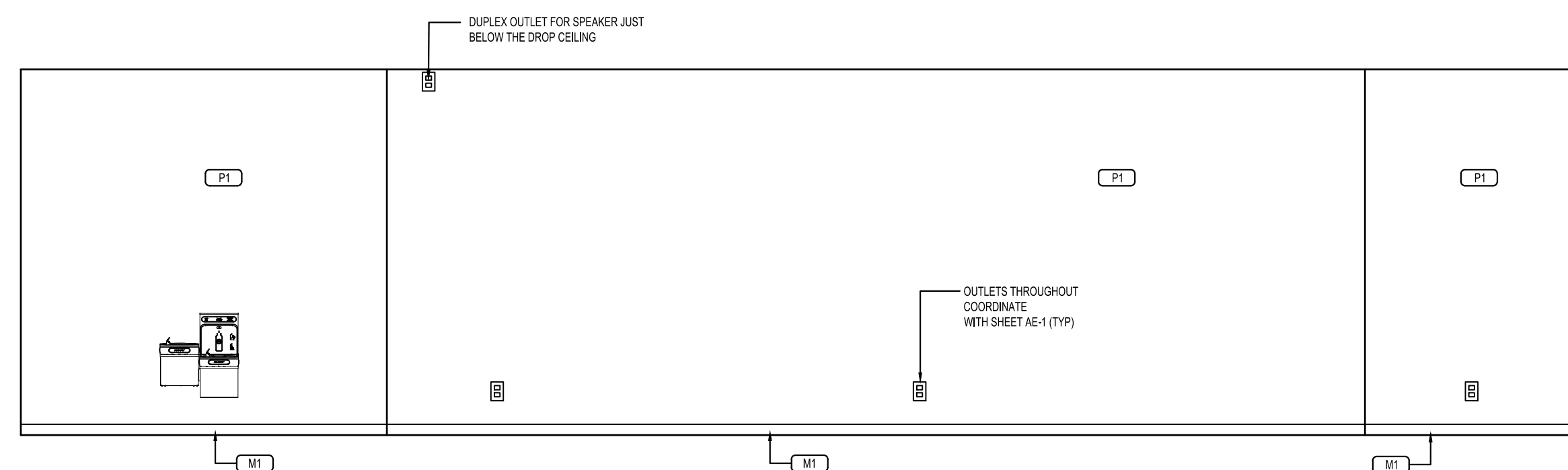
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SHEET 13 OF 16

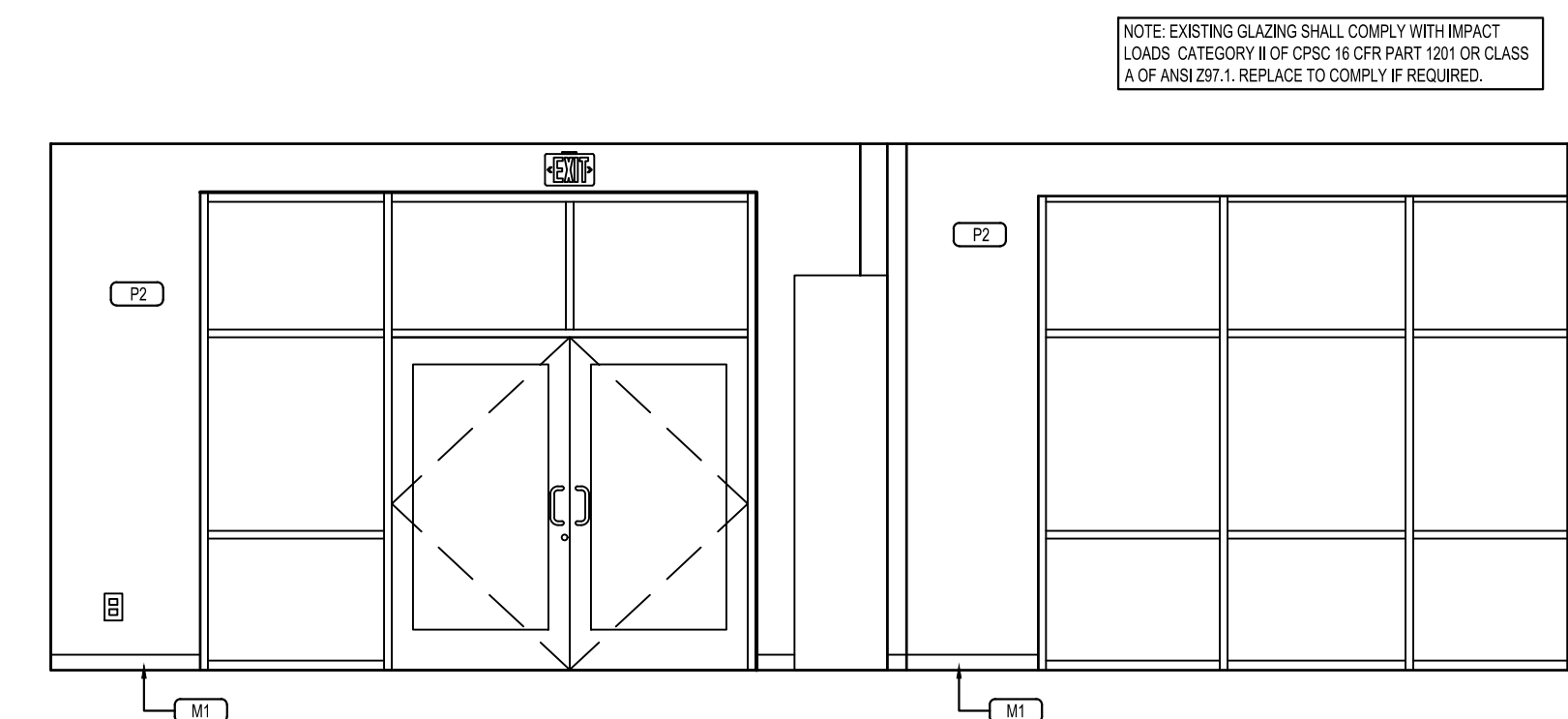
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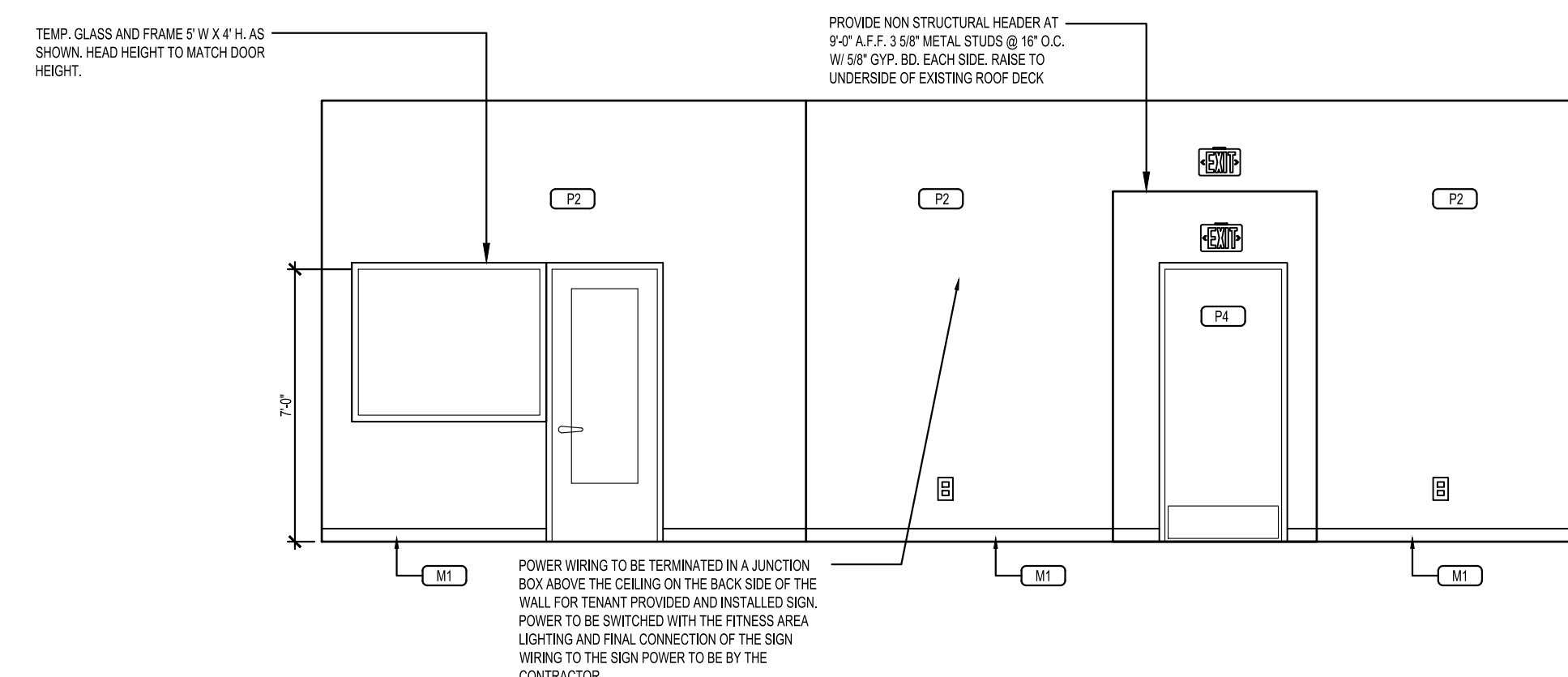
**1 INTERIOR ELEVATION**  
SCALE: 1/4" = 1'-0"



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



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



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



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CLIENT NAME:

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PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**SEWER PIPING PLAN**

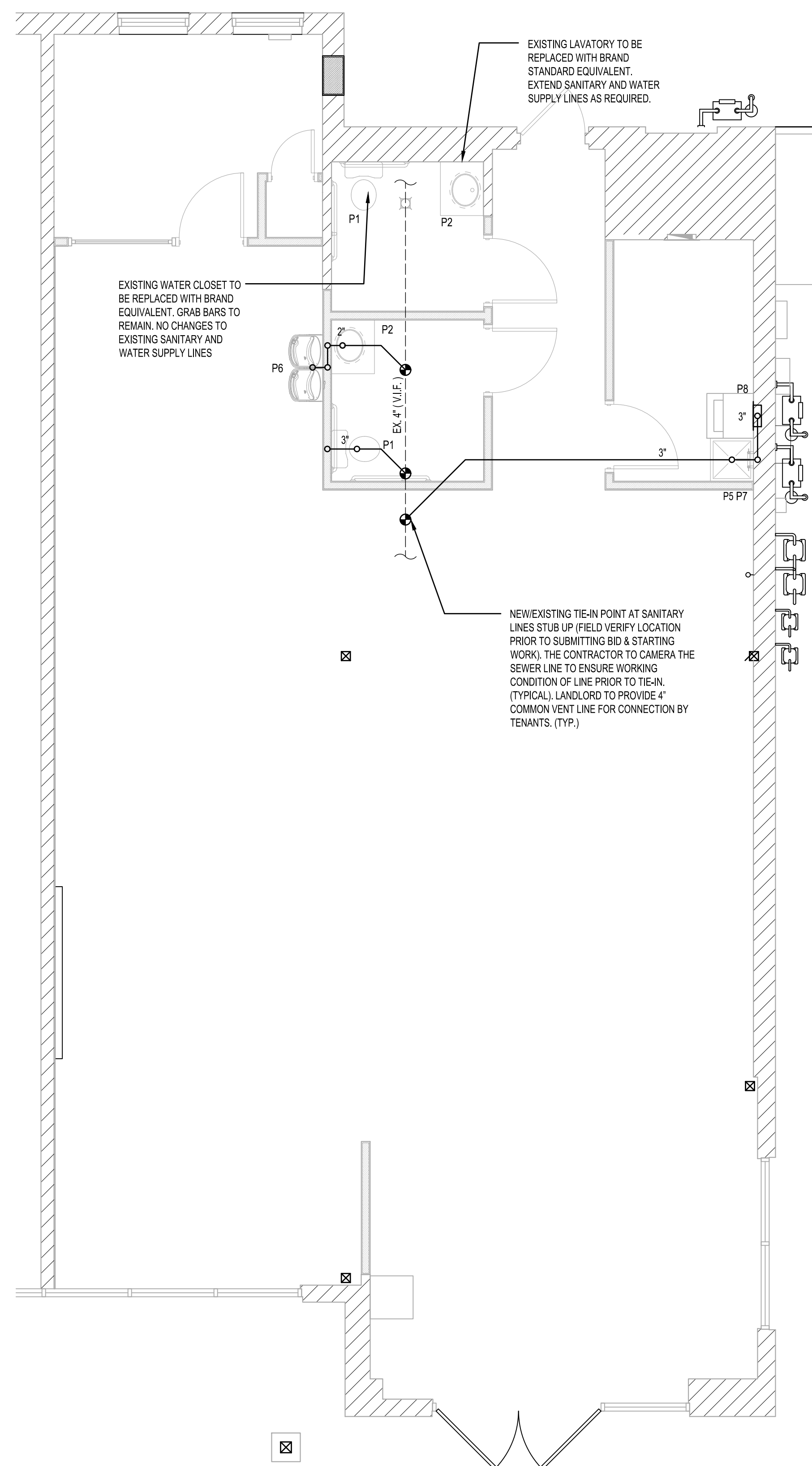
PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**AP-1.0**

SHEET 1 OF 4



CONTRACTOR SHALL CAP ALL UNUSED SEWER LINES, PER IPC 704.5 DEAD ENDS IN THE INSTALLATION OR REMOVAL OF ANY PART OF A DRAINAGE SYSTEM. DEAD ENDS SHALL BE PROHIBITED. CLEANOUT EXTENSIONS AND APPROVED FUTURE FIXTURE DRAINAGE PIPING SHALL NOT BE CONSIDERED AS DEAD ENDS.

**SEWER LINE LEGEND**

---	EXISTING SEWER
—	SEWER
---	GREASE WASTE
---	EXISTING GREASE WASTE

CONTRACTOR TO VERIFY LOCATION AND INVERT ELEVATION OF EXISTING SANITARY SEWER AND ADJUST SYSTEM LAYOUT TO ACCOMMODATE.

ALL PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE CAULKED OR SLEEVED PER UL DESIGN DETAILS ON G-4.

**1 SEWER PIPING PLAN**  
1/4" = 1'-0"

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PROJECT NAME:



**INTERIOR UP-FIT**  
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SHEET TITLE:

**SUPPLY PIPING PLAN**

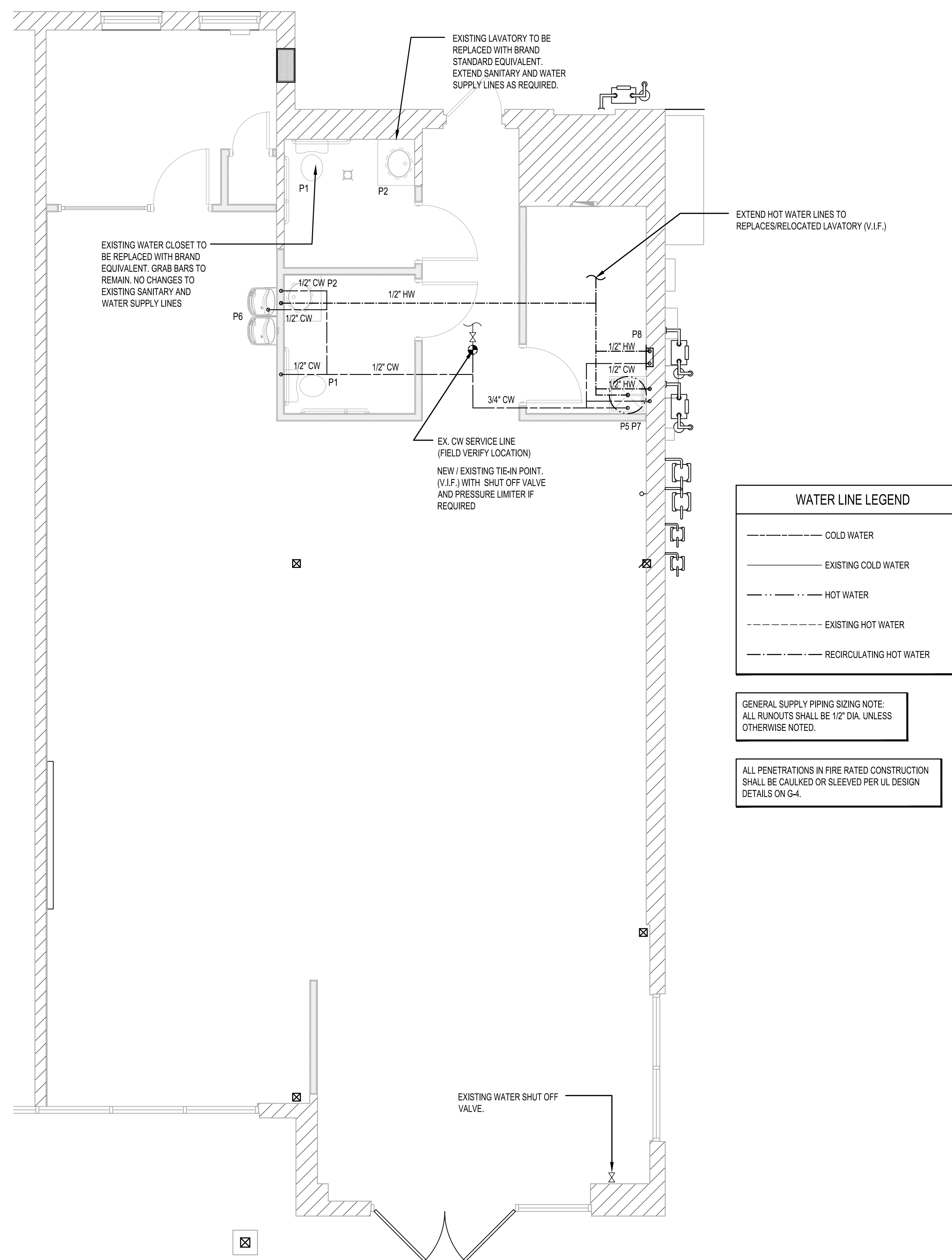
PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**AP-2.0**

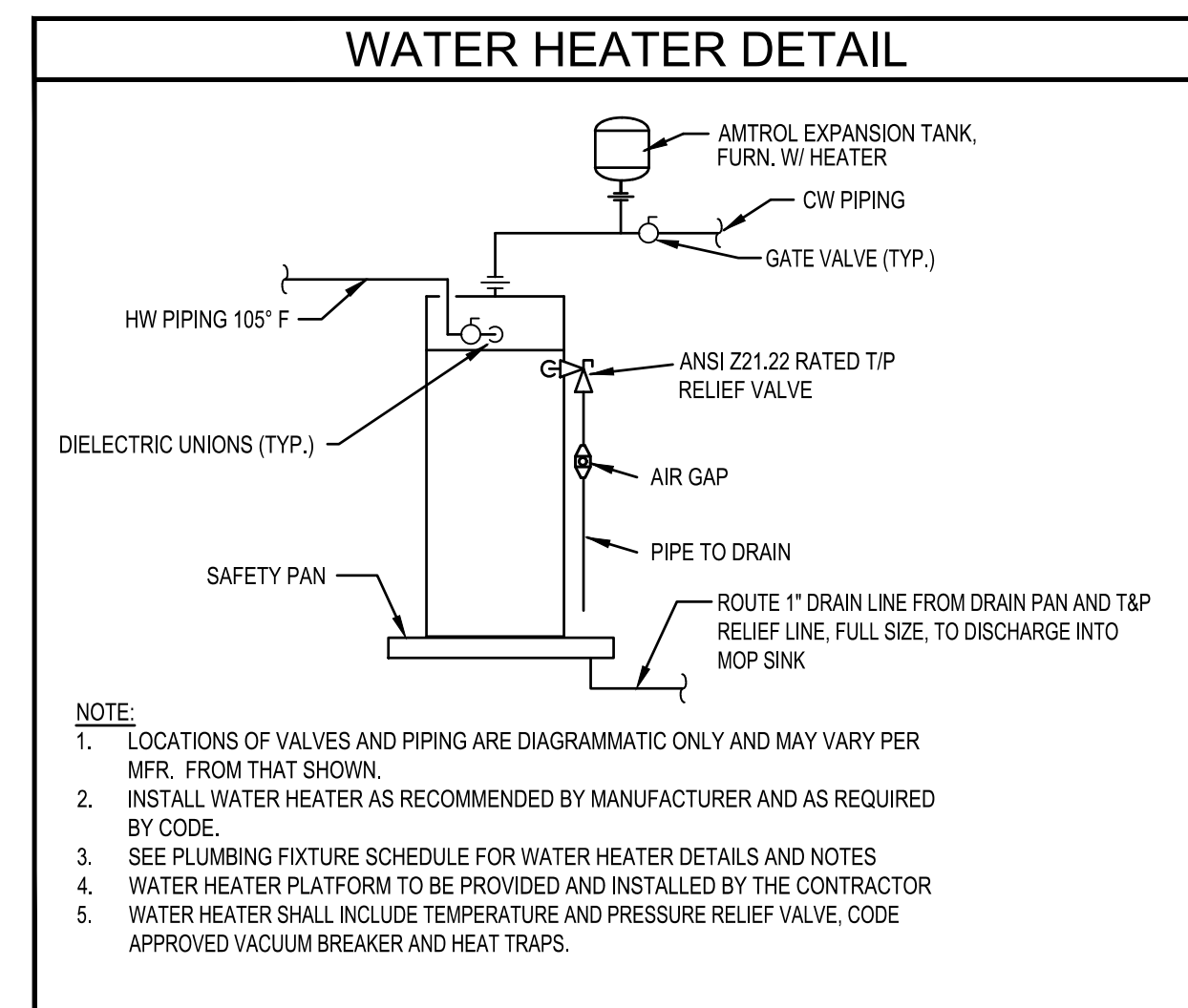
SHEET 2 OF 4



**1 SUPPLY PIPING PLAN**  
1/4" = 1'-0"

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.

PLUMBING FIXTURE SCHEDULE					
MARK	ITEM	HW 105*	CW	WASTE	DESCRIPTION
P1	WATER CLOSET	--	1/2"	4"	AMERICAN STANDARD CADET PRO ELONGATED 1.28 GPF TOILET WITH E-MAX FLUSH SYSTEM. BOLT-DOWN LID, FLUSH TRIP LEVER TO BE LOCATED ON THE OPEN SIDE OF THE TANK. OPEN FRONT SEAT
P2	LAVATORY	1/2"	1/2"	1 1/2"	FIXTURE: KOHLER BRAZIL MODEL K-21056, WHITE, 19" X 14" RECTANGULAR BOWL, REAR OVERFLOW, FAUCET: AMERICAN STANDARD PARADIGM SELECTRONIC MODEL 705.305.002, POLISHED CHROME-PLATED, BATTERY POWERED ELECTRONIC, WITH 0.5 GPM VANDAL-RESISTANT LAMINAR SPRAY, INTEGRAL THERMOSTATIC HOT WATER LIMITER THAT IS ASSE 1770 CERTIFIED, THERMOSTATIC TEMPERATURE LIMITER SET AT 110 DEGREES FAHRENHEIT.
P3	CLEANOUT	--	--	LINE SIZE	JAY R. SMITH, 4020 SERIES W/ROUND, POLISHED BRONZE TOP.
P4	CLEANOUT	--	--	LINE SIZE	JAY R. SMITH WALL CLEANOUT AND PLUG
P5	SERVICE SINK	1/2"	1/2"	3"	American Standard MSB2424100 Flat Showers Molded Stone Mop Basin, White W/ SERVICE FAUCET (MODEL# 63.600A), HOSE AND HOSE HOLDER (MODEL# 65.700), VINYL BUMPER GUARDS & DURAGUARD WALL GUARDS.
P6	HALO WATER COOLER	--	1/2"	2"	ELKAY ELZSTL8VNSLK HALO WATER COOLER W/ BOTTLE FILLING EZWSRK EZ20 STATION - MOUNTED @ ADA HEIGHT AND THE FIXTURE IS ADA COMPLIANT. PROVIDE CANE APRON
P7	WATER HEATER	3/4"	3/4"	--	RHEEM PROE30 S2 RH95 B" (30 GALLON STORAGE ), 2,000 WATT SINGLE ELEMENT, 120V, 1 PHASE, 2 WIRE W/ AMTROL EXPANSION TANK. CONTRACTOR IS TO PROVIDE & INSTALL A WALL MOUNTED PLATFORM.
P8	WASHING MACHINE OUTLET BOX	1/2"	1/2"	2"	TECTITE MODEL # FSBBXWMMWH: 1/2 IN. BRASS WASHING MACHINE OUTLET BOX WITH WATER HAMMER ARRESTORS PUSH-TO-CONNECT WASHING MACHINE VALVES. CONNECTS TO COPPER, CPVC OR PEX LINES



### GENERAL PLUMBING NOTES

- DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO DESIGN PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, EQUIPMENT, ETC. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND ACCEPTABLE WORKING INSTALLATION.
- ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL, STATE, AND ALL LOCAL CODES AND ORDINANCES HAVING JURISDICTION.
- THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. ALL EXECUTION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
- ALL MATERIAL SHALL BE NEW.
- ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/DESIGNER.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- THE PLUMBING CONTRACTOR SHALL SECURE AND PAY ALL PERMIT FEES, INSPECTIONS, AND TESTS. TESTS SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) ONE YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- VERIFY LOCATION, SIZE AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- ALL FIXTURES SHALL BE PROVIDED WITH READILY ACCESSIBLE STOPS.
- AIR CONDITIONING CONDENSATE DRAIN PIPING SHALL BE PVC #40 OR COPPER DRAIN WASTE AND BENT PIPE AND FITTINGS. INSULATE ALL CONDENSATE PIPING EXCEPT EXTERIOR PIPING. INSTALL ALL CONDENSATE PIPING FOR AIR CONDITIONING UNITS AS REQUIRED PER LOCAL CODES.
- FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE AND PDI APPROVED SHOCK ARRESTERS ON MAIN LINES AND RISERS.
- PIPING PASSING UNDER OR THROUGH FOUNDATION WALLS SHALL BE PROVIDED WITH A RELIEVING ARCH OR SLEEVE IN ACCORDANCE WITH SECTION 305.5 OF THE 2015 INTERNATIONAL PLUMBING CODE
- PROVIDE SEISMIC SWAY BRACING FOR ALL SUSPENDED EQUIPMENT AND PIPING LARGER THAN 2" IN ACCORDANCE WITH SECTION WITH CURRENT CODES.

### GAS PIPING NOTES:

- GAS PIPING AND FITTINGS SHALL BE SEAMLESS BLACK STEEL WITH MALLEABLE IRON FITTINGS. DIELECTRIC COUPLINGS OR UNIONS SHALL BE UTILIZED WHEN PIPING OF DISSIMILAR METAL IS CONNECTED. GAS PIPING OUTSIDE THE BUILDING SHALL BE PAINTED WITH BLACK "RUSTOLEUM" PAINT.
- GAS PIPING SYSTEM SHALL BE INSTALLED TO THE REQUIREMENTS OF THE AGA PAMPHLET "INSTALLATION OF GAS APPLIANCES AND GAS PIPING" AND THE NFPA STANDARD #54. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL FEES WITH THE "LOCAL" GAS COMPANY FOR THE INSTALLATION OF THE GAS METER, GAS SERVICE, AND ITS ACCESSORIES NECESSARY FOR A COMPLETE SYSTEM.
- GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN NFPA #54, AND ANY OTHER TESTS REQUIRED BY THE LOCAL BUILDING DEPARTMENT AND/OR THE LOCAL GAS UTILITY COMPANY.
- THE INSTALLING SUBCONTRACTOR SHALL BE LICENSED BY THE STATE FOR INSTALLATION OF GAS PIPING.
- RUNOUT PIPING, FROM THE MAIN PIPING TO APPLIANCES, SHALL BE WITH AN INVERTED TRAP CONNECTION AT THE MAIN.
- A 1/2" DIRT LEG, PRESSURE REGULATING VALVE, AND A GAS COCK, SHALL BE PROVIDED AT ALL GAS APPLIANCES.

### GENERAL PLUMBING SPECIFICATIONS

#### GENERAL CONDITIONS

- GENERAL AND SPECIAL CONDITIONS ARE HEREBY MADE AN INTEGRAL PART OF THIS DIVISION OF THE SPECIFICATIONS IN THAT THEY ARE APPLICABLE TO THE WORK UNDER THIS DIVISION UNLESS OTHERWISE NOTED.
- PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES.
- PERMITS: APPLY FOR AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION. ACREAGE CHARGES, BOND PROPERTY ASSESSMENTS AND FACILITIES CHARGE ARE NOT TO BE CONSTRUED TO BE A PART OF THIS CONTRACT.
- WARRANTY: PROVIDE ALL MATERIALS AND EQUIPMENT UNDER THIS SECTION OF THE SPECIFICATIONS WITH A ONE YEAR WARRANTY FROM THE DATE OF ACCEPTANCE OF WORK BY THE OWNER.
- THE CONTRACTOR SHALL TIE INTO CIVIL PROVIDED TAP AS INDICATED ON PLANS. ALL COSTS FOR THIS SERVICE SHALL BE PART OF HIS BID CONTRACT PRICE.
- PROTECT COPPER PIPING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED.
- PROTECT COPPER PIPING AGAINST CONTACT WITH ALL MASONRY. WHERE COPPER IS SLEEVED THROUGH MASONRY, PROVIDE COPPER OR RED BRASS SLEEVES.
- MAKE SURE PROVISIONS ARE INSTALLED IN ALL PIPING SO NO STRAIN OR BREAKAGE RESULTS FROM EXPANSION OR CONTRACTION.
- PITCH ALL WATER PIPES SO THAT ALL PARTS MAY BE DRAINED. THE FORMATION OF SAGS AND TRAPS SHALL BE AVOIDED.
- PROVIDE SHOCK ARRESTORS WHERE SHOWN ON PLANS FOR THE COMPLETE ELIMINATION OF WATER HAMMER.

#### MATERIALS AND EQUIPMENT

- ALL NEW WORK SHALL BE OF MATERIALS LISTED BELOW OR SHALL MATCH EXISTING. IF A CONFLICT EXISTS BETWEEN MATERIALS AND/OR EQUIPMENT, THE MORE STRINGENT SHALL APPLY AS ADJUDGED BY THE ARCHITECT/ENGINEER. THE CONTRACTOR SHALL FIELD VERIFY MATERIAL TYPE AND EQUIPMENT.
- DOMESTIC WATER PIPING:
  - DOMESTIC WATER PIPING BELOW GRADE: SOFT ANNEALED SEAMLESS COPPER TUBING, TYPE 'K' WITH NO JOINTS BELOW GRADE (ASTM B 88).
  - DOMESTIC WATER PIPING AND JOINTS ABOVE GRADE: HARD DRAWN SEAMLESS COPPER TUBING, TYPE 'L' WITH 95-5 SILVER SOLDERED JOINTS (ASTM B 88).

IF PERMITTED BY LOCAL CODES, ALL ABOVE GROUND WATER PIPING 2" AND SMALLER SHALL BE FLOWGUARD GOLD C.P.V.C. (ASTM D 1784) WITH C.P.V.C. SOCKET-TYPE PIPE FITTINGS (ASTM D 2846).
- STERILIZE DOMESTIC WATER PIPING IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.
- INSULATE DOMESTIC WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH ENGINEERED POLYMER FOAM INSULATION. FOLLOW THIS SCHEDULE:
 

SERVICE	PIPE SIZE	INSUL. THICKNESS
DOMESTIC HOT WATER (105 - 140 F)	.5" - 1.5"	1/2"
DOMESTIC HOT WATER (105 - 140 F)	2" AND UP	3/4"
DOMESTIC COLD WATER	ALL	1/2"
- DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES ARE REQUIRED TO MEET A FLAME-SPREAD RATING OF 25 OR LESS AND A SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 (NFPA 255) METHOD.
- INSTALL WATER PIPING IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.
- SHUT OFF VALVES: PROVIDE FULL PORT, BALL TYPE, AND INSTALL IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED.

#### C. SANITARY WASTE AND VENT PIPING:

- SANITARY WASTE AND VENT PIPING AND FITTINGS: SERVICE WEIGHT CAST IRON, HUB AND SPIGOT TYPE WITH COMPRESSION JOINTS (ASTM A 74) OR HD-HUB PIPING WITH COUPLINGS (CISR 301). IF PERMITTED BY LOCAL CODES, SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET-TYPE PIPE FITTINGS (ASTM D 3311) MAY BE USED.
 

EXCEPTIONS:  
DO NOT INSTALL PVC PIPING IN RETURN AIR PLENUMS OR WITHIN 10'-0" OF ANY LOCATION WHERE EQUIPMENT MAY DISCHARGE WATER IN EXCESS OF 140 DEGREES.
- SLOPE SANITARY WASTE PIPING 2.5" AND SMALLER AT 1/4" PER FOOT MIN. SLOPE SANITARY WASTE PIPING 3" AND LARGER AT 1/8" PER FOOT MINIMUM.
- WHERE WASTE PIPING IS EXPOSED IN REST ROOM AREAS, PROVIDE CHROME PLATED BRASS PIPING, WITH MATCHING STOPS AND ESCUTCHEONS. PROVIDE REMOVABLE TRAPS WITH INTEGRAL CLEAN-OUT PLUG FOR ALL LAVATORIES.
- INSTALL CLEAN-OUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.

#### SEISMIC REQUIREMENTS

PROPERLY SUPPORT AND BRACE VERTICALLY AND HORIZONTALLY ALL PIPING, APPARATUS, EQUIPMENT, ETC. IN ACCORDANCE WITH APPLICABLE CODES TO PREVENT EXCESSIVE MOVEMENT DURING SEISMIC CONDITIONS.

#### GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THE COMPLETE PLUMBING SYSTEM AGAINST DEFECTS DUE TO FAULTY MATERIALS, WORKMANSHIP OR FAILURE DUE TO NEGLIGENCE OF THE CONTRACTOR. THIS GUARANTEE SHALL EXTEND 12 MONTHS FROM DATE OF FINAL ACCEPTANCE. ALL SERVICE CALLS DURING THIS PERIOD SHALL BE PROVIDED BY THE CONTRACTOR.



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04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**ALLOY  
INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**PLUMBING  
FIXTURE  
SCHEDULE  
& NOTES**  
PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**AP-3.0**

SHEET 3 OF 4

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CLIENT NAME:

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PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**MECHANICAL PLAN**

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**AM-1.0**

SHEET 1 OF 3

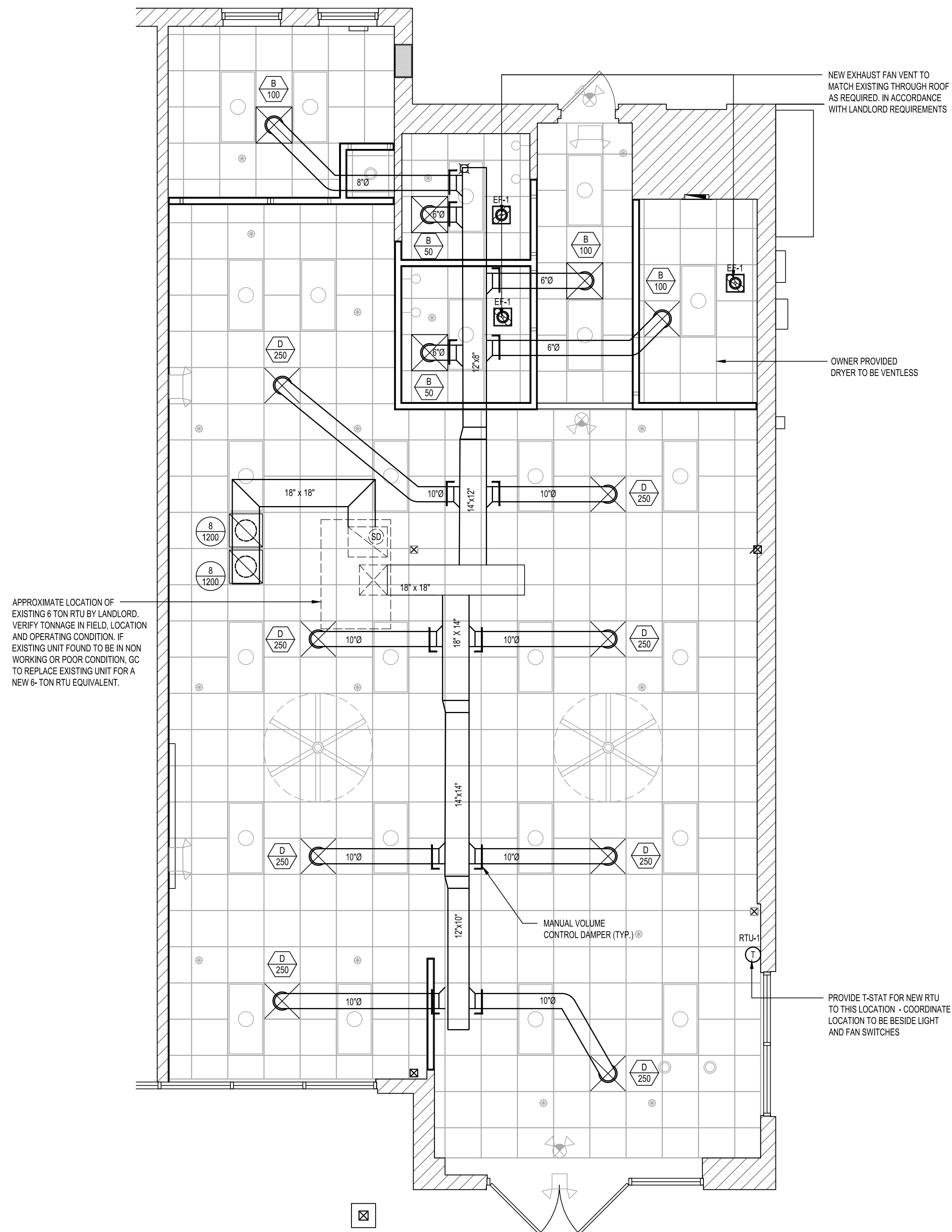
GENERAL NOTES:

- A. EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION BY OTHERS. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRAS DUE TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.
- C. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT AND LOCAL CODES.
- D. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.
- E. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.
- F. ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE INTENT OF THE INSTALLATION WHILE THE SPECIFICATIONS AND EQUIPMENT LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER AND/OR MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS REGARD ON BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
- G. COORDINATE DUCT ROUTING AND HEIGHTS WITH GENERAL CONTRACTOR. VERIFY ALL CLEARANCES BEFORE STARTING WORK.
- H. THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED TO CONFORM TO THE STRUCTURE. AVOID OBSTRUCTIONS, PRESERVE CEILING HEIGHTS AND HEADROOM AND MAKE ALL EQUIPMENT REQUIRING MAINTENANCE OR REPAIR ACCESSIBLE.
- I. ALL DUCT CONNECTIONS TO HVAC EQUIPMENT MUST BE MADE WITH FLEXIBLE CONNECTORS.
- J. DO NOT ATTACH ANYTHING TO DECK ABOVE. ATTACH TO STRUCTURE (i.e. BEAMS, JOISTS) ONLY. DUCT HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE. ALL CONNECTIONS TO JOISTS SHALL BE MADE AT THE TOP CORNER.
- K. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET STEEL. INSULATION SHALL BE A MINIMUM OF 2" THICK PROVIDING A R-6 VALUE OR HIGHER.
- L. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK VISIBLE TO THE PUBLIC SHALL BE INTERNALLY LINED AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT WRAP INSULATION IS NOT PERMITTED IN THESE AREAS.
- M. EXPOSED SPIRAL DUCT TO BE GALVANIZED FINISH, FREE FROM SCRATCHES, DENTS OR BLEMISHES AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT SHALL BE INTERNALLY LINED AND SEALED WITH DUCT SEALER COMPLETELY CONCEALED WITHIN THE DUCT JOINT. NO EXPOSED SEALER OR TAPE WILL BE ACCEPTED.
- N. ALL EXPOSED DUCTWORK SHALL BE INSTALLED TIGHT TO THE BOTTOM OF THE STRUCTURE - UNLESS NOTED OTHERWISE.
- O. PROVIDE REMOTE VOLUME DAMPER CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITED ENERTECH FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS. LOCATE CONTROLLER ABOVE ACCESSIBLE CEILING LOCATION.
- P. TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND/OR OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BIDDING. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK IN OR AROUND THE PREMISES.
- Q. ALL ROOFING WORK SHALL BE PERFORMED BY LANDLORD'S APPROVED ROOFING CONTRACTOR AT TENANT'S EXPENSE, IF REQUIRED IN LEASE OR TENANT CRITERIA MANUAL.
- R. ROOF MOUNTED EQUIPMENT SHALL BE LABELED WITH THE TENANT NAME AND SPACE NUMBER WITH 3" HIGH WEATHER PROOF LETTERS.
- S. MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR MANUFACTURER'S WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND/OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) ROUTINE SERVICES INCLUDING FILTER CHANGES DURING A ONE (1) YEAR PERIOD.
- T. AT THE COMPLETION OF CONSTRUCTION AN NEBB, AABC OR TABB CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND LANDLORD. THE BALANCING MUST BE COMPLETED BY AN INDEPENDENT, THIRD PARTY CONTRACTOR WITH NO TIES TO THE INSTALLING CONTRACTORS.
- U. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE NEW HVAC EQUIPMENT WITH THE LANDLORD'S REPRESENTATIVE, THE HVAC ARE INDICATED WITHIN THE PREVIOUSLY PLANNED ROOF TOP HVAC LOADING ZONE. THE CONTRACTOR SHALL PROVIDE ALL BRACING REQUIRED BY THE ADDITIONAL LOADS FROM THE NEW EQUIPMENT IF REQUIRED.
- V. ALL ROOF PENETRATIONS TO BE COORDINATED WITH THE ORIGINAL ROOFING CONTRACTOR. IN ORDER TO MAINTAIN THE INTEGRITY OF THE ROOF.
- W. ALL ROOF PENETRATIONS ARE TO BE MADE BY THE ORIGINAL ROOFING CONTRACTOR. CONTRACTOR IS TO INSTALL ROOF CRICKETS TO ENSURE PROPER DRAINAGE. ALL RTUS ARE TO BE MOUNTED ON CURBS SUPPLIED BY THE MANUFACTURER. ALL NEW AND EXISTING ROOF PENETRATIONS ARE TO BE SEALED AND FLASHED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- X. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ANY VENTS, EXHAUST DISCHARGES, ETC.
- Y. THERE IS AN EXISTING ROOF LADDER IN PLACE.

LANDLORD COORDINATION:

- AA. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LANDLORD'S TENANT CRITERIA MANUAL. TENANT CRITERIA MANUAL IS AN INTEGRAL PART OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LANDLORD REQUIREMENTS AT NO ADDITIONAL COST TO THE TENANT.
- AB. PARTS OF THE BASE BUILDING SYSTEMS THAT FALL INTO LEASE LINE SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
- AC. PROVIDE ALL NECESSARY WIRING, RELAYS, DETECTORS, COMPONENTS, ETC., FOR FIRE ALARM OR CONTROL SYSTEM INTERLOCK IF APPLICABLE. VERIFY WITH LANDLORD'S PERSONNEL BEFORE BID.
- AD. CONTRACTOR TO PROVIDE DESIGN FOR STRUCTURAL REINFORCEMENT AT NEW ROOFTOP HVAC UNIT

AC NOTE:  
RTU-1 - 2400 CFM MAX



1 MECHANICAL SUPPLY PLAN  
SCALE: 1/4" = 1'-0"

SUPPLY DIFFUSER SCHEDULE				
A 100	DESIGNATES LABEL FOR DIFFUSER TYPE		ALL DIFFUSERS ARE TO BE PROVIDED WITH OPPOSED BLADE DAMPERS UNLESS OTHERWISE SPECIFIED ON PLANS.	
	DESIGNATES CFM QUANTITY FOR DIFFUSER			
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
A	TITUS TMSA OR EQUAL	6"	0 - 125	12X12 LOUVERED FACE
B	TITUS TMSA OR EQUAL	6"	0 - 125	24X24 LOUVERED FACE
C	TITUS TMSA OR EQUAL	8"	130 - 200	24X24 LOUVERED FACE
D	TITUS TMSA OR EQUAL	10"	205 - 355	24X24 LOUVERED FACE
E	TITUS S300FL OR EQUAL	--	205 - 500	16x6 COMMERCIAL SPIRAL DIFFUSER
F	TITUS OR EQUAL	--	200 - 500	16x4 COMMERCIAL RECTANGULAR DIFFUSER W/ DAMPER

RETURN GRILLE SCHEDULE				
1 100	DESIGNATES LABEL FOR DIFFUSER TYPE			
	DESIGNATES CFM QUANTITY FOR DIFFUSER			
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
1	TITUS 50F OR EQUAL	6"	0 - 125	12X12 PERFORATED FACE
2	TITUS 50F OR EQUAL	6"	0 - 125	24X24 PERFORATED FACE
3	TITUS 50F OR EQUAL	8"	130 - 220	24X24 PERFORATED FACE
4	TITUS 50F OR EQUAL	10"	225 - 360	24X24 PERFORATED FACE
5	TITUS 50F OR EQUAL	12"	365 - 600	24X24 PERFORATED FACE
6	TITUS 50F OR EQUAL	14"	605 - 850	24X24 PERFORATED FACE
7	TITUS 50F OR EQUAL	16"	855 - 1395	24X24 PERFORATED FACE
8	TITUS 50F OR EQUAL	16"x16"	1400 - 3000	24X24 PERFORATED FACE

AIR BALANCE CALCULATIONS									
ITEM	DESCRIPTION	MFG.	SUPPLY AIR (CFM)	RETURN AIR (CFM)	RELIEF AIR (CFM)	OUTSIDE AIR (CFM)	MAKE-UP AIR (CFM)	EXHAUST AIR (CFM)	REMARKS
RTU-1	RTU-1	EXISTING	2400	2400		404	--		NOTE 1
EF-1	TOILET X2	GREENHECK						225	NOTE 2
TOTAL			2400	2400		404	--	225	

NET PRESSURE SUPPLIED TO ALLOY PERSONAL TRAINING = 404 (O.A.) - 225 (EXH) = 179 CFM (POSITIVE)

- NOTES:  
 1. ROOF UNIT IS EXISTING 6 TON RTU BY LANDLORD.  
 2. EXHAUST AIR REQUIRING MAKE-UP THRU AC UNITS

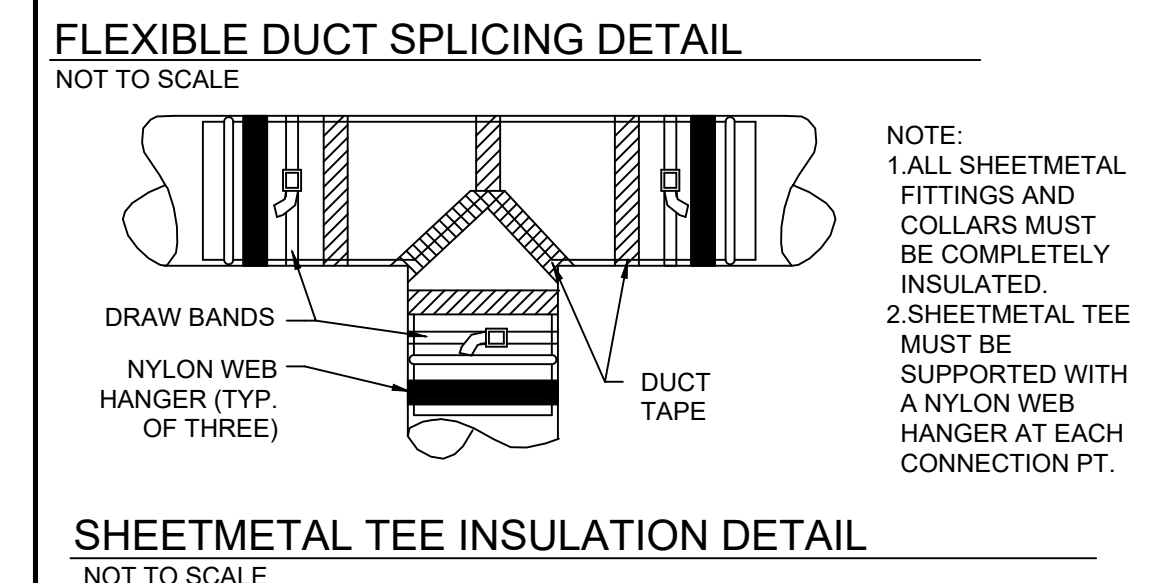
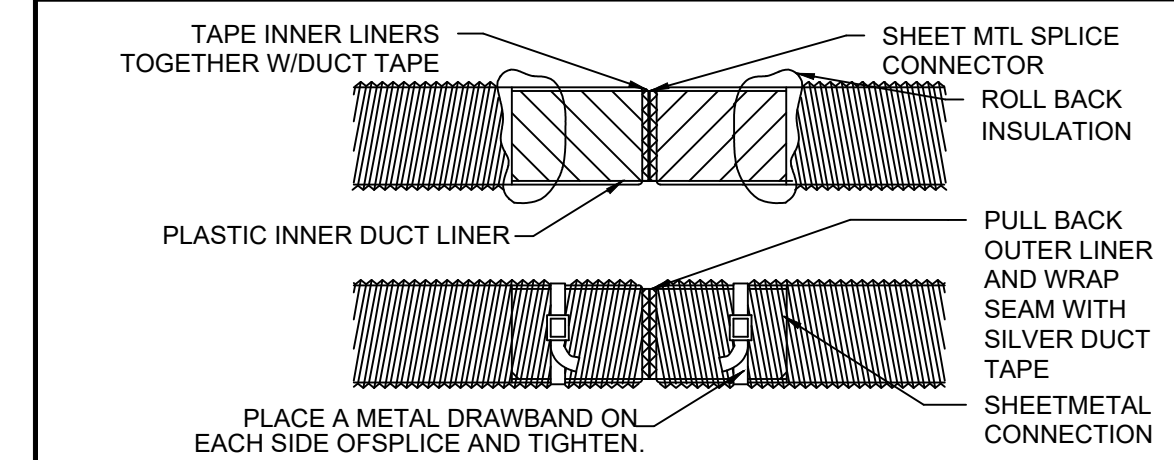
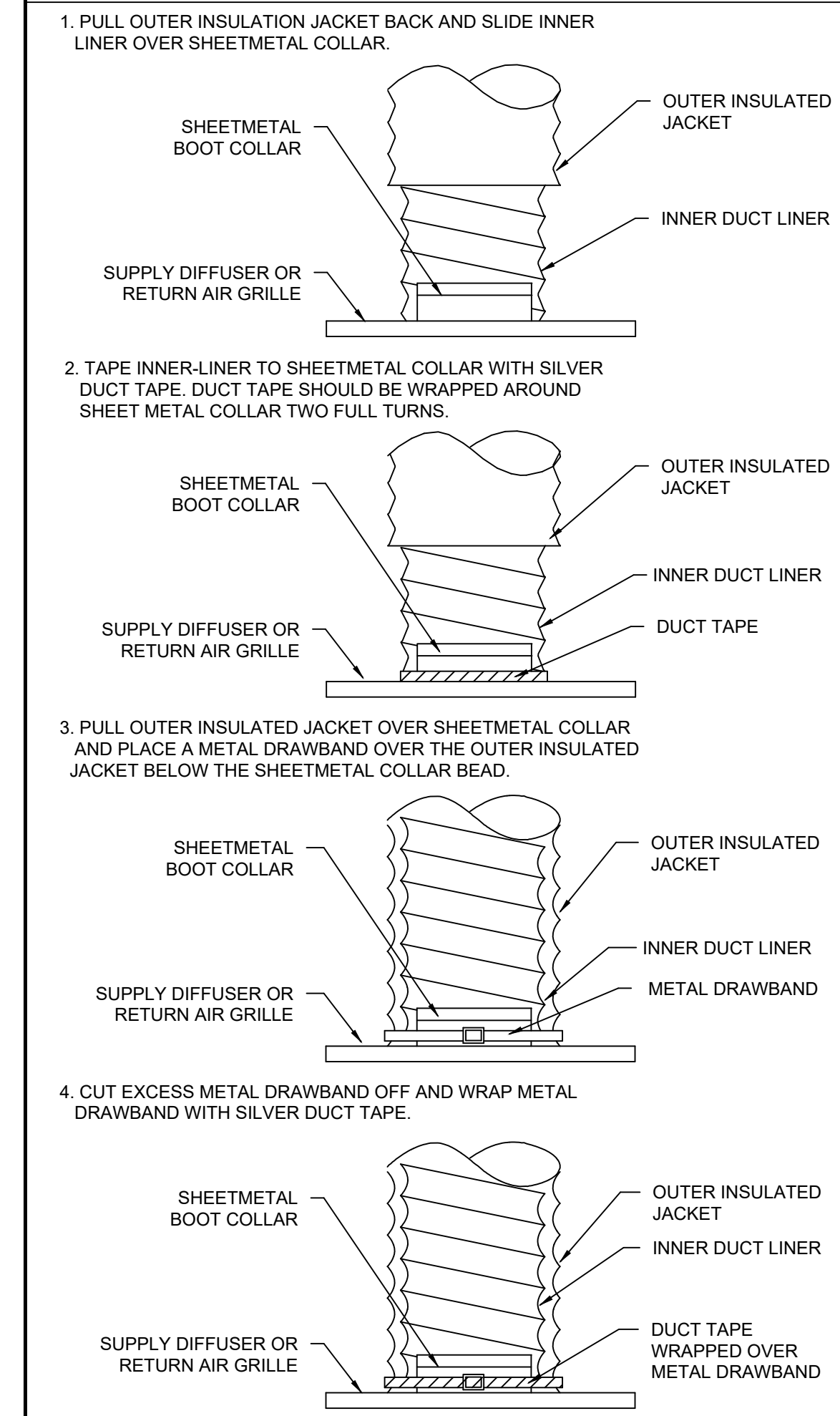
EXHAUST FAN SCHEDULE									
NO.	SERVICE	LOCATION	TYPE	CFM	SP IN YG	AMPS	WATTS	REMARKS	
EF-1	TOILET/UTILITY EXHAUST	CEILING	CABINET INLINE	75	0.5	1.14	80	GREENHECK SP-B NOTES: 1,4,5,7,10	

NOTES: 1) BIRDSCREENS, 2) PREFAB CURB, 3) DIRECT DRIVE, 4) DISCONNECT, 5) BACKDRAFT DAMPER, 6) MOTORIZED DAMPER, 7) INLET GRILLE 8) SOLID STATE VARIABLE SPEED SWITCH, 9) THERMOSTAT CONTROLLED, 10) INTERLOCKED W/ OCC SENSOR IN RESTROOM 11) ROOF VENT CAP (GREENHECK RDSP) 12) INTERLOCKED W/ RTUS 13) WALL DISCHARGE LOUVER 14) NEOPRENE ISOLATION GROMMETS EQUAL TO MASON INDUSTRIES TYPE HG

### GENERAL MECHANICAL NOTES

- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS: SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-8.1 MECHANICAL REFRIGERATION. ALL DUCTWORK SHALL BE FABRICATED, INSTALLED AND SUPPORTED AS PER SMACNA STANDARDS.
- THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES TO INSURE AN ORDERLY PROGRESS OF THIS WORK.
- THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT.
- CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.
- ALL MATERIAL SHALL BE NEW AND OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMEN.
- ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET STEEL. INSULATION SHALL BE A MINIMUM OF 2" THICK PROVIDING A R-6 VALUE OR HIGHER.
- ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.
- DUCT SIZES SHOWN ARE INSIDE DIMENSIONS (FREE AREA). THE CONTRACTOR MAY, AT HIS OPTION, USE ALTERNATE SHAPED DUCT OF EQUIVALENT SIZE (FREE AREA) WITH CONSTRUCTION OF SAME PER LATEST SMACNA DUCT CONSTRUCTION STANDARDS. ALL FLEXIBLE DUCT SHALL BE LIMITED TO 8 FEET IN LENGTH AND USED ONLY FOR RUNOUTS TO DIFFUSERS. FLEX DUCT SHALL BE U.L. 181 LISTED.
- ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY OWNER. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS, DIFFUSERS, REGISTERS AND GRILLES LOCATED IN FIRE RATED WALLS AND OR CEILINGS SHALL BE STEEL CONSTRUCTION.
- THERMOSTAT SHALL BE 7 DAY PROGRAMMABLE TYPE, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE HONEYWELL OR EQUAL.
- ALL BRANCH TAKE-OFFS TO BE PROVIDED WITH MANUAL VOLUME DAMPERS. ALL ELBOWS AND TEES MUST BE FURNISHED WITH TURNING VANES. PROVIDE 45° BRANCH TAKE-OFF AS PER BRANCH DUCT TAKE-OFF DETAIL.
- PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.
- PROVIDE SMOKE DETECTORS WITH ACCESS DOORS IN ALL RETURN AIR DUCTS FOR FANS AND AHUS SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.
- PROVIDE TYPE "B" FIRE DAMPERS IN ALL DUCTS OR OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, TENANT SEPARATION, PARTITIONS, FLOOR OR ROOF SLABS AND AT OIA INTAKES. PROVIDE RADIATION DAMPERS IN RATED CEILINGS FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY.
- HVAC CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT. FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHUS AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS, AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLS, RETURN GRILLS, AND EXHAUST GRILLS, AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLS AND EVAPORATORS.
- THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ARCHITECT BEFORE INSTALLATION.
- ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/0.
- MECHANICAL PLANS IN GENERAL ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- NO COMBUSTIBLE MATERIALS ARE ALLOWED IN RETURN AIR PLENUMS OR ABOVE CEILINGS USED AS RETURN AIR PLENUM. IF SPACE WITH RETURN AIR PLENUM HAS ANY DECK TO DECK PARTITIONS, AIR TRANSFER DUCTS MUST BE INSTALLED. REFER TO PLUMBING PLANS FOR ALL CONDENSATE PIPING.
- CONTRACTOR SHALL INSTALL ALL OUTDOOR EQUIPMENT TO WITHSTAND SUSTAINED WIND LOADING FORCES AS REQUIRED BY LOCAL CODES.
- PROVIDE ALL NECESSARY CONTACTORS, RELAYS, ETC., FOR A COMPLETE OPERATING A/C UNIT.
- THROUGHOUT THE COURSE OF THE WORK, MINOR CHANGES AND ADJUSTMENTS TO THE PLANS AND SPECIFICATIONS MAY BE REQUESTED BY THE TENANT. THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITHOUT ADDITIONAL COST TO THE TENANT, WHERE SUCH ADJUSTMENTS ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE SYSTEMS, AND WITHIN THE INTENT OF THE CONTRACT DOCUMENTS.
- IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO FORM A GUIDE FOR A COMPLETE INSTALLATION. EVERYTHING NECESSARY FOR THE COMPLETION AND SUCCESSFUL OPERATION OF THE WORK, WHETHER OR NOT HEREBY SPECIFIED OR INDICATED ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED AS WELL AND AS FAITHFULLY AS IF SO SPECIFIED OR INDICATED WITHOUT ADDITIONAL COST TO THE TENANT. THE MECHANICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LENGTHS PRIOR TO INSTALLATION.
- NOTWITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR BEARS ULTIMATE RESPONSIBILITY FOR COMPLIANCE OF THE INSTALLATION WITH THE REQUIREMENTS OF THE LANDLORD AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- IF ANY ERRORS, DISCREPANCIES OR OMISSIONS APPEAR IN THE DRAWINGS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF SUCH ERROR OR OMISSION. IN THE EVENT OF THE CONTRACTOR FAILING TO GIVE SUCH NOTICE BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK, HE WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS, DISCREPANCIES OR OMISSIONS AND THE COST OF RECTIFYING SAME.

### FLEX DUCT CONNECTION TO DIFFUSER, GRILLES AND SHEETMETAL PLENUM COLLARS



**GP | N**

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REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:  
 CHRISTINA & CURTIS VANDENBERG  
 509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:  
**ALLOY**  
**INTERIOR UP-FIT**  
 14807 W 64TH AVE.  
 ARVADA, CO 80007

SHEET TITLE:  
**MECHANICAL NOTES & DETAILS**

PROJECT NUMBER 24-036  
 DATE 04-19-2023  
 SHEET NO.

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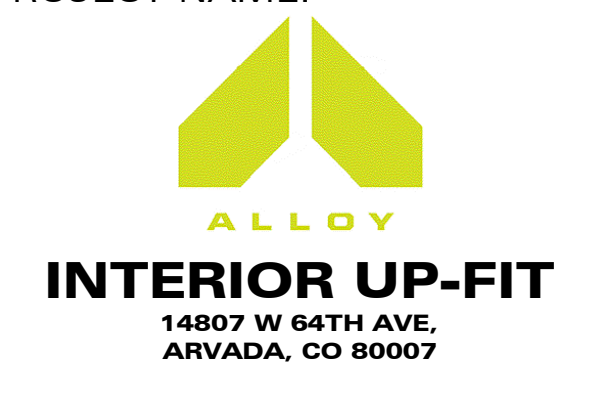
REVISIONS:

NO.	DATE	DESCRIPTION	BY
EX.		EXISTING	
WR.		WEATHER RESISTANT	
WP.		WEATHER PROOF	

CLIENT NAME:

**CHRISTINA & CURTIS VANDENBERG**  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



SHEET TITLE:

**POWER PLAN**

PROJECT NUMBER 24-036

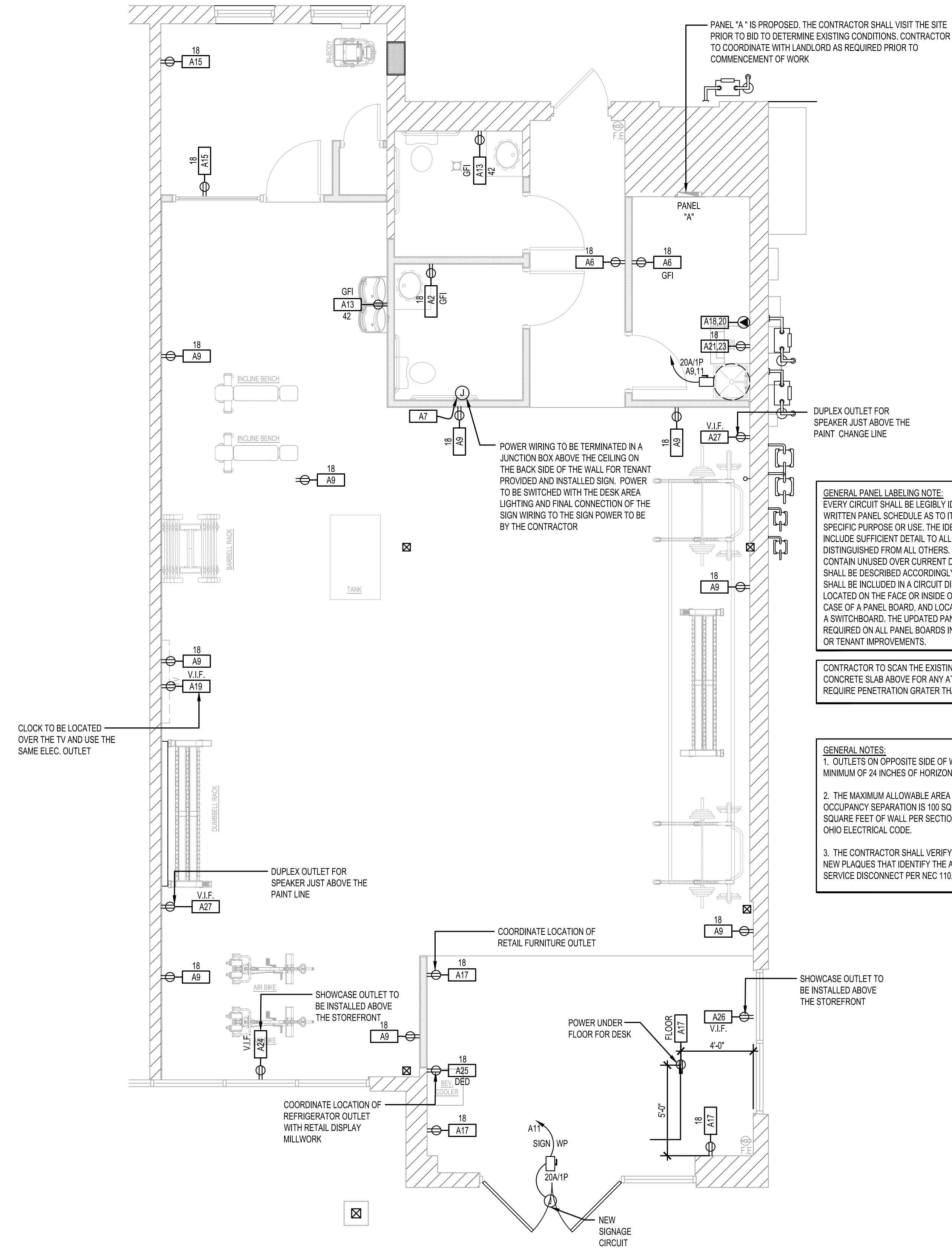
DATE 04-19-2023

SHEET NO.

**AE-1.0**

SHEET 1 OF 3

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.



**GENERAL PANEL LABELING NOTE:**  
EVERY CIRCUIT SHALL BE LEGIBLY IDENTIFIED WITH A TYPE WRITTEN PANEL SCHEDULE AS TO ITS CLEAR, EVIDENT AND SPECIFIC PURPOSE OR USE. THE IDENTIFICATION SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. SPARE POSITIONS THAT CONTAIN UNUSED OVER CURRENT DEVICES OR SWITCHES SHALL BE DESCRIBED ACCORDINGLY. THE IDENTIFICATION SHALL BE INCLUDED IN A CIRCUIT DIRECTORY THAT IS LOCATED ON THE FACE OR INSIDE OF THE PANEL DOOR IN CASE OF A PANEL BOARD, AND LOCATED AT EACH SWITCH ON A SWITCHBOARD. THE UPDATED PANEL SCHEDULE IS REQUIRED ON ALL PANEL BOARDS INVOLVED IN THE REMODEL OR TENANT IMPROVEMENTS.

CONTRACTOR TO SCAN THE EXISTING POST-TENSIONED CONCRETE SLAB ABOVE FOR ANY ATTACHMENTS WHICH REQUIRE PENETRATION GRATER THAN 3/4".

**GENERAL NOTES:**  
1. OUTLETS ON OPPOSITE SIDE OF WALL SHALL HAVE MINIMUM OF 24 INCHES OF HORIZONTAL SEPARATION.  
2. THE MAXIMUM ALLOWABLE AREA OF PENETRATIONS IN THE OCCUPANCY SEPARATION IS 100 SQUARE INCHES IN 100 SQUARE FEET OF WALL PER SECTION 711.3.2 OF THE 2023 OHIO ELECTRICAL CODE.  
3. THE CONTRACTOR SHALL VERIFY THE EXISTING OR PROVIDE NEW PLAQUES THAT IDENTIFY THE AIC RATING ON THE EXISTING SERVICE DISCONNECT PER NEC 110.24.

**1 POWER PLAN**  
1/4" = 1'-0"

SYMBOLS	DESCRIPTION
	DUPLEX RECEPTACLE
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE W/ USB CHARGING PORT
	SINGLE POLE SWITCH
	JUNCTION BOX
	TELEPHONE JACK
	COMPUTER DATA TERMINAL OUTLET
	FUSIBLE DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	CABLE CONNECTION
	DUCT SMOKE DETECTOR
	208V CONNECTION
	TELEPHONE BOARD
EX.	EXISTING
WR.	WEATHER RESISTANT
WP.	WEATHER PROOF



04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY

CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



**INTERIOR UP-FIT**  
14807 W 64TH AVE.  
ARVADA, CO 80007

SHEET TITLE:

**LIGHTING PLAN**

PROJECT NUMBER 24-036

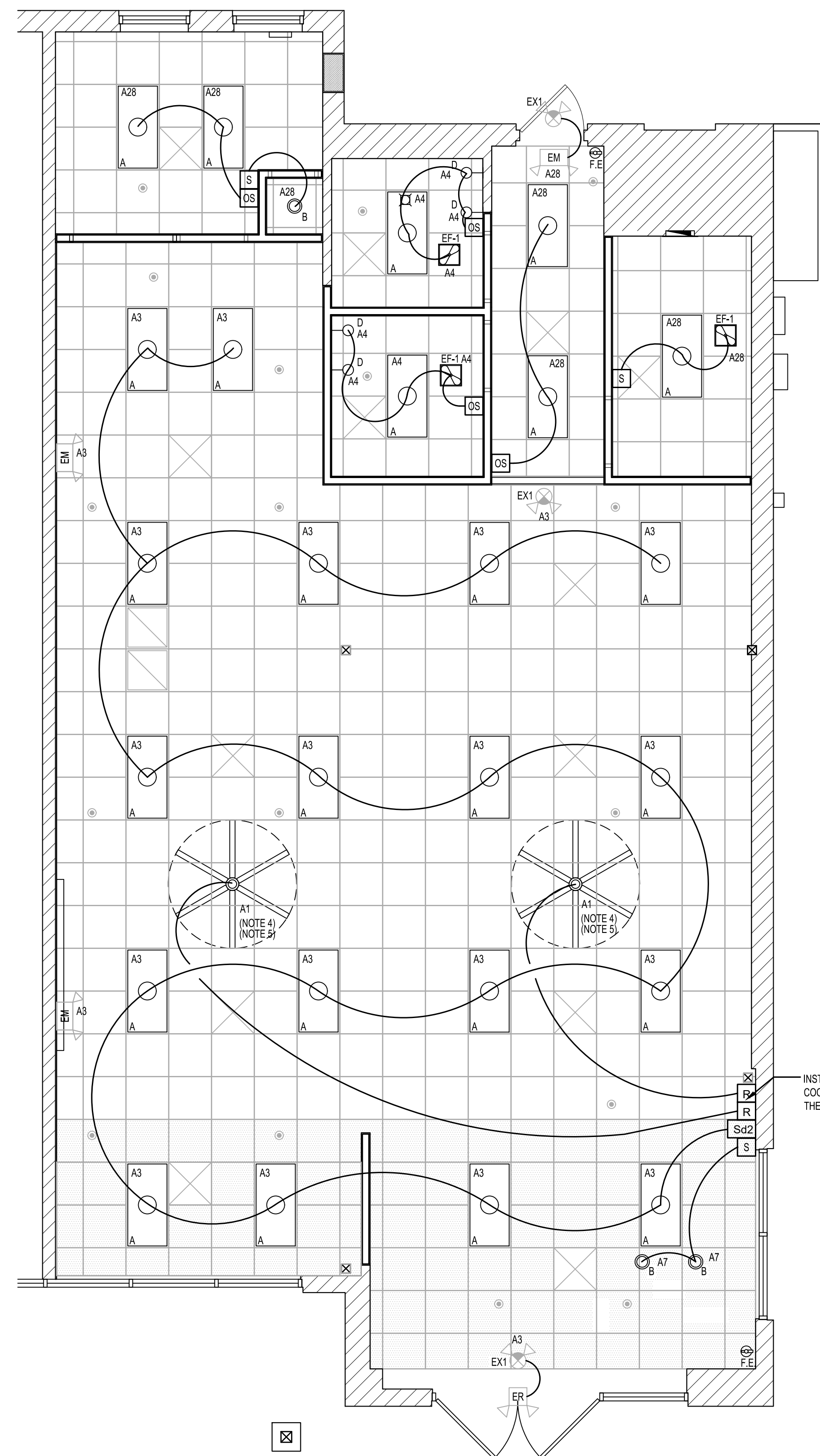
DATE 04-19-2023

SHEET NO.

**AE-2.0**

SHEET 2 OF 3

THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTUAL CONDITIONS, CONSTRUCTION AND/OR USE THEREOF. THIS DRAWING IS TO CONVEY DESIGN INTENTIONS AND/OR CODE COMPLIANCE ONLY. USE OF THESE DRAWINGS IMPLIES AGREEMENT WITH THESE CONDITIONS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS.



- GENERAL LIGHTING NOTES:**
1. CEILING MOUNTED RECEPTACLES ARE TO BE SWITCHED FROM BANK OF SWITCHES AS SHOWN
  2. ALL SWITCHES SHALL BE LOCATED @ 4" A.F.F. TO THE CENTER OF THE DEVICE
  3. ALL EMERGENCY LIGHTS AND EXIT SIGNS ARE SUPPLIED WITH BATTERY BACK-UP AND COMPLY WITH NEC 2023 ARTICLE 700.12
  4. DENOTES CEILING FAN SELECTED BY OWNER. COORDINATE W/ MANUFACTURER FOR EXACT ELECTRICAL REQUIREMENTS BEFORE PURCHASING, INSTALLING CIRCUIT BREAKER, WIRING & CONDUIT.
  5. COORDINATE WITH OWNER & MANUFACTURER FOR CONTROL OF CEILING FAN AND THE LOCATION OF THE CONTROLS

- LEGEND**
- OS WALL SWITCH OCCUPANCY SENSOR  
HUBBELL CONTROL SOLUTIONS CATALOG# LHMTS1W
  - S LOCAL TOGGLE SWITCH  
S.P.S.T. 20A, SPEC GRADE
  - OSd1 WALL SWITCH OCCUPANCY SENSOR HUBBELL CONTROL SOLUTIONS  
SINGLE POLE SWITCH DIMMING TYPE
  - OS1 DUAL TECHNOLOGY CEILING MTD. 360 DEGREES OCCUPANCY SENSOR - 2000 SQ. FT.  
HUBBELL CONTROL SOLUTIONS CATALOG# OMINDT-2000
  - OS2 PASSIVE INFRARED CEILING MTD. 360 DEGREES OCCUPANCY SENSOR - 22' RADIUS  
HUBBELL CONTROL SOLUTIONS CATALOG# OMNIRL
  - Sd1 SINGLE POLE SWITCH DIMMING TYPE, DIMMER TO BE AS  
MANUFACTURED BY LEGRAND H703PTUTC-HKITW
  - Sd2 SINGLE POLE SWITCH DIMMING TYPE (0 - 10 VOLTS), DIMMER TO  
BE AS MANUFACTURED BY LEVITON IP710-LFZ
  - J CEILING JUNCTION BOX PREWIRED PER OWNER'S INSTRUCTIONS AND BASED ON OWNER  
SELECTED FIXTURES
  - R ROTARY KNOB FOR FAN CONTROLS (PROVIDED BY MANUFACTURER AND INSTALLED BY  
ELECTRICAL CONTRACTOR)

LIGHTING FIXTURE SCHEDULE (ALL FIXTURES MAY NOT BE USED) GC IS RESPONSIBLE FOR PURCHASING ALL LIGHTS.					
TYPE	DESCRIPTION	LAMP	MANUFACTURER PART #	VOLTAGE	WATTAGE
A	RECESSED MOUNTED LED 2' x 4' BACKLIT PANEL (LAY-IN) - GRID	LED	MAXLITE 40W 2'X4' BACKLIT LED PANEL LIGHT MODEL #MLFP24G44040	120	40
B	PENDANT MOUNT LED DECORATIVE FIXTURE. CONTRACTOR SHALL VERIFY CORD LENGTH, COLOR, & FINISH PRIOR TO ORDERING. BOT. OF LOWER FIXT. = 7'-0" AFF BOT. OF HIGHER FIXT. = 7'-8" AFF	LED	ELED #PD256BKRTL6BM	120	3.5
C	PENDANT MOUNT LED DOWNLIGHT WITH POLYCARBONATE REFRACTOR. CONTRACTOR SHALL VERIFY CORD LENGTH, TRIM COLOR, & FINISH PRIOR TO ORDERING. BOT. OF FIXT. = MIN. 10'-0" AFF. MAX. 12'-0" AFF - COORDINATE TO NOT BE ABOVE THE BOTTOM OF THE DUCT WORK.	LED	ELED #HD120HB38	120	80
D	LED DECORATIVE WALL SCONCE. ARCHITECT SHALL VERIFY COLOR, & FINISH PRIOR TO ORDERING.  ROUGH-IN HEIGHT = 6'-0" AFF	LED	ELED #533629	120	3.5
E	4" RECESSED CAN W/ LENS (UL LISTED FOR WET LOCATIONS)	LED	MAXLITE 4" RECESSED LED DOWNLIGHT, 9W #RCF409CSW	120	9.4
EM	EMERGENCY DUAL HEAD FIXTURE WITH BATTERY BACKUP BOT. OF FIXTURE = 10'-0"	LED	ELED #ELCEL-M2	120	5
ER	DUAL EXIT DISCHARGE LIGHT (SEALED AND GASKETED) FED FROM EXIT SIGN "EX1"	LED	ELED #EMRH-2H	6	2
EX1	LED EXIT SIGN / EMERGENCY LIGHT COMBO WITH HIGH OUTPUT BATTERY BACK-UP TO FEED EXIT DISCHARGE LIGHT	LED	ELED #EXCOM2RWRH	120	5
EX2	LED EXIT LIGHT COMBO WITH BATTERY BACK-UP	BY MFG.	EXITRONIX CATALOG # VEX-U-BP-WB-WH-EL90 (GREEN TEXT)	120	5

- NOTE:**
1. BATTERY PACKS FOR ALL EXIT AND EMERGENCY LIGHT FIXTURES SHALL BE CAPABLE OF PROVIDING EMERGENCY POWER TO THE FIXTURES FOR A MINIMUM OF 90 MINUTES.
  2. LIGHTING SHALL BE PURCHASED THROUGH NATIONAL ACCOUNT W/ ELED (WWW.ELEDLIGHTS.COM)
  3. GC IS RESPONSIBLE FOR PURCHASING ALL LIGHTS.

**1 LIGHTING PLAN**  
1/4" = 1'-0"

**GENERAL ELECTRIC NOTES:**

- CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING A PROPOSAL.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2023 EDITION OF THE OHIO ELECTRIC CODE.
- ALL CONDUCTORS SHALL BE COPPER #12 MINIMUM.
- ALL CONDUITS SHALL HAVE PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTORS.
- PROVIDE THE NECESSARY PULL/JUNCTION BOXES, SUPPORTS AND MISC. ITEMS FOR A COMPLETE INSTALLATION.
- PROPERLY SEAL ALL PENETRATIONS OF FIRE RATED CONSTRUCTION AREAS.
- PROVIDE TYPE WRITTEN PANEL DIRECTORIES.
- ALL WIRING SHALL BE IN CONTINUOUS CONDUIT SYSTEMS.
- ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF SUSPENDED CEILINGS.
- ELECTRICAL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES.
- SWITCHES AND RECEPTACLES SHALL BE 20 AMP COMMERCIAL GRADE. THE DEVICES ARE TO BE WHITE WITH WHITE FACE PLATES.
- CONCEAL ALL CONDUITS AND BOXES UNLESS OTHERWISE NOTED.
- COORDINATE ALL POWER REQUIREMENTS WITH LOCAL POWER COMPANY ENGINEER.
- PROVIDE AND MAINTAIN TEMPORARY POWER AND LIGHTING SYSTEM FOR DURATION OF THE PROJECT.
- EMT FITTINGS SHALL BE COMPRESSION TYPE.
- MAKE FINAL CONNECTIONS TO EQUIPMENT WITH FLEXIBLE METAL CONDUIT. LIQUID TIGHT WHERE EXPOSED TO WEATHER.
- THIS PROJECT TO MEET NFPA 72 AND ADA REQUIREMENTS REGARDING MOUNTING HEIGHTS OF ELECTRICAL DEVICES.
- ALL PRE-WIRED EQUIPMENT MUST BE LISTED AND LABELED BY AN APPROVED TESTING AGENCY PER ARTICLE 110.3 ("A" AND "B") OF THE 2023 OEC.
- INDIVIDUAL UNIT EQUIPMENT USED FOR EXIT SIGNS AND EMERGENCY LIGHTS THAT USES RECHARGEABLE BATTERIES SUPPLIED BY THE CIRCUIT THAT SUPPLIES THE NORMAL LIGHTING FOR THAT AREA PER ARTICLE 700.12(F) AND 700.17 OF THE 2023 OEC.

**WIRING METHODS:**

ALL CONDUIT AND WIRING SIZES ARE SHOWN ON THE PANEL SCHEDULES AND RISER DIAGRAM. TYPES APPROVED ARE AS FOLLOWS:  
 OUTDOORS: USE THE FOLLOWING TYPES OF CONDUIT:  
 1. EXPOSED, RIGID STEEL OR IMC  
 2. CONCEALED, RIGID STEEL OR IMC  
 3. UNDERGROUND: RNC  
 INDOORS: USE THE FOLLOWING WIRING METHODS:  
 1. EXPOSED, IMC OR RIGID STEEL  
 2. CONCEALED, EMT, IMC  
 WIRING CONDUCTORS SHALL BE SOFT-ANNEALED 98% COPPER. ALL CONDUCTORS LARGER THAN #8 AWG SHALL BE STRANDED. MINIMUM SIZE CONDUCTOR SHALL BE #12 AWG UNLESS OTHERWISE SPECIFIED. NO ALUMINUM CONDUCTORS WILL BE PERMITTED. TYPE THHN SHALL NOT BE USE UNDERGROUND, OUTSIDE, AT SERVICE ENTRANCES OR IN WET LOCATION. ALL INSULATION SHALL BE RATED AT 600 VOLTS.  
 THE FOLLOWING INSULATION TYPES ARE PERMITTED:  
 #10 AWG AND SMALLER THW, THWN  
 #8 AWG TO #40 AWG THW, THHN  
 SERVICE ENTRANCE USE RHW  
 WIRE THROUGH FLUORESCENT FIXTURE OR WITHIN 3' OF HEATING EQUIPMENT THHN  
 TERMINATION PROVISIONS OF EQUIPMENT FOR CIRCUITS OF 100 AMPERES OR LESS SHALL UTILIZE CONDUCTOR AMPACITIES BASED ON 60 DEGREES CELSIUS TEMPERATURE RATINGS - SEE 2023 OEC TABLE 310.16 FOR AMPACITY RATINGS.

PANEL PANEL "A"													
120/208 VOLTS		3 PHASE			4 WIRE			ISCA RATING		22,000 EXISTING		NEMA RATING: 1	
MOUNTING: SURFACE				MAINS: 200A MLO				TOTAL CONNECTED LOAD 42.86 KVA					
LOAD SERVED	TRIP	PIPE	CIR.	GND.	LOAD-KVA	CKT. NO.	CKT. NO.	LOAD-KVA	GND.	CIR.	PIPE	TRIP	LOAD SERVED
						A	B						
CEILING FAN (1)	20	1/2	12	12	0.8	1	2	1.0	12	12	1/2	20	DRINKING FOUNTAIN (3)
LIGHTS- FITNESS STUDIO & LOBBY	20	1/2	12	12	1.1	3	4	1.0	12	12	1/2	20	LIGHTS- UTILITY & RR'S
ROOFTOP REC. (1)	20	1/2	12	12	0.7	5	6	0.8	12	12	1/2	20	REC.- UTILITY & HALLWAY
INTERIOR SIGNAGE (1) (4)	20	1/2	12	12	0.7	7	8	5.42	10	10	-	-	EXISTING RTU-1
REC.- TRAINING FLOOR	20	1/2	12	12	1.0	9	10	5.42	10	10	3/4	50	
EXTERIOR SIGNAGE (1) (4)	20	1/2	12	12	1.0	11	12	5.42	10	10	-	-	
REC.- RR'S	20	1/2	12	12	1.0	13	14	2.25	10	10	3/4	30	WATER HEATER (1)
REC.- OFFICE	20	1/2	12	12	1.0	15	16	2.25	10	10	-	-	
REC.- LOBBY	20	1/2	12	12	1.0	17	18	1.2	10	10	3/4	30	WASHER (1) (3)
REC.- FITNESS STUDIO TV'S	20	1/2	12	12	1.0	19	20	1.2	-	-	-	-	
DRYER (1) (3)	30	3/4	10	10	1.2	21	22	-	-	-	-	20	SPARE
REC.- REFRIGERATOR - GFCI	20	1/2	12	12	1.2	23	24	1.0	12	12	1/2	20	WINDOW SHOWCASE (1) (4)
REC.- FITNESS STUDIO SPEAKERS	20	1/2	12	12	1.0	25	26	1.0	12	12	1/2	20	WINDOW SHOWCASE (1) (4)
SPARE	20	-	-	-	-	27	28	-	-	-	-	20	LIGHTS- OFFICE & HALLWAY
SPARE	20	-	-	-	-	29	30	-	-	-	-	20	SPARE
SPARE	20	-	-	-	-	31	32	-	-	-	-	20	SPARE
SPARE	20	-	-	-	-	33	34	-	-	-	-	20	SPARE
SPARE	20	-	-	-	-	35	36	-	-	-	-	20	SPARE
SPARE	20	-	-	-	-	37	38	-	-	-	-	20	SPARE
SPARE	20	-	-	-	-	39	40	-	-	-	-	20	SPARE
SPARE	20	-	-	-	-	41	42	-	-	-	-	20	SPARE

(1) - VERIFY ELEC. LOAD / REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT  
 (2) - LOCKING TYPE & RED IN COLOR  
 (3) - GFI BREAKER  
 (4) - INTERMATIC GM40 (OR EQUAL)  
 (5) - EXISTING TO REMAIN  
 (6) - EXISTING WIRED TO NEW CIRCUIT  
 (7) - CONTROLLED VIA TIMELOCK

PHASE "A": 15.57 KVA  
 PHASE "B": 14.97 KVA  
 PHASE "C": 12.32 KVA

42.86 KVA @ 120/208/3Ø = 118.96 AMPERES

PANEL LOCATED IN UTILITY ROOM



**GERALD P. NOE ARCHITECT**

COLORADO REGISTRATION NO. 401357

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04-19-2023

REVISIONS:

NO.	DATE	DESCRIPTION	BY
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CLIENT NAME:

CHRISTINA & CURTIS VANDENBERG  
 509 N. JACKSON ST. GOLDEN, CO 80403

PROJECT NAME:



SHEET TITLE:

**PANEL SCHEDULE & NOTES**

PROJECT NUMBER 24-036

DATE 04-19-2023

SHEET NO.

**AE-3**

SHEET 3 OF 3

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